

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 922-34C4BS						
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES						
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES						
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6515						
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL julie.jacobson@anadarko.com						
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-0149077			11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>						
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')						
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')						
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>						
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN
LOCATION AT SURFACE		1991 FNL 662 FWL		SWNW		34		9.0 S		22.0 E		S
Top of Uppermost Producing Zone		747 FNL 2150 FWL		NENW		34		9.0 S		22.0 E		S
At Total Depth		747 FNL 2150 FWL		NENW		34		9.0 S		22.0 E		S
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 747			23. NUMBER OF ACRES IN DRILLING UNIT 600						
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 423			26. PROPOSED DEPTH MD: 9434 TVD: 8993						
27. ELEVATION - GROUND LEVEL 4947			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 - 2440	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 - 9434	11.6	I-80 LT&C	12.0	Premium Lite High Strength		310	3.38	12.0	
							50/50 Poz		1310	1.31	14.3	
ATTACHMENTS												
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES												
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER						<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN						
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP						
NAME Gina Becker				TITLE Regulatory Analyst II				PHONE 720 929-6086				
SIGNATURE				DATE 01/03/2013				EMAIL gina.becker@anadarko.com				
API NUMBER ASSIGNED 43047534870000				APPROVAL  Permit Manager								

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-34C4BS**

Surface:	1991 FNL / 662 FWL	SWNW
BHL:	747 FNL / 2150 FWL	NENW

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:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,244'	
Birds Nest	1,522'	Water
Mahogany	1,991'	Water
Wasatch	4,409'	Gas
Mesaverde	6,805'	Gas
Sego	8,993'	Gas
TVD	8,993'	
TD	9,434'	

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

11/27/2012

RECEIVED: December 26, 2012

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8993' TVD, approximately equals
5,486 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,531 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.

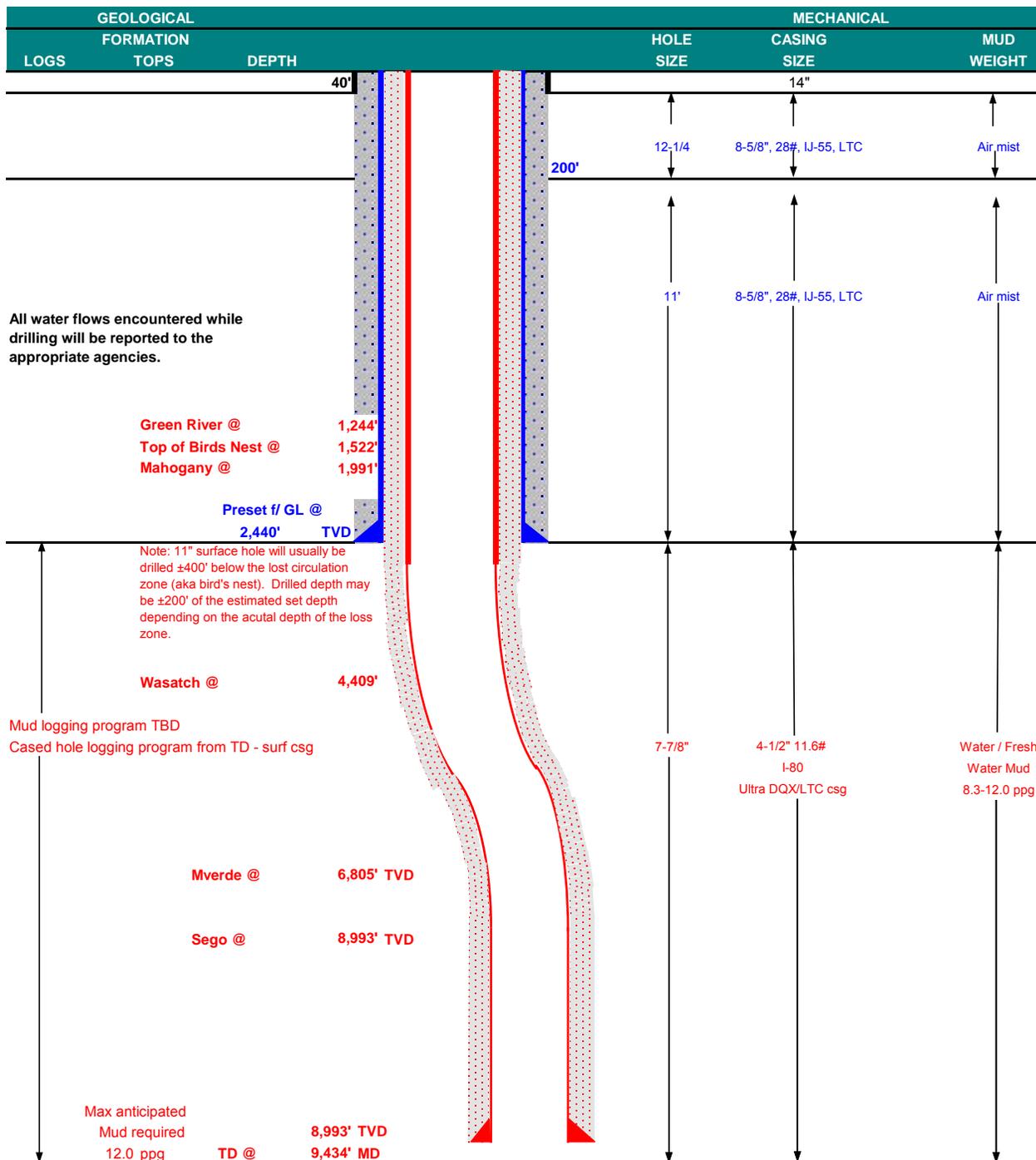
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	November 27, 2012	
WELL NAME	NBU 922-34C4BS		TD	8,993' TVD	9,434' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SWNW 1991 FNL 662 FWL	Sec 34	T 9S	FINISHED ELEVATION 4,947'	
	Latitude: 39.994330	Longitude: -109.433217		NAD 83	
BTM HOLE LOCATION	NENW 747 FNL 2150 FWL	Sec 34	T 9S	R 22E	
	Latitude: 39.997731	Longitude: -109.427908		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,440	28.00	IJ-55	LTC	2.22	1.65	5.82	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	1.13		2.99
					LTC	7,780	6,350	223,000	267,035
	4-1/2"	5,000 to 9,434'	11.60	I-80	LTC	1.11	1.13	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 Option 1	LEAD 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs) 1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized						
SURFACE Option 2	LEAD 1,940'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	180	35%	11.00	3.82
	TAIL 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD 3,904'	Premium Lite II +0.25 pps celloflake + .4% FL-52 + .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II + 1.2% Sodium Metasilicate + .05 lbs/sk Static Free	310	35%	12.00	3.38
	TAIL 5,530'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free + 1.2% Sodium Metasilicate + .5 % EC-1 +.002 gps FP-6L + 2% Bentonite II	1,310	35%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained
 *Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

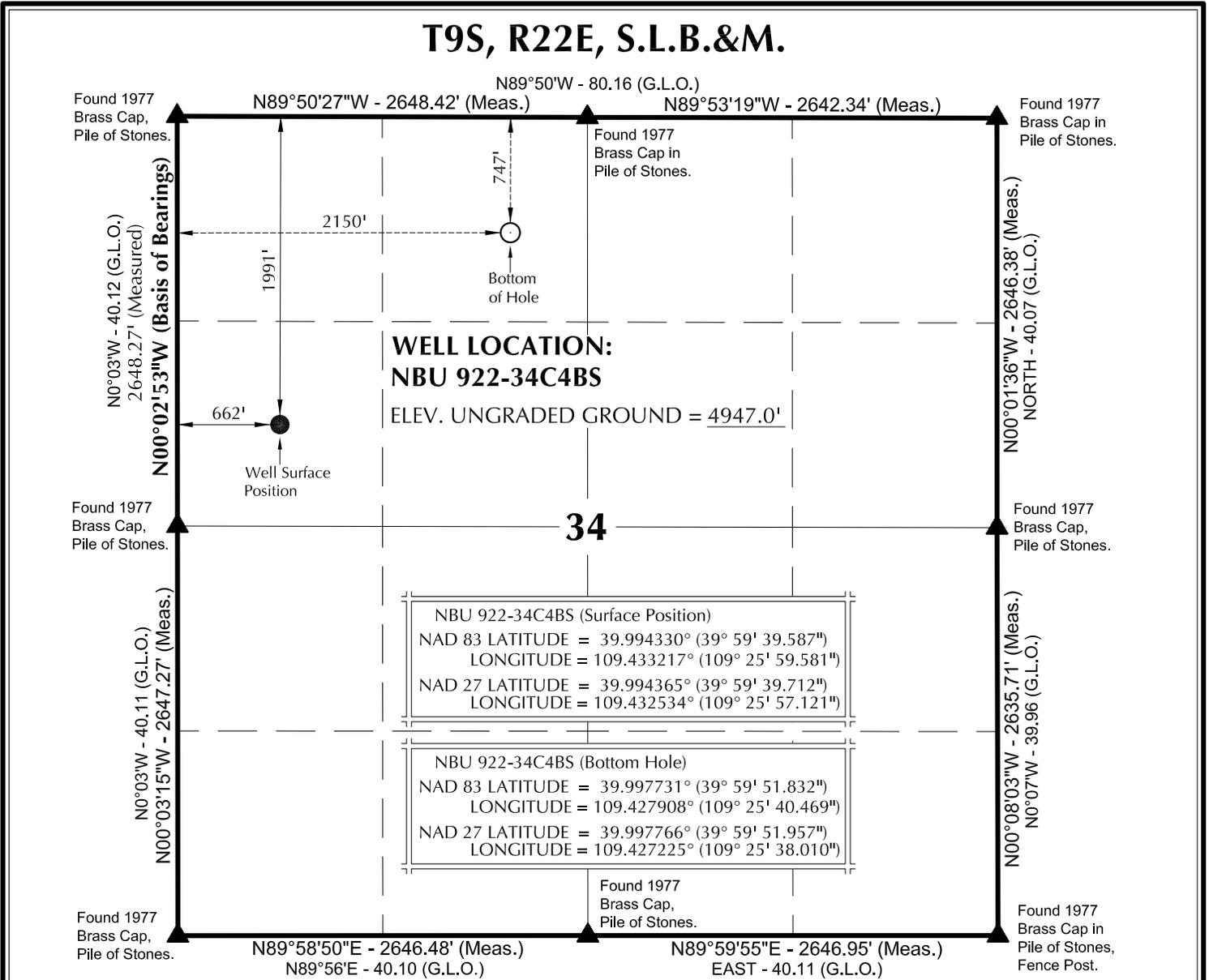
SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.
 BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.
 Surveys will be taken at 1,000' minimum intervals.
 Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.
 If extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

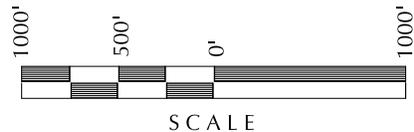
DRILLING ENGINEER: _____ **DATE:** _____
 Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliot
DRILLING SUPERINTENDENT: _____ **DATE:** _____
 Kenny Gathings / Lovel Young

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 N50°11'03"E 1936.36' 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'.



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.

John R. Haugh
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION NO. 6028691
 STATE OF UTAH

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

WELL PAD: NBU 922-34E

NBU 922-34C4BS
WELL PLAT
747' FNL, 2150' FWL (Bottom Hole)
NE 1/4 NW 1/4 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

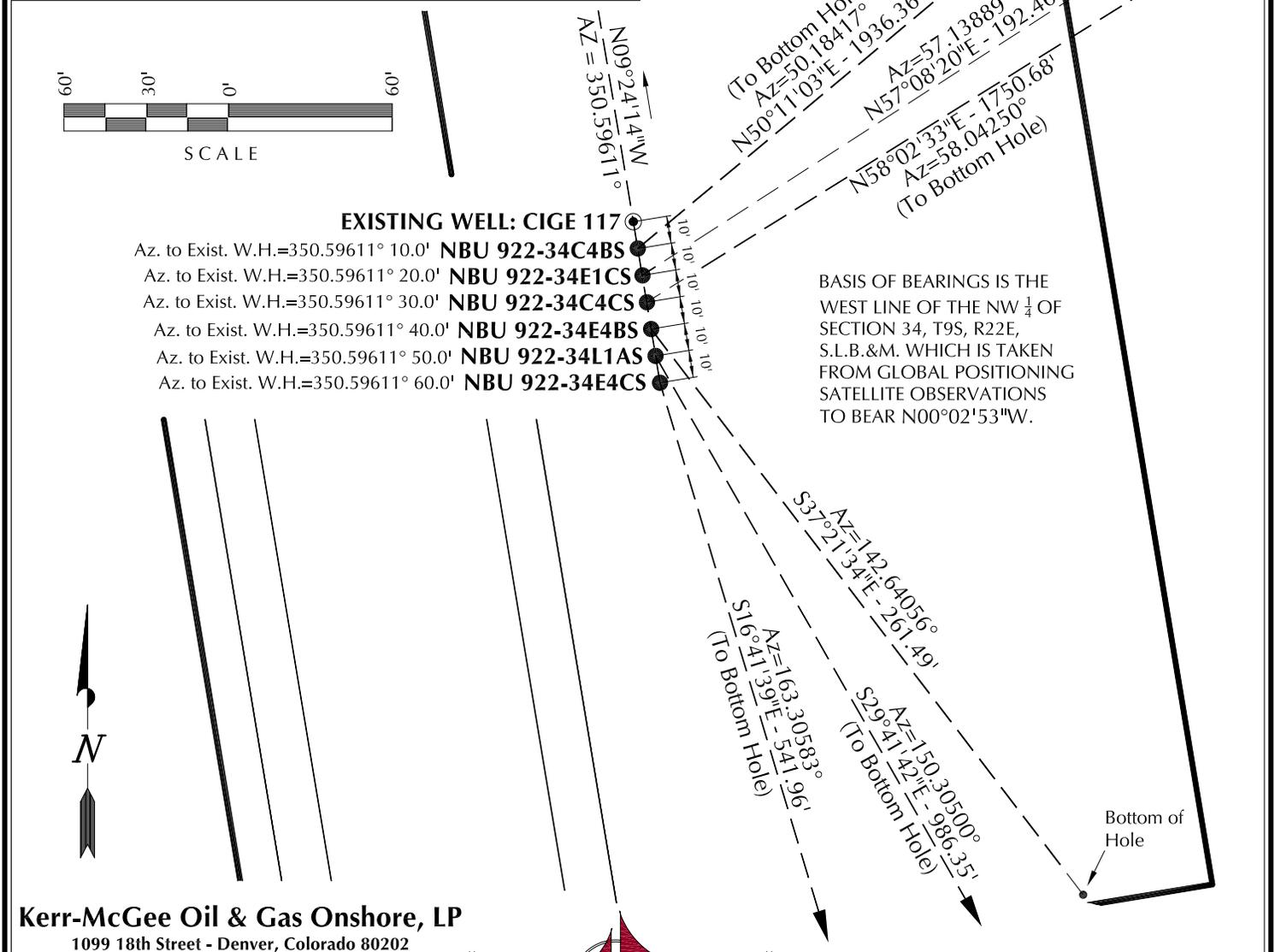
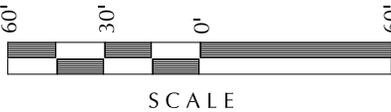
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-14-12	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 9-14-12	DRAWN BY: J.G.C.	
SCALE: 1" = 1000'		6 OF 18

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-34E4CS	39°59'39.100"	109°25'59.476"	39°59'39.225"	109°25'57.017"	2040' FNL 670' FWL	39°59'33.971"	109°25'57.479"	39°59'34.096"	109°25'55.019"	2559' FNL 825' FWL
NBU 922-34L1AS	39°59'39.198"	109°25'59.497"	39°59'39.322"	109°25'57.038"	2030' FNL 668' FWL	39°59'30.731"	109°25'53.224"	39°59'30.855"	109°25'50.766"	2406' FNL 1156' FWL
NBU 922-34E4BS	39°59'39.295"	109°25'59.518"	39°59'39.420"	109°25'57.059"	2021' FNL 666' FWL	39°59'37.241"	109°25'57.481"	39°59'37.366"	109°25'55.021"	2228' FNL 825' FWL
NBU 922-34C4CS	39°59'39.392"	109°25'59.539"	39°59'39.517"	109°25'57.080"	2011' FNL 665' FWL	39°59'48.542"	109°25'40.454"	39°59'48.667"	109°25'37.996"	1080' FNL 2151' FWL
NBU 922-34E1CS	39°59'39.490"	109°25'59.560"	39°59'39.615"	109°25'57.100"	2001' FNL 663' FWL	39°59'40.521"	109°25'57.483"	39°59'40.646"	109°25'55.023"	1896' FNL 825' FWL
NBU 922-34C4BS	39°59'39.587"	109°25'59.581"	39°59'39.712"	109°25'57.121"	1991' FNL 662' FWL	39°59'51.832"	109°25'40.469"	39°59'51.957"	109°25'38.010"	747' FNL 2150' FWL
CIGE 117	39°59'39.685"	109°25'59.602"	39°59'39.810"	109°25'57.142"	1981' FNL 660' FWL	39°59'43.577"	109°25'40.469"	39°59'43.577"	109°25'38.010"	

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 922-34E4CS	-519.1'	155.7'	NBU 922-34L1AS	-856.8'	488.6'	NBU 922-34E4BS	-207.8'	158.7'	NBU 922-34C4CS	926.6'	1485.3'
NBU 922-34E1CS	104.4'	161.7'	NBU 922-34C4BS	1239.9'	1487.3'						



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

WELL PAD - NBU 922-34E

WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-34E4CS, NBU 922-34L1AS,
NBU 922-34E4BS, NBU 922-34C4CS,
NBU 922-34E1CS & NBU 922-34C4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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

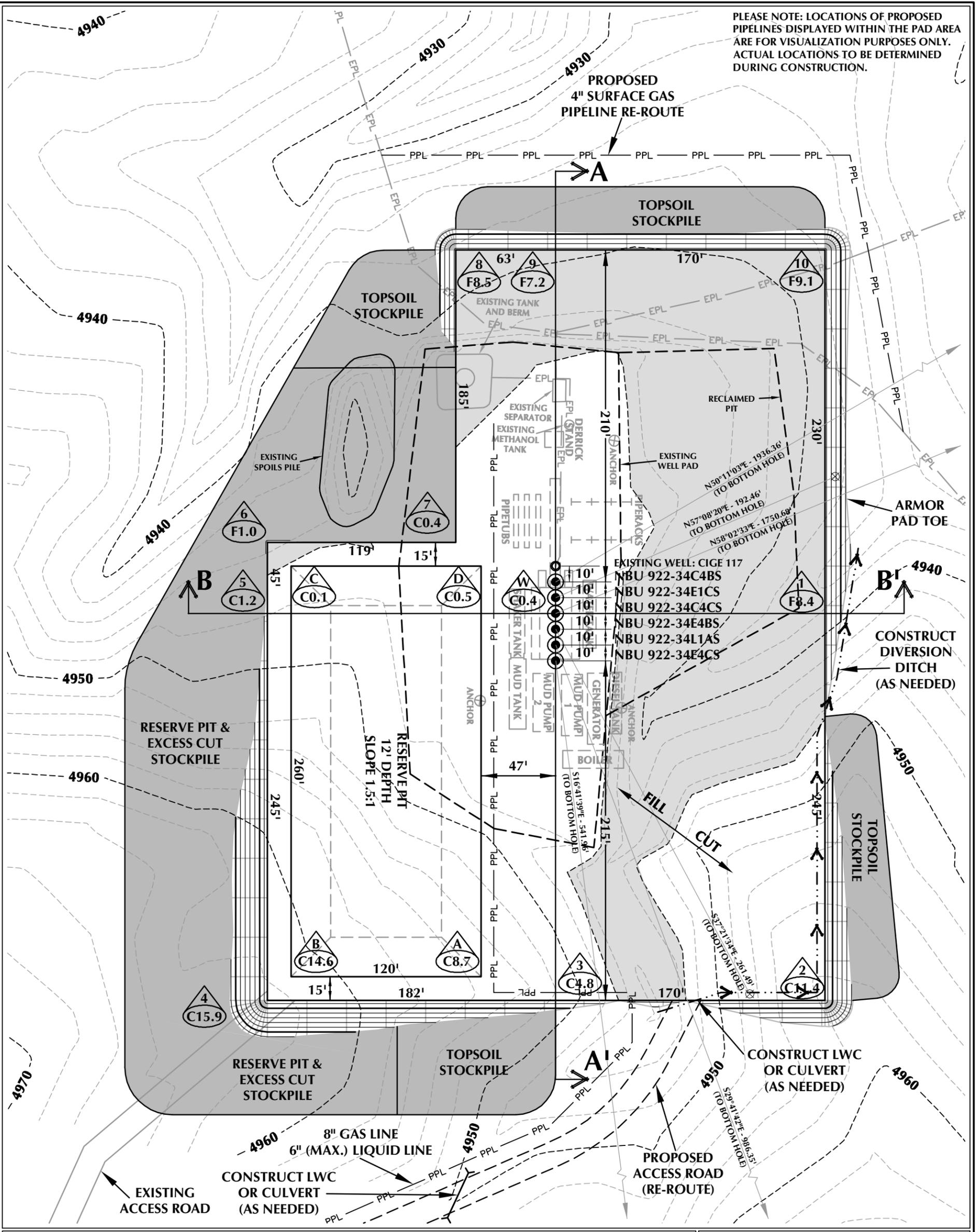
TIMBERLINE

(435) 789-1365

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

DATE SURVEYED: 9-14-12	SURVEYED BY: J.W.	SHEET NO: 7
DATE DRAWN: 9-14-12	DRAWN BY: J.G.C.	
SCALE: 1" = 60'	Date Last Revised: 9-14-12 T.J.R.	7 OF 18

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



WELL PAD - NBU 922-34E DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4947.1'
 FINISHED GRADE ELEVATION = 4946.7'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.74 ACRES
 TOTAL DISTURBANCE AREA = 5.31 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-34E
 WELL PAD - LOCATION LAYOUT
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,326 C.Y.
 TOTAL FILL FOR WELL PAD = 12,166 C.Y.
 TOPSOIL @ 6" DEPTH = 2,358 C.Y.
 EXCESS MATERIAL = 1,160 C.Y.

RESERVE PIT QUANTITIES

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

WELL PAD LEGEND

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

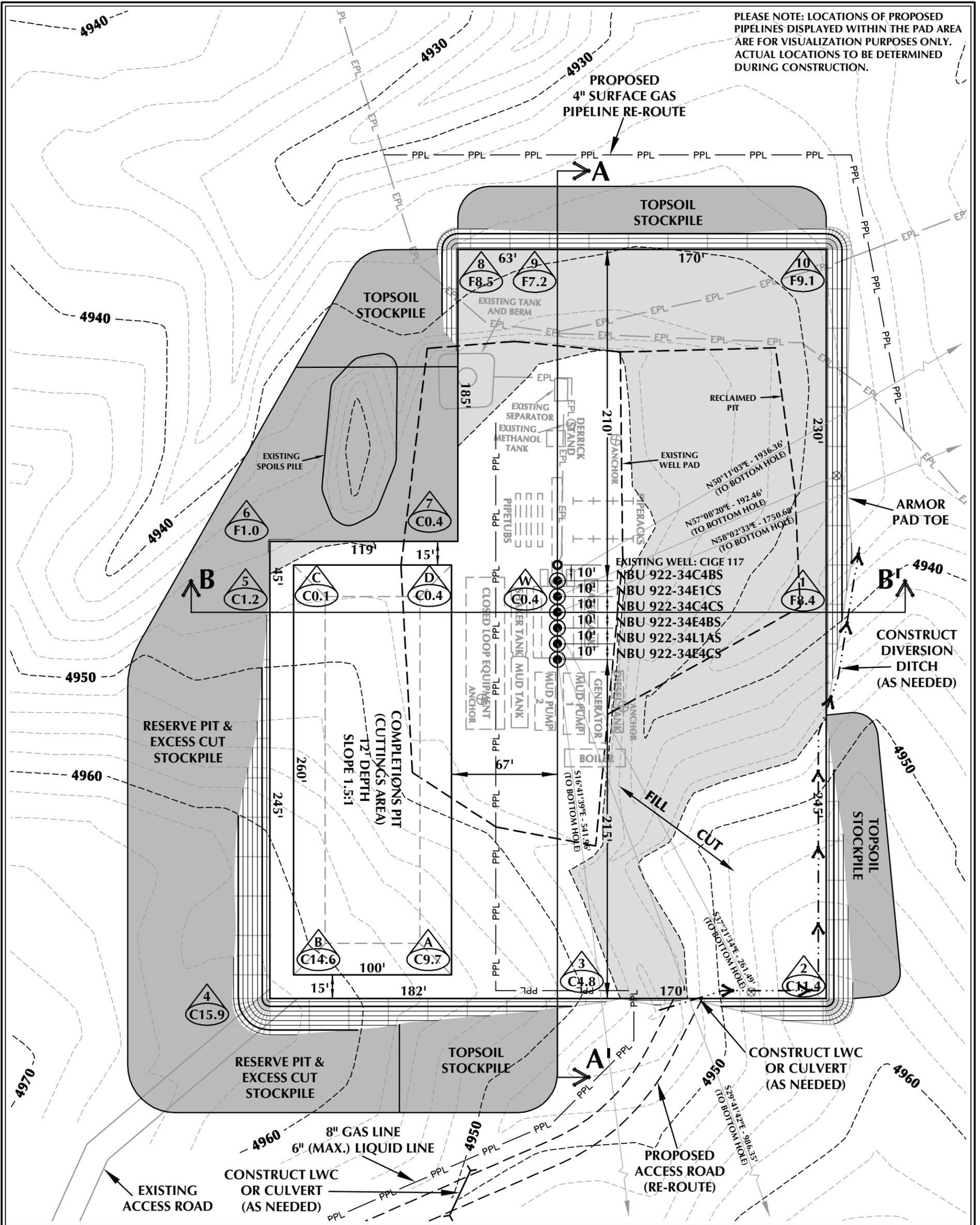


HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 7/10/12 SHEET NO:
 REVISED: JID 8 8 OF 18
 9/19/12

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

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



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

EXISTING GRADE @ CENTER OF WELL PAD = 4947.1'
 FINISHED GRADE ELEVATION = 4946.7'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.74 ACRES
 TOTAL DISTURBANCE AREA = 5.31 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-34E
 WELL PAD - LOCATION LAYOUT
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,326 C.Y.
 TOTAL FILL FOR WELL PAD = 12,166 C.Y.
 TOPSOIL @ 6" DEPTH = 2,358 C.Y.
 EXCESS MATERIAL = 1,160 C.Y.

COMPLETIONS PIT QUANTITIES

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

WELL PAD LEGEND

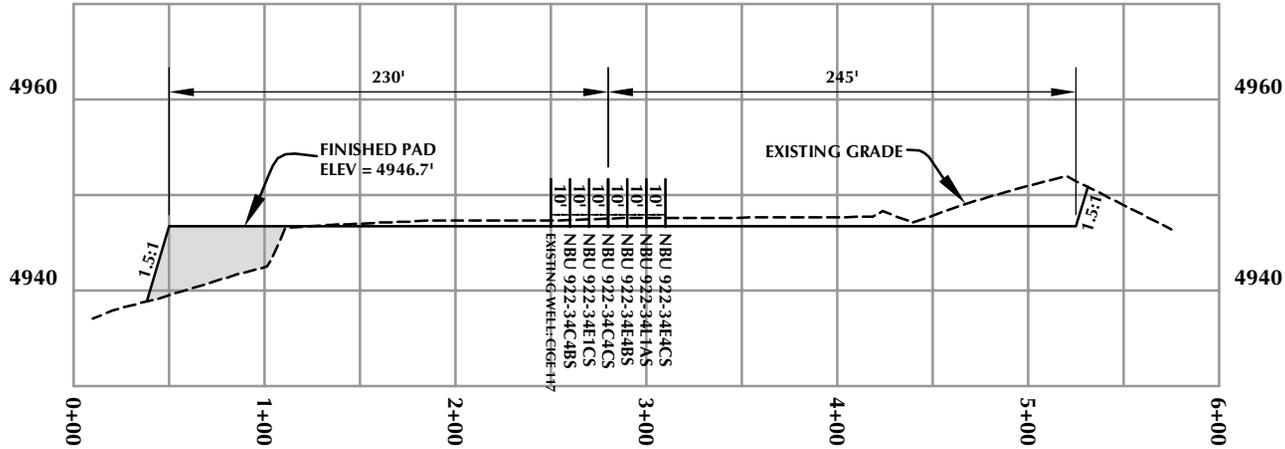
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



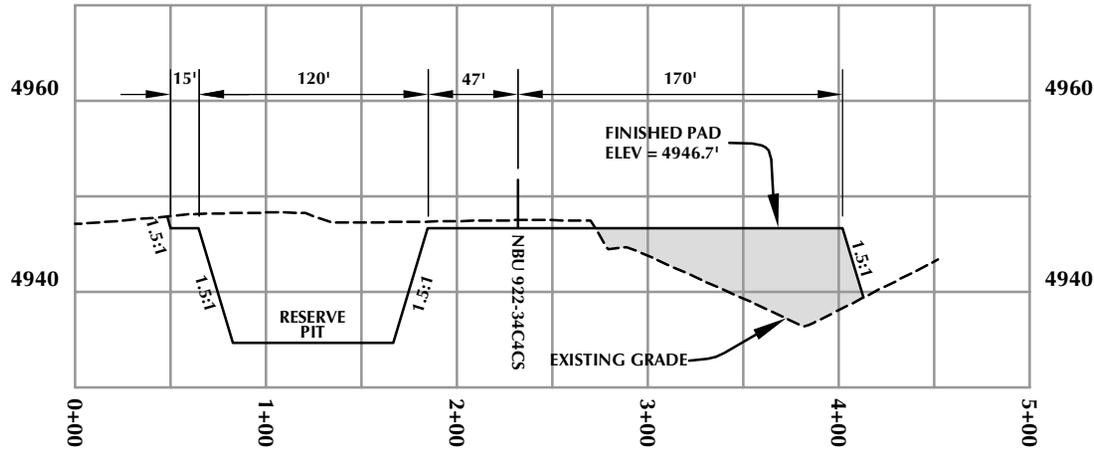
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 9/19/12 SHEET NO:
 REVISED: **8B** 8B OF 18

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



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 922-34E

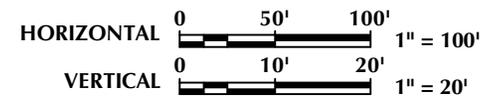
WELL PAD - CROSS SECTIONS
NBU 922-34E4CS, NBU 922-34L1AS,
NBU 922-34E4BS, NBU 922-34C4CS,
NBU 922-34E1CS & NBU 922-34C4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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

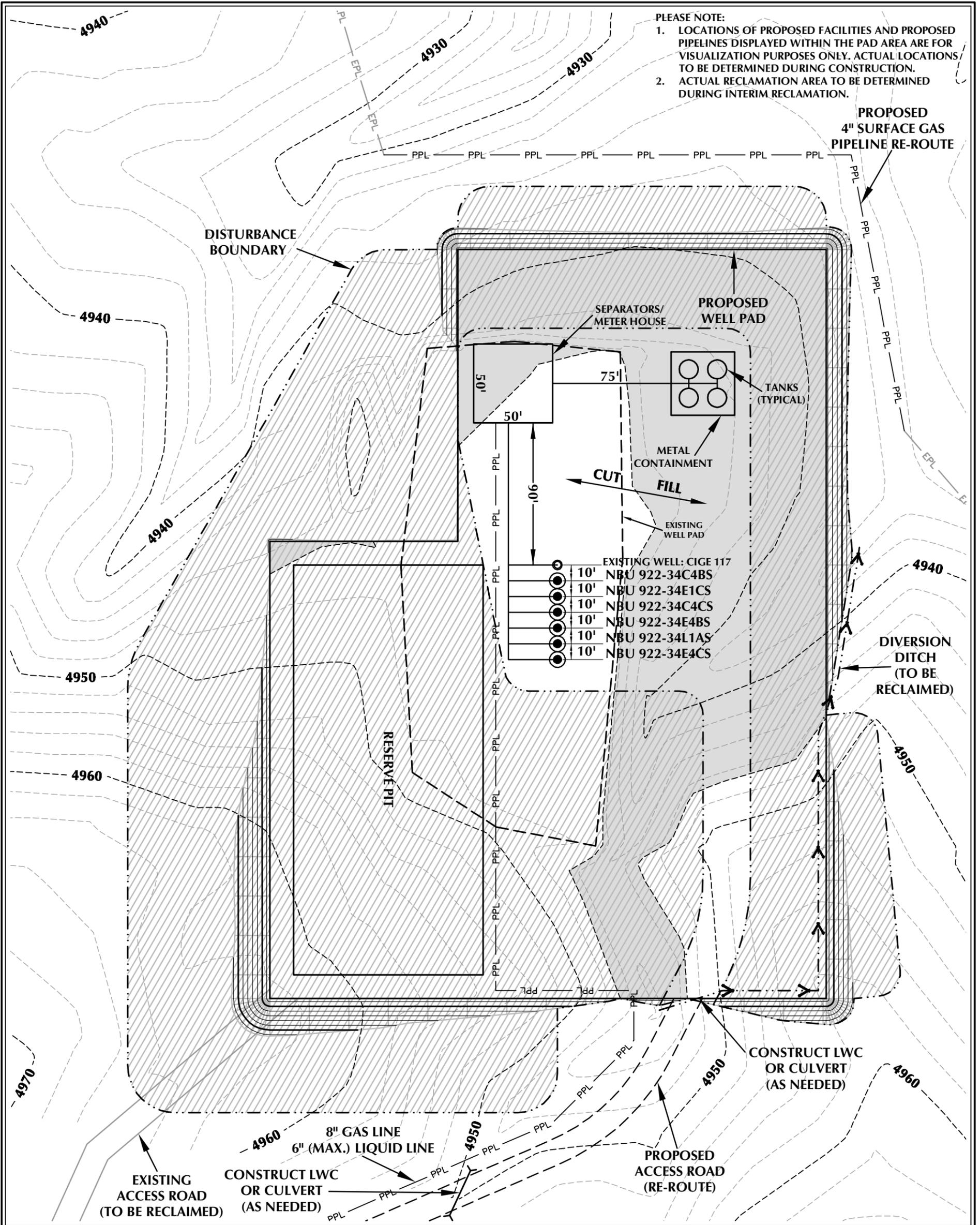
TIMBERLINE
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'	Date: 7/10/12	SHEET NO:
REVISED:	JID 9/19/12	9 9 OF 18

K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34\DWG\NBU 922-34E AT.dwg, 9/20/2012 9:19:23 PM, Jacob



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

WELL PAD - NBU 922-34E DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.31 ACRES (INCLUDING EXISTING)
 RECLAMATION AREA = 4.25 ACRES
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.06 ACRES

WELL PAD LEGEND

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



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

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

WELL PAD - NBU 922-34E

WELL PAD - RECLAMATION LAYOUT
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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

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

SCALE: 1"=60' DATE: 7/10/12 SHEET NO:
 REVISED: JID 9/19/12 **10** 10 OF 18

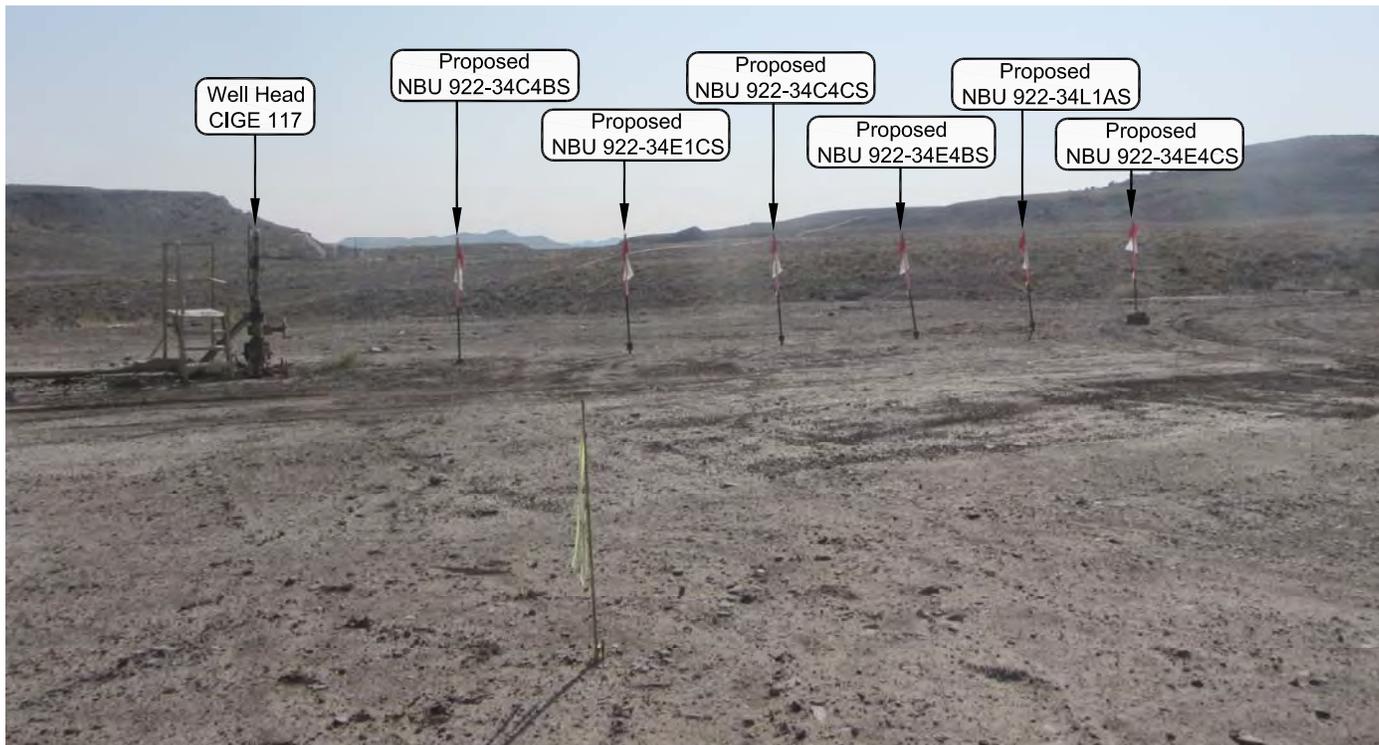


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: EASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

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

WELL PAD - NBU 922-34E

LOCATION PHOTOS
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



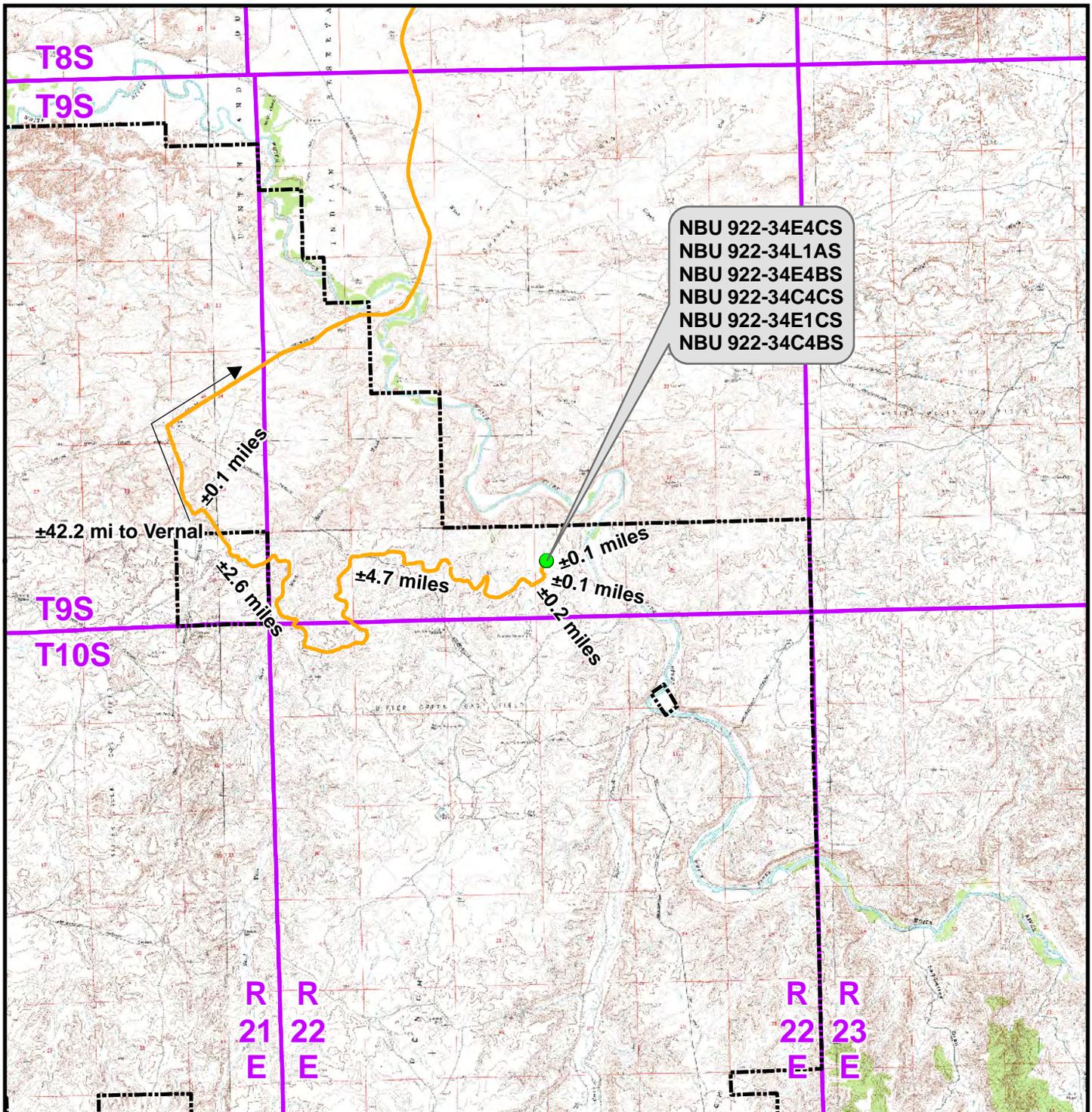
CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

TIMBERLINE

(435) 789-1365

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

DATE PHOTOS TAKEN: 9-14-12	PHOTOS TAKEN BY: J.W.	SHEET NO: 11
DATE DRAWN: 9-14-12	DRAWN BY: J.G.C.	
Date Last Revised:		11 OF 18



NBU 922-34E4CS
 NBU 922-34L1AS
 NBU 922-34E4BS
 NBU 922-34C4CS
 NBU 922-34E1CS
 NBU 922-34C4BS

File: K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34E\GIS\Maps_ABCDE\NBU_922-34E\NBU_922-34E_A.mxd, 9/14/2012 12:06:46 PM

Legend

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

Distance From Well Pad - NBU 922-34E To Unit Boundary: ±1991ft

WELL PAD - NBU 922-34E

TOPO A
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

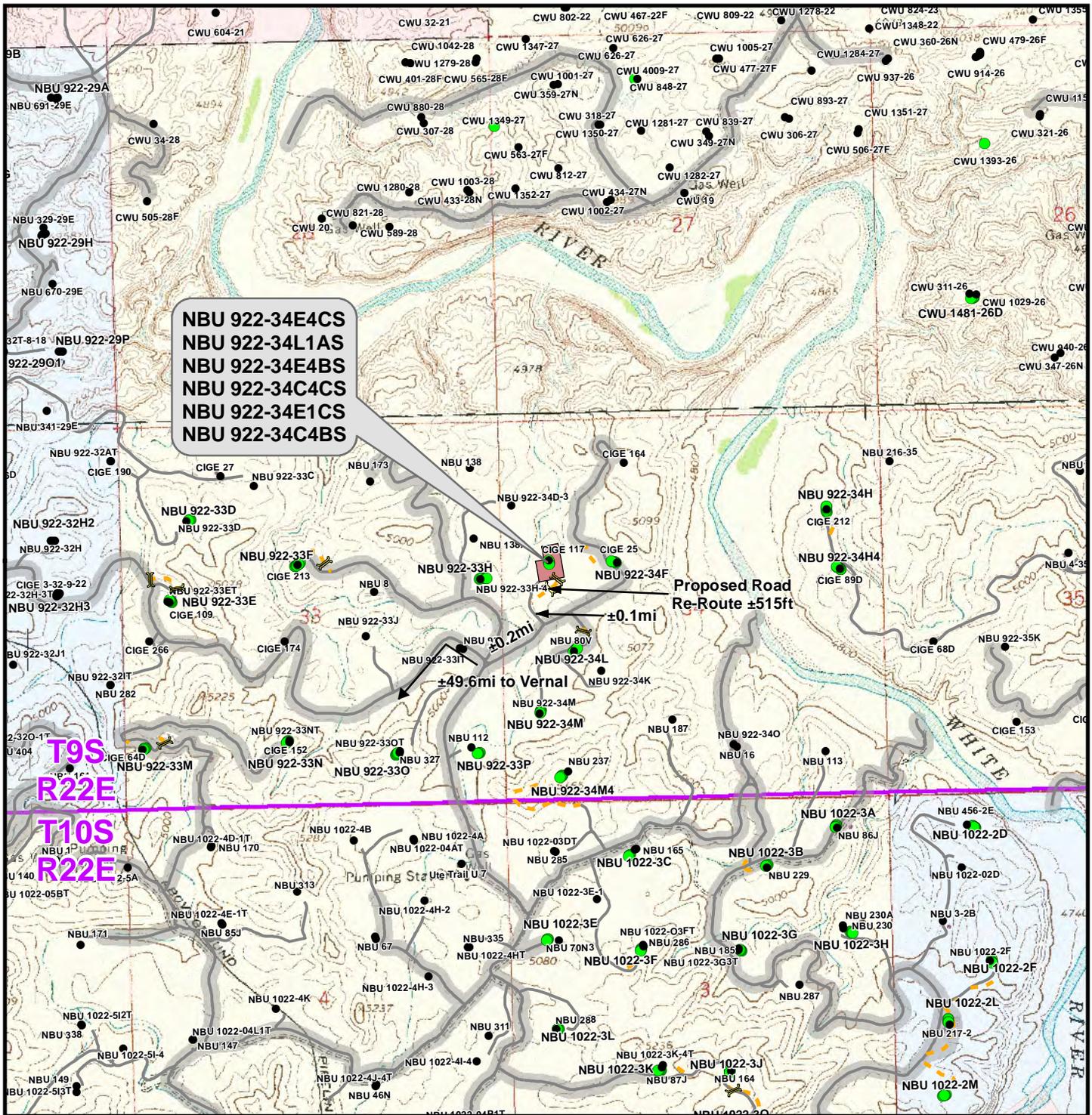
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	12 12 OF 18
DRAWN: TL	DATE: 28 June 2012	
REVISED: TL	DATE: 18 Sept 2012	



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Legend

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

Total Proposed Road Re-Route Length: ±515ft

WELL PAD - NBU 922-34E

TOPO B
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

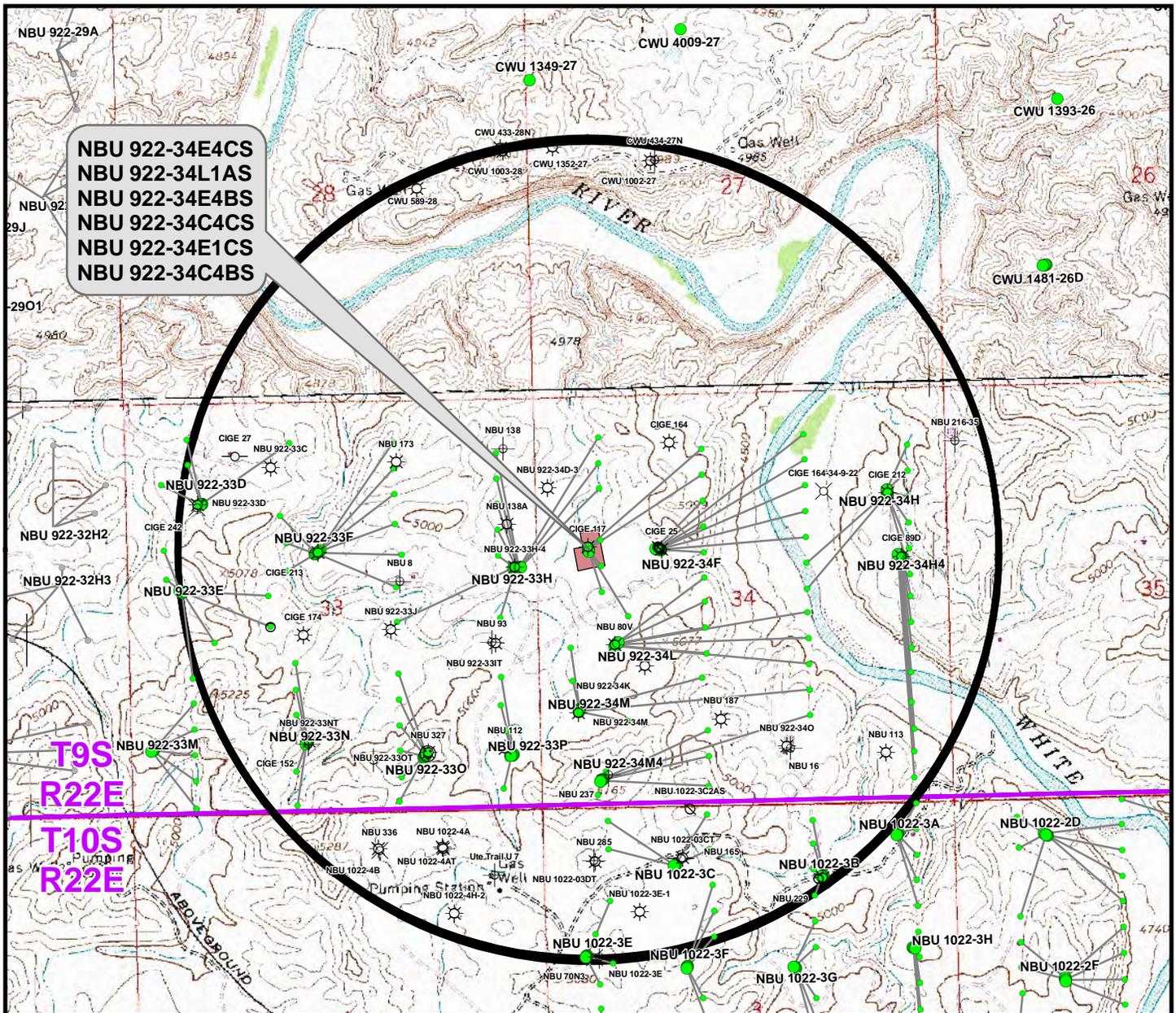
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	13
DRAWN: TL	DATE: 5 July 2012	13 OF 18	
REVISED: TL	DATE: 18 Sept 2012		



NBU 922-34E4CS
 NBU 922-34L1AS
 NBU 922-34E4BS
 NBU 922-34C4CS
 NBU 922-34E1CS
 NBU 922-34C4BS

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 922-34E4CS	CIGE 117	601ft
NBU 922-34L1AS	NBU 80V	402ft
NBU 922-34E4BS	CIGE 117	297ft
NBU 922-34C4CS	CIGE 164	593ft
NBU 922-34E1CS	CIGE 117	185ft
NBU 922-34C4BS	CIGE 164	423ft

Legend

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

WELL PAD - NBU 922-34E

TOPO C
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 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

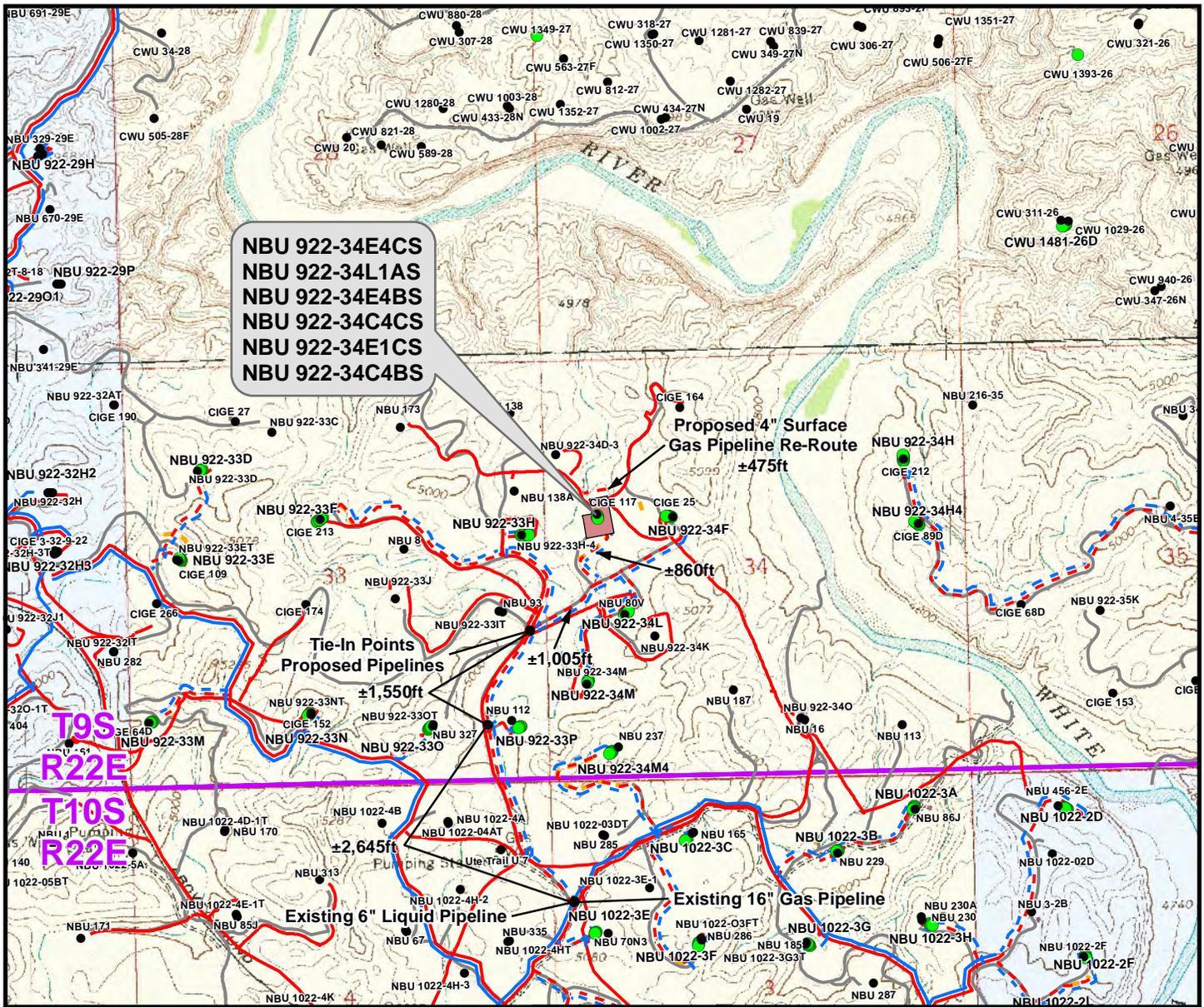
609 CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	14
DRAWN: TL	DATE: 18 Sept 2012	
REVISED:	DATE:	

SHEET NO:
14 OF 18

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NBU 922-34E4CS
 NBU 922-34L1AS
 NBU 922-34E4BS
 NBU 922-34C4CS
 NBU 922-34E1CS
 NBU 922-34C4BS

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Proposed Liquid Pipeline	Length
=====	
Buried 6" (Max.) (Separator to Edge of Pad)	±455ft
Buried 6" (Max.) (Edge of Pad to 34L Intersection)	±860ft
Buried 6" (Max.) (34L Intersection to 922-33H Intersection)	±1,005ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±2,320ft

Proposed Gas Pipeline	Length
=====	
Buried 8" (Meter House to Edge of Pad)	±455ft
Buried 8" (Edge of Pad to 34L Intersection)	±860ft
Buried 12" (34L Intersection to 922-33H Intersection)	±1,005ft
Surface 4" (Pipeline Re-Route)	±475ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±2,320ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±475ft

Legend

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

WELL PAD - NBU 922-34E

TOPO D
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 LOCATED IN SECTION 34, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

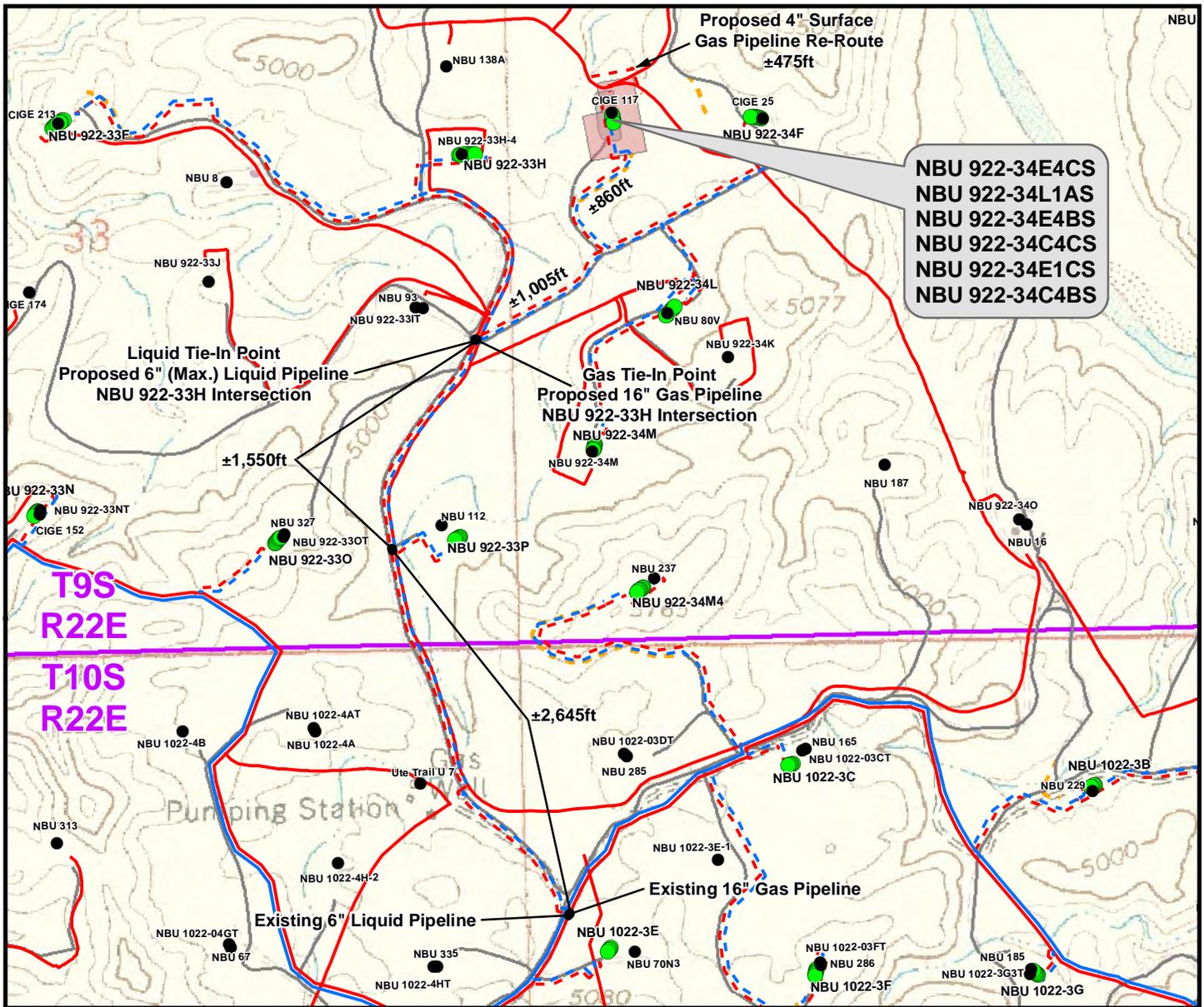
1099 18th Street
 Denver, Colorado 80202



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

SCALE: 1" = 2,000ft	NAD83 USP Central	15
DRAWN: TL	DATE: 18 Sept 2012	
REVISED:	DATE:	

SHEET NO:
15
 15 OF 18



NBU 922-34E4CS
NBU 922-34L1AS
NBU 922-34E4BS
NBU 922-34C4CS
NBU 922-34E1CS
NBU 922-34C4BS

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±455ft
Buried 6" (Max.) (Edge of Pad to 34L Intersection)	±860ft
Buried 6" (Max.) (34L Intersection to 922-33H Intersection)	±1,005ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±2,320ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±455ft
Buried 8" (Edge of Pad to 34L Intersection)	±860ft
Buried 12" (34L Intersection to 922-33H Intersection)	±1,005ft
Surface 4" (Pipeline Re-Route)	±475ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±2,320ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±475ft

Legend

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

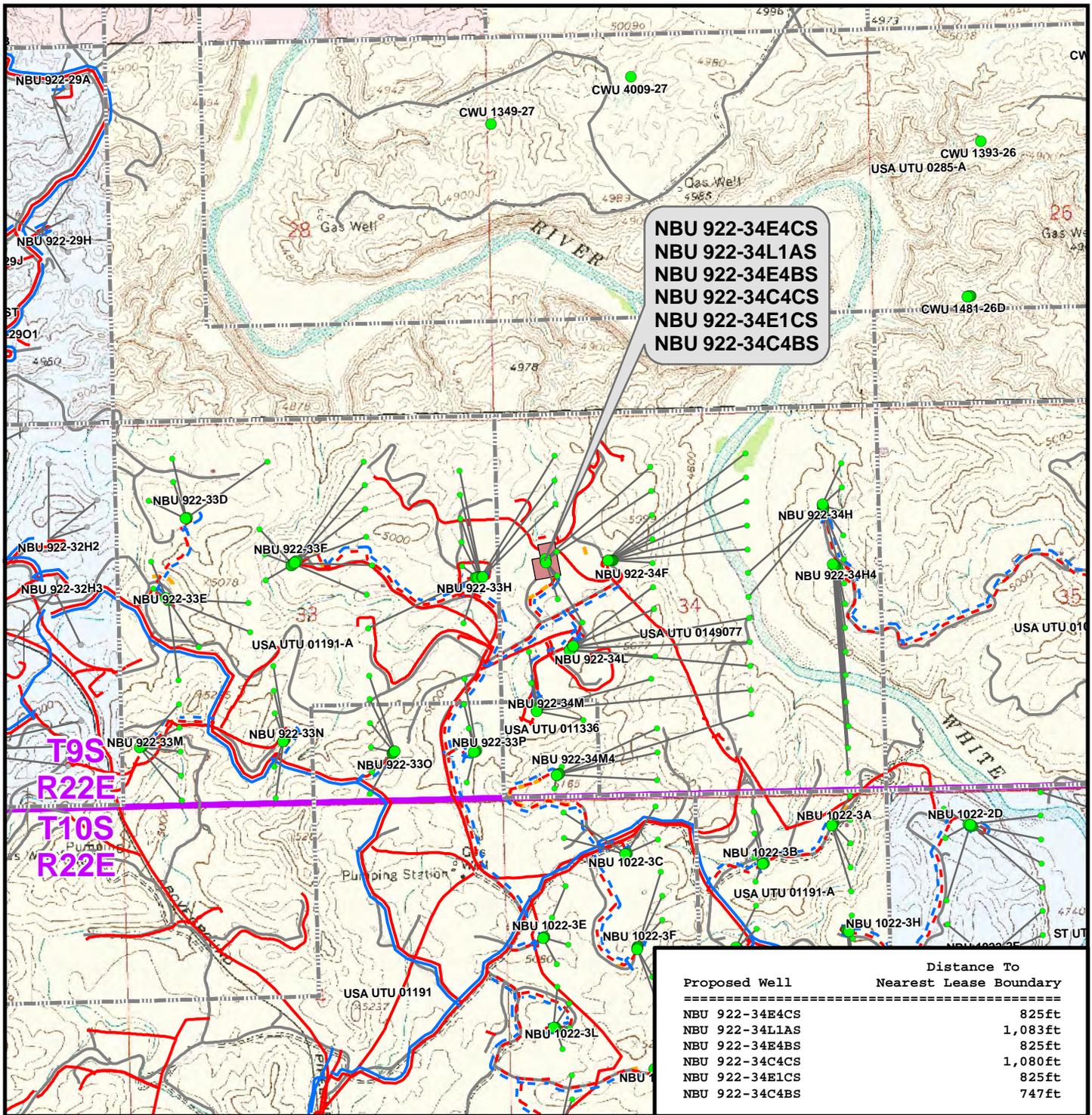
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WELL PAD - NBU 922-34E
TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-34E4CS, NBU 922-34L1AS,
NBU 922-34E4BS, NBU 922-34C4CS,
NBU 922-34E1CS & NBU 922-34C4BS
LOCATED IN SECTION 34, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

CONSULTING, LLC
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SCALE: 1" = 1,000ft	NAD83 USP Central	16 16 OF 18
DRAWN: TL	DATE: 5 July 2012	
REVISED: TL	DATE: 18 Sept 2012	



File: K:\ANADARKO\2012\2012_36_NBU_FOCUS_922-34E\GIS\Maps_ABCDENBU_922-34E.mxd, 9/21/2012 9:29:39 AM

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 922-34E

TOPO E
 NBU 922-34E4CS, NBU 922-34L1AS,
 NBU 922-34E4BS, NBU 922-34C4CS,
 NBU 922-34E1CS & NBU 922-34C4BS
 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



CONSULTING, LLC

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

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

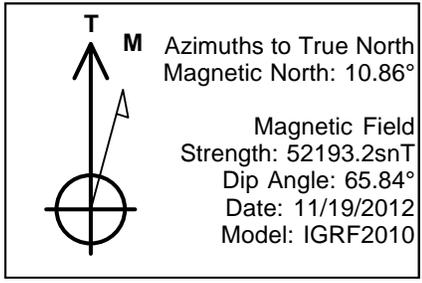
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 922-34E
WELLS – NBU 922-34E4CS, NBU 922-34L1AS,
NBU 922-34E4BS, NBU 922-34C4CS,
NBU 922-34E1CS & NBU 922-34C4BS
Section 34, T9S, R22E, S.L.B.&M.**

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 the fourth Class D County Road. Continuing in a northeasterly direction along the fourth Class D County Road approximately 0.2 miles to a service road to the northwest. Exit left and proceed in a northwesterly direction along the service road approximately 0.1 miles to the proposed access road. Follow road flags in a northeasterly direction approximately 515 feet to the proposed well location.

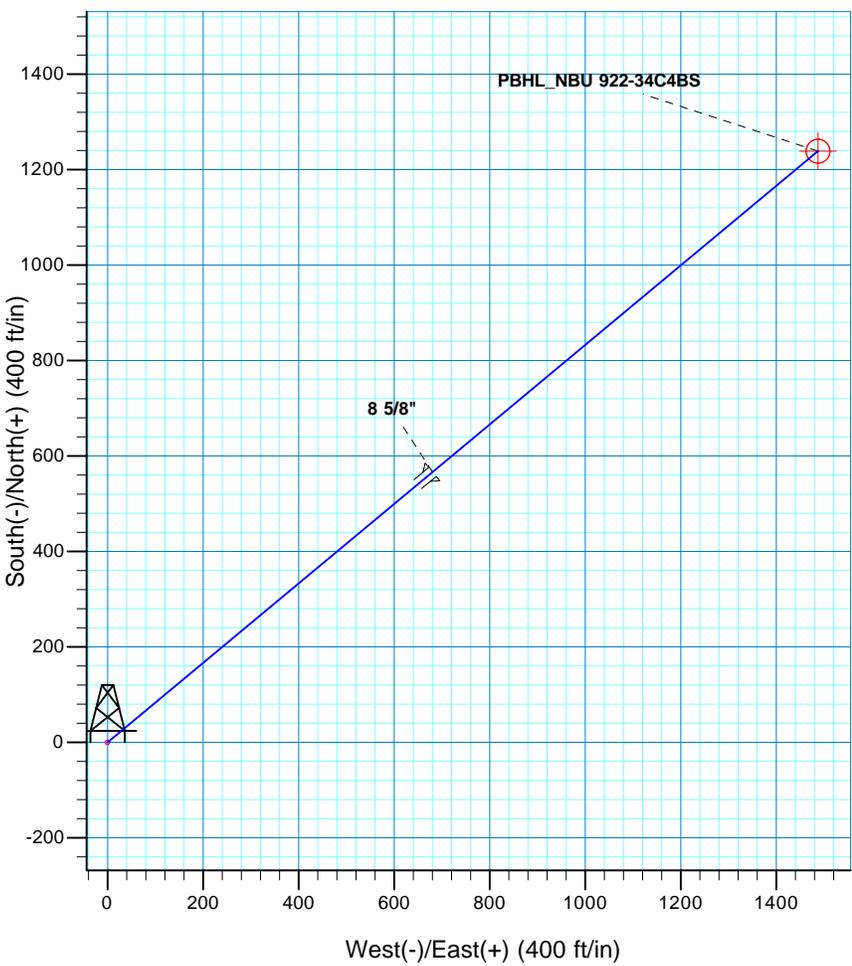
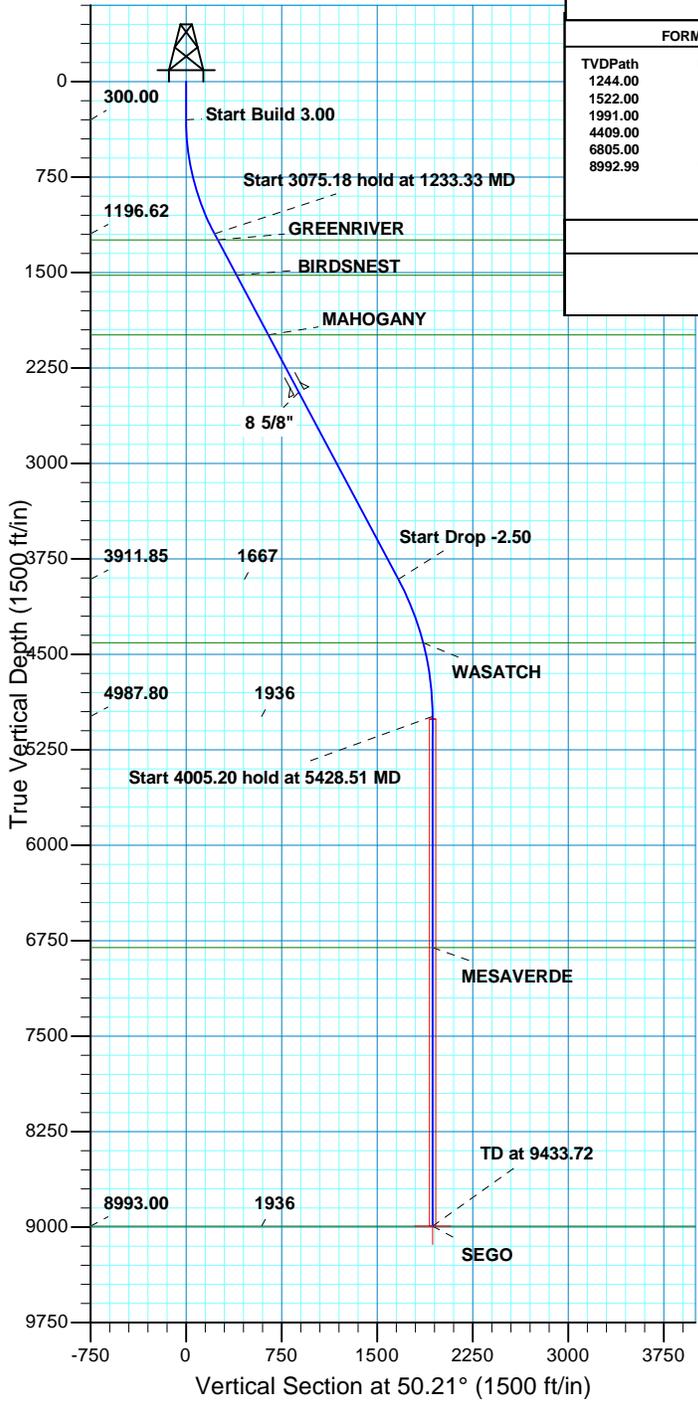
Total distance from Vernal, Utah to the proposed well location is approximately 50.0 miles in a southerly direction.



WELL DETAILS: NBU 922-34C4BS								
GL 4947 & KB 4 @ 4951.00ft (ASSUMED)								
+N-S	+E-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14527852.71	2079444.26	39.994365	-109.432534			
DESIGN TARGET DETAILS								
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8993.00	1238.74	1487.21	14529117.41	2080909.45	39.997766	-109.427225	Circle (Radius: 25.00)
- plan hits target center								



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	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1233.33	28.00	50.21	1196.62	143.07	171.77	3.00	50.21	223.55		
4308.51	28.00	50.21	3911.85	1067.05	1281.08	0.00	0.00	1667.26		
5428.51	0.00	0.00	4987.80	1238.74	1487.21	2.50	180.00	1935.53		
9433.72	0.00	0.00	8993.00	1238.74	1487.21	0.00	0.00	1935.53	PBHL_NBU 922-34C4BS	
FORMATION TOP DETAILS										
TVDPath	MDPath	Formation								
1244.00	1286.99	GREENRIVER								
1522.00	1601.84	BIRDSNEST								
1991.00	2133.02	MAHOGANY								
4409.00	4843.38	WASATCH								
6805.00	7245.72	MESAVERDE								
8992.99	9433.71	SEGO								
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: SCETION 34 T9S R22E										
System Datum: Mean Sea Level										
CASING DETAILS										
TVD	MD	Name	Size							
2441.00	2642.68	8 5/8"	8.625							



RECEIVED :



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 922-34E PAD

NBU 922-34C4BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

19 November, 2012





Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Site:	NBU 922-34E PAD	North Reference:	True
Well:	NBU 922-34C4BS	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 922-34E PAD, SCETION 34 T9S R22E				
Site Position:	Northing:	14,527,852.72 usft	Latitude:	39.994365	
From:	Lat/Long	Easting:	2,079,444.26 usft	Longitude:	-109.432534
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.01 °

Well	NBU 922-34C4BS, 1991 FNL 662 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,527,852.72 usft	Latitude:	39.994365
	+E/-W	0.00 ft	Easting:	2,079,444.26 usft	Longitude:	-109.432534
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,947.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/19/12	10.86	65.84	52,193

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	50.21

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	
1,233.33	28.00	50.21	1,196.62	143.07	171.77	3.00	3.00	0.00	50.21	
4,308.51	28.00	50.21	3,911.85	1,067.05	1,281.08	0.00	0.00	0.00	0.00	
5,428.51	0.00	0.00	4,987.80	1,238.74	1,487.21	2.50	-2.50	0.00	180.00	
9,433.72	0.00	0.00	8,993.00	1,238.74	1,487.21	0.00	0.00	0.00	0.00	PBHL_NBU 922-34C



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Site:	NBU 922-34E PAD	North Reference:	True
Well:	NBU 922-34C4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00										
400.00	3.00	50.21	399.95	1.68	2.01	2.62	3.00	3.00	3.00	0.00
500.00	6.00	50.21	499.63	6.70	8.04	10.46	3.00	3.00	3.00	0.00
600.00	9.00	50.21	598.77	15.05	18.07	23.51	3.00	3.00	3.00	0.00
700.00	12.00	50.21	697.08	26.71	32.07	41.74	3.00	3.00	3.00	0.00
800.00	15.00	50.21	794.31	41.65	50.00	65.08	3.00	3.00	3.00	0.00
900.00	18.00	50.21	890.18	59.82	71.82	93.48	3.00	3.00	3.00	0.00
1,000.00	21.00	50.21	984.43	81.19	97.47	126.85	3.00	3.00	3.00	0.00
1,100.00	24.00	50.21	1,076.81	105.67	126.87	165.12	3.00	3.00	3.00	0.00
1,200.00	27.00	50.21	1,167.06	133.22	159.95	208.16	3.00	3.00	3.00	0.00
1,233.33	28.00	50.21	1,196.62	143.07	171.77	223.55	3.00	3.00	3.00	0.00
Start 3075.18 hold at 1233.33 MD										
1,286.99	28.00	50.21	1,244.00	159.20	191.13	248.74	0.00	0.00	0.00	0.00
GREENRIVER										
1,300.00	28.00	50.21	1,255.49	163.11	195.82	254.85	0.00	0.00	0.00	0.00
1,400.00	28.00	50.21	1,343.78	193.15	231.89	301.80	0.00	0.00	0.00	0.00
1,500.00	28.00	50.21	1,432.08	223.20	267.97	348.75	0.00	0.00	0.00	0.00
1,600.00	28.00	50.21	1,520.37	253.24	304.04	395.69	0.00	0.00	0.00	0.00
1,601.84	28.00	50.21	1,522.00	253.80	304.71	396.56	0.00	0.00	0.00	0.00
BIRDSNEST										
1,700.00	28.00	50.21	1,608.67	283.29	340.11	442.64	0.00	0.00	0.00	0.00
1,800.00	28.00	50.21	1,696.96	313.34	376.19	489.59	0.00	0.00	0.00	0.00
1,900.00	28.00	50.21	1,785.26	343.38	412.26	536.53	0.00	0.00	0.00	0.00
2,000.00	28.00	50.21	1,873.55	373.43	448.33	583.48	0.00	0.00	0.00	0.00
2,100.00	28.00	50.21	1,961.85	403.47	484.41	630.43	0.00	0.00	0.00	0.00
2,133.02	28.00	50.21	1,991.00	413.40	496.32	645.93	0.00	0.00	0.00	0.00
MAHOGANY										
2,200.00	28.00	50.21	2,050.14	433.52	520.48	677.38	0.00	0.00	0.00	0.00
2,300.00	28.00	50.21	2,138.44	463.57	556.55	724.32	0.00	0.00	0.00	0.00
2,400.00	28.00	50.21	2,226.73	493.61	592.62	771.27	0.00	0.00	0.00	0.00
2,500.00	28.00	50.21	2,315.02	523.66	628.70	818.22	0.00	0.00	0.00	0.00
2,600.00	28.00	50.21	2,403.32	553.71	664.77	865.16	0.00	0.00	0.00	0.00
2,642.68	28.00	50.21	2,441.00	566.53	680.16	885.20	0.00	0.00	0.00	0.00
8 5/8"										
2,700.00	28.00	50.21	2,491.61	583.75	700.84	912.11	0.00	0.00	0.00	0.00
2,800.00	28.00	50.21	2,579.91	613.80	736.92	959.06	0.00	0.00	0.00	0.00
2,900.00	28.00	50.21	2,668.20	643.84	772.99	1,006.01	0.00	0.00	0.00	0.00
3,000.00	28.00	50.21	2,756.50	673.89	809.06	1,052.95	0.00	0.00	0.00	0.00
3,100.00	28.00	50.21	2,844.79	703.94	845.14	1,099.90	0.00	0.00	0.00	0.00
3,200.00	28.00	50.21	2,933.09	733.98	881.21	1,146.85	0.00	0.00	0.00	0.00
3,300.00	28.00	50.21	3,021.38	764.03	917.28	1,193.79	0.00	0.00	0.00	0.00
3,400.00	28.00	50.21	3,109.68	794.08	953.35	1,240.74	0.00	0.00	0.00	0.00
3,500.00	28.00	50.21	3,197.97	824.12	989.43	1,287.69	0.00	0.00	0.00	0.00
3,600.00	28.00	50.21	3,286.27	854.17	1,025.50	1,334.64	0.00	0.00	0.00	0.00
3,700.00	28.00	50.21	3,374.56	884.21	1,061.57	1,381.58	0.00	0.00	0.00	0.00
3,800.00	28.00	50.21	3,462.86	914.26	1,097.65	1,428.53	0.00	0.00	0.00	0.00
3,900.00	28.00	50.21	3,551.15	944.31	1,133.72	1,475.48	0.00	0.00	0.00	0.00
4,000.00	28.00	50.21	3,639.45	974.35	1,169.79	1,522.42	0.00	0.00	0.00	0.00
4,100.00	28.00	50.21	3,727.74	1,004.40	1,205.87	1,569.37	0.00	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Site:	NBU 922-34E PAD	North Reference:	True
Well:	NBU 922-34C4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.00	28.00	50.21	3,816.04	1,034.45	1,241.94	1,616.32	0.00	0.00	0.00
4,300.00	28.00	50.21	3,904.33	1,064.49	1,278.01	1,663.27	0.00	0.00	0.00
4,308.51	28.00	50.21	3,911.85	1,067.05	1,281.08	1,667.26	0.00	0.00	0.00
Start Drop -2.50									
4,400.00	25.71	50.21	3,993.46	1,093.50	1,312.84	1,708.59	2.50	-2.50	0.00
4,500.00	23.21	50.21	4,084.48	1,120.00	1,344.65	1,750.00	2.50	-2.50	0.00
4,600.00	20.71	50.21	4,177.21	1,143.93	1,373.39	1,787.39	2.50	-2.50	0.00
4,700.00	18.21	50.21	4,271.49	1,165.26	1,398.99	1,820.71	2.50	-2.50	0.00
4,800.00	15.71	50.21	4,367.13	1,183.93	1,421.40	1,849.88	2.50	-2.50	0.00
4,843.38	14.63	50.21	4,409.00	1,191.19	1,430.13	1,861.24	2.50	-2.50	0.00
WASATCH									
4,900.00	13.21	50.21	4,463.96	1,199.91	1,440.59	1,874.86	2.50	-2.50	0.00
5,000.00	10.71	50.21	4,561.78	1,213.17	1,456.52	1,895.58	2.50	-2.50	0.00
5,100.00	8.21	50.21	4,660.41	1,223.70	1,469.15	1,912.02	2.50	-2.50	0.00
5,200.00	5.71	50.21	4,759.66	1,231.45	1,478.46	1,924.15	2.50	-2.50	0.00
5,300.00	3.21	50.21	4,859.35	1,236.43	1,484.44	1,931.93	2.50	-2.50	0.00
5,400.00	0.71	50.21	4,959.28	1,238.63	1,487.07	1,935.35	2.50	-2.50	0.00
5,428.51	0.00	0.00	4,987.80	1,238.74	1,487.21	1,935.53	2.50	-2.50	0.00
Start 4005.20 hold at 5428.51 MD									
5,500.00	0.00	0.00	5,059.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
5,600.00	0.00	0.00	5,159.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
5,700.00	0.00	0.00	5,259.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
5,800.00	0.00	0.00	5,359.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
5,900.00	0.00	0.00	5,459.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,000.00	0.00	0.00	5,559.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,100.00	0.00	0.00	5,659.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,200.00	0.00	0.00	5,759.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,300.00	0.00	0.00	5,859.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,400.00	0.00	0.00	5,959.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,500.00	0.00	0.00	6,059.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,600.00	0.00	0.00	6,159.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,700.00	0.00	0.00	6,259.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,800.00	0.00	0.00	6,359.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
6,900.00	0.00	0.00	6,459.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,000.00	0.00	0.00	6,559.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,100.00	0.00	0.00	6,659.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,200.00	0.00	0.00	6,759.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,245.72	0.00	0.00	6,805.00	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
MESAVERDE									
7,300.00	0.00	0.00	6,859.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,400.00	0.00	0.00	6,959.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,500.00	0.00	0.00	7,059.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,600.00	0.00	0.00	7,159.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,700.00	0.00	0.00	7,259.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,800.00	0.00	0.00	7,359.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
7,900.00	0.00	0.00	7,459.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,000.00	0.00	0.00	7,559.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,100.00	0.00	0.00	7,659.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,200.00	0.00	0.00	7,759.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,300.00	0.00	0.00	7,859.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,400.00	0.00	0.00	7,959.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,500.00	0.00	0.00	8,059.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00
8,600.00	0.00	0.00	8,159.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Site:	NBU 922-34E PAD	North Reference:	True
Well:	NBU 922-34C4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,700.00	0.00	0.00	8,259.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,359.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,459.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,559.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,659.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,759.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,859.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,959.28	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
9,433.71	0.00	0.00	8,992.99	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
SEGO										
9,433.72	0.00	0.00	8,993.00	1,238.74	1,487.21	1,935.53	0.00	0.00	0.00	
TD at 9433.72 - PBHL_NBU 922-34C4BS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_NBU 922-34C4B:	0.00	0.00	8,993.00	1,238.74	1,487.21	14,529,117.41	2,080,909.45	39.997766	-109.427225	
- hit/miss target										
- Shape										
- plan hits target center										
- Circle (radius 25.00)										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,642.68	2,441.00	8 5/8"	8.625	11.000		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,286.99	1,240.00	GREENRIVER				
1,601.84	1,518.00	BIRDSNEST				
2,133.02	1,987.00	MAHOGANY				
4,843.38	4,405.00	WASATCH				
7,245.72	6,801.00	MESAVERDE				
9,433.71	8,988.99	SEGO		0.00		



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 4947 & KB 4 @ 4951.00ft (ASSUMED)
Site:	NBU 922-34E PAD	North Reference:	True
Well:	NBU 922-34C4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 3.00	
1,233.33	1,196.62	143.07	171.77	Start 3075.18 hold at 1233.33 MD	
4,308.51	3,911.85	1,067.05	1,281.08	Start Drop -2.50	
5,428.51	4,987.80	1,238.74	1,487.21	Start 4005.20 hold at 5428.51 MD	
9,433.72	8,993.00	1,238.74	1,487.21	TD at 9433.72	

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-34E PAD**

<u>API #</u>	<u>NBU 922-34C4BS</u>	
	Surface: 1991 FNL / 662 FWL	SWNW
	BHL: 747 FNL / 2150 FWL	NENW
<u>API #4304750603</u>	<u>NBU 922-34C4CS</u>	
	Surface: 2011 FNL / 665 FWL	SWNW
	BHL: 1080 FNL / 2151 FWL	NENW
<u>API #</u>	<u>NBU 922-34E1CS</u>	
	Surface: 2001 FNL / 663 FWL	SWNW
	BHL: 1896 FNL / 825 FWL	SWNW
<u>API #</u>	<u>NBU 922-34E4BS</u>	
	Surface: 2021 FNL / 666 FWL	SWNW
	BHL: 2228 FNL / 825 FWL	SWNW
<u>API #</u>	<u>NBU 922-34E4CS</u>	
	Surface: 2040 FNL / 670 FWL	SWNW
	BHL: 2559 FNL / 825 FWL	SWNW
<u>API #</u>	<u>NBU 922-34L1AS</u>	
	Surface: 2030 FNL / 668 FWL	SWNW
	BHL: 2406 FSL / 1156 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.

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"

±515' (0.1 miles) – Section 34 T9S R22E (SW/4 NW/4) – On-lease UTU-0149077, from the edge of pad to the T-intersection in SW/4 NW/4. Please refer to Topo B.

C. Location of Existing Wells:

Please refer to Topo C for existing wells.

D. Location of Existing and/or Proposed Facilities:

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

This pad will expand the existing pad for the CIGE 117, 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 ±6,515' and the individual segments are broken up as follows:

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

- ±455' (0.1 miles) – Section 34 T9S R22E (SW/4 NW/4) – On-lease UTU-0149077, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±860' (0.2 miles) – Section 34 T9S R22E (SW/4 NW/4) – On-lease UTU-0149077, BLM surface, New 8" 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 . Please refer to Exhibit A, Line 16.
- ±1,005' (0.2 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 922-34F, NBU 922-34L and NBU 922-34M Pads. Please refer to Exhibit A, Line 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 ±6,515' and the individual segments are broken up as follows:

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

- ±455' (0.1 miles) – Section 34 T9S R22E (SW/4 NW/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.
- ±860' (0.2 miles) – Section 34 T9S R22E (SW/4 NW/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 . Please refer to Exhibit B, Line 16.
- ±1,005' (0.2 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 922-34F, NBU 922-34L and NBU 922-34M Pads. Please refer to Exhibit B, Line 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 922-34F, NBU 922-34L, NBU 922-34M and NBU 922-33P Pads. Please refer to Exhibit B, Line 10.

Pipeline Gathering Construction

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

The Anadarko Completions Transportation System (ACTS) information:

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

Please refer to Exhibit C for ACTS Lines

E. Location and Types of Water Supply:

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

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

F. Construction Materials:

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

G. Methods for Handling Waste:

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

Materials Management

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

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

J. Plans for Surface Reclamation:

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

Interim Reclamation

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

Final Reclamation

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

Measures Common to Interim and Final Reclamation

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

Weed Control

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

Monitoring

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

K. Surface/Mineral Ownership:

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

L. Other Information:

Cultural and Paleontological Resources

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

Resource Reports:

A Class I literature survey 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.

NBU 922-34C4BS / NBU 922-34C4CS / NBU 922-34E1CS /
NBU 922-34E4BS / NBU 922-34E4CS / NBU 922-34L1AS

Surface Use Plan of Operations
6 of 6

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

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

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

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

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

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

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

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



Gina T. Becker

November 20, 2012

Date

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

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
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(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

RECEIVED: January 15, 2013

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	

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 -0700

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

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

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/3/2013

API NO. ASSIGNED: 43047534870000

WELL NAME: NBU 922-34C4BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: SWNW 34 090S 220E

Permit Tech Review:

SURFACE: 1991 FNL 0662 FWL

Engineering Review:

BOTTOM: 0747 FNL 2150 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99430

LONGITUDE: -109.43316

UTM SURF EASTINGS: 633759.00

NORTHINGS: 4428300.00

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



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 922-34C4BS
API Well Number: 43047534870000
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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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

DEC 04 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER BLM

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0149077
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE		7. If Unit or CA Agreement, Name and No. 891008900A
Contact: GINA T BECKER Email: GINA.BECKER@ANADARKO.COM		8. Lease Name and Well No. NBU 922-34C4BS
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086	9. API Well No. 43-047-53487
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWNW 1991FNL 662FWL 39.994330 N Lat, 109.433217 W Lon At proposed prod. zone NENW 747FNL 2150FWL 39.997731 N Lat, 109.427908 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 50 MILES SOUTHEAST OF VERNAL, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 34 T9S R22E Mer SLB SME: BLM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 747	16. No. of Acres in Lease 600.00	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 423	19. Proposed Depth 9434 MD 8993 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4947 GL	22. Approximate date work will start 07/01/2012	17. Spacing Unit dedicated to this well
23. Estimated duration 60-90 DAYS		20. BLM/BIA Bond No. on file WYB000291

24. Attachments

RECEIVED
MAY 31 2013

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

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

DIV. OF OIL, GAS & MINING

25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	Date 12/04/2012
Title REGULATORY ANALYST II		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date MAY 24 2013
Title Assistant Field Manager Lands & Mineral Resources		
Office VERNAL FIELD OFFICE		

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

CONDITIONS OF APPROVAL ATTACHED

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

Additional Operator Remarks (see next page)

Electronic Submission #161595 verified by the BLM Well Information System
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal
Committed to AFMSS for processing by JHNETTA MAGEE on 12/13/2012 (13JM0138AE)

NOTICE OF APPROVAL

** BLM REVISED **

JHNETTA MAGEE



**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:	SWNW, Sec. 34, T9S, R22E
Well No:	NBU 922-34C4BS	Lease No:	UTU-0149077
API No:	43-047-53487	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.
- 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 (¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
PHONE NUMBER: 720 929-6582	8. WELL NAME and NUMBER: NBU 922-34C4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1991 FNL 0662 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 34 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047534870000
	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/30/2014	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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

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

Date: November 18, 2013

By: 

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/14/2013	



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 43047534870000

API: 43047534870000

Well Name: NBU 922-34C4BS

Location: 1991 FNL 0662 FWL QTR SWNW 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.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077
		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 922-34C4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047534870000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1991 FNL 0662 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW 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	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 11/26/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER	
	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Spud well 11/26/2013 @ 10:00. 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 12/14/2013.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 02, 2013		
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 12/2/2013

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 922-34C4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047534870000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6114
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1991 FNL 0662 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 34 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/2/2014	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Started completing the well. Well TD at 9,390 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 April 02, 2014

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 4/2/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0149077	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 922-34C4BS	
9. API NUMBER: 43047534870000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well	3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	PHONE NUMBER: 720 929-6100
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1991 FNL 0662 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 34 Township: 09.0S Range: 22.0E Meridian: S	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/7/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The NBU 922-34C4BS was placed on production 05/07/2014 after a new well completion. Producing from the MESAVERDE.

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

FOR RECORD ONLY

May 09, 2014

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 5/9/2014	

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** Contact: KAY KELLY
 Email: kay.kelly@anadarko.com

8. Lease Name and Well No.
NBU 922-34C4BS

3. Address **P.O. BOX 173779 DENVER, CO 82017** 3a. Phone No. (include area code)
 Ph: 720-929-6000

9. API Well No. **43-047-53487**

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
 At surface **SWNW 1991FNL 662FWL 39.994330 N Lat, 109.433217 W Lon**
 At top prod interval reported below **NENW 739FNL 2147FWL**
 At total depth **NENW 774FNL 2152FWL**

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 **11/26/2013** 15. Date T.D. Reached **02/20/2014** 16. Date Completed **05/07/2014**
 D & A Ready to Prod.

17. Elevations (DF, KB, RT, GL)*
4965 KB

18. Total Depth: MD **9390** TVD **8998** 19. Plug Back T.D.: MD **9328** TVD **8937** 20. Depth Bridge Plug Set: MD **MD** TVD **TVD**

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

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

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J55	28.0	18	2593		800		0	
7.875	4.500 I-80	11.6	18	9376		1666		1888	

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	8779							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	7260	9242	7260 TO 9242	0.400	192	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
7260 TO 9242	PUMP 10,200 BBLs SLICKWATER, 48 BBLs 15% HCL ACID, 211,325 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
05/07/2014	05/12/2014	24	→	41.0	2837.0	0.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1791	2485.0	→	41	2837	0		PGW	

28a. Production - Interval B

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

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

ELECTRONIC SUBMISSION #247135 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVARDE	1179 1552 2091 4758 7245

32. Additional remarks (include plugging procedure):

The first 210 ft. of the surface hole was drilled with a 12 1/4 inch bit. The remainder of the surface hole was drilled with an 11 inch bit. DQX csg was run from surface to 4,912 ft; LTC csg was run from 4,912 ft. to 9,376 ft. Attached is the chronological well history, perforation report, and the final survey.

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 #247135 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) KAY KELLY Title SR STAFF REGULATORY SPECIALIST

Signature _____ (Electronic Submission) Date 05/28/2014

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

** ORIGINAL **

RECEIVED: May. 28, 2014

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/29/2013	9:00 - 13:30	4.50	MIRU	01	C	P	58	RIG DOWN CEMENTERS ON PREVIOUS WELL. PRE SPUD JOB SAFETY MEETING SKID RIG 20'. RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY. PRE SPUD JOB SAFETY MEETING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD. FINISH PICKING UP BHA.
	13:30 - 15:30	2.00	DRLSUR	02	B	P	58	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 2) .17 REV/GAL PICK UP 12 1/4" DRILL BIT . SPUD @ 12/13/2013 13:30. DRILL 12.25" HOLE 44' TO 210' (166' @ 83' FPH). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 900/700. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	15:30 - 17:30	2.00	DRLSUR	06	A	P	224	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT FROM 210' TO SURFACE ,CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP NOV (REED 616S) 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL GYRO TOOL, TRIP IN HOLE TO 80'
	17:30 - 18:00	0.50	DRLSUR	23		P	224	CONDUCTED SAFETY MEETING WITH CREW ON TRIPPING IN HOLE.
	18:00 - 20:00	2.00	DRLSUR	06	A	P	224	CONTINUE TO TRIP IN HOLE FROM 80' TO 210'

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:00 - 0:00	4.00	DRLSUR	02	B	P	224	DRILL 11" SURFACE HOLE FROM 210' TO 520' (310' @ 78' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1000/800. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 45/48/48 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/30/2013	0:00 - 5:30	5.50	DRLSUR	02	A	P	534	DRILL 11" SURFACE HOLE FROM 520' TO 940' (420' @ 76' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1000/800. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 45/48/48 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	23		P	954	CONDUCTED SAFETY MEETING WITH CREW ON MAKING CONNECTION.
	6:00 - 11:00	5.00	DRLSUR	02	B	P	954	DRILL 11" SURFACE HOLE FROM 940' TO 1250' (310' @ 62' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/50/50 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	11:00 - 11:30	0.50	DRLSUR	05	F	P	1264	CIRCULATE HOLE CLEAN AT 491 GPMS.
	11:30 - 17:30	6.00	DRLSUR	06	J	P	1264	PRE JOB SAFETY MEETING,TRIP OUT FROM 1250' TO SURFACE ,REMOVE GYRO PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL MWD TOOL, TRIP IN HOLE.
	17:30 - 18:00	0.50	DRLSUR	23		P	1264	CONDUCTED SAFETY MEETING WITH CREW ON DRILLING AHEAD.
	18:00 - 19:30	1.50	DRLSUR	06	A	P	1264	TRIP IN HOLE FROM 1000' TO 1250'

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:30 - 0:00	4.50	DRLSUR	02	B	P	1264	DRILL 11" SURFACE HOLE FROM 1250' TO 1400' (150' @ 33' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/50/50 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/31/2013	0:00 - 4:00	4.00	DRLSUR	02	B	P	1414	DRILL 11" SURFACE HOLE FROM 1400' TO 1480' (80' @ 20' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/50/50 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	4:00 - 5:00	1.00	DRLSUR	05	F	P	1494	CIRCULATE HOLE CLEAN AND BUILD VOLUME.
	5:00 - 5:30	0.50	DRLSUR	06	A	P	1494	PULL OUT HOLE FROM 1480 TO 1000'
	5:30 - 6:00	0.50	DRLSUR	23		P	1494	CONDUCTED SAFETY MEETING WITH CREW ON TRIPPING PIPE .
	6:00 - 11:30	5.50	DRLSUR	06	A	P	1494	CONTINUE TO TRIP OUT FROM 1000' TO SURFACE , BREAK OFF BIT #2, MAKE UP BIT #3, PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL MWD TOOL, TRIP IN HOLE TO 1310"
	11:30 - 12:30	1.00	DRLSUR	05	F	P	1494	CIRCULATE AND BUILD WATER VOLUME , BLOWING HOLE.
	12:30 - 13:00	0.50	DRLSUR	03	E	P	1494	WASH TO BOTTOM FROM 1310' TO 1480' (170' FT. FILL)
	13:00 - 17:30	4.50	DRLSUR	02	B	P	1494	DRILL 11" SURFACE HOLE FROM 1480' TO 1700' (220' @ 49' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/60/60 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:30 - 18:00	0.50	DRLSUR	23		P	1714	CONDUCTED SAFETY MEETING WITH CREW ON OPERATING WINCH LINE.
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1714	DRILL 11" SURFACE HOLE FROM 1700' TO 2060' (360' @ 60' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/60/60 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/1/2014	0:00 - 5:30	5.50	DRLSUR	02	B	P	2074	DRILL 11" SURFACE HOLE FROM 2060' TO 2330' (270' @ 49' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/60/60 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	02	B	P	2344	CONDUCTED SAFETY MEETING WITH CREW ON MAKING CONNECTION
	6:00 - 11:00	5.00	DRLSUR	02	B	P	2344	DRILL 11" SURFACE HOLE FROM 2330' TO 2605' TD (275' @ 55' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1200/1000. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/60/60 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	11:00 - 13:00	2.00	DRLSUR	05	F	P	2619	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 3-400 BBL UPRIGHT'S FULL AND 3-400 BBL UPRIGHTS EMPTY, 1,000 BBL OF FRESH WATER ON LOCATION FOR CEMENT JOB.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:00 - 17:30	4.50	DRLSUR	06	A	P	2619	PRE JOB SAFETY MEETING, PULL OUT HOLE FROM 2,605' TO SURFACE. BREAK MWD AND DIRECTIONAL TOOLS , 11" BIT AND LAY ALL OUT SAME. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN.
	17:30 - 18:00	0.50	CSGSUR	23		P	2619	CONDUCTED SAFETY MEETING WITH CREW ON FIRST DAY BACK AND RUNNING CASING.
	18:00 - 18:30	0.50	CSGSUR	12	A	P	2619	RIG UP CASING EQUIPMENT AND TOOLS.
	18:30 - 21:30	3.00	CSGSUR	12	C	P	2619	RUN 8 5/5" SURFACE CASING AS FOLLOW: 58 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2575' KB. SET TOP OF BAFFLE PLATE @ 2529'.
	21:30 - 0:00	2.50	CSGSUR	12	E	P	2619	PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS AND RIG CREW. RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 2,000 PSI. PUMP 142 BBLS OF WATER AHEAD CLEARING SHOE. MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 300 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 157.7 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB. FINAL LIFT OF 235 PSI AT 3.5 BBL/MINUTE. BUMPED PLUG @ 500 PSI. HELD @ 500 PSI FOR 5 MINUTES WITHOUT BLEED OFF. FLOAT HOLD. SHUT DOWN AND WASH UP. RELEASE RIG @ 01/02/2014 12:00 AM TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX (30.7 BBLS) PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO CEMENT RETURNS TO SURFACE. SHUT DOWN AND WASH UP. WAIT 2 HOURS ON CEMENT. TOP JOB # 2 : PUMP CEMENT DOWN BACKSIDE W/ 275 SX (56.3 BBLS) CEMENT DROPPED BACK DOWN. CEMENT TO SURFACE AND HELD. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 01/02/2014 02:00)

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/2/2014	0:00 - 6:00	6.00	CSGSUR	01	A	P	2619	RIG DOWN AND PREPARE TO MOVE OUT PRO PETRO RIG AND PIPE TRAILERS.
2/16/2014	0:00 - 1:30	1.50	MIRU3	01	C	P	2619	RIG DOWN, SKID RIG 20' TO THE NBU 922-34C4BS, RIG UP
	1:30 - 3:00	1.50	PRPSPD	14	A	P	2619	NIPPLE UP BOP, INSTALL BALES & ELEVATORS, HOOK UP GAS BUSTER, HOOK UP FLOW LINE & CHOKE LINE, HOOK UP ACCUMULATOR HOSES
	3:00 - 6:00	3.00	PRPSPD	15	A	P	2619	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, 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
	6:00 - 7:00	1.00	PRPSPD	09	A	P	2619	SLIP & CUT (14 WRAPS) 77' OF DRILLING LINE
	7:00 - 7:30	0.50	PRPSPD	14	B	P	2619	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 OVERVIEW OF WELLBORE.
	7:30 - 8:00	0.50	PRPSPD	06	J	P	2619	PICK UP SCIENTIFIC MOTOR- 6 1/2", 1.5 BEND, 7/8 LOBE, 6.4 STAGE, .23 RPG MUD MOTOR, (SER #6589-NBR) MAKE UP SMITH MDI616 PDC BIT, DRESSED WITH 6 X 15 JETS, (TFA = 1.035), (SER #JH6064) PICK UP MONEL DRILL COLLARS & INSTALL MWD TOOL, ORIENT & SCRIBE TOOLS
	8:00 - 9:00	1.00	PRPSPD	06	A	P	2619	PICK UP HEAVY WEIGHT DRILL PIPE, AND DRILL PIPE, TRIP IN HOLE TO TOP OF CEMENT @ 2,478' INSTALL ROTATING RUBBER
	9:00 - 10:00	1.00	DRLPRC	02	F	P	2619	SPUD @ 2/16/2014 09:00 DRILL CEMENT, BAFFLE, & FLOAT EQUIPMENT, CLEAN OUT TO 2,619' DRILLED 130' OF CEMENT

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 15:30	5.50	DRLPRC	02	B	P	2619	DIRECTIONAL DRILL FROM/2,619' TO/3,412' = 793' = 144' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 4-8K FT/LBS TORQUE 1900 PSI ON BOTTOM - 1500 PSI OFF BOTTOM PICK UP = 130K - SLACK OFF = 80K - ROTATING = 110K DRAG-20K HOLE IN GOOD SHAPE SLIDE 70' & 16.43% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28
	15:30 - 16:00	0.50	DRLPRC	07	A	P	3412	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.
	16:00 - 0:00	8.00	DRLPRC	02	B	P	3412	DIRECTIONAL DRILL FROM/3,412' TO/4,441' = 1,029' = 128' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 4-8K FT/LBS TORQUE 1900 PSI ON BOTTOM - 1500 PSI OFF BOTTOM PICK UP = 150K - SLACK OFF = 100K - ROTATING = 130K DRAG-20K HOLE IN GOOD SHAPE SLIDE 550' & 72% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28
2/17/2014	0:00 - 6:00	6.00	DRLPRC	02	B	P	4441	DIRECTIONAL DRILL FROM/4,441' TO/5,031' = 590' = 98' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 4-8K FT/LBS TORQUE 1900 PSI ON BOTTOM - 1500 PSI OFF BOTTOM PICK UP = 150K - SLACK OFF = 100K - ROTATING = 130K DRAG-20K HOLE IN GOOD SHAPE SLIDE 209' & 35% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRC	02	B	P	5031	DIRECTIONAL DRILL FROM/5,031' TO/5,872' = 841' = 140' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 10-12K FT/LBS TORQUE 2000 PSI ON BOTTOM - 1600 PSI OFF BOTTOM PICK UP = 170K - SLACK OFF = 120K - ROTATING = 150K DRAG-20K HOLE IN GOOD SHAPE SLIDE 59' & 7% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28
	12:00 - 15:30	3.50	DRLPRV	02	B	P	5872	DIRECTIONAL DRILL FROM/5,872' TO/6,173' = 301' = 86' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 12-15K FT/LBS TORQUE 2100 PSI ON BOTTOM - 1700 PSI OFF BOTTOM PICK UP = 190K - SLACK OFF = 140K - ROTATING = 170K DRAG-20K HOLE IN GOOD SHAPE SLIDE 40' & 10% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28
	15:30 - 16:00	0.50	DRLPRV	07	A	P	6173	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.
	16:00 - 0:00	8.00	DRLPRV	02	B	P	6173	DIRECTIONAL DRILL FROM/6,173' TO/6,662' = 489' = 61' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 12-15K FT/LBS TORQUE 2100 PSI ON BOTTOM - 1700 PSI OFF BOTTOM PICK UP = 190K - SLACK OFF = 140K - ROTATING = 170K DRAG-20K HOLE IN GOOD SHAPE SLIDE 40' & 10% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.8 - VISCOSITY = 28

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/18/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	6662	DIRECTIONAL DRILL FROM/6,662' TO/6,999' = 337' = 56' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 12-15K FT/LBS TORQUE 2100 PSI ON BOTTOM - 1700 PSI OFF BOTTOM PICK UP = 190K - SLACK OFF = 140K - ROTATING = 170K DRAG-20K HOLE IN GOOD SHAPE SLIDE 22' & 7% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 8.9 - VISCOSITY = 30
	6:00 - 12:00	6.00	DRLPRV	02	B	P	6999	DIRECTIONAL DRILL FROM/6,999' TO/7,498' = 499' = 83' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2100 PSI ON BOTTOM - 1700 PSI OFF BOTTOM PICK UP = 210K - SLACK OFF = 160K - ROTATING = 190K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.0 - VISCOSITY = 32
	12:00 - 16:00	4.00	DRLPRV	02	B	P	7498	DIRECTIONAL DRILL FROM/7,498' TO/7,697' = 199' = 49' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1900 PSI OFF BOTTOM PICK UP = 220K - SLACK OFF = 170K - ROTATING = 200K DRAG-20K HOLE IN GOOD SHAPE SLIDE 21' & 8% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.0 - VISCOSITY = 32
	16:00 - 16:30	0.50	DRLPRV	07	A	P	7697	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:30 - 0:00	7.50	DRLPRV	02	B	P	7697	DIRECTIONAL DRILL FROM/7,697' TO/8,108' = 411' = 54' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1900 PSI OFF BOTTOM PICK UP = 240K - SLACK OFF = 190K - ROTATING = 220K DRAG-20K HOLE IN GOOD SHAPE SLIDE 20' & 6% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.0 - VISCOSITY = 32
2/19/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	8108	DIRECTIONAL DRILL FROM/8,108' TO/8,363' = 255' = 42' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1900 PSI OFF BOTTOM PICK UP = 240K - SLACK OFF = 190K - ROTATING = 220K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.0 - VISCOSITY = 32
	6:00 - 9:00	3.00	DRLPRV	02	B	P	8363	DIRECTIONAL DRILL FROM/8,363' TO/8,606' = 243' = 81' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2200 PSI ON BOTTOM - 1900 PSI OFF BOTTOM PICK UP = 240K - SLACK OFF = 190K - ROTATING = 220K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 9.0 - VISCOSITY = 32

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 13:00	4.00	DRLPRV	05	C	P	8606	***FAILURE: MUD MOTOR LOST 450 PSI DUE TO MUD MOTOR FAILURE CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.0 PPG VISCOSITY=33, MUD OUT 10.4 PPG VISCOSITY=33, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.0# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS
	13:00 - 18:30	5.50	DRLPRV	06	A	P	8606	***FAILURE: MUD MOTOR PUMP 40 BBL DRY JOB, BLOW DOWN TOP DRIVE, TRIP OUT OF HOLE FOR BOTTOM HOLE ASSEMBLY, PUMP AND ROTATE 15 STANDS OFF B @ 320K, TIGHT HOLE @ 4,800', WASHED AND REAMED BACK THROUGH TIGHT HOLE LAY DOWN DIRECTIONAL TOOLS, LAY DOWN MUD MOTOR, MUD MOTOR DRAINED WITHOUT TURNING IT HOLE TOOK PROPER FILL WITH NO GAINS NO LOSSES NO FLOW ON FLOW CHECKS
	18:30 - 19:30	1.00	DRLPRV	06	A	P	8606	***FAILURE: MUD MOTOR MAKE UP NEW MUD MOTOR TRIP IN WITH BOTTOM HOLE ASSEMBLY
	19:30 - 20:30	1.00	DRLPRV	09	A	P	8606	***FAILURE: MUD MOTOR SLIP AND CUT (10 WRAPS) 55' OF DRILLING LINE
	20:30 - 23:00	2.50	DRLPRV	06	A	P	8606	***FAILURE: MUD MOTOR TRIP TO BOTTOM, FILL PIPE @ SURFACE CASING SHOE, @ 6000', REAM LAST TWO STANDS TO BOTTOM
	23:00 - 0:00	1.00	DRLPRV	02	B	P	8606	DIRECTIONAL DRILL FROM/8,606' TO/8,636' = 30' = 30' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2300 PSI ON BOTTOM - 2000 PSI OFF BOTTOM PICK UP = 260K - SLACK OFF = 200K - ROTATING = 240K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 10.4 - VISCOSITY = 32

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/20/2014	0:00 - 2:00	2.00	DRLPRV	02	B	P	8636	DIRECTIONAL DRILL FROM/8,636' TO/8,708' = 72' = 36' PER HOUR 18-24K WEIGHT ON BIT 60/60 STROKES PER MINUTE = 590 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2300 PSI ON BOTTOM - 2000 PSI OFF BOTTOM PICK UP = 260K - SLACK OFF = 200K - ROTATING = 240K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 10.4 - VISCOSITY = 33
	2:00 - 5:00	3.00	DRLPRV	05	B	X	8708	***FAILURE: WELL CONTROL GAINED 25 BBLS DURING DRILLING, SHUT WELL IN WITH 200 PSI SHUT IN PRESSURE, CIRCULATE THROUGH THE CHOKE, CIRCULATE @ 50 STROKES PER MINUTE FOR 4000 STROKES CIRCULATE BOTTOMS UP RAISE MUD WEIGHT FROM 10.4 PPG TO 11.2 PPG, HAD 25'-30' FLAIR DURING BOTTOMS UP
	5:00 - 6:00	1.00	DRLPRV	02	B	P	8708	DIRECTIONAL DRILL FROM/8,708' TO/8,751' = 30' = 30' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 516 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2300 PSI ON BOTTOM - 2000 PSI OFF BOTTOM PICK UP = 260K - SLACK OFF = 200K - ROTATING = 240K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 11.2 - VISCOSITY = 34

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRV	02	B	P	8751	DIRECTIONAL DRILL FROM/8,751' TO/9,000' = 249' = 41' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 516 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2300 PSI ON BOTTOM - 2000 PSI OFF BOTTOM PICK UP = 270K - SLACK OFF = 210K - ROTATING = 250K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 11.2 - VISCOSITY = 34
	12:00 - 14:30	2.50	DRLPRV	02	B	P	9000	DIRECTIONAL DRILL FROM/9,000' TO/9,132' = 132' = 52' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 516 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2400 PSI ON BOTTOM - 2100 PSI OFF BOTTOM PICK UP = 280K - SLACK OFF = 220K - ROTATING = 260K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 11.5 - VISCOSITY = 36
	14:30 - 15:00	0.50	DRLPRV	07	A	P	9132	RIG SERVICE, SERVICE TOP DRIVE, SERVICE DRAW WORKS, CHECK BRAKES AND ADJUST, SERVICE CROWN.
	15:00 - 20:00	5.00	DRLPRV	02	B	P	9132	DIRECTIONAL DRILL FROM/9,132' TO/9,390' = 258' = 51' PER HOUR 18-24K WEIGHT ON BIT 105 STROKES PER MINUTE = 516 GALLONS PER MINUTE MOTOR = 135 RPM, 40-60 RPM ON TOP DRIVE, TOTAL RPM=175-195 16-18K FT/LBS TORQUE 2400 PSI ON BOTTOM - 2100 PSI OFF BOTTOM PICK UP = 280K - SLACK OFF = 220K - ROTATING = 260K DRAG-20K HOLE IN GOOD SHAPE SLIDE 0' & 0% OF FOOTAGE BOS DEWATERING - RUNNING CENTRIFUGE - RUNNING MUD CLEANER - RUNNING MUD WEIGHT = 11.5 - VISCOSITY = 36

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:00 - 21:30	1.50	DRLPRV	05	C	P	9390	CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.8 PPG VISCOSITY=36, MUD OUT 11.8 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.8# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES PUMPED 40 BBL CAL CARB SWEEPS WITH WALL NUT AND, MULTI SEAL, NO FLOW ON FLOW CHECKS
	21:30 - 23:00	1.50	DRLPRV	06	E	P	9390	10 STAND WIPER TRIP BACK TO 8,500', NO TIGHT HOLE, HOLE TOOK PROPER FILL WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS
	23:00 - 0:00	1.00	DRLPRV	05	C	P	9390	CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.9 PPG VISCOSITY=36, MUD OUT 11.9 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.9# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS
2/21/2014	0:00 - 1:00	1.00	DRLPRV	05	C	P	9390	CONDITION MUD & CIRCULATE, WORKING DRILL STRING UP AND DOWN, MUD IN 11.9 PPG VISCOSITY=36, MUD OUT 11.9 PPG VISCOSITY=36, MUD COMING OVER SHAKERS IS CLEAN, BUILD 40 BBL 13.8# DRY JOB CIRCULATE WITH NO GAINS AND NO LOSSES NO FLOW ON FLOW CHECKS
	1:00 - 7:00	6.00	DRLPRV	06	D	P	9390	PUMP 40 BBL DRY JOB, BLOW DOWN TOP DRIVE, TRIP OUT OF HOLE FOR CASING RUN, PUMP AND ROTATE 12 STANDS OFF BTM @ 320K, TIGHT HOLE @ 4,500', WASHED AND REAMED BACK THROUGH TIGHT HOLE LAY DOWN DIRECTIONAL TOOLS, LAY DOWN MUD MOTOR, BIT, HOLE TOOK PROPER FILL WITH NO GAINS NO LOSSES NO FLOW ON FLOW CHECKS
	7:00 - 7:30	0.50	DRLPRV	14	B	P	9390	PULL WEAR BUSHING
	7:30 - 8:30	1.00	CSGPRO	12	A	P	9390	HOLD SAFETY MEETING / RIG UP WYOMING CASING SERVICE CASING EQUIPMENT

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: PROPETRO 12/12, SST 57/57

Event: DRILLING

Start Date: 12/29/2013

End Date: 2/21/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:30 - 13:30	5.00	CSGPRO	12	C	P	9390	WYOMING CASING SERVICE, (INSPECT FLOAT EQUIPMENT) RIG UP TORQUE TURN, PERFORM DUMP TEST. MAKE UP 4.5" K-55 LTC DRILLING & COMPLETION TECH. FLOAT SHOE ON SHOE JOINT WITH THREAD LOCK. MAKE UP 4.5" K-55 FLOAT COLLAR WITH THREAD LOCK ON TOP OF SHOE JOINT. RUN CENTRALIZERS ON FIRST 3 JOINTS AND EVERY THIRD JOINT FOR TOTAL OF 15 CENTRALIZERS. BREAK CIRCULATION @ 50', 968', 5000'. NO PROBLEMS WITH FLOAT SHOE OR COLLAR. RUN A TOTAL OF 100 JOINTS OF 4 1/2", 11.6#. I-80, LT&C CASING + 1 MARKER JOINT MAKE UP DQX CROSS OVER JOINT AND, RUN A TOTAL OF 111 JOINTS OF 4 1/2", 11.6#, I-80/ DQX, CASING, + 1 CROSSOVER + 1 PUP JOINT RUN A TOTAL OF 214 JOINTS OF CASING TO BOTTOM WITH NO PROBLEMS FILL PIPE EVERY 2,000' DURING CASING RUN SET FLOAT SHOE @ 9,375.70', SET TOP FLOAT COLLAR @ 9,328.45', SET TOP OF MESAVERDE MARKER JOINT @ 7,186.14'
	13:30 - 14:30	1.00	CSGPRO	05	D	P	9390	CIRCULATE HOLE CLEAN HOLD SAFETY MEETING, RIG UP BAKER HUGHES CEMENTING EQUIPMENT
	14:30 - 18:00	3.50	CSGPRO	12	E	P	9390	HOLD SAFETY MEETING CEMENT WITH BAKER HUGHES TEST LINES TO 5,000 PSI, DROP BOTTOM PLUG, PUMP 25 BBLs H2O 8.3 PPG SPACER, MIX & PUMP 190 BBLs LEAD CEMENT 540 SACKS WITH CLASS G CEMENT, WITH PLII +6%GELL +5#skKS +.4%FL52 +.2%SMS +.4% R-3+5#skSF + 1/4#skCF @ 12.5 PPG WITH 1.98 YIELD, MIX & PUMP 269 BBLs TAIL CEMENT 1,126 SACKS, WITH CLASS G CEMENT, WITH 50/50 poz+2%gell+0.55% R-3 + 10%salt+5#blind S.F. +.75%SMS @ 14.3 PPG WITH 1.34 YIELD, WASH UP LINES & DROP THE TOP PLUG DISPLACE WITH 144.6 BBLs H2O @ 8.3 PPG, WITH 6 GALLONS CLAY CARE, CLAY TREAT-2C FINAL LIFT PRESSURE PRIOR TO BUMPING PLUG 2,700 PSI BUMP PLUG WITH 3,400 PSI GOOD RETURNS THROUGHOUT JOB - 5 BBLs SPACER BACK TO SURFACE RIG DOWN CEMENTING EQUIPMENT TOP OF LEAD CEMENT@ 500', TOP OF TAIL CEMENT@ 4200'
	18:00 - 19:00	1.00	CSGPRO	12	C	P	9390	LAY DOWN LANDING JOINT / INSTALL & TEST PACK OFF 5000 PSI, 10 MINUTES
	19:00 - 20:00	1.00	RDMO	14	A	P	9390	NIPPLE DOWN BOP'S / CLEAN MUD TANKS / RELEASE RIG @ 2/21/2014 20:00 HOURS

1 General**1.1 Customer Information**

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-34C4BS BLACK	Wellbore No.	OH
Well Name	NBU 922-34C4BS	Wellbore Name	NBU 922-34C4BS
Report No.	1	Report Date	4/21/2014
Project	UTAH-UINTAH	Site	NBU 922-34E PAD
Rig Name/No.		Event	COMPLETION
Start Date	3/27/2014	End Date	5/7/2014
Spud Date	12/29/2013	Active Datum	RKB @4,965.00usft (above Mean Sea Level)
UWI	SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0		

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	7,260.0 (usft)-9,242.0 (usft)	Start Date/Time	4/21/2014 12:00AM
No. of Intervals	60	End Date/Time	4/21/2014 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-T S (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
4/21/2014 12:00AM	MESAVERDE/			7,260.0	7,261.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/21/2014 12:00AM	MESAVERDE/			7,324.0	7,325.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,360.0	7,361.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,416.0	7,417.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,427.0	7,428.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,470.0	7,471.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,557.0	7,558.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,565.0	7,566.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,609.0	7,610.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,693.0	7,694.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,700.0	7,701.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,798.0	7,799.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,837.0	7,838.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,846.0	7,847.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,855.0	7,856.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,874.0	7,875.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,912.0	7,913.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,961.0	7,962.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,968.0	7,969.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			7,982.0	7,983.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,057.0	8,058.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,081.0	8,082.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/21/2014 12:00AM	MESAVERDE/			8,182.0	8,183.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,188.0	8,189.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,220.0	8,221.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,233.0	8,234.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,256.0	8,257.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,273.0	8,274.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,297.0	8,298.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,314.0	8,315.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,351.0	8,352.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,370.0	8,371.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,486.0	8,487.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,498.0	8,499.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,508.0	8,509.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,527.0	8,528.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,553.0	8,554.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,565.0	8,566.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,590.0	8,591.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,599.0	8,600.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,632.0	8,633.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,668.0	8,669.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,677.0	8,678.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/21/2014 12:00AM	MESAVERDE/			8,713.0	8,714.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,721.0	8,722.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,731.0	8,732.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,755.0	8,757.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,816.0	8,817.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,826.0	8,827.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,840.0	8,841.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,856.0	8,857.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,870.0	8,871.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,884.0	8,885.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,897.0	8,898.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,921.0	8,922.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,974.0	8,976.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			8,998.0	9,000.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			9,067.0	9,068.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			9,085.0	9,086.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/21/2014 12:00AM	MESAVERDE/			9,240.0	9,242.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

3 Plots

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: MILES 4/4

Event: COMPLETION

Start Date: 3/27/2014

End Date: 5/7/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/27/2014	11:30 - 13:00	1.50	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 -75 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 543 PSI HELD FOR 5 MIN LOST -60 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN 200 PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1 BBL H2O
4/2/2014	-							
4/17/2014	9:00 - 10:00	1.00	SUBSPR	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
4/21/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 17:00	10.50	FRAC	36	H	P		FRAC STG #1) WHP 1436 PSI, BRK 3361 PSI @ 4 BPM. ISIP 2441 PSI, FG. 0.71 ISIP 2737 PSI, FG. 0.74, NPI 296 PSI, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 2392 PSI, BRK 3111 PSI @ 3.8 BPM. ISIP 2609 PSI, FG. 0.73 ISIP 2849 PSI, FG. 0.76, NPI 240 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, X/O TO FRAC. FRAC STG #3) WHP 2360 PSI, BRK 3234 PSI @ 5.7 BPM. ISIP 2470 PSI, FG. 0.72 ISIP 2730 PSI, FG. 0.75, NPI 260 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, SWI, SDFN.
4/22/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 18:00	11.50	FRAC	36	H	P		FRAC STG #4) WHP 2030 PSI, BRK 2662 PSI @ 5.8 BPM. ISIP 2119 PSI, FG. 0.69 ISIP 2481 PSI, FG. 0.73, NPI 362 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, X/O TO FRAC. FRAC STG #5) WHP 2220 PSI, BRK 4037 PSI @ 5.1 BPM. ISIP 2201 PSI, FG. 0.7 ISIP 2476 PSI, FG. 0.74, NPI 275 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED, SWI, SDFN.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: MILES 4/4

Event: COMPLETION

Start Date: 3/27/2014

End Date: 5/7/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/23/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 19:00	12.50	FRAC	36	H	P		FRAC STG #6) WHP 1860 PSI, BRK 2798 PSI @ 4.4 BPM. ISIP 1710 PSI, FG. 0.65 ISIP 2337 PSI, FG. 0.73, NPI 627 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 1915 PSI, BRK 2708 PSI @ 10.1 BPM. ISIP 2092 PSI, FG. 0.71 ISIP 2320 PSI, FG. 0.74, NPI 228 PSI, X/O TO WL. SET CBP & PEF STG #8 AS DESIGNED, X/O TO FRAC. FRAC STG #8) WHP 906 PSI, BRK 2561 PSI @ 4.8 BPM. ISIP 1504 PSI, FG. 0.64 ISIP 2325 PSI, FG. 0.75, NPI 821 PSI, X/O TO WL. SET KILL PLUG, SWI, RDMO WL & FRAC EQUIP. TOTAL FLUID- 10248 BBLs TOTAL SAND- 211325 LBS
5/6/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, SLIPS, TRIPS & FALLS, RIG MOVE, PU TBG, PT BOP
	7:15 - 15:00	7.75	DRLOUT	31	I	P		6 OF 6, RD, MIRU, ND WH, NU BOP, RU FLOOR & TBG EQUIP, PU 3 7/8" BIT, POBS, 1.875" XN S/N, TALLY & PU TBG TO KILL PLUG @ 7210', RU P/S, INSTAL W/R FILL TBG & BREAK CIRC, PT BOP TO 3,000 PSI, PREP TO D/O CBP'S IN AM, SWI, SDFN.
5/7/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, SLIPS, TRIPS & FALLS, P/S, D/O CBP'S, LANDING TBG, PUMP OFF BIT, RD

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK

Spud Date: 12/29/2013

Project: UTAH-UINTAH

Site: NBU 922-34E PAD

Rig Name No: MILES 4/4

Event: COMPLETION

Start Date: 3/27/2014

End Date: 5/7/2014

Active Datum: RKB @4,965.00usft (above Mean Sea Level)

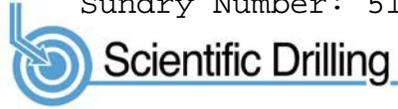
UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 15:00	7.75	DRLOUT	44	C	P		<p>6 OF 6, SURFACE CSG VALVE OPEN & LOCKED, D/O 8 CBP'S THRU BJD & HAL 9000</p> <p>C/O 15' SAND, TAG 1ST PLUG @ 7210', KICK 300 PSI, CSG PRESS 0 PSI, RIH</p> <p>C/O 45' SAND, TAG 2ND PLUG @ 7581', KICK 300 PSI, CSG PRESS 100 PSI, RIH</p> <p>C/O 20' SAND, TAG 3RD PLUG @ 7890', KICK 400 PSI, CSG PRESS 300 PSI, RIH</p> <p>C/O 25' SAND, TAG 4TH PLUG @ 8204', KICK 700 PSI, CSG PRESS 400 PSI, RIH</p> <p>C/O 25' SAND, TAG 5TH PLUG @ 8401', KICK 400 PSI, CSG PRESS 400 PSI, RIH</p> <p>C/O 20' SAND, TAG 6TH PLUG @ 8615', KICK 500 PSI, CSG PRESS 500 PSI, RIH</p> <p>C/O 30' SAND, TAG 7TH PLUG @ 8787', KICK 400 PSI, CSG PRESS 600 PSI, RIH</p> <p>C/O 15' SAND, TAG 8TH PLUG @ 8952', KICK 500 PSI, CSG PRESS 600 PSI,</p> <p>PBTD @ 9328', BTM PERF @ 9242', RIH TAGGED @ 8885', C/O TO 9328' PBTD, 86' PAST BTM PERF W/ 295 JTS 2 3/8" J-55 & L-80 TBG, LD 17 JTS ((WET)), PU & STRIP IN TBG HANGER & LAND TBG W/ 278 JTS 2 3/8" TBG, EOT 8779.11'.</p> <p>NOTE: D/O THRU BJD & (2) HAL 9000, SOLD THRU 2 SEPERATORS NBU 922-34C4BS SOLD 390 MCF NBU 922-34C4CS SOLD 338 MCF, TOTAL GAS SOLD 728 MCF.</p> <p>RD P/S, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL & SHEAR OFF BIT, P/T LINE FROM WH TO HAL 9000 TO 3,000 PSI, NO VISIBLE LEAKS.</p> <p>TURN OVER TO FLOW BACK CREW & SALES, RD & MOVE IN AM ((WIND BLOWING TOO HARD TO RD)).</p> <p>KB= 18' 4 1/16" CAMERON HANGER= .83' TBG DELIVERED 166 JTS L-80 128 JTS 2 3/8" L-80= 4050.12' TBG DELIVERED 150 JTS J-55 1 - 6' PUP JT L-80= 6.15' TOTAL TBG= 316 JTS L-80 & J-55 150 JTS 2 3/8" J-55 = 4,701.81' TBG USED 278 JTS POBS= 2.20'</p>

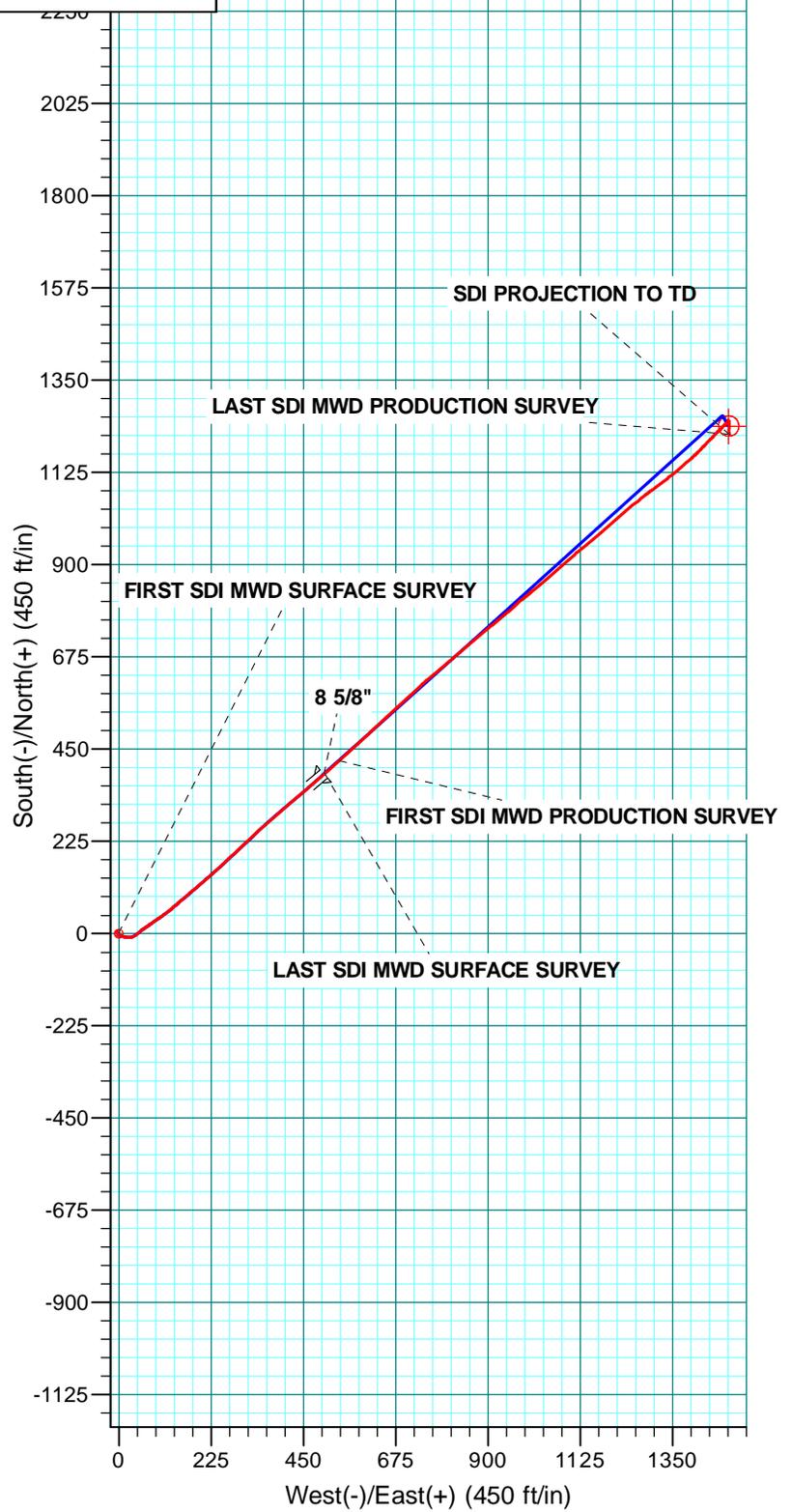
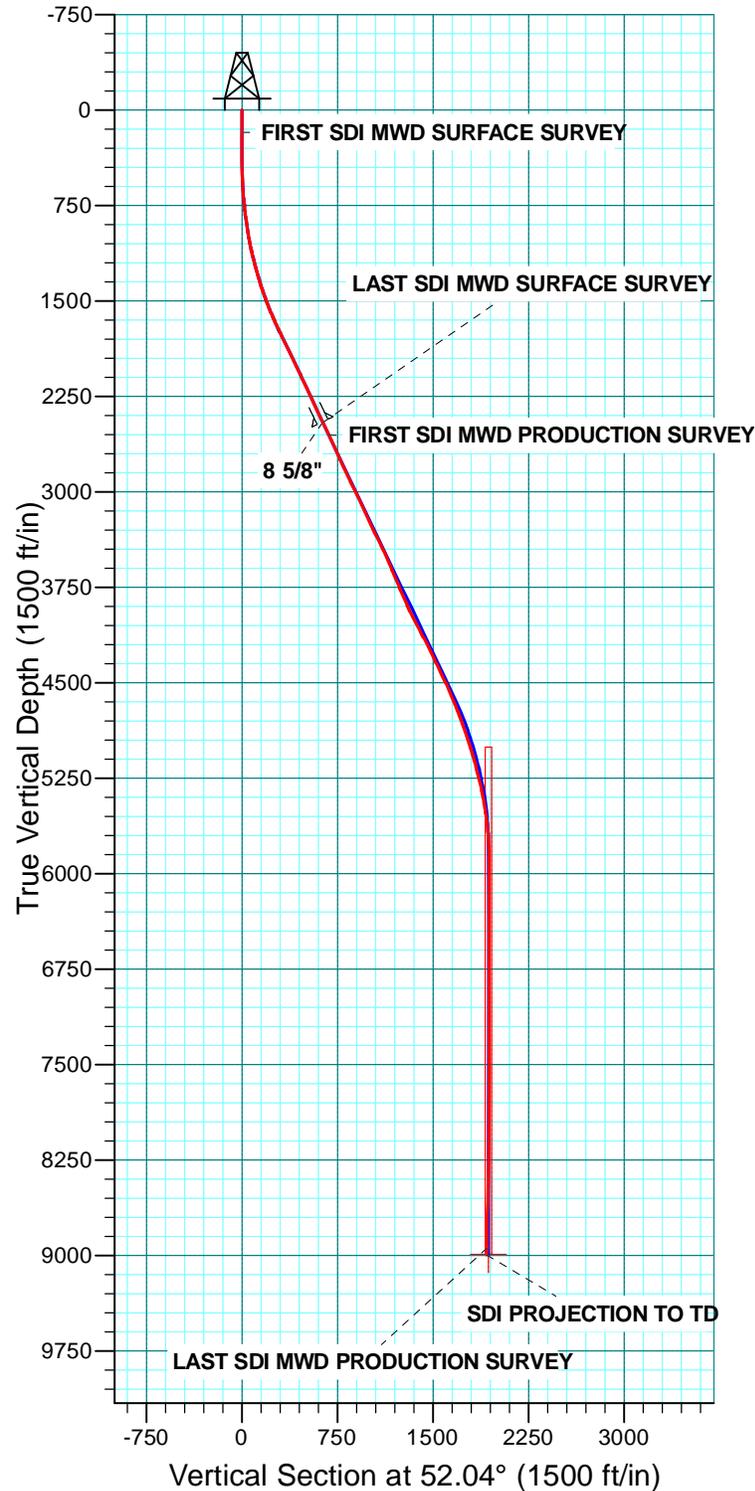
US ROCKIES REGION
Operation Summary Report

Well: NBU 922-34C4BS BLACK		Spud Date: 12/29/2013	
Project: UTAH-UINTAH		Site: NBU 922-34E PAD	Rig Name No: MILES 4/4
Event: COMPLETION		Start Date: 3/27/2014	End Date: 5/7/2014
Active Datum: RKB @4,965.00usft (above Mean Sea Level)		UWI: SW/NW/0/9/S/22/E/34/0/0/26/PM/N/1991/W/0/662/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								TBG RETURNED 38 JTS L-80 (1 W/ BAD THREADS) EOT @ 8779.11'
								TWTR= 10248 BBLS TWR= 3000 BBLS TWLTR= 7248 BBLS
	15:00 - 15:00	0.00	DRLOUT	50				WELL TURNED TO SALES # 8:30 HR ON 5/7/2014. 1MCFD, 1560 BWPD, FCP 2500#, FTP 2200 #, 20/64" CK.



WELL DETAILS: NBU 922-34C4BS					
GL 4947 & KB 18 @ 4965.00ft (SST 57)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14527852.71	2079444.26	39.9943650	-109.4325340





US ROCKIES REGION PLANNING

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

NBU 922-34E PAD

NBU 922-34C4BS

OH

Design: OH

Standard Survey Report

24 February, 2014





Scientific Drilling
Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Site:	NBU 922-34E PAD	MD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Well:	NBU 922-34C4BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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 922-34E PAD, SCETION 34 T9S R22E				
Site Position:		Northing:	14,527,852.72 usft	Latitude:	39.9943650
From:	Lat/Long	Easting:	2,079,444.26 usft	Longitude:	-109.4325340
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.01 °

Well	NBU 922-34C4BS, 1991 FNL 662 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,527,852.72 usft	Latitude:	39.9943650
	+E/-W	0.00 ft	Easting:	2,079,444.26 usft	Longitude:	-109.4325340
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,947.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	1/15/2014	10.80	65.80	51,993

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	52.04	

Survey Program	Date	2/24/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
14.00	2,581.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,691.00	9,390.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.00	0.79	290.39	176.99	0.39	-1.05	-0.59	0.48	0.48	0.00	0.00
FIRST SDI MWD SURFACE SURVEY										
233.00	0.79	208.65	232.99	0.19	-1.60	-1.15	1.85	0.00	-145.96	
320.00	1.67	162.69	319.97	-1.55	-1.51	-2.14	1.44	1.01	-52.83	
405.00	2.20	116.02	404.93	-3.45	0.32	-1.87	1.89	0.62	-54.91	
493.00	4.84	107.23	492.75	-5.29	5.39	1.00	3.05	3.00	-9.99	
583.00	5.54	104.50	582.39	-7.50	13.22	5.81	0.82	0.78	-3.03	
673.00	6.25	93.16	671.91	-8.86	22.32	12.15	1.51	0.79	-12.60	



Scientific Drilling
Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Site:	NBU 922-34E PAD	MD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Well:	NBU 922-34C4BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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)	
763.00	6.77	75.32	761.34	-7.78	32.34	20.71	2.31	0.58	-19.82	
853.00	7.21	53.09	850.69	-3.05	41.99	31.24	3.03	0.49	-24.70	
926.00	8.53	48.64	923.00	3.28	49.72	41.22	1.99	1.81	-6.10	
1,021.00	10.38	54.67	1,016.71	12.89	61.99	56.81	2.21	1.95	6.35	
1,111.00	12.76	55.95	1,104.87	23.14	76.84	74.82	2.66	2.64	1.42	
1,201.00	14.60	54.58	1,192.32	35.28	94.32	96.07	2.08	2.04	-1.52	
1,291.00	15.73	54.11	1,279.18	49.01	113.45	119.60	1.26	1.26	-0.52	
1,381.00	17.32	49.92	1,365.46	64.79	133.59	145.18	2.21	1.77	-4.66	
1,471.00	19.61	49.57	1,450.82	83.21	155.34	173.66	2.55	2.54	-0.39	
1,561.00	21.37	49.31	1,535.13	103.70	179.27	205.13	1.96	1.96	-0.29	
1,651.00	22.95	49.05	1,618.48	125.89	204.96	239.03	1.76	1.76	-0.29	
1,741.00	25.53	48.74	1,700.53	150.18	232.79	275.92	2.87	2.87	-0.34	
1,831.00	27.00	47.29	1,781.24	176.83	262.39	315.65	1.78	1.63	-1.61	
1,921.00	25.50	46.32	1,861.96	204.07	291.41	355.29	1.73	-1.67	-1.08	
2,011.00	25.41	47.02	1,943.22	230.61	319.55	393.80	0.35	-0.10	0.78	
2,101.00	25.94	46.67	2,024.33	257.29	347.99	432.63	0.61	0.59	-0.39	
2,191.00	25.24	49.13	2,105.51	283.35	376.82	471.39	1.41	-0.78	2.73	
2,281.00	25.32	50.01	2,186.89	308.27	406.08	509.79	0.43	0.09	0.98	
2,371.00	25.15	49.57	2,268.30	333.05	435.38	548.13	0.28	-0.19	-0.49	
2,461.00	24.53	48.34	2,349.97	357.87	463.90	585.88	0.90	-0.69	-1.37	
2,575.00	25.54	48.60	2,453.26	389.85	500.01	634.03	0.89	0.88	0.23	
8 5/8"										
2,581.00	25.59	48.61	2,458.68	391.56	501.95	636.61	0.89	0.88	0.22	
LAST SDI MWD SURFACE SURVEY										
2,691.00	25.50	48.84	2,557.92	422.85	537.60	683.97	0.12	-0.08	0.21	
FIRST SDI MWD PRODUCTION SURVEY										
2,786.00	24.82	48.23	2,643.91	449.59	567.87	724.28	0.77	-0.72	-0.64	
2,881.00	24.01	46.47	2,730.41	476.19	596.75	763.41	1.15	-0.85	-1.85	
2,977.00	24.83	46.77	2,817.83	503.45	625.60	802.92	0.86	0.85	0.31	
3,072.00	27.24	47.59	2,903.18	531.78	656.19	844.47	2.56	2.54	0.86	
3,166.00	25.94	46.91	2,987.24	560.33	687.09	886.39	1.42	-1.38	-0.72	
3,262.00	25.73	47.41	3,073.64	588.78	717.76	928.08	0.32	-0.22	0.52	
3,357.00	24.83	50.34	3,159.55	615.46	748.30	968.57	1.62	-0.95	3.08	
3,452.00	23.92	49.28	3,246.08	640.76	778.26	1,007.74	1.06	-0.96	-1.12	
3,548.00	25.85	49.45	3,333.16	667.06	808.91	1,048.10	2.01	2.01	0.18	
3,643.00	25.97	49.55	3,418.61	694.02	840.48	1,089.57	0.13	0.13	0.11	
3,738.00	24.45	49.45	3,504.56	720.30	871.25	1,129.99	1.60	-1.60	-0.11	
3,834.00	23.92	50.42	3,592.13	745.62	901.34	1,169.29	0.69	-0.55	1.01	
3,929.00	22.07	51.39	3,679.58	769.03	930.13	1,206.39	1.99	-1.95	1.02	
4,024.00	23.48	48.58	3,767.17	792.69	958.27	1,243.13	1.87	1.48	-2.96	
4,119.00	23.30	49.45	3,854.37	817.42	986.74	1,280.79	0.41	-0.19	0.92	
4,214.00	25.28	50.35	3,940.95	842.58	1,016.64	1,319.84	2.12	2.08	0.95	
4,309.00	27.75	48.06	4,025.96	870.31	1,048.72	1,362.19	2.81	2.60	-2.41	
4,405.00	27.87	48.84	4,110.87	900.02	1,082.23	1,406.89	0.40	0.13	0.81	



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Site:	NBU 922-34E PAD	MD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Well:	NBU 922-34C4BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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)
4,500.00	27.61	50.33	4,194.95	928.69	1,115.90	1,451.06	0.78	-0.27	1.57
4,595.00	26.20	50.16	4,279.67	956.18	1,148.95	1,494.03	1.49	-1.48	-0.18
4,690.00	25.32	49.02	4,365.23	982.93	1,180.39	1,535.28	1.06	-0.93	-1.20
4,785.00	24.89	49.15	4,451.25	1,009.33	1,210.84	1,575.53	0.46	-0.45	0.14
4,881.00	23.83	49.81	4,538.70	1,035.06	1,240.94	1,615.08	1.14	-1.10	0.69
4,976.00	23.76	51.46	4,625.63	1,059.37	1,270.57	1,653.40	0.70	-0.07	1.74
5,071.00	21.46	52.88	4,713.32	1,081.79	1,299.40	1,689.92	2.49	-2.42	1.49
5,166.00	19.70	53.48	4,802.26	1,101.80	1,326.13	1,723.30	1.87	-1.85	0.63
5,261.00	18.82	51.21	4,891.94	1,120.93	1,350.94	1,754.63	1.22	-0.93	-2.39
5,356.00	17.94	48.58	4,982.09	1,140.21	1,373.86	1,784.56	1.27	-0.93	-2.77
5,451.00	16.88	49.02	5,072.74	1,158.94	1,395.24	1,812.94	1.12	-1.12	0.46
5,546.00	15.06	44.01	5,164.08	1,176.86	1,414.23	1,838.93	2.40	-1.92	-5.27
5,642.00	13.45	44.80	5,257.12	1,193.76	1,430.76	1,862.36	1.69	-1.68	0.82
5,738.00	12.05	43.57	5,350.75	1,208.94	1,445.54	1,883.35	1.49	-1.46	-1.28
5,833.00	9.67	44.53	5,444.04	1,221.81	1,457.97	1,901.07	2.51	-2.51	1.01
5,928.00	7.74	44.01	5,537.94	1,232.10	1,468.01	1,915.32	2.03	-2.03	-0.55
6,023.00	5.72	47.87	5,632.28	1,239.88	1,475.97	1,926.37	2.18	-2.13	4.06
6,118.00	3.87	56.66	5,726.95	1,244.82	1,482.16	1,934.29	2.09	-1.95	9.25
6,213.00	2.02	62.29	5,821.82	1,247.36	1,486.32	1,939.14	1.97	-1.95	5.93
6,309.00	0.54	147.50	5,917.79	1,247.76	1,488.06	1,940.76	2.13	-1.54	88.76
6,404.00	0.75	172.98	6,012.79	1,246.77	1,488.38	1,940.40	0.37	0.22	26.82
6,499.00	0.79	312.50	6,107.79	1,246.60	1,487.97	1,939.97	1.52	0.04	146.86
6,595.00	0.53	300.12	6,203.78	1,247.27	1,487.10	1,939.69	0.31	-0.27	-12.90
6,690.00	0.26	261.45	6,298.78	1,247.45	1,486.50	1,939.34	0.38	-0.28	-40.71
6,785.00	0.09	157.30	6,393.78	1,247.35	1,486.32	1,939.13	0.31	-0.18	-109.63
6,881.00	0.90	339.62	6,489.77	1,247.99	1,486.09	1,939.34	1.03	0.84	-185.08
6,976.00	0.88	354.26	6,584.76	1,249.42	1,485.75	1,939.95	0.24	-0.02	15.41
7,071.00	0.88	353.73	6,679.75	1,250.87	1,485.60	1,940.73	0.01	0.00	-0.56
7,166.00	0.38	358.87	6,774.74	1,251.91	1,485.52	1,941.30	0.53	-0.53	5.41
7,261.00	0.35	336.24	6,869.74	1,252.49	1,485.39	1,941.56	0.15	-0.03	-23.82
7,356.00	0.33	57.26	6,964.74	1,252.90	1,485.51	1,941.90	0.47	-0.02	85.28
7,452.00	0.09	46.73	7,060.74	1,253.10	1,485.79	1,942.25	0.25	-0.25	-10.97
7,547.00	0.44	123.81	7,155.74	1,252.95	1,486.15	1,942.44	0.45	0.37	81.14
7,642.00	0.95	142.80	7,250.73	1,252.12	1,486.93	1,942.54	0.58	0.54	19.99
7,737.00	0.44	147.89	7,345.72	1,251.18	1,487.60	1,942.50	0.54	-0.54	5.36
7,832.00	0.26	131.72	7,440.72	1,250.73	1,487.95	1,942.50	0.21	-0.19	-17.02
7,927.00	0.44	133.21	7,535.72	1,250.34	1,488.38	1,942.59	0.19	0.19	1.57
8,023.00	0.65	157.29	7,631.72	1,249.58	1,488.86	1,942.51	0.32	0.22	25.08
8,118.00	0.88	189.90	7,726.71	1,248.37	1,488.94	1,941.82	0.51	0.24	34.33
8,213.00	0.94	178.62	7,821.70	1,246.87	1,488.84	1,940.82	0.20	0.06	-11.87
8,308.00	1.23	171.53	7,916.68	1,245.08	1,489.00	1,939.85	0.34	0.31	-7.46
8,403.00	0.62	201.11	8,011.67	1,243.59	1,488.97	1,938.91	0.80	-0.64	31.14
8,498.00	0.58	202.54	8,106.66	1,242.67	1,488.60	1,938.05	0.04	-0.04	1.51



Scientific Drilling
Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-34C4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Site:	NBU 922-34E PAD	MD Reference:	GL 4947 & KB 18 @ 4965.00ft (SST 57)
Well:	NBU 922-34C4BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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)	
8,601.00	0.97	188.06	8,209.65	1,241.33	1,488.28	1,936.97	0.42	0.38	-14.06	
8,696.00	1.49	179.36	8,304.63	1,239.29	1,488.18	1,935.64	0.58	0.55	-9.16	
8,791.00	1.41	175.23	8,399.60	1,236.89	1,488.29	1,934.25	0.14	-0.08	-4.35	
8,886.00	1.58	185.16	8,494.57	1,234.43	1,488.27	1,932.72	0.33	0.18	10.45	
8,981.00	1.85	192.01	8,589.53	1,231.62	1,487.83	1,930.65	0.36	0.28	7.21	
9,077.00	1.93	175.84	8,685.47	1,228.49	1,487.63	1,928.56	0.56	0.08	-16.84	
9,172.00	2.20	171.10	8,780.41	1,225.10	1,488.03	1,926.79	0.34	0.28	-4.99	
9,270.00	2.28	168.01	8,878.34	1,221.33	1,488.72	1,925.02	0.15	0.08	-3.15	
9,335.00	2.11	165.73	8,943.29	1,218.91	1,489.29	1,923.97	0.29	-0.26	-3.51	
LAST SDI MWD PRODUCTION SURVEY										
9,390.00	2.11	165.73	8,998.25	1,216.94	1,489.78	1,923.16	0.00	0.00	0.00	
SDI PROJECTION TO TD										

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-34C4B:	0.00	0.00	8,993.00	1,238.74	1,487.21	14,529,117.41	2,080,909.45	39.9977660	-109.4272250
- hit/miss target									
- Shape									
- actual wellpath misses target center by 21.74ft at 9383.95ft MD (8992.21 TVD, 1217.16 N, 1489.73 E)									
- Circle (radius 25.00)									

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,575.00	2,453.26	8 5/8"	8.625	11.000

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
177.00	176.99	0.39	-1.05	FIRST SDI MWD SURFACE SURVEY
2,581.00	2,458.68	391.56	501.95	LAST SDI MWD SURFACE SURVEY
2,691.00	2,557.92	422.85	537.60	FIRST SDI MWD PRODUCTION SURVEY
9,335.00	8,943.29	1,218.91	1,489.29	LAST SDI MWD PRODUCTION SURVEY
9,390.00	8,998.25	1,216.94	1,489.78	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____