

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

FORM 3

AMENDED REPORT

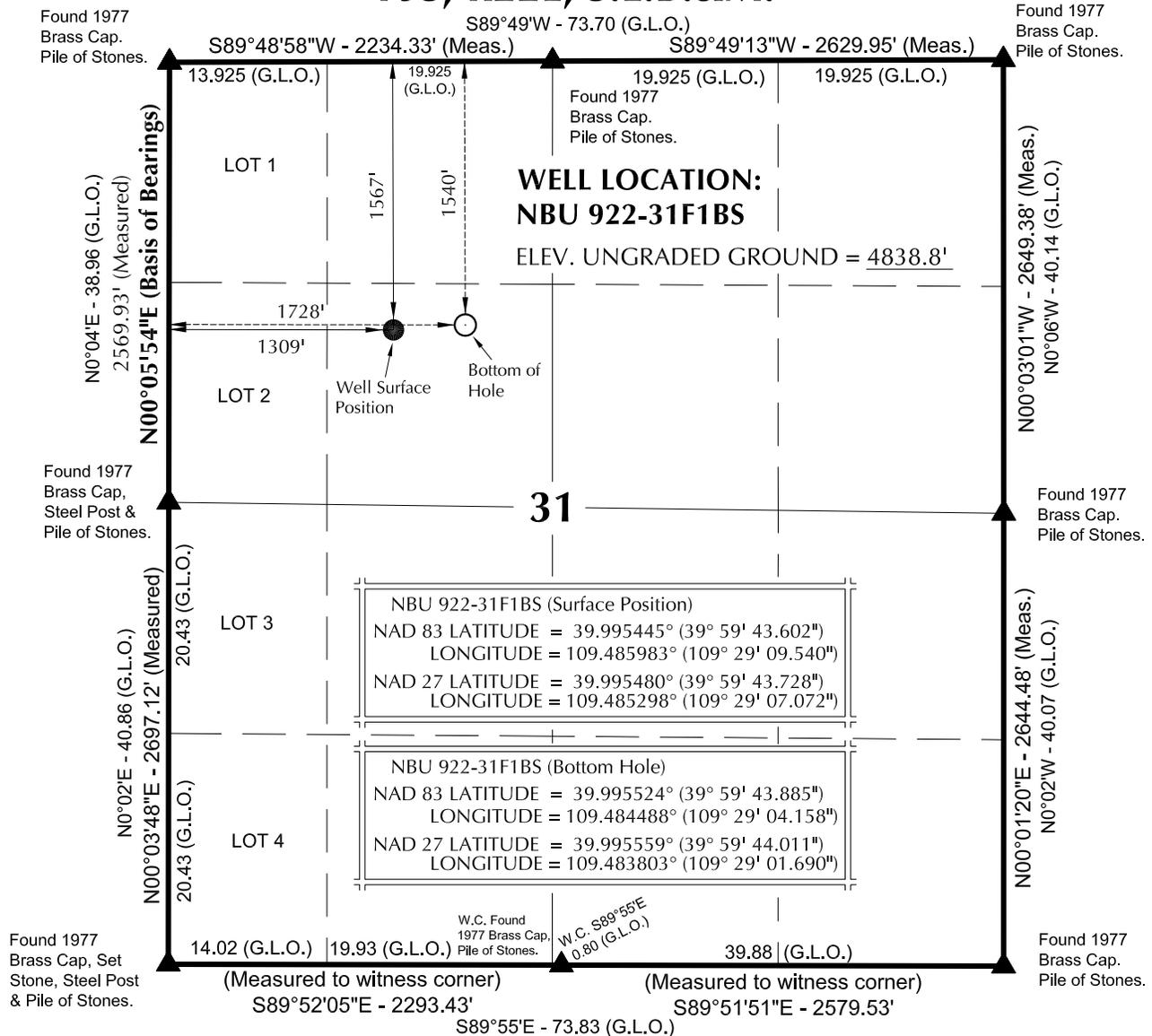
APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 922-31F1BS	
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES	
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES	
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 307-752-1169	
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL Laura.Gianakos@anadarko.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 23607			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" 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	1567 FNL 1309 FWL	SE	31	9.0 S	22.0 E	S	
Top of Uppermost Producing Zone	1540 FNL 1728 FWL	SE	31	9.0 S	22.0 E	S	
At Total Depth	1540 FNL 1728 FWL	SE	31	9.0 S	22.0 E	S	
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 1540			23. NUMBER OF ACRES IN DRILLING UNIT 124	
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 447			26. PROPOSED DEPTH MD: 10321 TVD: 10280	
27. ELEVATION - GROUND LEVEL 4839			28. BOND NUMBER 22013542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496	
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 Danielle Piernot			TITLE Regulatory Analyst			PHONE 720 929-6156	
SIGNATURE			DATE 05/05/2010			EMAIL gnbregulatory@anadarko.com	
API NUMBER ASSIGNED 43047510920000			APPROVAL  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10321		
Pipe	Grade	Length	Weight			
	Grade HCP-110 LT&C	10321	11.6			

Proposed Hole, Casing, and Cement

String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2442		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2442	28.0			

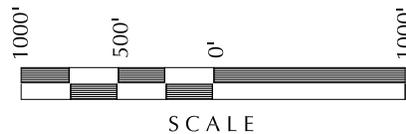
T9S, R22E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- The Bottom of hole bears N86°06'10"E 419.97' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ 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.

PROFESSOR OF SURVEYING
 No. 6028691
 JOHN R. BLAUGH
 REGISTERED LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH

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

WELL PAD - NBU 922-31F

**NBU 922-31F1BS
 WELL PLAT**

**1540' FNL, 1728' FWL (Bottom Hole)
 SE ¼ NW ¼ OF SECTION 31, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH.**



CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

TIMBERLINE

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

DATE SURVEYED: 1-11-10	SURVEYED BY: M.S.B.	SHEET NO: 1
DATE DRAWN: 1-13-10	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 3-4-10 M.W.W.	1 OF 18



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-31F Pad

NBU 922-31F1BS

NBU 922-31F1BS

Plan: PLAN #1 3-26-10 RHS

Standard Planning Report

26 March, 2010



Weatherford®

'APIWellNo:43047510920000'



Project: UINTAH COUNTY, UTAH (nad 27)
 Site: NBU 922-31F Pad
 Well: NBU 922-31F1BS
 Wellbore: NBU 922-31F1BS
 Section: SECTION 31 T9S R22E
 SHL: 1567 FNL 1309 FWL
 Design: PLAN #1 3-26-10 RHS
 Latitude: 39° 59' 43.728 N
 Longitude: 109° 29' 7.073 W
 GL: 4836.00
 KB: WELL @ 4850.00ft (Original Well Elev)



Weatherford

T
M

Azimuths to True North
Magnetic North: 11.25°

Magnetic Field
Strength: 52465.2snt
Dip Angle: 65.92°
Date: 3/26/2010
Model: BGGM2009

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1138.00	1151.18	GREEN RIVER
4403.00	4443.80	WASATCH
7956.00	7996.80	MESAVERDE

CASING DETAILS			
TVD	MD	Name	Size
1990.00	2023.03	8 5/8"	8.62

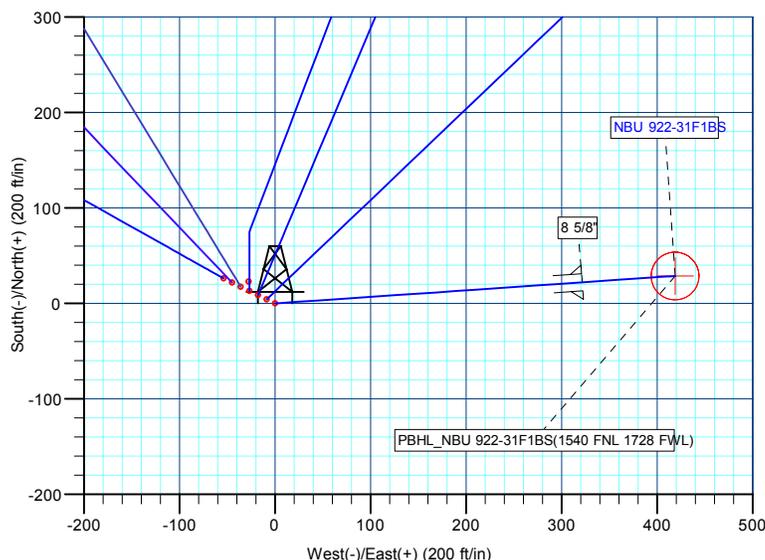
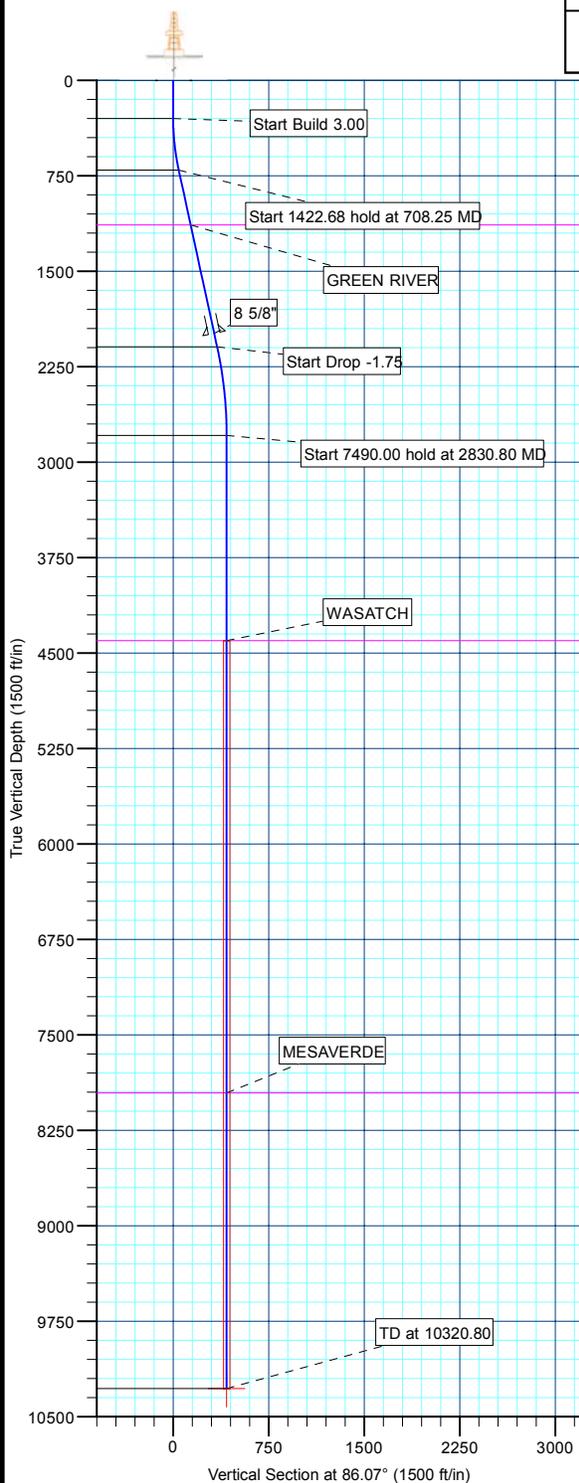
SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00	
708.25	12.25	86.07	705.15	2.98	43.37	3.00	86.07	43.47	Start 1422.68 hold at 708.25 MD	
2130.94	12.25	86.07	2095.46	23.67	344.46	0.00	0.00	345.27	Start Drop -1.75	
2830.80	0.00	0.00	2790.00	28.78	418.80	1.75	180.00	419.79	Start 7490.00 hold at 2830.80 MD	
10320.80	0.00	0.00	10280.00	28.78	418.80	0.00	0.00	419.79	TD at 10320.80	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	10280.00	28.78	418.80	39° 59' 44.012 N	109° 29' 1.691 W	Circle (Radius: 25.00)

WELL DETAILS: NBU 922-31F1BS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4836.00	Longitude	Slot
0.00	0.00	14528003.20	2064658.21	39° 59' 43.728 N	109° 29' 7.073 W	

LEGEND

- NBU 155 EXISTING, NBU 155 EXISTING, NBU 155 EXISTING V0
- NBU 922-31C1AS, NBU 922-31C1AS, PLAN #1 3-26-10 RHS V0
- NBU 922-31C3AS, NBU 922-31C3AS, PLAN #1 3-26-10 RHS V0
- NBU 922-31C4CS, NBU 922-31C4CS, PLAN #1 3-26-10 RHS V0
- NBU 922-31D1BS, NBU 922-31D1BS, PLAN #1 3-26-10 RHS V0
- NBU 922-31D4BS, NBU 922-31D4BS, PLAN #1 3-26-10 RHS V0
- NBU 922-31D4CS, NBU 922-31D4CS, PLAN #1 3-26-10 RHS V0
- PLAN #1 3-26-10 RHS



Plan: PLAN #1 3-26-10 RHS (NBU 922-31F1BS/NBU 922-31F1BS)

Created By: Robert H. Scott Date: 16:13, March 26 2010



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31F1BS		
Design:	PLAN #1 3-26-10 RHS		

Project	UINTAH COUNTY, UTAH (nad 27),		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 922-31F Pad, SECTION 31 T9S R22E				
Site Position:		Northing:	14,528,028.50 ft	Latitude:	39° 59' 43.987 N
From:	Lat/Long	Easting:	2,064,603.98 ft	Longitude:	109° 29' 7.764 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.97 °

Well	NBU 922-31F1BS					
Well Position	+N/-S	-26.22 ft	Northing:	14,528,003.20 ft	Latitude:	39° 59' 43.728 N
	+E/-W	53.79 ft	Easting:	2,064,658.21 ft	Longitude:	109° 29' 7.073 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,836.00 ft

Wellbore	NBU 922-31F1BS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	3/26/2010	11.25	65.92	52,465

Design	PLAN #1 3-26-10 RHS			
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	86.07

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	
708.25	12.25	86.07	705.15	2.98	43.37	3.00	3.00	0.00	86.07	
2,130.94	12.25	86.07	2,095.46	23.67	344.46	0.00	0.00	0.00	0.00	
2,830.80	0.00	0.00	2,790.00	28.78	418.80	1.75	-1.75	0.00	180.00	
10,320.80	0.00	0.00	10,280.00	28.78	418.80	0.00	0.00	0.00	0.00	PBHL_NBU 922-31



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Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31F1BS		
Design:	PLAN #1 3-26-10 RHS		

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)
Start Build 3.00									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	3.00	86.07	399.95	0.18	2.61	2.62	3.00	3.00	0.00
500.00	6.00	86.07	499.63	0.72	10.44	10.46	3.00	3.00	0.00
600.00	9.00	86.07	598.77	1.61	23.46	23.51	3.00	3.00	0.00
700.00	12.00	86.07	697.08	2.86	41.64	41.74	3.00	3.00	0.00
Start 1422.68 hold at 708.25 MD									
708.25	12.25	86.07	705.15	2.98	43.37	43.47	3.00	3.00	0.00
800.00	12.25	86.07	794.81	4.31	62.78	62.93	0.00	0.00	0.00
900.00	12.25	86.07	892.53	5.77	83.95	84.14	0.00	0.00	0.00
1,000.00	12.25	86.07	990.26	7.22	105.11	105.36	0.00	0.00	0.00
1,100.00	12.25	86.07	1,087.98	8.68	126.27	126.57	0.00	0.00	0.00
GREEN RIVER									
1,151.18	12.25	86.07	1,138.00	9.42	137.11	137.43	0.00	0.00	0.00
1,200.00	12.25	86.07	1,185.71	10.13	147.44	147.79	0.00	0.00	0.00
1,300.00	12.25	86.07	1,283.43	11.58	168.60	169.00	0.00	0.00	0.00
1,400.00	12.25	86.07	1,381.15	13.04	189.77	190.21	0.00	0.00	0.00
1,500.00	12.25	86.07	1,478.88	14.49	210.93	211.43	0.00	0.00	0.00
1,600.00	12.25	86.07	1,576.60	15.95	232.09	232.64	0.00	0.00	0.00
1,700.00	12.25	86.07	1,674.33	17.40	253.26	253.85	0.00	0.00	0.00
1,800.00	12.25	86.07	1,772.05	18.86	274.42	275.07	0.00	0.00	0.00
1,900.00	12.25	86.07	1,869.77	20.31	295.58	296.28	0.00	0.00	0.00
2,000.00	12.25	86.07	1,967.50	21.76	316.75	317.50	0.00	0.00	0.00
8 5/8"									
2,023.03	12.25	86.07	1,990.00	22.10	321.62	322.38	0.00	0.00	0.00
2,100.00	12.25	86.07	2,065.22	23.22	337.91	338.71	0.00	0.00	0.00
Start Drop -1.75									
2,130.94	12.25	86.07	2,095.46	23.67	344.46	345.27	0.00	0.00	0.00
2,200.00	11.04	86.07	2,163.10	24.62	358.36	359.21	1.75	-1.75	0.00
2,300.00	9.29	86.07	2,261.52	25.83	375.97	376.86	1.75	-1.75	0.00
2,400.00	7.54	86.07	2,360.44	26.84	390.57	391.49	1.75	-1.75	0.00
2,500.00	5.79	86.07	2,459.76	27.63	402.14	403.09	1.75	-1.75	0.00
2,600.00	4.04	86.07	2,559.39	28.22	410.69	411.66	1.75	-1.75	0.00
2,700.00	2.29	86.07	2,659.23	28.60	416.20	417.18	1.75	-1.75	0.00
2,800.00	0.54	86.07	2,759.20	28.77	418.66	419.64	1.75	-1.75	0.00
Start 7490.00 hold at 2830.80 MD									
2,830.80	0.00	0.00	2,790.00	28.78	418.80	419.79	1.75	-1.75	-279.45
2,900.00	0.00	0.00	2,859.20	28.78	418.80	419.79	0.00	0.00	0.00
3,000.00	0.00	0.00	2,959.20	28.78	418.80	419.79	0.00	0.00	0.00
3,100.00	0.00	0.00	3,059.20	28.78	418.80	419.79	0.00	0.00	0.00
3,200.00	0.00	0.00	3,159.20	28.78	418.80	419.79	0.00	0.00	0.00
3,300.00	0.00	0.00	3,259.20	28.78	418.80	419.79	0.00	0.00	0.00
3,400.00	0.00	0.00	3,359.20	28.78	418.80	419.79	0.00	0.00	0.00
3,500.00	0.00	0.00	3,459.20	28.78	418.80	419.79	0.00	0.00	0.00
3,600.00	0.00	0.00	3,559.20	28.78	418.80	419.79	0.00	0.00	0.00
3,700.00	0.00	0.00	3,659.20	28.78	418.80	419.79	0.00	0.00	0.00
3,800.00	0.00	0.00	3,759.20	28.78	418.80	419.79	0.00	0.00	0.00
3,900.00	0.00	0.00	3,859.20	28.78	418.80	419.79	0.00	0.00	0.00
4,000.00	0.00	0.00	3,959.20	28.78	418.80	419.79	0.00	0.00	0.00
4,100.00	0.00	0.00	4,059.20	28.78	418.80	419.79	0.00	0.00	0.00
4,200.00	0.00	0.00	4,159.20	28.78	418.80	419.79	0.00	0.00	0.00
4,300.00	0.00	0.00	4,259.20	28.78	418.80	419.79	0.00	0.00	0.00
4,400.00	0.00	0.00	4,359.20	28.78	418.80	419.79	0.00	0.00	0.00



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Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31F1BS		
Design:	PLAN #1 3-26-10 RHS		

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)
WASATCH									
4,443.80	0.00	0.00	4,403.00	28.78	418.80	419.79	0.00	0.00	0.00
4,500.00	0.00	0.00	4,459.20	28.78	418.80	419.79	0.00	0.00	0.00
4,600.00	0.00	0.00	4,559.20	28.78	418.80	419.79	0.00	0.00	0.00
4,700.00	0.00	0.00	4,659.20	28.78	418.80	419.79	0.00	0.00	0.00
4,800.00	0.00	0.00	4,759.20	28.78	418.80	419.79	0.00	0.00	0.00
4,900.00	0.00	0.00	4,859.20	28.78	418.80	419.79	0.00	0.00	0.00
5,000.00	0.00	0.00	4,959.20	28.78	418.80	419.79	0.00	0.00	0.00
5,100.00	0.00	0.00	5,059.20	28.78	418.80	419.79	0.00	0.00	0.00
5,200.00	0.00	0.00	5,159.20	28.78	418.80	419.79	0.00	0.00	0.00
5,300.00	0.00	0.00	5,259.20	28.78	418.80	419.79	0.00	0.00	0.00
5,400.00	0.00	0.00	5,359.20	28.78	418.80	419.79	0.00	0.00	0.00
5,500.00	0.00	0.00	5,459.20	28.78	418.80	419.79	0.00	0.00	0.00
5,600.00	0.00	0.00	5,559.20	28.78	418.80	419.79	0.00	0.00	0.00
5,700.00	0.00	0.00	5,659.20	28.78	418.80	419.79	0.00	0.00	0.00
5,800.00	0.00	0.00	5,759.20	28.78	418.80	419.79	0.00	0.00	0.00
5,900.00	0.00	0.00	5,859.20	28.78	418.80	419.79	0.00	0.00	0.00
6,000.00	0.00	0.00	5,959.20	28.78	418.80	419.79	0.00	0.00	0.00
6,100.00	0.00	0.00	6,059.20	28.78	418.80	419.79	0.00	0.00	0.00
6,200.00	0.00	0.00	6,159.20	28.78	418.80	419.79	0.00	0.00	0.00
6,300.00	0.00	0.00	6,259.20	28.78	418.80	419.79	0.00	0.00	0.00
6,400.00	0.00	0.00	6,359.20	28.78	418.80	419.79	0.00	0.00	0.00
6,500.00	0.00	0.00	6,459.20	28.78	418.80	419.79	0.00	0.00	0.00
6,600.00	0.00	0.00	6,559.20	28.78	418.80	419.79	0.00	0.00	0.00
6,700.00	0.00	0.00	6,659.20	28.78	418.80	419.79	0.00	0.00	0.00
6,800.00	0.00	0.00	6,759.20	28.78	418.80	419.79	0.00	0.00	0.00
6,900.00	0.00	0.00	6,859.20	28.78	418.80	419.79	0.00	0.00	0.00
7,000.00	0.00	0.00	6,959.20	28.78	418.80	419.79	0.00	0.00	0.00
7,100.00	0.00	0.00	7,059.20	28.78	418.80	419.79	0.00	0.00	0.00
7,200.00	0.00	0.00	7,159.20	28.78	418.80	419.79	0.00	0.00	0.00
7,300.00	0.00	0.00	7,259.20	28.78	418.80	419.79	0.00	0.00	0.00
7,400.00	0.00	0.00	7,359.20	28.78	418.80	419.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,459.20	28.78	418.80	419.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,559.20	28.78	418.80	419.79	0.00	0.00	0.00
7,700.00	0.00	0.00	7,659.20	28.78	418.80	419.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,759.20	28.78	418.80	419.79	0.00	0.00	0.00
7,900.00	0.00	0.00	7,859.20	28.78	418.80	419.79	0.00	0.00	0.00
MESAVERDE									
7,996.80	0.00	0.00	7,956.00	28.78	418.80	419.79	0.00	0.00	0.00
8,000.00	0.00	0.00	7,959.20	28.78	418.80	419.79	0.00	0.00	0.00
8,100.00	0.00	0.00	8,059.20	28.78	418.80	419.79	0.00	0.00	0.00
8,200.00	0.00	0.00	8,159.20	28.78	418.80	419.79	0.00	0.00	0.00
8,300.00	0.00	0.00	8,259.20	28.78	418.80	419.79	0.00	0.00	0.00
8,400.00	0.00	0.00	8,359.20	28.78	418.80	419.79	0.00	0.00	0.00
8,500.00	0.00	0.00	8,459.20	28.78	418.80	419.79	0.00	0.00	0.00
8,600.00	0.00	0.00	8,559.20	28.78	418.80	419.79	0.00	0.00	0.00
8,700.00	0.00	0.00	8,659.20	28.78	418.80	419.79	0.00	0.00	0.00
8,800.00	0.00	0.00	8,759.20	28.78	418.80	419.79	0.00	0.00	0.00
8,900.00	0.00	0.00	8,859.20	28.78	418.80	419.79	0.00	0.00	0.00
9,000.00	0.00	0.00	8,959.20	28.78	418.80	419.79	0.00	0.00	0.00
9,100.00	0.00	0.00	9,059.20	28.78	418.80	419.79	0.00	0.00	0.00
9,200.00	0.00	0.00	9,159.20	28.78	418.80	419.79	0.00	0.00	0.00
9,300.00	0.00	0.00	9,259.20	28.78	418.80	419.79	0.00	0.00	0.00
9,400.00	0.00	0.00	9,359.20	28.78	418.80	419.79	0.00	0.00	0.00



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31F1BS		
Design:	PLAN #1 3-26-10 RHS		

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)
9,500.00	0.00	0.00	9,459.20	28.78	418.80	419.79	0.00	0.00	0.00
9,600.00	0.00	0.00	9,559.20	28.78	418.80	419.79	0.00	0.00	0.00
9,700.00	0.00	0.00	9,659.20	28.78	418.80	419.79	0.00	0.00	0.00
9,800.00	0.00	0.00	9,759.20	28.78	418.80	419.79	0.00	0.00	0.00
9,900.00	0.00	0.00	9,859.20	28.78	418.80	419.79	0.00	0.00	0.00
10,000.00	0.00	0.00	9,959.20	28.78	418.80	419.79	0.00	0.00	0.00
10,100.00	0.00	0.00	10,059.20	28.78	418.80	419.79	0.00	0.00	0.00
10,200.00	0.00	0.00	10,159.20	28.78	418.80	419.79	0.00	0.00	0.00
10,300.00	0.00	0.00	10,259.20	28.78	418.80	419.79	0.00	0.00	0.00
PBHL_NBU 922-31F1BS(1540 FNL 1728 FWL)									
10,320.80	0.00	0.00	10,280.00	28.78	418.80	419.79	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NBU 922-31F1	0.00	0.00	10,280.00	28.78	418.80	14,528,039.08	2,065,076.46	39° 59' 44.012 N	109° 29' 1.691 W
- hit/miss target									
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,023.03	1,990.00	8 5/8"	8.62	11.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,151.18	1,138.00	GREEN RIVER			
4,443.80	4,403.00	WASATCH			
7,996.80	7,956.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 3.00
708.25	705.15	2.98	43.37	Start 1422.68 hold at 708.25 MD
2,130.94	2,095.46	23.67	344.46	Start Drop -1.75
2,830.80	2,790.00	28.78	418.80	Start 7490.00 hold at 2830.80 MD
10,320.80	10,280.00	28.78	418.80	TD at 10320.80



ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)
NBU 922-31F Pad
NBU 922-31F1BS**

**NBU 922-31F1BS
PLAN #1 3-26-10 RHS**

Anticollision Report

26 March, 2010





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 3-26-10 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	3/26/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	10,320.80	PLAN #1 3-26-10 RHS (NBU 922-31F1BS	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
NBU 922-31F Pad						
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	300.00	286.00	35.78	25.79	3.583	CC
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	10,320.80	10,266.00	446.29	15.17	1.035	Level 2, ES, SF
NBU 922-31C1AS - NBU 922-31C1AS - PLAN #1 3-26-1	300.00	300.00	19.69	18.60	18.029	CC, ES
NBU 922-31C1AS - NBU 922-31C1AS - PLAN #1 3-26-1	400.00	399.91	22.07	20.53	14.344	SF
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	300.00	300.00	29.67	28.58	27.159	CC, ES
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	9,400.00	9,395.68	779.41	735.56	17.773	SF
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	300.00	300.00	9.72	8.63	8.900	CC, ES
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	400.00	400.14	11.15	9.62	7.269	SF
NBU 922-31D1BS - NBU 922-31D1BS - PLAN #1 3-26-1	300.00	300.00	39.89	38.80	36.519	CC, ES
NBU 922-31D1BS - NBU 922-31D1BS - PLAN #1 3-26-1	500.00	498.19	53.39	51.38	26.682	SF
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	300.00	300.00	49.86	48.77	45.649	CC, ES
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	10,320.80	10,458.38	1,463.93	1,417.28	31.383	SF
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	300.00	300.00	59.84	58.75	54.778	CC, ES
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	9,400.00	9,389.78	1,209.48	1,168.17	29.280	SF

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-50.11	22.95	-27.45	38.42					
100.00	100.00	86.00	86.00	0.10	1.72	-50.11	22.95	-27.45	35.78	33.96	1.82	19.695		
200.00	200.00	186.00	186.00	0.32	5.44	-50.11	22.95	-27.45	35.78	30.02	5.76	6.210		
300.00	300.00	286.00	286.00	0.55	9.44	-50.11	22.95	-27.45	35.78	25.79	9.99	3.583	CC	
400.00	399.95	385.95	385.95	0.76	13.44	-138.90	22.95	-27.45	37.71	23.52	14.19	2.658		
500.00	499.63	485.63	485.63	1.00	17.43	-145.53	22.95	-27.45	43.93	25.59	18.34	2.395		
600.00	598.77	584.77	584.77	1.27	21.39	-153.05	22.95	-27.45	55.20	32.81	22.39	2.465		
708.25	705.15	691.15	691.15	1.64	25.65	-159.90	22.95	-27.45	73.58	46.98	26.60	2.766		
800.00	794.81	780.81	780.81	2.02	29.23	-164.06	22.95	-27.45	92.14	61.83	30.31	3.040		
900.00	892.53	878.53	878.53	2.44	33.14	-167.02	22.95	-27.45	112.72	78.35	34.37	3.279		
1,000.00	990.26	976.26	976.26	2.88	37.05	-169.06	22.95	-27.45	133.49	95.05	38.44	3.473		
1,100.00	1,087.98	1,073.98	1,073.98	3.32	40.96	-170.56	22.95	-27.45	154.39	111.88	42.51	3.632		
1,200.00	1,185.71	1,171.71	1,171.71	3.77	44.87	-171.69	22.95	-27.45	175.36	128.77	46.59	3.764		
1,300.00	1,283.43	1,269.43	1,269.43	4.22	48.78	-172.59	22.95	-27.45	196.38	145.72	50.67	3.876		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor
1,400.00	1,381.15	1,367.15	1,367.15	4.68	52.69	-173.31	22.95	-27.45	217.44	162.70	54.75	3.972	
1,500.00	1,478.88	1,464.88	1,464.88	5.13	56.60	-173.90	22.95	-27.45	238.53	179.70	58.83	4.055	
1,600.00	1,576.60	1,562.60	1,562.60	5.59	60.50	-174.40	22.95	-27.45	259.64	196.73	62.91	4.127	
1,700.00	1,674.33	1,660.33	1,660.33	6.05	64.41	-174.82	22.95	-27.45	280.76	213.77	67.00	4.191	
1,800.00	1,772.05	1,758.05	1,758.05	6.51	68.32	-175.18	22.95	-27.45	301.90	230.82	71.08	4.247	
1,900.00	1,869.77	1,855.77	1,855.77	6.97	72.23	-175.50	22.95	-27.45	323.05	247.88	75.17	4.298	
2,000.00	1,967.50	1,953.50	1,953.50	7.43	76.14	-175.78	22.95	-27.45	344.20	264.95	79.25	4.343	
2,100.00	2,065.22	2,051.22	2,051.22	7.89	80.05	-176.02	22.95	-27.45	365.37	282.02	83.34	4.384	
2,130.94	2,095.46	2,081.46	2,081.46	8.03	81.26	-176.09	22.95	-27.45	371.91	287.31	84.61	4.396	
2,200.00	2,163.10	2,149.10	2,149.10	8.30	83.96	-176.25	22.95	-27.45	385.82	298.05	87.78	4.396	
2,300.00	2,261.52	2,247.52	2,247.52	8.62	87.90	-176.43	22.95	-27.45	403.43	311.10	92.33	4.370	
2,400.00	2,360.44	2,346.44	2,346.44	8.90	91.86	-176.57	22.95	-27.45	418.04	321.19	96.85	4.317	
2,500.00	2,459.76	2,445.76	2,445.76	9.15	95.83	-176.68	22.95	-27.45	429.62	328.31	101.31	4.241	
2,600.00	2,559.39	2,545.39	2,545.39	9.36	99.82	-176.75	22.95	-27.45	438.17	332.46	105.72	4.145	
2,700.00	2,659.23	2,645.23	2,645.23	9.54	103.81	-176.80	22.95	-27.45	443.68	333.64	110.04	4.032	
2,800.00	2,759.20	2,745.20	2,745.20	9.68	107.81	-176.82	22.95	-27.45	446.15	331.88	114.27	3.904	
2,830.80	2,790.00	2,776.00	2,776.00	9.72	109.04	-90.75	22.95	-27.45	446.29	330.74	115.55	3.862	
2,900.00	2,859.20	2,845.20	2,845.20	9.81	111.81	-90.75	22.95	-27.45	446.29	327.85	118.44	3.768	
3,000.00	2,959.20	2,945.20	2,945.20	9.94	115.81	-90.75	22.95	-27.45	446.29	323.66	122.63	3.639	
3,100.00	3,059.20	3,045.20	3,045.20	10.08	119.81	-90.75	22.95	-27.45	446.29	319.47	126.82	3.519	
3,200.00	3,159.20	3,145.20	3,145.20	10.22	123.81	-90.75	22.95	-27.45	446.29	315.28	131.01	3.407	
3,300.00	3,259.20	3,245.20	3,245.20	10.36	127.81	-90.75	22.95	-27.45	446.29	311.09	135.20	3.301	
3,400.00	3,359.20	3,345.20	3,345.20	10.51	131.81	-90.75	22.95	-27.45	446.29	306.89	139.40	3.202	
3,500.00	3,459.20	3,445.20	3,445.20	10.65	135.81	-90.75	22.95	-27.45	446.29	302.70	143.60	3.108	
3,600.00	3,559.20	3,545.20	3,545.20	10.80	139.81	-90.75	22.95	-27.45	446.29	298.50	147.79	3.020	
3,700.00	3,659.20	3,645.20	3,645.20	10.96	143.81	-90.75	22.95	-27.45	446.29	294.30	151.99	2.936	
3,800.00	3,759.20	3,745.20	3,745.20	11.11	147.81	-90.75	22.95	-27.45	446.29	290.10	156.19	2.857	
3,900.00	3,859.20	3,845.20	3,845.20	11.27	151.81	-90.75	22.95	-27.45	446.29	285.90	160.40	2.782	
4,000.00	3,959.20	3,945.20	3,945.20	11.43	155.81	-90.75	22.95	-27.45	446.29	281.69	164.60	2.711	
4,100.00	4,059.20	4,045.20	4,045.20	11.60	159.81	-90.75	22.95	-27.45	446.29	277.49	168.80	2.644	
4,200.00	4,159.20	4,145.20	4,145.20	11.76	163.81	-90.75	22.95	-27.45	446.29	273.28	173.01	2.580	
4,300.00	4,259.20	4,245.20	4,245.20	11.93	167.81	-90.75	22.95	-27.45	446.29	269.08	177.22	2.518	
4,400.00	4,359.20	4,345.20	4,345.20	12.10	171.81	-90.75	22.95	-27.45	446.29	264.87	181.42	2.460	
4,500.00	4,459.20	4,445.20	4,445.20	12.27	175.81	-90.75	22.95	-27.45	446.29	260.66	185.63	2.404	
4,600.00	4,559.20	4,545.20	4,545.20	12.44	179.81	-90.75	22.95	-27.45	446.29	256.45	189.84	2.351	
4,700.00	4,659.20	4,645.20	4,645.20	12.61	183.81	-90.75	22.95	-27.45	446.29	252.25	194.05	2.300	
4,800.00	4,759.20	4,745.20	4,745.20	12.79	187.81	-90.75	22.95	-27.45	446.29	248.04	198.26	2.251	
4,900.00	4,859.20	4,845.20	4,845.20	12.96	191.81	-90.75	22.95	-27.45	446.29	243.83	202.47	2.204	
5,000.00	4,959.20	4,945.20	4,945.20	13.14	195.81	-90.75	22.95	-27.45	446.29	239.61	206.68	2.159	
5,100.00	5,059.20	5,045.20	5,045.20	13.32	199.81	-90.75	22.95	-27.45	446.29	235.40	210.89	2.116	
5,200.00	5,159.20	5,145.20	5,145.20	13.50	203.81	-90.75	22.95	-27.45	446.29	231.19	215.10	2.075	
5,300.00	5,259.20	5,245.20	5,245.20	13.69	207.81	-90.75	22.95	-27.45	446.29	226.98	219.31	2.035	
5,400.00	5,359.20	5,345.20	5,345.20	13.87	211.81	-90.75	22.95	-27.45	446.29	222.77	223.53	1.997	
5,500.00	5,459.20	5,445.20	5,445.20	14.05	215.81	-90.75	22.95	-27.45	446.29	218.55	227.74	1.960	
5,600.00	5,559.20	5,545.20	5,545.20	14.24	219.81	-90.75	22.95	-27.45	446.29	214.34	231.95	1.924	
5,700.00	5,659.20	5,645.20	5,645.20	14.43	223.81	-90.75	22.95	-27.45	446.29	210.12	236.17	1.890	
5,800.00	5,759.20	5,745.20	5,745.20	14.62	227.81	-90.75	22.95	-27.45	446.29	205.91	240.38	1.857	
5,900.00	5,859.20	5,845.20	5,845.20	14.80	231.81	-90.75	22.95	-27.45	446.29	201.70	244.60	1.825	
6,000.00	5,959.20	5,945.20	5,945.20	14.99	235.81	-90.75	22.95	-27.45	446.29	197.48	248.81	1.794	
6,100.00	6,059.20	6,045.20	6,045.20	15.19	239.81	-90.75	22.95	-27.45	446.29	193.26	253.03	1.764	
6,200.00	6,159.20	6,145.20	6,145.20	15.38	243.81	-90.75	22.95	-27.45	446.29	189.05	257.24	1.735	
6,300.00	6,259.20	6,245.20	6,245.20	15.57	247.81	-90.75	22.95	-27.45	446.29	184.83	261.46	1.707	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,400.00	6,359.20	6,345.20	6,345.20	15.76	251.81	-90.75	22.95	-27.45	446.29	180.62	265.68	1.680		
6,500.00	6,459.20	6,445.20	6,445.20	15.96	255.81	-90.75	22.95	-27.45	446.29	176.40	269.89	1.654		
6,600.00	6,559.20	6,545.20	6,545.20	16.15	259.81	-90.75	22.95	-27.45	446.29	172.18	274.11	1.628		
6,700.00	6,659.20	6,645.20	6,645.20	16.35	263.81	-90.75	22.95	-27.45	446.29	167.97	278.33	1.603		
6,800.00	6,759.20	6,745.20	6,745.20	16.55	267.81	-90.75	22.95	-27.45	446.29	163.75	282.54	1.580		
6,900.00	6,859.20	6,845.20	6,845.20	16.74	271.81	-90.75	22.95	-27.45	446.29	159.53	286.76	1.556		
7,000.00	6,959.20	6,945.20	6,945.20	16.94	275.81	-90.75	22.95	-27.45	446.29	155.31	290.98	1.534		
7,100.00	7,059.20	7,045.20	7,045.20	17.14	279.81	-90.75	22.95	-27.45	446.29	151.09	295.20	1.512		
7,200.00	7,159.20	7,145.20	7,145.20	17.34	283.81	-90.75	22.95	-27.45	446.29	146.88	299.42	1.491 Level 3		
7,300.00	7,259.20	7,245.20	7,245.20	17.54	287.81	-90.75	22.95	-27.45	446.29	142.66	303.63	1.470 Level 3		
7,400.00	7,359.20	7,345.20	7,345.20	17.74	291.81	-90.75	22.95	-27.45	446.29	138.44	307.85	1.450 Level 3		
7,500.00	7,459.20	7,445.20	7,445.20	17.94	295.81	-90.75	22.95	-27.45	446.29	134.22	312.07	1.430 Level 3		
7,600.00	7,559.20	7,545.20	7,545.20	18.14	299.81	-90.75	22.95	-27.45	446.29	130.00	316.29	1.411 Level 3		
7,700.00	7,659.20	7,645.20	7,645.20	18.35	303.81	-90.75	22.95	-27.45	446.29	125.78	320.51	1.392 Level 3		
7,800.00	7,759.20	7,745.20	7,745.20	18.55	307.81	-90.75	22.95	-27.45	446.29	121.56	324.73	1.374 Level 3		
7,900.00	7,859.20	7,845.20	7,845.20	18.75	311.81	-90.75	22.95	-27.45	446.29	117.34	328.95	1.357 Level 3		
8,000.00	7,959.20	7,945.20	7,945.20	18.96	315.81	-90.75	22.95	-27.45	446.29	113.13	333.17	1.340 Level 3		
8,100.00	8,059.20	8,045.20	8,045.20	19.16	319.81	-90.75	22.95	-27.45	446.29	108.91	337.39	1.323 Level 3		
8,200.00	8,159.20	8,145.20	8,145.20	19.37	323.81	-90.75	22.95	-27.45	446.29	104.69	341.61	1.306 Level 3		
8,300.00	8,259.20	8,245.20	8,245.20	19.57	327.81	-90.75	22.95	-27.45	446.29	100.47	345.83	1.291 Level 3		
8,400.00	8,359.20	8,345.20	8,345.20	19.78	331.81	-90.75	22.95	-27.45	446.29	96.25	350.05	1.275 Level 3		
8,500.00	8,459.20	8,445.20	8,445.20	19.98	335.81	-90.75	22.95	-27.45	446.29	92.03	354.27	1.260 Level 3		
8,600.00	8,559.20	8,545.20	8,545.20	20.19	339.81	-90.75	22.95	-27.45	446.29	87.81	358.49	1.245 Level 2		
8,700.00	8,659.20	8,645.20	8,645.20	20.40	343.81	-90.75	22.95	-27.45	446.29	83.59	362.71	1.230 Level 2		
8,800.00	8,759.20	8,745.20	8,745.20	20.60	347.81	-90.75	22.95	-27.45	446.29	79.37	366.93	1.216 Level 2		
8,900.00	8,859.20	8,845.20	8,845.20	20.81	351.81	-90.75	22.95	-27.45	446.29	75.14	371.15	1.202 Level 2		
9,000.00	8,959.20	8,945.20	8,945.20	21.02	355.81	-90.75	22.95	-27.45	446.29	70.92	375.37	1.189 Level 2		
9,100.00	9,059.20	9,045.20	9,045.20	21.23	359.81	-90.75	22.95	-27.45	446.29	66.70	379.59	1.176 Level 2		
9,200.00	9,159.20	9,145.20	9,145.20	21.44	363.81	-90.75	22.95	-27.45	446.29	62.48	383.81	1.163 Level 2		
9,300.00	9,259.20	9,245.20	9,245.20	21.64	367.81	-90.75	22.95	-27.45	446.29	58.26	388.03	1.150 Level 2		
9,400.00	9,359.20	9,345.20	9,345.20	21.85	371.81	-90.75	22.95	-27.45	446.29	54.04	392.25	1.138 Level 2		
9,500.00	9,459.20	9,445.20	9,445.20	22.06	375.81	-90.75	22.95	-27.45	446.29	49.82	396.47	1.126 Level 2		
9,600.00	9,559.20	9,545.20	9,545.20	22.27	379.81	-90.75	22.95	-27.45	446.29	45.60	400.69	1.114 Level 2		
9,700.00	9,659.20	9,645.20	9,645.20	22.48	383.81	-90.75	22.95	-27.45	446.29	41.38	404.92	1.102 Level 2		
9,800.00	9,759.20	9,745.20	9,745.20	22.69	387.81	-90.75	22.95	-27.45	446.29	37.16	409.14	1.091 Level 2		
9,900.00	9,859.20	9,845.20	9,845.20	22.90	391.81	-90.75	22.95	-27.45	446.29	32.93	413.36	1.080 Level 2		
10,000.00	9,959.20	9,945.20	9,945.20	23.12	395.81	-90.75	22.95	-27.45	446.29	28.71	417.58	1.069 Level 2		
10,100.00	10,059.20	10,045.20	10,045.20	23.33	399.81	-90.75	22.95	-27.45	446.29	24.49	421.80	1.058 Level 2		
10,200.00	10,159.20	10,145.20	10,145.20	23.54	403.81	-90.75	22.95	-27.45	446.29	20.27	426.02	1.048 Level 2		
10,300.00	10,259.20	10,245.20	10,245.20	23.75	407.81	-90.75	22.95	-27.45	446.29	16.05	430.24	1.037 Level 2		
10,320.80	10,280.00	10,266.00	10,266.00	23.79	408.64	-90.75	22.95	-27.45	446.29	15.17	431.12	1.035 Level 2, ES, SF		



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-63.65	8.74	-17.65	19.69						
100.00	100.00	100.00	100.00	0.10	0.10	-63.65	8.74	-17.65	19.69	19.50	0.19	101.886			
200.00	200.00	200.00	200.00	0.32	0.32	-63.65	8.74	-17.65	19.69	19.05	0.64	30.637			
300.00	300.00	300.00	300.00	0.55	0.55	-63.65	8.74	-17.65	19.69	18.60	1.09	18.029 CC, ES			
400.00	399.95	399.91	399.89	0.76	0.77	-148.59	10.35	-16.97	22.07	20.53	1.54	14.344 SF			
500.00	499.63	499.66	499.57	1.00	1.00	-149.70	13.56	-15.62	29.05	27.06	1.99	14.583			
600.00	598.77	598.93	598.79	1.27	1.22	-153.94	16.75	-14.28	40.66	38.20	2.46	16.533			
708.25	705.15	705.56	705.36	1.64	1.47	-158.63	20.18	-12.84	58.78	55.80	2.97	19.763			
800.00	794.81	795.47	795.21	2.02	1.67	-161.55	23.07	-11.62	76.73	73.33	3.40	22.558			
900.00	892.53	893.47	893.15	2.44	1.90	-163.49	26.22	-10.30	96.44	92.56	3.87	24.890			
1,000.00	990.26	991.47	991.09	2.88	2.12	-164.77	29.38	-8.97	116.21	111.86	4.35	26.700			
1,100.00	1,087.98	1,089.47	1,089.03	3.32	2.35	-165.68	32.53	-7.64	136.03	131.20	4.83	28.137			
1,200.00	1,185.71	1,187.46	1,186.96	3.77	2.58	-166.36	35.68	-6.32	155.87	150.55	5.32	29.303			
1,300.00	1,283.43	1,285.46	1,284.90	4.22	2.80	-166.88	38.84	-4.99	175.73	169.92	5.81	30.266			
1,400.00	1,381.15	1,383.46	1,382.84	4.68	3.03	-167.30	41.99	-3.67	195.59	189.30	6.29	31.074			
1,500.00	1,478.88	1,481.46	1,480.78	5.13	3.26	-167.64	45.14	-2.34	215.47	208.68	6.78	31.760			
1,600.00	1,576.60	1,579.46	1,578.72	5.59	3.48	-167.93	48.29	-1.01	235.35	228.08	7.28	32.350			
1,700.00	1,674.33	1,677.45	1,676.65	6.05	3.71	-168.16	51.45	0.31	255.24	247.47	7.77	32.863			
1,800.00	1,772.05	1,775.45	1,774.59	6.51	3.94	-168.37	54.60	1.64	275.13	266.87	8.26	33.312			
1,900.00	1,869.77	1,873.45	1,872.53	6.97	4.16	-168.55	57.75	2.96	295.02	286.27	8.75	33.708			
2,000.00	1,967.50	1,971.45	1,970.47	7.43	4.39	-168.70	60.90	4.29	314.91	305.67	9.25	34.061			
2,100.00	2,065.22	2,069.44	2,068.41	7.89	4.62	-168.84	64.06	5.62	334.81	325.07	9.74	34.377			
2,130.94	2,095.46	2,099.76	2,098.71	8.03	4.69	-168.88	65.03	6.03	340.97	331.08	9.89	34.468			
2,200.00	2,163.10	2,168.46	2,167.36	8.30	4.85	-168.97	67.31	6.99	353.99	343.75	10.24	34.583			
2,300.00	2,261.52	2,272.52	2,271.15	8.62	5.10	-168.45	74.14	9.86	369.41	358.67	10.74	34.392			
2,400.00	2,360.44	2,376.68	2,374.47	8.90	5.39	-167.05	86.18	14.92	380.56	369.28	11.28	33.731			
2,500.00	2,459.76	2,479.97	2,476.08	9.15	5.70	-164.81	103.23	22.09	387.84	375.97	11.87	32.666			
2,600.00	2,559.39	2,581.50	2,574.84	9.36	6.06	-161.78	124.90	31.21	391.91	379.38	12.53	31.281			
2,700.00	2,659.23	2,680.44	2,669.74	9.54	6.45	-158.01	150.64	42.03	393.70	380.44	13.26	29.687			
2,800.00	2,759.20	2,776.07	2,759.97	9.68	6.90	-153.55	179.80	54.29	394.43	380.35	14.07	28.028			
2,830.80	2,790.00	2,804.81	2,786.79	9.72	7.04	-65.99	189.34	58.31	394.65	380.31	14.33	27.534			
2,900.00	2,859.20	2,869.30	2,846.89	9.81	7.38	-62.61	210.90	67.38	396.01	381.05	14.96	26.476			
3,000.00	2,959.20	2,962.50	2,933.74	9.94	7.89	-57.77	242.05	80.48	400.75	384.88	15.87	25.255			
3,100.00	3,059.20	3,055.69	3,020.59	10.08	8.42	-53.07	273.20	93.58	408.66	391.90	16.77	24.375			
3,200.00	3,159.20	3,148.88	3,107.44	10.22	8.97	-48.56	304.36	106.68	419.57	401.94	17.63	23.797			
3,300.00	3,259.20	3,242.07	3,194.29	10.36	9.53	-44.27	335.51	119.79	433.26	414.80	18.45	23.479			
3,400.00	3,359.20	3,335.27	3,281.13	10.51	10.10	-40.24	366.66	132.89	449.45	430.23	19.22	23.381			
3,500.00	3,459.20	3,428.46	3,367.98	10.65	10.69	-36.47	397.81	145.99	467.91	447.97	19.94	23.464			
3,600.00	3,559.20	3,521.65	3,454.83	10.80	11.28	-32.98	428.97	159.09	488.36	467.75	20.61	23.696			
3,700.00	3,659.20	3,614.84	3,541.68	10.96	11.87	-29.76	460.12	172.20	510.57	489.34	21.23	24.048			
3,800.00	3,759.20	3,708.04	3,628.53	11.11	12.48	-26.79	491.27	185.30	534.32	512.51	21.81	24.495			
3,900.00	3,859.20	3,801.23	3,715.38	11.27	13.09	-24.06	522.43	198.40	559.42	537.06	22.36	25.017			
4,000.00	3,959.20	3,894.42	3,802.23	11.43	13.70	-21.55	553.58	211.50	585.69	562.81	22.88	25.597			
4,100.00	4,059.20	3,987.61	3,889.08	11.60	14.32	-19.25	584.73	224.61	612.98	589.60	23.38	26.220			
4,200.00	4,159.20	4,080.81	3,975.92	11.76	14.94	-17.14	615.88	237.71	641.16	617.30	23.86	26.876			
4,300.00	4,259.20	4,174.00	4,062.77	11.93	15.57	-15.20	647.04	250.81	670.11	645.79	24.32	27.555			
4,400.00	4,359.20	4,267.19	4,149.62	12.10	16.20	-13.41	678.19	263.91	699.75	674.98	24.77	28.248			
4,500.00	4,459.20	4,360.39	4,236.47	12.27	16.83	-11.77	709.34	277.02	729.99	704.77	25.21	28.951			
4,600.00	4,559.20	4,453.58	4,323.32	12.44	17.46	-10.25	740.50	290.12	760.75	735.10	25.65	29.657			
4,700.00	4,659.20	4,546.77	4,410.17	12.61	18.09	-8.84	771.65	303.22	791.98	765.90	26.08	30.362			
4,800.00	4,759.20	4,639.96	4,497.02	12.79	18.73	-7.54	802.80	316.32	823.62	797.11	26.51	31.063			
4,900.00	4,859.20	4,733.16	4,583.87	12.96	19.37	-6.33	833.95	329.43	855.63	828.69	26.94	31.757			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft					
Survey Program: 0-MWD												Offset Well Error:	0.00 ft					
Reference												Semi Major Axis		Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor						
5,000.00	4,959.20	4,826.35	4,670.71	13.14	20.00	-5.21	865.11	342.53	887.97	860.60	27.37	32.443						
5,100.00	5,059.20	4,919.54	4,757.56	13.32	20.64	-4.16	896.26	355.63	920.60	892.80	27.80	33.118						
5,200.00	5,159.20	5,012.73	4,844.41	13.50	21.29	-3.19	927.41	368.73	953.49	925.27	28.23	33.781						
5,300.00	5,259.20	5,105.93	4,931.26	13.69	21.93	-2.28	958.56	381.84	986.62	957.97	28.65	34.432						
5,400.00	5,359.20	5,199.12	5,018.11	13.87	22.57	-1.42	989.72	394.94	1,019.96	990.88	29.08	35.069						
5,500.00	5,459.20	5,292.31	5,104.96	14.05	23.21	-0.62	1,020.87	408.04	1,053.50	1,023.98	29.52	35.692						
5,600.00	5,559.20	5,385.50	5,191.81	14.24	23.86	0.13	1,052.02	421.14	1,087.21	1,057.26	29.95	36.301						
5,700.00	5,659.20	5,478.70	5,278.66	14.43	24.50	0.84	1,083.18	434.25	1,121.08	1,090.69	30.39	36.895						
5,800.00	5,759.20	5,571.89	5,365.50	14.62	25.15	1.51	1,114.33	447.35	1,155.09	1,124.27	30.82	37.474						
5,900.00	5,859.20	5,665.08	5,452.35	14.80	25.80	2.14	1,145.48	460.45	1,189.24	1,157.98	31.26	38.039						
6,000.00	5,959.20	5,758.28	5,539.20	14.99	26.45	2.73	1,176.63	473.55	1,223.51	1,191.80	31.71	38.590						
6,100.00	6,059.20	5,851.47	5,626.05	15.19	27.09	3.29	1,207.79	486.66	1,257.89	1,225.74	32.15	39.126						
6,200.00	6,159.20	5,944.66	5,712.90	15.38	27.74	3.83	1,238.94	499.76	1,292.38	1,259.78	32.60	39.648						
6,300.00	6,259.20	6,037.85	5,799.75	15.57	28.39	4.33	1,270.09	512.86	1,326.96	1,293.91	33.05	40.156						
6,400.00	6,359.20	6,131.05	5,886.60	15.76	29.04	4.81	1,301.25	525.96	1,361.62	1,328.13	33.50	40.650						
6,500.00	6,459.20	6,224.24	5,973.44	15.96	29.69	5.27	1,332.40	539.07	1,396.37	1,362.42	33.95	41.131						
6,600.00	6,559.20	6,369.13	6,109.18	16.15	30.54	5.92	1,379.09	558.70	1,430.18	1,395.69	34.49	41.465						
6,700.00	6,659.20	6,554.61	6,286.29	16.35	31.41	6.56	1,429.79	580.03	1,458.73	1,423.65	35.08	41.584						
6,800.00	6,759.20	6,746.94	6,473.29	16.55	32.16	7.06	1,471.09	597.40	1,481.19	1,445.53	35.66	41.536						
6,900.00	6,859.20	6,944.69	6,668.25	16.74	32.77	7.40	1,501.41	610.15	1,497.24	1,461.02	36.22	41.336						
7,000.00	6,959.20	7,146.15	6,868.70	16.94	33.20	7.60	1,519.47	617.75	1,506.63	1,469.88	36.75	40.998						
7,100.00	7,059.20	7,336.76	7,059.20	17.14	33.45	7.66	1,524.59	619.90	1,509.27	1,472.05	37.22	40.548						
7,200.00	7,159.20	7,436.76	7,159.20	17.34	33.54	7.66	1,524.59	619.90	1,509.27	1,471.70	37.58	40.167						
7,300.00	7,259.20	7,536.76	7,259.20	17.54	33.64	7.66	1,524.59	619.90	1,509.27	1,471.33	37.94	39.780						
7,400.00	7,359.20	7,636.76	7,359.20	17.74	33.74	7.66	1,524.59	619.90	1,509.27	1,470.96	38.31	39.400						
7,500.00	7,459.20	7,736.76	7,459.20	17.94	33.84	7.66	1,524.59	619.90	1,509.27	1,470.60	38.67	39.025						
7,600.00	7,559.20	7,836.76	7,559.20	18.14	33.94	7.66	1,524.59	619.90	1,509.27	1,470.23	39.04	38.655						
7,700.00	7,659.20	7,936.76	7,659.20	18.35	34.05	7.66	1,524.59	619.90	1,509.27	1,469.86	39.42	38.291						
7,800.00	7,759.20	8,036.76	7,759.20	18.55	34.15	7.66	1,524.59	619.90	1,509.27	1,469.48	39.79	37.932						
7,900.00	7,859.20	8,136.76	7,859.20	18.75	34.26	7.66	1,524.59	619.90	1,509.27	1,469.11	40.16	37.578						
8,000.00	7,959.20	8,236.76	7,959.20	18.96	34.36	7.66	1,524.59	619.90	1,509.27	1,468.73	40.54	37.230						
8,100.00	8,059.20	8,336.76	8,059.20	19.16	34.47	7.66	1,524.59	619.90	1,509.27	1,468.35	40.92	36.886						
8,200.00	8,159.20	8,436.76	8,159.20	19.37	34.58	7.66	1,524.59	619.90	1,509.27	1,467.98	41.30	36.548						
8,300.00	8,259.20	8,536.76	8,259.20	19.57	34.69	7.66	1,524.59	619.90	1,509.27	1,467.60	41.68	36.215						
8,400.00	8,359.20	8,636.76	8,359.20	19.78	34.80	7.66	1,524.59	619.90	1,509.27	1,467.21	42.06	35.886						
8,500.00	8,459.20	8,736.76	8,459.20	19.98	34.91	7.66	1,524.59	619.90	1,509.27	1,466.83	42.44	35.562						
8,600.00	8,559.20	8,836.76	8,559.20	20.19	35.02	7.66	1,524.59	619.90	1,509.27	1,466.45	42.82	35.244						
8,700.00	8,659.20	8,936.76	8,659.20	20.40	35.14	7.66	1,524.59	619.90	1,509.27	1,466.06	43.21	34.929						
8,800.00	8,759.20	9,036.76	8,759.20	20.60	35.25	7.66	1,524.59	619.90	1,509.27	1,465.68	43.60	34.620						
8,900.00	8,859.20	9,136.76	8,859.20	20.81	35.37	7.66	1,524.59	619.90	1,509.27	1,465.29	43.98	34.315						
9,000.00	8,959.20	9,236.76	8,959.20	21.02	35.49	7.66	1,524.59	619.90	1,509.27	1,464.90	44.37	34.014						
9,100.00	9,059.20	9,336.76	9,059.20	21.23	35.60	7.66	1,524.59	619.90	1,509.27	1,464.51	44.76	33.718						
9,200.00	9,159.20	9,436.76	9,159.20	21.44	35.72	7.66	1,524.59	619.90	1,509.27	1,464.12	45.15	33.426						
9,300.00	9,259.20	9,536.76	9,259.20	21.64	35.84	7.66	1,524.59	619.90	1,509.27	1,463.73	45.54	33.139						
9,328.77	9,287.97	9,565.53	9,287.97	21.70	35.88	7.66	1,524.59	619.90	1,509.27	1,463.61	45.66	33.057						
9,400.00	9,359.20	9,583.56	9,306.00	21.85	35.90	7.66	1,524.59	619.90	1,510.21	1,464.37	45.84	32.946						
9,500.00	9,459.20	9,583.56	9,306.00	22.06	35.90	7.66	1,524.59	619.90	1,517.03	1,470.98	46.05	32.943						
9,600.00	9,559.20	9,583.56	9,306.00	22.27	35.90	7.66	1,524.59	619.90	1,530.36	1,484.10	46.26	33.082						
9,700.00	9,659.20	9,583.56	9,306.00	22.48	35.90	7.66	1,524.59	619.90	1,550.05	1,503.58	46.47	33.356						
9,800.00	9,759.20	9,583.56	9,306.00	22.69	35.90	7.66	1,524.59	619.90	1,575.85	1,529.16	46.68	33.758						
9,900.00	9,859.20	9,583.56	9,306.00	22.90	35.90	7.66	1,524.59	619.90	1,607.46	1,560.57	46.89	34.280						
10,000.00	9,959.20	9,583.56	9,306.00	23.12	35.90	7.66	1,524.59	619.90	1,644.56	1,597.45	47.10	34.914						

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31C1AS - NBU 922-31C1AS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,100.00	10,059.20	9,583.56	9,306.00	23.33	35.90	7.66	1,524.59	619.90	1,686.78	1,639.46	47.31	35.650	
10,200.00	10,159.20	9,583.56	9,306.00	23.54	35.90	7.66	1,524.59	619.90	1,733.74	1,686.21	47.53	36.479	
10,300.00	10,259.20	9,583.56	9,306.00	23.75	35.90	7.66	1,524.59	619.90	1,785.07	1,737.34	47.74	37.393	
10,320.80	10,280.00	9,583.56	9,306.00	23.79	35.90	7.66	1,524.59	619.90	1,796.27	1,748.48	47.78	37.592	



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-63.77	13.11	-26.61	29.67						
100.00	100.00	100.00	100.00	0.10	0.10	-63.77	13.11	-26.61	29.67	29.47	0.19	153.479			
200.00	200.00	200.00	200.00	0.32	0.32	-63.77	13.11	-26.61	29.67	29.02	0.64	46.151			
300.00	300.00	300.00	300.00	0.55	0.55	-63.77	13.11	-26.61	29.67	28.58	1.09	27.159 CC, ES			
400.00	399.95	399.47	399.45	0.76	0.77	-149.37	14.84	-26.61	32.70	31.16	1.54	21.224			
500.00	499.63	499.10	499.02	1.00	1.00	-150.48	18.32	-26.61	41.02	39.02	2.00	20.521			
600.00	598.77	598.20	598.06	1.27	1.22	-153.80	21.77	-26.61	53.98	51.52	2.47	21.882			
708.25	705.15	704.57	704.36	1.64	1.47	-157.73	25.49	-26.61	73.51	70.53	2.98	24.641			
800.00	794.81	794.22	793.96	2.02	1.67	-160.41	28.61	-26.61	92.64	89.23	3.41	27.156			
900.00	892.53	891.94	891.62	2.44	1.90	-162.30	32.03	-26.61	113.64	109.75	3.88	29.252			
1,000.00	990.26	989.65	989.27	2.88	2.12	-163.60	35.44	-26.61	134.71	130.35	4.36	30.875			
1,100.00	1,087.98	1,087.37	1,086.93	3.32	2.35	-164.55	38.85	-26.61	155.84	150.99	4.85	32.164			
1,200.00	1,185.71	1,185.08	1,184.58	3.77	2.57	-165.27	42.26	-26.61	176.99	171.66	5.33	33.208			
1,300.00	1,283.43	1,282.80	1,282.24	4.22	2.80	-165.84	45.67	-26.61	198.17	192.35	5.82	34.070			
1,400.00	1,381.15	1,380.51	1,379.90	4.68	3.03	-166.30	49.08	-26.61	219.36	213.06	6.30	34.792			
1,500.00	1,478.88	1,478.23	1,477.55	5.13	3.25	-166.67	52.49	-26.61	240.57	233.77	6.79	35.406			
1,600.00	1,576.60	1,575.94	1,575.21	5.59	3.48	-166.99	55.90	-26.61	261.78	254.49	7.29	35.933			
1,700.00	1,674.33	1,673.66	1,672.86	6.05	3.70	-167.26	59.31	-26.61	282.99	275.22	7.78	36.390			
1,800.00	1,772.05	1,771.37	1,770.52	6.51	3.93	-167.49	62.72	-26.61	304.22	295.95	8.27	36.791			
1,900.00	1,869.77	1,869.09	1,868.17	6.97	4.16	-167.69	66.13	-26.61	325.44	316.68	8.76	37.144			
2,000.00	1,967.50	1,966.80	1,965.83	7.43	4.38	-167.87	69.54	-26.61	346.67	337.42	9.25	37.458			
2,100.00	2,065.22	2,064.52	2,063.49	7.89	4.61	-168.02	72.95	-26.61	367.91	358.16	9.75	37.739			
2,130.94	2,095.46	2,094.75	2,093.70	8.03	4.68	-168.07	74.00	-26.61	374.47	364.57	9.90	37.821			
2,200.00	2,163.10	2,167.76	2,166.66	8.30	4.84	-168.19	76.52	-26.25	388.11	377.87	10.25	37.879			
2,300.00	2,261.52	2,271.29	2,269.94	8.62	5.09	-167.81	83.04	-23.77	403.90	393.15	10.74	37.603			
2,400.00	2,360.44	2,374.91	2,372.79	8.90	5.36	-166.60	94.79	-19.29	415.64	404.36	11.27	36.867			
2,500.00	2,459.76	2,477.71	2,473.99	9.15	5.67	-164.61	111.57	-12.90	423.68	411.83	11.85	35.753			
2,600.00	2,559.39	2,578.80	2,572.43	9.36	6.01	-161.91	133.02	-4.73	428.63	416.15	12.48	34.339			
2,700.00	2,659.23	2,677.38	2,667.13	9.54	6.39	-158.52	158.59	5.01	431.31	418.14	13.18	32.726			
2,800.00	2,759.20	2,772.79	2,757.33	9.68	6.82	-154.54	187.60	16.06	432.80	418.86	13.94	31.052			
2,830.80	2,790.00	2,801.75	2,784.55	9.72	6.96	-67.17	196.86	19.59	433.19	419.01	14.18	30.546			
2,900.00	2,859.20	2,866.78	2,845.65	9.81	7.28	-64.23	217.65	27.51	434.70	419.95	14.76	29.460			
3,000.00	2,959.20	2,960.74	2,933.95	9.94	7.77	-60.04	247.69	38.95	439.14	423.55	15.60	28.158			
3,100.00	3,059.20	3,054.71	3,022.25	10.08	8.28	-55.95	277.73	50.39	446.17	429.74	16.43	27.152			
3,200.00	3,159.20	3,148.68	3,110.54	10.22	8.80	-51.99	307.77	61.83	455.66	438.41	17.25	26.414			
3,300.00	3,259.20	3,242.65	3,198.84	10.36	9.33	-48.19	337.81	73.28	467.47	449.43	18.04	25.911			
3,400.00	3,359.20	3,336.61	3,287.14	10.51	9.88	-44.58	367.84	84.72	481.43	462.63	18.80	25.612			
3,500.00	3,459.20	3,430.58	3,375.44	10.65	10.43	-41.16	397.88	96.16	497.35	477.83	19.52	25.485			
3,600.00	3,559.20	3,524.55	3,463.74	10.80	10.99	-37.94	427.92	107.60	515.05	494.85	20.20	25.503			
3,700.00	3,659.20	3,618.51	3,552.04	10.96	11.56	-34.93	457.96	119.04	534.36	513.52	20.84	25.643			
3,800.00	3,759.20	3,712.48	3,640.33	11.11	12.14	-32.12	488.00	130.49	555.11	533.66	21.45	25.882			
3,900.00	3,859.20	3,806.45	3,728.63	11.27	12.72	-29.51	518.04	141.93	577.14	555.11	22.03	26.202			
4,000.00	3,959.20	3,900.42	3,816.93	11.43	13.31	-27.07	548.08	153.37	600.31	577.73	22.58	26.588			
4,100.00	4,059.20	3,994.38	3,905.23	11.60	13.90	-24.81	578.12	164.81	624.50	601.39	23.11	27.026			
4,200.00	4,159.20	4,088.35	3,993.53	11.76	14.49	-22.72	608.16	176.25	649.58	625.97	23.62	27.505			
4,300.00	4,259.20	4,193.32	4,092.38	11.93	15.11	-20.58	641.14	188.82	675.07	650.95	24.12	27.993			
4,400.00	4,359.20	4,310.43	4,203.99	12.10	15.66	-18.61	674.26	201.43	698.56	674.01	24.55	28.449			
4,500.00	4,459.20	4,430.43	4,319.76	12.27	16.17	-16.98	703.75	212.66	719.39	694.41	24.98	28.797			
4,600.00	4,559.20	4,553.01	4,439.27	12.44	16.64	-15.67	729.16	222.34	737.24	711.84	25.40	29.024			
4,700.00	4,659.20	4,677.77	4,562.00	12.61	17.05	-14.64	750.10	230.32	751.85	726.04	25.81	29.128			
4,800.00	4,759.20	4,804.29	4,687.33	12.79	17.42	-13.89	766.21	236.46	763.04	736.82	26.21	29.108			
4,900.00	4,859.20	4,932.12	4,814.60	12.96	17.70	-13.39	777.22	240.65	770.65	744.05	26.60	28.971			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,959.20	5,060.75	4,943.07	13.14	17.92	-13.13	782.94	242.83	774.59	747.61	26.98	28.713			
5,100.00	5,059.20	5,176.88	5,059.20	13.32	18.08	-13.10	783.78	243.15	775.17	747.84	27.33	28.362			
5,200.00	5,159.20	5,276.88	5,159.20	13.50	18.20	-13.10	783.78	243.15	775.17	747.49	27.68	28.008			
5,300.00	5,259.20	5,376.88	5,259.20	13.69	18.34	-13.10	783.78	243.15	775.17	747.14	28.03	27.656			
5,400.00	5,359.20	5,476.88	5,359.20	13.87	18.47	-13.10	783.78	243.15	775.17	746.78	28.38	27.310			
5,500.00	5,459.20	5,576.88	5,459.20	14.05	18.60	-13.10	783.78	243.15	775.17	746.43	28.74	26.970			
5,600.00	5,559.20	5,676.88	5,559.20	14.24	18.74	-13.10	783.78	243.15	775.17	746.07	29.10	26.636			
5,700.00	5,659.20	5,776.88	5,659.20	14.43	18.88	-13.10	783.78	243.15	775.17	745.70	29.46	26.309			
5,800.00	5,759.20	5,876.88	5,759.20	14.62	19.02	-13.10	783.78	243.15	775.17	745.34	29.83	25.987			
5,900.00	5,859.20	5,976.88	5,859.20	14.80	19.16	-13.10	783.78	243.15	775.17	744.97	30.20	25.671			
6,000.00	5,959.20	6,076.88	5,959.20	14.99	19.30	-13.10	783.78	243.15	775.17	744.60	30.57	25.361			
6,100.00	6,059.20	6,176.88	6,059.20	15.19	19.45	-13.10	783.78	243.15	775.17	744.23	30.94	25.056			
6,200.00	6,159.20	6,276.88	6,159.20	15.38	19.59	-13.10	783.78	243.15	775.17	743.86	31.31	24.757			
6,300.00	6,259.20	6,376.88	6,259.20	15.57	19.74	-13.10	783.78	243.15	775.17	743.48	31.69	24.464			
6,400.00	6,359.20	6,476.88	6,359.20	15.76	19.89	-13.10	783.78	243.15	775.17	743.10	32.06	24.176			
6,500.00	6,459.20	6,576.88	6,459.20	15.96	20.04	-13.10	783.78	243.15	775.17	742.73	32.44	23.893			
6,600.00	6,559.20	6,676.88	6,559.20	16.15	20.19	-13.10	783.78	243.15	775.17	742.34	32.82	23.616			
6,700.00	6,659.20	6,776.88	6,659.20	16.35	20.35	-13.10	783.78	243.15	775.17	741.96	33.21	23.344			
6,800.00	6,759.20	6,876.88	6,759.20	16.55	20.50	-13.10	783.78	243.15	775.17	741.58	33.59	23.077			
6,900.00	6,859.20	6,976.88	6,859.20	16.74	20.66	-13.10	783.78	243.15	775.17	741.19	33.98	22.815			
7,000.00	6,959.20	7,076.88	6,959.20	16.94	20.81	-13.10	783.78	243.15	775.17	740.80	34.36	22.557			
7,100.00	7,059.20	7,176.88	7,059.20	17.14	20.97	-13.10	783.78	243.15	775.17	740.41	34.75	22.305			
7,200.00	7,159.20	7,276.88	7,159.20	17.34	21.13	-13.10	783.78	243.15	775.17	740.02	35.14	22.057			
7,300.00	7,259.20	7,376.88	7,259.20	17.54	21.29	-13.10	783.78	243.15	775.17	739.63	35.54	21.814			
7,400.00	7,359.20	7,476.88	7,359.20	17.74	21.45	-13.10	783.78	243.15	775.17	739.24	35.93	21.575			
7,500.00	7,459.20	7,576.88	7,459.20	17.94	21.62	-13.10	783.78	243.15	775.17	738.85	36.32	21.341			
7,600.00	7,559.20	7,676.88	7,559.20	18.14	21.78	-13.10	783.78	243.15	775.17	738.45	36.72	21.111			
7,700.00	7,659.20	7,776.88	7,659.20	18.35	21.95	-13.10	783.78	243.15	775.17	738.05	37.12	20.885			
7,800.00	7,759.20	7,876.88	7,759.20	18.55	22.11	-13.10	783.78	243.15	775.17	737.65	37.51	20.664			
7,900.00	7,859.20	7,976.88	7,859.20	18.75	22.28	-13.10	783.78	243.15	775.17	737.26	37.91	20.446			
8,000.00	7,959.20	8,076.88	7,959.20	18.96	22.45	-13.10	783.78	243.15	775.17	736.85	38.31	20.232			
8,100.00	8,059.20	8,176.88	8,059.20	19.16	22.62	-13.10	783.78	243.15	775.17	736.45	38.71	20.023			
8,200.00	8,159.20	8,276.88	8,159.20	19.37	22.79	-13.10	783.78	243.15	775.17	736.05	39.12	19.817			
8,300.00	8,259.20	8,376.88	8,259.20	19.57	22.96	-13.10	783.78	243.15	775.17	735.65	39.52	19.614			
8,400.00	8,359.20	8,476.88	8,359.20	19.78	23.13	-13.10	783.78	243.15	775.17	735.24	39.93	19.416			
8,500.00	8,459.20	8,576.88	8,459.20	19.98	23.30	-13.10	783.78	243.15	775.17	734.84	40.33	19.220			
8,600.00	8,559.20	8,676.88	8,559.20	20.19	23.48	-13.10	783.78	243.15	775.17	734.43	40.74	19.029			
8,700.00	8,659.20	8,776.88	8,659.20	20.40	23.65	-13.10	783.78	243.15	775.17	734.02	41.14	18.840			
8,800.00	8,759.20	8,876.88	8,759.20	20.60	23.83	-13.10	783.78	243.15	775.17	733.62	41.55	18.655			
8,900.00	8,859.20	8,976.88	8,859.20	20.81	24.01	-13.10	783.78	243.15	775.17	733.21	41.96	18.473			
9,000.00	8,959.20	9,076.88	8,959.20	21.02	24.18	-13.10	783.78	243.15	775.17	732.80	42.37	18.295			
9,100.00	9,059.20	9,176.88	9,059.20	21.23	24.36	-13.10	783.78	243.15	775.17	732.39	42.78	18.119			
9,200.00	9,159.20	9,276.88	9,159.20	21.44	24.54	-13.10	783.78	243.15	775.17	731.98	43.19	17.947			
9,300.00	9,259.20	9,376.88	9,259.20	21.64	24.72	-13.10	783.78	243.15	775.17	731.56	43.60	17.777			
9,400.00	9,359.20	9,395.68	9,278.00	21.85	24.75	-13.10	783.78	243.15	779.41	735.56	43.85	17.773 SF			
9,500.00	9,459.20	9,395.68	9,278.00	22.06	24.75	-13.10	783.78	243.15	796.06	752.00	44.06	18.067			
9,600.00	9,559.20	9,395.68	9,278.00	22.27	24.75	-13.10	783.78	243.15	824.60	780.32	44.27	18.625			
9,700.00	9,659.20	9,395.68	9,278.00	22.48	24.75	-13.10	783.78	243.15	863.83	819.35	44.48	19.419			
9,800.00	9,759.20	9,395.68	9,278.00	22.69	24.75	-13.10	783.78	243.15	912.38	867.69	44.69	20.414			
9,900.00	9,859.20	9,395.68	9,278.00	22.90	24.75	-13.10	783.78	243.15	968.85	923.95	44.90	21.576			
10,000.00	9,959.20	9,395.68	9,278.00	23.12	24.75	-13.10	783.78	243.15	1,031.95	986.83	45.12	22.873			
10,100.00	10,059.20	9,395.68	9,278.00	23.33	24.75	-13.10	783.78	243.15	1,100.53	1,055.20	45.33	24.280			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,159.20	9,395.68	9,278.00	23.54	24.75	-13.10	783.78	243.15	1,173.63	1,128.09	45.54	25.772	
10,300.00	10,259.20	9,395.68	9,278.00	23.75	24.75	-13.10	783.78	243.15	1,250.46	1,204.70	45.75	27.332	
10,320.80	10,280.00	9,395.68	9,278.00	23.79	24.75	-13.10	783.78	243.15	1,266.84	1,221.05	45.79	27.663	



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference				Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-63.29	4.37	-8.68	9.72						
100.00	100.00	100.00	100.00	0.10	0.10	-63.29	4.37	-8.68	9.72	9.53	0.19	50.295			
200.00	200.00	200.00	200.00	0.32	0.32	-63.29	4.37	-8.68	9.72	9.08	0.64	15.124			
300.00	300.00	300.00	300.00	0.55	0.55	-63.29	4.37	-8.68	9.72	8.63	1.09	8.900 CC, ES			
400.00	399.95	400.14	400.09	0.76	0.77	-143.48	6.18	-6.79	11.15	9.62	1.53	7.269 SF			
500.00	499.63	500.09	499.72	1.00	1.01	-132.63	11.60	-1.11	15.87	13.88	1.99	7.957			
600.00	598.77	599.66	598.43	1.27	1.28	-124.31	20.57	8.28	24.29	21.76	2.53	9.588			
708.25	705.15	706.82	703.75	1.64	1.64	-118.84	34.18	22.53	37.55	34.30	3.25	11.546			
800.00	794.81	797.03	791.44	2.02	2.02	-114.13	48.79	37.82	51.11	47.14	3.97	12.859			
900.00	892.53	895.33	886.12	2.44	2.50	-108.32	67.05	56.94	67.28	62.43	4.85	13.883			
1,000.00	990.26	993.82	980.93	2.88	3.00	-104.66	85.48	76.23	83.93	78.20	5.73	14.637			
1,100.00	1,087.98	1,092.31	1,075.74	3.32	3.52	-102.21	103.90	95.52	100.81	94.18	6.63	15.201			
1,200.00	1,185.71	1,190.80	1,170.54	3.77	4.05	-100.46	122.32	114.81	117.82	110.28	7.54	15.634			
1,300.00	1,283.43	1,289.29	1,265.35	4.22	4.58	-99.16	140.75	134.10	134.91	126.46	8.44	15.976			
1,400.00	1,381.15	1,387.78	1,360.16	4.68	5.11	-98.15	159.17	153.38	152.05	142.69	9.36	16.252			
1,500.00	1,478.88	1,486.27	1,454.97	5.13	5.65	-97.34	177.59	172.67	169.22	158.95	10.27	16.479			
1,600.00	1,576.60	1,584.76	1,549.78	5.59	6.19	-96.68	196.01	191.96	186.42	175.24	11.18	16.669			
1,700.00	1,674.33	1,683.24	1,644.58	6.05	6.73	-96.14	214.44	211.25	203.65	191.55	12.10	16.830			
1,800.00	1,772.05	1,781.73	1,739.39	6.51	7.27	-95.68	232.86	230.54	220.88	207.87	13.02	16.968			
1,900.00	1,869.77	1,880.22	1,834.20	6.97	7.81	-95.28	251.28	249.82	238.13	224.20	13.94	17.087			
2,000.00	1,967.50	1,978.71	1,929.01	7.43	8.35	-94.94	269.71	269.11	255.39	240.54	14.86	17.192			
2,100.00	2,065.22	2,077.20	2,023.82	7.89	8.89	-94.64	288.13	288.40	272.66	256.88	15.78	17.284			
2,130.94	2,095.46	2,107.67	2,053.15	8.03	9.06	-94.56	293.83	294.37	278.00	261.94	16.06	17.310			
2,200.00	2,163.10	2,176.68	2,119.60	8.30	9.43	-94.45	306.70	307.84	289.84	273.20	16.65	17.409			
2,300.00	2,261.52	2,280.79	2,220.40	8.62	9.87	-94.12	324.64	326.63	305.63	288.30	17.33	17.632			
2,400.00	2,360.44	2,385.57	2,322.65	8.90	10.27	-93.72	340.46	343.19	319.43	301.48	17.94	17.801			
2,500.00	2,459.76	2,490.96	2,426.17	9.15	10.63	-93.26	354.09	357.46	331.21	312.72	18.49	17.917			
2,600.00	2,559.39	2,596.89	2,530.82	9.36	10.95	-92.71	365.45	369.36	340.96	322.01	18.95	17.990			
2,700.00	2,659.23	2,703.30	2,636.40	9.54	11.23	-92.08	374.51	378.84	348.67	329.33	19.34	18.025			
2,800.00	2,759.20	2,810.10	2,742.76	9.68	11.47	-91.36	381.22	385.86	354.35	334.70	19.66	18.026			
2,830.80	2,790.00	2,843.06	2,775.64	9.72	11.53	-5.05	382.80	387.52	355.69	335.96	19.74	18.021			
2,900.00	2,859.20	2,917.24	2,849.71	9.81	11.66	-4.56	385.53	390.38	358.01	338.10	19.91	17.977			
3,000.00	2,959.20	3,024.67	2,957.11	9.94	11.81	-4.22	387.43	392.36	359.63	339.45	20.18	17.824			
3,100.00	3,059.20	3,126.77	3,059.20	10.08	11.92	-4.20	387.52	392.46	359.71	339.27	20.44	17.596			
3,200.00	3,159.20	3,226.77	3,159.20	10.22	12.04	-4.20	387.52	392.46	359.71	338.99	20.72	17.363			
3,300.00	3,259.20	3,326.77	3,259.20	10.36	12.16	-4.20	387.52	392.46	359.71	338.71	21.00	17.131			
3,400.00	3,359.20	3,426.77	3,359.20	10.51	12.28	-4.20	387.52	392.46	359.71	338.43	21.28	16.900			
3,500.00	3,459.20	3,526.77	3,459.20	10.65	12.41	-4.20	387.52	392.46	359.71	338.13	21.58	16.671			
3,600.00	3,559.20	3,626.77	3,559.20	10.80	12.53	-4.20	387.52	392.46	359.71	337.84	21.87	16.445			
3,700.00	3,659.20	3,726.77	3,659.20	10.96	12.66	-4.20	387.52	392.46	359.71	337.53	22.18	16.220			
3,800.00	3,759.20	3,826.77	3,759.20	11.11	12.80	-4.20	387.52	392.46	359.71	337.23	22.48	15.998			
3,900.00	3,859.20	3,926.77	3,859.20	11.27	12.93	-4.20	387.52	392.46	359.71	336.91	22.80	15.779			
4,000.00	3,959.20	4,026.77	3,959.20	11.43	13.07	-4.20	387.52	392.46	359.71	336.60	23.11	15.563			
4,100.00	4,059.20	4,126.77	4,059.20	11.60	13.21	-4.20	387.52	392.46	359.71	336.28	23.43	15.350			
4,200.00	4,159.20	4,226.77	4,159.20	11.76	13.36	-4.20	387.52	392.46	359.71	335.95	23.76	15.139			
4,300.00	4,259.20	4,326.77	4,259.20	11.93	13.50	-4.20	387.52	392.46	359.71	335.62	24.09	14.932			
4,400.00	4,359.20	4,426.77	4,359.20	12.10	13.65	-4.20	387.52	392.46	359.71	335.29	24.42	14.729			
4,500.00	4,459.20	4,526.77	4,459.20	12.27	13.80	-4.20	387.52	392.46	359.71	334.95	24.76	14.528			
4,600.00	4,559.20	4,626.77	4,559.20	12.44	13.95	-4.20	387.52	392.46	359.71	334.61	25.10	14.331			
4,700.00	4,659.20	4,726.77	4,659.20	12.61	14.10	-4.20	387.52	392.46	359.71	334.27	25.44	14.138			
4,800.00	4,759.20	4,826.77	4,759.20	12.79	14.26	-4.20	387.52	392.46	359.71	333.92	25.79	13.948			
4,900.00	4,859.20	4,926.77	4,859.20	12.96	14.42	-4.20	387.52	392.46	359.71	333.57	26.14	13.761			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft					
Survey Program: 0-MWD													Offset Well Error:	0.00 ft					
Reference													Semi Major Axis		Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor							
5,000.00	4,959.20	5,026.77	4,959.20	13.14	14.58	-4.20	387.52	392.46	359.71	333.22	26.49	13.577							
5,100.00	5,059.20	5,126.77	5,059.20	13.32	14.74	-4.20	387.52	392.46	359.71	332.86	26.85	13.397							
5,200.00	5,159.20	5,226.77	5,159.20	13.50	14.90	-4.20	387.52	392.46	359.71	332.50	27.21	13.221							
5,300.00	5,259.20	5,326.77	5,259.20	13.69	15.06	-4.20	387.52	392.46	359.71	332.14	27.57	13.047							
5,400.00	5,359.20	5,426.77	5,359.20	13.87	15.23	-4.20	387.52	392.46	359.71	331.78	27.93	12.877							
5,500.00	5,459.20	5,526.77	5,459.20	14.05	15.40	-4.20	387.52	392.46	359.71	331.41	28.30	12.711							
5,600.00	5,559.20	5,626.77	5,559.20	14.24	15.57	-4.20	387.52	392.46	359.71	331.04	28.67	12.547							
5,700.00	5,659.20	5,726.77	5,659.20	14.43	15.74	-4.20	387.52	392.46	359.71	330.67	29.04	12.387							
5,800.00	5,759.20	5,826.77	5,759.20	14.62	15.91	-4.20	387.52	392.46	359.71	330.30	29.41	12.230							
5,900.00	5,859.20	5,926.77	5,859.20	14.80	16.08	-4.20	387.52	392.46	359.71	329.92	29.79	12.076							
6,000.00	5,959.20	6,026.77	5,959.20	14.99	16.25	-4.20	387.52	392.46	359.71	329.55	30.17	11.924							
6,100.00	6,059.20	6,126.77	6,059.20	15.19	16.43	-4.20	387.52	392.46	359.71	329.17	30.55	11.776							
6,200.00	6,159.20	6,226.77	6,159.20	15.38	16.60	-4.20	387.52	392.46	359.71	328.79	30.93	11.631							
6,300.00	6,259.20	6,326.77	6,259.20	15.57	16.78	-4.20	387.52	392.46	359.71	328.40	31.31	11.489							
6,400.00	6,359.20	6,426.77	6,359.20	15.76	16.96	-4.20	387.52	392.46	359.71	328.02	31.69	11.349							
6,500.00	6,459.20	6,526.77	6,459.20	15.96	17.14	-4.20	387.52	392.46	359.71	327.63	32.08	11.213							
6,600.00	6,559.20	6,626.77	6,559.20	16.15	17.32	-4.20	387.52	392.46	359.71	327.24	32.47	11.079							
6,700.00	6,659.20	6,726.77	6,659.20	16.35	17.50	-4.20	387.52	392.46	359.71	326.85	32.86	10.947							
6,800.00	6,759.20	6,826.77	6,759.20	16.55	17.69	-4.20	387.52	392.46	359.71	326.46	33.25	10.819							
6,900.00	6,859.20	6,926.77	6,859.20	16.74	17.87	-4.20	387.52	392.46	359.71	326.07	33.64	10.692							
7,000.00	6,959.20	7,026.77	6,959.20	16.94	18.05	-4.20	387.52	392.46	359.71	325.68	34.04	10.568							
7,100.00	7,059.20	7,126.77	7,059.20	17.14	18.24	-4.20	387.52	392.46	359.71	325.28	34.43	10.447							
7,200.00	7,159.20	7,226.77	7,159.20	17.34	18.43	-4.20	387.52	392.46	359.71	324.88	34.83	10.328							
7,300.00	7,259.20	7,326.77	7,259.20	17.54	18.61	-4.20	387.52	392.46	359.71	324.49	35.23	10.211							
7,400.00	7,359.20	7,426.77	7,359.20	17.74	18.80	-4.20	387.52	392.46	359.71	324.09	35.63	10.097							
7,500.00	7,459.20	7,526.77	7,459.20	17.94	18.99	-4.20	387.52	392.46	359.71	323.69	36.03	9.985							
7,600.00	7,559.20	7,626.77	7,559.20	18.14	19.18	-4.20	387.52	392.46	359.71	323.28	36.43	9.875							
7,700.00	7,659.20	7,726.77	7,659.20	18.35	19.37	-4.20	387.52	392.46	359.71	322.88	36.83	9.767							
7,800.00	7,759.20	7,826.77	7,759.20	18.55	19.56	-4.20	387.52	392.46	359.71	322.48	37.23	9.661							
7,900.00	7,859.20	7,926.77	7,859.20	18.75	19.75	-4.20	387.52	392.46	359.71	322.07	37.64	9.557							
8,000.00	7,959.20	8,026.77	7,959.20	18.96	19.95	-4.20	387.52	392.46	359.71	321.67	38.04	9.455							
8,100.00	8,059.20	8,126.77	8,059.20	19.16	20.14	-4.20	387.52	392.46	359.71	321.26	38.45	9.355							
8,200.00	8,159.20	8,226.77	8,159.20	19.37	20.33	-4.20	387.52	392.46	359.71	320.85	38.86	9.257							
8,300.00	8,259.20	8,326.77	8,259.20	19.57	20.53	-4.20	387.52	392.46	359.71	320.44	39.27	9.161							
8,400.00	8,359.20	8,426.77	8,359.20	19.78	20.72	-4.20	387.52	392.46	359.71	320.03	39.68	9.066							
8,500.00	8,459.20	8,526.77	8,459.20	19.98	20.92	-4.20	387.52	392.46	359.71	319.62	40.09	8.973							
8,600.00	8,559.20	8,626.77	8,559.20	20.19	21.12	-4.20	387.52	392.46	359.71	319.21	40.50	8.882							
8,700.00	8,659.20	8,726.77	8,659.20	20.40	21.31	-4.20	387.52	392.46	359.71	318.80	40.91	8.793							
8,800.00	8,759.20	8,826.77	8,759.20	20.60	21.51	-4.20	387.52	392.46	359.71	318.39	41.32	8.705							
8,900.00	8,859.20	8,926.77	8,859.20	20.81	21.71	-4.20	387.52	392.46	359.71	317.98	41.74	8.619							
9,000.00	8,959.20	9,026.77	8,959.20	21.02	21.91	-4.20	387.52	392.46	359.71	317.56	42.15	8.534							
9,100.00	9,059.20	9,126.77	9,059.20	21.23	22.11	-4.20	387.52	392.46	359.71	317.15	42.57	8.451							
9,200.00	9,159.20	9,226.77	9,159.20	21.44	22.30	-4.20	387.52	392.46	359.71	316.73	42.98	8.369							
9,300.00	9,259.20	9,326.77	9,259.20	21.64	22.50	-4.20	387.52	392.46	359.71	316.31	43.40	8.289							
9,400.00	9,359.20	9,328.57	9,261.00	21.85	22.51	-4.20	387.52	392.46	372.87	329.26	43.61	8.550							
9,500.00	9,459.20	9,328.57	9,261.00	22.06	22.51	-4.20	387.52	392.46	410.70	366.88	43.82	9.372							
9,600.00	9,559.20	9,328.57	9,261.00	22.27	22.51	-4.20	387.52	392.46	467.24	423.21	44.03	10.612							
9,700.00	9,659.20	9,328.57	9,261.00	22.48	22.51	-4.20	387.52	392.46	536.62	492.37	44.24	12.130							
9,800.00	9,759.20	9,328.57	9,261.00	22.69	22.51	-4.20	387.52	392.46	614.49	570.04	44.45	13.824							
9,900.00	9,859.20	9,328.57	9,261.00	22.90	22.51	-4.20	387.52	392.46	698.02	653.36	44.66	15.629							
10,000.00	9,959.20	9,328.57	9,261.00	23.12	22.51	-4.20	387.52	392.46	785.41	740.54	44.87	17.503							
10,100.00	10,059.20	9,328.57	9,261.00	23.33	22.51	-4.20	387.52	392.46	875.51	830.43	45.08	19.420							

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,159.20	9,328.57	9,261.00	23.54	22.51	-4.20	387.52	392.46	967.55	922.26	45.29	21.361	
10,300.00	10,259.20	9,328.57	9,261.00	23.75	22.51	-4.20	387.52	392.46	1,061.04	1,015.53	45.51	23.316	
10,320.80	10,280.00	9,328.57	9,261.00	23.79	22.51	-4.20	387.52	392.46	1,080.63	1,035.08	45.55	23.724	



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft	
Survey Program: 0-MWD												Offset Well Error:		0.00 ft
Reference				Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-64.01	17.48	-35.86	39.89					
100.00	100.00	100.00	100.00	0.10	0.10	-64.01	17.48	-35.86	39.89	39.70	0.19	206.374		
200.00	200.00	200.00	200.00	0.32	0.32	-64.01	17.48	-35.86	39.89	39.25	0.64	62.057		
300.00	300.00	300.00	300.00	0.55	0.55	-64.01	17.48	-35.86	39.89	38.80	1.09	36.519 CC, ES		
400.00	399.95	398.72	398.70	0.76	0.77	-150.51	18.94	-36.74	43.61	42.07	1.54	28.312		
500.00	499.63	498.19	498.11	1.00	0.99	-152.47	21.90	-38.54	53.39	51.38	2.00	26.682 SF		
600.00	598.77	597.06	596.92	1.27	1.22	-155.68	24.85	-40.33	67.92	65.45	2.47	27.547		
708.25	705.15	703.06	702.85	1.64	1.46	-159.22	28.02	-42.25	89.23	86.25	2.98	29.976		
800.00	794.81	792.35	792.09	2.02	1.67	-161.70	30.68	-43.87	109.89	106.50	3.40	32.338		
900.00	892.53	889.67	889.36	2.44	1.89	-163.52	33.58	-45.63	132.57	128.70	3.86	34.300		
1,000.00	990.26	987.00	986.62	2.88	2.12	-164.80	36.49	-47.39	155.33	150.99	4.34	35.818		
1,100.00	1,087.98	1,084.32	1,083.89	3.32	2.34	-165.76	39.39	-49.15	178.14	173.33	4.81	37.021		
1,200.00	1,185.71	1,181.65	1,181.15	3.77	2.57	-166.50	42.30	-50.91	201.00	195.70	5.29	37.994		
1,300.00	1,283.43	1,278.97	1,278.42	4.22	2.79	-167.09	45.20	-52.68	223.87	218.10	5.77	38.795		
1,400.00	1,381.15	1,376.30	1,375.68	4.68	3.02	-167.57	48.10	-54.44	246.77	240.52	6.25	39.465		
1,500.00	1,478.88	1,473.62	1,472.95	5.13	3.24	-167.96	51.01	-56.20	269.68	262.94	6.74	40.033		
1,600.00	1,576.60	1,570.95	1,570.21	5.59	3.47	-168.30	53.91	-57.96	292.60	285.38	7.22	40.521		
1,700.00	1,674.33	1,668.27	1,667.48	6.05	3.69	-168.59	56.81	-59.72	315.53	307.82	7.71	40.944		
1,800.00	1,772.05	1,765.60	1,764.74	6.51	3.92	-168.83	59.72	-61.49	338.46	330.27	8.19	41.313		
1,900.00	1,869.77	1,862.92	1,862.01	6.97	4.15	-169.05	62.62	-63.25	361.40	352.72	8.68	41.639		
2,000.00	1,967.50	1,960.25	1,959.28	7.43	4.37	-169.24	65.53	-65.01	384.35	375.18	9.17	41.928		
2,100.00	2,065.22	2,057.57	2,056.54	7.89	4.60	-169.41	68.43	-66.77	407.29	397.64	9.65	42.186		
2,130.94	2,095.46	2,087.68	2,086.63	8.03	4.67	-169.46	69.33	-67.32	414.40	404.59	9.81	42.260		
2,200.00	2,163.10	2,150.96	2,149.86	8.30	4.82	-169.56	71.42	-68.58	429.71	419.57	10.14	42.387		
2,300.00	2,261.52	2,236.48	2,235.15	8.62	5.03	-169.35	76.74	-71.82	451.44	440.85	10.59	42.633		
2,400.00	2,360.44	2,321.24	2,319.31	8.90	5.26	-168.73	85.24	-76.97	472.96	461.92	11.04	42.829		
2,500.00	2,459.76	2,400.00	2,397.06	9.15	5.49	-167.84	95.99	-83.49	494.42	482.93	11.48	43.056		
2,600.00	2,559.39	2,487.54	2,482.78	9.36	5.78	-166.54	111.14	-92.69	515.88	503.92	11.96	43.131		
2,700.00	2,659.23	2,568.67	2,561.42	9.54	6.08	-165.09	128.17	-103.02	537.65	525.22	12.43	43.265		
2,800.00	2,759.20	2,648.21	2,637.63	9.68	6.41	-163.47	147.62	-114.82	559.91	547.02	12.89	43.424		
2,830.80	2,790.00	2,672.36	2,660.58	9.72	6.52	-76.88	154.06	-118.73	566.90	553.87	13.04	43.484		
2,900.00	2,859.20	2,727.04	2,712.17	9.81	6.78	-75.57	169.55	-128.12	583.58	570.18	13.39	43.580		
3,000.00	2,959.20	2,821.01	2,800.47	9.94	7.26	-73.38	197.02	-144.79	609.21	595.23	13.98	43.591		
3,100.00	3,059.20	2,914.98	2,888.78	10.08	7.77	-71.36	224.49	-161.46	635.65	621.09	14.56	43.668		
3,200.00	3,159.20	3,008.95	2,977.09	10.22	8.29	-69.50	251.97	-178.13	662.80	647.67	15.13	43.799		
3,300.00	3,259.20	3,102.92	3,065.39	10.36	8.84	-67.78	279.44	-194.80	690.58	674.87	15.70	43.978		
3,400.00	3,359.20	3,196.89	3,153.70	10.51	9.40	-66.19	306.92	-211.46	718.91	702.64	16.27	44.196		
3,500.00	3,459.20	3,290.87	3,242.00	10.65	9.97	-64.71	334.39	-228.13	747.73	730.91	16.82	44.448		
3,600.00	3,559.20	3,384.84	3,330.31	10.80	10.55	-63.35	361.87	-244.80	776.99	759.61	17.37	44.729		
3,700.00	3,659.20	3,478.81	3,418.61	10.96	11.13	-62.08	389.34	-261.47	806.63	788.72	17.91	45.032		
3,800.00	3,759.20	3,572.78	3,506.92	11.11	11.73	-60.89	416.81	-278.14	836.62	818.18	18.45	45.353		
3,900.00	3,859.20	3,666.75	3,595.23	11.27	12.33	-59.79	444.29	-294.81	866.93	847.95	18.98	45.686		
4,000.00	3,959.20	3,760.72	3,683.53	11.43	12.93	-58.76	471.76	-311.47	897.51	878.01	19.50	46.029		
4,100.00	4,059.20	3,854.69	3,771.84	11.60	13.54	-57.80	499.24	-328.14	928.35	908.33	20.02	46.378		
4,200.00	4,159.20	3,948.66	3,860.14	11.76	14.16	-56.89	526.71	-344.81	959.41	938.88	20.53	46.730		
4,300.00	4,259.20	4,042.64	3,948.45	11.93	14.77	-56.05	554.18	-361.48	990.68	969.64	21.04	47.084		
4,400.00	4,359.20	4,136.61	4,036.76	12.10	15.39	-55.25	581.66	-378.15	1,022.14	1,000.59	21.55	47.436		
4,500.00	4,459.20	4,230.58	4,125.06	12.27	16.01	-54.50	609.13	-394.82	1,053.77	1,031.72	22.05	47.787		
4,600.00	4,559.20	4,324.55	4,213.37	12.44	16.64	-53.79	636.61	-411.48	1,085.56	1,063.00	22.55	48.134		
4,700.00	4,659.20	4,418.52	4,301.67	12.61	17.27	-53.13	664.08	-428.15	1,117.48	1,094.43	23.05	48.477		
4,800.00	4,759.20	4,512.49	4,389.98	12.79	17.89	-52.50	691.55	-444.82	1,149.54	1,125.99	23.55	48.815		
4,900.00	4,859.20	4,606.46	4,478.29	12.96	18.52	-51.90	719.03	-461.49	1,181.72	1,157.67	24.04	49.147		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,959.20	4,700.43	4,566.59	13.14	19.16	-51.33	746.50	-478.16	1,214.00	1,189.47	24.54	49.473			
5,100.00	5,059.20	4,794.41	4,654.90	13.32	19.79	-50.80	773.98	-494.83	1,246.39	1,221.36	25.03	49.792			
5,200.00	5,159.20	4,888.38	4,743.20	13.50	20.42	-50.29	801.45	-511.49	1,278.88	1,253.35	25.52	50.104			
5,300.00	5,259.20	4,982.35	4,831.51	13.69	21.06	-49.80	828.92	-528.16	1,311.45	1,285.43	26.02	50.410			
5,400.00	5,359.20	5,076.32	4,919.82	13.87	21.70	-49.34	856.40	-544.83	1,344.10	1,317.59	26.51	50.707			
5,500.00	5,459.20	5,170.29	5,008.12	14.05	22.33	-48.90	883.87	-561.50	1,376.83	1,349.83	27.00	50.998			
5,600.00	5,559.20	5,264.26	5,096.43	14.24	22.97	-48.48	911.35	-578.17	1,409.62	1,382.13	27.49	51.282			
5,700.00	5,659.20	5,358.23	5,184.73	14.43	23.61	-48.08	938.82	-594.84	1,442.48	1,414.51	27.98	51.558			
5,800.00	5,759.20	5,452.20	5,273.04	14.62	24.25	-47.70	966.29	-611.50	1,475.41	1,446.94	28.47	51.827			
5,900.00	5,859.20	5,546.18	5,361.34	14.80	24.89	-47.33	993.77	-628.17	1,508.38	1,479.43	28.96	52.089			
6,000.00	5,959.20	5,640.15	5,449.65	14.99	25.53	-46.98	1,021.24	-644.84	1,541.42	1,511.97	29.45	52.343			
6,100.00	6,059.20	5,734.12	5,537.96	15.19	26.18	-46.65	1,048.72	-661.51	1,574.50	1,544.56	29.94	52.591			
6,200.00	6,159.20	5,828.09	5,626.26	15.38	26.82	-46.32	1,076.19	-678.18	1,607.63	1,577.20	30.43	52.833			
6,300.00	6,259.20	5,923.03	5,715.09	15.57	27.59	-45.92	1,112.63	-700.28	1,640.54	1,609.55	30.99	52.938			
6,400.00	6,359.20	6,172.55	5,954.10	15.76	28.62	-45.36	1,166.08	-732.71	1,668.40	1,636.67	31.73	52.586			
6,500.00	6,459.20	6,399.68	6,176.04	15.96	29.47	-44.95	1,207.10	-757.60	1,688.95	1,656.52	32.43	52.075			
6,600.00	6,559.20	6,633.27	6,407.53	16.15	30.08	-44.71	1,233.48	-773.61	1,701.81	1,668.73	33.08	51.440			
6,700.00	6,659.20	6,870.42	6,644.31	16.35	30.44	-44.61	1,243.69	-779.80	1,706.71	1,673.05	33.67	50.692			
6,800.00	6,759.20	6,985.31	6,759.20	16.55	30.56	-44.61	1,243.79	-779.86	1,706.76	1,672.70	34.06	50.109			
6,900.00	6,859.20	7,085.31	6,859.20	16.74	30.67	-44.61	1,243.79	-779.86	1,706.76	1,672.33	34.44	49.565			
7,000.00	6,959.20	7,185.31	6,959.20	16.94	30.77	-44.61	1,243.79	-779.86	1,706.76	1,671.95	34.81	49.029			
7,100.00	7,059.20	7,285.31	7,059.20	17.14	30.88	-44.61	1,243.79	-779.86	1,706.76	1,671.57	35.19	48.503			
7,200.00	7,159.20	7,385.31	7,159.20	17.34	30.99	-44.61	1,243.79	-779.86	1,706.76	1,671.19	35.57	47.986			
7,300.00	7,259.20	7,485.31	7,259.20	17.54	31.10	-44.61	1,243.79	-779.86	1,706.76	1,670.81	35.95	47.478			
7,400.00	7,359.20	7,585.31	7,359.20	17.74	31.21	-44.61	1,243.79	-779.86	1,706.76	1,670.43	36.33	46.979			
7,500.00	7,459.20	7,685.31	7,459.20	17.94	31.32	-44.61	1,243.79	-779.86	1,706.76	1,670.05	36.71	46.488			
7,600.00	7,559.20	7,785.31	7,559.20	18.14	31.43	-44.61	1,243.79	-779.86	1,706.76	1,669.66	37.10	46.005			
7,700.00	7,659.20	7,885.31	7,659.20	18.35	31.54	-44.61	1,243.79	-779.86	1,706.76	1,669.28	37.49	45.531			
7,800.00	7,759.20	7,985.31	7,759.20	18.55	31.66	-44.61	1,243.79	-779.86	1,706.76	1,668.89	37.87	45.065			
7,900.00	7,859.20	8,085.31	7,859.20	18.75	31.78	-44.61	1,243.79	-779.86	1,706.76	1,668.50	38.26	44.606			
8,000.00	7,959.20	8,185.31	7,959.20	18.96	31.89	-44.61	1,243.79	-779.86	1,706.76	1,668.11	38.65	44.156			
8,100.00	8,059.20	8,285.31	8,059.20	19.16	32.01	-44.61	1,243.79	-779.86	1,706.76	1,667.72	39.04	43.713			
8,200.00	8,159.20	8,385.31	8,159.20	19.37	32.13	-44.61	1,243.79	-779.86	1,706.76	1,667.32	39.44	43.278			
8,300.00	8,259.20	8,485.31	8,259.20	19.57	32.25	-44.61	1,243.79	-779.86	1,706.76	1,666.93	39.83	42.850			
8,400.00	8,359.20	8,585.31	8,359.20	19.78	32.38	-44.61	1,243.79	-779.86	1,706.76	1,666.54	40.23	42.429			
8,500.00	8,459.20	8,685.31	8,459.20	19.98	32.50	-44.61	1,243.79	-779.86	1,706.76	1,666.14	40.62	42.015			
8,600.00	8,559.20	8,785.31	8,559.20	20.19	32.62	-44.61	1,243.79	-779.86	1,706.76	1,665.74	41.02	41.609			
8,700.00	8,659.20	8,885.31	8,659.20	20.40	32.75	-44.61	1,243.79	-779.86	1,706.76	1,665.34	41.42	41.209			
8,800.00	8,759.20	8,985.31	8,759.20	20.60	32.88	-44.61	1,243.79	-779.86	1,706.76	1,664.94	41.82	40.815			
8,900.00	8,859.20	9,085.31	8,859.20	20.81	33.00	-44.61	1,243.79	-779.86	1,706.76	1,664.54	42.22	40.428			
9,000.00	8,959.20	9,185.31	8,959.20	21.02	33.13	-44.61	1,243.79	-779.86	1,706.76	1,664.14	42.62	40.048			
9,100.00	9,059.20	9,285.31	9,059.20	21.23	33.26	-44.61	1,243.79	-779.86	1,706.76	1,663.74	43.02	39.673			
9,200.00	9,159.20	9,385.31	9,159.20	21.44	33.39	-44.61	1,243.79	-779.86	1,706.76	1,663.34	43.42	39.305			
9,300.00	9,259.20	9,485.31	9,259.20	21.64	33.52	-44.61	1,243.79	-779.86	1,706.76	1,662.93	43.83	38.943			
9,339.17	9,298.37	9,524.48	9,298.37	21.73	33.58	-44.61	1,243.79	-779.86	1,706.76	1,662.78	43.99	38.803			
9,400.00	9,359.20	9,540.11	9,314.00	21.85	33.60	-44.61	1,243.79	-779.86	1,707.36	1,663.21	44.15	38.676			
9,500.00	9,459.20	9,540.11	9,314.00	22.06	33.60	-44.61	1,243.79	-779.86	1,712.93	1,668.57	44.36	38.615			
9,600.00	9,559.20	9,540.11	9,314.00	22.27	33.60	-44.61	1,243.79	-779.86	1,724.28	1,679.71	44.57	38.684			
9,700.00	9,659.20	9,540.11	9,314.00	22.48	33.60	-44.61	1,243.79	-779.86	1,741.32	1,696.53	44.79	38.879			
9,800.00	9,759.20	9,540.11	9,314.00	22.69	33.60	-44.61	1,243.79	-779.86	1,763.87	1,718.87	45.00	39.194			
9,900.00	9,859.20	9,540.11	9,314.00	22.90	33.60	-44.61	1,243.79	-779.86	1,791.72	1,746.51	45.22	39.624			
10,000.00	9,959.20	9,540.11	9,314.00	23.12	33.60	-44.61	1,243.79	-779.86	1,824.64	1,779.21	45.43	40.161			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31D1BS - NBU 922-31D1BS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,100.00	10,059.20	9,540.11	9,314.00	23.33	33.60	-44.61	1,243.79	-779.86	1,862.35	1,816.70	45.65	40.797	
10,200.00	10,159.20	9,540.11	9,314.00	23.54	33.60	-44.61	1,243.79	-779.86	1,904.57	1,858.71	45.86	41.526	
10,300.00	10,259.20	9,540.11	9,314.00	23.75	33.60	-44.61	1,243.79	-779.86	1,951.01	1,904.93	46.08	42.339	
10,320.80	10,280.00	9,540.11	9,314.00	23.79	33.60	-44.61	1,243.79	-779.86	1,961.17	1,915.05	46.13	42.518	



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-64.01	21.85	-44.82	49.86						
100.00	100.00	100.00	100.00	0.10	0.10	-64.01	21.85	-44.82	49.86	49.67	0.19	257.968			
200.00	200.00	200.00	200.00	0.32	0.32	-64.01	21.85	-44.82	49.86	49.22	0.64	77.571			
300.00	300.00	300.00	300.00	0.55	0.55	-64.01	21.85	-44.82	49.86	48.77	1.09	45.649 CC, ES			
400.00	399.95	397.40	397.36	0.76	0.77	-150.44	23.65	-46.54	54.53	52.98	1.54	35.381			
500.00	499.63	493.54	493.20	1.00	1.00	-151.20	28.94	-51.59	68.45	66.42	2.02	33.837			
600.00	598.77	587.22	586.14	1.27	1.25	-151.87	37.45	-59.71	91.43	88.90	2.53	36.160			
708.25	705.15	684.64	682.05	1.64	1.57	-152.30	49.78	-71.48	126.14	123.05	3.10	40.743			
800.00	794.81	763.91	759.36	2.02	1.89	-152.61	62.41	-83.53	161.37	157.80	3.57	45.234			
900.00	892.53	847.40	839.94	2.44	2.29	-152.37	78.21	-98.62	203.33	199.24	4.10	49.629			
1,000.00	990.26	927.72	916.48	2.88	2.73	-151.85	95.80	-115.41	248.84	244.20	4.64	53.619			
1,100.00	1,087.98	1,010.24	994.16	3.32	3.25	-151.21	115.95	-134.64	297.30	292.09	5.21	57.069			
1,200.00	1,185.71	1,097.44	1,076.09	3.77	3.82	-150.69	137.52	-155.24	346.20	340.43	5.77	59.999			
1,300.00	1,283.43	1,184.63	1,158.02	4.22	4.41	-150.29	159.09	-175.83	395.12	388.77	6.34	62.289			
1,400.00	1,381.15	1,271.82	1,239.96	4.68	5.00	-149.99	180.66	-196.42	444.04	437.11	6.93	64.068			
1,500.00	1,478.88	1,359.01	1,321.89	5.13	5.60	-149.74	202.24	-217.01	492.98	485.46	7.52	65.572			
1,600.00	1,576.60	1,446.20	1,403.82	5.59	6.20	-149.54	223.81	-237.61	541.92	533.81	8.11	66.800			
1,700.00	1,674.33	1,533.39	1,485.75	6.05	6.80	-149.37	245.38	-258.20	590.87	582.15	8.71	67.821			
1,800.00	1,772.05	1,620.58	1,567.69	6.51	7.41	-149.23	266.95	-278.79	639.81	630.50	9.32	68.683			
1,900.00	1,869.77	1,707.77	1,649.62	6.97	8.01	-149.11	288.52	-299.38	688.76	678.84	9.92	69.419			
2,000.00	1,967.50	1,794.96	1,731.55	7.43	8.62	-149.00	310.10	-319.98	737.72	727.19	10.53	70.052			
2,100.00	2,065.22	1,882.16	1,813.48	7.89	9.23	-148.91	331.67	-340.57	786.67	775.53	11.14	70.600			
2,130.94	2,095.46	1,909.13	1,838.83	8.03	9.42	-148.88	338.34	-346.94	801.82	790.49	11.33	70.757			
2,200.00	2,163.10	1,969.64	1,895.69	8.30	9.84	-149.14	353.31	-361.23	835.08	823.31	11.78	70.911			
2,300.00	2,261.52	2,058.28	1,978.98	8.62	10.47	-149.40	375.24	-382.16	881.30	868.91	12.39	71.146			
2,400.00	2,360.44	2,148.03	2,063.32	8.90	11.10	-149.53	397.45	-403.36	925.18	912.20	12.99	71.244			
2,500.00	2,459.76	2,238.82	2,148.64	9.15	11.73	-149.57	419.91	-424.81	966.71	953.14	13.57	71.241			
2,600.00	2,559.39	2,330.57	2,234.85	9.36	12.38	-149.51	442.61	-446.47	1,005.87	991.74	14.13	71.164			
2,700.00	2,659.23	2,423.18	2,321.88	9.54	13.03	-149.36	465.53	-468.35	1,042.66	1,027.98	14.68	71.031			
2,800.00	2,759.20	2,516.58	2,409.64	9.68	13.68	-149.14	488.63	-490.41	1,077.06	1,061.86	15.20	70.857			
2,830.80	2,790.00	2,545.49	2,436.81	9.72	13.89	-62.99	495.79	-497.23	1,087.18	1,071.83	15.36	70.795			
2,900.00	2,859.20	2,610.52	2,497.91	9.81	14.34	-62.58	511.87	-512.59	1,109.69	1,094.00	15.69	70.738			
3,000.00	2,959.20	2,704.48	2,586.21	9.94	15.01	-62.03	535.12	-534.78	1,142.29	1,126.13	16.17	70.654			
3,100.00	3,059.20	2,798.45	2,674.51	10.08	15.67	-61.51	558.37	-556.98	1,174.99	1,158.34	16.65	70.582			
3,200.00	3,159.20	2,892.42	2,762.81	10.22	16.33	-61.01	581.62	-579.17	1,207.77	1,190.64	17.13	70.520			
3,300.00	3,259.20	2,986.39	2,851.11	10.36	16.99	-60.55	604.87	-601.36	1,240.63	1,223.02	17.61	70.467			
3,400.00	3,359.20	3,080.36	2,939.41	10.51	17.65	-60.10	628.12	-623.56	1,273.56	1,255.47	18.08	70.421			
3,500.00	3,459.20	3,174.33	3,027.72	10.65	18.31	-59.68	651.37	-645.75	1,306.55	1,287.99	18.56	70.380			
3,600.00	3,559.20	3,268.30	3,116.02	10.80	18.98	-59.28	674.62	-667.94	1,339.60	1,320.56	19.04	70.344			
3,700.00	3,659.20	3,362.26	3,204.32	10.96	19.64	-58.89	697.87	-690.14	1,372.71	1,353.19	19.52	70.311			
3,800.00	3,759.20	3,537.76	3,370.89	11.11	20.58	-58.28	737.77	-728.23	1,403.27	1,383.09	20.18	69.548			
3,900.00	3,859.20	3,723.68	3,550.67	11.27	21.39	-57.79	771.92	-760.83	1,427.93	1,407.13	20.81	68.624			
4,000.00	3,959.20	3,915.25	3,738.74	11.43	22.04	-57.43	798.21	-785.93	1,446.38	1,424.98	21.40	67.576			
4,100.00	4,059.20	4,110.98	3,932.94	11.60	22.52	-57.21	815.62	-802.55	1,458.34	1,436.39	21.95	66.430			
4,200.00	4,159.20	4,309.13	4,130.75	11.76	22.81	-57.11	823.44	-810.01	1,463.65	1,441.20	22.45	65.198			
4,300.00	4,259.20	4,437.58	4,259.20	11.93	22.93	-57.10	823.85	-810.40	1,463.93	1,441.11	22.82	64.150			
4,400.00	4,359.20	4,537.58	4,359.20	12.10	23.01	-57.10	823.85	-810.40	1,463.93	1,440.77	23.16	63.209			
4,500.00	4,459.20	4,637.58	4,459.20	12.27	23.10	-57.10	823.85	-810.40	1,463.93	1,440.43	23.50	62.285			
4,600.00	4,559.20	4,737.58	4,559.20	12.44	23.19	-57.10	823.85	-810.40	1,463.93	1,440.08	23.85	61.379			
4,700.00	4,659.20	4,837.58	4,659.20	12.61	23.28	-57.10	823.85	-810.40	1,463.93	1,439.73	24.20	60.491			
4,800.00	4,759.20	4,937.58	4,759.20	12.79	23.38	-57.10	823.85	-810.40	1,463.93	1,439.38	24.55	59.621			
4,900.00	4,859.20	5,037.58	4,859.20	12.96	23.47	-57.10	823.85	-810.40	1,463.93	1,439.02	24.91	58.768			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft						
Survey Program: 0-MWD												Offset Well Error:	0.00 ft						
Reference												Semi Major Axis		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor							
5,000.00	4,959.20	5,137.58	4,959.20	13.14	23.57	-57.10	823.85	-810.40	1,463.93	1,438.66	25.27	57.933							
5,100.00	5,059.20	5,237.58	5,059.20	13.32	23.67	-57.10	823.85	-810.40	1,463.93	1,438.30	25.63	57.115							
5,200.00	5,159.20	5,337.58	5,159.20	13.50	23.77	-57.10	823.85	-810.40	1,463.93	1,437.94	26.00	56.314							
5,300.00	5,259.20	5,437.58	5,259.20	13.69	23.88	-57.10	823.85	-810.40	1,463.93	1,437.57	26.36	55.530							
5,400.00	5,359.20	5,537.58	5,359.20	13.87	23.98	-57.10	823.85	-810.40	1,463.93	1,437.20	26.73	54.763							
5,500.00	5,459.20	5,637.58	5,459.20	14.05	24.09	-57.10	823.85	-810.40	1,463.93	1,436.83	27.10	54.012							
5,600.00	5,559.20	5,737.58	5,559.20	14.24	24.19	-57.10	823.85	-810.40	1,463.93	1,436.45	27.48	53.277							
5,700.00	5,659.20	5,837.58	5,659.20	14.43	24.30	-57.10	823.85	-810.40	1,463.93	1,436.08	27.85	52.557							
5,800.00	5,759.20	5,937.58	5,759.20	14.62	24.41	-57.10	823.85	-810.40	1,463.93	1,435.70	28.23	51.853							
5,900.00	5,859.20	6,037.58	5,859.20	14.80	24.53	-57.10	823.85	-810.40	1,463.93	1,435.32	28.61	51.164							
6,000.00	5,959.20	6,137.58	5,959.20	14.99	24.64	-57.10	823.85	-810.40	1,463.93	1,434.94	28.99	50.490							
6,100.00	6,059.20	6,237.58	6,059.20	15.19	24.76	-57.10	823.85	-810.40	1,463.93	1,434.55	29.38	49.830							
6,200.00	6,159.20	6,337.58	6,159.20	15.38	24.87	-57.10	823.85	-810.40	1,463.93	1,434.17	29.76	49.184							
6,300.00	6,259.20	6,437.58	6,259.20	15.57	24.99	-57.10	823.85	-810.40	1,463.93	1,433.78	30.15	48.552							
6,400.00	6,359.20	6,537.58	6,359.20	15.76	25.11	-57.10	823.85	-810.40	1,463.93	1,433.39	30.54	47.933							
6,500.00	6,459.20	6,637.58	6,459.20	15.96	25.23	-57.10	823.85	-810.40	1,463.93	1,433.00	30.93	47.327							
6,600.00	6,559.20	6,737.58	6,559.20	16.15	25.36	-57.10	823.85	-810.40	1,463.93	1,432.61	31.32	46.735							
6,700.00	6,659.20	6,837.58	6,659.20	16.35	25.48	-57.10	823.85	-810.40	1,463.93	1,432.21	31.72	46.155							
6,800.00	6,759.20	6,937.58	6,759.20	16.55	25.61	-57.10	823.85	-810.40	1,463.93	1,431.82	32.11	45.587							
6,900.00	6,859.20	7,037.58	6,859.20	16.74	25.73	-57.10	823.85	-810.40	1,463.93	1,431.42	32.51	45.030							
7,000.00	6,959.20	7,137.58	6,959.20	16.94	25.86	-57.10	823.85	-810.40	1,463.93	1,431.02	32.91	44.486							
7,100.00	7,059.20	7,237.58	7,059.20	17.14	25.99	-57.10	823.85	-810.40	1,463.93	1,430.62	33.31	43.953							
7,200.00	7,159.20	7,337.58	7,159.20	17.34	26.12	-57.10	823.85	-810.40	1,463.93	1,430.22	33.71	43.431							
7,300.00	7,259.20	7,437.58	7,259.20	17.54	26.25	-57.10	823.85	-810.40	1,463.93	1,429.82	34.11	42.919							
7,400.00	7,359.20	7,537.58	7,359.20	17.74	26.39	-57.10	823.85	-810.40	1,463.93	1,429.42	34.51	42.419							
7,500.00	7,459.20	7,637.58	7,459.20	17.94	26.52	-57.10	823.85	-810.40	1,463.93	1,429.02	34.92	41.928							
7,600.00	7,559.20	7,737.58	7,559.20	18.14	26.66	-57.10	823.85	-810.40	1,463.93	1,428.61	35.32	41.447							
7,700.00	7,659.20	7,837.58	7,659.20	18.35	26.80	-57.10	823.85	-810.40	1,463.93	1,428.21	35.73	40.976							
7,800.00	7,759.20	7,937.58	7,759.20	18.55	26.93	-57.10	823.85	-810.40	1,463.93	1,427.80	36.13	40.515							
7,900.00	7,859.20	8,037.58	7,859.20	18.75	27.07	-57.10	823.85	-810.40	1,463.93	1,427.39	36.54	40.062							
8,000.00	7,959.20	8,137.58	7,959.20	18.96	27.21	-57.10	823.85	-810.40	1,463.93	1,426.98	36.95	39.619							
8,100.00	8,059.20	8,237.58	8,059.20	19.16	27.36	-57.10	823.85	-810.40	1,463.93	1,426.57	37.36	39.184							
8,200.00	8,159.20	8,337.58	8,159.20	19.37	27.50	-57.10	823.85	-810.40	1,463.93	1,426.16	37.77	38.758							
8,300.00	8,259.20	8,437.58	8,259.20	19.57	27.64	-57.10	823.85	-810.40	1,463.93	1,425.75	38.18	38.340							
8,400.00	8,359.20	8,537.58	8,359.20	19.78	27.79	-57.10	823.85	-810.40	1,463.93	1,425.34	38.59	37.931							
8,500.00	8,459.20	8,637.58	8,459.20	19.98	27.93	-57.10	823.85	-810.40	1,463.93	1,424.92	39.01	37.529							
8,600.00	8,559.20	8,737.58	8,559.20	20.19	28.08	-57.10	823.85	-810.40	1,463.93	1,424.51	39.42	37.135							
8,700.00	8,659.20	8,837.58	8,659.20	20.40	28.23	-57.10	823.85	-810.40	1,463.93	1,424.10	39.84	36.748							
8,800.00	8,759.20	8,937.58	8,759.20	20.60	28.38	-57.10	823.85	-810.40	1,463.93	1,423.68	40.25	36.369							
8,900.00	8,859.20	9,037.58	8,859.20	20.81	28.53	-57.10	823.85	-810.40	1,463.93	1,423.26	40.67	35.997							
9,000.00	8,959.20	9,137.58	8,959.20	21.02	28.68	-57.10	823.85	-810.40	1,463.93	1,422.85	41.09	35.632							
9,100.00	9,059.20	9,237.58	9,059.20	21.23	28.83	-57.10	823.85	-810.40	1,463.93	1,422.43	41.50	35.273							
9,200.00	9,159.20	9,337.58	9,159.20	21.44	28.98	-57.10	823.85	-810.40	1,463.93	1,422.01	41.92	34.921							
9,300.00	9,259.20	9,437.58	9,259.20	21.64	29.14	-57.10	823.85	-810.40	1,463.93	1,421.59	42.34	34.576							
9,400.00	9,359.20	9,537.58	9,359.20	21.85	29.29	-57.10	823.85	-810.40	1,463.93	1,421.17	42.76	34.237							
9,500.00	9,459.20	9,637.58	9,459.20	22.06	29.45	-57.10	823.85	-810.40	1,463.93	1,420.75	43.18	33.904							
9,600.00	9,559.20	9,737.58	9,559.20	22.27	29.60	-57.10	823.85	-810.40	1,463.93	1,420.33	43.60	33.576							
9,700.00	9,659.20	9,837.58	9,659.20	22.48	29.76	-57.10	823.85	-810.40	1,463.93	1,419.91	44.02	33.255							
9,800.00	9,759.20	9,937.58	9,759.20	22.69	29.92	-57.10	823.85	-810.40	1,463.93	1,419.49	44.44	32.940							
9,900.00	9,859.20	10,037.58	9,859.20	22.90	30.08	-57.10	823.85	-810.40	1,463.93	1,419.07	44.87	32.630							
10,000.00	9,959.20	10,137.58	9,959.20	23.12	30.24	-57.10	823.85	-810.40	1,463.93	1,418.64	45.29	32.325							
10,100.00	10,059.20	10,237.58	10,059.20	23.33	30.40	-57.10	823.85	-810.40	1,463.93	1,418.22	45.71	32.026							

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,159.20	10,337.58	10,159.20	23.54	30.56	-57.10	823.85	-810.40	1,463.93	1,417.80	46.13	31.731	
10,300.00	10,259.20	10,437.58	10,259.20	23.75	30.72	-57.10	823.85	-810.40	1,463.93	1,417.37	46.56	31.442	
10,320.80	10,280.00	10,458.38	10,280.00	23.79	30.76	-57.10	823.85	-810.40	1,463.93	1,417.28	46.65	31.383 SF	



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference				Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-64.01	26.22	-53.79	59.84						
100.00	100.00	100.00	100.00	0.10	0.10	-64.01	26.22	-53.79	59.84	59.64	0.19	309.561			
200.00	200.00	200.00	200.00	0.32	0.32	-64.01	26.22	-53.79	59.84	59.20	0.64	93.085			
300.00	300.00	300.00	300.00	0.55	0.55	-64.01	26.22	-53.79	59.84	58.75	1.09	54.778 CC, ES			
400.00	399.95	397.80	397.78	0.76	0.76	-151.08	27.04	-55.24	63.82	62.29	1.54	41.560			
500.00	499.63	497.14	497.06	1.00	0.98	-153.66	28.74	-58.26	74.24	72.25	1.99	37.249			
600.00	598.77	595.83	595.70	1.27	1.20	-156.91	30.42	-61.27	89.54	87.09	2.45	36.499			
708.25	705.15	701.57	701.37	1.64	1.44	-160.34	32.23	-64.49	111.81	108.85	2.96	37.785			
800.00	794.81	790.61	790.35	2.02	1.65	-162.82	33.75	-67.20	133.34	129.97	3.37	39.518			
900.00	892.53	887.65	887.33	2.44	1.87	-164.74	35.41	-70.15	157.01	153.17	3.83	40.959			
1,000.00	990.26	984.70	984.32	2.88	2.10	-166.16	37.06	-73.10	180.79	176.49	4.30	42.070			
1,100.00	1,087.98	1,081.74	1,081.31	3.32	2.32	-167.25	38.72	-76.06	204.66	199.89	4.77	42.948			
1,200.00	1,185.71	1,178.79	1,178.29	3.77	2.55	-168.12	40.38	-79.01	228.58	223.34	5.24	43.656			
1,300.00	1,283.43	1,275.83	1,275.28	4.22	2.77	-168.82	42.04	-81.96	252.54	246.83	5.71	44.237			
1,400.00	1,381.15	1,372.88	1,372.26	4.68	3.00	-169.39	43.69	-84.92	276.53	270.35	6.18	44.718			
1,500.00	1,478.88	1,469.92	1,469.25	5.13	3.22	-169.88	45.35	-87.87	300.54	293.88	6.66	45.127			
1,600.00	1,576.60	1,566.97	1,566.24	5.59	3.45	-170.29	47.01	-90.82	324.57	317.44	7.14	45.476			
1,700.00	1,674.33	1,664.01	1,663.22	6.05	3.67	-170.65	48.67	-93.78	348.62	341.00	7.62	45.777			
1,800.00	1,772.05	1,761.06	1,760.21	6.51	3.90	-170.96	50.32	-96.73	372.67	364.58	8.09	46.039			
1,900.00	1,869.77	1,858.10	1,857.20	6.97	4.13	-171.23	51.98	-99.68	396.74	388.16	8.57	46.268			
2,000.00	1,967.50	1,955.15	1,954.18	7.43	4.35	-171.47	53.64	-102.64	420.81	411.75	9.06	46.472			
2,100.00	2,065.22	2,052.19	2,051.17	7.89	4.58	-171.69	55.30	-105.59	444.88	435.35	9.54	46.653			
2,130.94	2,095.46	2,081.04	2,080.00	8.03	4.65	-171.75	55.79	-106.47	452.34	442.65	9.68	46.717			
2,200.00	2,163.10	2,136.99	2,135.88	8.30	4.78	-171.85	57.14	-108.89	469.17	459.17	10.00	46.930			
2,300.00	2,261.52	2,215.83	2,214.43	8.62	4.98	-171.81	60.41	-114.71	494.15	483.73	10.42	47.416			
2,400.00	2,360.44	2,300.00	2,297.91	8.90	5.22	-171.55	65.65	-124.05	519.85	509.00	10.85	47.899			
2,500.00	2,459.76	2,370.54	2,367.45	9.15	5.44	-171.21	71.42	-134.33	546.12	534.88	11.24	48.577			
2,600.00	2,559.39	2,446.30	2,441.60	9.36	5.69	-170.71	79.02	-147.87	573.10	561.46	11.63	49.256			
2,700.00	2,659.23	2,520.94	2,513.99	9.54	5.97	-170.12	87.90	-163.70	600.74	588.72	12.01	49.999			
2,800.00	2,759.20	2,600.00	2,589.84	9.68	6.30	-169.40	98.82	-183.14	629.09	616.69	12.40	50.740			
2,830.80	2,790.00	2,616.81	2,605.84	9.72	6.38	-83.18	101.34	-187.63	637.92	625.42	12.50	51.053			
2,900.00	2,859.20	2,666.56	2,652.93	9.81	6.62	-82.61	109.19	-201.62	658.74	645.97	12.77	51.581			
3,000.00	2,959.20	2,755.89	2,736.89	9.94	7.09	-81.62	124.12	-228.22	690.76	677.53	13.23	52.215			
3,100.00	3,059.20	2,849.86	2,825.19	10.08	7.61	-80.66	139.84	-256.24	723.03	709.34	13.70	52.785			
3,200.00	3,159.20	2,943.83	2,913.50	10.22	8.15	-79.78	155.57	-284.26	755.48	741.31	14.17	53.316			
3,300.00	3,259.20	3,037.80	3,001.80	10.36	8.71	-78.97	171.30	-312.29	788.07	773.43	14.64	53.813			
3,400.00	3,359.20	3,131.77	3,090.11	10.51	9.29	-78.22	187.03	-340.31	820.80	805.67	15.12	54.280			
3,500.00	3,459.20	3,225.74	3,178.41	10.65	9.88	-77.54	202.76	-368.34	853.64	838.04	15.60	54.719			
3,600.00	3,559.20	3,319.71	3,266.72	10.80	10.48	-76.90	218.48	-396.36	886.58	870.50	16.08	55.135			
3,700.00	3,659.20	3,413.68	3,355.02	10.96	11.09	-76.31	234.21	-424.38	919.61	903.05	16.56	55.528			
3,800.00	3,759.20	3,507.65	3,443.33	11.11	11.70	-75.76	249.94	-452.41	952.73	935.69	17.04	55.901			
3,900.00	3,859.20	3,601.62	3,531.63	11.27	12.33	-75.24	265.67	-480.43	985.92	968.39	17.53	56.254			
4,000.00	3,959.20	3,695.59	3,619.94	11.43	12.95	-74.76	281.40	-508.45	1,019.18	1,001.17	18.01	56.589			
4,100.00	4,059.20	3,789.57	3,708.24	11.60	13.59	-74.31	297.12	-536.48	1,052.49	1,034.00	18.49	56.907			
4,200.00	4,159.20	3,883.54	3,796.55	11.76	14.22	-73.89	312.85	-564.50	1,085.86	1,066.88	18.98	57.209			
4,300.00	4,259.20	4,008.77	3,914.62	11.93	15.00	-73.37	333.27	-600.89	1,118.58	1,099.04	19.54	57.252			
4,400.00	4,359.20	4,164.94	4,064.11	12.10	15.74	-72.86	355.36	-640.24	1,146.87	1,126.75	20.12	56.992			
4,500.00	4,459.20	4,325.88	4,220.49	12.27	16.40	-72.46	373.92	-673.30	1,169.95	1,149.25	20.70	56.518			
4,600.00	4,559.20	4,490.75	4,382.66	12.44	16.95	-72.17	388.44	-699.18	1,187.60	1,166.34	21.26	55.853			
4,700.00	4,659.20	4,658.59	4,549.21	12.61	17.39	-71.97	398.51	-717.12	1,199.63	1,177.83	21.80	55.025			
4,800.00	4,759.20	4,828.30	4,718.54	12.79	17.70	-71.87	403.82	-726.58	1,205.91	1,183.60	22.31	54.044			
4,900.00	4,859.20	4,968.98	4,859.20	12.96	17.88	-71.85	404.65	-728.06	1,206.88	1,184.13	22.76	53.032			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft								
Survey Program: 0-MWD												Offset Well Error:		0.00 ft							
Reference												Offset		Semi Major Axis		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor									
5,000.00	4,959.20	5,068.98	4,959.20	13.14	18.01	-71.85	404.65	-728.06	1,206.88	1,183.74	23.14	52.146									
5,100.00	5,059.20	5,168.98	5,059.20	13.32	18.13	-71.85	404.65	-728.06	1,206.88	1,183.35	23.54	51.280									
5,200.00	5,159.20	5,268.98	5,159.20	13.50	18.26	-71.85	404.65	-728.06	1,206.88	1,182.96	23.93	50.438									
5,300.00	5,259.20	5,368.98	5,259.20	13.69	18.40	-71.85	404.65	-728.06	1,206.88	1,182.56	24.32	49.619									
5,400.00	5,359.20	5,468.98	5,359.20	13.87	18.53	-71.85	404.65	-728.06	1,206.88	1,182.16	24.72	48.822									
5,500.00	5,459.20	5,568.98	5,459.20	14.05	18.67	-71.85	404.65	-728.06	1,206.88	1,181.77	25.12	48.048									
5,600.00	5,559.20	5,668.98	5,559.20	14.24	18.81	-71.85	404.65	-728.06	1,206.88	1,181.36	25.52	47.294									
5,700.00	5,659.20	5,768.98	5,659.20	14.43	18.94	-71.85	404.65	-728.06	1,206.88	1,180.96	25.92	46.561									
5,800.00	5,759.20	5,868.98	5,759.20	14.62	19.09	-71.85	404.65	-728.06	1,206.88	1,180.56	26.32	45.848									
5,900.00	5,859.20	5,968.98	5,859.20	14.80	19.23	-71.85	404.65	-728.06	1,206.88	1,180.16	26.73	45.153									
6,000.00	5,959.20	6,068.98	5,959.20	14.99	19.37	-71.85	404.65	-728.06	1,206.88	1,179.75	27.13	44.477									
6,100.00	6,059.20	6,168.98	6,059.20	15.19	19.52	-71.85	404.65	-728.06	1,206.88	1,179.34	27.54	43.819									
6,200.00	6,159.20	6,268.98	6,159.20	15.38	19.66	-71.85	404.65	-728.06	1,206.88	1,178.93	27.95	43.178									
6,300.00	6,259.20	6,368.98	6,259.20	15.57	19.81	-71.85	404.65	-728.06	1,206.88	1,178.52	28.36	42.554									
6,400.00	6,359.20	6,468.98	6,359.20	15.76	19.96	-71.85	404.65	-728.06	1,206.88	1,178.11	28.77	41.946									
6,500.00	6,459.20	6,568.98	6,459.20	15.96	20.11	-71.85	404.65	-728.06	1,206.88	1,177.70	29.18	41.354									
6,600.00	6,559.20	6,668.98	6,559.20	16.15	20.27	-71.85	404.65	-728.06	1,206.88	1,177.29	29.60	40.776									
6,700.00	6,659.20	6,768.98	6,659.20	16.35	20.42	-71.85	404.65	-728.06	1,206.88	1,176.87	30.01	40.213									
6,800.00	6,759.20	6,868.98	6,759.20	16.55	20.58	-71.85	404.65	-728.06	1,206.88	1,176.46	30.43	39.664									
6,900.00	6,859.20	6,968.98	6,859.20	16.74	20.73	-71.85	404.65	-728.06	1,206.88	1,176.04	30.84	39.129									
7,000.00	6,959.20	7,068.98	6,959.20	16.94	20.89	-71.85	404.65	-728.06	1,206.88	1,175.62	31.26	38.607									
7,100.00	7,059.20	7,168.98	7,059.20	17.14	21.05	-71.85	404.65	-728.06	1,206.88	1,175.20	31.68	38.097									
7,200.00	7,159.20	7,268.98	7,159.20	17.34	21.21	-71.85	404.65	-728.06	1,206.88	1,174.79	32.10	37.600									
7,300.00	7,259.20	7,368.98	7,259.20	17.54	21.37	-71.85	404.65	-728.06	1,206.88	1,174.37	32.52	37.115									
7,400.00	7,359.20	7,468.98	7,359.20	17.74	21.53	-71.85	404.65	-728.06	1,206.88	1,173.95	32.94	36.641									
7,500.00	7,459.20	7,568.98	7,459.20	17.94	21.70	-71.85	404.65	-728.06	1,206.88	1,173.52	33.36	36.178									
7,600.00	7,559.20	7,668.98	7,559.20	18.14	21.86	-71.85	404.65	-728.06	1,206.88	1,173.10	33.78	35.726									
7,700.00	7,659.20	7,768.98	7,659.20	18.35	22.03	-71.85	404.65	-728.06	1,206.88	1,172.68	34.20	35.285									
7,800.00	7,759.20	7,868.98	7,759.20	18.55	22.20	-71.85	404.65	-728.06	1,206.88	1,172.26	34.63	34.853									
7,900.00	7,859.20	7,968.98	7,859.20	18.75	22.36	-71.85	404.65	-728.06	1,206.88	1,171.83	35.05	34.432									
8,000.00	7,959.20	8,068.98	7,959.20	18.96	22.53	-71.85	404.65	-728.06	1,206.88	1,171.41	35.48	34.019									
8,100.00	8,059.20	8,168.98	8,059.20	19.16	22.70	-71.85	404.65	-728.06	1,206.88	1,170.98	35.90	33.617									
8,200.00	8,159.20	8,268.98	8,159.20	19.37	22.87	-71.85	404.65	-728.06	1,206.88	1,170.56	36.33	33.222									
8,300.00	8,259.20	8,368.98	8,259.20	19.57	23.05	-71.85	404.65	-728.06	1,206.88	1,170.13	36.75	32.837									
8,400.00	8,359.20	8,468.98	8,359.20	19.78	23.22	-71.85	404.65	-728.06	1,206.88	1,169.70	37.18	32.460									
8,500.00	8,459.20	8,568.98	8,459.20	19.98	23.39	-71.85	404.65	-728.06	1,206.88	1,169.28	37.61	32.091									
8,600.00	8,559.20	8,668.98	8,559.20	20.19	23.57	-71.85	404.65	-728.06	1,206.88	1,168.85	38.04	31.730									
8,700.00	8,659.20	8,768.98	8,659.20	20.40	23.74	-71.85	404.65	-728.06	1,206.88	1,168.42	38.46	31.377									
8,800.00	8,759.20	8,868.98	8,759.20	20.60	23.92	-71.85	404.65	-728.06	1,206.88	1,167.99	38.89	31.031									
8,900.00	8,859.20	8,968.98	8,859.20	20.81	24.09	-71.85	404.65	-728.06	1,206.88	1,167.56	39.32	30.692									
9,000.00	8,959.20	9,068.98	8,959.20	21.02	24.27	-71.85	404.65	-728.06	1,206.88	1,167.13	39.75	30.360									
9,100.00	9,059.20	9,168.98	9,059.20	21.23	24.45	-71.85	404.65	-728.06	1,206.88	1,166.70	40.18	30.035									
9,200.00	9,159.20	9,268.98	9,159.20	21.44	24.63	-71.85	404.65	-728.06	1,206.88	1,166.27	40.61	29.716									
9,300.00	9,259.20	9,368.98	9,259.20	21.64	24.81	-71.85	404.65	-728.06	1,206.88	1,165.84	41.04	29.404									
9,400.00	9,359.20	9,389.78	9,280.00	21.85	24.85	-71.85	404.65	-728.06	1,209.48	1,168.17	41.31	29.280 SF									
9,500.00	9,459.20	9,389.78	9,280.00	22.06	24.85	-71.85	404.65	-728.06	1,220.12	1,178.59	41.53	29.381									
9,600.00	9,559.20	9,389.78	9,280.00	22.27	24.85	-71.85	404.65	-728.06	1,238.76	1,197.01	41.75	29.673									
9,700.00	9,659.20	9,389.78	9,280.00	22.48	24.85	-71.85	404.65	-728.06	1,265.05	1,223.09	41.97	30.145									
9,800.00	9,759.20	9,389.78	9,280.00	22.69	24.85	-71.85	404.65	-728.06	1,298.54	1,256.35	42.19	30.781									
9,900.00	9,859.20	9,389.78	9,280.00	22.90	24.85	-71.85	404.65	-728.06	1,338.67	1,296.27	42.41	31.568									
10,000.00	9,959.20	9,389.78	9,280.00	23.12	24.85	-71.85	404.65	-728.06	1,384.88	1,342.25	42.63	32.489									
10,100.00	10,059.20	9,389.78	9,280.00	23.33	24.85	-71.85	404.65	-728.06	1,436.57	1,393.72	42.85	33.529									

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



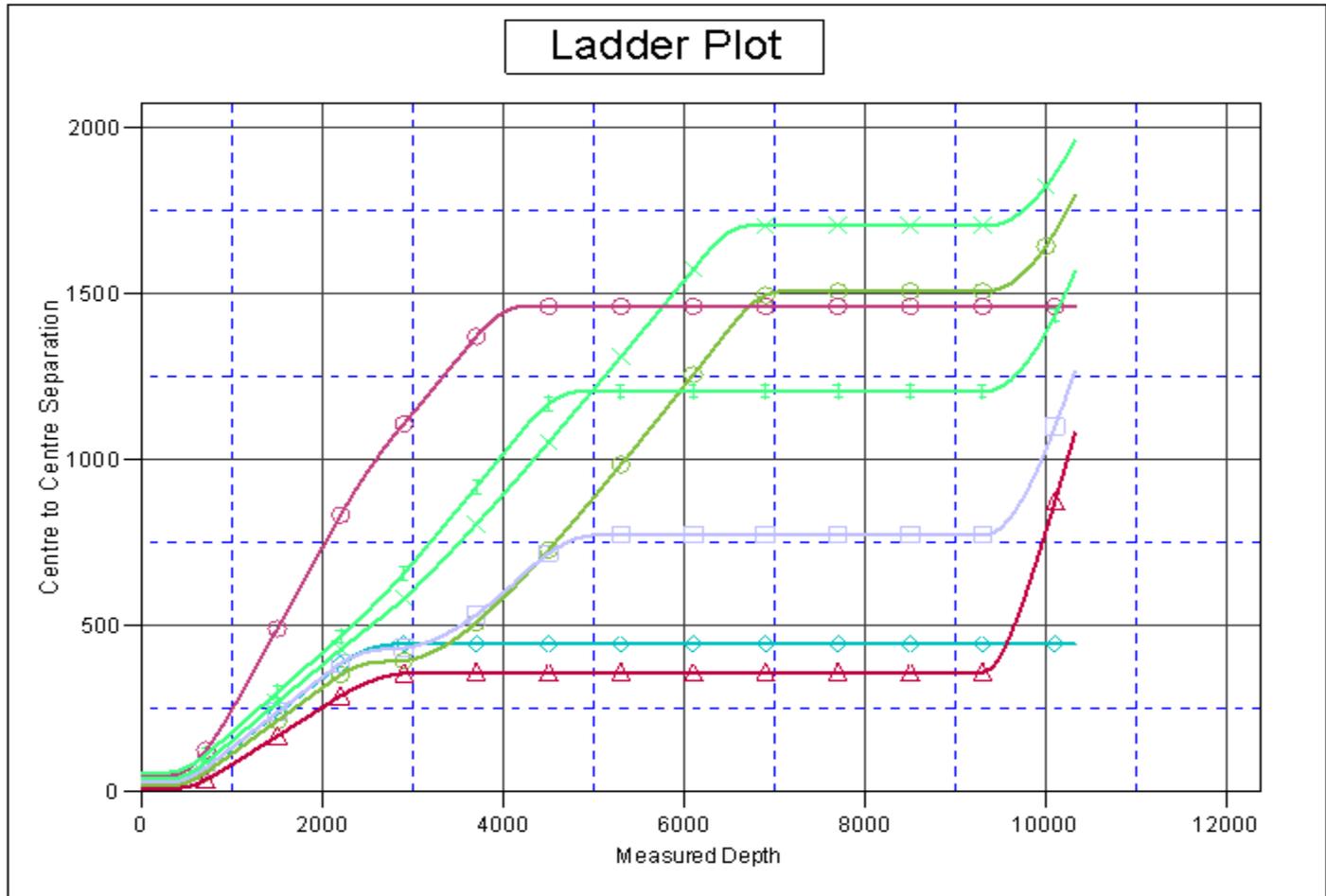
Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 922-31F Pad - NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,159.20	9,389.78	9,280.00	23.54	24.85	-71.85	404.65	-728.06	1,493.17	1,450.11	43.07	34.672	
10,300.00	10,259.20	9,389.78	9,280.00	23.75	24.85	-71.85	404.65	-728.06	1,554.16	1,510.87	43.29	35.905	
10,320.80	10,280.00	9,389.78	9,280.00	23.79	24.85	-71.85	404.65	-728.06	1,567.34	1,524.01	43.33	36.171	



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4850.00ft (Original Well Elev) Coordinates are relative to: NBU 922-31F1BS
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.97°



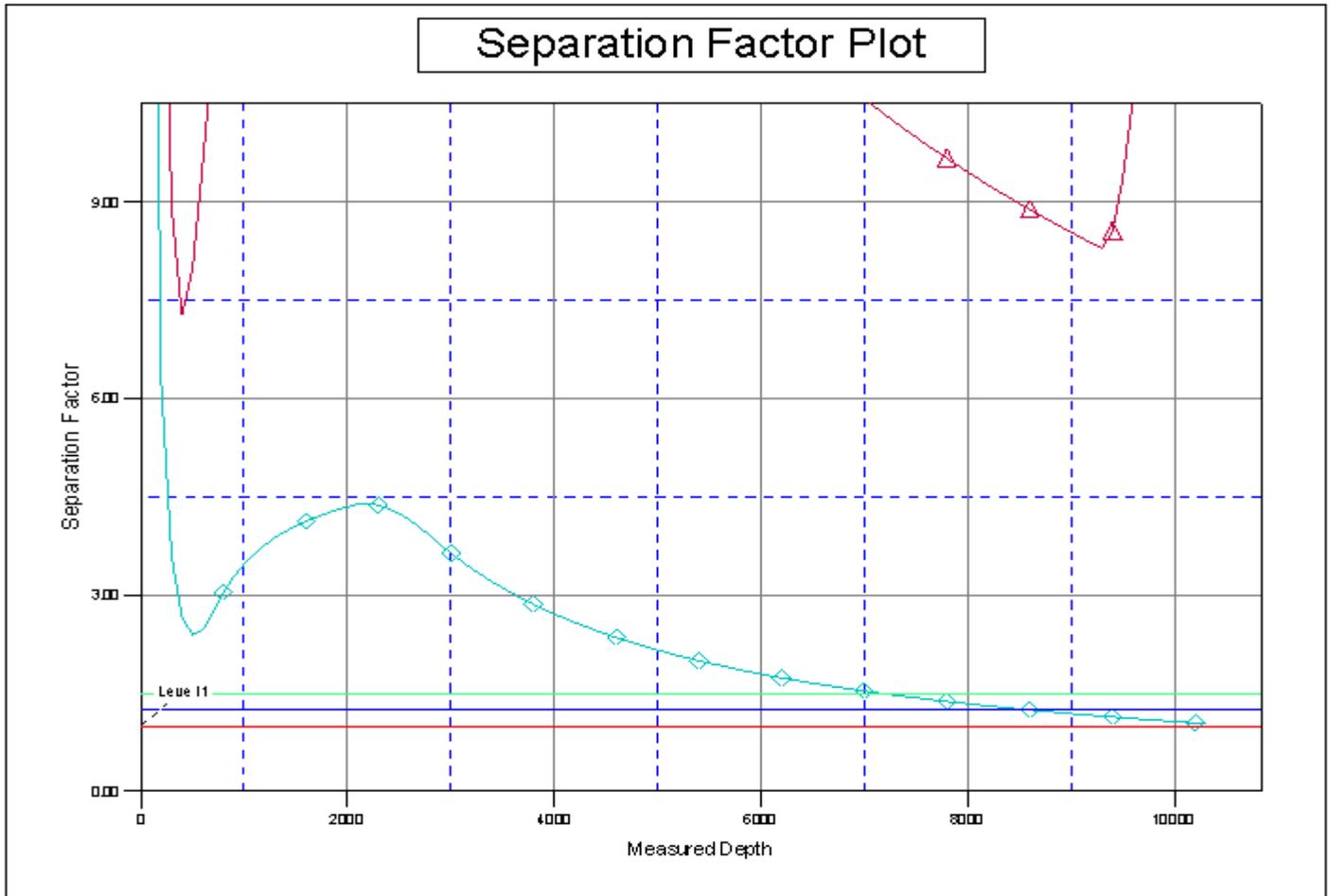
LEGEND

- EXISTING, NBU 155 EXISTING, NBU 155 EXISTING \0
- 1C1AS, NBU922-31C1AS, PLAN#1 3-26-10 RHS \0
- 1C3AS, NBU922-31C3AS, PLAN#1 3-26-10 RHS \0
- ▲ NBU92231C4CS, NBU92231C4CS, PLAN #1 3-26-10 RHS \0
- ✕ NBU92231D1BS, NBU92231D1BS, PLAN#1 3-26-10 RHS \0
- NBU92231D4BS, NBU92231D4BS, PLAN#1 3-26-10 RHS \0
- ◆ NBU 92231D4CS, NBU 922-31D4CS, PLAN#1 3-26-10 RHS \0



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31F1BS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4850.00ft (Original Well Elev) Coordinates are relative to: NBU 922-31F1BS
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.97°



LEGEND

- EXISTING, NBU 155 EXISTING, NBU 155 EXISTING \VD
- :1C1AS, NBU 922-31C1AS, PLAN#1 3-26-10 RHS \VD
- :1C3AS, NBU 922-31C3AS, PLAN#1 3-26-10 RHS \VD
- ▲ NBU 922-31C4CS, NBU 922-31C4CS, PLAN #1 3-26-10 RHS \VD
- ✖ NBU 922-31D1BS, NBU 922-31D1BS, PLAN#1 3-26-10 RHS \VD
- ⊖ NBU 922-31D4BS, NBU 922-31D4BS, PLAN#1 3-26-10 RHS \VD
- ◆ NBU 922-31D4CS, NBU 922-31D4CS, PLAN#1 3-26-10 RHS \VD

NBU 922-31F1BS

Pad: NBU 922-31F

Surface: 1,567' FNL 1,309' FWL (SE/4NW/4)

BHL: 1,540' FNL 1,728' FWL (SE/4NW/4)

Section 31 T9S R22E

Uintah, Utah

Mineral Lease: ML 23607

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	1,138'	
Birds Nest	1,473'	Water
Mahogany	1,841'	Water
Wasatch	4,403'	Gas
Mesaverde	7,022'	Gas
MVU2	7,956'	Gas
MVL1	8,569'	Gas
Sego*	9,248'	
Castlegate*	9,379'	
MN5*	9,780'	
TVD	10,280'	
TD	10,321'	

* The Blackhawk formation is in the Mesaverde group

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

Please refer to the attached Drilling Program.

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.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,280' TVD, approximately equals 6,565 psi (calculated at 0.64 psi/foot).

Maximum anticipated surface pressure equals approximately 4,303 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

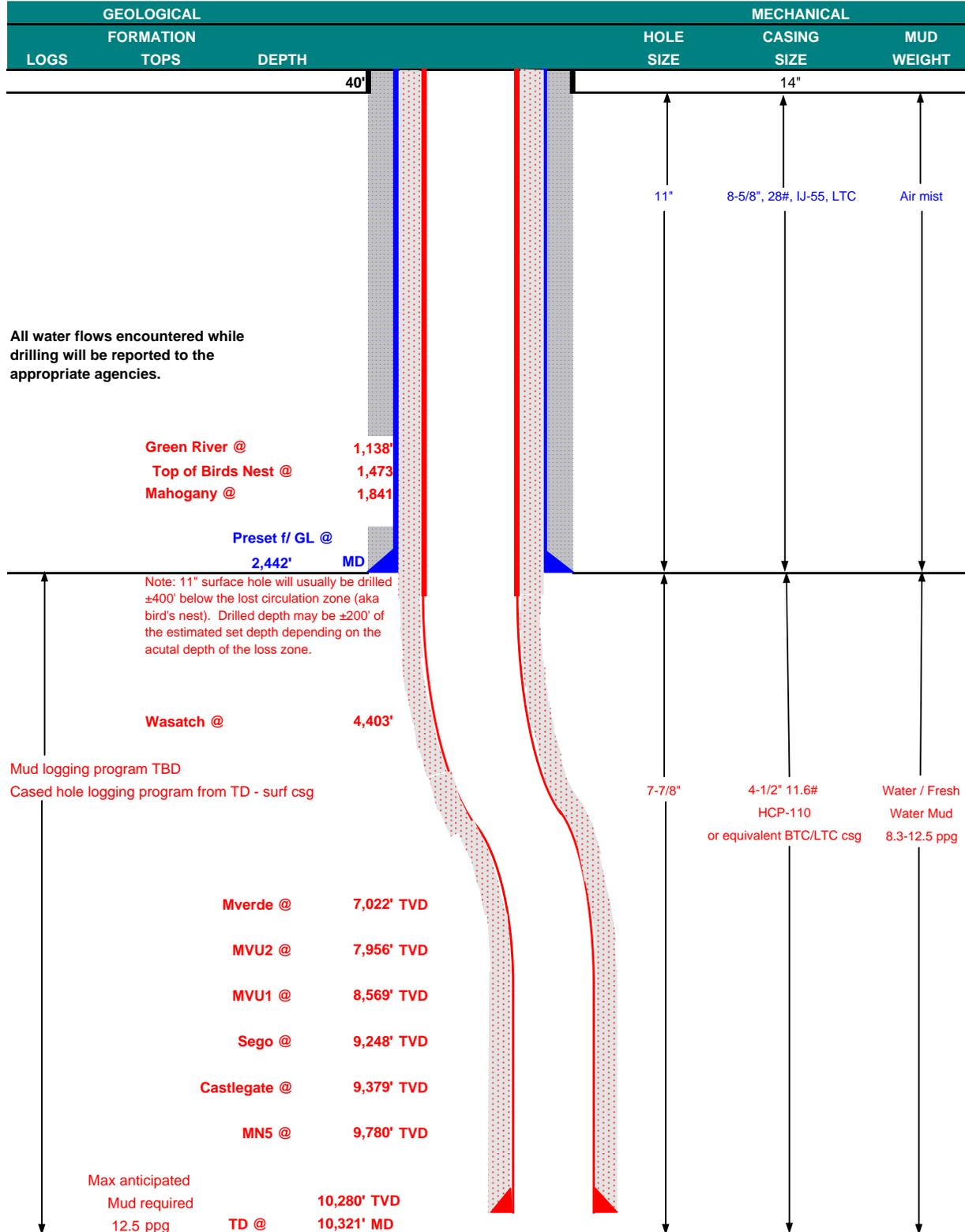
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	May 5, 2010	
WELL NAME	NBU 922-31F1BS		TD	10,280' TVD	10,321' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SE/4 NW/4	1,567' FNL	1,309' FWL	Sec 31 T 9S R 22E	FINISHED ELEVATION 4,837'
	Latitude: 39.995480		Longitude: -109.485298		NAD 27
BTM HOLE LOCATION	SE/4 NW/4	1,540' FNL	1,728' FWL	Sec 31 T 9S R 22E	
	Latitude: 39.995559		Longitude: -109.483803		NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				



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



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
SURFACE	8-5/8"	0 to 2,442'	28.00	IJ-55	LTC	0.76	1.65	5.04
						10,690	8,650	279,000
PRODUCTION	4-1/2"	0 to 10,280'	11.60	HCP-110	LTC	4.73	1.29	2.89

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.20

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.5 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,303 psi

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

(Burst Assumptions: TD = 12.5 ppg)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,565 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,942'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,901'	Premium Lite II + 3% KCl + 0.25 pps	310	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,420'	50/50 Poz/G + 10% salt + 2% gel	1,570	40%	14.30	1.31
			+ 0.1% R-3				

*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. No centralizers will be used.

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.

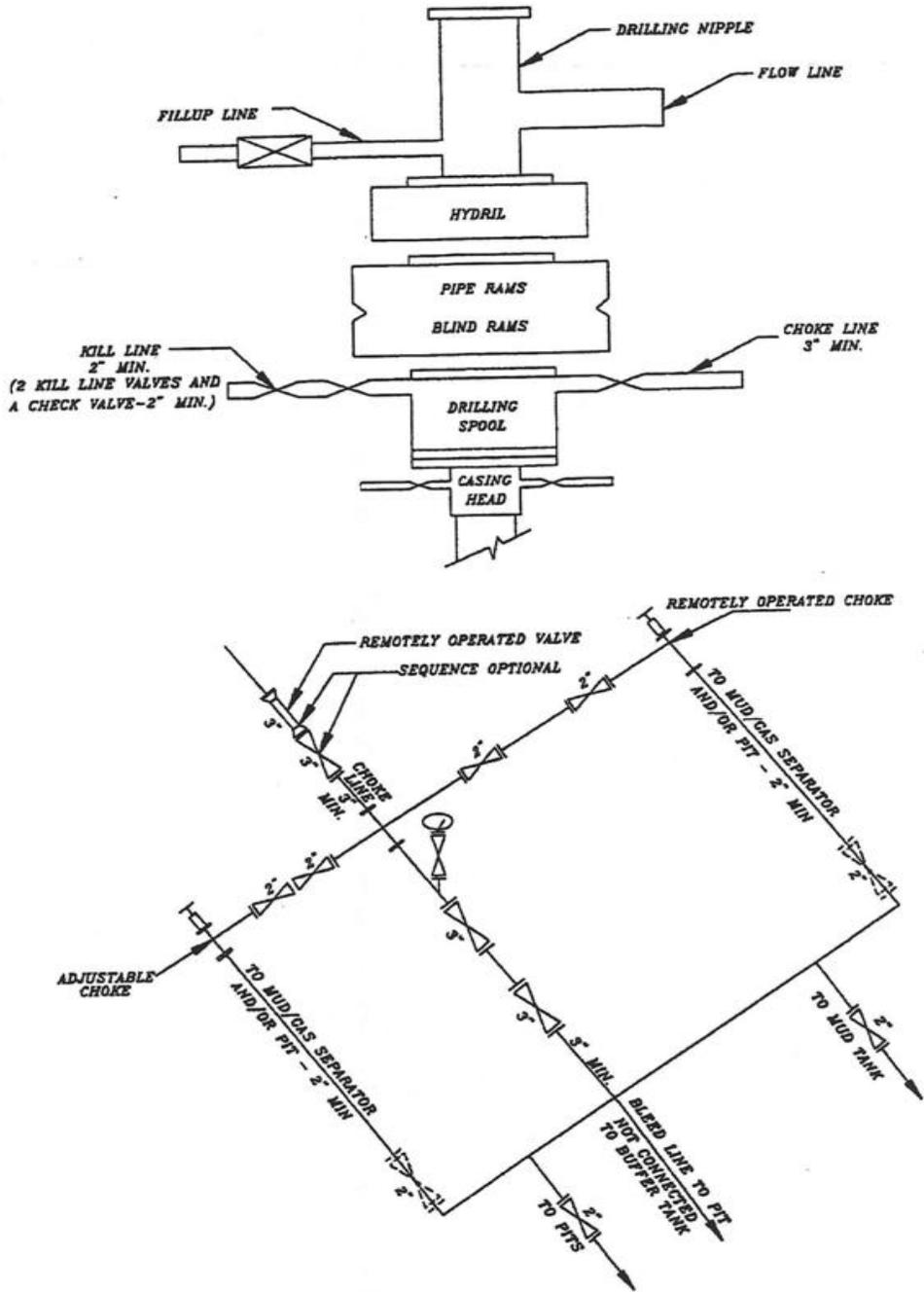
Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: John Merkel / Lovel Young

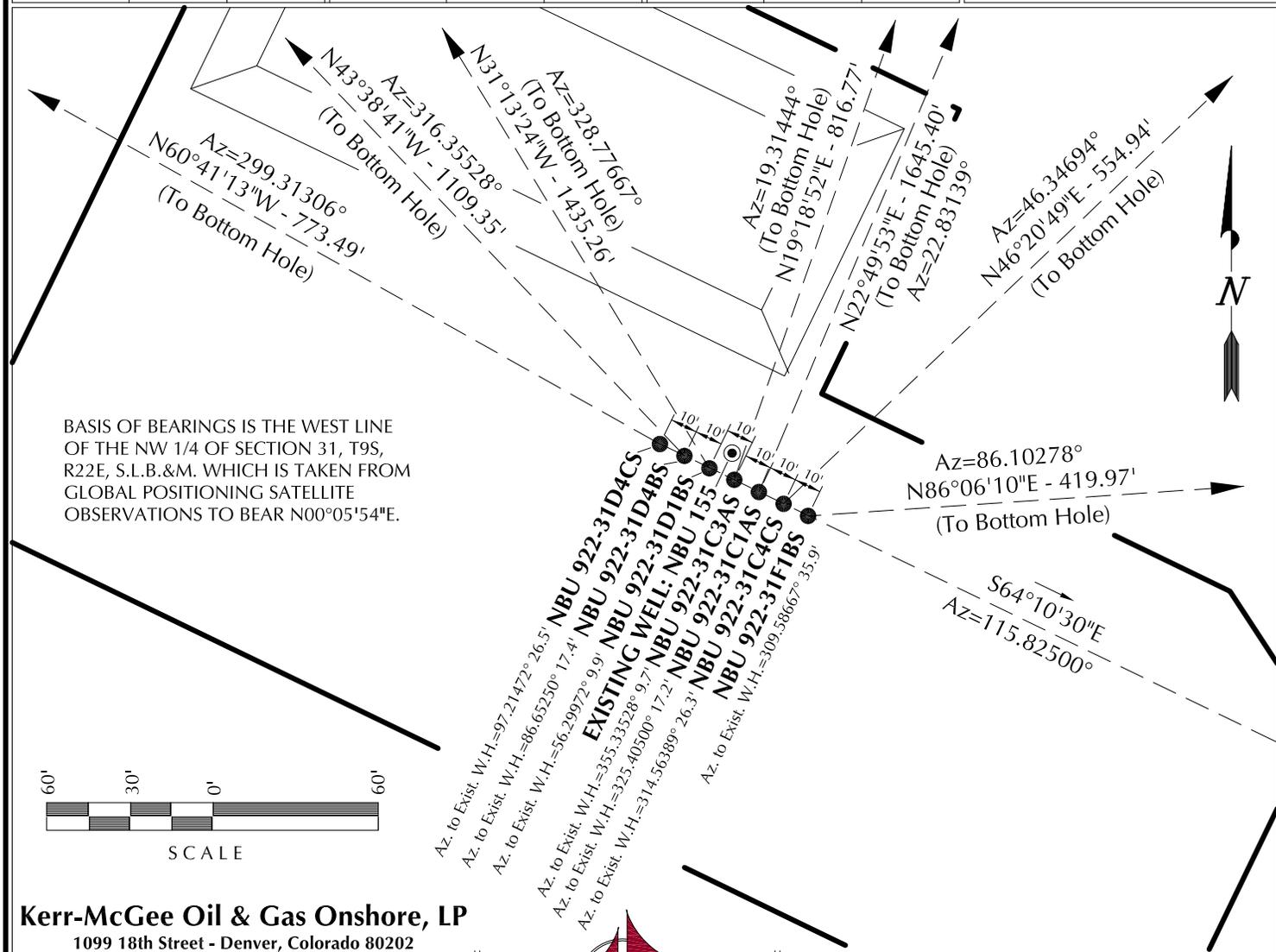
EXHIBIT A NBU 922-31F1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-31F1BS	39°59'43.602" 39.995445°	109°29'09.540" 109.485983°	39°59'43.728" 39.995480°	109°29'07.072" 109.485298°	1567' FNL 1309' FWL	39°59'43.885" 39.995524°	109°29'04.158" 109.484488°	39°59'44.011" 39.995559°	109°29'01.690" 109.483803°	1540' FNL 1728' FWL
NBU 922-31C4CS	39°59'43.645" 39.995457°	109°29'09.655" 109.486015°	39°59'43.771" 39.995492°	109°29'07.186" 109.485329°	1563' FNL 1300' FWL	39°59'47.431" 39.996509°	109°29'04.498" 109.484583°	39°59'47.557" 39.996544°	109°29'02.030" 109.483897°	1181' FNL 1701' FWL
NBU 922-31C1AS	39°59'43.688" 39.995469°	109°29'09.770" 109.486047°	39°59'43.814" 39.995504°	109°29'07.301" 109.485361°	1558' FNL 1291' FWL	39°59'58.672" 39.999637°	109°29'01.573" 109.483770°	39°59'58.798" 39.999666°	109°28'59.105" 109.483085°	44' FNL 1927' FWL
NBU 922-31C3AS	39°59'43.732" 39.995481°	109°29'09.885" 109.486079°	39°59'43.858" 39.995516°	109°29'07.417" 109.485393°	1554' FNL 1282' FWL	39°59'51.348" 39.997597°	109°29'06.417" 109.485116°	39°59'51.474" 39.997632°	109°29'03.949" 109.484430°	784' FNL 1551' FWL
NBU 922-31D1BS	39°59'43.773" 39.995493°	109°29'10.002" 109.486112°	39°59'43.899" 39.995528°	109°29'07.533" 109.485426°	1550' FNL 1273' FWL	39°59'55.897" 39.998860°	109°29'19.563" 109.488768°	39°59'56.023" 39.998895°	109°29'17.094" 109.488082°	320' FNL 527' FWL
NBU 922-31D4BS	39°59'43.818" 39.995505°	109°29'10.118" 109.486144°	39°59'43.944" 39.995540°	109°29'07.649" 109.485458°	1545' FNL 1264' FWL	39°59'51.747" 39.997707°	109°29'19.956" 109.488877°	39°59'51.873" 39.997742°	109°29'17.487" 109.488191°	740' FNL 497' FWL
NBU 922-31D4CS	39°59'43.861" 39.995517°	109°29'10.233" 109.486176°	39°59'43.986" 39.995552°	109°29'07.764" 109.485490°	1541' FNL 1255' FWL	39°59'47.600" 39.996556°	109°29'18.898" 109.488583°	39°59'47.726" 39.996591°	109°29'16.429" 109.487897°	1160' FNL 580' FWL
NBU 155	39°59'43.828" 39.995508°	109°29'09.895" 109.486082°	39°59'43.954" 39.995543°	109°29'07.427" 109.485396°	1544' FNL 1281' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole											
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-31F1BS	28.5'	419.0'	NBU 922-31C4CS	383.1'	401.5'	NBU 922-31C1AS	1516.5'	638.5'	NBU 922-31C3AS	770.8'	270.1'
NBU 922-31D1BS	1227.4'	-744.0'	NBU 922-31D4BS	802.8'	-765.7'	NBU 922-31D4CS	378.7'	-674.4'			



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

WELL PAD - NBU 922-31F

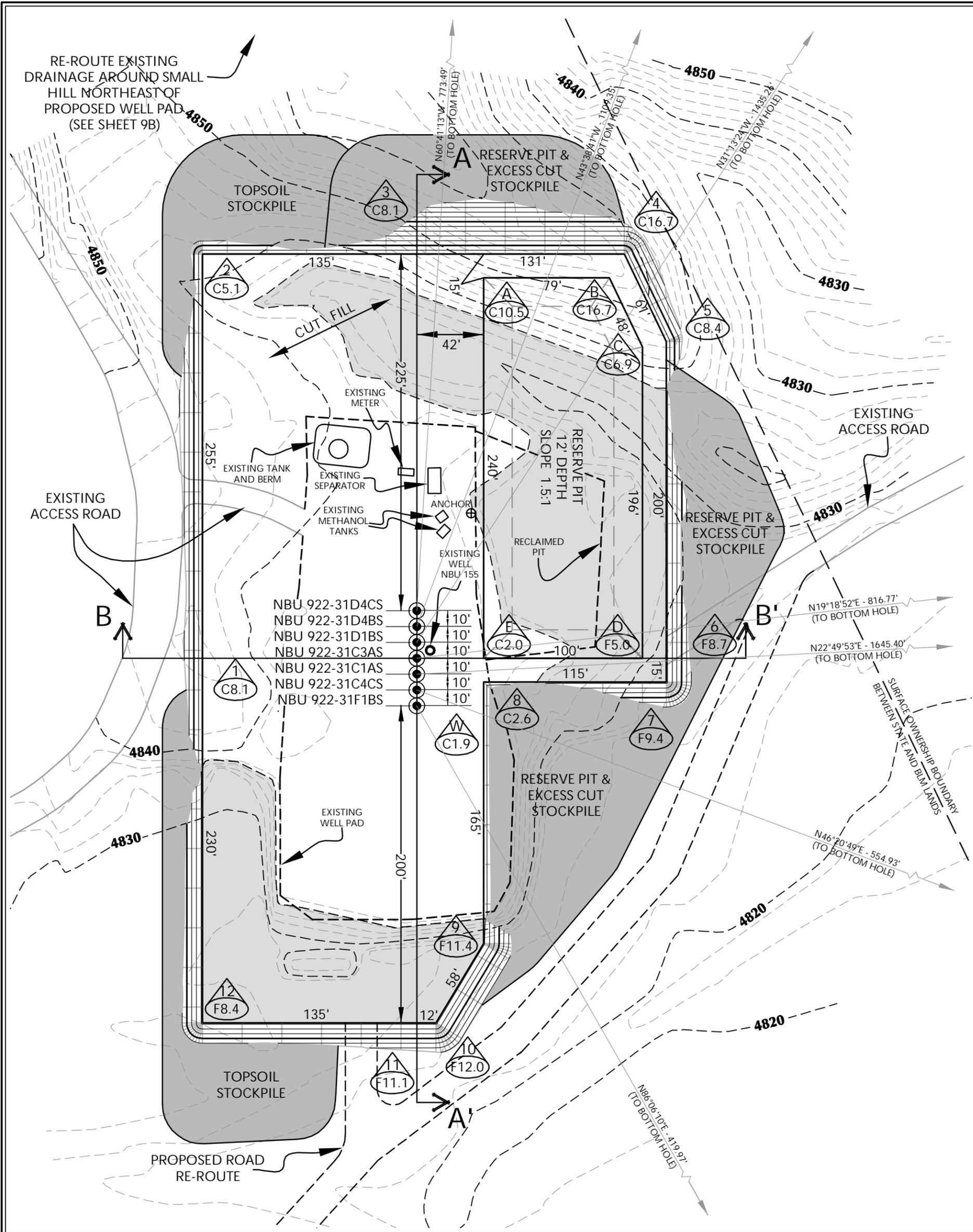
WELL PAD INTERFERENCE PLAT
 WELLS - NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH.

609

CONSULTING, LLC
 371 Coffeen Avenue
 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: 1-11-10	SURVEYED BY: M.S.B.	SHEET NO: 8
DATE DRAWN: 1-13-10	DRAWN BY: M.W.W.	
SCALE: 1" = 60'		8 OF 18



WELL PAD - NBU 922-31F DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4838.4'
 FINISHED GRADE ELEVATION = 4836.5'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.07 ACRES
 TOTAL DAMAGE AREA = 5.70 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

WELL PAD QUANTITIES
 TOTAL CUT FOR WELL PAD = 10,737 C.Y.
 TOTAL FILL FOR WELL PAD = 10,339 C.Y.
 TOPSOIL @ 6" DEPTH = 1,776 C.Y.
 EXCESS MATERIAL = 398 C.Y.

RESERVE PIT QUANTITIES
 TOTAL CUT FOR RESERVE PIT +/- 7,996 CY
 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 30,416 BARRELS

- WELL PAD LEGEND**
- EXISTING WELL LOCATION
 - PROPOSED WELL LOCATION
 - PROPOSED BOTTOM HOLE LOCATION
 - EXISTING CONTOURS (2' INTERVAL)
 - PROPOSED CONTOURS (2' INTERVAL)



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 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-31F

WELL PAD - LOCATION LAYOUT
 NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

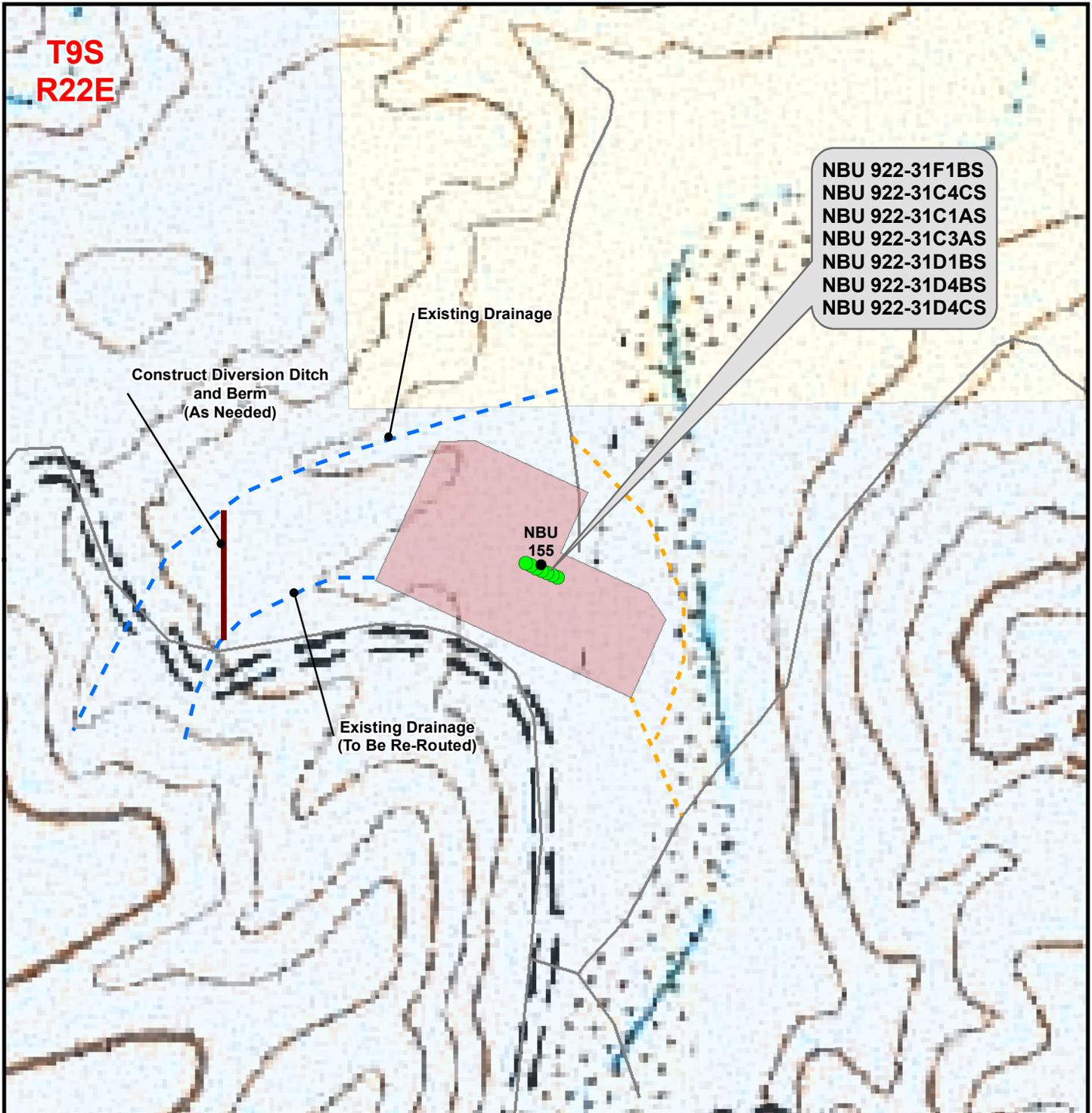


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TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

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Scale: 1"=60' Date: 3/9/10 SHEET NO: 9A OF 18
 REVISED: SEA 3/18/10



Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

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

WELL PAD - NBU 922-31F

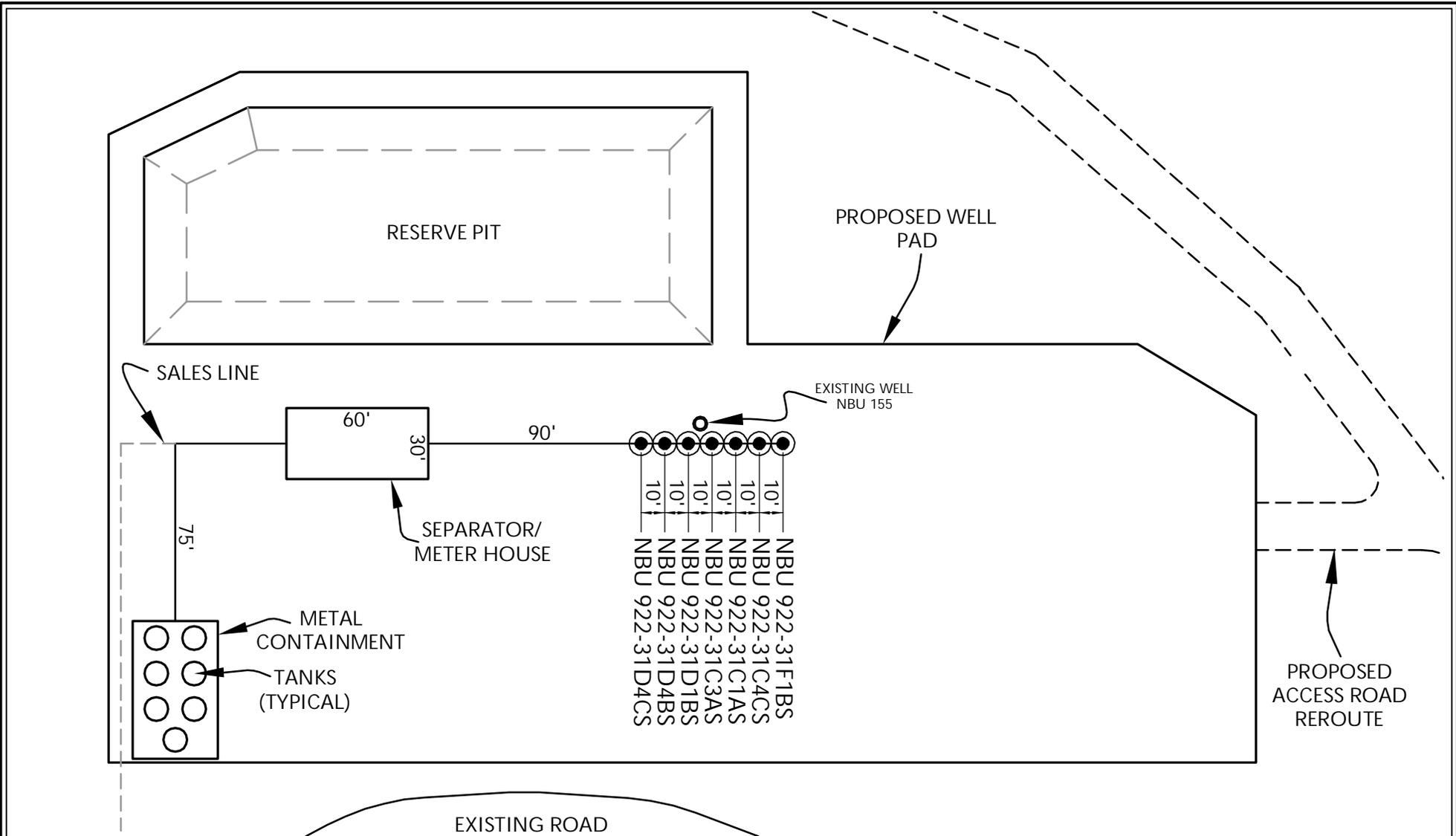
NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
DIVERSION STRUCTURE LOCATION
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

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CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 250ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	9B
Revised: CPS	Date: 22 Mar 2010	
		9B of 18

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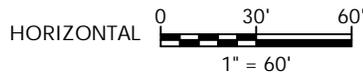
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-31F

WELL PAD - FACILITIES DIAGRAM
 NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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 Sheridan, WY 82801
 Phone 307-674-0609
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WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED SALES LINE

TIMBERLINE
ENGINEERING & LAND SURVEYING, INC.
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(435) 789-1365

Scale: 1"=60' Date: 3/9/10

SHEET NO:

REVISED:

11 11 OF 18

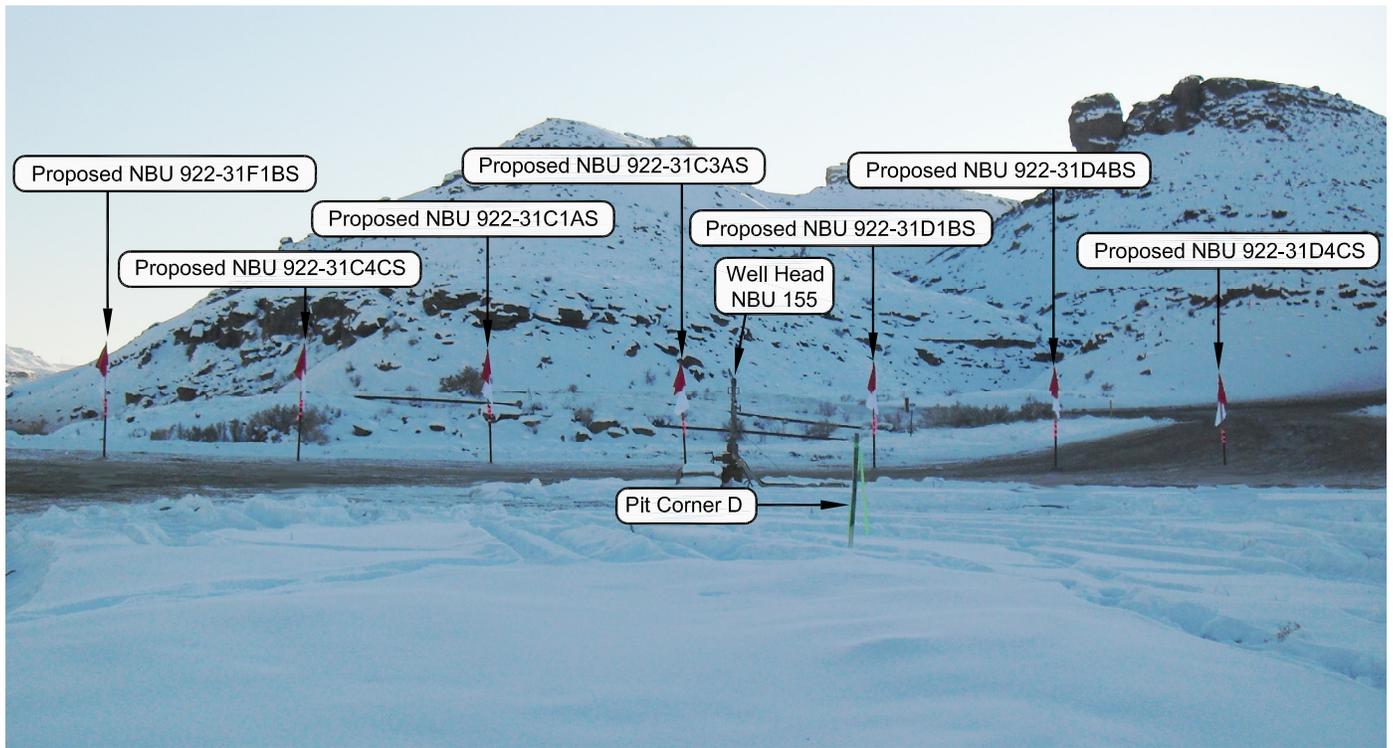


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

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

Well Pad - NBU 922-31F

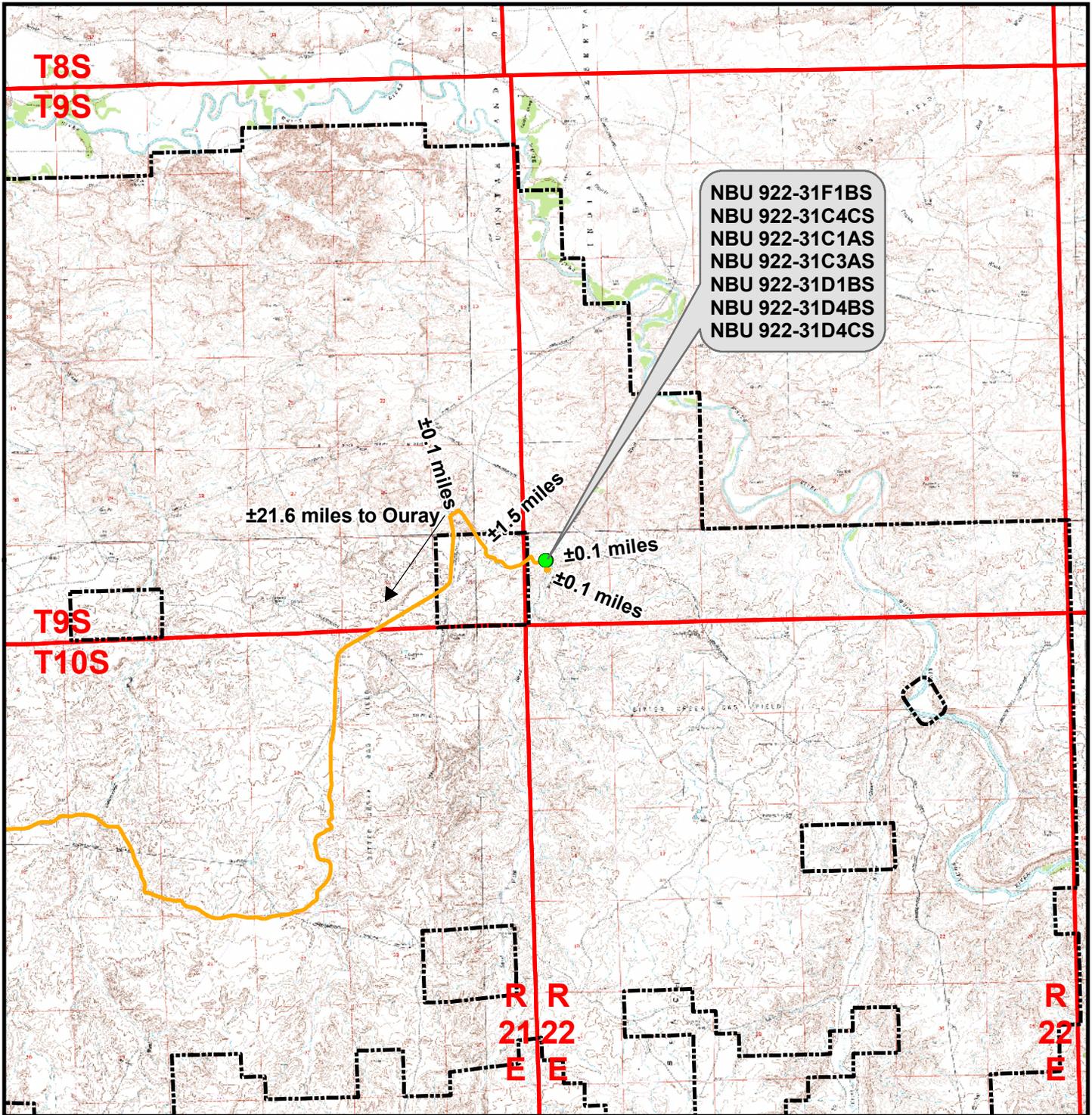
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 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATION PHOTOS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 1-11-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 12
DATE DRAWN: 1-14-10	DRAWN BY: M.W.W.	
Date Last Revised: 3-4-10 M.W.W.		12 OF 18



NBU 922-31F1BS
 NBU 922-31C4CS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31D1BS
 NBU 922-31D4BS
 NBU 922-31D4CS

±0.1 miles
 ±21.6 miles to Ouray
 ±1.5 miles
 ±0.1 miles
 ±0.1 miles

Legend Distance From Well Pad - NBU 922-31F To Unit Boundary: ±1,255ft

● Proposed Well Location Natural Buttes Unit Boundary

— Access Route - Proposed

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

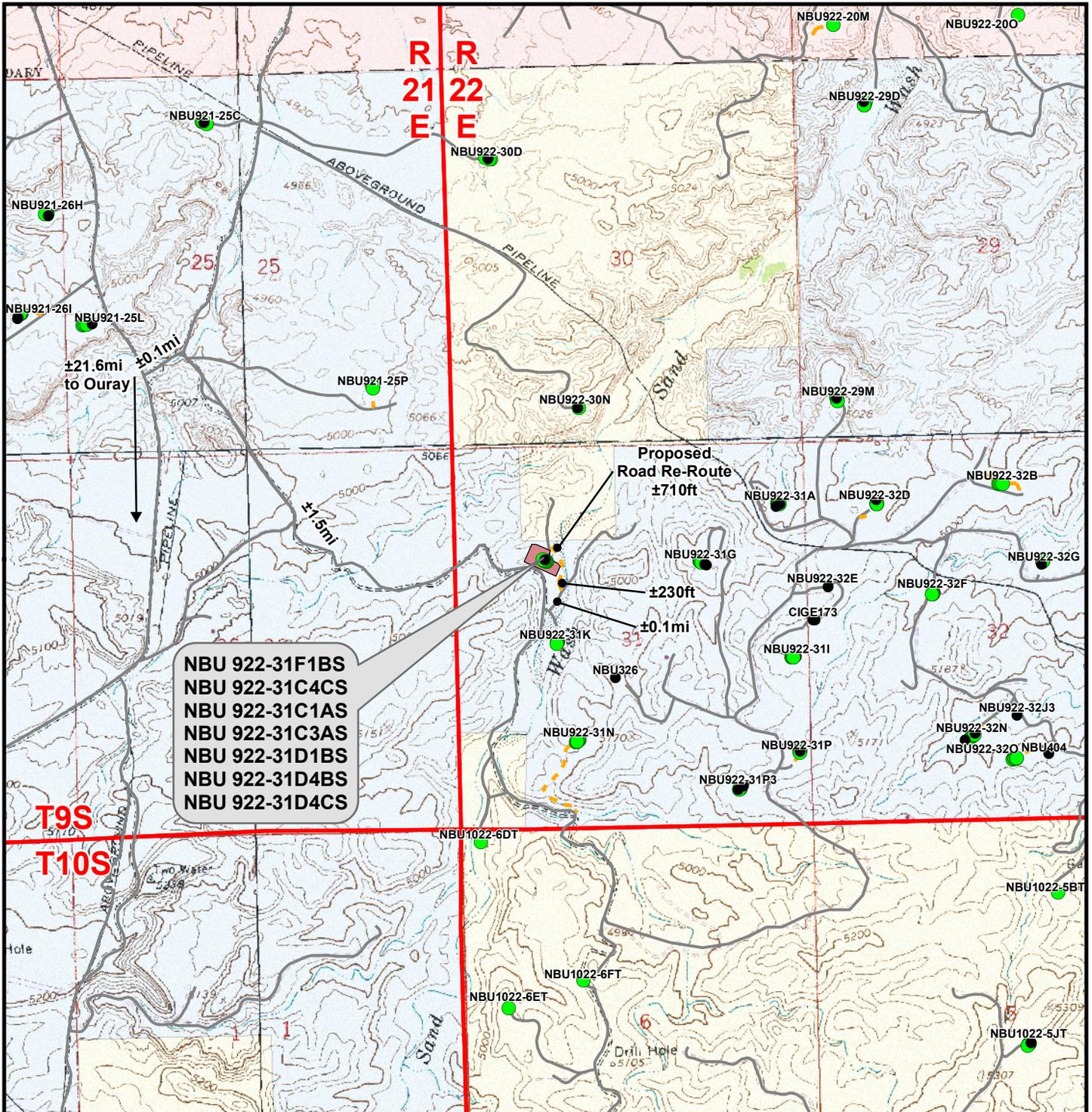
WELL PAD - NBU 922-31F

NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO A
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

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Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	13 13 of 18
Revised:	Date:	



Legend

Total Proposed Road Length: ±940ft

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

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

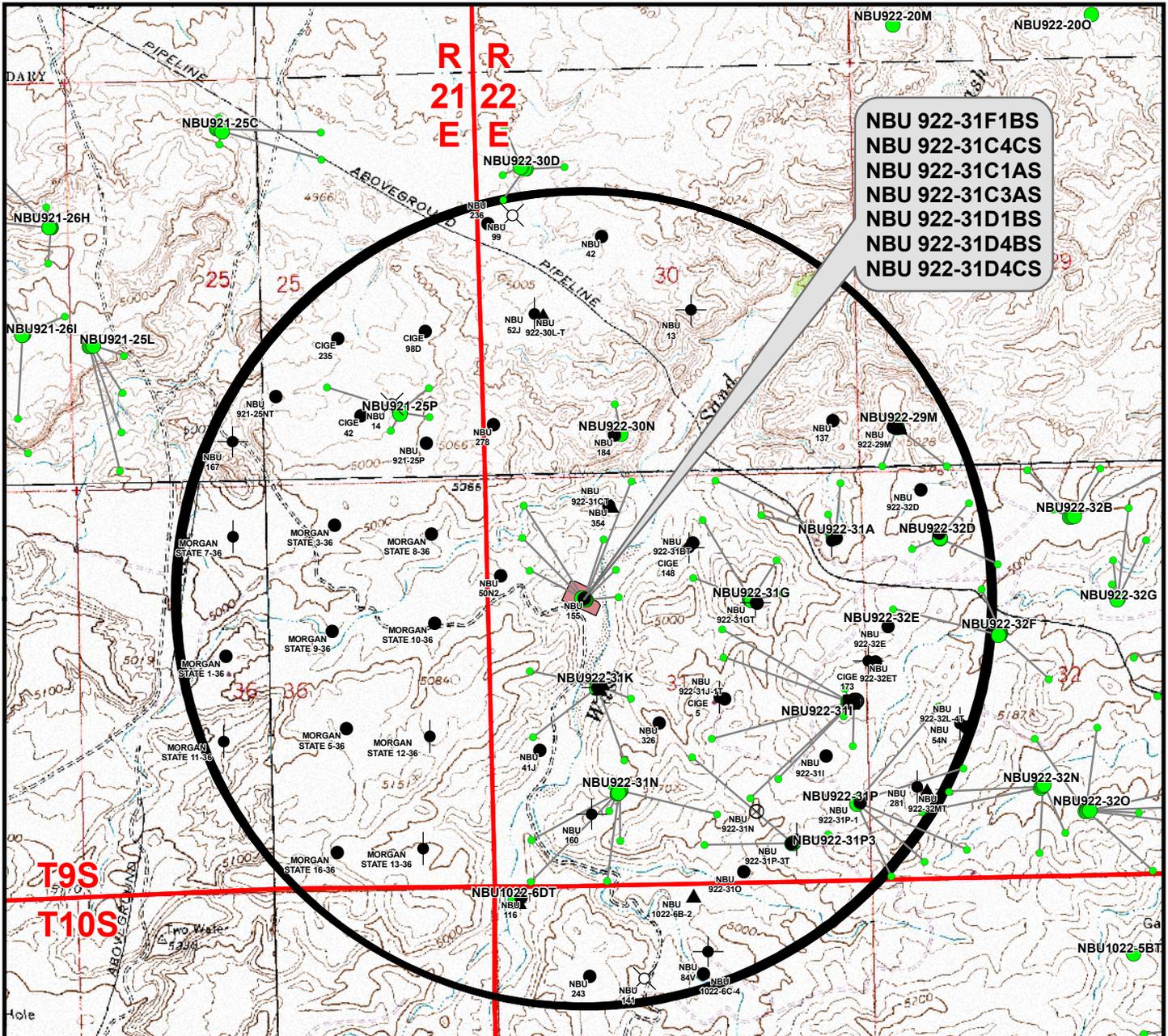
WELL PAD - NBU 922-31F

NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO B
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Mar 2010	14
Revised:	Date:	



NBU 922-31F1BS
NBU 922-31C4CS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31D1BS
NBU 922-31D4BS
NBU 922-31D4CS

Proposed Well	Nearest Well Bore	Footage	Proposed Well	Nearest Well Bore	Footage
NBU 922-31F1BS	NBU 155	447ft	NBU 922-31D1BS	NBU 50N2	967ft
NBU 922-31C4CS	NBU 155	556ft	NBU 922-31D4BS	NBU 50N2	572ft
NBU 922-31C1AS	NBU 354	432ft	NBU 922-31D4CS	NBU 50N2	381ft
NBU 922-31C3AS	NBU 354	436ft			

Legend

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

- Well - Proposed
- Well Pad
- Bottom Hole - Proposed
- Well - 1 Mile Radius
- Well Path
- Producing
- Temporarily-Abandoned
- ⊙ Active
- Shut-In
- ☺ Spudded (Drilling commenced; Not yet completed)
- Plugged and Abandoned
- ▲ Approved permit (APD); not yet spudded
- ⊗ Location Abandoned
- New Permit (Not yet approved or drilled)
- ⊖ Dry hole marker, buried
- ⊕ Inactive
- ⊗ Returned APD (Unapproved)
- ⊘ Drilling Operations Suspended

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

WELL PAD - NBU 922-31F

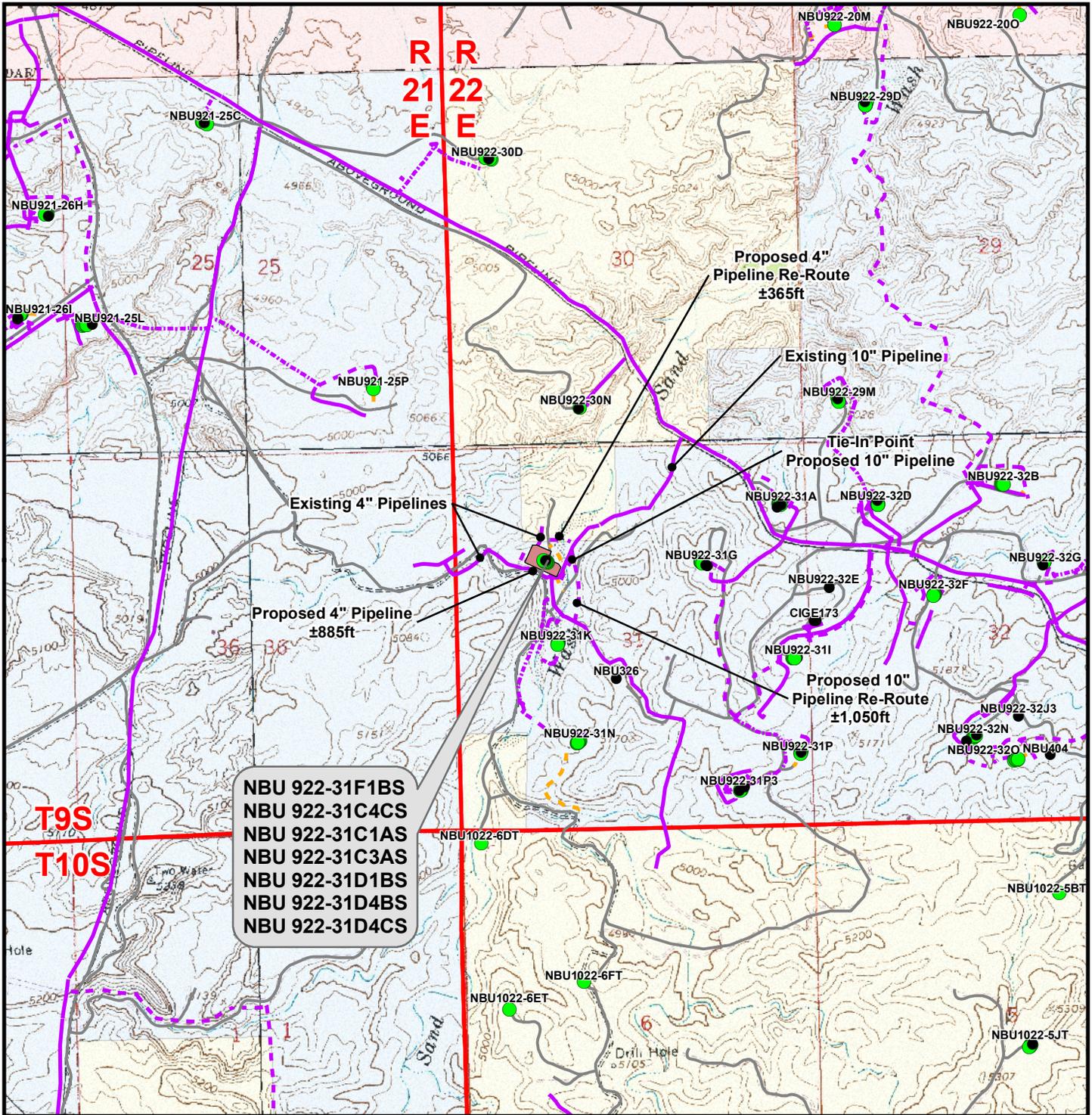
NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO C
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

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CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	15
Revised:	Date:	



NBU 922-31F1BS
 NBU 922-31C4CS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31D1BS
 NBU 922-31D4BS
 NBU 922-31D4CS

Legend

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

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±885ft
 Proposed Pipeline Length From Edge Of Pad To Meter House: ±265ft

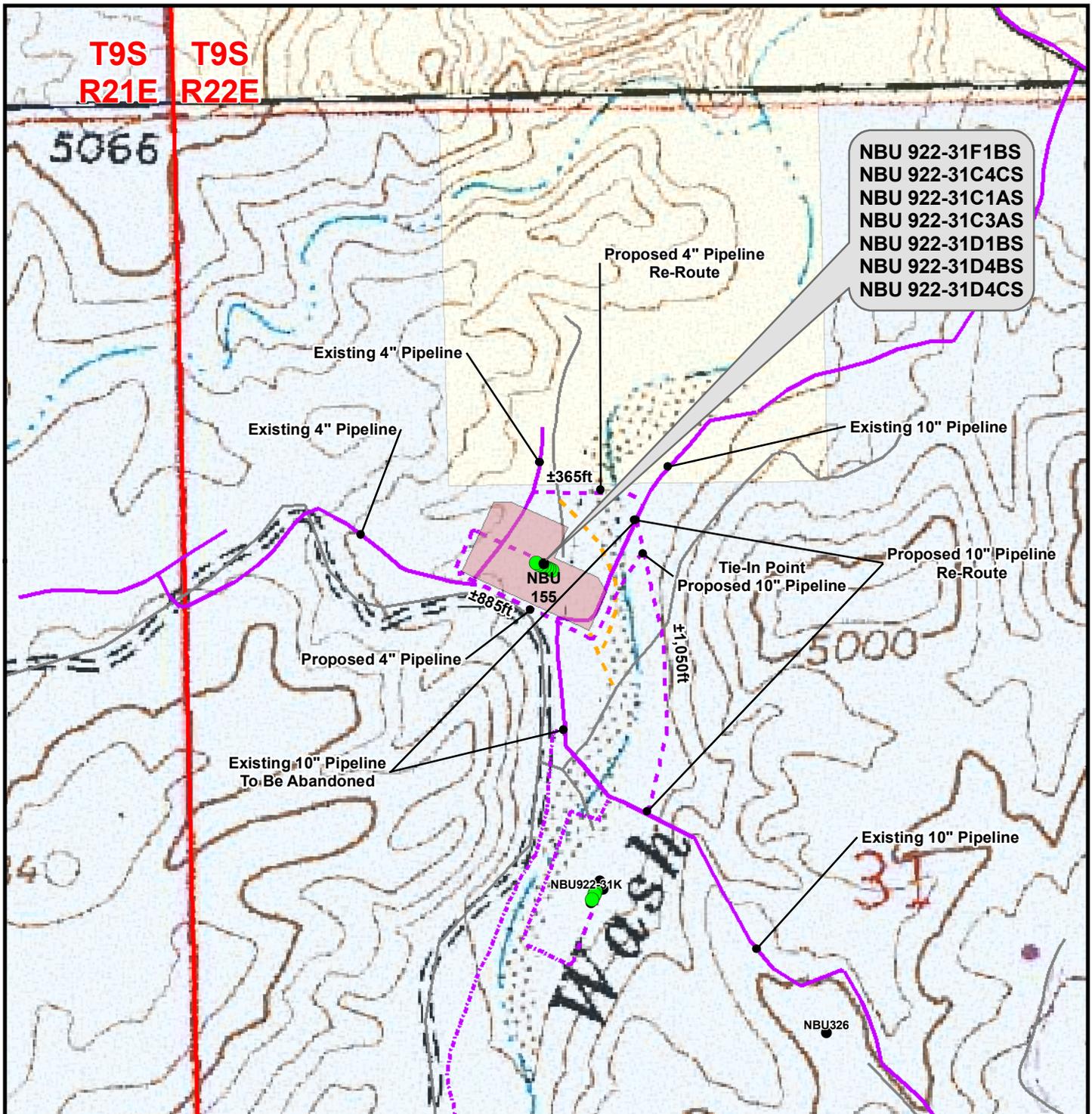
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-31F

NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO D
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	16 16 of 18
Revised:	Date:	



NBU 922-31F1BS
 NBU 922-31C4CS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31D1BS
 NBU 922-31D4BS
 NBU 922-31D4CS

Legend

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

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±885ft
 Proposed Pipeline Length From Edge Of Pad To Meter House: ±265ft

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

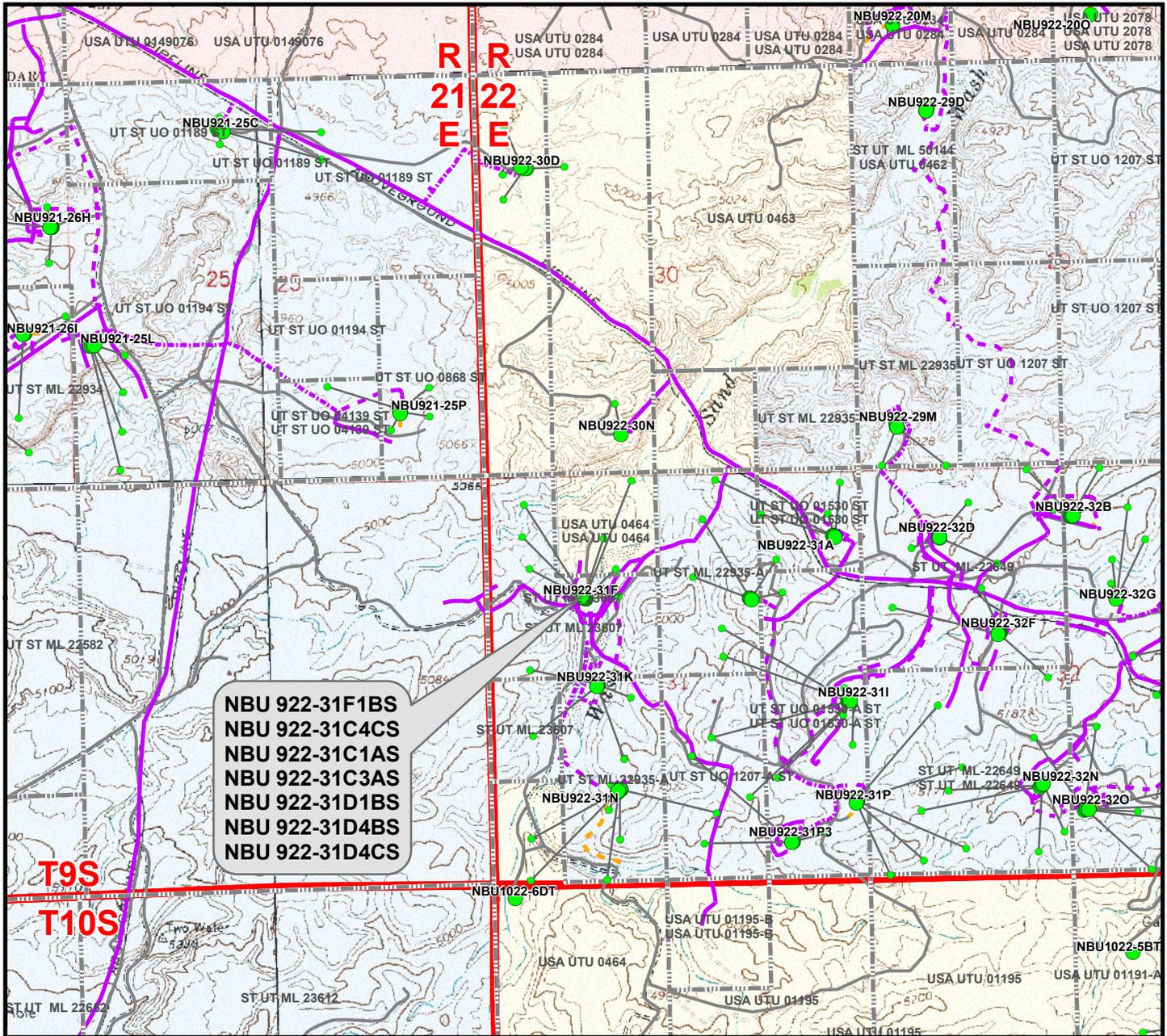
WELL PAD - NBU 922-31F

NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO D (PAD & PIPELINE DETAIL)
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UTAH COUNTY, UTAH

609
 CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	16A 16A of 18
Revised:	Date:	



NBU 922-31F1BS
NBU 922-31C4CS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31D1BS
NBU 922-31D4BS
NBU 922-31D4CS

Proposed Well	Distance To Nearest Lease Boundary	Proposed Well	Distance To Nearest Lease Boundary
NBU 922-31F1BS	275ft	NBU 922-31D1BS	320ft
NBU 922-31C4CS	84ft	NBU 922-31D4BS	424ft
NBU 922-31C1AS	44ft	NBU 922-31D4CS	345ft
NBU 922-31C3AS	480ft		

Legend

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

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

WELL PAD - NBU 922-31F

NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 TOPO E
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Mar 2010	17
Revised:	Date:	

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 922-31F
WELLS – NBU 922-31F1BS, NBU 922-31C4CS, NBU 922-31C1AS,
NBU 922-31C3AS, NBU 922-31D1BS, NBU 922-31D4BS & NBU 922-31D4CS
Section 31, T9S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 10.4 MILES TO A CLASS D COUNTY ROAD TO THE NORTHEAST. EXIT RIGHT 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 1.5 MILES TO A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.1 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION ALONG THE PROPOSED ACCESS ROAD APPROXIMATELY 230 FEET TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 54.0 MILES IN A SOUTHERLY DIRECTION.

NBU 922-31C1AS

Surface: 1,558' FNL 1,291' FWL (SE/4NW/4)
BHL: 44' FNL 1,927' FWL (NE/4NW/4)
Mineral Lease: UTU 0464

NBU 922-31C3AS

Surface: 1,554' FNL 1,282' FWL (SE/4NW/4)
BHL: 784' FNL 1,551' FWL (NE/4NW/4)
Mineral Lease: UTU 0464

NBU 922-31C4CS

Surface: 1,563' FNL 1,300' FWL (SE/4NW/4)
BHL: 1,181' FNL 1,701' FWL (NE/4NW/4)
Mineral Lease: UTU 0464

NBU 922-31D1BS

Surface: 1,550' FNL 1,273' FWL (SE/4NW/4)
BHL: 320' FNL 527' FWL (NW/4NW/4) Lot 1
Mineral Lease: ML 23607

NBU 922-31D4BS

Surface: 1,545' FNL 1,264' FWL (SE/4NW/4)
BHL: 740' FNL 497' FWL (NW/4NW/4) Lot 1
Mineral Lease: ML 23607

NBU 922-31D4CS

Surface: 1,541' FNL 1,255' FWL (SE/4NW/4)
BHL: 1,160' FNL 580' FWL (NW/4NW/4) Lot 1
Mineral Lease: ML 2360

NBU 922-31F1BS

Surface: 1,567' FNL 1,309' FWL (SE/4NW/4)
BHL: 1,540' FNL 1,728' FWL (SE/4NW/4)
Mineral Lease: ML 23607

Pad: NBU 922-31F
Section 31 T9S R22E

Uintah, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

ONSHORE ORDER NO. 1

***MULTI-POINT SURFACE USE & OPERATIONS PLAN
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

An on-site meeting was held on March 16, 2010. Present were:

- Floyd Bartlett – UDOGM
- Ed Bonner - SITLA
- Alex Hansen, Ben Williams – Division of Wildlife Resources (DWR)
- John Slaugh, Mitch Batty – 609 Consulting, LLC
- Clay Einerson, Charles Chase, Sheila Wopsock, Roger Perry, Grizz Oleen – Kerr- McGee Oil & Gas Onshore LP. (Kerr-McGee)

Directional Drilling:

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

A. Existing Roads:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

B. Planned Access Roads:

See MDP for additional details on road construction.

Approximately 940' (± 0.2 miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

C. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

D. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

This pad will expand the existing pad for the NBU 155, which is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records.

The following guidelines will apply if the well is productive.

Approximately 1,150' (± 0.2 miles) of buried 8" steel pipeline is proposed from the meter located on the well pad to the tie-in point located in the NW/4 in Sec 31 T9S-R22E (see Topo D2 for specific tie in point). The 8" buried pipeline will be constructed utilizing existing disturbance when possible. The area of disturbance during construction from the edge of road or well pad will be 30' in width. The portion going cross country will need a construction area of 50' in width (see Topo D2 for specific cross country portions). The total pipeline disturbance width will be 30'. Where possible there will be no additional disturbance during construction, as the road will be utilized for construction vehicles. The liquid and gas gathering lines will be in the same trench.

The proposed trench for the pipeline would range from 18-48 inch and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. The pipeline will be welded or zap locked along the proposed right-of-way and lowered into place. During construction blasting may occur along the proposed right-of-way when trenching equipment can not cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The 8" buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically tested before being placed into service.

Upon completion of the 8" buried pipeline the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to the MDP for more details regarding final reclamation. Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations to connect the new line to existing

facilities and/or for safety purposes. Kerr-McGee requests for a permanent 30' right-of-way that will be maintained for the portion following the road and the piece of cross country. The need for the 30' permanent right-of-way is for maintenance and repairs.

The gas gathering pipeline information is planned as follows:

Gas Gathering Pipeline size: Buried 8" pipeline.

Gas Gathering Pipeline material: Steel line pipe with fusion bond epoxy coating.

The liquid gathering pipeline information is planned as follows:

Liquid Gathering Pipeline size: Buried 6" pipeline.

Liquid Gathering Pipeline material: Flex Steel

E. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained using Desert Generation Permit number 49-225.

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

No water well is to be drilled on this lease.

F. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

G. Methods of Handling Waste Materials:

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

H. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

I. Well Site Layout: (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

J. Plans for Reclamation of the Surface:

See MDP for additional details on Plans for Reclamation of the Surface.

K. Surface Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

Mineral Ownership for NBU 922-31C1AS, 31C3AS, 31C4CS:

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

Mineral Ownership for NBU 922-31D1BS, 31D4BS, 31D4CS, 31F1BS:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

L. Other Information:

See MDP for additional details on Other Information.

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

Danielle Piernot
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

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

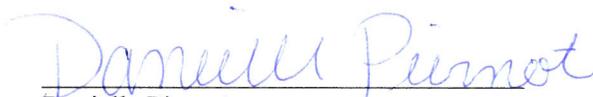
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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 State Surety Bond 22013542 and 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.


Danielle Piernot

May 5, 2010
Date



1099 18th Street
Denver, CO 80202
303-296-3600 (main)
303-296-3601 (fax)

ANNA C. CAVALERI
(Direct) 720-929-6029
(Direct Fax) 720-929-7029

April 8, 2010

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
NBU 922-31F1BS
T9S R22E
Section 31: SENW (Surface) / SENW (Bottom Hole)
Surface Footages: 1567' FNL, 1309' FWL
Bottom Hole Footages: 1540' FNL, 1728' FWL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Directional Drilling of Wells.

- Kerr-McGee's NBU 922-31F1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Cavaleri'.

Anna C. Cavaleri
Landman

CLASS I REVIEW OF
KERR-MCGEE OIL & GAS ONSHORE LP'S
PROPOSED WELL LOCATIONS: NBU 922-31C1AS,
NBU 922-31C3AS, NBU 922-31C4CS, NBU 922-31D1BS,
NBU 922-31D4BS, NBU 922-31D4CS, AND NBU 922-31F1BS
(T9S, R22E, SECTION 31)
UINTAH COUNTY, UTAH

By:

Keith R. Montgomery

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532

MOAC Report No. 08-280

February 17, 2010

United States Department of Interior (FLPMA)
Permit No. 10-UT-60122

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

IPC #09-184

Paleontological Reconnaissance Survey Report

**Block Section Survey of the NW Quarter of Section 31, Including
Kerr McGee's Proposed "NBU #922-31F, F1BS, C4CS, C1AS,
C3AS, D1BS, D4BS, & D4CS" (Sec. 31, T 9 S, R 22 E)**

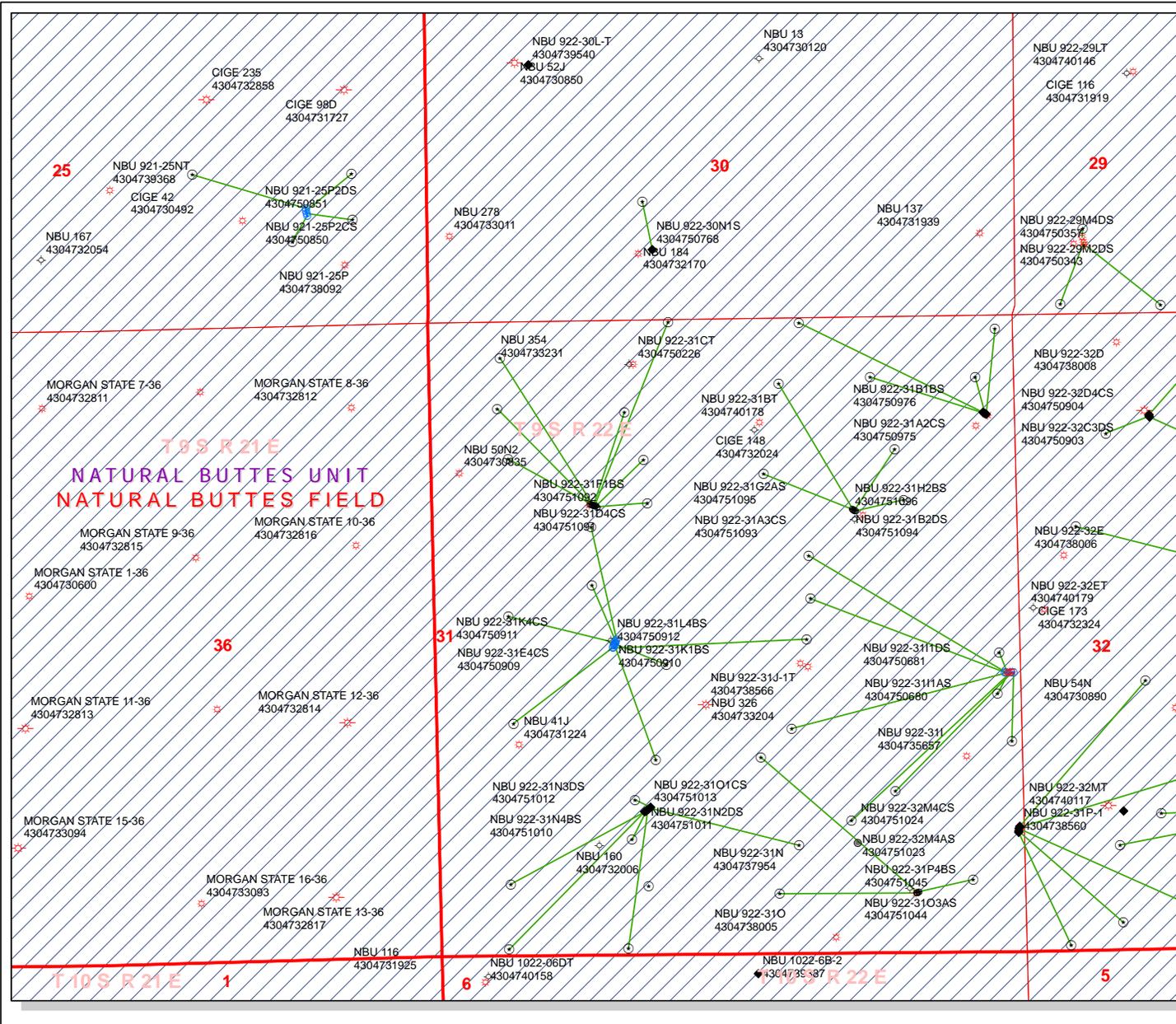
Archy Bench
Topographic Quadrangle
Uintah County, Utah

March 3, 2010

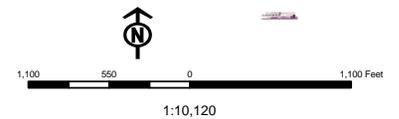
Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

API Number: 4304751092
Well Name: NBU 922-31F1BS
Township 09.0 S Range 22.0 E Section 31
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason



Units	Wells Query
STATUS	✖ <all other values>
ACTIVE	APD - Approved Permit
EXPLORATORY	DRL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	OPS - Operation Suspended
PP GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Sections	SGW - Shut-in Gas Well
Township	SOW - Shut-in Oil Well
	TA - Temp. Abandoned
	TW - Test Well
	WDW - Water Disposal
	WWI - Water Injection Well
	WSW - Water Supply Well



From: Jim Davis
To: Bonner, Ed; Hill, Brad; Mason, Diana
CC: Danielle Piernot; Garrison, LaVonne; kathy.schneebeckdulnoan@anadarko.com
Date: 5/13/2010 9:27 AM
Subject: Kerr McGee APD approvals.

The following APDs have been approved by SITLA including arch and paleo clearance- with one stipulation. In keeping with recommendations made in the paleo survey reports, SITLA is requiring that a permitted paleontologist monitor all phases of construction of these well pads, their attendant roads and pipelines.

Application For Permit to Drill NBU 922-31F1BS (4304751092)
Application For Permit to Drill NBU 922-31D4CS (4304751091)
Application For Permit to Drill NBU 922-31D4BS (4304751090)
Application For Permit to Drill NBU 922-31D1BS (4304751089)
Application For Permit to Drill NBU 922-31C4CS (4304751088)
Application For Permit to Drill NBU 922-31C3AS (4304751087)
Application For Permit to Drill NBU 922-31C1AS (4304751086)
Application For Permit to Drill NBU 922-32G2AS (4304751072)
Application For Permit to Drill NBU 922-32B4AS (4304751071)
Application For Permit to Drill NBU 922-32B3DS (4304751070)
Application For Permit to Drill NBU 922-32B1CS (4304751069)

Thanks.
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

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)

May 13, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 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 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

43-047-51086	NBU 922-31C1AS	Sec 31 T09S R22E 1558 FNL 1291 FWL BHL Sec 31 T09S R22E 0044 FNL 1927 FWL
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43-047-51087	NBU 922-31C3AS	Sec 31 T09S R22E 1554 FNL 1282 FWL BHL Sec 31 T09S R22E 0784 FNL 1551 FWL
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43-047-51088	NBU 922-31C4CS	Sec 31 T09S R22E 1563 FNL 1300 FWL BHL Sec 31 T09S R22E 1181 FNL 1701 FWL
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43-047-51089	NBU 922-31D1BS	Sec 31 T09S R22E 1550 FNL 1273 FWL BHL Sec 31 T09S R22E 0320 FNL 0527 FWL
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43-047-51090	NBU 922-31D4BS	Sec 31 T09S R22E 1545 FNL 1264 FWL BHL Sec 31 T09S R22E 0740 FNL 0497 FWL
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43-047-51091	NBU 922-31D4CS	Sec 31 T09S R22E 1541 FNL 1255 FWL BHL Sec 31 T09S R22E 1160 FNL 0580 FWL
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43-047-51092	NBU 922-31F1BS	Sec 31 T09S R22E 1567 FNL 1309 FWL BHL Sec 31 T09S R22E 1540 FNL 1728 FWL
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API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51093	NBU 922-31A3CS	Sec 31 T09S R22E 1624 FNL 1423 FEL BHL Sec 31 T09S R22E 1121 FNL 1079 FEL
43-047-51094	NBU 922-31B2DS	Sec 31 T09S R22E 1619 FNL 1432 FEL BHL Sec 31 T09S R22E 0567 FNL 2027 FEL
43-047-51095	NBU 922-31G2AS	Sec 31 T09S R22E 1614 FNL 1440 FEL BHL Sec 31 T09S R22E 1314 FNL 2167 FEL
43-047-51096	NBU 922-31H2BS	Sec 31 T09S R22E 1629 FNL 1414 FEL BHL Sec 31 T09S R22E 1544 FNL 1010 FEL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:5-13-10

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-31F1BS 4304751092		
String	Surf	Prod	
Casing Size(")	8.625	4.500	
Setting Depth (TVD)	2442	10280	
Previous Shoe Setting Depth (TVD)	40	2442	
Max Mud Weight (ppg)	8.3	12.5	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3390	10690	
Operators Max Anticipated Pressure (psi)	6579	12.3	

Calculations	Surf String	8.625	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1054	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	761	NO air drill
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	517	NO OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	526	NO Reasonable depth in area
Required Casing/BOPE Test Pressure=		2373	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

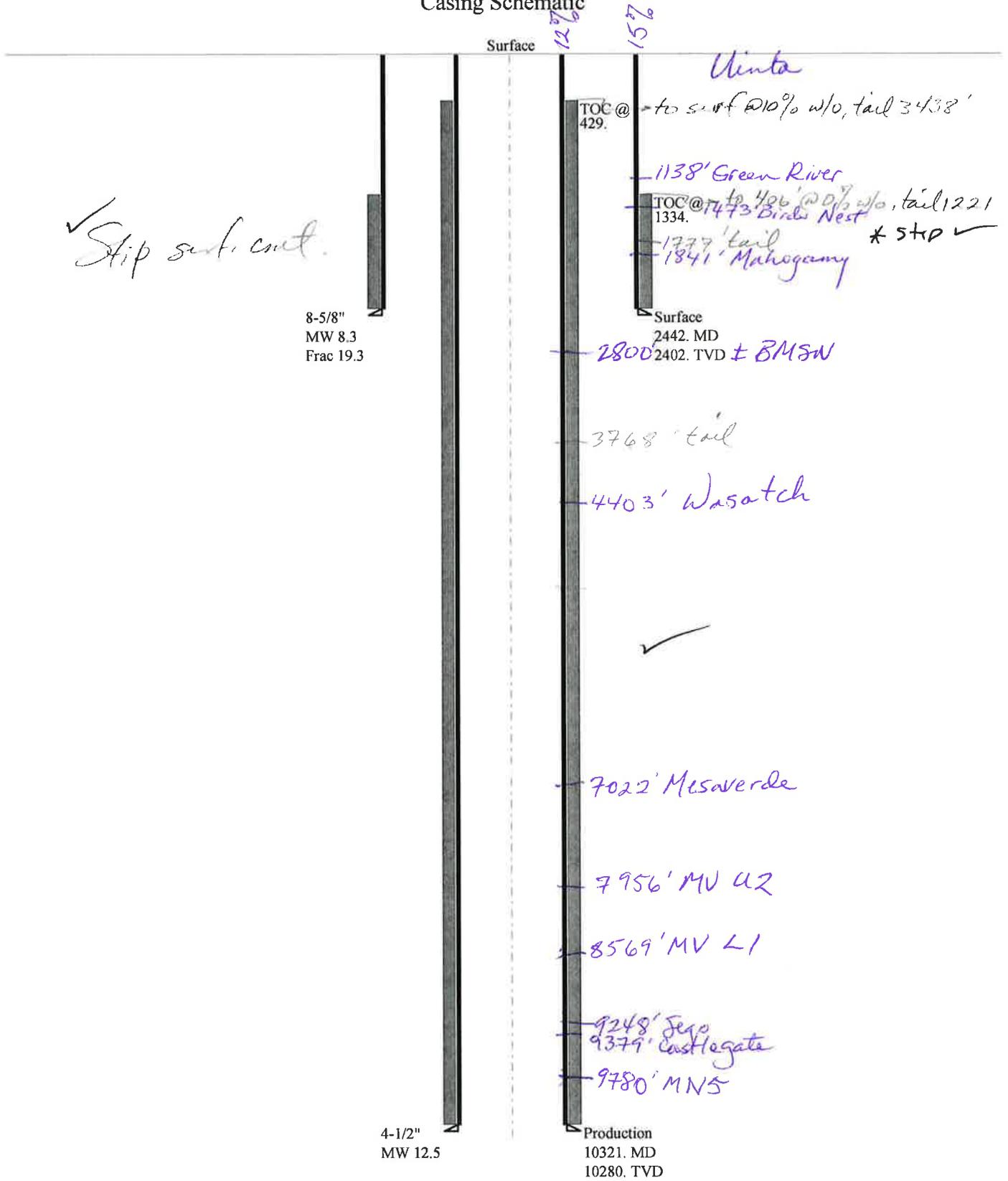
Calculations	Prod String	4.500	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	6682	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	5448	NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	4420	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4958	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2442	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$		NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$		NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43047510920000 NBU 922-31F1BS

Casing Schematic



Well name:	43047510920000 NBU 922-31F1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51092
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 8.330 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 108 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,334 ft

Burst

Max anticipated surface pressure: 2,149 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,437 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,143 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 397 ft
Maximum dogleg: 3 °/100ft
Inclination at shoe: 6.8 °

Re subsequent strings:

Next setting depth: 10,280 ft
Next mud weight: 12.500 ppg
Next setting BHP: 6,675 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,442 ft
Injection pressure: 2,442 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2442	8.625	28.00	I-55	LT&C	2402	2442	7.892	96703
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1039	1848	1.777	2437	3390	1.39	67.3	348	5.17 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: May 17, 2010
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2402 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	43047510920000 NBU 922-31F1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51092
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 12.500 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 218 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 429 ft

Burst

Max anticipated surface pressure: 4,414 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 6,675 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.60 (B)

Tension is based on air weight.
 Neutral point: 8,400 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 420 ft
 Maximum dogleg: 3 °/100ft
 Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	10321	4.5	11.60	HCP-110	LT&C	10280	10321	3.875	49727
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	6675	8650	1.296	6675	10690	1.60	119.3	279	2.34 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: May 17, 2010
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10280 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.						
Well Name	NBU 922-31F1BS						
API Number	43047510920000	APD No	2644	Field/Unit	NATURAL BUTTES		
Location: 1/4,1/4	SENW	Sec	31	Tw	9.0S	Rng	22.0E 1567 FNL 1309 FWL
GPS Coord (UTM)	629299	4428145	Surface Owner				

Participants

Floyd Bartlett (DOGM), Clay Einerson, Grizz Oleen, Charles Chase, Roger Perry and Shelia Wopsock (Kerr McGee), Alex Hansen and Ben Williams (UDWR) and Mitch Batty and John Slaugh, (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in the bottom of the Sand Wash drainage of Uintah, County, approximately 31 air miles and 54 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 230 feet of road will be constructed as a re-route to reach the pad. Topography of the general area is characterized wide drainage bottoms and open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the area. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. Also, no springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 155 gas well will be significantly enlarged to add seven wells that will be directionally drilled. They are the NBU 922-31C4CS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31D1BS, NBU 922-31D4BS, NBU 922-31D4CS and NBU 922-31F1BS. Kerr McGee representatives at the pre-site did not know the future of the existing well. The site is in the bottom of the Sand Wash extending away from the broken terrain on the southwest side toward the defined ephemeral drainage that is about 40 feet beyond the disturbance of the pad. The reserve pit will be on the northwest corner of the location. Dimensions are 100' x 240' x 12' deep. A significant portion of the outer edge will be within fill. Between pit corners B and C which are in cut, the edge has been angled to reduce the distance into the bottom toward the defined drainage. The area between pit corners C and D is in up to 6.9 feet of fill. The pit spoils and excess cut from the pad is piled along the outer edge in this area. Here the spoils need to continue on around the edge of the pit corner D and location corners 6 and 7 to add protection to the outer edge of the pit. The pit will be lined with a 30-mil liner and padded with 2 layers of felt. Two feet of freeboard is planned with a 15-foot outer bench. With these precautions, the pit itself should be stable. Along the west side of the location a draw will be filled. The drainage in this area will be re-routed around the pad returning it to the existing drainage where it is well defined. To obtain the necessary fill and lengthen the pad, broken terrain to the south and west will be cut. Also surface of the existing pad will be lowered about 1.9 feet. The White River is approximately 2 mile down drainage. No stability concerns were noted with the existing pad. The selected site appears to be an acceptable site for constructing a pad, drilling and operating the additional wells.

The surface is owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited by phone and email to the pre-site evaluation. Mr. Bonner attended and had no concerns regarding the proposal except as discussed above. Mr. Charles Chase of the Kerr McGee will provide a site restoration plan to SITLA for their concurrence. Three wells will be drilled to minerals owned by the United States and managed by the BLM. They are the NBU 922-31C4CS, NBU 922-31C1AS, NBU 922-31C3AS.

Surface Use Plan

Current Surface Use

Grazing
 Recreational
 Wildlife Habitat
 Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.05	Width 230 Length 485	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation is a bottom lands salt desert shrub type. Principal species present are black sagebrush, greasewood, cheatgrass, prickly pear, wild onion, halogeton, pepper grass and annuals.

Cattle, antelope and small mammals and birds.

Soil Type and Characteristics

Surface soils are a shallow to moderately deep sandy rocky loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? Y

Along the west side of the location a draw will be filled. The drainage in this area will be re-routed around the pad returning it to the existing drainage where it is well defined.

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?**

Reserve Pit

Site-Specific Factors	Site Ranking	
Distance to Groundwater (feet)	25 to 75	15
Distance to Surface Water (feet)	300 to 1000	2
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0

Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	52	1 Sensitivity Level

Characteristics / Requirements

The reserve pit will be on the northwest corner of the location. Dimensions are 100' x 240' x 12' deep. A significant portion of the outer edge will be within fill. Between pit corners B and C which are in cut, the edge has been angled to reduce the distance into the bottom toward the defined drainage. The area between pit corners C and D is in up to 6.9 feet of fill. The pit spoils and excess cut from the pad is piled along the outer edge in this area. Here the spoils need to continue on around the edge of the pit corner D and location corners 6 and 7 to add protection to the outer edge of the pit. The pit will be lined with a 30-mil liner and padded with 2 layers of felt. Two feet of freeboard is planned with a 15-foot outer bench. With these precautions, the pit itself should be stable

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

Other Observations / Comments

Floyd Bartlett
Evaluator

3/16/2010
Date / Time

Application for Permit to Drill Statement of Basis

5/26/2010

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
2644	43047510920000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31F1BS	Unit		NATURAL BUTTES	
Field	NATURAL BUTTES	Type of Work		DRILL	
Location	SEW 31 9S 22E S 1567 FNL 1309 FWL GPS Coord (UTM) 629320E 4428154N				

Geologic Statement of Basis

Kerr McGee proposes to set 1,980' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,800'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 31. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought to above the base of the moderately saline groundwater in order to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

5/11/2010
Date / Time

Surface Statement of Basis

The general area is the Natural Buttes Unit in the bottom of the Sand Wash drainage of Uintah, County, approximately 31 air miles and 54 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 230 feet of road will be constructed as a re-route to reach the pad. Topography of the general area is characterized wide drainage bottoms and open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the area. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. Also, no springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 155 gas well will be significantly enlarged to add seven wells that will be directionally drilled. They are the NBU 922-31C4CS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31D1BS, NBU 922-31D4BS, NBU 922-31D4CS and NBU 922-31F1BS. Kerr McGee representatives at the pre-site did not know the future of the existing well. The site is in the bottom of the Sand Wash extending away from the broken terrain on the southwest side toward the defined ephemeral drainage that is about 40 feet beyond the disturbance of the pad. The reserve pit will be on the northwest corner of the location. Dimensions are 100' x 240' x 12' deep. A significant portion of the outer edge will be within fill. Between pit corners B and C which are in cut, the edge has been angled to reduce the distance into the bottom toward the defined drainage. The area between pit corners C and D is in up to 6.9 feet of fill. The pit spoils and excess cut from the pad is piled along the outer edge in this area. Here the spoils need to continue on around the edge of the pit corner D and location corners 6 and 7 to add protection to the outer edge of the pit. The pit will be lined with a 30-mil liner and padded with 2 layers of felt. Two feet of freeboard is planned with a 15-foot outer bench. With these precautions, the pit itself should be stable. Along the west side of the location a draw will be filled. The drainage in this area will be re-routed around the pad returning it to the existing drainage where it is well defined. To obtain the necessary fill and lengthen the pad, broken terrain to the south and west will be cut. Also surface of the existing pad will be lowered about 1.9 feet. The White River is approximately 2 mile down drainage. No stability concerns were noted with the existing pad. The selected site appears to be an acceptable site for constructing a pad, drilling and operating the additional wells.

Application for Permit to Drill Statement of Basis

5/26/2010

Utah Division of Oil, Gas and Mining

Page 2

The surface is owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited by phone and email to the pre-site evaluation. Mr. Bonner attended and had no concerns regarding the proposal except as discussed above. Mr. Charles Chase of the Kerr McGee will provide a site restoration plan to SITLA for their concurrence. Three wells will be drilled to minerals owned by the United States and managed by the BLM. They are the NBU 922-31C4CS, NBU 922-31C1AS, NBU 922-31C3AS.

Alex Hansen of the Utah Division of Wildlife Resources also attended. He stated that the area was yearlong antelope habitat but recommended no stipulations. No other wildlife is expected to be significantly affected.

Floyd Bartlett
Onsite Evaluator

3/16/2010
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 5/5/2010

API NO. ASSIGNED: 43047510920000

WELL NAME: NBU 922-31F1BS

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

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SENW 31 090S 220E

Permit Tech Review:

SURFACE: 1567 FNL 1309 FWL

Engineering Review:

BOTTOM: 1540 FNL 1728 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99557

LONGITUDE: -109.48517

UTM SURF EASTINGS: 629320.00

NORTHINGS: 4428154.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 23607

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

LOCATION AND SITING:

PLAT

R649-2-3.

Bond: STATE/FEE - 22013542

Unit: NATURAL BUTTES

Potash

R649-3-2. General

Oil Shale 190-5

R649-3-3. Exception

Oil Shale 190-3

Drilling Unit

Oil Shale 190-13

Water Permit: Permit #43-8496

Board Cause No: Cause 173-14

RDCC Review:

Effective Date: 12/2/1999

Fee Surface Agreement

Siting: 460' Fr U Bdry & Uncommitted Tracts

Intent to Commingle

R649-3-11. Directional Drill

Commingling Approved

Comments: Presite Completed

Stipulations: 3 - Commingling - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmadonald



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 922-31F1BS
API Well Number: 43047510920000
Lease Number: ML 23607
Surface Owner: STATE
Approval Date: 6/1/2010

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 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:

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.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

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
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

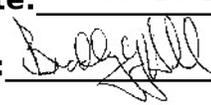
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- 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:



Acting Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
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 922-31F1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510920000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1567 FNL 1309 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 31 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 checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/1/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <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.		
<p>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.</p> <div style="text-align: right;"> <p>Accepted by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>05/16/2011</u></p> <p>By: <u></u></p> </div>		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 5/13/2011	



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 43047510920000

API: 43047510920000

Well Name: NBU 922-31F1BS

Location: 1567 FNL 1309 FWL QTR SENW SEC 31 TWNP 090S RNG 220E MER S

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

Date Original Permit Issued: 6/1/2010

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: Gina Becker

Date: 5/13/2011

Title: Regulatory Analyst II **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: ML 23607
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 922-31F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510920000
5. PHONE NUMBER: 720 929-6511	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: 5/1/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" 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 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 operator is requesting the approval of the following changes to the originally approved APD: 1. Surface Location Change (New Plat is Attached) From = 1567 FNL/ 1309 FWL To = 1004 FNL/ 2230 FEL (Bottom Hole will remaining the same) 2. Proposed Total Depth (New Drilling Program Attached) 4. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) 5. Change to a Directional Well (Directional Drilling Survey Attached) 6. Surface Use Plan of Operation (Updated Plan Attached) 7. Updated Topos & Directions (Attached)

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

Date: May 09, 2012

By: *D. K. Quist*

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 4/17/2012	

Application for Permit to Drill

Statement of Basis

6/5/2012

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
6182	43-047-51092-00-00		GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31F1BS	Unit	NATURAL BUTTES		
Field	NATURAL BUTTES		Type of Work		
Location	NWNE 31 9S 22E S 1004 FNL 2230 FEL GPS Coord (UTM) 629657E 4428536N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,442' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 31. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect ground water in this area.

Brad Hill
APD Evaluator

6/5/2012
Date / Time

Surface Statement of Basis

The general area is in the Natural Buttes Unit of Uintah County, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the general area is characterized by wide drainage bottoms and open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the area. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. Also, no springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 922-31BT gas well will be slightly enlarged to add six wells that will be directionally drilled. They are the NBU 922-30O4BS, NBU 922-31A2BS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31C4CS, and the NBU 922-31F1BS. Kerr McGee representatives at the pre-site did not know the future of the existing well. The White River is approximately 2 miles to the northeast. No stability concerns were noted with the existing pad. The selected site appears to be an acceptable site for constructing a pad, drilling and operating the additional wells.

New construction will amount to 60' or less on all sides of the existing location. Reserve pit will be constructed in the same area as the reserve pit for the original location.

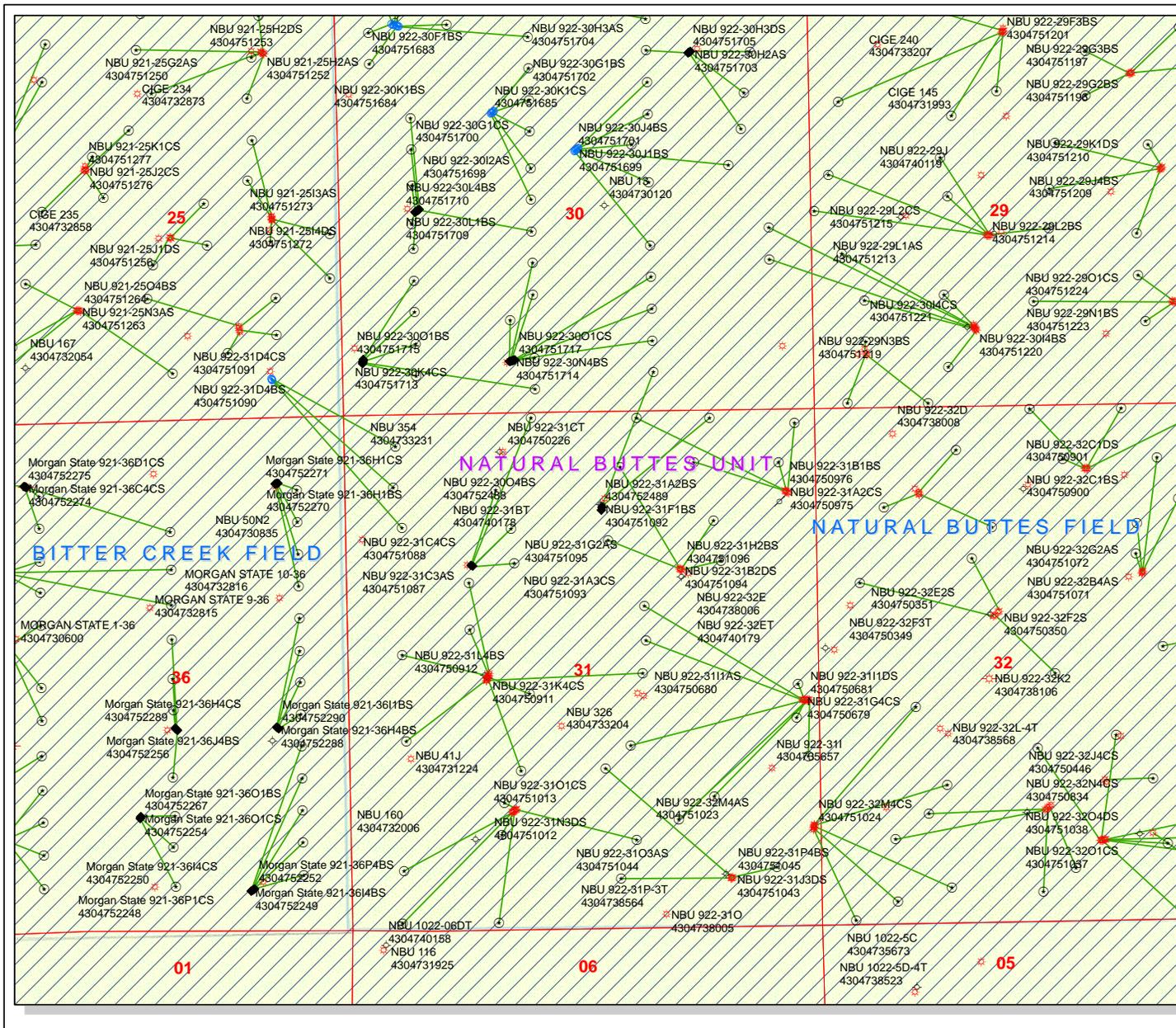
Jim Davis of SITLA and Ben Williams of DWR were invited to the pre-site evaluation. Jim Davis attended and had no concerns regarding the drilling of these wells or the enlargement of the location.

David Hackford
Onsite Evaluator

5/23/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

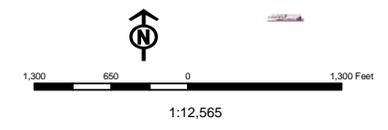
Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the east side of the location.



API Number: 4304751092
Well Name: NBU 922-31F1BS
 Township T0.9 . Range R2.2 . Section 31
 Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

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



**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 922-31B
WELLS – NBU 922-30O4BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
Section 31, 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 right 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 1.5 miles to a service road to the southeast. Exit right and proceed in a southeasterly direction along the service road approximately 75 feet to a second service road to the northeast. Exit left and proceed in a northeasterly direction along the second service road approximately 0.4 miles to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 44.2 miles in a southerly direction.

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-31F1BS**

Surface:	1004 FNL / 2230 FEL	NWNE
BHL:	1540 FNL / 1728 FWL	SENW

Section 31 T9S R22E

Unitah County, Utah
Mineral Lease: ST UT ML-23607

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	1,182'	
Birds Nest	1,519'	Water
Mahogany	2,027'	Water
Wasatch	4,458'	Gas
Mesaverde	7,101'	Gas
Sego	9,264'	Gas
Castlegate	9,328'	Gas
Blackhawk	9,765'	Gas
TVD	10,365'	
TD	10,531'	

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

Please refer to the attached Drilling Program

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

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 10415' TVD, approximately equals
 6,841 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,608 psi (bottom hole pressure
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variations:

Please refer to the attached Drilling Program.
 Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

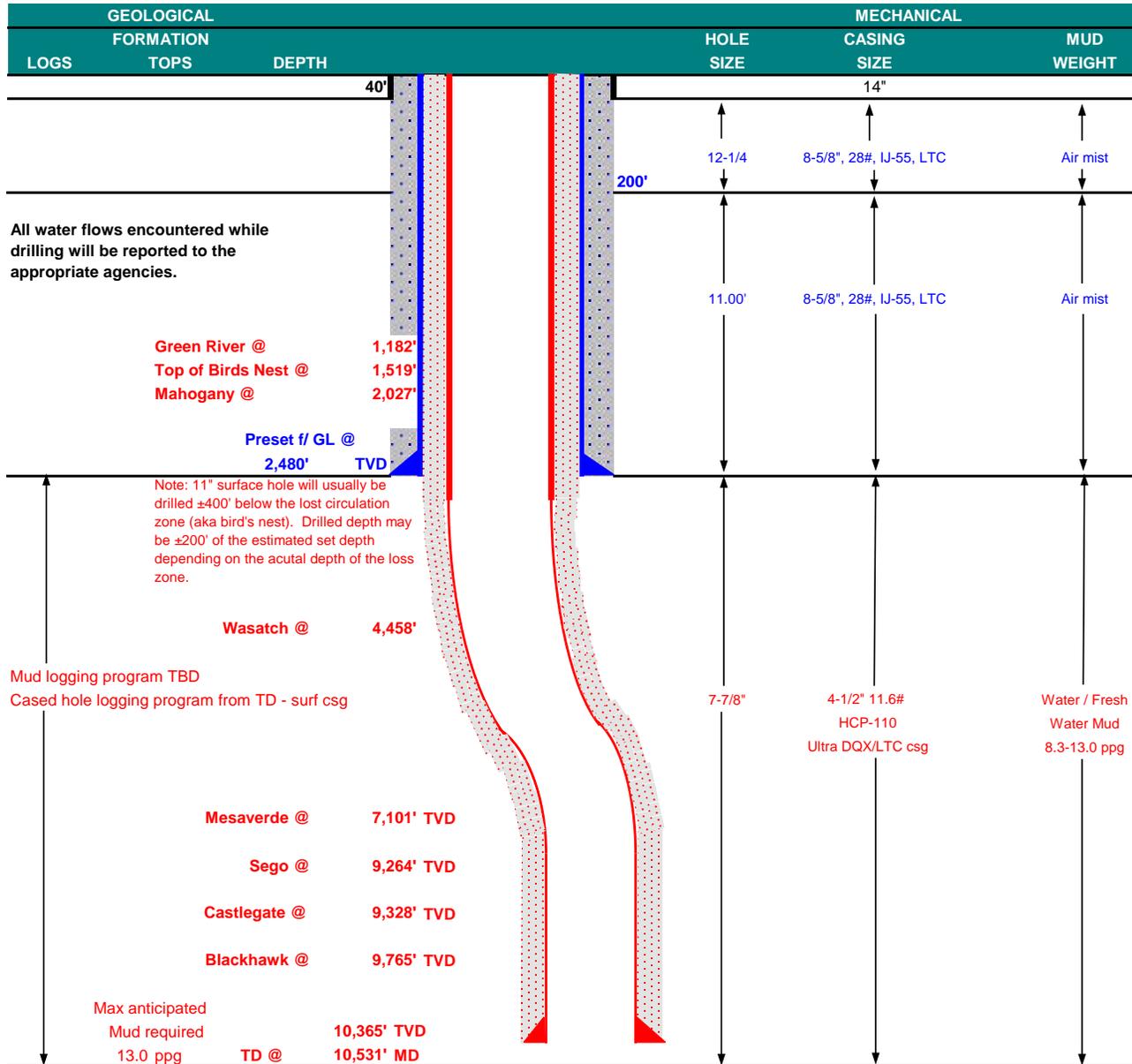
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	April 11, 2012			
WELL NAME	NBU 922-31F1B5		TD	10,365'	TVD	10,531' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,892'
SURFACE LOCATION	NWNE	1004 FNL	2230 FEL	Sec 31	T 9S	R 22E	
	Latitude:	39.997036	Longitude:	-109.480558		NAD 27	
BTM HOLE LOCATION	SENW	1540 FNL	1728 FWL	Sec 31	T 9S	R 22E	
	Latitude:	39.995559	Longitude:	-109.483803		NAD 27	
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), SITLA (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	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,480	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.17	1.62	5.72	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	10,690	8,650	279,000	367,174
						1.19	1.23		3.75
	4-1/2"	5,000 to 10,531'	11.60	HCP-110	LTC	1.19	1.23	5.43	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe
 Fracture at surface shoe with 0.1 psi/ft gas gradient above
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 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 1,980'	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 3,951'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	310	35%	12.00	3.38
	TAIL 6,580'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,550	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.

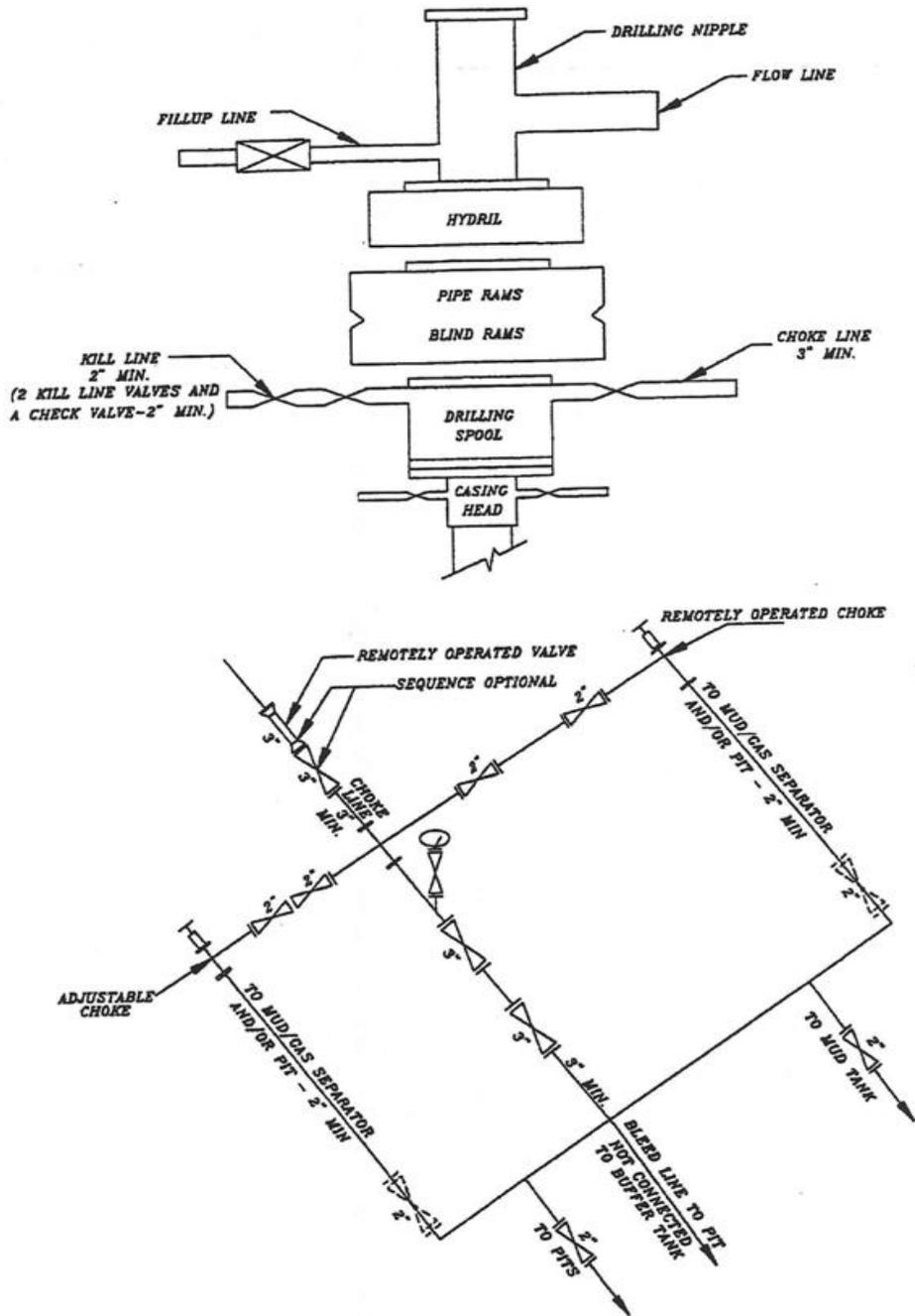
ADDITIONAL INFORMATION

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.

DRILLING ENGINEER: _____
 Nick Spence / Danny Showers / Chad Loesel
DRILLING SUPERINTENDENT: _____
 Kenny Gathings / Lovel Young

DATE: _____
DATE: _____

EXHIBIT A NBU 922-31F1BS



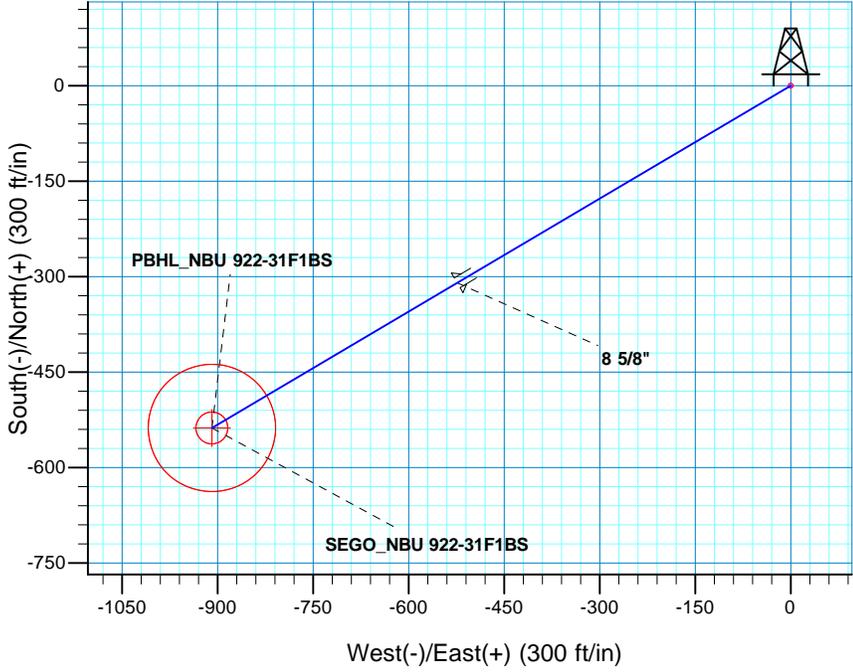
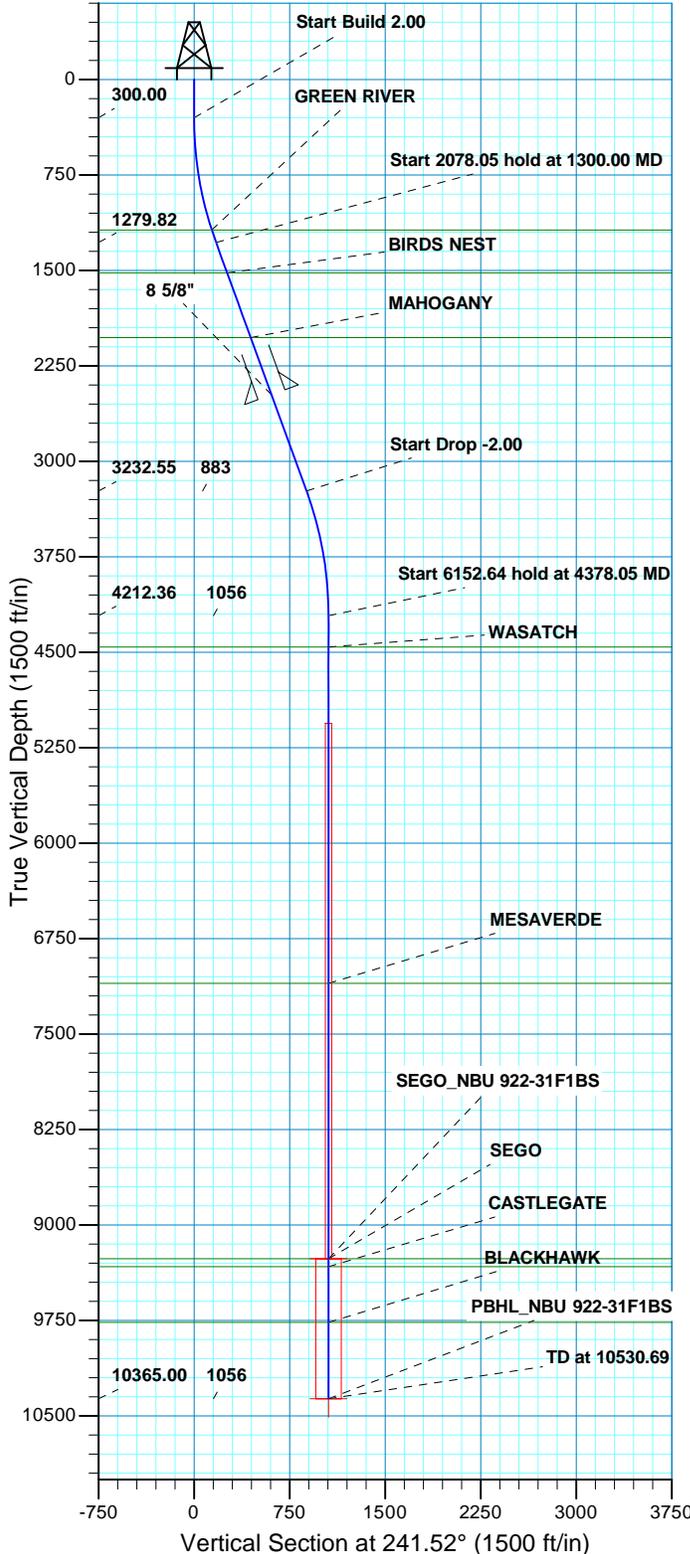
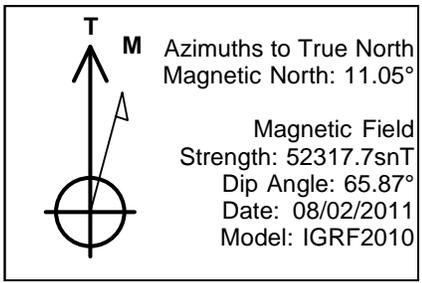
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



Site: NBU 922-31B PAD
Well: NBU 922-31F1BS
Wellbore: OH
Design: PLAN #2



WELL DETAILS: NBU 922-31F1BS								
GL 4892 & KB 4 @ 4896.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14528592.42	2065976.19	39.997036	-109.480558			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	9264.00	-537.92	-909.04	14528039.08	2065076.46	39.995559	-109.483803	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10365.00	-537.92	-909.04	14528039.08	2065076.46	39.995559	-109.483803	Circle (Radius: 100.00)
- 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		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
1300.00	20.00	239.39	1279.82	-87.98	-148.69	2.00	239.39	172.65		
3378.05	20.00	239.39	3232.55	-449.94	-760.35	0.00	0.00	882.89		
4378.05	0.00	0.00	4212.36	-537.92	-909.04	2.00	180.00	1055.54		
10530.69	0.00	0.00	10365.00	-537.92	-909.04	0.00	0.00	1055.54	PBHL_NBU 922-31F1BS	

PROJECT DETAILS: Uintah County, UT UTM12				FORMATION TOP DETAILS			
Geodetic System: Universal Transverse Mercator (US Survey Feet)				TVDPath	MDPath	Formation	
Datum: NAD 1927 - Western US				1182.00	1196.56	GREEN RIVER	
Ellipsoid: Clarke 1866				1519.00	1554.53	BIRDS NEST	
Zone: Zone 12N (114 W to 108 W)				2027.00	2095.14	MAHOGANY	
Location: SECTION 31 T9S R22E				4458.00	4623.69	WASATCH	
System Datum: Mean Sea Level				7101.00	7266.69	MESAVERDE	
				9264.00	9429.69	SEGO	
				9328.00	9493.69	CASTLEGATE	
				9765.00	9930.69	BLACKHAWK	

CASING DETAILS			
TVD	MD	Name	Size
2477.00	2574.02	8 5/8"	8.625



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 922-31B PAD
NBU 922-31F1BS**

OH

Plan: PLAN #2

Standard Planning Report

08 March, 2012





SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Project	Uintah County, UT UTM12		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 922-31B PAD, SECTION 31 T9S R22E				
Site Position:	Northing:	14,528,641.40 usft	Latitude:	39.997170	
From:	Lat/Long	Easting:	2,065,986.00 usft	Longitude:	-109.480520
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.98 °

Well	NBU 922-31F1BS, 1004 FNL 2230 FWL					
Well Position	+N/-S	-48.80 ft	Northing:	14,528,592.43 usft	Latitude:	39.997036
	+E/-W	-10.64 ft	Easting:	2,065,976.19 usft	Longitude:	-109.480558
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,892.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/02/11	11.05	65.87	52,318

Design	PLAN #2			
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	241.52

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	239.39	1,279.82	-87.98	-148.69	2.00	2.00	0.00	239.39	
3,378.05	20.00	239.39	3,232.55	-449.94	-760.35	0.00	0.00	0.00	0.00	
4,378.05	0.00	0.00	4,212.36	-537.92	-909.04	2.00	-2.00	0.00	180.00	
10,530.69	0.00	0.00	10,365.00	-537.92	-909.04	0.00	0.00	0.00	0.00	PBHL_NBU 922-31F1



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
400.00	2.00	239.39	399.98	-0.89	-1.50	1.74	2.00	2.00	0.00	
500.00	4.00	239.39	499.84	-3.55	-6.01	6.97	2.00	2.00	0.00	
600.00	6.00	239.39	599.45	-7.99	-13.51	15.68	2.00	2.00	0.00	
700.00	8.00	239.39	698.70	-14.20	-23.99	27.86	2.00	2.00	0.00	
800.00	10.00	239.39	797.47	-22.16	-37.46	43.49	2.00	2.00	0.00	
900.00	12.00	239.39	895.62	-31.88	-53.88	62.56	2.00	2.00	0.00	
1,000.00	14.00	239.39	993.06	-43.34	-73.23	85.04	2.00	2.00	0.00	
1,100.00	16.00	239.39	1,089.64	-56.52	-95.51	110.90	2.00	2.00	0.00	
1,196.56	17.93	239.39	1,182.00	-70.87	-119.76	139.06	2.00	2.00	0.00	
GREEN RIVER										
1,200.00	18.00	239.39	1,185.27	-71.41	-120.67	140.12	2.00	2.00	0.00	
1,300.00	20.00	239.39	1,279.82	-87.98	-148.69	172.65	2.00	2.00	0.00	
Start 2078.05 hold at 1300.00 MD										
1,400.00	20.00	239.39	1,373.78	-105.40	-178.12	206.83	0.00	0.00	0.00	
1,500.00	20.00	239.39	1,467.75	-122.82	-207.56	241.00	0.00	0.00	0.00	
1,554.53	20.00	239.39	1,519.00	-132.32	-223.61	259.64	0.00	0.00	0.00	
BIRDS NEST										
1,600.00	20.00	239.39	1,561.72	-140.24	-236.99	275.18	0.00	0.00	0.00	
1,700.00	20.00	239.39	1,655.69	-157.66	-266.42	309.36	0.00	0.00	0.00	
1,800.00	20.00	239.39	1,749.66	-175.07	-295.86	343.54	0.00	0.00	0.00	
1,900.00	20.00	239.39	1,843.63	-192.49	-325.29	377.72	0.00	0.00	0.00	
2,000.00	20.00	239.39	1,937.60	-209.91	-354.73	411.90	0.00	0.00	0.00	
2,095.14	20.00	239.39	2,027.00	-226.48	-382.73	444.41	0.00	0.00	0.00	
MAHOGANY										
2,100.00	20.00	239.39	2,031.57	-227.33	-384.16	446.07	0.00	0.00	0.00	
2,200.00	20.00	239.39	2,125.54	-244.74	-413.60	480.25	0.00	0.00	0.00	
2,300.00	20.00	239.39	2,219.51	-262.16	-443.03	514.43	0.00	0.00	0.00	
2,400.00	20.00	239.39	2,313.48	-279.58	-472.47	548.61	0.00	0.00	0.00	
2,500.00	20.00	239.39	2,407.45	-297.00	-501.90	582.79	0.00	0.00	0.00	
2,574.02	20.00	239.39	2,477.00	-309.89	-523.69	608.09	0.00	0.00	0.00	
8 5/8"										
2,600.00	20.00	239.39	2,501.42	-314.42	-531.34	616.97	0.00	0.00	0.00	
2,700.00	20.00	239.39	2,595.39	-331.83	-560.77	651.14	0.00	0.00	0.00	
2,800.00	20.00	239.39	2,689.35	-349.25	-590.21	685.32	0.00	0.00	0.00	
2,900.00	20.00	239.39	2,783.32	-366.67	-619.64	719.50	0.00	0.00	0.00	
3,000.00	20.00	239.39	2,877.29	-384.09	-649.07	753.68	0.00	0.00	0.00	
3,100.00	20.00	239.39	2,971.26	-401.51	-678.51	787.86	0.00	0.00	0.00	
3,200.00	20.00	239.39	3,065.23	-418.92	-707.94	822.04	0.00	0.00	0.00	
3,300.00	20.00	239.39	3,159.20	-436.34	-737.38	856.21	0.00	0.00	0.00	
3,378.05	20.00	239.39	3,232.55	-449.94	-760.35	882.89	0.00	0.00	0.00	
Start Drop -2.00										
3,400.00	19.56	239.39	3,253.20	-453.72	-766.75	890.31	2.00	-2.00	0.00	
3,500.00	17.56	239.39	3,347.99	-469.93	-794.14	922.12	2.00	-2.00	0.00	
3,600.00	15.56	239.39	3,443.84	-484.44	-818.67	950.60	2.00	-2.00	0.00	
3,700.00	13.56	239.39	3,540.62	-497.25	-840.30	975.73	2.00	-2.00	0.00	
3,800.00	11.56	239.39	3,638.22	-508.32	-859.02	997.46	2.00	-2.00	0.00	
3,900.00	9.56	239.39	3,736.52	-517.65	-874.79	1,015.77	2.00	-2.00	0.00	
4,000.00	7.56	239.39	3,835.41	-525.24	-887.60	1,030.65	2.00	-2.00	0.00	



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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)	
4,100.00	5.56	239.39	3,934.75	-531.05	-897.43	1,042.06	2.00	-2.00	0.00	
4,200.00	3.56	239.39	4,034.42	-535.10	-904.28	1,050.01	2.00	-2.00	0.00	
4,300.00	1.56	239.39	4,134.32	-537.38	-908.12	1,054.48	2.00	-2.00	0.00	
4,378.05	0.00	0.00	4,212.36	-537.92	-909.04	1,055.54	2.00	-2.00	0.00	
Start 6152.64 hold at 4378.05 MD										
4,400.00	0.00	0.00	4,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
4,623.69	0.00	0.00	4,458.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
WASATCH										
4,700.00	0.00	0.00	4,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,266.69	0.00	0.00	7,101.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
MESAVERDE										
7,300.00	0.00	0.00	7,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00	



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
8,900.00	0.00	0.00	8,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,000.00	0.00	0.00	8,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,100.00	0.00	0.00	8,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,200.00	0.00	0.00	9,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,300.00	0.00	0.00	9,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,400.00	0.00	0.00	9,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,429.69	0.00	0.00	9,264.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00
SEGO - SEGO_NBU 922-31F1BS									
9,493.69	0.00	0.00	9,328.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00
CASTLEGATE									
9,500.00	0.00	0.00	9,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,600.00	0.00	0.00	9,434.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,700.00	0.00	0.00	9,534.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,800.00	0.00	0.00	9,634.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,900.00	0.00	0.00	9,734.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
9,930.69	0.00	0.00	9,765.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00
BLACKHAWK									
10,000.00	0.00	0.00	9,834.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,100.00	0.00	0.00	9,934.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,200.00	0.00	0.00	10,034.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,300.00	0.00	0.00	10,134.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,400.00	0.00	0.00	10,234.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,500.00	0.00	0.00	10,334.31	-537.92	-909.04	1,055.54	0.00	0.00	0.00
10,530.69	0.00	0.00	10,365.00	-537.92	-909.04	1,055.54	0.00	0.00	0.00
PBHL_NBU 922-31F1BS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 922-31F1B - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,264.00	-537.92	-909.04	14,528,039.09	2,065,076.45	39.995559	-109.483803
PBHL_NBU 922-31F1B - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,365.00	-537.92	-909.04	14,528,039.09	2,065,076.45	39.995559	-109.483803

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,574.02	2,477.00	8 5/8"	8.625	11.000	



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31F1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,196.56	1,182.00	GREEN RIVER				
1,554.53	1,519.00	BIRDS NEST				
2,095.14	2,027.00	MAHOGANY				
4,623.69	4,458.00	WASATCH				
7,266.69	7,101.00	MESAVERDE				
9,429.69	9,264.00	SEGO				
9,493.69	9,328.00	CASTLEGATE				
9,930.69	9,765.00	BLACKHAWK				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,300.00	1,279.82	-87.98	-148.69	Start 2078.05 hold at 1300.00 MD	
3,378.05	3,232.55	-449.94	-760.35	Start Drop -2.00	
4,378.05	4,212.36	-537.92	-909.04	Start 6152.64 hold at 4378.05 MD	
10,530.69	10,365.00	-537.92	-909.04	TD at 10530.69	

NBU 922-3004BS/ NBU 922-31A2BS/ NBU 922-31C1AS/
 NBU 922-31C3AS/ NBU 922-31C4CS/ NBU 922-31F1BS

Surface Use Plan of Operations
 1 of 13

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

NBU 922-31B PAD

<u>API #</u>	<u>NBU 922-3004BS</u>		
Mineral Lease #UTU-463	Surface: 956 FNL / 2220 FEL	NWNE	Lot
	BHL: 406 FSL / 1670 FEL	SWSE	Lot
<u>API #</u>	<u>NBU 922-31A2BS</u>		
Mineral Lease #ST UT UO 01530 ST	Surface: 965 FNL / 2222 FEL	NWNE	Lot
	BHL: 76 FNL / 1100 FEL	NENE	Lot
<u>API #4304751086</u>	<u>NBU 922-31C1AS</u>		
Mineral Lease #UTU-464	Surface: 975 FNL / 2224 FEL	NWNE	Lot
	BHL: 44 FNL / 1927 FWL	NENW	Lot
<u>API #4304751087</u>	<u>NBU 922-31C3AS</u>		
Mineral Lease #UTU-464	Surface: 985 FNL / 2226 FEL	NWNE	Lot
	BHL: 784 FNL / 1551 FWL	NENW	Lot
<u>API #4304751088</u>	<u>NBU 922-31C4CS</u>		
Mineral Lease #UTU-464	Surface: 995 FNL / 2228 FEL	NWNE	Lot
	BHL: 1181 FNL / 1701 FWL	NENW	Lot
<u>API #4304751092</u>	<u>NBU 922-31F1BS</u>		
Mineral Lease #ST UT ML-23607	Surface: 1004 FNL / 2230 FEL	NWNE	Lot
	BHL: 1540 FNL / 1728 FWL	SENE	Lot

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.

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

4/11/2012

RECEIVED: Apr. 17, 2012

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

No new access road is proposed. Please see Topo B

C. Location of Existing Wells:

4/11/2012

RECEIVED: Apr. 17, 2012

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 922-31BT, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on April 11, 2012. The CIGE 148 has been plugged and abandoned since December 23, 2008. 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).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is $\pm 465'$ and the individual segments are broken up as follows:

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

- $\pm 375'$ (0.1 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 90'$ (0.01 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the edge of the pad to the tie-in at the existing 10" surface gas gathering pipeline. Please refer to Topo D2.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 2,380'$ and the individual segments are broken up as follows:

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

- $\pm 340'$ (0.1 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA 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.
- $\pm 2,040'$ (0.4 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface and UTU-464, BLM surface, New 6" buried liquid gathering pipeline from the south edge of the pad and traveling southwest to tie-in to the existing buried liquid gathering line at SE/4 NW/4 of Section 31.

Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie

4/11/2012

RECEIVED: Apr. 17, 2012

on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

4/11/2012

RECEIVED: Apr. 17, 2012

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

E. Location and Types of Water Supply:

4/11/2012

RECEIVED: Apr. 17, 2012

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

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

No water well is to be drilled on this lease.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for

ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

4/11/2012

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches

where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Shadescale Mix	Pure Live Seed lbs/acre
Indian Ricegrass (Nezpar)	3
Sandberg bluegrass	0.75
Bottlebrush squirreltail	1
Great Basin Wildrye	0.5
Crested wheatgrass	1.5
Winterfat	0.25
Shadescale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

Weed Control

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

4/11/2012

Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

K. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102
(801) 538-5100

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**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

Resource Reports:

A Class I literature survey was completed on December 14, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-403

A paleontological reconnaissance survey was completed on November 11, 2011 by Intermountain Paleo-Consulting. For additional details please refer to report IPC 11-210.

Biological field survey was completed on November 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-646.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year)¹			
Pollutant	Development	Production	Total
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO ₂	0.005	0.0043	0.0093
PM ₁₀	1.7	0.11	1.81
PM _{2.5}	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

¹ Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory^a (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	23.52	16,547	0.14%
VOC	30	127,495	0.02%

^a http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

NBU 922-3004BS/ NBU 922-31A2BS/ NBU 922-31C1AS/
NBU 922-31C3AS/ NBU 922-31C4CS/ NBU 922-31F1BS

Surface Use Plan of Operations
13 of 13

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

Gina T. Becker
Regulatory Analyst II
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.



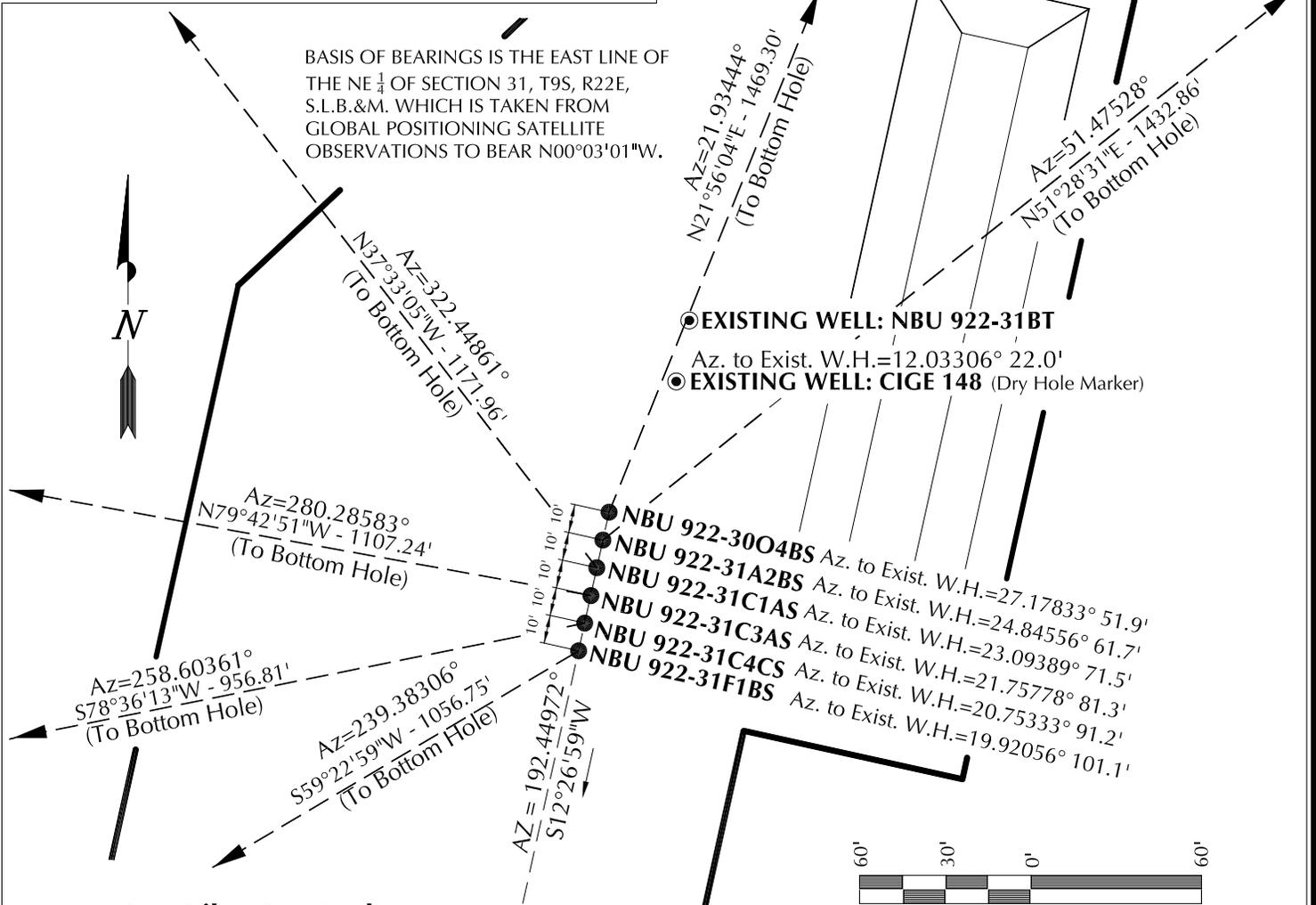
Gina T. Becker

April 11, 2012
Date

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-3004BS	39°59'49.688"	109°28'52.339"	39°59'49.814"	109°28'49.871"	956' FNL 2220' FEL	40°00'03.154"	109°28'45.292"	40°00'03.280"	109°28'42.824"	406' FSL 1670' FEL
NBU 922-31A2BS	39°59'49.591"	109°28'52.368"	39°59'49.716"	109°28'49.900"	965' FNL 2222' FEL	39°59'58.410"	109°28'37.969"	39°59'58.536"	109°28'35.502"	76' FNL 1100' FEL
NBU 922-31C1AS	39°59'49.494"	109°28'52.395"	39°59'49.620"	109°28'49.927"	975' FNL 2224' FEL	39°59'58.672"	109°29'01.573"	39°59'58.798"	109°28'59.105"	44' FNL 1927' FWL
NBU 922-31C3AS	39°59'49.398"	109°28'52.422"	39°59'49.523"	109°28'49.954"	985' FNL 2226' FEL	39°59'51.348"	109°29'06.417"	39°59'51.474"	109°29'03.949"	784' FNL 1551' FWL
NBU 922-31C4CS	39°59'49.301"	109°28'52.450"	39°59'49.427"	109°28'49.982"	995' FNL 2228' FEL	39°59'47.431"	109°29'04.498"	39°59'47.557"	109°29'02.030"	1181' FNL 1701' FWL
NBU 922-31F1BS	39°59'49.204"	109°28'52.477"	39°59'49.330"	109°28'50.009"	1004' FNL 2230' FEL	39°59'43.885"	109°29'04.158"	39°59'44.011"	109°29'01.690"	1540' FNL 1728' FWL
CIGE 148	39°59'50.143"	109°28'52.035"	39°59'50.269"	109°28'49.567"	909' FNL 2196' FEL	39°59'50.143"	109°28'52.035"	39°59'50.269"	109°28'49.567"	
NBU 922-31BT	39°59'50.356"	109°28'51.976"	39°59'50.482"	109°28'49.508"	888' FNL 2191' FEL	39°59'50.356"	109°28'51.976"	39°59'50.482"	109°28'49.508"	

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 922-3004BS	1362.9'	548.8'	NBU 922-31A2BS	892.5'	1121.0'	NBU 922-31C1AS	929.1'	-714.3'	NBU 922-31C3AS	197.7'	-1089.4'
NBU 922-31C4CS	-189.1'	-937.9'	NBU 922-31F1BS	-538.2'	-909.4'						



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

WELL PAD - NBU 922-31B

WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

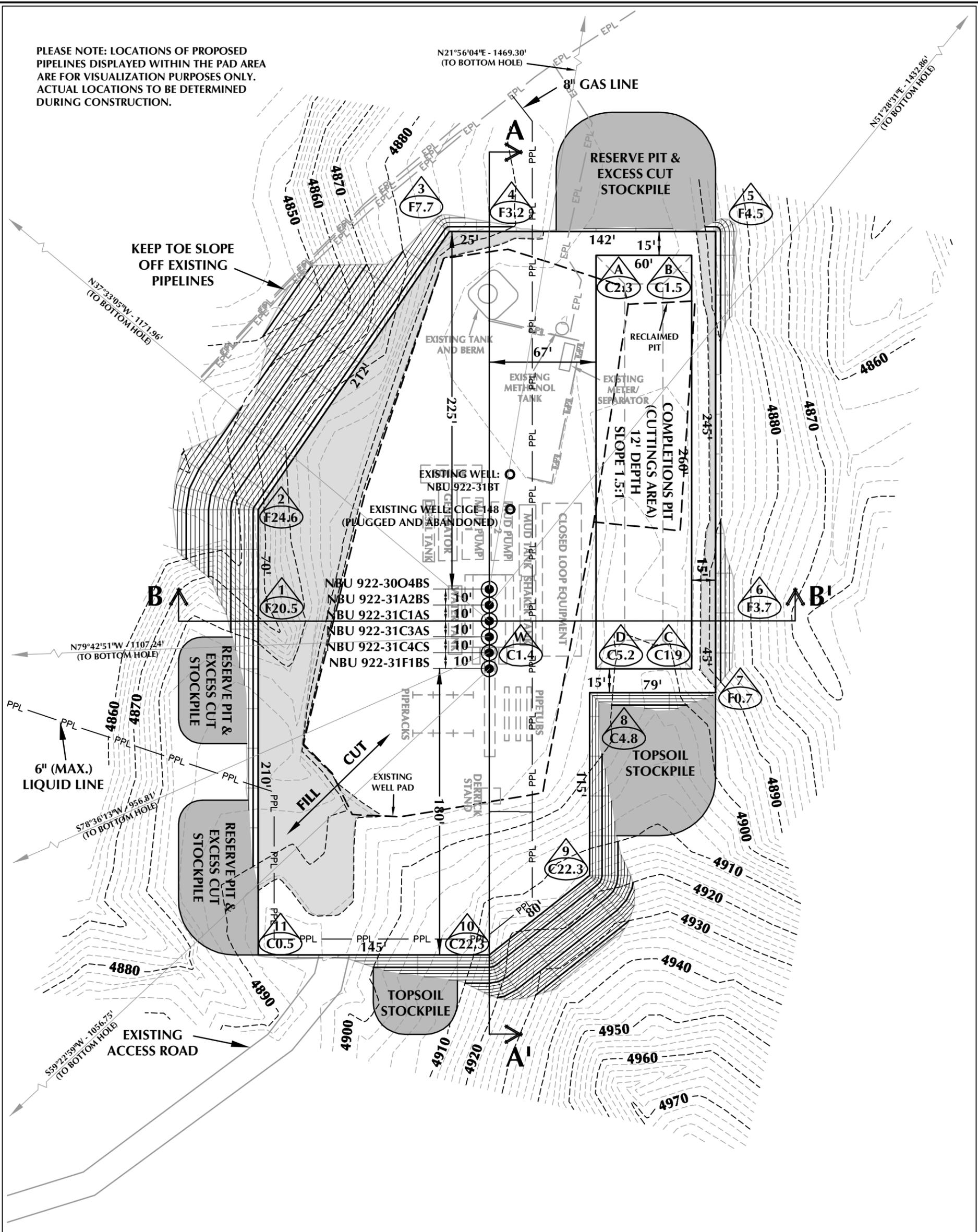


CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 10-25-11	SURVEYED BY: M.S.B.	SHEET NO: 7
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	7 OF 18
SCALE: 1" = 60'	Date Last Revised 11-04-11 T.J.R.	

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 922-31B (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4893.6'
 FINISHED GRADE ELEVATION = 4892.2'
 CUT SLOPES = 1:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 2.98 ACRES
 TOTAL DISTURBANCE AREA = 3.46 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-31B
 WELL PAD - LOCATION LAYOUT
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
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WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 12,248 C.Y.
 TOTAL FILL FOR WELL PAD = 11,350 C.Y.
 TOPSOIL @ 6" DEPTH = 1,506 C.Y.
 EXCESS MATERIAL = 898 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
 +/- 4,570 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 16,750 BARRELS

WELL PAD LEGEND

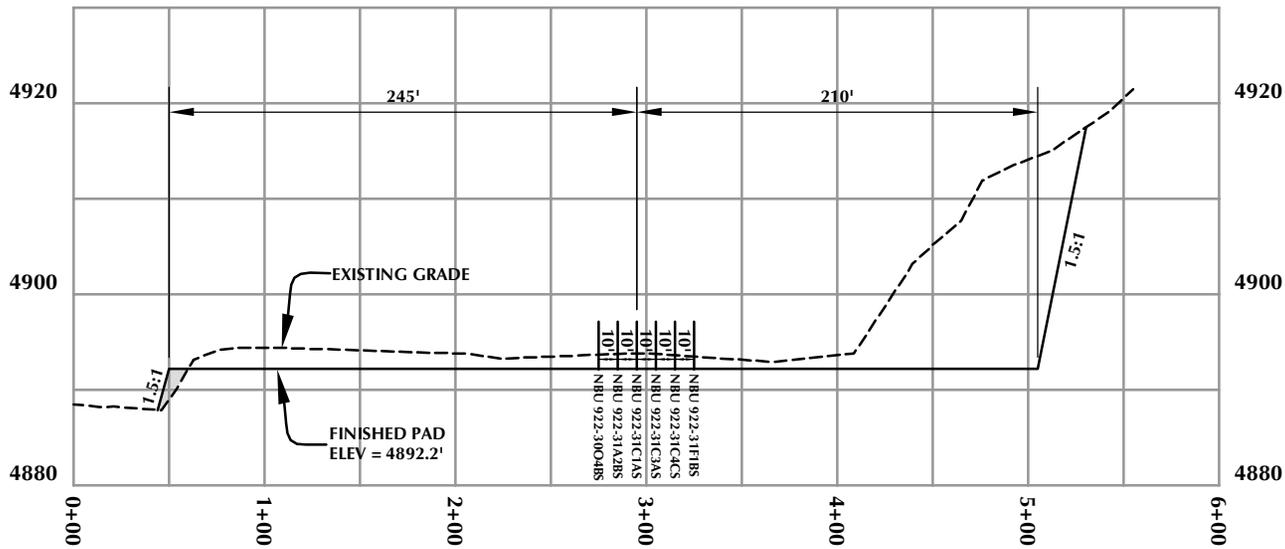
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



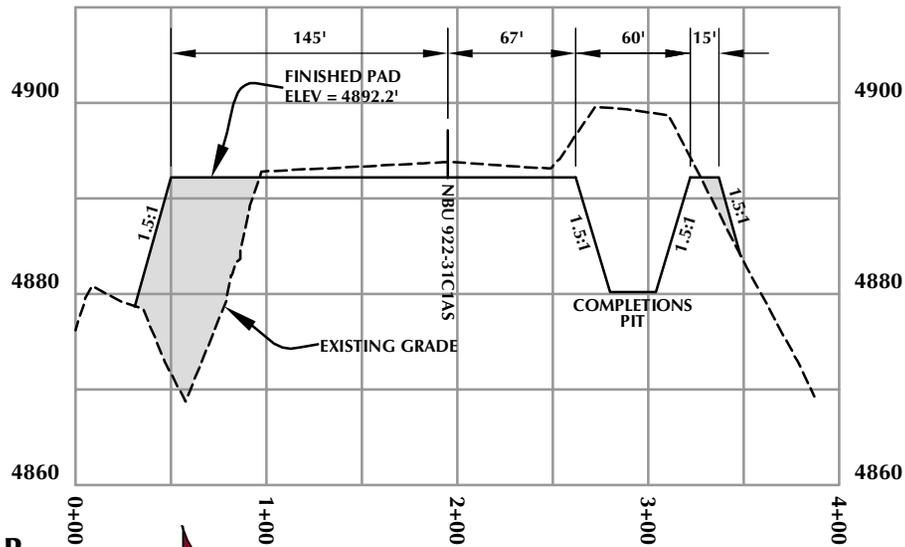
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 1/4/11 SHEET NO:
 REVISED: JFE 11/9/11 **8** 8 OF 18

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CROSS SECTION A-A'



CROSS SECTION B-B'

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WELL PAD - NBU 922-31B

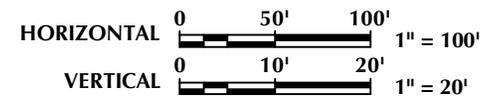
WELL PAD - CROSS SECTIONS
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



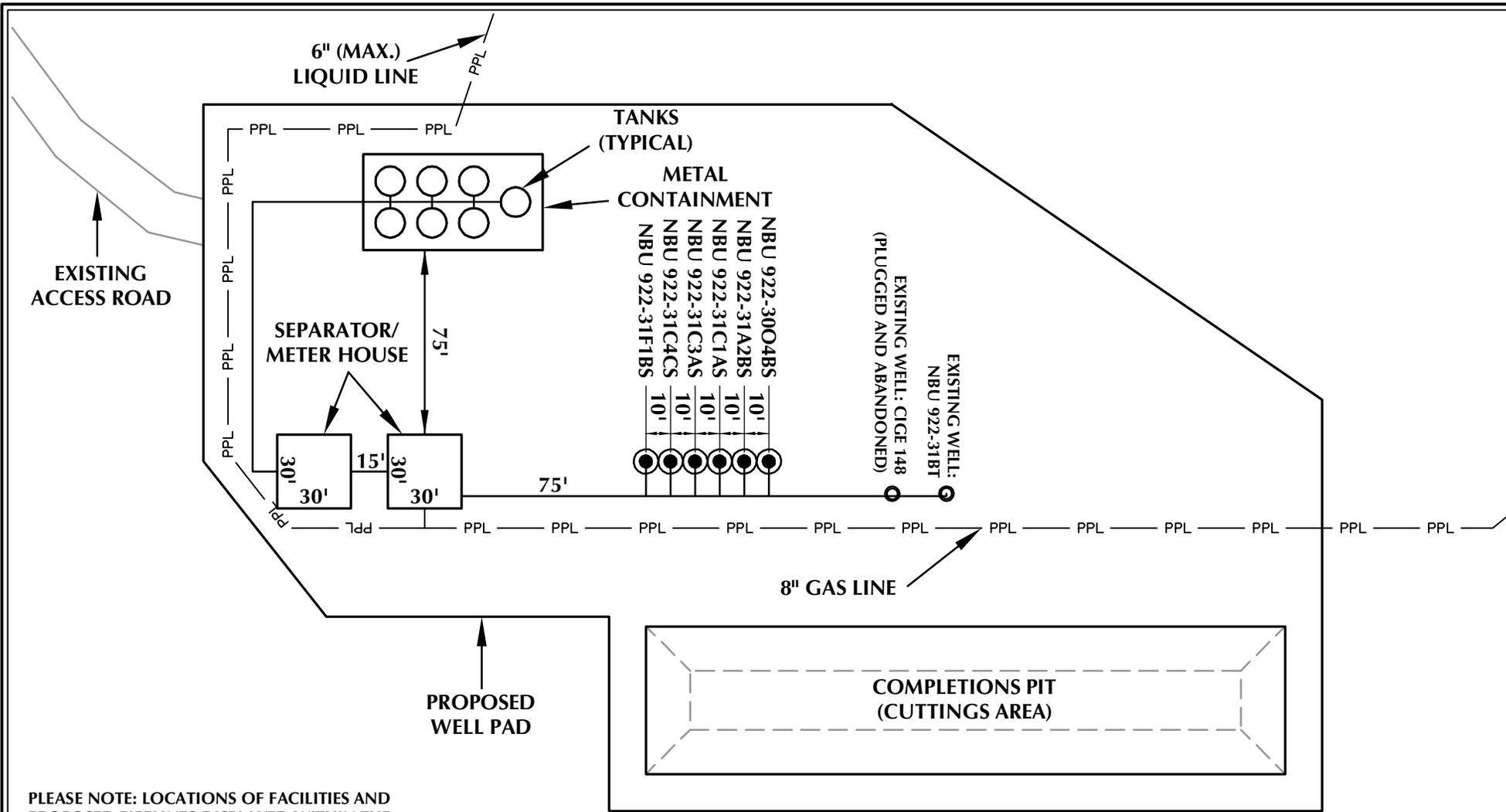
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Scale: 1"=100'	Date: 1/4/11	SHEET NO:
REVISED:	JFE 11/4/11	9 9 OF 18



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

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

WELL PAD - NBU 922-31B

WELL PAD - FACILITIES DIAGRAM
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



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Sheridan, WY 82801
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WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

Date: 1/4/11

SHEET NO:

REVISED:

JFE
11/4/11

10 10 OF 18

K:\MADARRO\2010\2010_36_NBU_FOCUS_SEC_922-30\DWGS\NBU 922-31B\NBU 922-31B.dwg, 11/2/2011 5:56:42 PM, kimberly

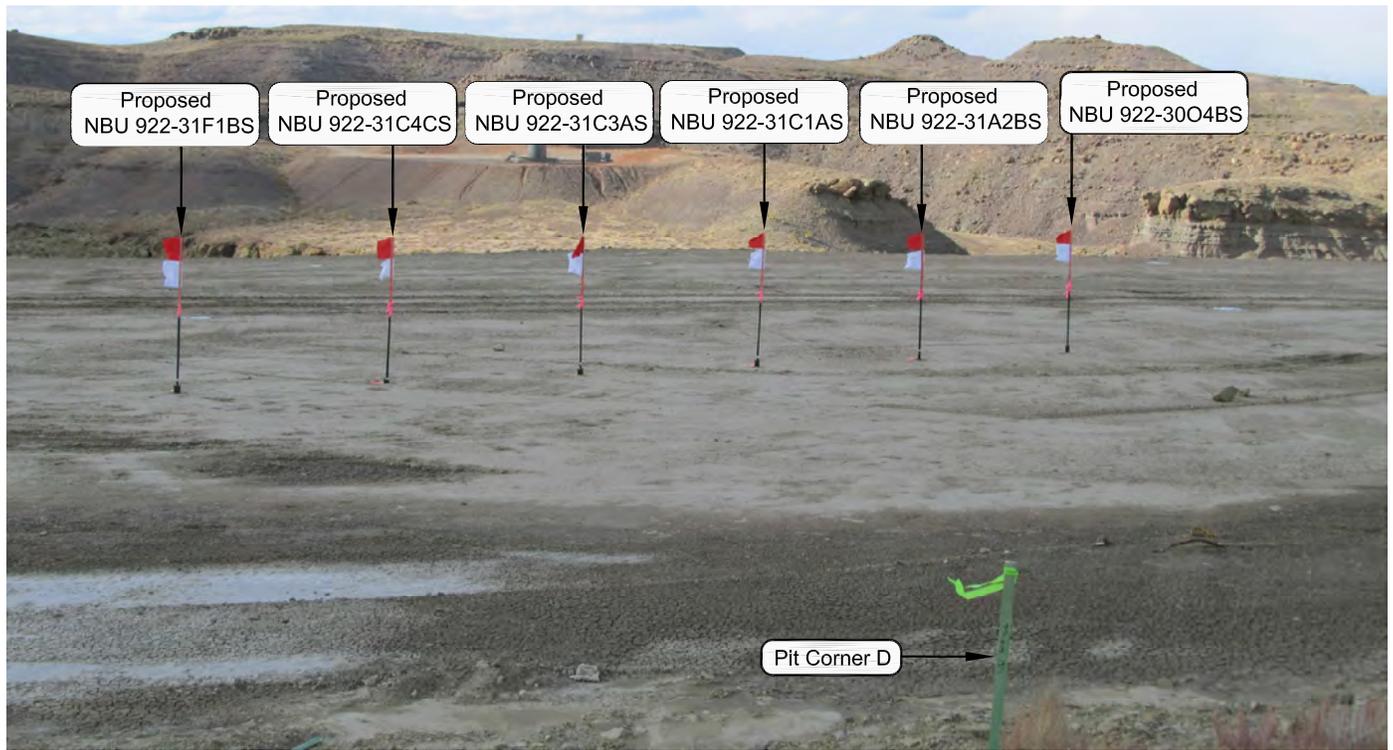


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

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

WELL PAD - NBU 922-31B

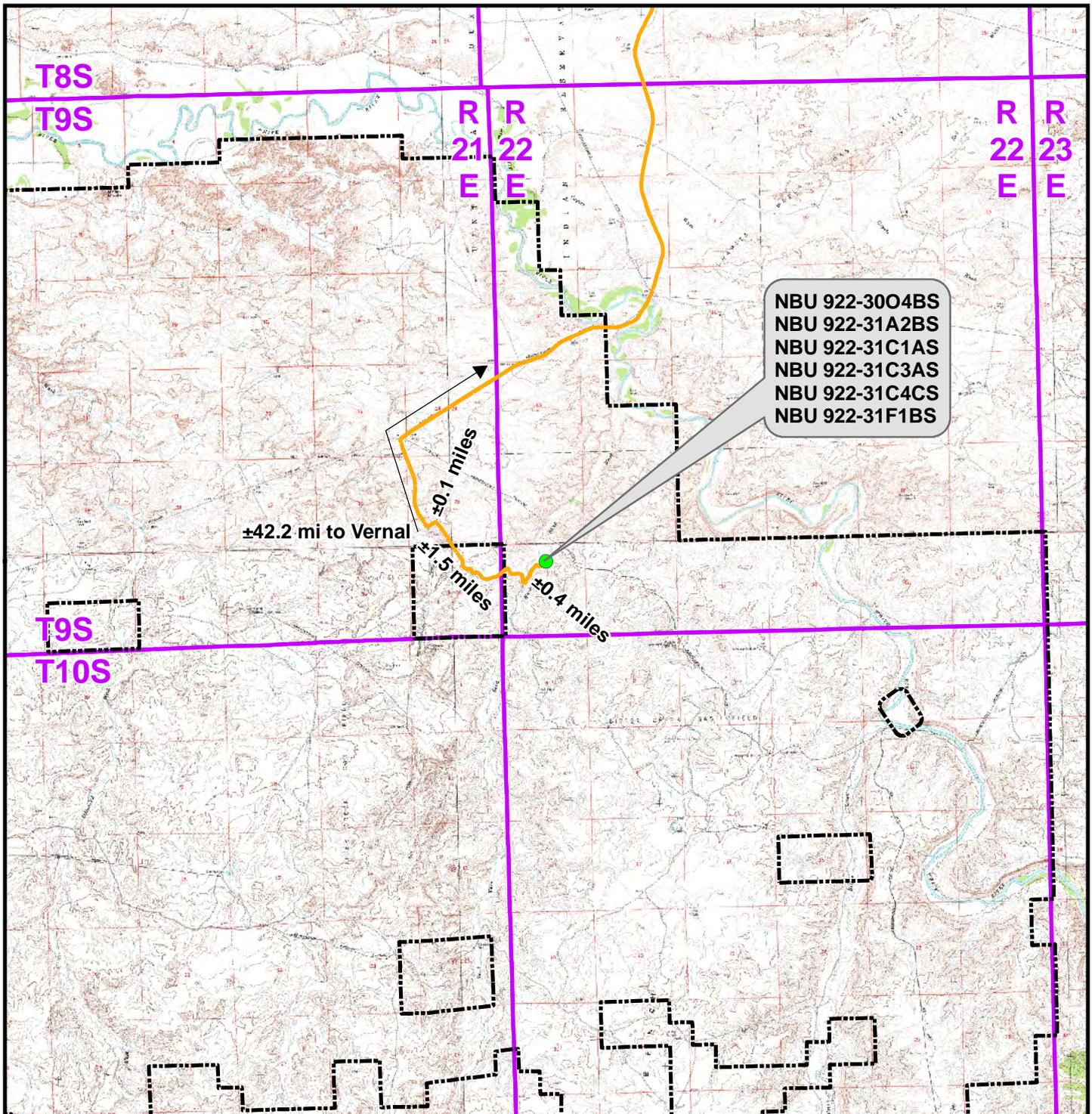
LOCATION PHOTOS
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
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DATE PHOTOS TAKEN: 10-25-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 11
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	
Date Last Revised: 11-04-11 T.J.R.		11 OF 18



Legend

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

Distance From Well Pad - NBU 922-31B To Unit Boundary: ±2,637ft

WELL PAD - NBU 922-31B

TOPO A
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

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 Denver, Colorado 80202



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 Phone 307-674-0609
 Fax 307-674-0182



SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

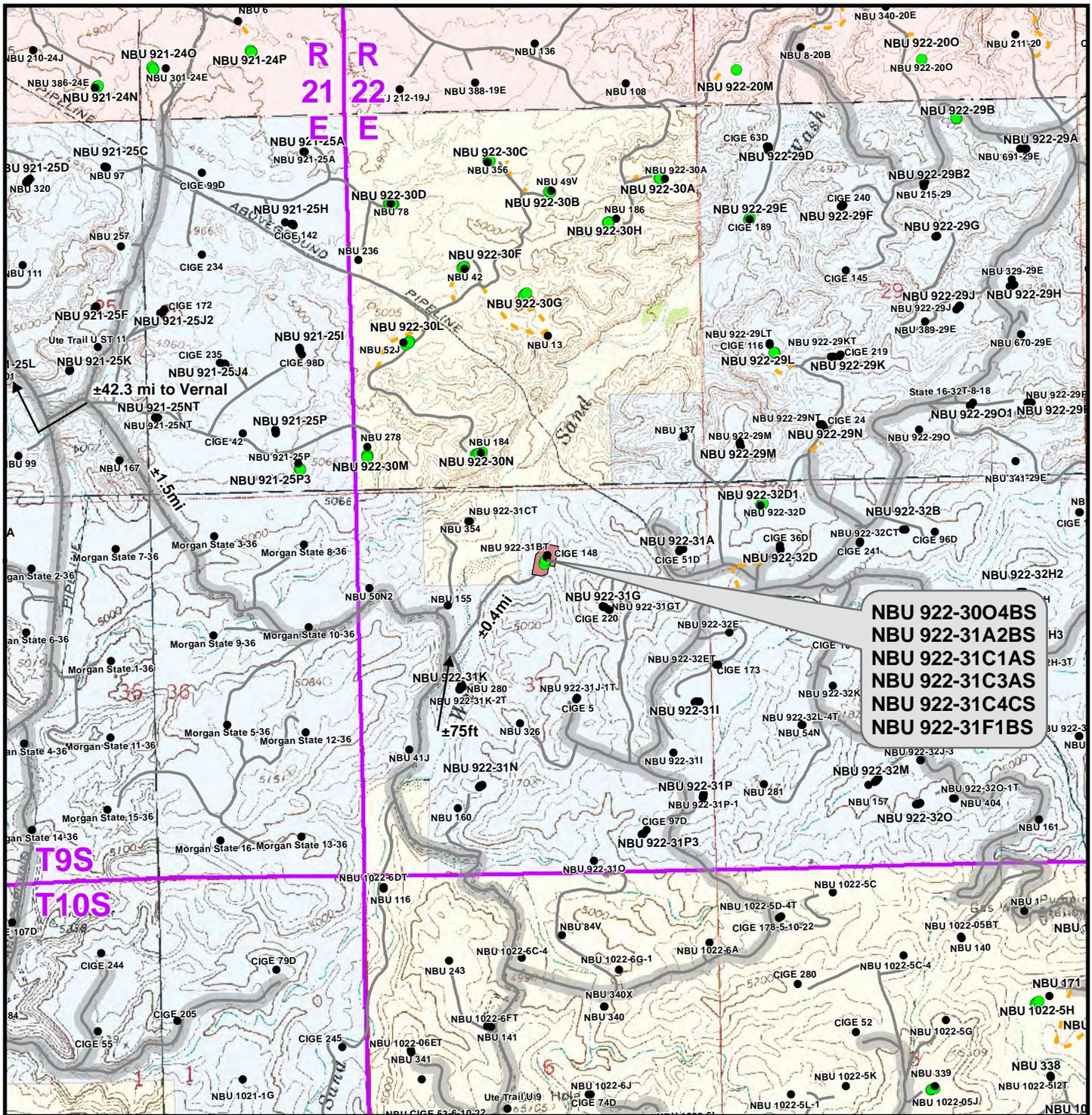
DATE: 14 Jan 2011

12

REVISED: TL

DATE: 4 Nov 2011

12 OF 18



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

Legend

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

Total Proposed Road Length: ±0ft

WELL PAD - NBU 922-31B

TOPO B
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street
 Denver, Colorado 80202



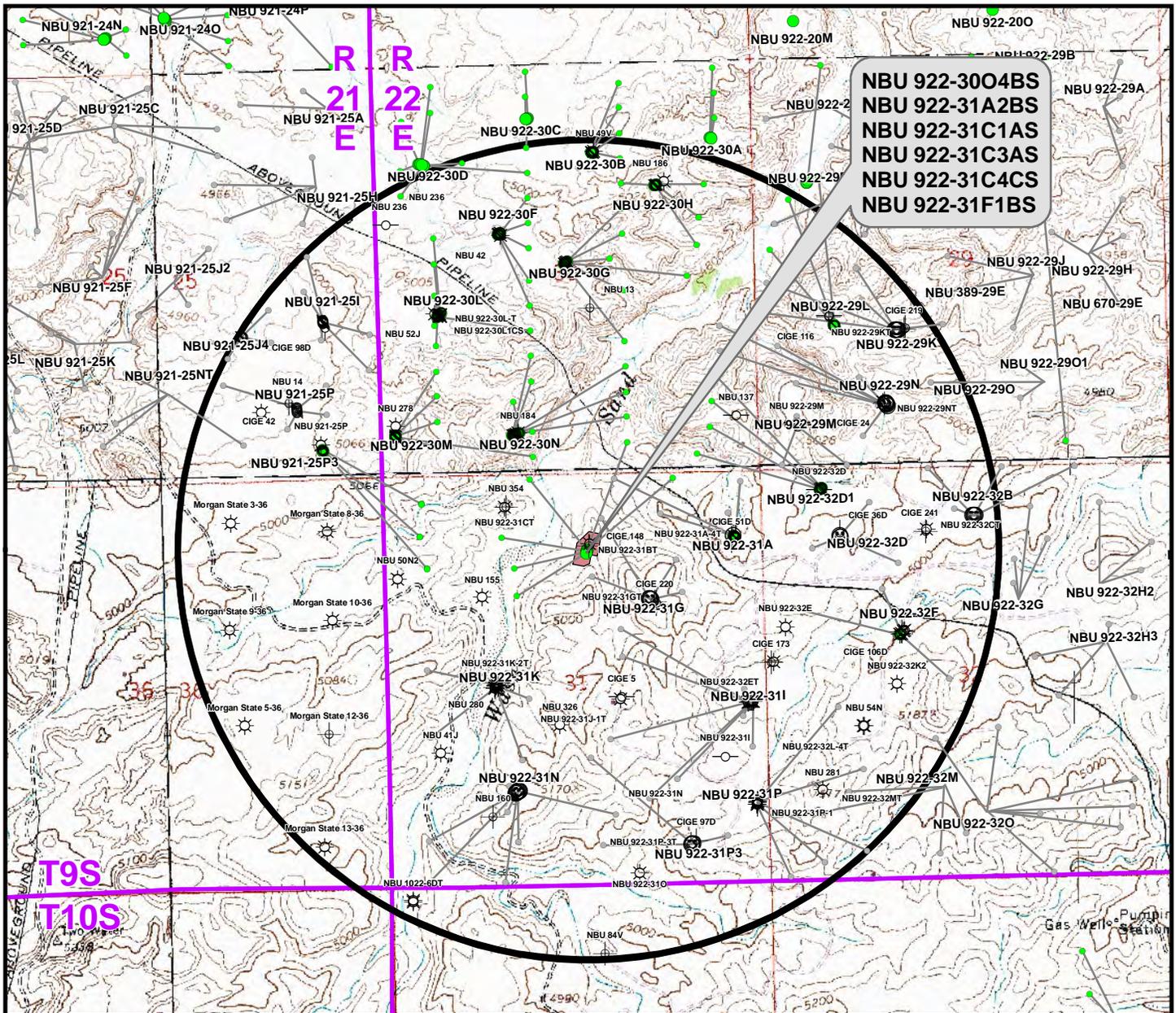
CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182



SCALE: 1" = 2,000ft	NAD83 USP Central	13
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	

SHEET NO:

13 OF 18



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

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 922-3004BS	NBU 922-31B1BS BH	502ft
NBU 922-31A2BS	NBU 922-31A2CS BH	478ft
NBU 922-31C1AS	NBU 354	465ft
NBU 922-31C3AS	NBU 922-31CT	397ft
NBU 922-31C4CS	NBU 155	556ft
NBU 922-31F1BS	NBU 155	447ft

Legend

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

WELL PAD - NBU 922-31B

TOPO C
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., Uintah County, Utah

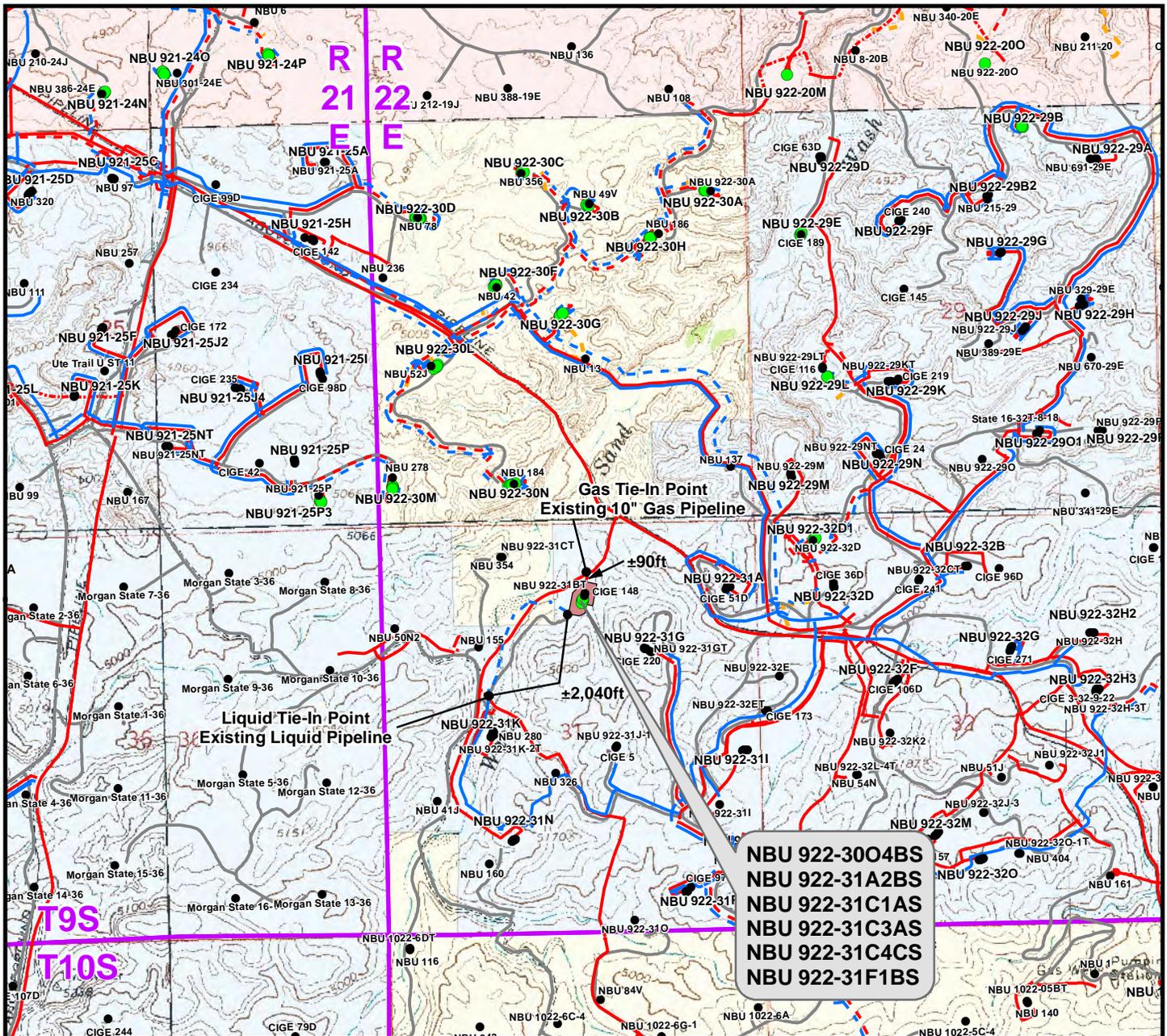
**Kerr-McGee Oil &
 Gas Onshore L.P.**

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 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	14 14 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±340ft
Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline)	±2,040ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,380ft

Proposed Gas Pipeline	Length
Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED GAS PIPELINE =	±465ft

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 922-31B

TOPO D
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

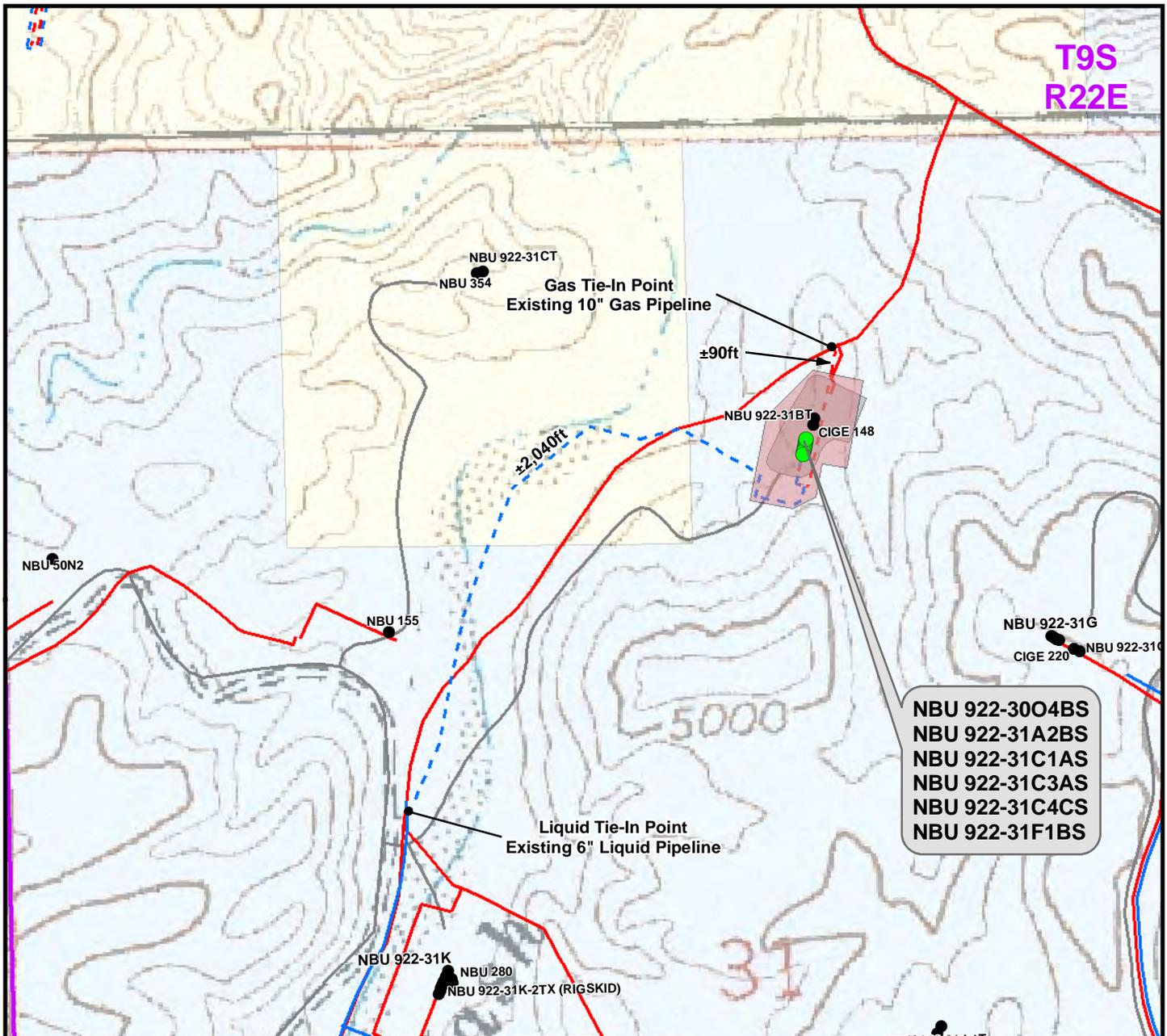
1099 18th Street
 Denver, Colorado 80202

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

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SCALE: 1" = 2,000ft	NAD83 USP Central	15
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	

SHEET NO:
15 OF 18



- NBU 922-3004BS
- NBU 922-31A2BS
- NBU 922-31C1AS
- NBU 922-31C3AS
- NBU 922-31C4CS
- NBU 922-31F1BS

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±340ft	Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 6" (Max.) (Edge of Pad to Existing Liquid Pipeline)	±2,040ft	Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,380ft	TOTAL PROPOSED GAS PIPELINE =	±465ft

Legend

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

WELL PAD - NBU 922-31B

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

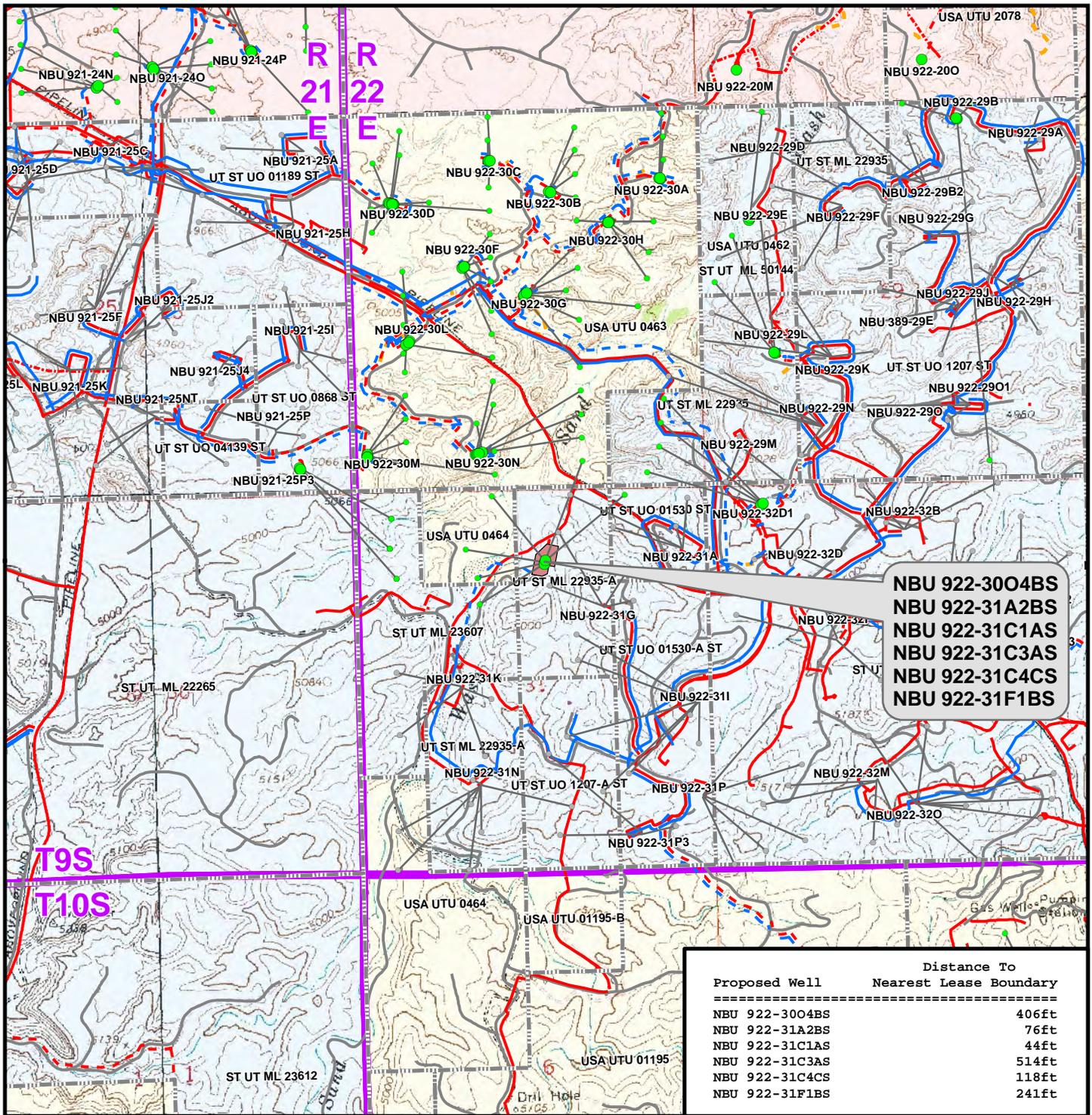
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 500ft	NAD83 USP Central	16 16 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	



NBU 922-31B
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS

Proposed Well	Distance To Nearest Lease Boundary
NBU 922-31B	406ft
NBU 922-31A2BS	76ft
NBU 922-31C1AS	44ft
NBU 922-31C3AS	514ft
NBU 922-31C4CS	118ft
NBU 922-31F1BS	241ft

Legend

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

WELL PAD - NBU 922-31B
 TOPO E
 NBU 922-31A2BS, NBU 922-31C1AS, NBU 922-31C3AS, NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, 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

DRAWN: TL

REVISED: TL

NAD83 USP Central

DATE: 14 Jan 2011

DATE: 4 Nov 2011

SHEET NO:
17

17 OF 18

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: ML 23607
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: 720 929-6511	8. WELL NAME and NUMBER: NBU 922-31F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510920000
	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: 6/1/2012	<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: June 04, 2012

By:

NAME (PLEASE PRINT) Jenn Hawkins	PHONE NUMBER 720 929-6247	TITLE Staff Operations Specialist III
SIGNATURE N/A	DATE 5/29/2012	



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 43047510920000

API: 43047510920000

Well Name: NBU 922-31F1BS

Location: 1004 FNL 2230 FEL QTR NWNE SEC 31 TWP 090S RNG 220E MER S

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

Date Original Permit Issued: 6/1/2010

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: Jenn Hawkins

Date: 5/29/2012

Title: Staff Operations Specialist III 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	5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
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:
1. TYPE OF WELL Gas Well	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: NBU 922-31F1BS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047510920000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 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 checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/22/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" 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 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 operator is asking to re-route the liquid pipeline route. After the onsite with UDOGM/SITLA/BLM, the BLM required the operator to move the liquid pipeline route. Attached is an updated SUPO, pad & facilities design and topos. No other changes were required.

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

Date: July 16, 2012

By:

NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 6/22/2012	

NBU 922-3004BS/ NBU 922-31A2BS/ NBU 922-31C1AS/
 NBU 922-31C3AS/ NBU 922-31C4CS/ NBU 922-31F1BS

Surface Use Plan of Operations
 1 of 13

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

NBU 922-31B PAD

<u>API #</u>	<u>NBU 922-3004BS</u>		
Mineral Lease #UTU-463	Surface: 956 FNL / 2220 FEL	NWNE	Lot
	BHL: 406 FSL / 1670 FEL	SWSE	Lot
<u>API #</u>	<u>NBU 922-31A2BS</u>		
Mineral Lease #ST UT UO 01530 ST	Surface: 965 FNL / 2222 FEL	NWNE	Lot
	BHL: 76 FNL / 1100 FEL	NENE	Lot
<u>API #4304751086</u>	<u>NBU 922-31C1AS</u>		
Mineral Lease #UTU-464	Surface: 975 FNL / 2224 FEL	NWNE	Lot
	BHL: 44 FNL / 1927 FWL	NENW	Lot
<u>API #4304751087</u>	<u>NBU 922-31C3AS</u>		
Mineral Lease #UTU-464	Surface: 985 FNL / 2226 FEL	NWNE	Lot
	BHL: 784 FNL / 1551 FWL	NENW	Lot
<u>API #4304751088</u>	<u>NBU 922-31C4CS</u>		
Mineral Lease #UTU-464	Surface: 995 FNL / 2228 FEL	NWNE	Lot
	BHL: 1181 FNL / 1701 FWL	NENW	Lot
<u>API #4304751092</u>	<u>NBU 922-31F1BS</u>		
Mineral Lease #ST UT ML-23607	Surface: 1004 FNL / 2230 FEL	NWNE	Lot
	BHL: 1540 FNL / 1728 FWL	SENE	Lot

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.

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

6/21/2012

RECEIVED: Jun. 22, 2012

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

No new access road is proposed. Please see Topo B

C. Location of Existing Wells:

6/21/2012

RECEIVED: Jun. 22, 2012

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 922-31BT, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on April 11, 2012. The CIGE 148 has been plugged and abandoned since December 23, 2008. 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).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is $\pm 465'$ and the individual segments are broken up as follows:

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

- $\pm 375'$ (0.1 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 90'$ (0.01 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 8" surface gas gathering pipeline from the edge of the pad to the tie-in at the existing 10" surface gas gathering pipeline. Please refer to Topo D2.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,965'$ and the individual segments are broken up as follows:

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

- $\pm 215'$ (0.04 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA 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.
- $\pm 1,750'$ (0.4 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface and UTU-464, BLM surface, New 6" buried liquid gathering pipeline from the south edge of the pad and traveling southwest to tie-in to the existing buried liquid gathering line at SE/4 NW/4 of Section 31. Please refer to Topo D & D2.

Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie

6/21/2012

RECEIVED: Jun. 22, 2012

on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

E. Location and Types of Water Supply:

6/21/2012

RECEIVED: Jun. 22, 2012

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

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

No water well is to be drilled on this lease.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for

ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

6/21/2012

RECEIVED: Jun. 22, 2012

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches

where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Shadescale Mix	Pure Live Seed lbs/acre
Indian Ricegrass (Nezpar)	3
Sandberg bluegrass	0.75
Bottlebrush squirreltail	1
Great Basin Wildrye	0.5
Crested wheatgrass	1.5
Winterfat	0.25
Shadescale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

Weed Control

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

6/21/2012

Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

K. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102
(801) 538-5100

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

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

Resource Reports:

A Class I literature survey was completed on December 14, 2011 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-403

A paleontological reconnaissance survey was completed on November 11, 2011 by Intermountain Paleo-Consulting. For additional details please refer to report IPC 11-210.

Biological field survey was completed on November 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-646.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year)¹			
Pollutant	Development	Production	Total
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	10.94	11.04
SO ₂	0.005	0.00	0.01
PM ₁₀	1.7	0.11	1.81
PM _{2.5}	0.4	0.03	0.43
Benzene	2.2E-03	0.08	0.09
Toluene	1.6E-03	0.13	0.14
Ethylbenzene	3.4E-04	0.00	0.00
Xylene	1.1E-03	0.06	0.06
n-Hexane	1.7E-04	0.34	0.34
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

¹ Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory^a (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	23.52	16,547	0.14%
VOC	66.25734	127,495	0.05%

^a http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

NBU 922-3004BS/ NBU 922-31A2BS/ NBU 922-31C1AS/
NBU 922-31C3AS/ NBU 922-31C4CS/ NBU 922-31F1BS

Surface Use Plan of Operations
13 of 13

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.

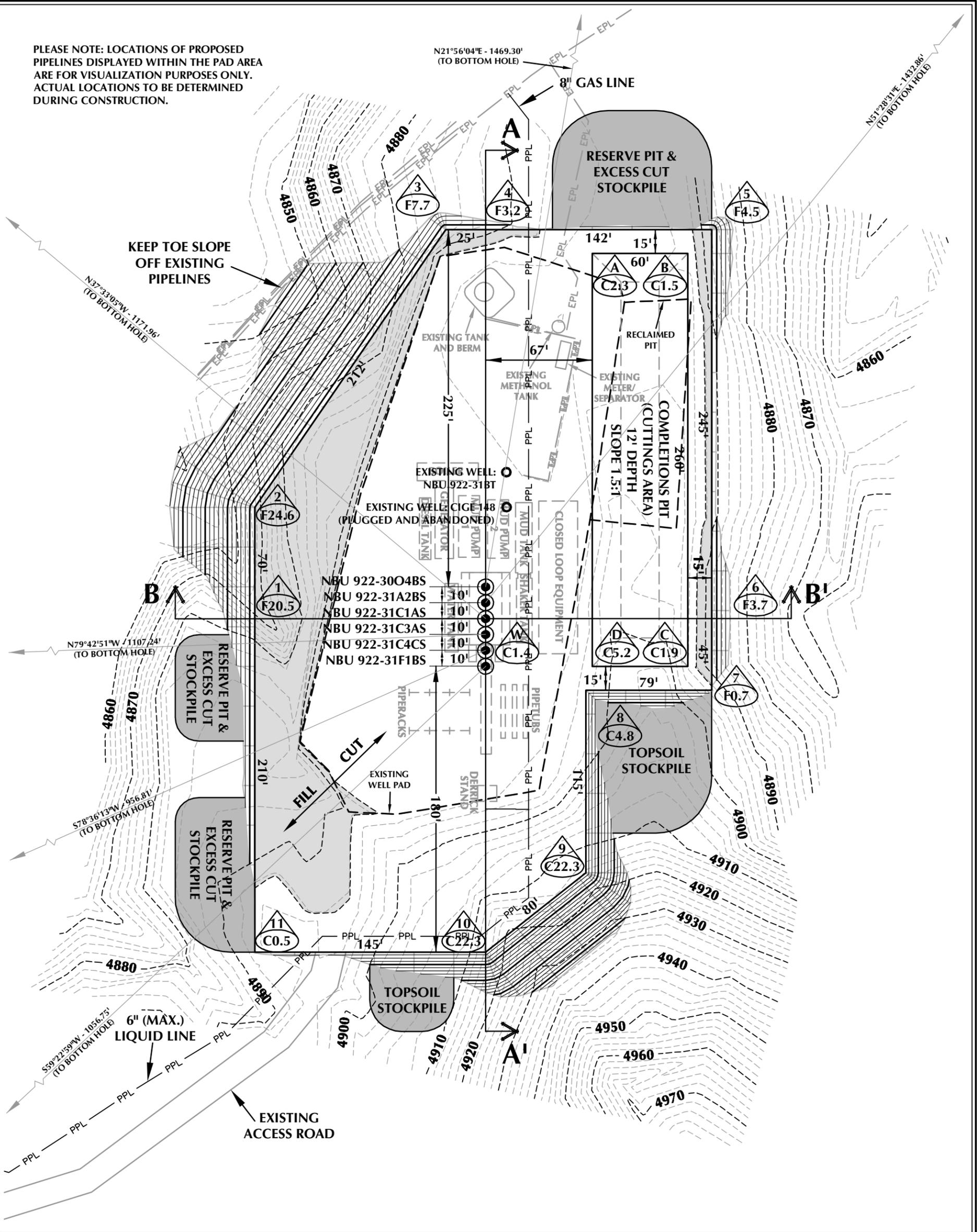
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan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

June 21, 2012
Date

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 922-31B (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4893.6'
 FINISHED GRADE ELEVATION = 4892.2'
 CUT SLOPES = 1:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 2.98 ACRES
 TOTAL DISTURBANCE AREA = 3.46 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-31B
 WELL PAD - LOCATION LAYOUT
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 12,248 C.Y.
 TOTAL FILL FOR WELL PAD = 11,350 C.Y.
 TOPSOIL @ 6" DEPTH = 1,506 C.Y.
 EXCESS MATERIAL = 898 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
 +/- 4,570 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 16,750 BARRELS

WELL PAD LEGEND

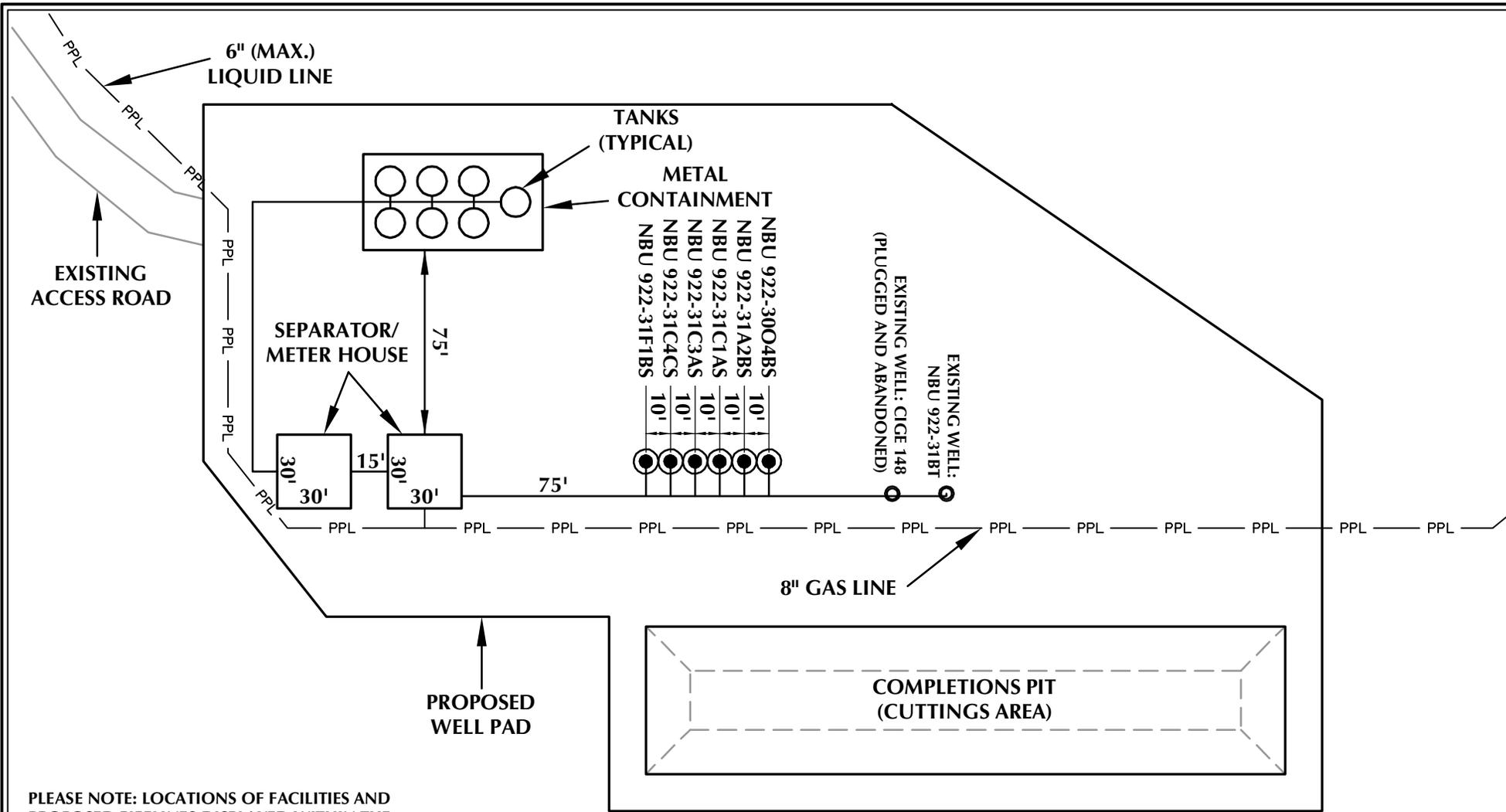
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



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

SCALE: 1"=60' DATE: 1/4/11 SHEET NO:
 REVISED: DJD 8 8 OF 18
 6/14/12

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



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

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

WELL PAD - NBU 922-31B

WELL PAD - FACILITIES DIAGRAM
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, 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 LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

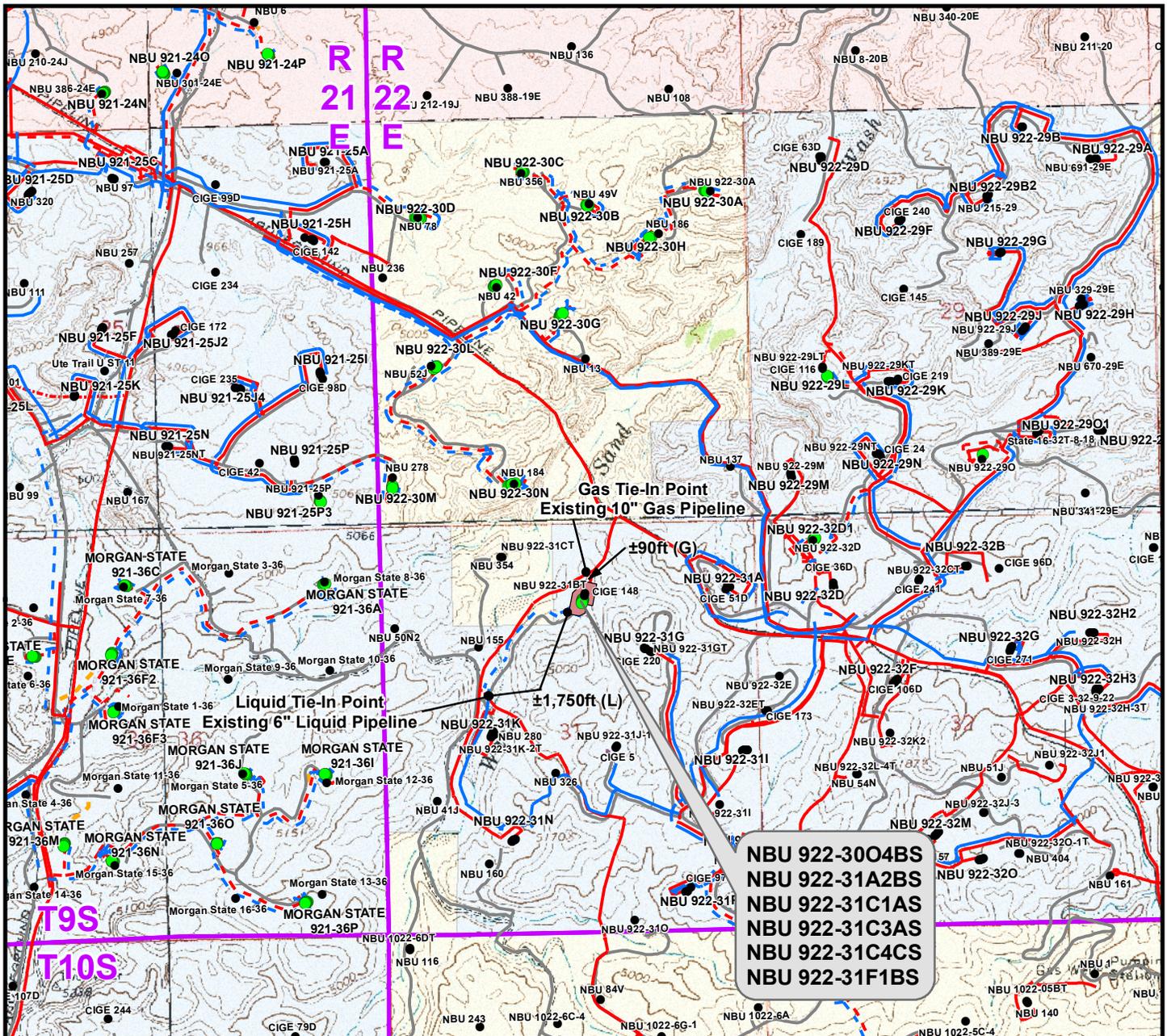
Date: 1/4/11

SHEET NO:

REVISED:

DJD
6/14/12

10 10 OF 18



NBU 922-3004BS
NBU 922-31A2BS
NBU 922-31C1AS
NBU 922-31C3AS
NBU 922-31C4CS
NBU 922-31F1BS

Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±215ft
Proposed 6" (Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,750ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,965ft

Proposed Gas Pipeline	Length
Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED GAS PIPELINE =	±465ft

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 922-31B

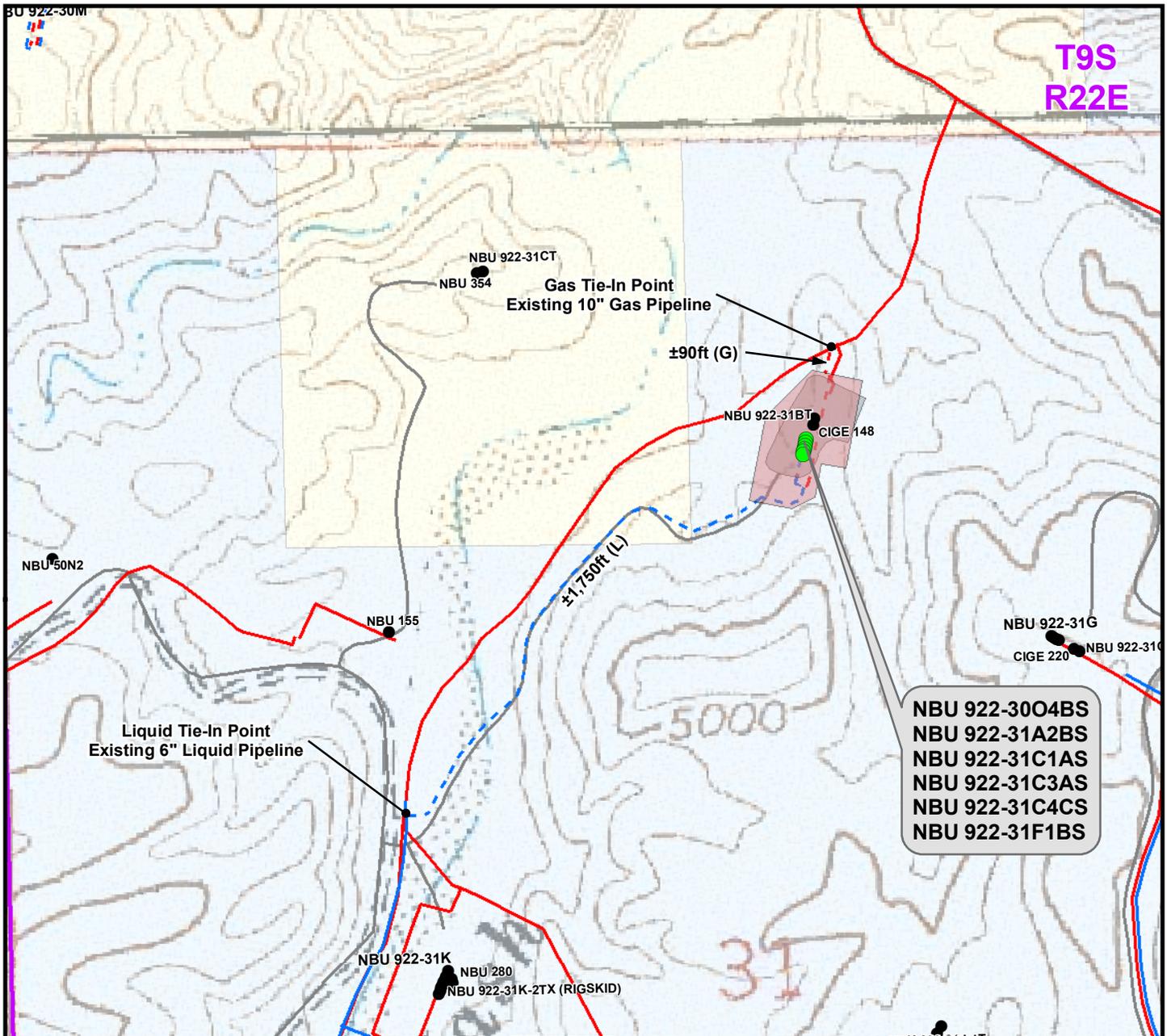
TOPO D
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

SCALE: 1" = 2,000ft	NAD83 USP Central	15 15 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 15 June 2012	



NBU 922-3004BS
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS

Proposed Liquid Pipeline	Length
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Proposed Gas Pipeline	Length
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Legend

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

WELL PAD - NBU 922-31B

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, 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" = 500ft

NAD83 USP Central

SHEET NO:

DRAWN: TL

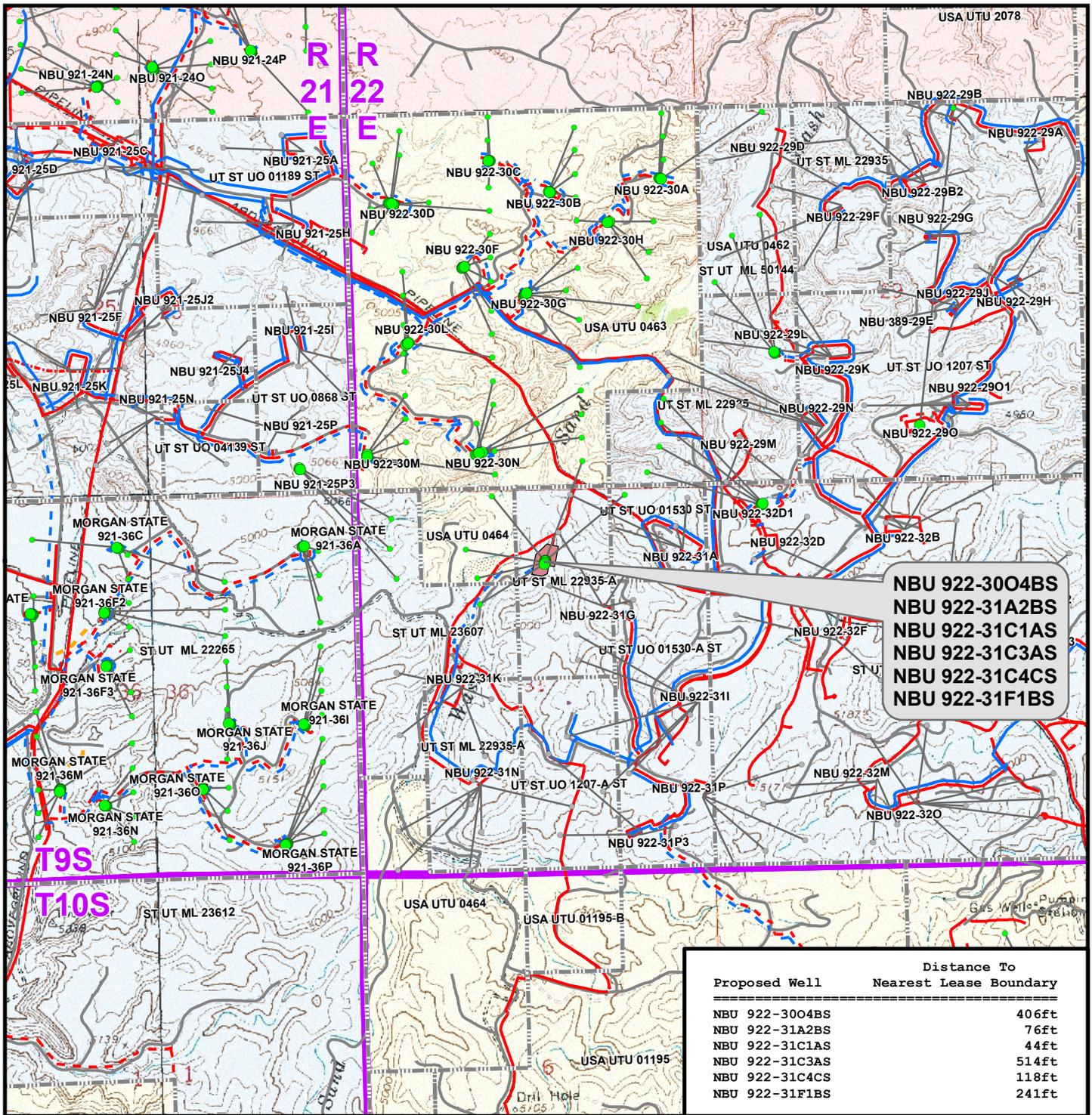
DATE: 14 Jan 2011

16

REVISED: TL

DATE: 15 June 2012

16 OF 18



**NBU 922-3004BS
 NBU 922-31A2BS
 NBU 922-31C1AS
 NBU 922-31C3AS
 NBU 922-31C4CS
 NBU 922-31F1BS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 922-3004BS	406ft
NBU 922-31A2BS	76ft
NBU 922-31C1AS	44ft
NBU 922-31C3AS	514ft
NBU 922-31C4CS	118ft
NBU 922-31F1BS	241ft

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 922-31B

TOPO E
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

**1099 18th Street
 Denver, Colorado 80202**



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 2155 North Main Street
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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 14 Jan 2011	17
REVISED: TL	DATE: 15 June 2012	

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: ML 23607
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
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	8. WELL NAME and NUMBER: NBU 922-31F1BS
PHONE NUMBER: 720 929-6511	9. API NUMBER: 43047510920000
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: 6/4/2013	<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 respectfully requests an extension to the above mentioned well. This well is a part of a State & Federal pad that we just received APD approvals on from the BLM. This well is slated to be drilled in November. This is a re submittal (Per Brad Hill) of a prior returned sundry.

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

Date: June 05, 2013
By:

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 6/4/2013	



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 43047510920000

API: 43047510920000

Well Name: NBU 922-31F1BS

Location: 1004 FNL 2230 FEL QTR NWNE SEC 31 TWP 090S RNG 220E MER S

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

Date Original Permit Issued: 6/1/2010

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

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No

- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No

- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No

- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No

- Has the approved source of water for drilling changed? Yes No

- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No

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

Signature: Teena Paulo

Date: 6/4/2013

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 922-31F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047510920000
PHONE NUMBER: 720 929-6511		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"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 8/8/2013	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<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"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> 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 08/08/2013 @ 10:30. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 08/20/2013.		
		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 09, 2013
NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 8/9/2013	

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: ML 23607
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510920000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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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
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<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/4/2013	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
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	<input type="checkbox"/> 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.

No new activity since last report. Well TD at 2,630 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 07, 2013

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 10/4/2013	

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: ML 23607
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 922-31F1BS
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PHONE NUMBER: 720 929-6511		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
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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 type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/2/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
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	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> APD EXTENSION	
	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No activity for Quarter 4 of 2013. Well TD at Drilled to 2,650 ft.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2014		
NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/2/2014	

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: ML 23607
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: 720 929-6114	8. WELL NAME and NUMBER: NBU 922-31F1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510920000
	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 10,565 ft.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 April 08, 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
SUNDRY NOTICES AND REPORTS ON WELLS	5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
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:
1. TYPE OF WELL Gas Well	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: NBU 922-31F1BS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047510920000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1004 FNL 2230 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 4/8/2014	<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 922-31F1BS was placed on production 04/08/2014 after a new well completion. Producing from the MESAVERDE/BLACKHAWK.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 April 09, 2014

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 4/9/2014	

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

AMENDED REPORT FORM 8
 (highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF WORK: NEW WELL HORIZ. LATS DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

5. LEASE DESIGNATION AND SERIAL NUMBER:
ST UT ML23607

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

2. NAME OF OPERATOR:
KERR-MCGEE OIL AND GAS ONSHORE LP

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
NBU 922-31F1BS

3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY Denver STATE Co ZIP 82017

PHONE NUMBER: 720-929-6000

9. API NUMBER:
43-047-51092

10. FIELD AND POOL, OR WILDCAT
Natural Buttes

4. LOCATION OF WELL (FOOTAGES)
 AT SURFACE: **NWNE 1004 FNL 2230 FEL**
 AT TOP PRODUCING INTERVAL REPORTED BELOW: **SENW 1536 FNL 1719 FWL**
 AT TOTAL DEPTH: **SENW 1601 FNL 1735 FWL**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NWNE 31 9S 22E SLB

12. COUNTY **UINTAH** 13. STATE **UTAH**

14. DATE SPUDDED: **8/8/2013** 15. DATE T. D. REACHED: **1/24/2014** 16. DATE COMPLETED: **4/8/2014**

ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
4916 RKB

18. TOTAL DEPTH: MD **10565** TVD **10403**

19. PLUG BACK T.D.: MD **10504** TVD **10342**

20. IF MULTIPLE COMPLETIONS, HOW MANY? * _____

21. DEPTH BRIDGE PLUG SET: MD _____ TVD _____

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
AID/NGR MEMORY LOG-BHV-RCBL/GR/CCL/TEMP

23. WAS WELL CORED? YES (Submit analysis)
 WAS DST RUN? YES (Submit report)
 DIRECTIONAL SURVEY? NO YES (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20	14 STL	36.7	0	40		28			
11	8.63 J-55	28	24	2625		750		0	
7.875	4.5 P-110	11.6	24	10551		1625		3247	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.375	9099							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) WASATCH	7212	7214		
(B) MESAVERDE	7266	10126		
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
7,212 7,214	0.4	6	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
7,266 10,126	0.4	258	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7212-10,126	PUMP 14,753 BBLs SLICKWATER, 71 BBLs 15% HCL ACID AND 309,087 LBS 30/50 MESH SAND

29. ENCLOSED ATTACHMENTS:

ELECTRICAL/MECHANICAL LOGS GEOLOGICAL REPORT DST REPORT DIRECTIONAL SURVEY

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER:

30. WELL STATUS:
PRODUCING

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 4/8/2014		TEST DATE: 4/20/2014		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 3	GAS - MCF: 2021	WATER - BBL: 0	PROD. METHOD: Flowing
CHOKE SIZE: 20/64	TBG. PRESS. 688	CSG. PRESS. 1250	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL: 3	GAS - MCF: 2021	WATER - BBL: 0	INTERVAL STATUS Producing

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. 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.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1290
				BIRD'S NEST	1649
				MAHOGANY	2113
				WASATCH	4633
				MESAVERDE	7261

35. ADDITIONAL REMARKS (Include plugging procedures)

The first 210 ft. of the surface hole was drilled with a 12 1/4 in. bit. The remainder of surface hole was drilled with an 11 in. bit. A DV tool was placed in the well from 5043 feet – 5046 feet. DQX csg was run from surface to 5043 ft.; LTC csg was run from 5043 ft. to 10,551 ft. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Ila Beale

TITLE Staff Regulatory Specialist

SIGNATURE 

DATE 5-7-2014

This report must be submitted within 30 days of

- completing or plugging a new well
- reentering a previously plugged and abandoned well
- drilling horizontal laterals from an existing well bore
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
Fax: 801-359-3940

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/09/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/23/2013	18:00 - 0:00	6.00	CSGSUR	01	C	P	64	SKID RIG 20' TO NBU 922-31C3AS, RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY
8/24/2013	0:00 - 0:30	0.50	DRLSUR	02	B	P	64	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.
	0:30 - 2:00	1.50	DRLSUR	02	B	P	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 5) .17 REV/GAL PICK UP 12 1/4" DRILL BIT FINISH PICKING UP BHA SPUD @ 08/23/2013 00:00 DRILL 12.25" HOLE 44'-210' (166', 110.6'/PER HOUR). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 900/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 22/20/21 K. DRAG 1 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	2:00 - 6:00	4.00	DRLSUR	06	A	P	210	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK REED 12 1/4" BIT. MAKE UP REED 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY / NEW BHA, SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLSUR	02	B	P	210	DRILL 11". SURFACE HOLE FROM 210' TO 820', (610', 101'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 900/680. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 54/49/51 K. DRAG 3 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.1' HIGH & 0.23' LEFT OF THE LINE WITH 115' OF SLIDE @ 19.13%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 17:30	5.50	DRLSUR	02	B	P	820	DRILL 11". SURFACE HOLE FROM 820' TO 1,240', (420', 76.3'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,000/800. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 60/50/55 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.5' LOW & 0.06' RIGHT OF THE LINE WITH 105' OF SLIDE @ 22.83%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	17:30 - 18:00	0.50	DRLSUR	07	A	P	1240	LUBRICATE RIG AND HAND OVER SAFETY MEETING.
	18:00 - 0:00	6.00	DRLSUR				1240	DRILL 11". SURFACE HOLE FROM 1,240' TO 1,750', (510', 85'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,170/950. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/50/60 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 1.5' HIGH & 2.78' LEFT OF THE LINE WITH 50' OF SLIDE @ 9.8%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# 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 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/25/2013	0:00 - 5:30	5.50	DRLSUR	02	B	P	1750	DRILL 11" SURFACE HOLE FROM 1,750' TO 2,140', (390', 70'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,230/1,030. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 77/57/67 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.2' HIGH & 0.16' RIGHT OF THE LINE WITH 27' OF SLIDE @ 7.5%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# 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	B	P	2140	SAFETY MEETING AND CREW CHANGE
	6:00 - 12:00	6.00	DRLSUR	02	B	P	2140	DRILL 11" SURFACE HOLE FROM 2,140' TO 2,510', (370', 61'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,200/1,060. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 84/57/68 K. DRAG 16 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY .07' HIGH & 3.0' LEFT OF THE LINE WITH 27' OF SLIDE @ 7.5%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 14:00	2.00	DRLSUR	02	A	P	2510	DRILL 11" SURFACE HOLE FROM 2,510' TO 2,630' TD, (120', 60'/PER HOUR). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1,415/1,251. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 86/61/72 K. DRAG 14 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.0' LOW & 2.7' LEFT OF THE LINE WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	14:00 - 16:00	2.00	DRLSUR	05	C	P	2630	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 1-400 BBL UPRIGHT'S FULL AND 5-400 BBL UPRIGHTS EMPTY,

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/09/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 16:30	0.50	DRLSUR	05	C	S	2630	PUMPED HEAVY KILL MUD ON BOTTOM
	16:30 - 20:00	3.50	DRLSUR	06	D	P	2630	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA.
	20:00 - 21:00	1.00	CSGSUR	01	B	P	2630	PRE JOB SAFETY MEETING WITH PRO PETRO RIG CREW . MOVE PIPE RACKS AND CATWALK. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	21:00 - 23:00	2.00	CSGSUR	12	C	P	2630	RUN 59 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 A TOTAL OF 59 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,601.49' KB. SET TOP OF BAFFLE PLATE @ 2,555.79'
	23:00 - 0:00	1.00	CSGSUR	12	E	P	2630	PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RELEASE RIG @ RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 2,000 PSI. PUMP 150.00 BBLS OF WATER AHEAD CLEARING SHOE. MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 16% GEL, 10 LB/SX GILSONITE, 2 LB/SX GR-3, 3% SALT, & 0.25 LB/SX FLOCELE. 152.8 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. MIX & PUMP 200 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 40.9 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/O9/S/22/E/31/O/0/26/PM/N/1004/E/O/2230/O/O

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/26/2013	0:00 - 0:30	0.50	CSGSUR	12	E	P	2630	<p>PRESSURE TEST LINES TO 2,000 PSI. PUMP 142.9 BBLs OF WATER AHEAD CLEARING SHOE. MIX AND PUMP 20 BBLs OF GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 16% GEL, 10 LB/SX GILSONITE, 2 LB/SX GR-3, 3% SALT, & 0.25 LB/SX FLOCELE. 152.9 BBLs OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. MIX & PUMP 200 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 159.4 BBLs OF FRESH WATER. PARTIAL RETURNS THROUGH OUT JOB. FINAL LIFT OF 510 PSI AT 3.5 BBL/MINUTE. BUMPED PLUG @ 810 PSI. HELD @ 810 PSI FOR 5 MINUTES WITHOUT BLEED OFF. TESTED FLOAT AND FLOAT HELD. SHUT DOWN AND WASH UP</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX (20.4 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 1.5 HOURS ON CEMENT, TOP JOB # 2 : PUMPCEMENT DOWN BACKSIDE W/ 100 SX (26.6 BBLs) SAME CEMENT, 3 BBLs CEMENT RETURNS TO SURFACE. RIG DOWN CEMENTERS.</p>
1/17/2014	19:00 - 20:00	1.00	MIRU3	01	C	P	2630	SKID RIG ONTO NBU 922-31F1BS
	20:00 - 21:00	1.00	PRPSPD	14	A	P	2630	NIPPLE UP BOPE
	21:00 - 23:30	2.50	PRPSPD	15	A	P	2630	HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, RIG DOWN
	23:30 - 0:00	0.50	PRPSPD	14	B	P	2630	SET WEAR BUSHING
1/18/2014	0:00 - 1:30	1.50	PRPSPD	09	A	P	2630	CUT AND SLIP 88' OF DRILL LINE (16 WRAPS)
	1:30 - 3:30	2.00	PRPSPD	06	A	P	2630	PICK UP DIRECTIONAL TOOLS. BIT AND MOTOR, SCRIBE MOTOR.
	3:30 - 6:00	2.50	PRPSPD	06	A	P	2630	TRIP IN HOLE TO TOP OF SURFACE CEMENT, TAG CEMENT AT 2,515'
	6:00 - 7:00	1.00	DRLPRC	02	F	P	2630	DRILL OUT SURFACE CEMENT, BAFFLE AND FLOAT SHOE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 15:00	8.00	DRLPRC	02	B	P	2630	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,630' TO 3,597' (967' @ 120 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.0 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 1,950/1,200. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 95/64/74 K. TORQUE = ON/OFF (BOTTOM) 12K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10' LOW / 1' LEFT OF THE LINE WITH 122' OF SLIDE @ 29%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	15:00 - 15:30	0.50	DRLPRC	07	A	P	3597	RIG SERVICE
	15:30 - 18:00	2.50	DRLPRC	02	B	P	3597	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 3,597' TO 3,881' (284' @ 113 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.0 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 1,950/1,200. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 130/90/110 K. TORQUE = ON/OFF (BOTTOM) 12K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 18' LOW / 14' LEFT OF THE LINE WITH 92' OF SLIDE @ 20%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLPRC	02	B	P	3881	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 3,881' TO 4,652' (771' @ 128 FPH). WEIGHT ON BIT 18-23 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.0 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,000/1,600. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 150/90/130 K. TORQUE = ON/OFF (BOTTOM) 12K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.30' WEST / 5.4' NORTH OF CENTER WITH 119' OF SLIDE @ 16%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/19/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	4652	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,652' TO 5,278' (626' @ 104 FPH). WEIGHT ON BIT 18-23 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.0 PPG / VIS- 31 PRESSURE ON/OFF(BOTTOM) 2,200/1,800. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 155/95/125 K. TORQUE = ON/OFF (BOTTOM) 12K / 11K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.66' WEST / 2.03' NORTH OF CENTER WITH 12' OF SLIDE @ 3%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 13:30	7.50	DRLPRV	02	B	P	5278	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,278' TO 5,977' (699' @ 93 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.0 PPG / VIS- 31 PRESSURE ON/OFF(BOTTOM) 2,250/1,850. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 195/115/119 K. TORQUE = ON/OFF (BOTTOM) 12K / 11K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8' WEST / 2' NORTH OF CENTER WITH 12' OF SLIDE @ 1%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	13:30 - 14:00	0.50	DRLPRV	07	A	P	5977	RIG SERVICE
	14:00 - 18:00	4.00	DRLPRV	02	B	P	5977	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,977' TO 6,452' (475' @ 118 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,250/1,850. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 225/115/123 K. TORQUE = ON/OFF (BOTTOM) 12K / 11K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9' WEST / .5' SOUTH OF CENTER WITH 22' OF SLIDE @ 12%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK		Spud Date: 8/24/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 1/27/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRV	02	B	P	6452	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,452' TO 6,741' (289' @ 48 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,250/1,850. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 229/125/150 K. TORQUE = ON/OFF (BOTTOM) 12K / 11K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8.80' WEST / 1.3' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/20/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	6741	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,741' TO 7,306' (565' @ 94 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,300/2,000. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 232/120/152 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.80' WEST / 2.14' NORTH OF CENTER WITH 22' OF SLIDE @ 7%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 14:00	8.00	DRLPRV	02	B	P	7306	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,306' TO 8,066' (760' @ 95 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,300/2,000. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 232/120/152 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.70' WEST / 17.92' NORTH OF CENTER WITH 33' OF SLIDE @ 4.5%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK		Spud Date: 8/24/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date: 1/27/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 21:00	7.00	DRLPRV	08	C	S	8066	*** REPAIR FLOW LINE TO GAS BUSTER, CALLED OUT A WELDER, REMOVED LINE TO SAFE LOCATION FOR REPAIR, REINSTALL FLOWLINE.
	21:00 - 0:00	3.00	DRLPRV	02	B	P	8066	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,066' TO 8,280' (214' @ 71 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,300/2,000. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 260/150/170 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.85' WEST / 14.87' NORTH OF CENTER WITH 12' OF SLIDE @ 5.5%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/21/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	8280	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,280' TO 8,573' (293' @ 48 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,800/2,500. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 265/152/174 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.81' WEST / 11.84' NORTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

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	8573	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,573' TO 8,828' (255' @ 42 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=166. GALLONS PER MINUTE=583. MUD WEIGHT = 9.2 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,900/2,700. ROTARY RPM 65, MOTOR RPM 81, TOTAL RPM 146. UP/DOWN/ ROT 265/152/174 K. TORQUE = ON/OFF (BOTTOM) 15K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.77' WEST / 5.97' NORTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 17:00	5.00	DRLPRV	08	A	S	8828	***REPAIR CONTROL CABLE ON TOP DRIVE.
	17:00 - 0:00	7.00	DRLPRV	02	B	P	8828	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,828' TO 9,146' (318' @ 45 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 10.9 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,900/2,700. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 265/152/174 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 6.16' WEST / 1.15' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/22/2014	0:00 - 8:00	8.00	DRLPRV	02	B	P	9146	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,146' TO 9,422' (276' @ 34 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 11.2 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,900/2,700. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 265/152/174 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.43' WEST / 4.70' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:00 - 17:30	9.50	DRLPRV	05	C	P	9422	CIRCULATE AND CONDITION MUD FOR BIT TRIP, BRING MUD WEIGHT UP FROM 11.2 TO 11.7 IN AND OUT WHILE CIRCULATING OUT GAS AND CHECKING FOR FLOW, AT 11.7 WE CIRCULATED OUT GAS AND HAD NO FLOW FOR BIT TRIP WITH NO LOSSES.
	17:30 - 0:00	6.50	DRLPRV	06	A	S	9422	TRIP OUT OF HOLE COULD NOT GET IT TO DRILL
1/23/2014	0:00 - 1:30	1.50	DRLPRV	06	A	S	9422	LAY DOWN BIT AND MOTOR BIT WAS BBR MOTOR DRAINED WELL AND LOOKED OK, PICK UP NEW BIT AND MOTOR
	1:30 - 7:00	5.50	DRLPRV	06	A	S	9422	TRIP BACK TO BOTTOM WASH DOWN THE LAST 200' AND FAN THE BOTTOM TO AVOID JUNK FROM DAMAGED BIT.
	7:00 - 10:30	3.50	DRLPRV	02	B	P	9422	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,422' TO 9,589' (167' @ 48 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 215/155/180 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8.21' WEST / 6.77' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	10:30 - 11:00	0.50	DRLPRV	07	A	P	9589	RIG SERVICE
	11:00 - 18:00	7.00	DRLPRV	02	B	P	9589	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,589' TO 9,843' (254' @ 36 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 215/155/180 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 8.96' WEST / 14.65' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRV	02	B	P	9843	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 9,843' TO 10,044' (201' @ 33 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 235/170/190 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 4.48' WEST / 32.55' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
1/24/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	10,044	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 10,044' TO 10,232' (188' @ 31 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 238/171/195 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.79' WEST / 36.56' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 10:30	4.50	DRLPRV	02	B	P	10,232	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 10,232' TO 10,445' (213' @ 47 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 242/165/195 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.41' EAST / 53.35' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	10:30 - 11:00	0.50	DRLPRV	07	A	P	10,445	RIG SERVICE

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NWN/E/09/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	11:00 - 14:30	3.50	DRLPRV	02	B	P	10,445	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 10,445' TO 10,565' (213' @ 47 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=150. GALLONS PER MINUTE=527. MUD WEIGHT = 12 PPG / VIS- 42 PRESSURE ON/OFF(BOTTOM) 2,700/2,500. ROTARY RPM 65, MOTOR RPM 74, TOTAL RPM 139. UP/DOWN/ ROT 250/160/200 K. TORQUE = ON/OFF (BOTTOM) 18K / 15K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.77' EAST / 59.42' SOUTH OF CENTER WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	14:30 - 16:00	1.50	DRLPRV	05	C	P	10,565	CIRCULATE BOTTOMS UP WITH 2% LCM TO STOP SLOW LOSSES, NO GAS NO FLOW ON FLOW CHECK
	16:00 - 17:30	1.50	DRLPRV	06	E	P	10,565	10 STAND WIPER TRIP, PULLED STRAIGHT OFF BOTTOM WITH NO PROBLEMS, CHECKED FOR FLOW NO FLOW, TRIP BACK TO BOTTOM.
	17:30 - 18:30	1.00	DRLPRV	05	C	P	10,565	CIRCULATE ONE BOTTOMS UP WITH NO FLARE, AND NO FLOW.
	18:30 - 23:30	5.00	DRLPRV	06	B	P	10,565	PUMP PILL FOR DRY JOB AND TRIP OUT OF HOLE FOR THRUBIT LOGS.
	23:30 - 0:00	0.50	DRLPRV	09	A	P	10,565	SLIP AND CUT DRILL LINE.
1/25/2014	0:00 - 0:30	0.50	DRLPRV	09	A	P	10,565	SLIP AND CUT DRILL LINE SO WE DIDNT HAVE TO DURING LOGGING OPERATIONS
	0:30 - 2:30	2.00	DRLPRV	06	B	P	10,565	FINISH TRIP OUT FOR THRUBIT LOGS
	2:30 - 3:30	1.00	DRLPRV	06	B	P	10,565	LAY DOWN BIT AND MOTOR AND RACK BACK DIRECTIONAL TOOLS.
	3:30 - 4:30	1.00	EVALPR	06	B	P	10,565	RIG UP LOGGING CREW AND PICK UP AND MAKE UP THRUBIT BHA.
	4:30 - 10:30	6.00	EVALPR	06	B	P	10,565	TRIP IN HOLE WITH THRUBIT BHA.
	10:30 - 13:00	2.50	EVALPR	05	C	P	10,565	CIRCULATE OUT GAS AND EVEN MUD WEIGHT FOR LOGGING RUN .
	13:00 - 14:00	1.00	EVALPR	01	B	P	10,565	PULL ONE STAND AND 2 SINGLES, FINISH RIGGING UP LOGGING CREW,
	14:00 - 18:00	4.00	EVALPR	11	D	P	10,565	RUN IN ON WIRE LINE TRIPLE COMBO MEMORY LOGGING TOOLS WITH PUMPS TO 10,565"
	18:00 - 0:00	6.00	EVALPR	11	D	P	10,565	TRIP OUT OF HOLE WHILE LOGGING WITH TRIPLE COMBO MEMORY LOGS @ 30 FPM FROM 10,500' TO 2,750'
1/26/2014	0:00 - 2:00	2.00	EVALPR	11	D	P	10,565	TRIP OUT OF HOLE WHILE LOGGING WITH TRIPLE COMBO MEMORY LOGS @ 30 FPM FROM 2,750' TO SURFACE
	2:00 - 3:00	1.00	EVALPR	01	E	P	10,565	PULL LOGGING TOOL AND RIG DOWN LOGGING CREW
	3:00 - 3:30	0.50	CSGPRO	12	A	P	10,565	PULL WEAR BUSHING

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/O9/S/22/E/31/O/O/26/PM/N/1004/E/O/2230/O/O

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	3:30 - 5:30	2.00	CSGPRO	01	B	P	10,565	PJSM WITH FRANKS CASING CREW RIG UP CASING EQUIPMENT AND CHANGE OUT ELEVATORS
	5:30 - 19:00	13.50	CSGPRO	12	C	P	10,565	FRANK'S CASING SERVICE, (INSPECT FLOAT EQUIPMENT) RIG UP TORQUE TURN, PERFORM DUMP TEST. MAKE UP 4.5" HCP-110 LTC DRILLING & COMPLETION TECH. FLOAT SHOE ON SHOE JOINT WITH THREAD LOCK. MAKE UP 4.5" HCP-110 FLOAT COLLAR WITH THREAD LOCK ON TOP OF SHOE JOINT. RUN CENTRALIZERS ON FIRST 3 JOINTS AND EVERYTHIRD JOINT FOR TOTAL OF 20 CENTRALIZERS. BREAK CIRCULATION @ 50', 3,776', 7,000'. NO PROBLEMS WITH FLOAT SHOE OR COLLAR. RUN A TOTAL OF 124 JOINTS OF 4 1/2", 11.6#, P-110, LT&C CASING + 2 MARKER JOINT MAKE UP DQX CROSS OVER JOINT AND, RUN A TOTAL OF 113 JOINTS OF 4 1/2", 11.6#, P-110/ DQX, CASING, + 1 CROSSOVER + 1 PUP JOINT RUN A TOTAL OF 237 JOINTS OF CASING TO BOTTOM WITH NO PROBLEMS SET FLOAT SHOE @ 10,550.86', SET TOP FLOAT COLLAR @ 10,503.66', SET TOP OF BLACKHAWK MARKER JOINT @ 9,950.21' SET TOP OF MESAVERDE MARKER JOINT @ 7,259.76'
	19:00 - 22:00	3.00	CSGPRO	05	D	P	10,565	CIRCULATE TWO BOTTOMS UP HAD A SMALL FLARE FOR THE FIRST BOTTOMS UP AND NO FLARE ON THE SECOND.
	22:00 - 0:00	2.00	CSGPRO	12	E	P	10,565	FIRST STAGE PJSM, RIG UP BAKER HUGHES CEMENTERS & CEMENT FIRST STAGE TEST LINES TO 5,000 PSI. PUMP 25 BBLS FRESH WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 1,430 SX 50:50 POZ CEMENT WITH 0.05% STATIC FREE + 10% SODIUM CHLORIDE + 0.55% R-3 + 0.5% EC-1 + 0.25 LBS/SX CELLO FLAKE + 0.002 GPS FP-6L + 0.7% SMS + 2% GELL + 5 LBS/SX KOL-SEAL / 228 BBLS OF SLURRY MIXED @ 14.3 PPG WITH YIELD OF 1.35 CF/SX.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: PROPETRO 12/12, SST 54/54

Event: DRILLING

Start Date: 8/1/2013

End Date: 1/27/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/O/S/22/E/31/O/O/26/PM/N/1004/E/O/2230/O/O

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/27/2014	0:00 - 2:00	2.00	CSGPRO	12	E	P	10,565	FIRST STAGE PJSM, RIG UP BAKER HUGHES CEMENTERS & CEMENT FIRST STAGE TEST LINES TO 5,000 PSI. PUMP 25 BBLS FRESH WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 1,430 SX 50:50 POZ CEMENT WITH 0.05% STATIC FREE + 10% SODIUM CHLORIDE + 0.55% R-3 + 0.5% EC-1 + 0.25 LBS/SX CELLO FLAKE + 0.002 GPS FP-6L + 0.7% SMS + 2% GELL + 5 LBS/SX KOL-SEAL / 228 BBLS OF SLURRY MIXED @ 14.3 PPG WITH YIELD OF 1.35 CF/SX. DIPLACE WITH 1 OOBBL WATER WITH CLAYCARE & MAGNACIDE 42 BBLS OF 12.2# MUD, BUMPED PLUG FROM 2384 TO 3001 PSI, CHECKED FLOAT HOLD WITH 1.5 BBLS BLED BACK, DROP OPENING CONE AND OPEN DV TOOL. 35 BBLS CEMENT BACK TO THE PIT.
	2:00 - 6:00	4.00	CSGPRO	13	A	P	10,565	CIRCULATE THROUGH CASING WITH THE RIG PUMPS FOR 4 HRS WHILE WAITING ON CEMENT TO DO STAGE 2.
	6:00 - 8:00	2.00	CSGPRO	12	E	P	10,565	JSM, PUMP SECOND STAGE PRIMARY CEMENT JOB PUMP 25 BBLS FRESH WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 855 SX PREMIUN LITE II CEMENT + 0.05% STATIC FREE + 2% CACL2 + 0.25 LB/SX CELLO FLAKE + 5 LB/SX KOLSEAL + 0.4% FL-52 + 0.4% SMS + 6% GEL 271 BBL OF SLURRY MIXED @ 13 PPG WITH YIELD OF 2.01 CF/SX. 2ND TAIL MIX & PUMP 60 SX G CEMENT + 1% CACL2 + 0.4% SMS 12.4 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.16 CF/SX. DROP PLUG DISPLACEMENT WITH 78.4 BBLS FRESH WATER 1322 PSI FINAL LIFT PRESSURE BUMP PLUG TO 3090 PSI TO CLOSE DV TOOL TEST DV TOOL. TOOL HELD. 35 BBLS CEMENT BACK TO SURFACE.
	8:00 - 9:30	1.50	CSGPRO	17	A	P	10,565	REMOVE LANDING JOINT AND SET PACK OFF.
	9:30 - 11:00	1.50	RDMO	14	A	P	10,565	NIPPLE DOWN BOPE, RELEASE THE RIG.

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-31F1BS BLACK	Wellbore No.	OH
Well Name	NBU 922-31F1BS	Wellbore Name	NBU 922-31F1BS
Report No.	1	Report Date	3/17/2014
Project	UTAH-JUNTAH	Site	NBU 922-31B PAD
Rig Name/No.		Event	COMPLETION
Start Date	2/12/2014	End Date	4/8/2014
Spud Date	8/24/2013	Active Datum	RKB @4,916.00usft (above Mean Sea Level)
UWI	NWN/E/09/S/22/E/31/0/0/26/PMN/1004/E/0/2230/0/0		

1.3 General

Contractor		Job Method	Supervisor
Perforated Assembly		Conveyed Method	

1.4 Initial Conditions

Fluid Type	Fluid Density	Gross Interval	7,212.0 (usft)-10,126.0 (us	Start Date/Time	3/17/2014 12:00AM
Surface Press	Estimate Res Press	No. of Intervals	75	End Date/Time	3/17/2014 12:00AM
TVD Fluid Top	Fluid Head	Total Shots	264	Net Perforation Interval	88.00 (usft)
Hydrostatic Press	Press Difference	Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL			Final Press Date	

1.5 Summary

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
3/17/2014 12:00AM	WASATCH/			7,212.0	7,214.0	3.00		0.410	EXP/	3.125	120.00		19,000	PRODUCTIO	N

US ROCKIES REGION

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
3/17/2014 12:00AM	MESAVERDE/			7,266.0	7,269.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,283.0	7,286.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,348.0	7,349.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,368.0	7,369.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,397.0	7,398.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,439.0	7,440.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,451.0	7,452.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,456.0	7,457.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,472.0	7,473.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,484.0	7,485.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,516.0	7,517.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,546.0	7,547.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,566.0	7,567.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,592.0	7,593.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,622.0	7,623.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,629.0	7,630.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,681.0	7,683.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,744.0	7,745.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,779.0	7,780.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,797.0	7,798.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,858.0	7,859.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

US ROCKIES REGION

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
3/17/2014 12:00AM	MESAVERDE/			7,918.0	7,920.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,946.0	7,948.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,008.0	8,009.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,023.0	8,024.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,040.0	8,041.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,077.0	8,078.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,089.0	8,090.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,099.0	8,100.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,134.0	8,136.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,261.0	8,262.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,327.0	8,328.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,338.0	8,339.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,351.0	8,352.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,376.0	8,378.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,385.0	8,387.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,478.0	8,479.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,501.0	8,502.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,508.0	8,509.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,544.0	8,545.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,558.0	8,559.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,569.0	8,570.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

US ROCKIES REGION

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
3/17/2014 12:00AM	MESAVERDE/			8,589.0	8,590.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,661.0	8,662.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,716.0	8,717.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,728.0	8,729.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,734.0	8,735.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,790.0	8,791.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,798.0	8,799.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,804.0	8,805.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,841.0	8,842.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,853.0	8,854.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,890.0	8,891.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,919.0	8,920.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,949.0	8,950.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,961.0	8,962.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,979.0	8,980.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,999.0	9,000.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,026.0	9,027.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,048.0	9,049.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,127.0	9,128.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,155.0	9,156.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,192.0	9,193.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

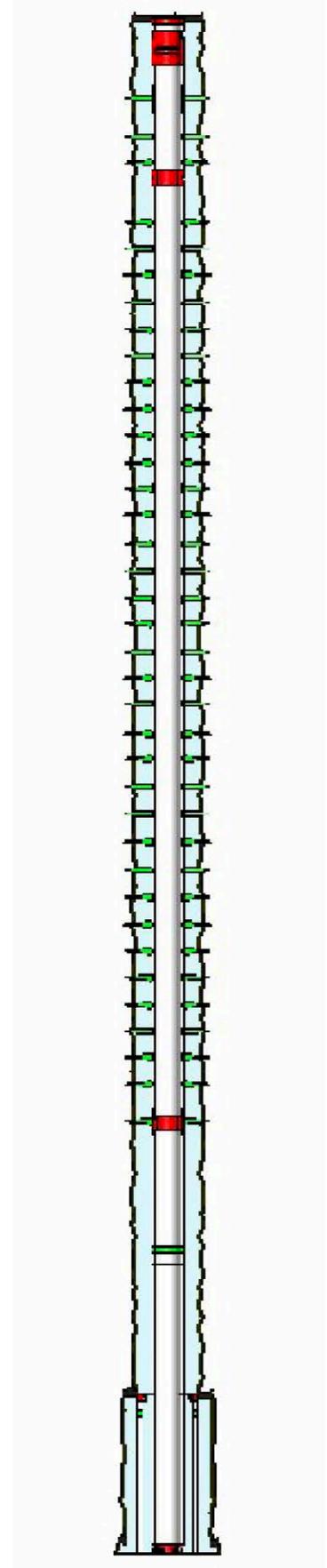
US ROCKIES REGION

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
3/17/2014 12:00AM	MESAVERDE/			9,232.0	9,233.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,240.0	9,241.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,272.0	9,273.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,286.0	9,287.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,288.0	9,289.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,018.0	10,019.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,033.0	10,034.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,062.0	10,063.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,085.0	10,086.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,112.0	10,114.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			10,124.0	10,126.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION
Operation Summary Report

US ROCKIES REGION								
Operation Summary Report								
Well: NBU 922-31F1BS BLACK					Spud Date: 8/24/2013			
Project: UTAH-UINTAH			Site: NBU 922-31B PAD			Rig Name No: SWABBCO 6/6		
Event: COMPLETION			Start Date: 2/12/2014			End Date: 4/8/2014		
Active Datum: RKB @4,916.00usft (above Mean Sea Level)				UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/12/2014	7:00 - 12:00	5.00	SUBSPR	32	F	P		RU IPS RIH TAGGED CEMENT @ 4,940 DRILLED OUT CEMENT FROM 4,940 TO DV TOOL@ 5,046. DRILLED OUT DV TOOL 45 MIN, RIH TAGGED FLOAT COLLAR @ 10,505 CIRCULATE CLEAN, POOH, ND FRAC VALVE, INSTALL TREE SWIFN
2/18/2014	-							
3/5/2014	12:00 - 13:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 9000 PSI. HELD FOR 15 MIN LOST -61 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 505 PSI HELD FOR 5 MIN LOST -98 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1 BBL H2O
3/17/2014	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 11:00	3.75	FRAC	37	E	P		MIRU CASED HOLE SOLUTIONS, RIH PERF STG #1 AS DESIGNED, SWIFN.
3/18/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 15:30	9.00	FRAC	36	H	P		FRAC STG #1) WHP 262 PSI, BRK 3534 PSI @ 5.7 BPM. ISIP 1454 PSI, FG. 0.58 ISIP 3287 PSI, FG. 0.77, NPI 1833 PSI, SCREENED OUT 76 BBLS INTO FLUSH W/ 80 BBLS LEFT TO FLUSH, FLOWED BACK FOR 20 MIN & REFLUSHED, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 1501 PSI, BRK 3138 PSI @ 4.1 BPM. ISIP 2695 PSI, FG. 0.73 ISIP 3025 PSI, FG. 0.77, NPI 330 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, SWI, SDFN.
3/19/2014	6:00 - 6:15	0.25	FRAC	48		P		HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31F1BS BLACK

Spud Date: 8/24/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: SWABBCCO 6/6

Event: COMPLETION

Start Date: 2/12/2014

End Date: 4/8/2014

Active Datum: RKB @4,916.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:15 - 18:00	11.75	FRAC	36	H	P		FRAC STG #3) WHP 1950 PSI, BRK 3115 PSI @ 3.8 BPM. ISIP 2128 PSI, FG. 0.68 ISIP 2893 PSI, FG. 0.76, NPI 765 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 1974 PSI, BRK 2855 PSI @ 3.5 BPM. ISIP 2271 PSI, FG. 0.7 ISIP 2928 PSI, FG. 0.77, NPI 657 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, X/O TO FRAC. FRAC STG #5) WHP 1450 PSI, BRK 3279 PSI @ 4.3 BPM. ISIP 2302 PSI, FG. 0.71 ISIP 2481 PSI, FG. 0.73, NPI 179 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED, SWI, SDFN. HSM-JSA
3/20/2014	6:00 - 6:15	0.25	FRAC	48		P		
	6:15 - 17:00	10.75	FRAC	36	H	P		FRAC STG #6) WHP 704 PSI, BRK 2426 PSI @ 5.8 BPM. ISIP 1730 PSI, FG. 0.65 ISIP 2377 PSI, FG. 0.72, NPI 647 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 1030 PSI, BRK 2180 PSI @ 3.8 BPM. ISIP 1638 PSI, FG. 0.64 ISIP 2458 PSI, FG. 0.74, NPI 820 PSI, X/O TO WL. SET CBP & PERF STG #8 AS DESIGNED, SWI, SDFN. HSM-JSA
3/22/2014	6:00 - 6:15	0.25	FRAC	48		P		
	6:15 - 18:30	12.25	FRAC	36	H	P		FRAC STG #8) WHP 1275 PSI, BRK 2771 PSI @ 3.9 BPM. ISIP 1725 PSI, FG. 0.66 ISIP 2442 PSI, FG. 0.75, NPI 717 PSI, X/O TO WL. SET CBP & PERF STG #9 AS DESIGNED, X/O TO FRAC. FRAC STG #9) WHP 1420 PSI, BRK 2152 PSI @ 3.4 BPM. ISIP 1336 PSI, FG. 0.61 ISIP 1809 PSI, FG. 0.68, NPI 473 PSI, X/O TO WL. SET CBP & PERF STG #10 AS DESIGNED, X/O TO FRAC. FRAC STG #10) WHP 1534 PSI, BRK 1720 PSI @ 3.1 BPM. ISIP 1509 PSI, FG. 0.64 ISIP 1984 PSI, FG. 0.71, NPI 475 PSI, X/O TO WL. SET CBP & PERF STG #11 AS DESIGNED, SWI, SDFN. HSM-JSA
3/23/2014	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31F1BS BLACK		Spud Date: 8/24/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 2/12/2014	End Date: 4/8/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NWN/E/0/9/S/22/E/31/0/0/26/PM/N/1004/E/0/2230/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 14:00	6.75	FRAC	36	H	P		FRAC STG #11) WHP 1164 PSI, BRK 2849 PSI @ 5.2 BPM. ISIP 1447 PSI, FG. 0.64 ISIP 2545 PSI, FG. 0.79, NPI 1098 PSI, X/O TO WL. SET KILL PLUG RDMO WL & FRAC EQUIP. TOTAL CLEAN FLUID- 14824 BBLS TOTAL SAND- 309087 LBS
4/7/2014	7:00 - 7:30	0.50	DRLOUT	48		P		POBS
	7:30 - 15:00	7.50	DRLOUT	31	I	P		MIRU, 6TH WELL (BLACKHAWK) OF 6 ON PAD, NDWH, NU BOP'S, BJD, PU POBS, BIT, SN, TIH 150 JTS J-55 TBG, PU 6' PUP, 77 JTS L-80, TIH TAG KILL PLUG, 227 JTS, 7162', PU PWR SWIVEL BREAK CIRC, TEST BOP'S 3000#, ,SWIFN
4/8/2014	7:00 - 7:30	0.50	DRLOUT	48		P		H2S
	7:30 - 16:30	9.00	DRLOUT	44	C	P		BREAK CIRC, MILL 11 CBP'S THRU BJD, C/O TO PBTD, 0' SAND PU, LAND TBG, ND BOP'S, NUWH, POBS 1500#, TURN TO PROD RDMO PLUG# 1 7162' 15' SAND 9 MIN 100# KICK PLUG# 2 7316' 25' SAND 7 MIN 200# KICK PLUG# 3 7505' 20' SAND 9 MIN 100# KICK PLUG# 4 7713' 60' SAND 8 MIN 100# KICK PLUG# 5 7978' 30' SAND 5 MIN 200# KICK PLUG# 6 8166' 25' SAND 9 MIN 200# KICK PLUG# 7 8417' 30' SAND 9 MIN 100# KICK PLUG# 8 8692' 30' SAND 5 MIN 100# KICK PLUG# 9 8879' 25' SAND 9 MIN 100# KICK PLUG# 10 9076' 30' SAND 5 MIN 100# KICK PLUG# 11 9319' 30' SAND 9 MIN 200# KICK PBTD 10,300.43' BTM PERF 10126" KB 24.00' HANGER 4.125" .83' TBG 138 JTS L-80 4337.90' TBG PUP JT L-80 6.00' TBG 150 JTS J-55 4728.08' XN SN 1.875" 2.20' EOT 9098.51' FRAC WTR 14,824 BBLS RCVD 4,520 BBLS LTR 10,304 BBLS GAS RCVD ON MILL OUT 960 MCF WELL TURNED TO SALES @ 09:00 HR ON 4/8/2014. 1600 MCFD, 1680 BWPD, FCP 1850#< FTP 1632#, OPEN CHOKE.
	16:30 - 16:30	0.00	DRLOUT	50				

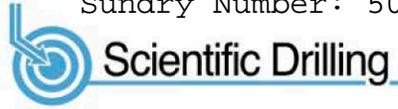
Sundry Number: 50821 API Well Number: 43047510920000

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

Site: NBU 922-31B PAD

Well: NBU 922-31F1BS

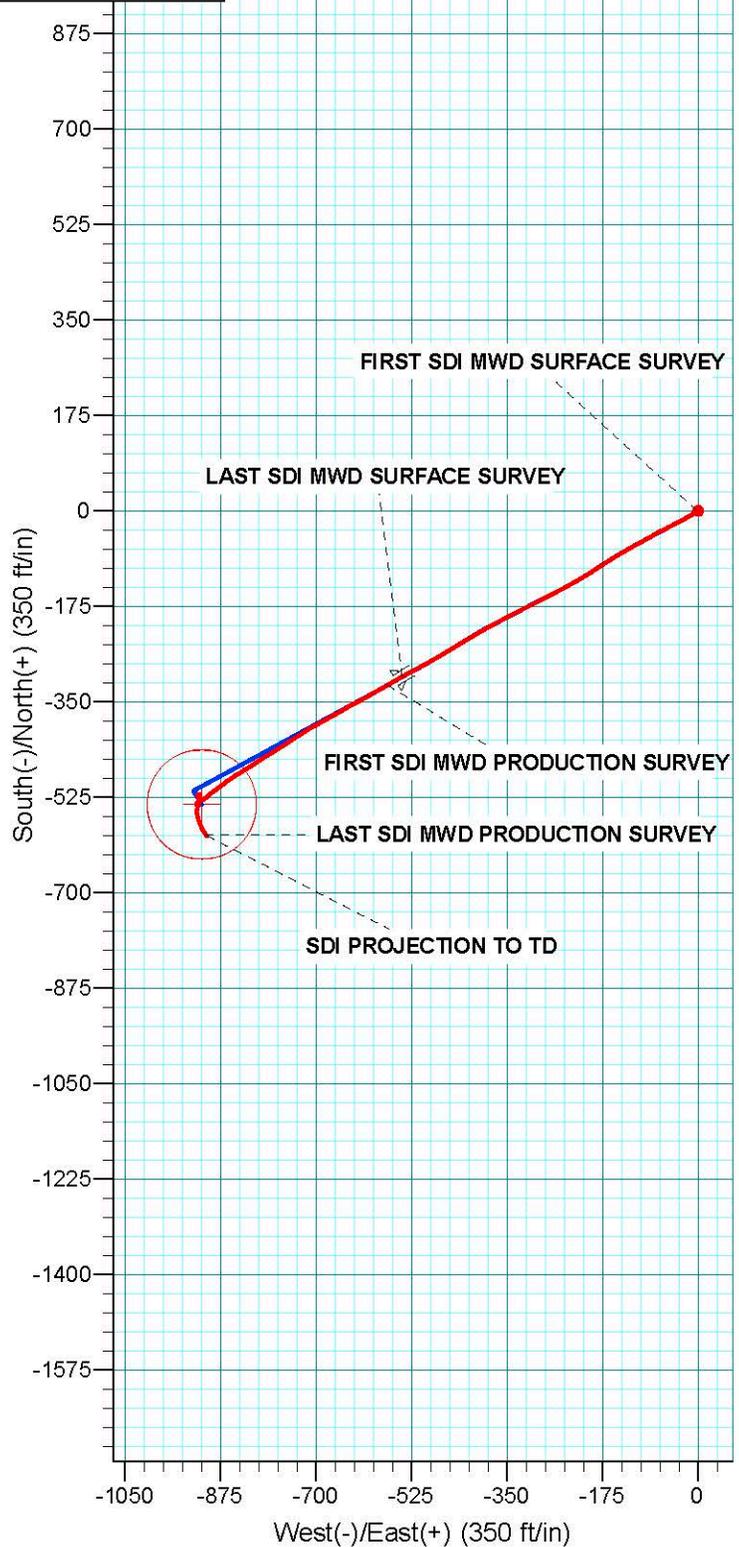
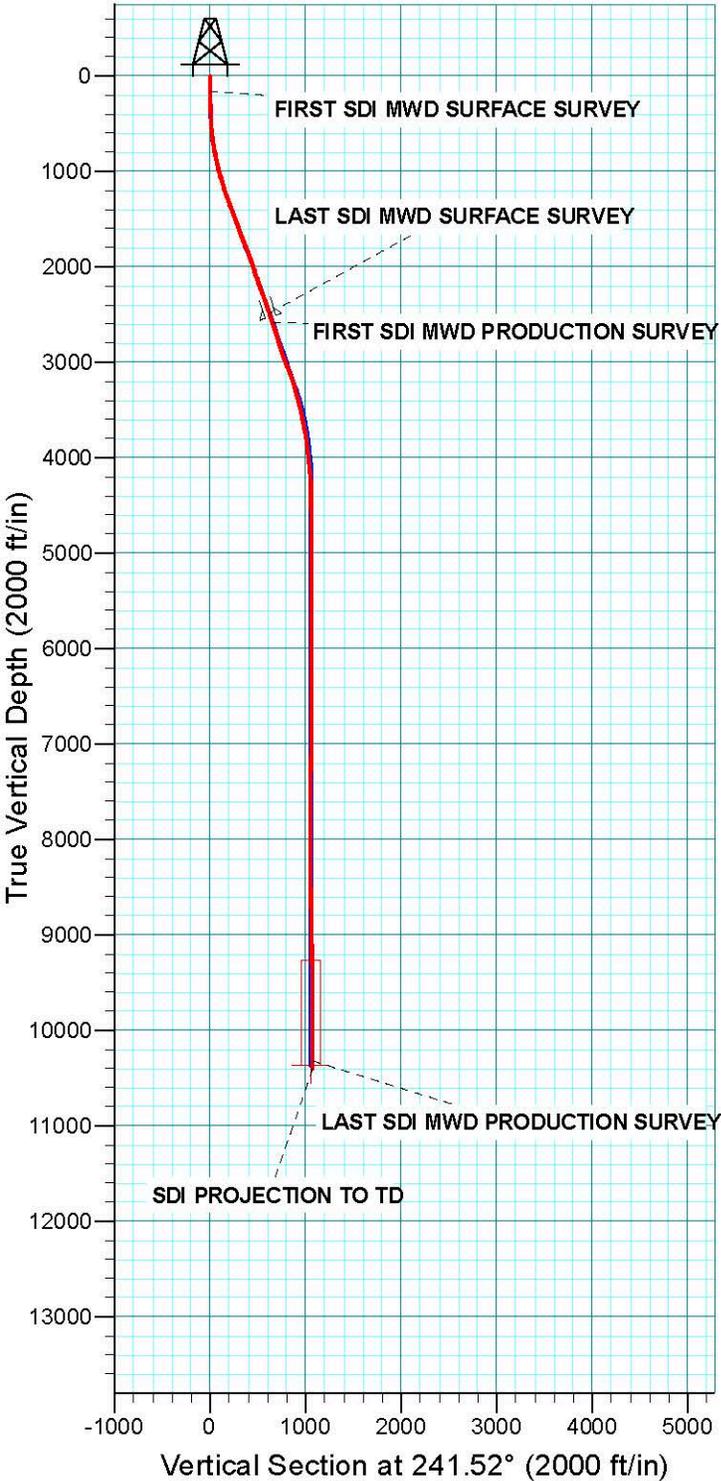
Wellbore: OH



WELL DETAILS: NBU 922-31F1BS

GL 4892 & KB 24 @ 4916.00ft (SST 54)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14528592.42	2065976.19	39.9970360	-109.4805580





US ROCKIES REGION PLANNING

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

NBU 922-31B PAD

NBU 922-31F1BS

OH

Design: OH

Standard Survey Report

27 January, 2014



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31F1BS	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 922-31B PAD, SECTION 31 T9S R22E				
Site Position:		Northing:	14,528,641.40 usft	Latitude:	39.9971700
From:	Lat/Long	Easting:	2,065,986.00 usft	Longitude:	-109.4805200
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.98 °

Well	NBU 922-31F1BS, 1004 FNL 2230 FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,528,592.43 usft	Latitude:	39.9970360
	+E/-W	0.00 ft	Easting:	2,065,976.19 usft	Longitude:	-109.4805580
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,892.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/29/2013	10.84	65.80	52,014

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	241.52	

Survey Program	Date	1/27/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
20.00	2,585.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,685.00	10,565.00	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	
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	
164.00	0.70	269.10	164.00	-0.01	-0.88	0.78	0.49	0.49	0.00	
FIRST SDI MWD SURFACE SURVEY										
219.00	0.97	232.19	218.99	-0.30	-1.58	1.54	1.07	0.49	-67.11	
302.00	2.20	234.38	301.96	-1.66	-3.43	3.81	1.48	1.48	2.64	
386.00	2.37	233.94	385.89	-3.62	-6.15	7.13	0.20	0.20	-0.52	
476.00	3.43	240.10	475.77	-6.06	-9.99	11.67	1.23	1.18	6.84	
566.00	5.19	241.94	565.52	-9.32	-15.91	18.43	1.96	1.96	2.04	
656.00	7.39	241.06	654.97	-14.04	-24.57	28.29	2.45	2.44	-0.98	



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31F1BS	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)	
746.00	9.41	241.94	744.00	-20.30	-36.13	41.44	2.25	2.24	0.98	
836.00	11.34	242.91	832.52	-27.79	-50.50	57.64	2.15	2.14	1.08	
926.00	13.10	242.12	920.48	-36.59	-67.40	76.69	1.96	1.96	-0.88	
1,016.00	14.68	240.80	1,007.85	-46.92	-86.37	98.29	1.79	1.76	-1.47	
1,106.00	16.44	241.59	1,094.54	-58.55	-107.53	122.43	1.97	1.96	0.88	
1,196.00	17.67	240.45	1,180.59	-71.34	-130.61	148.82	1.42	1.37	-1.27	
1,286.00	19.31	238.09	1,265.94	-85.95	-155.13	177.34	2.00	1.82	-2.62	
1,376.00	20.50	236.83	1,350.56	-102.43	-180.95	207.90	1.41	1.32	-1.40	
1,466.00	21.28	238.16	1,434.64	-119.67	-208.02	239.91	1.01	0.87	1.48	
1,556.00	20.22	242.17	1,518.81	-135.55	-235.65	271.77	1.97	-1.18	4.46	
1,646.00	19.86	241.91	1,603.36	-150.01	-262.89	302.61	0.41	-0.40	-0.29	
1,736.00	20.40	243.26	1,687.86	-164.27	-290.38	333.57	0.79	0.60	1.50	
1,826.00	21.42	242.98	1,771.93	-178.79	-319.03	365.68	1.14	1.13	-0.31	
1,916.00	21.79	241.85	1,855.61	-194.14	-348.40	398.81	0.62	0.41	-1.26	
2,006.00	19.70	242.29	1,939.77	-209.07	-376.56	430.69	2.33	-2.32	0.49	
2,096.00	18.73	240.27	2,024.76	-223.29	-402.54	460.31	1.31	-1.08	-2.24	
2,186.00	18.99	239.22	2,109.93	-237.95	-427.67	489.38	0.48	0.29	-1.17	
2,276.00	19.61	237.37	2,194.87	-253.59	-452.97	519.08	0.97	0.69	-2.06	
2,456.00	19.08	242.38	2,364.72	-283.52	-504.48	578.63	0.97	-0.29	2.78	
2,546.00	19.43	241.59	2,449.68	-297.46	-530.68	608.30	0.48	0.39	-0.88	
2,585.00	19.41	240.44	2,486.46	-303.74	-542.02	621.27	0.98	-0.05	-2.95	
LAST SDI MWD SURFACE SURVEY										
2,625.50	18.67	240.22	2,524.75	-310.28	-553.50	634.48	1.83	-1.82	-0.55	
8 5/8"										
2,685.00	17.59	239.86	2,581.29	-319.53	-569.55	652.99	1.83	-1.82	-0.60	
FIRST SDI MWD PRODUCTION SURVEY										
2,780.00	18.38	240.57	2,671.65	-334.10	-595.01	682.31	0.86	0.83	0.75	
2,875.00	16.62	241.97	2,762.25	-347.84	-620.04	710.88	1.90	-1.85	1.47	
2,969.00	18.47	239.95	2,851.87	-361.62	-644.80	739.21	2.07	1.97	-2.15	
3,065.00	20.22	241.09	2,942.45	-377.25	-672.49	771.00	1.86	1.82	1.19	
3,159.00	20.66	240.65	3,030.53	-393.23	-701.16	803.83	0.50	0.47	-0.47	
3,254.00	19.79	236.79	3,119.68	-410.26	-729.23	836.61	1.68	-0.92	-4.06	
3,349.00	18.03	236.87	3,209.55	-427.10	-755.00	867.30	1.85	-1.85	0.08	
3,444.00	16.62	238.37	3,300.23	-442.26	-778.88	895.52	1.56	-1.48	1.58	
3,539.00	15.56	237.23	3,391.51	-456.29	-801.16	921.79	1.16	-1.12	-1.20	
3,634.00	13.01	237.75	3,483.57	-468.89	-820.92	945.17	2.69	-2.68	0.55	
3,729.00	12.13	238.37	3,576.29	-479.83	-838.47	965.81	0.94	-0.93	0.65	
3,823.00	10.20	238.02	3,668.51	-489.42	-853.94	983.98	2.05	-2.05	-0.37	
3,919.00	8.79	231.78	3,763.19	-498.46	-866.91	999.69	1.82	-1.47	-6.50	
4,014.00	7.74	232.22	3,857.20	-506.87	-877.67	1,013.16	1.11	-1.11	0.46	
4,110.00	7.56	234.59	3,952.35	-514.49	-887.93	1,025.81	0.38	-0.19	2.47	
4,205.00	5.89	229.14	4,046.69	-521.30	-896.71	1,036.77	1.88	-1.76	-5.74	
4,300.00	4.40	235.20	4,141.31	-526.57	-903.39	1,045.16	1.67	-1.57	6.38	
4,395.00	3.43	244.17	4,236.09	-529.89	-908.94	1,051.62	1.20	-1.02	9.44	



Scientific Drilling

Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31F1BS	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)
4,491.00	1.93	247.16	4,331.98	-531.77	-913.01	1,056.10	1.57	-1.56	3.11
4,586.00	0.44	186.34	4,426.96	-532.75	-914.53	1,057.90	1.85	-1.57	-64.02
4,681.00	0.97	180.98	4,521.95	-533.92	-914.58	1,058.50	0.56	0.56	-5.64
4,777.00	1.06	191.52	4,617.94	-535.60	-914.77	1,059.47	0.22	0.09	10.98
4,872.00	0.26	359.48	4,712.93	-536.24	-914.95	1,059.93	1.38	-0.84	176.80
4,968.00	0.18	106.18	4,808.93	-536.07	-914.81	1,059.72	0.37	-0.08	111.15
5,062.00	0.65	202.55	4,902.93	-536.60	-914.87	1,060.03	0.74	0.50	102.52
5,157.00	0.79	167.88	4,997.92	-537.74	-914.94	1,060.64	0.47	0.15	-36.49
5,252.00	0.62	100.73	5,092.92	-538.48	-914.29	1,060.42	0.83	-0.18	-70.68
5,348.00	0.88	334.78	5,188.91	-537.91	-914.10	1,059.98	1.40	0.27	-131.20
5,443.00	0.44	1.42	5,283.90	-536.88	-914.40	1,059.76	0.55	-0.46	28.04
5,538.00	0.79	336.89	5,378.90	-535.91	-914.65	1,059.51	0.45	0.37	-25.82
5,633.00	0.26	318.88	5,473.90	-535.15	-915.05	1,059.50	0.58	-0.56	-18.96
5,728.00	0.79	286.71	5,568.89	-534.80	-915.82	1,060.01	0.62	0.56	-33.86
5,824.00	0.88	264.56	5,664.88	-534.68	-917.18	1,061.15	0.35	0.09	-23.07
5,919.00	0.62	223.78	5,759.87	-535.12	-918.27	1,062.31	0.61	-0.27	-42.93
6,014.00	1.14	206.11	5,854.86	-536.34	-919.04	1,063.57	0.61	0.55	-18.60
6,109.00	0.97	176.23	5,949.85	-537.99	-919.40	1,064.68	0.60	-0.18	-31.45
6,204.00	0.62	114.36	6,044.84	-539.00	-918.88	1,064.71	0.92	-0.37	-65.13
6,299.00	0.62	5.63	6,139.84	-538.70	-918.36	1,064.11	1.06	0.00	-114.45
6,394.00	0.26	40.53	6,234.83	-538.03	-918.17	1,063.62	0.46	-0.38	36.74
6,490.00	0.18	347.27	6,330.83	-537.72	-918.06	1,063.37	0.22	-0.08	-55.48
6,585.00	0.26	161.46	6,425.83	-537.78	-918.03	1,063.37	0.46	0.08	183.36
6,679.00	0.18	141.78	6,519.83	-538.09	-917.87	1,063.38	0.12	-0.09	-20.94
6,774.00	0.44	209.19	6,614.83	-538.53	-917.95	1,063.66	0.43	0.27	70.96
6,869.00	0.26	87.20	6,709.83	-538.84	-917.91	1,063.78	0.65	-0.19	-128.41
6,964.00	1.58	7.83	6,804.82	-537.53	-917.52	1,062.81	1.63	1.39	-83.55
7,058.00	1.23	21.19	6,898.79	-535.30	-916.98	1,061.27	0.51	-0.37	14.21
7,153.00	0.97	42.46	6,993.77	-533.76	-916.07	1,059.73	0.50	-0.27	22.39
7,248.00	1.06	9.15	7,088.76	-532.30	-915.39	1,058.44	0.62	0.09	-35.06
7,343.00	1.49	1.86	7,183.73	-530.20	-915.21	1,057.28	0.48	0.45	-7.67
7,439.00	0.97	349.81	7,279.71	-528.15	-915.31	1,056.39	0.60	-0.54	-12.55
7,534.00	2.11	347.97	7,374.68	-525.65	-915.82	1,055.64	1.20	1.20	-1.94
7,628.00	1.67	355.61	7,468.62	-522.59	-916.28	1,054.60	0.54	-0.47	8.13
7,723.00	0.70	344.01	7,563.60	-520.65	-916.55	1,053.90	1.05	-1.02	-12.21
7,818.00	0.53	40.09	7,658.60	-519.76	-916.42	1,053.37	0.63	-0.18	59.03
7,913.00	0.70	76.21	7,753.59	-519.28	-915.58	1,052.40	0.44	0.18	38.02
8,008.00	0.97	125.08	7,848.58	-519.61	-914.36	1,051.48	0.77	0.28	51.44
8,103.00	0.70	159.18	7,943.57	-520.61	-913.49	1,051.20	0.58	-0.28	35.89
8,199.00	1.41	166.65	8,039.56	-522.31	-913.01	1,051.59	0.75	0.74	7.78
8,294.00	0.87	169.89	8,134.54	-524.16	-912.61	1,052.12	0.57	-0.57	3.41
8,390.00	0.88	167.53	8,230.53	-525.59	-912.33	1,052.55	0.04	0.01	-2.46
8,484.00	0.79	182.29	8,324.52	-526.95	-912.20	1,053.08	0.25	-0.10	15.70



Scientific Drilling
Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31F1BS	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)	
8,579.00	0.97	179.39	8,419.51	-528.40	-912.21	1,053.79	0.20	0.19	-3.05	
8,674.00	1.14	193.28	8,514.49	-530.13	-912.42	1,054.80	0.32	0.18	14.62	
8,769.00	0.88	207.61	8,609.48	-531.69	-912.98	1,056.03	0.38	-0.27	15.08	
8,865.00	1.76	210.60	8,705.45	-533.62	-914.07	1,057.91	0.92	0.92	3.11	
8,960.00	1.45	191.44	8,800.41	-536.05	-915.05	1,059.93	0.65	-0.33	-20.17	
9,054.00	1.32	185.20	8,894.38	-538.29	-915.39	1,061.30	0.21	-0.14	-6.64	
9,150.00	1.49	198.82	8,990.36	-540.58	-915.89	1,062.83	0.39	0.18	14.19	
9,245.00	1.14	200.66	9,085.33	-542.63	-916.62	1,064.45	0.37	-0.37	1.94	
9,340.00	1.32	201.81	9,180.31	-544.53	-917.36	1,066.01	0.19	0.19	1.21	
9,436.00	2.49	187.49	9,276.25	-547.63	-918.04	1,068.08	1.31	1.22	-14.92	
9,531.00	2.64	178.25	9,371.16	-551.86	-918.25	1,070.28	0.46	0.16	-9.73	
9,626.00	2.55	164.80	9,466.06	-556.08	-917.62	1,071.75	0.65	-0.09	-14.16	
9,721.00	3.17	163.05	9,560.94	-560.64	-916.30	1,072.76	0.66	0.65	-1.84	
9,817.00	2.73	166.21	9,656.82	-565.40	-914.99	1,073.87	0.49	-0.46	3.29	
9,912.00	2.81	163.22	9,751.71	-569.82	-913.77	1,074.91	0.17	0.08	-3.15	
10,007.00	2.55	149.16	9,846.60	-573.87	-912.02	1,075.30	0.74	-0.27	-14.80	
10,103.00	2.59	161.19	9,942.51	-577.75	-910.22	1,075.58	0.56	0.04	12.53	
10,198.00	2.90	160.17	10,037.40	-582.05	-908.72	1,076.30	0.33	0.33	-1.07	
10,293.00	2.90	143.53	10,132.28	-586.24	-906.47	1,076.33	0.88	0.00	-17.52	
10,388.00	2.81	144.24	10,227.16	-590.06	-903.68	1,075.70	0.10	-0.09	0.75	
10,479.00	2.46	148.98	10,318.06	-593.55	-901.37	1,075.33	0.45	-0.38	5.21	
LAST SDI MWD PRODUCTION SURVEY										
10,565.00	2.46	148.98	10,403.98	-596.71	-899.47	1,075.16	0.00	0.00	0.00	
SDI PROJECTION TO TD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_NBU 922-31F1B	0.00	0.00	10,365.00	-537.92	-909.04	14,528,039.09	2,065,076.45	39.9955590	-109.4838030	
- actual wellpath misses target center by 57.96ft at 10523.68ft MD (10362.70 TVD, -595.19 N, -900.39 E)										
- Circle (radius 100.00)										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,625.50	2,524.75	8 5/8"	8.625	11.000	



Scientific Drilling
Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31F1BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31F1BS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
164.00	164.00	-0.01	-0.88	FIRST SDI MWD SURFACE SURVEY
2,585.00	2,486.46	-303.74	-542.02	LAST SDI MWD SURFACE SURVEY
2,685.00	2,581.29	-319.53	-569.55	FIRST SDI MWD PRODUCTION SURVEY
10,479.00	10,318.06	-593.55	-901.37	LAST SDI MWD PRODUCTION SURVEY
10,565.00	10,403.98	-596.71	-899.47	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____