

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 922-31D1BS	
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	1550 FNL 1273 FWL	SENW	31	9.0 S	22.0 E	S	
Top of Uppermost Producing Zone	320 FNL 527 FWL	NWNW	31	9.0 S	22.0 E	S	
At Total Depth	320 FNL 527 FWL	NWNW	31	9.0 S	22.0 E	S	
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 320			23. NUMBER OF ACRES IN DRILLING UNIT 124	
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 967			26. PROPOSED DEPTH MD: 9540 TVD: 9314	
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 43047510890000			APPROVAL  Permit Manager				

Proposed Hole, Casing, and Cement

String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9540		
Pipe	Grade	Length	Weight			
	Grade I-80 Buttress	9540	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2020		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2020	28.0			



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-31F Pad

NBU 922-31D1BS

NBU 922-31D1BS

Plan: PLAN #1 3-26-10 RHS

Standard Planning Report

26 March, 2010



Weatherford®

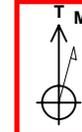
'APIWellNo:43047510890000'



Project: UINTAH COUNTY, UTAH (nad 27)
 Site: NBU 922-31F Pad
 Well: NBU 922-31D1BS
 Wellbore: NBU 922-31D1BS
 Section: SECTION 31 T9S R22E
 SHL: 1550 FNL 1273 FWL
 Design: PLAN #1 3-26-10 RHS
 Latitude: 39° 59' 43.901 N
 Longitude: 109° 29' 7.534 W
 GL: 4836.00
 KB: WELL @ 4850.00ft (Original Well Elev)



Weatherford



Azimuths to True North
 Magnetic North: 11.25°

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

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1174.00	1174.49	GREEN RIVER
4446.00	4572.11	WASATCH
8077.00	8303.11	MESAVERDE

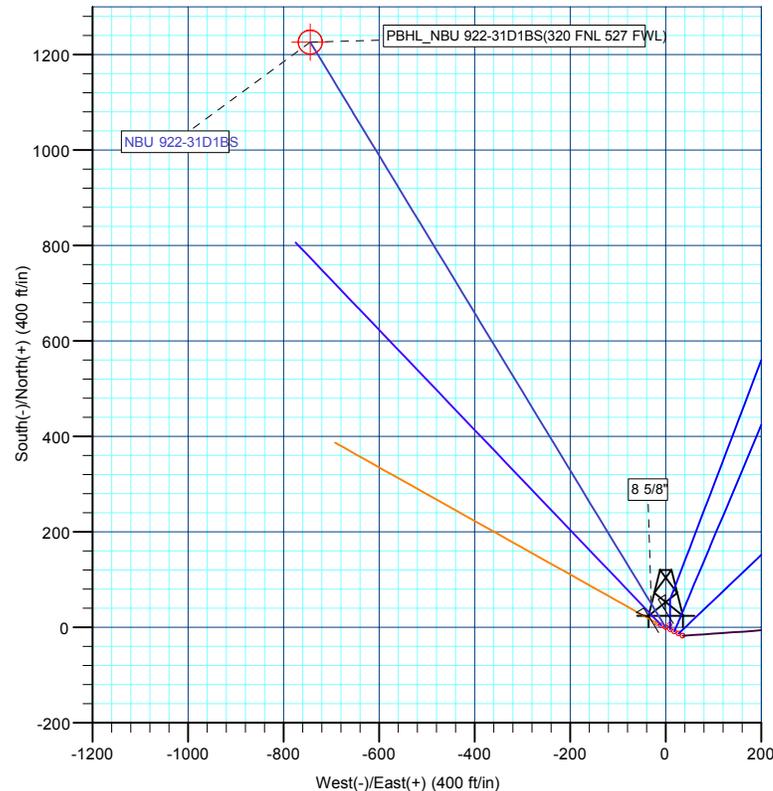
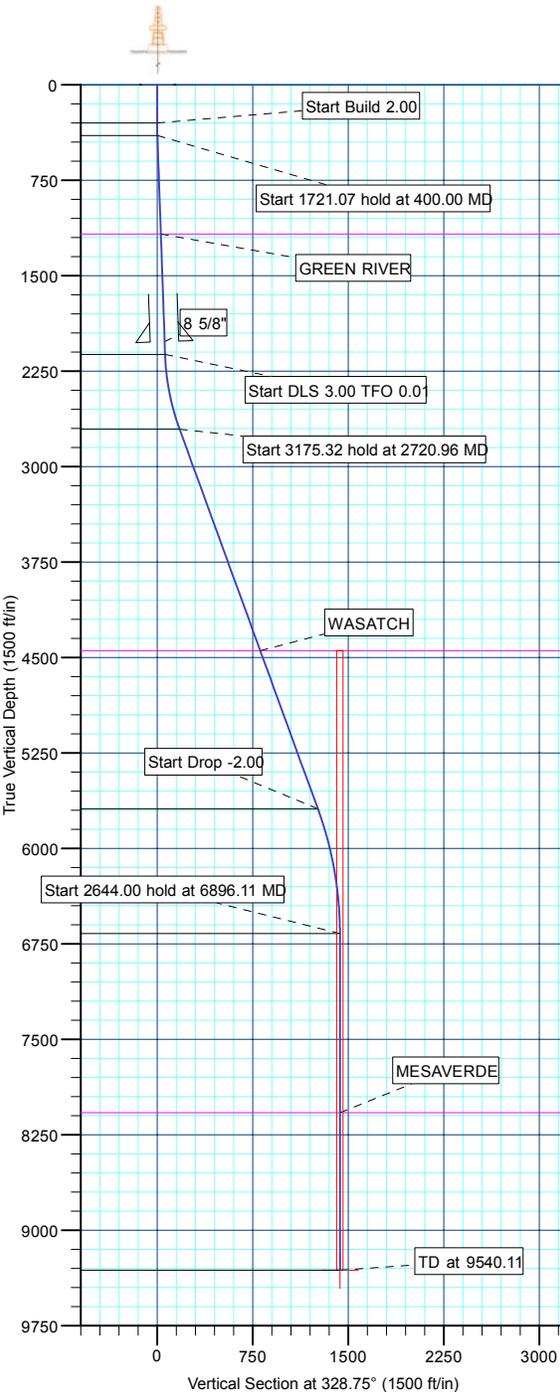
CASING DETAILS			
TVD	MD	Name	Size
2020.00	2021.01	8 5/8"	8.62

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 2.00
400.00	2.00	328.75	399.98	1.49	-0.91	2.00	328.75	1.75	Start 1721.07 hold at 400.00 MD
2121.07	2.00	328.75	2120.00	52.84	-32.07	0.00	0.00	61.81	Start DLS 3.00 TFO 0.01
2720.96	20.00	328.75	2706.45	150.29	-91.19	3.00	0.01	175.79	Start 3175.32 hold at 2720.96 MD
5896.28	20.00	328.75	5690.34	1078.64	-654.42	0.00	0.00	1261.64	Start Drop -2.00
6896.11	0.00	0.00	6670.00	1226.30	-744.00	2.00	180.00	1434.35	Start 2644.00 hold at 6896.11 MD
9540.11	0.00	0.00	9314.00	1226.30	-744.00	0.00	0.00	1434.35	TD at 9540.11

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9314.00	1226.30	-744.00	39° 59' 56.022 N	109° 29' 17.095 W	Circle (Radius: 25.00)

WELL DETAILS: NBU 922-31D1BS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4836.00 Latitude	Longitude	Slot
0.00	0.00	14528020.07	2064622.06	39° 59' 43.901 N	109° 29' 7.534 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 922-31D4BS, NBU 922-31D4BS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31D4CS, NBU 922-31D4CS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31F1BS, NBU 922-31F1BS, PLAN #1 3-26-10 RHS V0
—	PLAN #1 3-26-10 RHS



Plan: PLAN #1 3-26-10 RHS (NBU 922-31D1BS/NBU 922-31D1BS)
 Created By: Robert H. Scott Date: 16:07, March 26 2010



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31D1BS		
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 922-31D1BS					
Well Position	+N/-S	-8.74 ft	Northing:	14,528,020.07 ft	Latitude:	39° 59' 43.901 N
	+E/-W	17.93 ft	Easting:	2,064,622.06 ft	Longitude:	109° 29' 7.534 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,836.00 ft

Wellbore	NBU 922-31D1BS				
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	328.75

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	
400.00	2.00	328.75	399.98	1.49	-0.91	2.00	2.00	0.00	328.75	
2,121.07	2.00	328.75	2,120.00	52.84	-32.07	0.00	0.00	0.00	0.00	
2,720.96	20.00	328.75	2,706.45	150.29	-91.19	3.00	3.00	0.00	0.01	
5,896.28	20.00	328.75	5,690.34	1,078.64	-654.42	0.00	0.00	0.00	0.00	
6,896.11	0.00	0.00	6,670.00	1,226.30	-744.00	2.00	-2.00	0.00	180.00	
9,540.11	0.00	0.00	9,314.00	1,226.30	-744.00	0.00	0.00	0.00	0.00	PBHL_NBU 922-31



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31D1BS		
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 2.00										
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start 1721.07 hold at 400.00 MD										
400.00	2.00	328.75	399.98	1.49	-0.91	1.75	2.00	2.00	0.00	0.00
500.00	2.00	328.75	499.92	4.48	-2.72	5.24	0.00	0.00	0.00	0.00
600.00	2.00	328.75	599.86	7.46	-4.53	8.73	0.00	0.00	0.00	0.00
700.00	2.00	328.75	699.80	10.44	-6.34	12.22	0.00	0.00	0.00	0.00
800.00	2.00	328.75	799.74	13.43	-8.15	15.70	0.00	0.00	0.00	0.00
900.00	2.00	328.75	899.68	16.41	-9.96	19.19	0.00	0.00	0.00	0.00
1,000.00	2.00	328.75	999.61	19.39	-11.77	22.68	0.00	0.00	0.00	0.00
1,100.00	2.00	328.75	1,099.55	22.38	-13.58	26.17	0.00	0.00	0.00	0.00
GREEN RIVER										
1,174.49	2.00	328.75	1,174.00	24.60	-14.93	28.77	0.00	0.00	0.00	0.00
1,200.00	2.00	328.75	1,199.49	25.36	-15.39	29.66	0.00	0.00	0.00	0.00
1,300.00	2.00	328.75	1,299.43	28.34	-17.20	33.15	0.00	0.00	0.00	0.00
1,400.00	2.00	328.75	1,399.37	31.33	-19.01	36.64	0.00	0.00	0.00	0.00
1,500.00	2.00	328.75	1,499.31	34.31	-20.82	40.13	0.00	0.00	0.00	0.00
1,600.00	2.00	328.75	1,599.25	37.30	-22.63	43.62	0.00	0.00	0.00	0.00
1,700.00	2.00	328.75	1,699.19	40.28	-24.44	47.11	0.00	0.00	0.00	0.00
1,800.00	2.00	328.75	1,799.13	43.26	-26.25	50.60	0.00	0.00	0.00	0.00
1,900.00	2.00	328.75	1,899.07	46.25	-28.06	54.09	0.00	0.00	0.00	0.00
2,000.00	2.00	328.75	1,999.01	49.23	-29.87	57.58	0.00	0.00	0.00	0.00
8 5/8"										
2,021.01	2.00	328.75	2,020.00	49.86	-30.25	58.32	0.00	0.00	0.00	0.00
2,100.00	2.00	328.75	2,098.94	52.21	-31.68	61.07	0.00	0.00	0.00	0.00
Start DLS 3.00 TFO 0.01										
2,121.07	2.00	328.75	2,120.00	52.84	-32.07	61.81	0.00	0.00	0.00	0.00
2,200.00	4.37	328.75	2,198.80	56.59	-34.34	66.19	3.00	3.00	0.00	0.00
2,300.00	7.37	328.75	2,298.27	65.33	-39.64	76.42	3.00	3.00	0.00	0.00
2,400.00	10.37	328.75	2,397.06	78.51	-47.64	91.83	3.00	3.00	0.00	0.00
2,500.00	13.37	328.75	2,494.91	96.09	-58.30	112.39	3.00	3.00	0.00	0.00
2,600.00	16.37	328.75	2,591.55	118.02	-71.61	138.05	3.00	3.00	0.00	0.00
2,700.00	19.37	328.75	2,686.72	144.25	-87.52	168.73	3.00	3.00	0.00	0.00
Start 3175.32 hold at 2720.96 MD										
2,720.96	20.00	328.75	2,706.45	150.29	-91.19	175.79	3.00	3.00	0.00	0.00
2,800.00	20.00	328.75	2,780.73	173.40	-105.21	202.82	0.00	0.00	0.00	0.00
2,900.00	20.00	328.75	2,874.70	202.63	-122.94	237.01	0.00	0.00	0.00	0.00
3,000.00	20.00	328.75	2,968.67	231.87	-140.68	271.21	0.00	0.00	0.00	0.00
3,100.00	20.00	328.75	3,062.64	261.11	-158.42	305.41	0.00	0.00	0.00	0.00
3,200.00	20.00	328.75	3,156.61	290.34	-176.16	339.60	0.00	0.00	0.00	0.00
3,300.00	20.00	328.75	3,250.59	319.58	-193.89	373.80	0.00	0.00	0.00	0.00
3,400.00	20.00	328.75	3,344.56	348.82	-211.63	408.00	0.00	0.00	0.00	0.00
3,500.00	20.00	328.75	3,438.53	378.05	-229.37	442.19	0.00	0.00	0.00	0.00
3,600.00	20.00	328.75	3,532.50	407.29	-247.11	476.39	0.00	0.00	0.00	0.00
3,700.00	20.00	328.75	3,626.47	436.53	-264.85	510.59	0.00	0.00	0.00	0.00
3,800.00	20.00	328.75	3,720.44	465.76	-282.58	544.78	0.00	0.00	0.00	0.00
3,900.00	20.00	328.75	3,814.41	495.00	-300.32	578.98	0.00	0.00	0.00	0.00
4,000.00	20.00	328.75	3,908.38	524.24	-318.06	613.18	0.00	0.00	0.00	0.00
4,100.00	20.00	328.75	4,002.36	553.47	-335.80	647.37	0.00	0.00	0.00	0.00
4,200.00	20.00	328.75	4,096.33	582.71	-353.53	681.57	0.00	0.00	0.00	0.00
4,300.00	20.00	328.75	4,190.30	611.95	-371.27	715.77	0.00	0.00	0.00	0.00
4,400.00	20.00	328.75	4,284.27	641.18	-389.01	749.96	0.00	0.00	0.00	0.00
4,500.00	20.00	328.75	4,378.24	670.42	-406.75	784.16	0.00	0.00	0.00	0.00



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Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31D1BS		
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									
4,572.11	20.00	328.75	4,446.00	691.50	-419.54	808.82	0.00	0.00	0.00
4,600.00	20.00	328.75	4,472.21	699.66	-424.49	818.36	0.00	0.00	0.00
4,700.00	20.00	328.75	4,566.18	728.89	-442.22	852.55	0.00	0.00	0.00
4,800.00	20.00	328.75	4,660.15	758.13	-459.96	886.75	0.00	0.00	0.00
4,900.00	20.00	328.75	4,754.13	787.37	-477.70	920.95	0.00	0.00	0.00
5,000.00	20.00	328.75	4,848.10	816.60	-495.44	955.14	0.00	0.00	0.00
5,100.00	20.00	328.75	4,942.07	845.84	-513.17	989.34	0.00	0.00	0.00
5,200.00	20.00	328.75	5,036.04	875.08	-530.91	1,023.54	0.00	0.00	0.00
5,300.00	20.00	328.75	5,130.01	904.31	-548.65	1,057.73	0.00	0.00	0.00
5,400.00	20.00	328.75	5,223.98	933.55	-566.39	1,091.93	0.00	0.00	0.00
5,500.00	20.00	328.75	5,317.95	962.79	-584.12	1,126.12	0.00	0.00	0.00
5,600.00	20.00	328.75	5,411.92	992.02	-601.86	1,160.32	0.00	0.00	0.00
5,700.00	20.00	328.75	5,505.90	1,021.26	-619.60	1,194.52	0.00	0.00	0.00
5,800.00	20.00	328.75	5,599.87	1,050.50	-637.34	1,228.71	0.00	0.00	0.00
Start Drop -2.00									
5,896.28	20.00	328.75	5,690.34	1,078.64	-654.42	1,261.64	0.00	0.00	0.00
5,900.00	19.92	328.75	5,693.84	1,079.73	-655.07	1,262.91	2.00	-2.00	0.00
6,000.00	17.92	328.75	5,788.43	1,107.45	-671.89	1,295.34	2.00	-2.00	0.00
6,100.00	15.92	328.75	5,884.10	1,132.34	-686.99	1,324.44	2.00	-2.00	0.00
6,200.00	13.92	328.75	5,980.72	1,154.35	-700.35	1,350.19	2.00	-2.00	0.00
6,300.00	11.92	328.75	6,078.18	1,173.47	-711.95	1,372.55	2.00	-2.00	0.00
6,400.00	9.92	328.75	6,176.36	1,189.67	-721.77	1,391.50	2.00	-2.00	0.00
6,500.00	7.92	328.75	6,275.15	1,202.93	-729.82	1,407.01	2.00	-2.00	0.00
6,600.00	5.92	328.75	6,374.41	1,213.23	-736.07	1,419.06	2.00	-2.00	0.00
6,700.00	3.92	328.75	6,474.04	1,220.57	-740.52	1,427.64	2.00	-2.00	0.00
6,800.00	1.92	328.75	6,573.91	1,224.93	-743.16	1,432.74	2.00	-2.00	0.00
Start 2644.00 hold at 6896.11 MD									
6,896.11	0.00	0.00	6,670.00	1,226.30	-744.00	1,434.35	2.00	-2.00	0.00
6,900.00	0.00	0.00	6,673.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,000.00	0.00	0.00	6,773.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,100.00	0.00	0.00	6,873.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,200.00	0.00	0.00	6,973.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,300.00	0.00	0.00	7,073.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,400.00	0.00	0.00	7,173.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,500.00	0.00	0.00	7,273.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,600.00	0.00	0.00	7,373.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,700.00	0.00	0.00	7,473.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,800.00	0.00	0.00	7,573.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
7,900.00	0.00	0.00	7,673.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,000.00	0.00	0.00	7,773.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,100.00	0.00	0.00	7,873.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,200.00	0.00	0.00	7,973.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,300.00	0.00	0.00	8,073.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
MESAVERDE									
8,303.11	0.00	0.00	8,077.00	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,400.00	0.00	0.00	8,173.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,500.00	0.00	0.00	8,273.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,600.00	0.00	0.00	8,373.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,700.00	0.00	0.00	8,473.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,800.00	0.00	0.00	8,573.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
8,900.00	0.00	0.00	8,673.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
9,000.00	0.00	0.00	8,773.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
9,100.00	0.00	0.00	8,873.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31D1BS		
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)
9,200.00	0.00	0.00	8,973.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
9,300.00	0.00	0.00	9,073.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
9,400.00	0.00	0.00	9,173.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
9,500.00	0.00	0.00	9,273.89	1,226.30	-744.00	1,434.35	0.00	0.00	0.00
TD at 9540.11 - PBHL_NBU 922-31D1BS(320 FNL 527 FWL)									
9,540.11	0.00	0.00	9,314.00	1,226.30	-744.00	1,434.35	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 922-31D1 - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	9,314.00	1,226.30	-744.00	14,529,233.55	2,063,857.33	39° 59' 56.022 N	109° 29' 17.095 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,021.01	2,020.00	8 5/8"	8.62	11.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,174.49	1,174.00	GREEN RIVER			
4,572.11	4,446.00	WASATCH			
8,303.11	8,077.00	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 2.00	
400.00	399.98	1.49	-0.91	Start 1721.07 hold at 400.00 MD	
2,121.07	2,120.00	52.84	-32.07	Start DLS 3.00 TFO 0.01	
2,720.96	2,706.45	150.29	-91.19	Start 3175.32 hold at 2720.96 MD	
5,896.28	5,690.34	1,078.64	-654.42	Start Drop -2.00	
6,896.11	6,670.00	1,226.30	-744.00	Start 2644.00 hold at 6896.11 MD	
9,540.11	9,314.00	1,226.30	-744.00	TD at 9540.11	



ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)
NBU 922-31F Pad
NBU 922-31D1BS**

**NBU 922-31D1BS
PLAN #1 3-26-10 RHS**

Anticollision Report

26 March, 2010





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	9,540.11	PLAN #1 3-26-10 RHS (NBU 922-31D1BS	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)	342.19	328.19	10.02	-1.75	0.851	Level 1, CC
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	600.00	585.86	13.08	-9.56	0.578	Level 1, SF
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	2,121.07	2,106.00	62.31	-24.53	0.718	Level 1, ES
NBU 922-31C1AS - NBU 922-31C1AS - PLAN #1 3-26-1	300.00	300.00	20.20	19.11	18.490	CC, ES
NBU 922-31C1AS - NBU 922-31C1AS - PLAN #1 3-26-1	2,121.07	2,120.21	74.37	64.95	7.895	SF
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	300.00	300.00	10.23	9.13	9.361	CC, ES
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	2,121.07	2,120.91	41.56	32.11	4.396	SF
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	300.00	300.00	30.17	29.08	27.620	CC, ES
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	500.00	498.22	38.82	36.82	19.435	SF
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	300.00	300.00	9.97	8.88	9.130	CC, ES
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	5,500.00	5,496.33	246.43	198.13	5.103	SF
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	300.00	300.00	19.95	18.85	18.259	CC
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	400.00	399.30	20.23	18.69	13.185	ES
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	2,100.00	2,098.77	41.77	32.47	4.491	SF
NBU 922-31F1BS - NBU 922-31F1BS - PLAN #1 3-26-1C	300.00	300.00	39.89	38.80	36.519	CC, ES
NBU 922-31F1BS - NBU 922-31F1BS - PLAN #1 3-26-1C	500.00	495.44	53.22	51.23	26.797	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	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	56.97	5.46	8.40	17.22					
100.00	100.00	86.00	86.00	0.10	1.72	56.97	5.46	8.40	10.02	8.21	1.82	5.518		
200.00	200.00	186.00	186.00	0.32	5.44	56.97	5.46	8.40	10.02	4.26	5.76	1.740		
300.00	300.00	286.00	286.00	0.55	9.44	56.97	5.46	8.40	10.02	0.04	9.99	1.004	Level 2	
342.19	342.19	328.19	328.19	0.64	11.13	90.00	5.46	8.40	10.02	-1.75	11.77	0.851	Level 1, CC	
400.00	399.98	385.98	385.98	0.77	13.44	98.14	5.46	8.40	10.12	-4.09	14.21	0.712	Level 1	
500.00	499.92	485.92	485.92	1.00	17.44	116.16	5.46	8.40	11.16	-7.26	18.43	0.606	Level 1	
600.00	599.86	585.86	585.86	1.22	21.43	130.01	5.46	8.40	13.08	-9.56	22.65	0.578	Level 1, SF	
700.00	699.80	685.80	685.80	1.45	25.43	139.90	5.46	8.40	15.56	-11.31	26.87	0.579	Level 1	
800.00	799.74	785.74	785.74	1.68	29.43	146.93	5.46	8.40	18.37	-12.72	31.08	0.591	Level 1	
900.00	899.68	885.68	885.68	1.91	33.43	152.04	5.46	8.40	21.38	-13.93	35.30	0.606	Level 1	
1,000.00	999.61	985.61	985.61	2.15	37.42	155.86	5.46	8.40	24.51	-15.01	39.52	0.620	Level 1	

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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			
1,100.00	1,099.55	1,085.55	1,085.55	2.38	41.42	158.81	5.46	8.40	27.74	-16.01	43.74	0.634	Level 1		
1,200.00	1,199.49	1,185.49	1,185.49	2.61	45.42	161.14	5.46	8.40	31.02	-16.95	47.96	0.647	Level 1		
1,300.00	1,299.43	1,285.43	1,285.43	2.84	49.42	163.03	5.46	8.40	34.34	-17.84	52.18	0.658	Level 1		
1,400.00	1,399.37	1,385.37	1,385.37	3.07	53.41	164.58	5.46	8.40	37.69	-18.71	56.40	0.668	Level 1		
1,500.00	1,499.31	1,485.31	1,485.31	3.30	57.41	165.87	5.46	8.40	41.06	-19.56	60.62	0.677	Level 1		
1,600.00	1,599.25	1,585.25	1,585.25	3.54	61.41	166.97	5.46	8.40	44.46	-20.39	64.84	0.686	Level 1		
1,700.00	1,699.19	1,685.19	1,685.19	3.77	65.41	167.91	5.46	8.40	47.86	-21.20	69.07	0.693	Level 1		
1,800.00	1,799.13	1,785.13	1,785.13	4.00	69.41	168.73	5.46	8.40	51.28	-22.00	73.29	0.700	Level 1		
1,900.00	1,899.07	1,885.07	1,885.07	4.23	73.40	169.44	5.46	8.40	54.71	-22.80	77.51	0.706	Level 1		
2,000.00	1,999.01	1,985.01	1,985.01	4.46	77.40	170.07	5.46	8.40	58.14	-23.58	81.73	0.711	Level 1		
2,100.00	2,098.94	2,084.94	2,084.94	4.70	81.40	170.63	5.46	8.40	61.58	-24.36	85.95	0.717	Level 1		
2,121.07	2,120.00	2,106.00	2,106.00	4.75	82.24	170.74	5.46	8.40	62.31	-24.53	86.84	0.718	Level 1, ES		
2,200.00	2,198.80	2,184.80	2,184.80	4.94	85.39	171.33	5.46	8.40	66.64	-23.33	89.97	0.741	Level 1		
2,300.00	2,298.27	2,284.27	2,284.27	5.20	89.37	172.44	5.46	8.40	76.76	-16.92	93.68	0.819	Level 1		
2,400.00	2,397.06	2,383.06	2,383.06	5.49	93.32	173.65	5.46	8.40	92.07	-4.99	97.06	0.949	Level 1		
2,500.00	2,494.91	2,480.91	2,480.91	5.82	97.24	174.75	5.46	8.40	112.53	12.46	100.06	1.125	Level 2		
2,600.00	2,591.55	2,577.55	2,577.55	6.20	101.10	175.66	5.46	8.40	138.10	35.44	102.66	1.345	Level 3		
2,700.00	2,686.72	2,672.72	2,672.72	6.65	104.91	176.39	5.46	8.40	168.71	63.90	104.81	1.610			
2,720.96	2,706.45	2,692.45	2,692.45	6.75	105.70	176.52	5.46	8.40	175.76	70.56	105.20	1.671			
2,800.00	2,780.73	2,766.73	2,766.73	7.15	108.67	176.98	5.46	8.40	202.75	94.56	108.20	1.874			
2,900.00	2,874.70	2,860.70	2,860.70	7.68	112.43	177.42	5.46	8.40	236.91	124.92	111.99	2.115			
3,000.00	2,968.67	2,954.67	2,954.67	8.24	116.19	177.74	5.46	8.40	271.08	155.29	115.80	2.341			
3,100.00	3,062.64	3,048.64	3,048.64	8.82	119.95	178.00	5.46	8.40	305.26	185.65	119.61	2.552			
3,200.00	3,156.61	3,142.61	3,142.61	9.41	123.70	178.20	5.46	8.40	339.44	216.02	123.42	2.750			
3,300.00	3,250.59	3,236.59	3,236.59	10.02	127.46	178.36	5.46	8.40	373.62	246.38	127.24	2.936			
3,400.00	3,344.56	3,330.56	3,330.56	10.64	131.22	178.50	5.46	8.40	407.81	276.74	131.06	3.112			
3,500.00	3,438.53	3,424.53	3,424.53	11.27	134.98	178.62	5.46	8.40	441.99	307.10	134.89	3.277			
3,600.00	3,532.50	3,518.50	3,518.50	11.90	138.74	178.72	5.46	8.40	476.18	337.46	138.72	3.433			
3,700.00	3,626.47	3,612.47	3,612.47	12.54	142.50	178.80	5.46	8.40	510.37	367.82	142.55	3.580			
3,800.00	3,720.44	3,706.44	3,706.44	13.19	146.26	178.88	5.46	8.40	544.56	398.18	146.38	3.720			
3,900.00	3,814.41	3,800.41	3,800.41	13.84	150.02	178.94	5.46	8.40	578.75	428.53	150.22	3.853			
4,000.00	3,908.38	3,894.38	3,894.38	14.49	153.78	179.00	5.46	8.40	612.95	458.89	154.06	3.979			
4,100.00	4,002.36	3,988.36	3,988.36	15.15	157.53	179.06	5.46	8.40	647.14	489.24	157.90	4.098			
4,200.00	4,096.33	4,082.33	4,082.33	15.81	161.29	179.10	5.46	8.40	681.33	519.59	161.74	4.213			
4,300.00	4,190.30	4,176.30	4,176.30	16.48	165.05	179.15	5.46	8.40	715.52	549.94	165.58	4.321			
4,400.00	4,284.27	4,270.27	4,270.27	17.14	168.81	179.18	5.46	8.40	749.72	580.29	169.42	4.425			
4,500.00	4,378.24	4,364.24	4,364.24	17.81	172.57	179.22	5.46	8.40	783.91	610.64	173.27	4.524			
4,600.00	4,472.21	4,458.21	4,458.21	18.48	176.33	179.25	5.46	8.40	818.11	640.99	177.11	4.619			
4,700.00	4,566.18	4,552.18	4,552.18	19.15	180.09	179.28	5.46	8.40	852.30	671.34	180.96	4.710			
4,800.00	4,660.15	4,646.15	4,646.15	19.83	183.85	179.31	5.46	8.40	886.49	701.69	184.81	4.797			
4,900.00	4,754.13	4,740.13	4,740.13	20.50	187.61	179.34	5.46	8.40	920.69	732.03	188.66	4.880			
5,000.00	4,848.10	4,834.10	4,834.10	21.18	191.36	179.36	5.46	8.40	954.88	762.38	192.51	4.960			
5,100.00	4,942.07	4,928.07	4,928.07	21.86	195.12	179.38	5.46	8.40	989.08	792.72	196.36	5.037			
5,200.00	5,036.04	5,022.04	5,022.04	22.54	198.88	179.40	5.46	8.40	1,023.27	823.07	200.21	5.111			
5,300.00	5,130.01	5,116.01	5,116.01	23.22	202.64	179.42	5.46	8.40	1,057.47	853.41	204.06	5.182			
5,400.00	5,223.98	5,209.98	5,209.98	23.90	206.40	179.44	5.46	8.40	1,091.66	883.75	207.91	5.251			
5,500.00	5,317.95	5,303.95	5,303.95	24.58	210.16	179.46	5.46	8.40	1,125.86	914.10	211.76	5.317			
5,600.00	5,411.92	5,397.92	5,397.92	25.26	213.92	179.47	5.46	8.40	1,160.05	944.44	215.61	5.380			
5,700.00	5,505.90	5,491.90	5,491.90	25.94	217.68	179.49	5.46	8.40	1,194.25	974.78	219.47	5.442			
5,800.00	5,599.87	5,585.87	5,585.87	26.63	221.43	179.50	5.46	8.40	1,228.44	1,005.12	223.32	5.501			
5,896.28	5,690.34	5,676.34	5,676.34	27.28	225.05	179.52	5.46	8.40	1,261.37	1,034.33	227.03	5.556			
5,900.00	5,693.84	5,679.84	5,679.84	27.31	225.19	179.52	5.46	8.40	1,262.64	1,035.36	227.28	5.556			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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		
6,000.00	5,788.43	5,774.43	5,774.43	27.83	228.98	179.53	5.46	8.40	1,295.06	1,061.33	233.73	5.541		
6,100.00	5,884.10	5,870.10	5,870.10	28.31	232.80	179.55	5.46	8.40	1,324.17	1,084.15	240.02	5.517		
6,200.00	5,980.72	5,966.72	5,966.72	28.74	236.67	179.56	5.46	8.40	1,349.92	1,103.80	246.11	5.485		
6,300.00	6,078.18	6,064.18	6,064.18	29.13	240.57	179.57	5.46	8.40	1,372.28	1,120.28	252.00	5.446		
6,400.00	6,176.36	6,162.36	6,162.36	29.47	244.49	179.58	5.46	8.40	1,391.22	1,133.58	257.64	5.400		
6,500.00	6,275.15	6,261.15	6,261.15	29.76	248.45	179.59	5.46	8.40	1,406.73	1,143.69	263.04	5.348		
6,600.00	6,374.41	6,360.41	6,360.41	30.01	252.42	179.59	5.46	8.40	1,418.78	1,150.62	268.16	5.291		
6,700.00	6,474.04	6,460.04	6,460.04	30.21	256.40	179.60	5.46	8.40	1,427.36	1,154.38	272.99	5.229		
6,800.00	6,573.91	6,559.91	6,559.91	30.36	260.40	179.60	5.46	8.40	1,432.46	1,154.96	277.50	5.162		
6,896.11	6,670.00	6,656.00	6,656.00	30.47	264.24	148.35	5.46	8.40	1,434.07	1,152.55	281.52	5.094		
6,900.00	6,673.89	6,659.89	6,659.89	30.47	264.40	148.35	5.46	8.40	1,434.07	1,152.39	281.68	5.091		
7,000.00	6,773.89	6,759.89	6,759.89	30.58	268.40	148.35	5.46	8.40	1,434.07	1,148.21	285.86	5.017		
7,100.00	6,873.89	6,859.89	6,859.89	30.68	272.40	148.35	5.46	8.40	1,434.07	1,144.03	290.04	4.944		
7,200.00	6,973.89	6,959.89	6,959.89	30.79	276.40	148.35	5.46	8.40	1,434.07	1,139.85	294.22	4.874		
7,300.00	7,073.89	7,059.89	7,059.89	30.89	280.40	148.35	5.46	8.40	1,434.07	1,135.67	298.40	4.806		
7,400.00	7,173.89	7,159.89	7,159.89	31.00	284.40	148.35	5.46	8.40	1,434.07	1,131.49	302.58	4.739		
7,500.00	7,273.89	7,259.89	7,259.89	31.11	288.40	148.35	5.46	8.40	1,434.07	1,127.31	306.77	4.675		
7,600.00	7,373.89	7,359.89	7,359.89	31.22	292.40	148.35	5.46	8.40	1,434.07	1,123.12	310.95	4.612		
7,700.00	7,473.89	7,459.89	7,459.89	31.33	296.40	148.35	5.46	8.40	1,434.07	1,118.94	315.13	4.551		
7,800.00	7,573.89	7,559.89	7,559.89	31.45	300.40	148.35	5.46	8.40	1,434.07	1,114.75	319.32	4.491		
7,900.00	7,673.89	7,659.89	7,659.89	31.56	304.40	148.35	5.46	8.40	1,434.07	1,110.57	323.51	4.433		
8,000.00	7,773.89	7,759.89	7,759.89	31.68	308.40	148.35	5.46	8.40	1,434.07	1,106.38	327.69	4.376		
8,100.00	7,873.89	7,859.89	7,859.89	31.79	312.40	148.35	5.46	8.40	1,434.07	1,102.19	331.88	4.321		
8,200.00	7,973.89	7,959.89	7,959.89	31.91	316.40	148.35	5.46	8.40	1,434.07	1,098.00	336.07	4.267		
8,300.00	8,073.89	8,059.89	8,059.89	32.03	320.40	148.35	5.46	8.40	1,434.07	1,093.81	340.26	4.215		
8,400.00	8,173.89	8,159.89	8,159.89	32.15	324.40	148.35	5.46	8.40	1,434.07	1,089.62	344.45	4.163		
8,500.00	8,273.89	8,259.89	8,259.89	32.27	328.40	148.35	5.46	8.40	1,434.07	1,085.43	348.64	4.113		
8,600.00	8,373.89	8,359.89	8,359.89	32.39	332.40	148.35	5.46	8.40	1,434.07	1,081.24	352.83	4.064		
8,700.00	8,473.89	8,459.89	8,459.89	32.52	336.40	148.35	5.46	8.40	1,434.07	1,077.05	357.03	4.017		
8,800.00	8,573.89	8,559.89	8,559.89	32.64	340.40	148.35	5.46	8.40	1,434.07	1,072.86	361.22	3.970		
8,900.00	8,673.89	8,659.89	8,659.89	32.77	344.40	148.35	5.46	8.40	1,434.07	1,068.66	365.41	3.925		
9,000.00	8,773.89	8,759.89	8,759.89	32.89	348.40	148.35	5.46	8.40	1,434.07	1,064.47	369.61	3.880		
9,100.00	8,873.89	8,859.89	8,859.89	33.02	352.40	148.35	5.46	8.40	1,434.07	1,060.27	373.80	3.836		
9,200.00	8,973.89	8,959.89	8,959.89	33.15	356.40	148.35	5.46	8.40	1,434.07	1,056.08	378.00	3.794		
9,300.00	9,073.89	9,059.89	9,059.89	33.28	360.40	148.35	5.46	8.40	1,434.07	1,051.88	382.19	3.752		
9,400.00	9,173.89	9,159.89	9,159.89	33.41	364.40	148.35	5.46	8.40	1,434.07	1,047.68	386.39	3.711		
9,500.00	9,273.89	9,259.89	9,259.89	33.54	368.40	148.35	5.46	8.40	1,434.07	1,043.49	390.59	3.672		
9,540.11	9,314.00	9,300.00	9,300.00	33.60	370.00	148.35	5.46	8.40	1,434.07	1,041.80	392.27	3.656		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	115.64	-8.74	18.21	20.20						
100.00	100.00	100.00	100.00	0.10	0.10	115.64	-8.74	18.21	20.20	20.00	0.19	104.492			
200.00	200.00	200.00	200.00	0.32	0.32	115.64	-8.74	18.21	20.20	19.56	0.64	31.421			
300.00	300.00	300.00	300.00	0.55	0.55	115.64	-8.74	18.21	20.20	19.11	1.09	18.490 CC, ES			
400.00	399.98	400.01	399.99	0.77	0.77	144.78	-7.13	18.89	21.59	20.05	1.54	14.001			
500.00	499.92	499.96	499.88	1.00	1.00	141.31	-3.92	20.24	24.44	22.45	1.99	12.287			
600.00	599.86	599.91	599.77	1.22	1.22	138.58	-0.70	21.59	27.36	24.92	2.44	11.210			
700.00	699.80	699.86	699.66	1.45	1.45	136.38	2.51	22.94	30.33	27.44	2.90	10.477			
800.00	799.74	799.81	799.54	1.68	1.68	134.57	5.73	24.29	33.34	29.99	3.35	9.949			
900.00	899.68	899.76	899.43	1.91	1.91	133.06	8.94	25.65	36.38	32.57	3.81	9.551			
1,000.00	999.61	999.71	999.32	2.15	2.14	131.79	12.16	27.00	39.44	35.17	4.27	9.243			
1,100.00	1,099.55	1,099.66	1,099.21	2.38	2.37	130.70	15.38	28.35	42.51	37.79	4.73	8.997			
1,200.00	1,199.49	1,199.61	1,199.10	2.61	2.60	129.76	18.59	29.70	45.60	40.42	5.18	8.796			
1,300.00	1,299.43	1,299.56	1,298.99	2.84	2.83	128.93	21.81	31.06	48.70	43.06	5.64	8.629			
1,400.00	1,399.37	1,399.51	1,398.88	3.07	3.07	128.21	25.02	32.41	51.81	45.70	6.10	8.489			
1,500.00	1,499.31	1,499.46	1,498.77	3.30	3.30	127.57	28.24	33.76	54.92	48.36	6.56	8.369			
1,600.00	1,599.25	1,599.41	1,598.66	3.54	3.53	126.99	31.45	35.11	58.04	51.02	7.02	8.265			
1,700.00	1,699.19	1,699.36	1,698.54	3.77	3.76	126.48	34.67	36.47	61.17	53.69	7.48	8.175			
1,800.00	1,799.13	1,799.31	1,798.43	4.00	3.99	126.01	37.88	37.82	64.30	56.36	7.94	8.096			
1,900.00	1,899.07	1,899.26	1,898.32	4.23	4.22	125.59	41.10	39.17	67.43	59.03	8.40	8.025			
2,000.00	1,999.01	1,999.20	1,998.21	4.46	4.45	125.21	44.31	40.52	70.57	61.71	8.86	7.963			
2,100.00	2,098.94	2,099.15	2,098.10	4.70	4.69	124.86	47.53	41.87	73.71	64.39	9.32	7.906			
2,121.07	2,120.00	2,120.21	2,119.14	4.75	4.73	124.79	48.21	42.16	74.37	64.95	9.42	7.895 SF			
2,200.00	2,198.80	2,198.44	2,197.29	4.94	4.92	125.02	51.26	43.44	77.98	68.20	9.78	7.971			
2,300.00	2,298.27	2,296.70	2,295.18	5.20	5.17	125.01	58.99	46.69	86.62	76.36	10.27	8.438			
2,400.00	2,397.06	2,394.28	2,391.84	5.49	5.44	124.53	71.25	51.85	99.89	89.10	10.78	9.263			
2,500.00	2,494.91	2,490.88	2,486.74	5.82	5.74	123.76	87.85	58.83	117.71	106.36	11.35	10.374			
2,600.00	2,591.55	2,586.22	2,579.39	6.20	6.07	122.84	108.55	67.54	140.00	128.03	11.97	11.694			
2,700.00	2,686.72	2,680.06	2,669.38	6.65	6.45	121.84	133.05	77.85	166.65	153.98	12.68	13.145			
2,720.96	2,706.45	2,700.00	2,688.32	6.75	6.54	121.63	138.79	80.26	172.78	159.95	12.83	13.462			
2,800.00	2,780.73	2,772.39	2,756.54	7.15	6.88	121.08	161.12	89.65	196.73	183.23	13.50	14.570			
2,900.00	2,874.70	2,866.50	2,844.28	7.68	7.37	119.86	192.48	102.84	228.05	213.63	14.42	15.814			
3,000.00	2,968.67	2,961.36	2,932.68	8.24	7.88	118.91	224.19	116.17	259.48	244.10	15.38	16.868			
3,100.00	3,062.64	3,056.21	3,021.07	8.82	8.42	118.16	255.90	129.51	290.96	274.58	16.38	17.763			
3,200.00	3,156.61	3,151.06	3,109.47	9.41	8.98	117.56	287.60	142.85	322.48	305.07	17.41	18.526			
3,300.00	3,250.59	3,245.92	3,197.87	10.02	9.55	117.06	319.31	156.18	354.03	335.57	18.46	19.180			
3,400.00	3,344.56	3,340.77	3,286.26	10.64	10.14	116.65	351.02	169.52	385.59	366.06	19.53	19.744			
3,500.00	3,438.53	3,435.62	3,374.66	11.27	10.73	116.29	382.73	182.86	417.17	396.55	20.62	20.233			
3,600.00	3,532.50	3,530.48	3,463.06	11.90	11.33	115.99	414.44	196.19	448.76	427.04	21.72	20.660			
3,700.00	3,626.47	3,625.33	3,551.45	12.54	11.94	115.73	446.14	209.53	480.36	457.53	22.84	21.033			
3,800.00	3,720.44	3,720.19	3,639.85	13.19	12.56	115.50	477.85	222.86	511.97	488.01	23.97	21.363			
3,900.00	3,814.41	3,815.04	3,728.25	13.84	13.18	115.30	509.56	236.20	543.59	518.49	25.10	21.655			
4,000.00	3,908.38	3,909.89	3,816.64	14.49	13.81	115.11	541.27	249.54	575.21	548.97	26.25	21.915			
4,100.00	4,002.36	4,004.75	3,905.04	15.15	14.44	114.95	572.98	262.87	606.84	579.44	27.40	22.147			
4,200.00	4,096.33	4,099.60	3,993.44	15.81	15.07	114.81	604.68	276.21	638.47	609.91	28.56	22.356			
4,300.00	4,190.30	4,194.45	4,081.83	16.48	15.71	114.67	636.39	289.54	670.10	640.38	29.72	22.544			
4,400.00	4,284.27	4,289.31	4,170.23	17.14	16.35	114.55	668.10	302.88	701.74	670.85	30.89	22.715			
4,500.00	4,378.24	4,384.16	4,258.63	17.81	16.99	114.44	699.81	316.22	733.38	701.31	32.07	22.870			
4,600.00	4,472.21	4,479.02	4,347.02	18.48	17.63	114.34	731.52	329.55	765.02	731.78	33.25	23.011			
4,700.00	4,566.18	4,573.87	4,435.42	19.15	18.28	114.25	763.22	342.89	796.67	762.24	34.43	23.140			
4,800.00	4,660.15	4,668.72	4,523.82	19.83	18.92	114.16	794.93	356.22	828.31	792.70	35.61	23.259			
4,900.00	4,754.13	4,763.58	4,612.22	20.50	19.57	114.08	826.64	369.56	859.96	823.16	36.80	23.368			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	4,848.10	4,858.43	4,700.61	21.18	20.22	114.01	858.35	382.90	891.61	853.62	37.99	23.469						
5,100.00	4,942.07	4,953.28	4,789.01	21.86	20.88	113.94	890.06	396.23	923.26	884.07	39.18	23.562						
5,200.00	5,036.04	5,048.14	4,877.41	22.54	21.53	113.88	921.76	409.57	954.91	914.53	40.38	23.648						
5,300.00	5,130.01	5,142.99	4,965.80	23.22	22.18	113.82	953.47	422.90	986.56	944.98	41.58	23.728						
5,400.00	5,223.98	5,237.85	5,054.20	23.90	22.84	113.76	985.18	436.24	1,018.21	975.44	42.78	23.803						
5,500.00	5,317.95	5,332.70	5,142.60	24.58	23.49	113.71	1,016.89	449.58	1,049.87	1,005.89	43.98	23.873						
5,600.00	5,411.92	5,427.55	5,230.99	25.26	24.15	113.66	1,048.60	462.91	1,081.52	1,036.34	45.18	23.938						
5,700.00	5,505.90	5,522.41	5,319.39	25.94	24.81	113.61	1,080.30	476.25	1,113.17	1,066.79	46.38	23.999						
5,800.00	5,599.87	5,617.26	5,407.79	26.63	25.47	113.57	1,112.01	489.58	1,144.83	1,097.24	47.59	24.057						
5,896.28	5,690.34	5,708.58	5,492.89	27.28	26.10	113.53	1,142.54	502.42	1,175.31	1,126.56	48.75	24.108						
5,900.00	5,693.84	5,712.11	5,496.18	27.31	26.12	113.55	1,143.72	502.92	1,176.49	1,127.69	48.80	24.110						
6,000.00	5,788.43	5,807.17	5,584.77	27.83	26.79	114.02	1,175.50	516.29	1,207.43	1,157.46	49.96	24.167						
6,100.00	5,884.10	5,902.52	5,673.62	28.31	27.45	114.31	1,207.37	529.69	1,237.03	1,185.94	51.09	24.214						
6,200.00	5,980.72	5,998.04	5,762.65	28.74	28.11	114.44	1,239.30	543.12	1,265.30	1,213.13	52.17	24.254						
6,300.00	6,078.18	6,093.63	5,851.73	29.13	28.78	114.41	1,271.26	556.56	1,292.27	1,239.07	53.20	24.291						
6,400.00	6,176.36	6,189.17	5,940.76	29.47	29.45	114.24	1,303.19	569.99	1,317.98	1,263.80	54.18	24.327						
6,500.00	6,275.15	6,291.68	6,036.35	29.76	30.13	113.89	1,337.32	584.35	1,342.43	1,287.31	55.12	24.355						
6,600.00	6,374.41	6,418.13	6,155.61	30.01	30.78	113.30	1,376.02	600.62	1,364.23	1,308.26	55.97	24.376						
6,700.00	6,474.04	6,547.16	6,279.11	30.21	31.38	112.71	1,410.47	615.11	1,382.68	1,325.98	56.71	24.383						
6,800.00	6,573.91	6,678.56	6,406.46	30.36	31.92	112.09	1,440.25	627.64	1,397.68	1,340.34	57.34	24.376						
6,896.11	6,670.00	6,806.82	6,532.07	30.47	32.37	80.23	1,464.10	637.67	1,408.75	1,350.92	57.83	24.358						
6,900.00	6,673.89	6,812.04	6,537.21	30.47	32.39	80.20	1,464.96	638.03	1,409.13	1,351.28	57.85	24.358						
7,000.00	6,773.89	6,947.54	6,671.07	30.58	32.78	79.49	1,484.27	646.15	1,417.62	1,359.35	58.27	24.330						
7,100.00	6,873.89	7,084.76	6,807.48	30.68	33.09	78.99	1,497.86	651.87	1,423.59	1,364.96	58.63	24.280						
7,200.00	6,973.89	7,223.09	6,945.55	30.79	33.32	78.72	1,505.45	655.06	1,426.92	1,367.98	58.94	24.210						
7,300.00	7,073.89	7,351.45	7,073.89	30.89	33.46	78.66	1,507.11	655.76	1,427.65	1,368.45	59.19	24.119						
7,400.00	7,173.89	7,451.45	7,173.89	31.00	33.56	78.66	1,507.11	655.76	1,427.65	1,368.24	59.41	24.030						
7,500.00	7,273.89	7,551.45	7,273.89	31.11	33.66	78.66	1,507.11	655.76	1,427.65	1,368.01	59.63	23.941						
7,600.00	7,373.89	7,651.45	7,373.89	31.22	33.76	78.66	1,507.11	655.76	1,427.65	1,367.79	59.86	23.851						
7,700.00	7,473.89	7,751.45	7,473.89	31.33	33.86	78.66	1,507.11	655.76	1,427.65	1,367.56	60.08	23.761						
7,800.00	7,573.89	7,851.45	7,573.89	31.45	33.96	78.66	1,507.11	655.76	1,427.65	1,367.33	60.31	23.670						
7,900.00	7,673.89	7,951.45	7,673.89	31.56	34.06	78.66	1,507.11	655.76	1,427.65	1,367.10	60.55	23.580						
8,000.00	7,773.89	8,051.45	7,773.89	31.68	34.17	78.66	1,507.11	655.76	1,427.65	1,366.87	60.78	23.489						
8,100.00	7,873.89	8,151.45	7,873.89	31.79	34.27	78.66	1,507.11	655.76	1,427.65	1,366.63	61.02	23.398						
8,200.00	7,973.89	8,251.45	7,973.89	31.91	34.38	78.66	1,507.11	655.76	1,427.65	1,366.39	61.26	23.306						
8,300.00	8,073.89	8,351.45	8,073.89	32.03	34.49	78.66	1,507.11	655.76	1,427.65	1,366.15	61.50	23.215						
8,400.00	8,173.89	8,451.45	8,173.89	32.15	34.59	78.66	1,507.11	655.76	1,427.65	1,365.90	61.74	23.123						
8,500.00	8,273.89	8,551.45	8,273.89	32.27	34.70	78.66	1,507.11	655.76	1,427.65	1,365.66	61.99	23.031						
8,600.00	8,373.89	8,651.45	8,373.89	32.39	34.81	78.66	1,507.11	655.76	1,427.65	1,365.41	62.24	22.939						
8,700.00	8,473.89	8,751.45	8,473.89	32.52	34.93	78.66	1,507.11	655.76	1,427.65	1,365.16	62.49	22.847						
8,800.00	8,573.89	8,851.45	8,573.89	32.64	35.04	78.66	1,507.11	655.76	1,427.65	1,364.91	62.74	22.755						
8,900.00	8,673.89	8,951.45	8,673.89	32.77	35.15	78.66	1,507.11	655.76	1,427.65	1,364.65	63.00	22.663						
9,000.00	8,773.89	9,051.45	8,773.89	32.89	35.27	78.66	1,507.11	655.76	1,427.65	1,364.39	63.25	22.570						
9,100.00	8,873.89	9,151.45	8,873.89	33.02	35.39	78.66	1,507.11	655.76	1,427.65	1,364.13	63.51	22.478						
9,200.00	8,973.89	9,251.45	8,973.89	33.15	35.50	78.66	1,507.11	655.76	1,427.65	1,363.87	63.77	22.386						
9,300.00	9,073.89	9,351.45	9,073.89	33.28	35.62	78.66	1,507.11	655.76	1,427.65	1,363.61	64.04	22.294						
9,400.00	9,173.89	9,451.45	9,173.89	33.41	35.74	78.66	1,507.11	655.76	1,427.65	1,363.34	64.30	22.202						
9,500.00	9,273.89	9,551.45	9,273.89	33.54	35.86	78.66	1,507.11	655.76	1,427.65	1,363.07	64.57	22.109						
9,523.41	9,297.30	9,574.86	9,297.30	33.57	35.89	78.66	1,507.11	655.76	1,427.65	1,363.01	64.63	22.088						
9,540.11	9,314.00	9,583.56	9,306.00	33.60	35.90	78.66	1,507.11	655.76	1,427.67	1,363.00	64.67	22.077						



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	115.30	-4.37	9.24	10.23					
100.00	100.00	100.00	100.00	0.10	0.10	115.30	-4.37	9.24	10.23	10.03	0.19	52.900		
200.00	200.00	200.00	200.00	0.32	0.32	115.30	-4.37	9.24	10.23	9.58	0.64	15.907		
300.00	300.00	300.00	300.00	0.55	0.55	115.30	-4.37	9.24	10.23	9.13	1.09	9.361 CC, ES		
400.00	399.98	400.14	400.12	0.77	0.77	143.30	-2.62	9.24	10.95	9.41	1.54	7.102		
500.00	499.92	500.13	500.04	1.00	1.00	138.03	0.87	9.24	12.49	10.50	1.99	6.278		
600.00	599.86	600.11	599.97	1.22	1.23	133.93	4.36	9.24	14.12	11.67	2.44	5.778		
700.00	699.80	700.09	699.89	1.45	1.46	130.70	7.85	9.24	15.80	12.90	2.90	5.448		
800.00	799.74	800.07	799.81	1.68	1.69	128.09	11.34	9.24	17.52	14.16	3.36	5.218		
900.00	899.68	900.06	899.73	1.91	1.92	125.95	14.83	9.24	19.27	15.45	3.82	5.048		
1,000.00	999.61	1,000.04	999.65	2.15	2.15	124.17	18.32	9.24	21.04	16.76	4.28	4.920		
1,100.00	1,099.55	1,100.02	1,099.57	2.38	2.38	122.67	21.80	9.24	22.83	18.09	4.74	4.819		
1,200.00	1,199.49	1,200.00	1,199.49	2.61	2.61	121.39	25.29	9.24	24.63	19.44	5.20	4.739		
1,300.00	1,299.43	1,299.98	1,299.42	2.84	2.84	120.28	28.78	9.24	26.45	20.79	5.66	4.673		
1,400.00	1,399.37	1,399.97	1,399.34	3.07	3.07	119.32	32.27	9.24	28.27	22.15	6.12	4.618		
1,500.00	1,499.31	1,499.95	1,499.26	3.30	3.30	118.47	35.76	9.24	30.10	23.52	6.58	4.572		
1,600.00	1,599.25	1,599.93	1,599.18	3.54	3.53	117.72	39.25	9.24	31.94	24.89	7.05	4.532		
1,700.00	1,699.19	1,699.91	1,699.10	3.77	3.77	117.05	42.74	9.24	33.78	26.27	7.51	4.499		
1,800.00	1,799.13	1,799.90	1,799.02	4.00	4.00	116.45	46.23	9.24	35.62	27.65	7.97	4.469		
1,900.00	1,899.07	1,899.88	1,898.94	4.23	4.23	115.91	49.72	9.24	37.47	29.04	8.43	4.443		
2,000.00	1,999.01	1,999.86	1,998.87	4.46	4.46	115.42	53.21	9.24	39.32	30.42	8.90	4.420		
2,100.00	2,098.94	2,099.84	2,098.79	4.70	4.69	114.98	56.70	9.24	41.17	31.82	9.36	4.400		
2,121.07	2,120.00	2,120.91	2,119.84	4.75	4.74	114.89	57.43	9.24	41.56	32.11	9.46	4.396 SF		
2,200.00	2,198.80	2,198.84	2,197.70	4.94	4.91	116.13	60.45	10.15	44.67	34.86	9.81	4.554		
2,300.00	2,298.27	2,297.44	2,295.96	5.20	5.15	117.83	68.03	13.03	52.79	42.50	10.29	5.129		
2,400.00	2,397.06	2,395.43	2,393.06	5.49	5.42	118.76	80.25	17.69	65.47	54.65	10.82	6.052		
2,500.00	2,494.91	2,492.52	2,488.49	5.82	5.71	119.07	96.93	24.04	82.60	71.21	11.39	7.251		
2,600.00	2,591.55	2,588.46	2,581.77	6.20	6.04	118.95	117.84	32.01	104.08	92.05	12.03	8.652		
2,700.00	2,686.72	2,682.99	2,672.47	6.65	6.42	118.58	142.70	41.48	129.79	117.04	12.75	10.180		
2,720.96	2,706.45	2,702.61	2,691.12	6.75	6.50	118.48	148.38	43.64	135.71	122.80	12.91	10.512		
2,800.00	2,780.73	2,776.69	2,761.00	7.15	6.84	118.21	171.37	52.40	158.84	145.26	13.59	11.692		
2,900.00	2,874.70	2,872.18	2,850.72	7.68	7.31	117.65	201.89	64.02	188.50	174.00	14.50	12.998		
3,000.00	2,968.67	2,967.67	2,940.45	8.24	7.81	117.24	232.42	75.65	218.16	202.71	15.45	14.118		
3,100.00	3,062.64	3,063.15	3,030.18	8.82	8.32	116.93	262.94	87.28	247.84	231.40	16.44	15.076		
3,200.00	3,156.61	3,158.64	3,119.91	9.41	8.85	116.68	293.47	98.90	277.52	260.06	17.45	15.901		
3,300.00	3,250.59	3,254.13	3,209.64	10.02	9.40	116.49	323.99	110.53	307.20	288.71	18.49	16.614		
3,400.00	3,344.56	3,349.62	3,299.36	10.64	9.95	116.33	354.52	122.16	336.88	317.34	19.55	17.233		
3,500.00	3,438.53	3,445.11	3,389.09	11.27	10.52	116.19	385.05	133.79	366.57	345.95	20.62	17.774		
3,600.00	3,532.50	3,540.60	3,478.82	11.90	11.09	116.07	415.57	145.41	396.26	374.55	21.71	18.250		
3,700.00	3,626.47	3,636.08	3,568.55	12.54	11.67	115.97	446.10	157.04	425.95	403.14	22.81	18.670		
3,800.00	3,720.44	3,731.57	3,658.27	13.19	12.26	115.89	476.62	168.67	455.64	431.72	23.93	19.043		
3,900.00	3,814.41	3,827.06	3,748.00	13.84	12.85	115.81	507.15	180.29	485.33	460.29	25.05	19.376		
4,000.00	3,908.38	3,922.55	3,837.73	14.49	13.44	115.75	537.67	191.92	515.03	488.85	26.18	19.674		
4,100.00	4,002.36	4,018.04	3,927.46	15.15	14.04	115.69	568.20	203.55	544.72	517.41	27.32	19.942		
4,200.00	4,096.33	4,113.53	4,017.18	15.81	14.65	115.63	598.72	215.18	574.41	545.96	28.46	20.185		
4,300.00	4,190.30	4,216.11	4,113.98	16.48	15.22	115.69	630.44	227.26	603.66	574.08	29.58	20.411		
4,400.00	4,284.27	4,321.12	4,214.25	17.14	15.70	116.07	659.59	238.36	631.53	600.92	30.61	20.630		
4,500.00	4,378.24	4,426.63	4,316.07	17.81	16.15	116.73	685.40	248.19	658.05	626.44	31.61	20.817		
4,600.00	4,472.21	4,532.34	4,419.04	18.48	16.56	117.65	707.73	256.70	683.30	650.74	32.56	20.984		
4,700.00	4,566.18	4,637.97	4,522.74	19.15	16.93	118.80	726.48	263.84	707.40	673.94	33.46	21.143		
4,800.00	4,660.15	4,743.23	4,626.74	19.83	17.25	120.16	741.60	269.60	730.51	696.22	34.29	21.306		
4,900.00	4,754.13	4,847.85	4,730.63	20.50	17.52	121.70	753.08	273.97	752.82	717.78	35.04	21.484		

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	4,848.10	4,951.54	4,833.98	21.18	17.74	123.40	760.95	276.97	774.54	738.82	35.71	21.687			
5,100.00	4,942.07	5,054.07	4,936.40	21.86	17.91	125.24	765.29	278.62	795.90	759.60	36.30	21.925			
5,200.00	5,036.04	5,153.72	5,036.04	22.54	18.05	127.17	766.30	279.01	817.19	780.39	36.80	22.204			
5,300.00	5,130.01	5,247.69	5,130.01	23.22	18.17	128.96	766.30	279.01	839.08	801.81	37.27	22.513			
5,400.00	5,223.98	5,341.66	5,223.98	23.90	18.29	130.67	766.30	279.01	861.78	824.06	37.72	22.847			
5,500.00	5,317.95	5,435.64	5,317.95	24.58	18.41	132.29	766.30	279.01	885.21	847.06	38.15	23.204			
5,600.00	5,411.92	5,529.61	5,411.92	25.26	18.54	133.84	766.30	279.01	909.33	870.77	38.56	23.579			
5,700.00	5,505.90	5,623.58	5,505.90	25.94	18.67	135.31	766.30	279.01	934.08	895.11	38.97	23.972			
5,800.00	5,599.87	5,717.55	5,599.87	26.63	18.80	136.70	766.30	279.01	959.40	920.05	39.36	24.377			
5,896.28	5,690.34	5,808.02	5,690.34	27.28	18.92	137.98	766.30	279.01	984.29	944.57	39.72	24.779			
5,900.00	5,693.84	5,811.52	5,693.84	27.31	18.93	138.04	766.30	279.01	985.26	945.53	39.74	24.794			
6,000.00	5,788.43	5,906.11	5,788.43	27.83	19.06	139.58	766.30	279.01	1,010.25	970.16	40.09	25.200			
6,100.00	5,884.10	6,001.78	5,884.10	28.31	19.20	140.91	766.30	279.01	1,033.02	992.60	40.43	25.553			
6,200.00	5,980.72	6,098.40	5,980.72	28.74	19.33	142.03	766.30	279.01	1,053.43	1,012.68	40.75	25.850			
6,300.00	6,078.18	6,195.86	6,078.18	29.13	19.48	142.98	766.30	279.01	1,071.34	1,030.28	41.06	26.090			
6,400.00	6,176.36	6,294.05	6,176.36	29.47	19.62	143.76	766.30	279.01	1,086.65	1,045.29	41.36	26.273			
6,500.00	6,275.15	6,392.83	6,275.15	29.76	19.77	144.39	766.30	279.01	1,099.26	1,057.62	41.64	26.400			
6,600.00	6,374.41	6,492.10	6,374.41	30.01	19.91	144.86	766.30	279.01	1,109.11	1,067.21	41.90	26.470			
6,700.00	6,474.04	6,591.72	6,474.04	30.21	20.06	145.20	766.30	279.01	1,116.15	1,074.01	42.15	26.483			
6,800.00	6,573.91	6,691.59	6,573.91	30.36	20.22	145.39	766.30	279.01	1,120.35	1,077.97	42.37	26.440			
6,896.11	6,670.00	6,787.68	6,670.00	30.47	20.36	144.21	766.30	279.01	1,121.67	1,079.10	42.58	26.345			
6,900.00	6,673.89	6,791.57	6,673.89	30.47	20.37	144.21	766.30	279.01	1,121.67	1,079.08	42.59	26.338			
7,000.00	6,773.89	6,891.57	6,773.89	30.58	20.52	144.21	766.30	279.01	1,121.67	1,078.79	42.88	26.159			
7,100.00	6,873.89	6,991.57	6,873.89	30.68	20.68	144.21	766.30	279.01	1,121.67	1,078.50	43.17	25.981			
7,200.00	6,973.89	7,091.57	6,973.89	30.79	20.84	144.21	766.30	279.01	1,121.67	1,078.20	43.47	25.803			
7,300.00	7,073.89	7,191.57	7,073.89	30.89	21.00	144.21	766.30	279.01	1,121.67	1,077.90	43.77	25.627			
7,400.00	7,173.89	7,291.57	7,173.89	31.00	21.16	144.21	766.30	279.01	1,121.67	1,077.60	44.07	25.451			
7,500.00	7,273.89	7,391.57	7,273.89	31.11	21.32	144.21	766.30	279.01	1,121.67	1,077.30	44.38	25.277			
7,600.00	7,373.89	7,491.57	7,373.89	31.22	21.48	144.21	766.30	279.01	1,121.67	1,076.99	44.68	25.103			
7,700.00	7,473.89	7,591.57	7,473.89	31.33	21.64	144.21	766.30	279.01	1,121.67	1,076.68	44.99	24.931			
7,800.00	7,573.89	7,691.57	7,573.89	31.45	21.81	144.21	766.30	279.01	1,121.67	1,076.37	45.30	24.759			
7,900.00	7,673.89	7,791.57	7,673.89	31.56	21.97	144.21	766.30	279.01	1,121.67	1,076.06	45.62	24.589			
8,000.00	7,773.89	7,891.57	7,773.89	31.68	22.14	144.21	766.30	279.01	1,121.67	1,075.74	45.93	24.420			
8,100.00	7,873.89	7,991.57	7,873.89	31.79	22.31	144.21	766.30	279.01	1,121.67	1,075.42	46.25	24.252			
8,200.00	7,973.89	8,091.57	7,973.89	31.91	22.47	144.21	766.30	279.01	1,121.67	1,075.10	46.57	24.085			
8,300.00	8,073.89	8,191.57	8,073.89	32.03	22.64	144.21	766.30	279.01	1,121.67	1,074.78	46.89	23.919			
8,400.00	8,173.89	8,291.57	8,173.89	32.15	22.81	144.21	766.30	279.01	1,121.67	1,074.45	47.22	23.755			
8,500.00	8,273.89	8,391.57	8,273.89	32.27	22.98	144.21	766.30	279.01	1,121.67	1,074.13	47.55	23.591			
8,600.00	8,373.89	8,491.57	8,373.89	32.39	23.16	144.21	766.30	279.01	1,121.67	1,073.80	47.87	23.430			
8,700.00	8,473.89	8,591.57	8,473.89	32.52	23.33	144.21	766.30	279.01	1,121.67	1,073.47	48.20	23.269			
8,800.00	8,573.89	8,691.57	8,573.89	32.64	23.50	144.21	766.30	279.01	1,121.67	1,073.14	48.54	23.109			
8,900.00	8,673.89	8,791.57	8,673.89	32.77	23.68	144.21	766.30	279.01	1,121.67	1,072.80	48.87	22.951			
9,000.00	8,773.89	8,891.57	8,773.89	32.89	23.85	144.21	766.30	279.01	1,121.67	1,072.46	49.21	22.795			
9,100.00	8,873.89	8,991.57	8,873.89	33.02	24.03	144.21	766.30	279.01	1,121.67	1,072.13	49.55	22.639			
9,200.00	8,973.89	9,091.57	8,973.89	33.15	24.21	144.21	766.30	279.01	1,121.67	1,071.79	49.89	22.485			
9,300.00	9,073.89	9,191.57	9,073.89	33.28	24.39	144.21	766.30	279.01	1,121.67	1,071.45	50.23	22.332			
9,400.00	9,173.89	9,291.57	9,173.89	33.41	24.57	144.21	766.30	279.01	1,121.67	1,071.10	50.57	22.181			
9,500.00	9,273.89	9,391.57	9,273.89	33.54	24.74	144.21	766.30	279.01	1,121.67	1,070.76	50.91	22.030			
9,540.11	9,314.00	9,395.68	9,278.00	33.60	24.75	144.21	766.30	279.01	1,122.25	1,071.26	50.99	22.010			



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	115.76	-13.11	27.17	30.17						
100.00	100.00	100.00	100.00	0.10	0.10	115.76	-13.11	27.17	30.17	29.98	0.19	156.085			
200.00	200.00	200.00	200.00	0.32	0.32	115.76	-13.11	27.17	30.17	29.53	0.64	46.935			
300.00	300.00	300.00	300.00	0.55	0.55	115.76	-13.11	27.17	30.17	29.08	1.09	27.620 CC, ES			
400.00	399.98	399.36	399.31	0.77	0.77	144.38	-11.33	29.04	32.58	31.04	1.54	21.146			
500.00	499.92	498.22	497.86	1.00	1.01	136.86	-6.01	34.60	38.82	36.82	2.00	19.435 SF			
600.00	599.86	596.10	594.92	1.22	1.27	126.69	2.71	43.74	48.75	46.27	2.48	19.647			
700.00	699.80	692.52	689.76	1.45	1.59	117.10	14.65	56.24	63.51	60.53	2.98	21.280			
800.00	799.74	787.02	781.76	1.68	1.98	109.43	29.55	71.83	83.55	80.05	3.50	23.902			
900.00	899.68	882.06	873.34	1.91	2.43	103.72	47.09	90.20	108.01	104.00	4.01	26.952			
1,000.00	999.61	978.46	966.14	2.15	2.93	100.01	65.12	109.08	133.48	128.98	4.50	29.664			
1,100.00	1,099.55	1,074.87	1,058.95	2.38	3.43	97.48	83.16	127.96	159.30	154.31	4.99	31.913			
1,200.00	1,199.49	1,171.28	1,151.75	2.61	3.94	95.66	101.19	146.84	185.33	179.85	5.49	33.782			
1,300.00	1,299.43	1,267.69	1,244.56	2.84	4.46	94.29	119.22	165.72	211.50	205.51	5.98	35.350			
1,400.00	1,399.37	1,364.10	1,337.36	3.07	4.98	93.22	137.26	184.60	237.75	231.27	6.48	36.680			
1,500.00	1,499.31	1,460.50	1,430.17	3.30	5.51	92.37	155.29	203.48	264.06	257.08	6.98	37.819			
1,600.00	1,599.25	1,556.91	1,522.97	3.54	6.03	91.66	173.32	222.36	290.42	282.94	7.48	38.804			
1,700.00	1,699.19	1,653.32	1,615.78	3.77	6.56	91.08	191.36	241.25	316.81	308.83	7.99	39.663			
1,800.00	1,799.13	1,749.73	1,708.58	4.00	7.09	90.58	209.39	260.13	343.23	334.74	8.49	40.419			
1,900.00	1,899.07	1,846.14	1,801.39	4.23	7.62	90.16	227.42	279.01	369.67	360.68	9.00	41.087			
2,000.00	1,999.01	1,942.54	1,894.19	4.46	8.15	89.79	245.46	297.89	396.13	386.63	9.50	41.683			
2,100.00	2,098.94	2,038.95	1,987.00	4.70	8.68	89.47	263.49	316.77	422.60	412.59	10.01	42.217			
2,121.07	2,120.00	2,059.26	2,006.55	4.75	8.80	89.41	267.29	320.75	428.18	418.06	10.12	42.323			
2,200.00	2,198.80	2,135.38	2,079.82	4.94	9.22	88.75	281.53	335.65	449.05	438.54	10.51	42.718			
2,300.00	2,298.27	2,244.08	2,184.77	5.20	9.72	88.65	301.09	356.13	474.44	463.39	11.06	42.912			
2,400.00	2,397.06	2,357.39	2,295.08	5.49	10.16	89.41	318.95	374.83	496.68	485.04	11.64	42.671			
2,500.00	2,494.91	2,471.28	2,406.80	5.82	10.56	90.93	334.24	390.83	515.95	503.67	12.28	42.014			
2,600.00	2,591.55	2,585.01	2,519.05	6.20	10.92	93.12	346.81	404.00	532.74	519.75	12.99	41.018			
2,700.00	2,686.72	2,697.82	2,630.96	6.65	11.22	95.91	356.62	414.27	547.73	533.96	13.77	39.780			
2,720.96	2,706.45	2,721.28	2,654.29	6.75	11.27	96.56	358.33	416.06	550.72	536.78	13.94	39.505			
2,800.00	2,780.73	2,809.65	2,742.31	7.15	11.47	99.39	363.71	421.69	561.53	546.90	14.63	38.376			
2,900.00	2,874.70	2,921.40	2,853.87	7.68	11.66	102.94	368.17	426.36	574.08	558.56	15.52	36.996			
3,000.00	2,968.67	3,032.87	2,965.30	8.24	11.82	106.49	369.99	428.27	585.48	569.09	16.40	35.707			
3,100.00	3,062.64	3,130.21	3,062.64	8.82	11.93	109.58	370.04	428.32	596.77	579.54	17.23	34.641			
3,200.00	3,156.61	3,224.18	3,156.61	9.41	12.03	112.45	370.04	428.32	609.71	591.67	18.04	33.800			
3,300.00	3,250.59	3,318.15	3,250.59	10.02	12.15	115.21	370.04	428.32	624.26	605.43	18.83	33.149			
3,400.00	3,344.56	3,412.13	3,344.56	10.64	12.26	117.85	370.04	428.32	640.30	620.70	19.60	32.665			
3,500.00	3,438.53	3,506.10	3,438.53	11.27	12.38	120.37	370.04	428.32	657.74	637.39	20.35	32.326			
3,600.00	3,532.50	3,600.07	3,532.50	11.90	12.50	122.76	370.04	428.32	676.45	655.39	21.07	32.112			
3,700.00	3,626.47	3,694.04	3,626.47	12.54	12.62	125.03	370.04	428.32	696.35	674.59	21.76	32.005			
3,800.00	3,720.44	3,788.01	3,720.44	13.19	12.75	127.18	370.04	428.32	717.32	694.90	22.42	31.990			
3,900.00	3,814.41	3,881.98	3,814.41	13.84	12.87	129.22	370.04	428.32	739.28	716.21	23.07	32.052			
4,000.00	3,908.38	3,975.95	3,908.38	14.49	13.00	131.15	370.04	428.32	762.14	738.46	23.68	32.179			
4,100.00	4,002.36	4,069.92	4,002.36	15.15	13.13	132.96	370.04	428.32	785.83	761.54	24.28	32.362			
4,200.00	4,096.33	4,163.90	4,096.33	15.81	13.27	134.68	370.04	428.32	810.26	785.40	24.86	32.592			
4,300.00	4,190.30	4,257.87	4,190.30	16.48	13.40	136.30	370.04	428.32	835.38	809.96	25.42	32.860			
4,400.00	4,284.27	4,351.84	4,284.27	17.14	13.54	137.83	370.04	428.32	861.13	835.16	25.97	33.160			
4,500.00	4,378.24	4,445.81	4,378.24	17.81	13.68	139.28	370.04	428.32	887.45	860.95	26.50	33.486			
4,600.00	4,472.21	4,539.78	4,472.21	18.48	13.82	140.64	370.04	428.32	914.29	887.27	27.02	33.833			
4,700.00	4,566.18	4,633.75	4,566.18	19.15	13.96	141.93	370.04	428.32	941.61	914.07	27.53	34.198			
4,800.00	4,660.15	4,727.72	4,660.15	19.83	14.11	143.15	370.04	428.32	969.36	941.32	28.04	34.576			
4,900.00	4,754.13	4,821.69	4,754.13	20.50	14.25	144.31	370.04	428.32	997.51	968.98	28.53	34.964			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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												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	4,848.10	4,915.67	4,848.10	21.18	14.40	145.40	370.04	428.32	1,026.03	997.02	29.02	35.359			
5,100.00	4,942.07	5,009.64	4,942.07	21.86	14.55	146.43	370.04	428.32	1,054.89	1,025.39	29.50	35.760			
5,200.00	5,036.04	5,103.61	5,036.04	22.54	14.70	147.42	370.04	428.32	1,084.06	1,054.08	29.98	36.164			
5,300.00	5,130.01	5,197.58	5,130.01	23.22	14.85	148.35	370.04	428.32	1,113.52	1,083.07	30.45	36.569			
5,400.00	5,223.98	5,291.55	5,223.98	23.90	15.01	149.23	370.04	428.32	1,143.23	1,112.32	30.92	36.975			
5,500.00	5,317.95	5,385.52	5,317.95	24.58	15.16	150.08	370.04	428.32	1,173.20	1,141.81	31.39	37.379			
5,600.00	5,411.92	5,479.49	5,411.92	25.26	15.32	150.88	370.04	428.32	1,203.39	1,171.53	31.85	37.780			
5,700.00	5,505.90	5,573.46	5,505.90	25.94	15.48	151.64	370.04	428.32	1,233.78	1,201.47	32.32	38.179			
5,800.00	5,599.87	5,667.44	5,599.87	26.63	15.63	152.37	370.04	428.32	1,264.38	1,231.60	32.78	38.574			
5,896.28	5,690.34	5,757.91	5,690.34	27.28	15.79	153.03	370.04	428.32	1,294.00	1,260.78	33.22	38.949			
5,900.00	5,693.84	5,761.41	5,693.84	27.31	15.79	153.07	370.04	428.32	1,295.15	1,261.90	33.24	38.960			
6,000.00	5,788.43	5,856.00	5,788.43	27.83	15.96	153.97	370.04	428.32	1,324.48	1,290.73	33.76	39.236			
6,100.00	5,884.10	5,951.66	5,884.10	28.31	16.12	154.74	370.04	428.32	1,350.93	1,316.69	34.25	39.446			
6,200.00	5,980.72	6,048.29	5,980.72	28.74	16.29	155.40	370.04	428.32	1,374.42	1,339.71	34.71	39.594			
6,300.00	6,078.18	6,145.75	6,078.18	29.13	16.46	155.95	370.04	428.32	1,394.89	1,359.74	35.15	39.684			
6,400.00	6,176.36	6,243.93	6,176.36	29.47	16.64	156.41	370.04	428.32	1,412.27	1,376.72	35.56	39.719			
6,500.00	6,275.15	6,342.72	6,275.15	29.76	16.81	156.77	370.04	428.32	1,426.53	1,390.60	35.93	39.701			
6,600.00	6,374.41	6,441.98	6,374.41	30.01	16.99	157.05	370.04	428.32	1,437.63	1,401.36	36.27	39.633			
6,700.00	6,474.04	6,541.61	6,474.04	30.21	17.17	157.24	370.04	428.32	1,445.54	1,408.96	36.58	39.515			
6,800.00	6,573.91	6,641.47	6,573.91	30.36	17.35	157.35	370.04	428.32	1,450.24	1,413.39	36.86	39.349			
6,896.11	6,670.00	6,737.57	6,670.00	30.47	17.52	157.14	370.04	428.32	1,451.73	1,414.64	37.09	39.142			
6,900.00	6,673.89	6,741.46	6,673.89	30.47	17.53	126.14	370.04	428.32	1,451.73	1,414.63	37.10	39.129			
7,000.00	6,773.89	6,841.46	6,773.89	30.58	17.71	126.14	370.04	428.32	1,451.73	1,414.29	37.44	38.776			
7,100.00	6,873.89	6,941.46	6,873.89	30.68	17.90	126.14	370.04	428.32	1,451.73	1,413.95	37.78	38.427			
7,200.00	6,973.89	7,041.46	6,973.89	30.79	18.08	126.14	370.04	428.32	1,451.73	1,413.61	38.12	38.082			
7,300.00	7,073.89	7,141.46	7,073.89	30.89	18.27	126.14	370.04	428.32	1,451.73	1,413.27	38.47	37.741			
7,400.00	7,173.89	7,241.46	7,173.89	31.00	18.45	126.14	370.04	428.32	1,451.73	1,412.92	38.81	37.404			
7,500.00	7,273.89	7,341.46	7,273.89	31.11	18.64	126.14	370.04	428.32	1,451.73	1,412.57	39.16	37.071			
7,600.00	7,373.89	7,441.46	7,373.89	31.22	18.83	126.14	370.04	428.32	1,451.73	1,412.22	39.51	36.742			
7,700.00	7,473.89	7,541.46	7,473.89	31.33	19.02	126.14	370.04	428.32	1,451.73	1,411.87	39.86	36.417			
7,800.00	7,573.89	7,641.46	7,573.89	31.45	19.21	126.14	370.04	428.32	1,451.73	1,411.51	40.22	36.096			
7,900.00	7,673.89	7,741.46	7,673.89	31.56	19.40	126.14	370.04	428.32	1,451.73	1,411.16	40.58	35.779			
8,000.00	7,773.89	7,841.46	7,773.89	31.68	19.59	126.14	370.04	428.32	1,451.73	1,410.80	40.93	35.466			
8,100.00	7,873.89	7,941.46	7,873.89	31.79	19.78	126.14	370.04	428.32	1,451.73	1,410.44	41.29	35.157			
8,200.00	7,973.89	8,041.46	7,973.89	31.91	19.97	126.14	370.04	428.32	1,451.73	1,410.08	41.65	34.852			
8,300.00	8,073.89	8,141.46	8,073.89	32.03	20.17	126.14	370.04	428.32	1,451.73	1,409.71	42.02	34.550			
8,400.00	8,173.89	8,241.46	8,173.89	32.15	20.36	126.14	370.04	428.32	1,451.73	1,409.35	42.38	34.253			
8,500.00	8,273.89	8,341.46	8,273.89	32.27	20.56	126.14	370.04	428.32	1,451.73	1,408.98	42.75	33.959			
8,600.00	8,373.89	8,441.46	8,373.89	32.39	20.75	126.14	370.04	428.32	1,451.73	1,408.61	43.12	33.669			
8,700.00	8,473.89	8,541.46	8,473.89	32.52	20.95	126.14	370.04	428.32	1,451.73	1,408.25	43.49	33.383			
8,800.00	8,573.89	8,641.46	8,573.89	32.64	21.14	126.14	370.04	428.32	1,451.73	1,407.87	43.86	33.101			
8,900.00	8,673.89	8,741.46	8,673.89	32.77	21.34	126.14	370.04	428.32	1,451.73	1,407.50	44.23	32.822			
9,000.00	8,773.89	8,841.46	8,773.89	32.89	21.54	126.14	370.04	428.32	1,451.73	1,407.13	44.60	32.547			
9,100.00	8,873.89	8,941.46	8,873.89	33.02	21.74	126.14	370.04	428.32	1,451.73	1,406.75	44.98	32.276			
9,200.00	8,973.89	9,041.46	8,973.89	33.15	21.94	126.14	370.04	428.32	1,451.73	1,406.38	45.36	32.008			
9,300.00	9,073.89	9,141.46	9,073.89	33.28	22.13	126.14	370.04	428.32	1,451.73	1,406.00	45.73	31.743			
9,400.00	9,173.89	9,241.46	9,173.89	33.41	22.33	126.14	370.04	428.32	1,451.73	1,405.62	46.11	31.482			
9,461.74	9,235.62	9,303.19	9,235.62	33.49	22.46	126.14	370.04	428.32	1,451.73	1,405.38	46.35	31.323			
9,500.00	9,273.89	9,328.57	9,261.00	33.54	22.51	126.14	370.04	428.32	1,451.79	1,405.32	46.47	31.243			
9,540.11	9,314.00	9,328.57	9,261.00	33.60	22.51	126.14	370.04	428.32	1,452.70	1,406.16	46.54	31.214			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	4.37	-8.96	9.97						
100.00	100.00	100.00	100.00	0.10	0.10	-64.01	4.37	-8.96	9.97	9.78	0.19	51.593			
200.00	200.00	200.00	200.00	0.32	0.32	-64.01	4.37	-8.96	9.97	9.33	0.64	15.514			
300.00	300.00	300.00	300.00	0.55	0.55	-64.01	4.37	-8.96	9.97	8.88	1.09	9.130 CC, ES			
400.00	399.98	399.49	399.45	0.77	0.77	-32.95	6.24	-10.75	10.95	9.41	1.54	7.119			
500.00	499.92	498.76	498.40	1.00	1.01	-29.83	11.84	-16.10	15.35	13.36	1.99	7.709			
600.00	599.86	597.30	596.10	1.22	1.28	-24.89	21.07	-24.91	24.80	22.34	2.46	10.083			
700.00	699.80	694.62	691.82	1.45	1.61	-21.38	33.76	-37.02	39.35	36.41	2.94	13.400			
800.00	799.74	790.25	784.88	1.68	2.01	-19.15	49.63	-52.17	58.91	55.49	3.42	17.219			
900.00	899.68	883.75	874.71	1.91	2.48	-17.72	68.40	-70.09	83.32	79.41	3.91	21.299			
1,000.00	999.61	975.25	961.28	2.15	3.02	-16.75	89.81	-90.52	112.38	107.97	4.41	25.477			
1,100.00	1,099.55	1,070.33	1,050.62	2.38	3.64	-16.10	113.33	-112.98	143.34	138.44	4.91	29.223			
1,200.00	1,199.49	1,165.41	1,139.97	2.61	4.28	-15.68	136.85	-135.43	174.31	168.92	5.39	32.311			
1,300.00	1,299.43	1,260.49	1,229.31	2.84	4.92	-15.38	160.38	-157.89	205.29	199.40	5.89	34.856			
1,400.00	1,399.37	1,355.56	1,318.65	3.07	5.57	-15.17	183.90	-180.34	236.27	229.88	6.39	36.966			
1,500.00	1,499.31	1,450.64	1,407.99	3.30	6.23	-15.00	207.42	-202.80	267.25	260.35	6.90	38.749			
1,600.00	1,599.25	1,545.72	1,497.34	3.54	6.89	-14.87	230.95	-225.25	298.23	290.83	7.41	40.273			
1,700.00	1,699.19	1,640.79	1,586.68	3.77	7.55	-14.76	254.47	-247.71	329.22	321.30	7.92	41.588			
1,800.00	1,799.13	1,735.87	1,676.02	4.00	8.21	-14.67	277.99	-270.16	360.20	351.77	8.43	42.734			
1,900.00	1,899.07	1,830.95	1,765.36	4.23	8.87	-14.60	301.52	-292.62	391.19	382.25	8.94	43.741			
2,000.00	1,999.01	1,926.03	1,854.70	4.46	9.54	-14.53	325.04	-315.07	422.18	412.72	9.46	44.631			
2,100.00	2,098.94	2,021.10	1,944.05	4.70	10.21	-14.48	348.56	-337.53	453.16	443.19	9.98	45.425			
2,121.07	2,120.00	2,041.13	1,962.87	4.75	10.35	-14.47	353.52	-342.26	459.69	449.61	10.09	45.581			
2,200.00	2,198.80	2,116.65	2,033.83	4.94	10.88	-14.31	372.20	-360.09	482.64	472.11	10.53	45.828			
2,300.00	2,298.27	2,213.53	2,124.87	5.20	11.55	-14.27	396.17	-382.97	507.35	496.25	11.09	45.730			
2,400.00	2,397.06	2,311.51	2,216.94	5.49	12.24	-14.40	420.41	-406.12	527.12	515.47	11.65	45.242			
2,500.00	2,494.91	2,410.33	2,309.80	5.82	12.94	-14.69	444.86	-429.45	541.91	529.71	12.20	44.418			
2,600.00	2,591.55	2,509.71	2,403.19	6.20	13.64	-15.14	469.45	-452.93	551.71	538.97	12.74	43.294			
2,700.00	2,686.72	2,609.39	2,496.85	6.65	14.34	-15.75	494.11	-476.47	556.53	543.25	13.28	41.895			
2,720.96	2,706.45	2,630.29	2,516.49	6.75	14.48	-15.90	499.28	-481.40	556.92	543.52	13.40	41.568			
2,800.00	2,780.73	2,709.11	2,590.56	7.15	15.04	-16.49	518.79	-500.02	557.98	544.08	13.90	40.145			
2,900.00	2,874.70	2,808.84	2,684.27	7.68	15.74	-17.24	543.46	-523.57	559.40	544.85	14.55	38.447			
3,000.00	2,968.67	2,908.56	2,777.98	8.24	16.44	-17.97	568.13	-547.13	560.92	545.70	15.22	36.855			
3,100.00	3,062.64	3,008.29	2,871.69	8.82	17.14	-18.71	592.81	-570.68	562.53	546.63	15.91	35.361			
3,200.00	3,156.61	3,108.02	2,965.40	9.41	17.85	-19.44	617.48	-594.23	564.24	547.62	16.62	33.957			
3,300.00	3,250.59	3,207.74	3,059.12	10.02	18.55	-20.16	642.15	-617.79	566.04	548.69	17.34	32.637			
3,400.00	3,344.56	3,307.47	3,152.83	10.64	19.25	-20.89	666.83	-641.34	567.92	549.83	18.09	31.394			
3,500.00	3,438.53	3,417.15	3,256.05	11.27	19.97	-21.68	693.66	-666.95	569.55	550.66	18.88	30.161			
3,600.00	3,532.50	3,541.02	3,374.02	11.90	20.59	-22.66	720.96	-693.02	567.75	548.04	19.72	28.792			
3,700.00	3,626.47	3,664.33	3,492.95	12.54	21.15	-23.74	744.46	-715.45	561.86	541.29	20.57	27.310			
3,800.00	3,720.44	3,786.62	3,612.19	13.19	21.62	-24.97	764.08	-734.18	551.95	530.50	21.45	25.730			
3,900.00	3,814.41	3,907.46	3,731.04	13.84	22.02	-26.37	779.84	-749.22	538.14	515.78	22.36	24.063			
4,000.00	3,908.38	4,026.46	3,848.88	14.49	22.33	-27.98	791.80	-760.64	520.59	497.26	23.32	22.320			
4,100.00	4,002.36	4,143.27	3,965.12	15.15	22.58	-29.85	800.09	-768.55	499.48	475.13	24.35	20.511			
4,200.00	4,096.33	4,257.56	4,079.21	15.81	22.75	-32.05	804.88	-773.12	475.08	449.60	25.48	18.646			
4,300.00	4,190.30	4,368.68	4,190.30	16.48	22.87	-34.66	806.37	-774.55	447.70	420.96	26.74	16.743			
4,400.00	4,284.27	4,462.65	4,284.27	17.14	22.95	-37.26	806.37	-774.55	419.44	391.41	28.03	14.965			
4,500.00	4,378.24	4,556.62	4,378.24	17.81	23.03	-40.22	806.37	-774.55	392.12	362.65	29.47	13.306			
4,600.00	4,472.21	4,650.59	4,472.21	18.48	23.11	-43.58	806.37	-774.55	365.97	334.88	31.09	11.772			
4,700.00	4,566.18	4,744.56	4,566.18	19.15	23.20	-47.41	806.37	-774.55	341.24	308.34	32.90	10.373			
4,800.00	4,660.15	4,838.53	4,660.15	19.83	23.28	-51.78	806.37	-774.55	318.26	283.37	34.89	9.121			
4,900.00	4,754.13	4,932.51	4,754.13	20.50	23.37	-56.74	806.37	-774.55	297.46	260.39	37.06	8.025			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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 Tooflance (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
5,000.00	4,848.10	5,026.48	4,848.10	21.18	23.46	-62.34	806.37	-774.55	279.30	239.94	39.36	7.097		
5,100.00	4,942.07	5,120.45	4,942.07	21.86	23.55	-68.58	806.37	-774.55	264.34	222.66	41.68	6.343		
5,200.00	5,036.04	5,214.42	5,036.04	22.54	23.65	-75.40	806.37	-774.55	253.14	209.25	43.89	5.768		
5,300.00	5,130.01	5,308.39	5,130.01	23.22	23.74	-82.66	806.37	-774.55	246.22	200.40	45.82	5.374		
5,397.78	5,221.90	5,400.28	5,221.90	23.88	23.84	-90.00	806.37	-774.55	243.93	196.64	47.29	5.158		
5,400.00	5,223.98	5,402.36	5,223.98	23.90	23.84	-90.17	806.37	-774.55	243.94	196.62	47.32	5.155		
5,500.00	5,317.95	5,496.33	5,317.95	24.58	23.94	-97.67	806.37	-774.55	246.43	198.13	48.29	5.103 SF		
5,600.00	5,411.92	5,590.30	5,411.92	25.26	24.04	-104.92	806.37	-774.55	253.55	204.82	48.73	5.204		
5,700.00	5,505.90	5,684.28	5,505.90	25.94	24.14	-111.71	806.37	-774.55	264.92	216.23	48.70	5.440		
5,800.00	5,599.87	5,778.25	5,599.87	26.63	24.24	-117.92	806.37	-774.55	280.04	231.72	48.32	5.795		
5,896.28	5,690.34	5,868.72	5,690.34	27.28	24.34	-123.29	806.37	-774.55	297.60	249.83	47.76	6.231		
5,900.00	5,693.84	5,872.22	5,693.84	27.31	24.34	-123.50	806.37	-774.55	298.33	250.59	47.74	6.250		
6,000.00	5,788.43	5,966.81	5,788.43	27.83	24.45	-128.53	806.37	-774.55	318.10	271.17	46.94	6.777		
6,100.00	5,884.10	6,062.48	5,884.10	28.31	24.56	-132.60	806.37	-774.55	337.52	291.30	46.22	7.303		
6,200.00	5,980.72	6,159.10	5,980.72	28.74	24.67	-135.86	806.37	-774.55	355.80	310.18	45.63	7.798		
6,300.00	6,078.18	6,256.56	6,078.18	29.13	24.78	-138.46	806.37	-774.55	372.40	327.23	45.17	8.244		
6,400.00	6,176.36	6,354.74	6,176.36	29.47	24.89	-140.49	806.37	-774.55	386.91	342.08	44.84	8.629		
6,500.00	6,275.15	6,453.53	6,275.15	29.76	25.01	-142.05	806.37	-774.55	399.07	354.46	44.61	8.945		
6,600.00	6,374.41	6,552.79	6,374.41	30.01	25.13	-143.21	806.37	-774.55	408.68	364.19	44.49	9.186		
6,700.00	6,474.04	6,652.42	6,474.04	30.21	25.25	-143.99	806.37	-774.55	415.59	371.14	44.45	9.349		
6,800.00	6,573.91	6,752.29	6,573.91	30.36	25.37	-144.45	806.37	-774.55	419.73	375.24	44.49	9.434		
6,896.11	6,670.00	6,848.38	6,670.00	30.47	25.49	-175.84	806.37	-774.55	421.04	376.44	44.60	9.440		
6,900.00	6,673.89	6,852.27	6,673.89	30.47	25.50	-175.84	806.37	-774.55	421.04	376.43	44.61	9.438		
7,000.00	6,773.89	6,952.27	6,773.89	30.58	25.62	-175.84	806.37	-774.55	421.04	376.14	44.90	9.378		
7,100.00	6,873.89	7,052.27	6,873.89	30.68	25.75	-175.84	806.37	-774.55	421.04	375.85	45.19	9.318		
7,200.00	6,973.89	7,152.27	6,973.89	30.79	25.88	-175.84	806.37	-774.55	421.04	375.56	45.48	9.258		
7,300.00	7,073.89	7,252.27	7,073.89	30.89	26.01	-175.84	806.37	-774.55	421.04	375.27	45.77	9.198		
7,400.00	7,173.89	7,352.27	7,173.89	31.00	26.14	-175.84	806.37	-774.55	421.04	374.97	46.07	9.139		
7,500.00	7,273.89	7,452.27	7,273.89	31.11	26.27	-175.84	806.37	-774.55	421.04	374.67	46.37	9.080		
7,600.00	7,373.89	7,552.27	7,373.89	31.22	26.41	-175.84	806.37	-774.55	421.04	374.37	46.67	9.022		
7,700.00	7,473.89	7,652.27	7,473.89	31.33	26.54	-175.84	806.37	-774.55	421.04	374.07	46.97	8.963		
7,800.00	7,573.89	7,752.27	7,573.89	31.45	26.68	-175.84	806.37	-774.55	421.04	373.76	47.28	8.905		
7,900.00	7,673.89	7,852.27	7,673.89	31.56	26.82	-175.84	806.37	-774.55	421.04	373.45	47.59	8.848		
8,000.00	7,773.89	7,952.27	7,773.89	31.68	26.95	-175.84	806.37	-774.55	421.04	373.14	47.90	8.790		
8,100.00	7,873.89	8,052.27	7,873.89	31.79	27.09	-175.84	806.37	-774.55	421.04	372.83	48.21	8.733		
8,200.00	7,973.89	8,152.27	7,973.89	31.91	27.23	-175.84	806.37	-774.55	421.04	372.52	48.53	8.676		
8,300.00	8,073.89	8,252.27	8,073.89	32.03	27.38	-175.84	806.37	-774.55	421.04	372.20	48.84	8.620		
8,400.00	8,173.89	8,352.27	8,173.89	32.15	27.52	-175.84	806.37	-774.55	421.04	371.88	49.16	8.564		
8,500.00	8,273.89	8,452.27	8,273.89	32.27	27.66	-175.84	806.37	-774.55	421.04	371.56	49.48	8.509		
8,600.00	8,373.89	8,552.27	8,373.89	32.39	27.81	-175.84	806.37	-774.55	421.04	371.23	49.81	8.453		
8,700.00	8,473.89	8,652.27	8,473.89	32.52	27.95	-175.84	806.37	-774.55	421.04	370.91	50.13	8.399		
8,800.00	8,573.89	8,752.27	8,573.89	32.64	28.10	-175.84	806.37	-774.55	421.04	370.58	50.46	8.344		
8,900.00	8,673.89	8,852.27	8,673.89	32.77	28.25	-175.84	806.37	-774.55	421.04	370.25	50.79	8.290		
9,000.00	8,773.89	8,952.27	8,773.89	32.89	28.40	-175.84	806.37	-774.55	421.04	369.92	51.12	8.236		
9,100.00	8,873.89	9,052.27	8,873.89	33.02	28.55	-175.84	806.37	-774.55	421.04	369.59	51.45	8.183		
9,200.00	8,973.89	9,152.27	8,973.89	33.15	28.70	-175.84	806.37	-774.55	421.04	369.26	51.79	8.130		
9,300.00	9,073.89	9,252.27	9,073.89	33.28	28.85	-175.84	806.37	-774.55	421.04	368.92	52.12	8.078		
9,400.00	9,173.89	9,352.27	9,173.89	33.41	29.01	-175.84	806.37	-774.55	421.04	368.58	52.46	8.026		
9,500.00	9,273.89	9,452.27	9,273.89	33.54	29.16	-175.84	806.37	-774.55	421.04	368.24	52.80	7.974		
9,540.11	9,314.00	9,492.38	9,314.00	33.60	29.22	-175.84	806.37	-774.55	421.04	368.11	52.94	7.954		

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	8.74	-17.93	19.95						
100.00	100.00	100.00	100.00	0.10	0.10	-64.01	8.74	-17.93	19.95	19.75	0.19	103.187			
200.00	200.00	200.00	200.00	0.32	0.32	-64.01	8.74	-17.93	19.95	19.30	0.64	31.028			
300.00	300.00	300.00	300.00	0.55	0.55	-64.01	8.74	-17.93	19.95	18.85	1.09	18.259 CC			
400.00	399.98	399.30	399.28	0.77	0.77	-35.13	9.58	-19.43	20.23	18.69	1.53	13.185 ES			
500.00	499.92	499.28	499.20	1.00	0.99	-39.68	11.30	-22.47	20.91	18.94	1.97	10.597			
600.00	599.86	599.27	599.12	1.22	1.21	-43.91	13.01	-25.51	21.72	19.30	2.42	8.983			
700.00	699.80	699.25	699.05	1.45	1.44	-47.83	14.72	-28.55	22.63	19.77	2.87	7.897			
800.00	799.74	799.23	798.97	1.68	1.67	-51.42	16.43	-31.59	23.65	20.33	3.32	7.128			
900.00	899.68	899.22	898.89	1.91	1.90	-54.71	18.14	-34.63	24.75	20.98	3.77	6.562			
1,000.00	999.61	999.20	998.82	2.15	2.13	-57.71	19.85	-37.68	25.92	21.70	4.23	6.132			
1,100.00	1,099.55	1,099.19	1,098.74	2.38	2.36	-60.44	21.56	-40.72	27.16	22.48	4.68	5.798			
1,200.00	1,199.49	1,199.17	1,198.66	2.61	2.59	-62.92	23.27	-43.76	28.46	23.31	5.14	5.533			
1,300.00	1,299.43	1,299.16	1,298.59	2.84	2.83	-65.19	24.98	-46.80	29.80	24.20	5.60	5.319			
1,400.00	1,399.37	1,399.14	1,398.51	3.07	3.06	-67.26	26.69	-49.84	31.19	25.12	6.06	5.144			
1,500.00	1,499.31	1,499.12	1,498.43	3.30	3.29	-69.15	28.40	-52.88	32.61	26.09	6.52	4.998			
1,600.00	1,599.25	1,599.11	1,598.36	3.54	3.52	-70.88	30.11	-55.92	34.07	27.08	6.99	4.876			
1,700.00	1,699.19	1,699.09	1,698.28	3.77	3.76	-72.47	31.83	-58.96	35.55	28.10	7.45	4.773			
1,800.00	1,799.13	1,799.08	1,798.21	4.00	3.99	-73.93	33.54	-62.01	37.06	29.15	7.91	4.685			
1,900.00	1,899.07	1,899.06	1,898.13	4.23	4.22	-75.27	35.25	-65.05	38.60	30.22	8.37	4.609			
2,000.00	1,999.01	1,999.05	1,998.05	4.46	4.45	-76.51	36.96	-68.09	40.15	31.31	8.84	4.543			
2,100.00	2,098.94	2,098.77	2,097.71	4.70	4.69	-77.58	38.70	-71.19	41.77	32.47	9.30	4.491 SF			
2,121.07	2,120.00	2,119.53	2,118.45	4.75	4.74	-77.49	39.21	-72.09	42.31	32.91	9.40	4.502			
2,200.00	2,198.80	2,197.21	2,195.90	4.94	4.93	-77.23	42.07	-77.19	45.34	35.56	9.77	4.639			
2,300.00	2,298.27	2,295.38	2,293.34	5.20	5.20	-78.14	47.90	-87.56	51.23	40.94	10.28	4.981			
2,400.00	2,397.06	2,393.21	2,389.70	5.49	5.51	-79.93	56.12	-102.22	59.45	48.60	10.85	5.479			
2,500.00	2,494.91	2,490.59	2,484.64	5.82	5.85	-82.06	66.70	-121.07	70.06	58.57	11.49	6.096			
2,600.00	2,591.55	2,587.44	2,577.85	6.20	6.25	-84.19	79.56	-143.98	83.09	70.86	12.23	6.793			
2,700.00	2,686.72	2,683.77	2,669.12	6.65	6.71	-86.13	94.62	-170.82	98.55	85.46	13.09	7.530			
2,720.96	2,706.45	2,704.42	2,688.52	6.75	6.81	-86.58	98.07	-176.98	102.02	88.73	13.29	7.677			
2,800.00	2,780.73	2,782.27	2,761.68	7.15	7.23	-88.60	111.10	-200.20	115.18	101.10	14.08	8.182			
2,900.00	2,874.70	2,880.75	2,854.23	7.68	7.78	-90.58	127.58	-229.57	131.99	116.86	15.13	8.725			
3,000.00	2,968.67	2,979.24	2,946.78	8.24	8.36	-92.11	144.06	-258.94	148.91	132.69	16.22	9.178			
3,100.00	3,062.64	3,077.73	3,039.33	8.82	8.96	-93.33	160.54	-288.31	165.92	148.56	17.36	9.558			
3,200.00	3,156.61	3,176.22	3,131.88	9.41	9.57	-94.32	177.02	-317.69	182.99	164.46	18.52	9.879			
3,300.00	3,250.59	3,274.71	3,224.43	10.02	10.19	-95.15	193.51	-347.06	200.10	180.38	19.71	10.150			
3,400.00	3,344.56	3,373.19	3,316.98	10.64	10.83	-95.84	209.99	-376.43	217.24	196.31	20.93	10.381			
3,500.00	3,438.53	3,471.68	3,409.53	11.27	11.47	-96.43	226.47	-405.81	234.41	212.26	22.15	10.581			
3,600.00	3,532.50	3,570.17	3,502.08	11.90	12.12	-96.94	242.95	-435.18	251.60	228.20	23.40	10.753			
3,700.00	3,626.47	3,668.66	3,594.63	12.54	12.77	-97.39	259.43	-464.55	268.81	244.16	24.65	10.903			
3,800.00	3,720.44	3,767.15	3,687.18	13.19	13.44	-97.78	275.91	-493.92	286.03	260.11	25.92	11.035			
3,900.00	3,814.41	3,865.63	3,779.73	13.84	14.10	-98.13	292.39	-523.30	303.27	276.07	27.20	11.151			
4,000.00	3,908.38	3,965.54	3,873.70	14.49	14.75	-98.49	308.99	-552.88	320.43	291.97	28.46	11.258			
4,100.00	4,002.36	4,067.90	3,970.93	15.15	15.29	-99.29	324.63	-580.76	336.69	307.04	29.65	11.355			
4,200.00	4,096.33	4,170.21	4,069.19	15.81	15.76	-100.60	338.56	-605.58	351.95	321.16	30.80	11.429			
4,300.00	4,190.30	4,272.20	4,168.11	16.48	16.19	-102.34	350.73	-627.27	366.42	334.52	31.89	11.488			
4,400.00	4,284.27	4,373.63	4,267.28	17.14	16.57	-104.46	361.11	-645.77	380.34	347.41	32.93	11.550			
4,500.00	4,378.24	4,474.25	4,366.35	17.81	16.90	-106.91	369.71	-661.10	394.03	360.15	33.88	11.629			
4,600.00	4,472.21	4,573.81	4,464.92	18.48	17.18	-109.66	376.54	-673.26	407.86	373.12	34.73	11.742			
4,700.00	4,566.18	4,672.11	4,562.66	19.15	17.42	-112.64	381.63	-682.34	422.21	386.74	35.47	11.905			
4,800.00	4,660.15	4,768.93	4,659.24	19.83	17.60	-115.81	385.04	-688.41	437.48	401.42	36.06	12.131			
4,900.00	4,754.13	4,864.11	4,754.33	20.50	17.75	-119.12	386.83	-691.60	454.08	417.56	36.52	12.434			

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 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	4,848.10	4,957.88	4,848.10	21.18	17.87	-122.50	387.16	-692.20	472.37	435.53	36.84	12.821						
5,100.00	4,942.07	5,051.85	4,942.07	21.86	17.98	-125.73	387.16	-692.20	492.38	455.28	37.09	13.274						
5,200.00	5,036.04	5,145.82	5,036.04	22.54	18.10	-128.71	387.16	-692.20	513.88	476.58	37.30	13.777						
5,300.00	5,130.01	5,239.79	5,130.01	23.22	18.23	-131.47	387.16	-692.20	536.70	499.22	37.48	14.321						
5,400.00	5,223.98	5,333.76	5,223.98	23.90	18.35	-134.01	387.16	-692.20	560.68	523.05	37.63	14.898						
5,500.00	5,317.95	5,427.73	5,317.95	24.58	18.48	-136.35	387.16	-692.20	585.68	547.90	37.78	15.501						
5,600.00	5,411.92	5,521.70	5,411.92	25.26	18.60	-138.50	387.16	-692.20	611.57	573.64	37.93	16.125						
5,700.00	5,505.90	5,615.67	5,505.90	25.94	18.73	-140.49	387.16	-692.20	638.24	600.16	38.08	16.762						
5,800.00	5,599.87	5,709.65	5,599.87	26.63	18.86	-142.32	387.16	-692.20	665.60	627.36	38.23	17.410						
5,896.28	5,690.34	5,800.12	5,690.34	27.28	18.99	-143.95	387.16	-692.20	692.51	654.12	38.39	18.039						
5,900.00	5,693.84	5,803.62	5,693.84	27.31	18.99	-144.02	387.16	-692.20	693.56	655.17	38.40	18.064						
6,000.00	5,788.43	5,898.21	5,788.43	27.83	19.13	-145.83	387.16	-692.20	720.58	682.07	38.50	18.714						
6,100.00	5,884.10	5,993.87	5,884.10	28.31	19.26	-147.34	387.16	-692.20	745.19	706.55	38.64	19.285						
6,200.00	5,980.72	6,090.50	5,980.72	28.74	19.40	-148.61	387.16	-692.20	767.23	728.43	38.80	19.773						
6,300.00	6,078.18	6,187.96	6,078.18	29.13	19.55	-149.65	387.16	-692.20	786.55	747.58	38.98	20.180						
6,400.00	6,176.36	6,286.14	6,176.36	29.47	19.69	-150.50	387.16	-692.20	803.05	763.89	39.16	20.506						
6,500.00	6,275.15	6,384.93	6,275.15	29.76	19.84	-151.16	387.16	-692.20	816.63	777.28	39.35	20.752						
6,600.00	6,374.41	6,484.19	6,374.41	30.01	19.99	-151.67	387.16	-692.20	827.23	787.69	39.54	20.921						
6,700.00	6,474.04	6,583.82	6,474.04	30.21	20.14	-152.02	387.16	-692.20	834.80	795.07	39.73	21.012						
6,800.00	6,573.91	6,683.68	6,573.91	30.36	20.29	-152.22	387.16	-692.20	839.31	799.40	39.91	21.028						
6,896.11	6,670.00	6,779.78	6,670.00	30.47	20.44	-176.47	387.16	-692.20	840.74	800.65	40.09	20.973						
6,900.00	6,673.89	6,783.67	6,673.89	30.47	20.44	176.47	387.16	-692.20	840.74	800.64	40.10	20.967						
7,000.00	6,773.89	6,883.67	6,773.89	30.58	20.60	176.47	387.16	-692.20	840.74	800.32	40.41	20.803						
7,100.00	6,873.89	6,983.67	6,873.89	30.68	20.76	176.47	387.16	-692.20	840.74	800.00	40.73	20.640						
7,200.00	6,973.89	7,083.67	6,973.89	30.79	20.91	176.47	387.16	-692.20	840.74	799.68	41.05	20.479						
7,300.00	7,073.89	7,183.67	7,073.89	30.89	21.07	176.47	387.16	-692.20	840.74	799.36	41.38	20.319						
7,400.00	7,173.89	7,283.67	7,173.89	31.00	21.23	176.47	387.16	-692.20	840.74	799.03	41.70	20.160						
7,500.00	7,273.89	7,383.67	7,273.89	31.11	21.40	176.47	387.16	-692.20	840.74	798.71	42.03	20.003						
7,600.00	7,373.89	7,483.67	7,373.89	31.22	21.56	176.47	387.16	-692.20	840.74	798.38	42.36	19.847						
7,700.00	7,473.89	7,583.67	7,473.89	31.33	21.72	176.47	387.16	-692.20	840.74	798.04	42.69	19.692						
7,800.00	7,573.89	7,683.67	7,573.89	31.45	21.89	176.47	387.16	-692.20	840.74	797.71	43.03	19.539						
7,900.00	7,673.89	7,783.67	7,673.89	31.56	22.05	176.47	387.16	-692.20	840.74	797.37	43.37	19.387						
8,000.00	7,773.89	7,883.67	7,773.89	31.68	22.22	176.47	387.16	-692.20	840.74	797.03	43.70	19.237						
8,100.00	7,873.89	7,983.67	7,873.89	31.79	22.39	176.47	387.16	-692.20	840.74	796.69	44.04	19.088						
8,200.00	7,973.89	8,083.67	7,973.89	31.91	22.56	176.47	387.16	-692.20	840.74	796.35	44.39	18.941						
8,300.00	8,073.89	8,183.67	8,073.89	32.03	22.73	176.47	387.16	-692.20	840.74	796.01	44.73	18.795						
8,400.00	8,173.89	8,283.67	8,173.89	32.15	22.90	176.47	387.16	-692.20	840.74	795.66	45.08	18.651						
8,500.00	8,273.89	8,383.67	8,273.89	32.27	23.07	176.47	387.16	-692.20	840.74	795.31	45.43	18.508						
8,600.00	8,373.89	8,483.67	8,373.89	32.39	23.24	176.47	387.16	-692.20	840.74	794.96	45.78	18.367						
8,700.00	8,473.89	8,583.67	8,473.89	32.52	23.42	176.47	387.16	-692.20	840.74	794.61	46.13	18.227						
8,800.00	8,573.89	8,683.67	8,573.89	32.64	23.59	176.47	387.16	-692.20	840.74	794.26	46.48	18.088						
8,900.00	8,673.89	8,783.67	8,673.89	32.77	23.77	176.47	387.16	-692.20	840.74	793.90	46.83	17.951						
9,000.00	8,773.89	8,883.67	8,773.89	32.89	23.94	176.47	387.16	-692.20	840.74	793.55	47.19	17.815						
9,100.00	8,873.89	8,983.67	8,873.89	33.02	24.12	176.47	387.16	-692.20	840.74	793.19	47.55	17.681						
9,200.00	8,973.89	9,083.67	8,973.89	33.15	24.30	176.47	387.16	-692.20	840.74	792.83	47.91	17.549						
9,300.00	9,073.89	9,183.67	9,073.89	33.28	24.48	176.47	387.16	-692.20	840.74	792.47	48.27	17.417						
9,400.00	9,173.89	9,283.67	9,173.89	33.41	24.66	176.47	387.16	-692.20	840.74	792.10	48.63	17.288						
9,500.00	9,273.89	9,383.67	9,273.89	33.54	24.84	176.47	387.16	-692.20	840.74	791.74	49.00	17.159						
9,540.11	9,314.00	9,389.78	9,280.00	33.60	24.85	176.47	387.16	-692.20	841.42	792.35	49.08	17.144						



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	115.99	-17.48	35.86	39.89					
100.00	100.00	100.00	100.00	0.10	0.10	115.99	-17.48	35.86	39.89	39.70	0.19	206.374		
200.00	200.00	200.00	200.00	0.32	0.32	115.99	-17.48	35.86	39.89	39.25	0.64	62.057		
300.00	300.00	300.00	300.00	0.55	0.55	115.99	-17.48	35.86	39.89	38.80	1.09	36.519 CC, ES		
400.00	399.98	398.08	398.03	0.77	0.76	146.77	-17.31	38.37	43.59	42.05	1.54	28.382		
500.00	499.92	495.44	495.10	1.00	0.99	144.79	-16.80	45.82	53.22	51.23	1.99	26.797 SF		
600.00	599.86	591.63	590.50	1.22	1.24	141.58	-15.96	58.03	67.45	65.00	2.45	27.522		
700.00	699.80	686.21	683.58	1.45	1.57	138.29	-14.81	74.68	86.40	83.47	2.93	29.530		
800.00	799.74	782.60	777.81	1.68	1.95	135.54	-13.42	94.96	108.78	105.37	3.40	31.967		
900.00	899.68	879.93	872.92	1.91	2.36	133.69	-12.01	115.56	131.44	127.57	3.87	33.960		
1,000.00	999.61	977.25	968.03	2.15	2.78	132.38	-10.59	136.15	154.20	149.86	4.34	35.537		
1,100.00	1,099.55	1,074.57	1,063.14	2.38	3.21	131.41	-9.18	156.75	177.01	172.20	4.81	36.788		
1,200.00	1,199.49	1,171.90	1,158.24	2.61	3.65	130.66	-7.76	177.35	199.87	194.58	5.29	37.802		
1,300.00	1,299.43	1,269.22	1,253.35	2.84	4.08	130.07	-6.35	197.95	222.74	216.98	5.77	38.635		
1,400.00	1,399.37	1,366.55	1,348.46	3.07	4.53	129.58	-4.93	218.54	245.64	239.39	6.24	39.336		
1,500.00	1,499.31	1,463.87	1,443.57	3.30	4.97	129.18	-3.51	239.14	268.55	261.82	6.73	39.930		
1,600.00	1,599.25	1,561.20	1,538.68	3.54	5.41	128.84	-2.10	259.74	291.47	284.26	7.21	40.439		
1,700.00	1,699.19	1,658.52	1,633.79	3.77	5.86	128.56	-0.68	280.34	314.39	306.70	7.69	40.881		
1,800.00	1,799.13	1,755.85	1,728.90	4.00	6.30	128.31	0.73	300.93	337.33	329.15	8.17	41.267		
1,900.00	1,899.07	1,853.17	1,824.01	4.23	6.75	128.09	2.15	321.53	360.27	351.61	8.66	41.608		
2,000.00	1,999.01	1,950.50	1,919.12	4.46	7.20	127.90	3.56	342.13	383.21	374.07	9.14	41.911		
2,100.00	2,098.94	2,047.82	2,014.23	4.70	7.65	127.73	4.98	362.73	406.16	396.53	9.63	42.181		
2,121.07	2,120.00	2,068.33	2,034.27	4.75	7.74	127.69	5.28	367.07	411.00	401.27	9.73	42.235		
2,200.00	2,198.80	2,146.98	2,111.14	4.94	8.09	127.29	6.42	383.67	430.04	419.95	10.09	42.608		
2,300.00	2,298.27	2,258.54	2,220.65	5.20	8.49	127.36	7.87	404.89	454.90	444.35	10.55	43.104		
2,400.00	2,397.06	2,370.67	2,331.39	5.49	8.82	128.05	9.08	422.46	479.71	468.70	11.01	43.577		
2,500.00	2,494.91	2,483.09	2,442.94	5.82	9.11	129.26	10.03	436.26	504.67	493.21	11.47	44.008		
2,600.00	2,591.55	2,595.49	2,554.89	6.20	9.35	130.91	10.71	446.23	530.11	518.18	11.93	44.428		
2,700.00	2,686.72	2,707.55	2,666.78	6.65	9.55	132.91	11.13	452.34	556.40	544.00	12.40	44.886		
2,720.96	2,706.45	2,730.97	2,690.18	6.75	9.58	133.37	11.19	453.14	562.05	549.56	12.49	44.993		
2,800.00	2,780.73	2,819.67	2,778.87	7.15	9.71	135.57	11.29	454.64	582.85	569.89	12.96	44.975		
2,900.00	2,874.70	2,915.50	2,874.70	7.68	9.83	137.81	11.29	454.66	608.47	594.94	13.53	44.960		
3,000.00	2,968.67	3,009.47	2,968.67	8.24	9.95	139.83	11.29	454.66	634.89	620.78	14.11	44.994		
3,100.00	3,062.64	3,103.44	3,062.64	8.82	10.08	141.70	11.29	454.66	662.02	647.33	14.69	45.080		
3,200.00	3,156.61	3,197.41	3,156.61	9.41	10.21	143.42	11.29	454.66	689.78	674.52	15.26	45.213		
3,300.00	3,250.59	3,291.39	3,250.59	10.02	10.35	145.01	11.29	454.66	718.10	702.27	15.82	45.388		
3,400.00	3,344.56	3,385.36	3,344.56	10.64	10.48	146.49	11.29	454.66	746.90	730.52	16.38	45.597		
3,500.00	3,438.53	3,479.33	3,438.53	11.27	10.62	147.86	11.29	454.66	776.15	759.22	16.93	45.836		
3,600.00	3,532.50	3,573.30	3,532.50	11.90	10.76	149.14	11.29	454.66	805.78	788.30	17.48	46.097		
3,700.00	3,626.47	3,667.27	3,626.47	12.54	10.91	150.32	11.29	454.66	835.77	817.75	18.02	46.376		
3,800.00	3,720.44	3,761.24	3,720.44	13.19	11.05	151.43	11.29	454.66	866.06	847.51	18.56	46.668		
3,900.00	3,814.41	3,855.21	3,814.41	13.84	11.20	152.46	11.29	454.66	896.64	877.55	19.09	46.971		
4,000.00	3,908.38	3,949.18	3,908.38	14.49	11.35	153.42	11.29	454.66	927.47	907.85	19.62	47.280		
4,100.00	4,002.36	4,043.16	4,002.36	15.15	11.50	154.33	11.29	454.66	958.53	938.39	20.14	47.593		
4,200.00	4,096.33	4,137.13	4,096.33	15.81	11.66	155.18	11.29	454.66	989.79	969.13	20.66	47.908		
4,300.00	4,190.30	4,231.10	4,190.30	16.48	11.81	155.97	11.29	454.66	1,021.25	1,000.07	21.18	48.223		
4,400.00	4,284.27	4,325.07	4,284.27	17.14	11.97	156.72	11.29	454.66	1,052.87	1,031.18	21.69	48.536		
4,500.00	4,378.24	4,419.04	4,378.24	17.81	12.13	157.43	11.29	454.66	1,084.65	1,062.45	22.21	48.847		
4,600.00	4,472.21	4,513.01	4,472.21	18.48	12.29	158.10	11.29	454.66	1,116.57	1,093.86	22.72	49.154		
4,700.00	4,566.18	4,606.98	4,566.18	19.15	12.45	158.73	11.29	454.66	1,148.63	1,125.40	23.23	49.456		
4,800.00	4,660.15	4,700.95	4,660.15	19.83	12.61	159.33	11.29	454.66	1,180.80	1,157.07	23.73	49.753		
4,900.00	4,754.13	4,794.93	4,754.13	20.50	12.78	159.90	11.29	454.66	1,213.09	1,188.85	24.24	50.044		

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



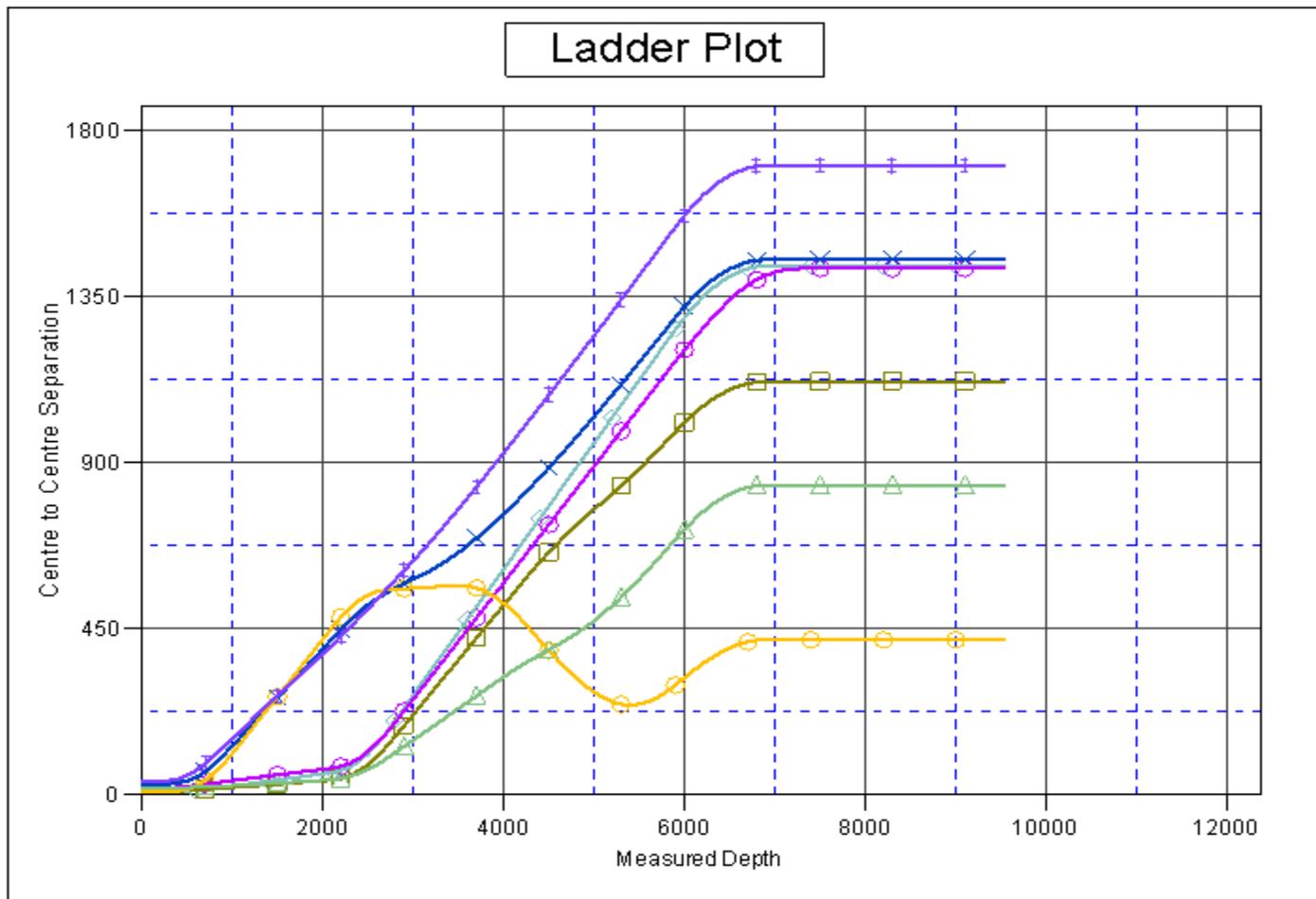
Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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	4,848.10	4,888.90	4,848.10	21.18	12.94	160.43	11.29	454.66	1,245.47	1,220.73	24.75	50.329		
5,100.00	4,942.07	4,982.87	4,942.07	21.86	13.11	160.94	11.29	454.66	1,277.95	1,252.70	25.25	50.607		
5,200.00	5,036.04	5,076.84	5,036.04	22.54	13.28	161.43	11.29	454.66	1,310.52	1,284.76	25.76	50.879		
5,300.00	5,130.01	5,170.81	5,130.01	23.22	13.45	161.89	11.29	454.66	1,343.17	1,316.91	26.26	51.145		
5,400.00	5,223.98	5,264.78	5,223.98	23.90	13.62	162.33	11.29	454.66	1,375.90	1,349.13	26.77	51.404		
5,500.00	5,317.95	5,358.75	5,317.95	24.58	13.79	162.75	11.29	454.66	1,408.69	1,381.42	27.27	51.656		
5,600.00	5,411.92	5,452.72	5,411.92	25.26	13.97	163.15	11.29	454.66	1,441.55	1,413.77	27.78	51.901		
5,700.00	5,505.90	5,546.70	5,505.90	25.94	14.14	163.53	11.29	454.66	1,474.47	1,446.19	28.28	52.139		
5,800.00	5,599.87	5,640.67	5,599.87	26.63	14.32	163.90	11.29	454.66	1,507.45	1,478.66	28.78	52.371		
5,896.28	5,690.34	5,731.14	5,690.34	27.28	14.49	164.24	11.29	454.66	1,539.25	1,509.98	29.27	52.589		
5,900.00	5,693.84	5,734.64	5,693.84	27.31	14.49	164.26	11.29	454.66	1,540.48	1,511.18	29.29	52.587		
6,000.00	5,788.43	5,829.23	5,788.43	27.83	14.67	164.75	11.29	454.66	1,571.84	1,541.94	29.90	52.567		
6,100.00	5,884.10	5,924.90	5,884.10	28.31	14.85	165.18	11.29	454.66	1,600.03	1,569.55	30.48	52.498		
6,200.00	5,980.72	6,021.52	5,980.72	28.74	15.04	165.54	11.29	454.66	1,625.00	1,593.98	31.02	52.385		
6,300.00	6,078.18	6,118.98	6,078.18	29.13	15.22	165.84	11.29	454.66	1,646.70	1,615.17	31.53	52.232		
6,400.00	6,176.36	6,217.16	6,176.36	29.47	15.41	166.09	11.29	454.66	1,665.10	1,633.11	32.00	52.042		
6,500.00	6,275.15	6,315.95	6,275.15	29.76	15.60	166.29	11.29	454.66	1,680.17	1,647.75	32.43	51.817		
6,600.00	6,374.41	6,415.21	6,374.41	30.01	15.79	166.44	11.29	454.66	1,691.89	1,659.07	32.81	51.559		
6,700.00	6,474.04	6,514.84	6,474.04	30.21	15.99	166.55	11.29	454.66	1,700.23	1,667.07	33.16	51.268		
6,800.00	6,573.91	6,614.71	6,573.91	30.36	16.18	166.61	11.29	454.66	1,705.19	1,671.72	33.47	50.945		
6,896.11	6,670.00	6,710.80	6,670.00	30.47	16.37	135.39	11.29	454.66	1,706.76	1,673.03	33.73	50.602		
6,900.00	6,673.89	6,714.69	6,673.89	30.47	16.38	135.39	11.29	454.66	1,706.76	1,673.02	33.74	50.581		
7,000.00	6,773.89	6,814.69	6,773.89	30.58	16.58	135.39	11.29	454.66	1,706.76	1,672.65	34.12	50.029		
7,100.00	6,873.89	6,914.69	6,873.89	30.68	16.77	135.39	11.29	454.66	1,706.76	1,672.27	34.49	49.486		
7,200.00	6,973.89	7,014.69	6,973.89	30.79	16.97	135.39	11.29	454.66	1,706.76	1,671.90	34.87	48.952		
7,300.00	7,073.89	7,114.69	7,073.89	30.89	17.17	135.39	11.29	454.66	1,706.76	1,671.52	35.24	48.427		
7,400.00	7,173.89	7,214.69	7,173.89	31.00	17.37	135.39	11.29	454.66	1,706.76	1,671.14	35.62	47.911		
7,500.00	7,273.89	7,314.69	7,273.89	31.11	17.57	135.39	11.29	454.66	1,706.76	1,670.76	36.00	47.404		
7,600.00	7,373.89	7,414.69	7,373.89	31.22	17.77	135.39	11.29	454.66	1,706.76	1,670.37	36.39	46.906		
7,700.00	7,473.89	7,514.69	7,473.89	31.33	17.97	135.39	11.29	454.66	1,706.76	1,669.99	36.77	46.416		
7,800.00	7,573.89	7,614.69	7,573.89	31.45	18.17	135.39	11.29	454.66	1,706.76	1,669.61	37.16	45.935		
7,900.00	7,673.89	7,714.69	7,673.89	31.56	18.38	135.39	11.29	454.66	1,706.76	1,669.22	37.54	45.462		
8,000.00	7,773.89	7,814.69	7,773.89	31.68	18.58	135.39	11.29	454.66	1,706.76	1,668.83	37.93	44.997		
8,100.00	7,873.89	7,914.69	7,873.89	31.79	18.78	135.39	11.29	454.66	1,706.76	1,668.44	38.32	44.540		
8,200.00	7,973.89	8,014.69	7,973.89	31.91	18.99	135.39	11.29	454.66	1,706.76	1,668.05	38.71	44.091		
8,300.00	8,073.89	8,114.69	8,073.89	32.03	19.19	135.39	11.29	454.66	1,706.76	1,667.66	39.10	43.649		
8,400.00	8,173.89	8,214.69	8,173.89	32.15	19.40	135.39	11.29	454.66	1,706.76	1,667.27	39.50	43.215		
8,500.00	8,273.89	8,314.69	8,273.89	32.27	19.60	135.39	11.29	454.66	1,706.76	1,666.87	39.89	42.788		
8,600.00	8,373.89	8,414.69	8,373.89	32.39	19.81	135.39	11.29	454.66	1,706.76	1,666.48	40.28	42.368		
8,700.00	8,473.89	8,514.69	8,473.89	32.52	20.01	135.39	11.29	454.66	1,706.76	1,666.08	40.68	41.955		
8,800.00	8,573.89	8,614.69	8,573.89	32.64	20.22	135.39	11.29	454.66	1,706.76	1,665.68	41.08	41.549		
8,900.00	8,673.89	8,714.69	8,673.89	32.77	20.43	135.39	11.29	454.66	1,706.76	1,665.29	41.48	41.150		
9,000.00	8,773.89	8,814.69	8,773.89	32.89	20.63	135.39	11.29	454.66	1,706.76	1,664.89	41.88	40.758		
9,100.00	8,873.89	8,914.69	8,873.89	33.02	20.84	135.39	11.29	454.66	1,706.76	1,664.49	42.28	40.372		
9,200.00	8,973.89	9,014.69	8,973.89	33.15	21.05	135.39	11.29	454.66	1,706.76	1,664.08	42.68	39.992		
9,300.00	9,073.89	9,114.69	9,073.89	33.28	21.26	135.39	11.29	454.66	1,706.76	1,663.68	43.08	39.619		
9,400.00	9,173.89	9,214.69	9,173.89	33.41	21.47	135.39	11.29	454.66	1,706.76	1,663.28	43.48	39.252		
9,500.00	9,273.89	9,314.69	9,273.89	33.54	21.68	135.39	11.29	454.66	1,706.76	1,662.88	43.89	38.890		
9,540.11	9,314.00	9,354.80	9,314.00	33.60	21.76	135.39	11.29	454.66	1,706.76	1,662.71	44.05	38.747		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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 922-31D1BS
 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°



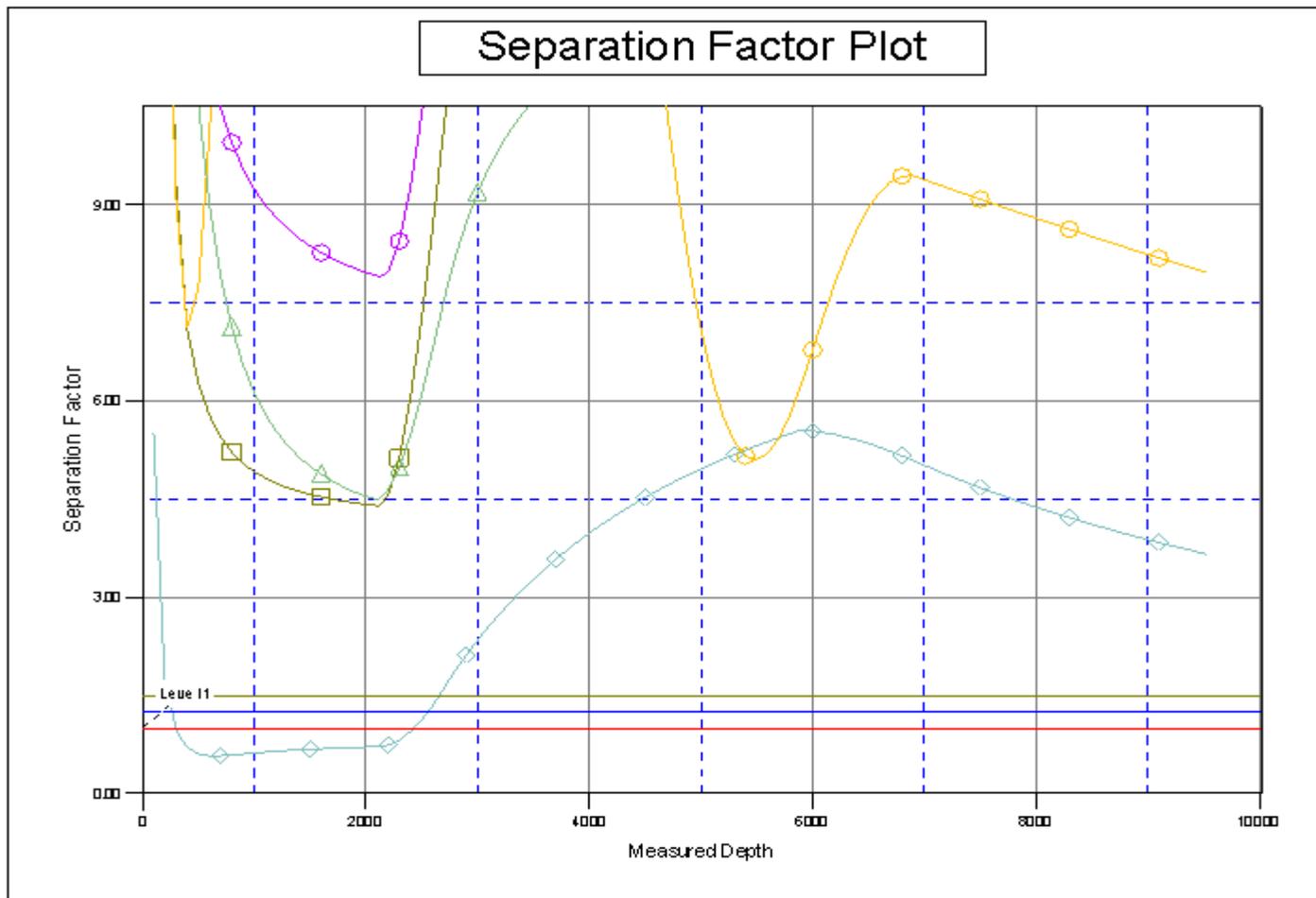
LEGEND

- 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
- NBU922-31C4CS, NBU922-31C4CS, PLAN #1 3-26-10 RHS \0
- NBU922-31D4BS, NBU922-31D4BS, PLAN#1 3-26-10 RHS \0
- NBU922-31D4CS, NBU922-31D4CS, PLAN #1 3-26-10 RHS \0
- NBU 922-31F1BS, NBU 922-31F1BS, PLAN #1 3-26-10 RHS \0



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31D1BS
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 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31D1BS	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 922-31D1BS
 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 \D
- 1C1AS, NBU922-31C1AS, PLAN#1 3-26-10 RHS \D
- 1C3AS, NBU922-31C3AS, PLAN#1 3-26-10 RHS \D
- NBU922-31C4CS, NBU922-31C4CS, PLAN #1 3-26-10 RHS \D
- NBU922-31D4BS, NBU922-31D4BS, PLAN#1 3-26-10 RHS \D
- NBU922-31D4CS, NBU922-31D4CS, PLAN #1 3-26-10 RHS \D
- NBU 922-31F1BS, NBU 922-31F1BS, PLAN #1 3-26-10 RHS \D

NBU 922-31D1BS

Pad: NBU 922-31F

Surface: 1,550' FNL 1,273' FWL (SE/4NW/4)

BHL: 320' FNL 527' FWL (NW/4NW/4) Lot 1

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	1,174'	
Birds Nest	1,504'	Water
Mahogany	1,872'	Water
Wasatch	4,446'	Gas
Mesaverde	7,093'	Gas
MVU2	8,077'	Gas
MVL1	8,663'	Gas
TVD	9,314'	
TD	9,540'	

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 9,314' TVD, approximately equals 5,706 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,657 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

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 2,020	28.00	IJ-55	LTC	0.88	1.99	6.09
PRODUCTION	4-1/2"	0 to 9,540	11.60	I-80	BTC	2.07	1.09	2.88

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.66

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 = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoyn.Fact. of water)
MASP 3,657 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoyn.Fact. of water)
MABHP 5,706 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,520'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	140	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	3,940'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	40%	11.00	3.38
	TAIL	5,600'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,180	20%	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. 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.

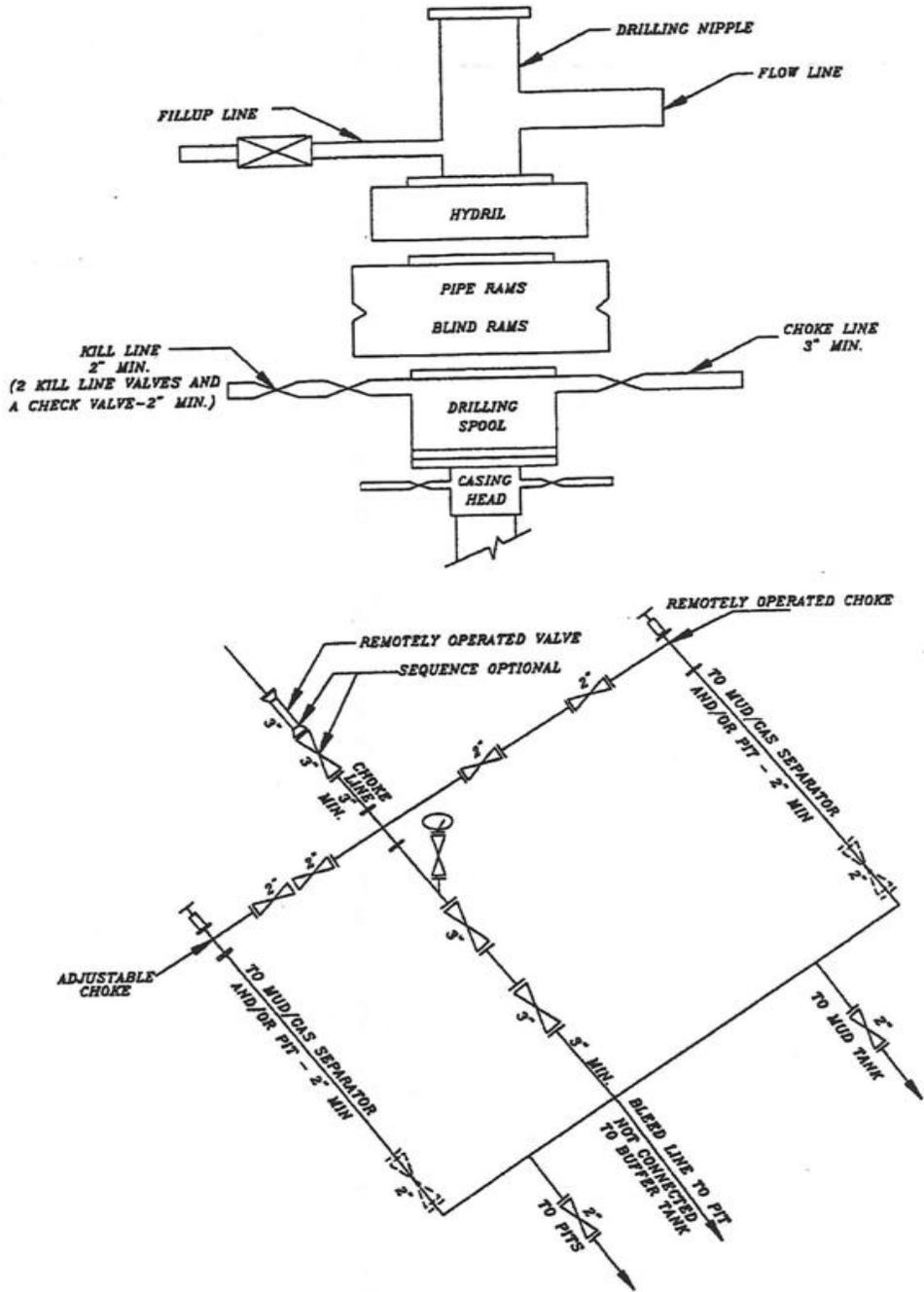
Surveys will be taken at 1,000' minimum intervals.

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

DRILLING ENGINEER: _____ **DATE:** _____
 John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____
 John Merkel / Lovel Young

EXHIBIT A NBU 922-31D1BS

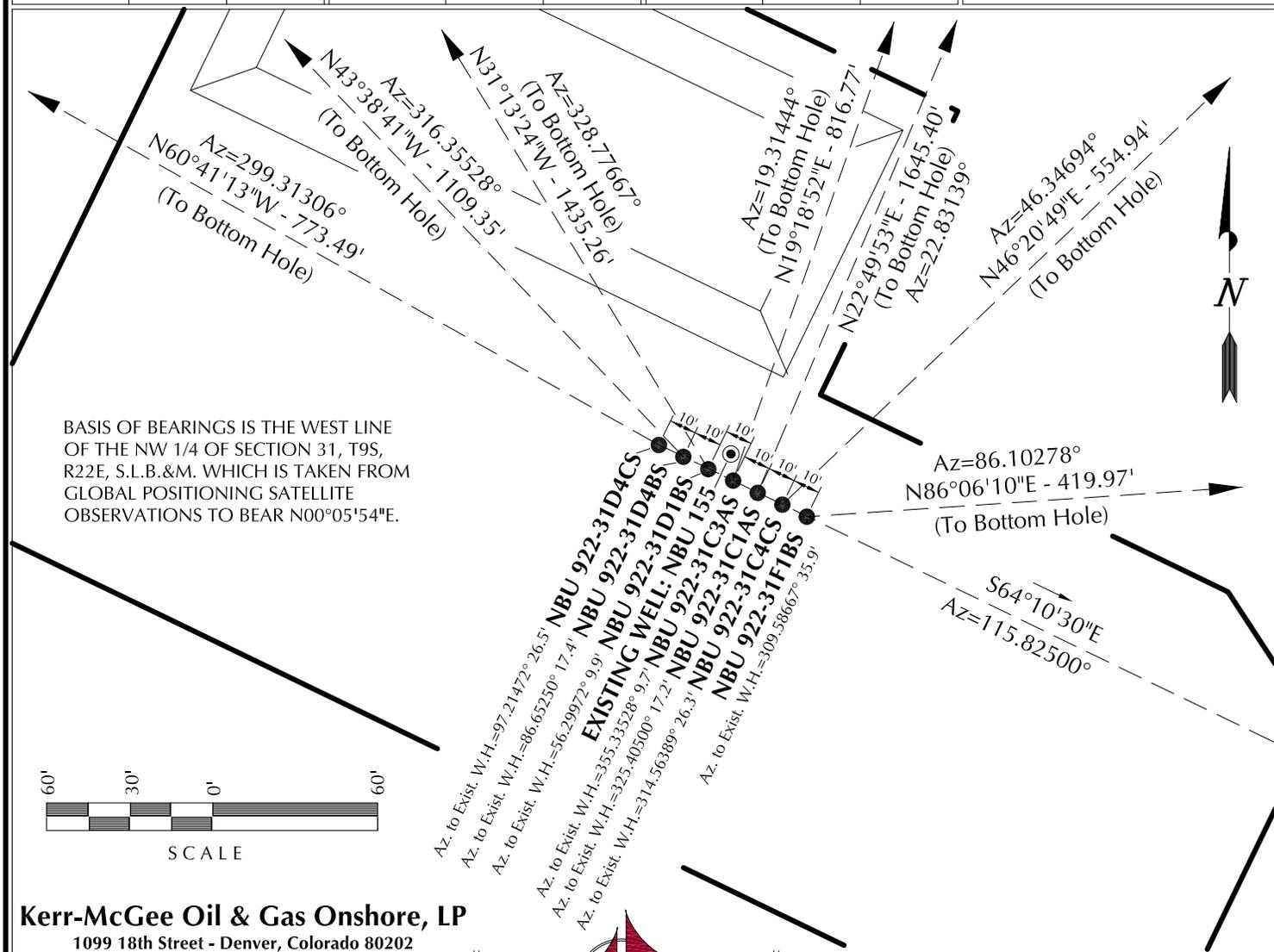


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



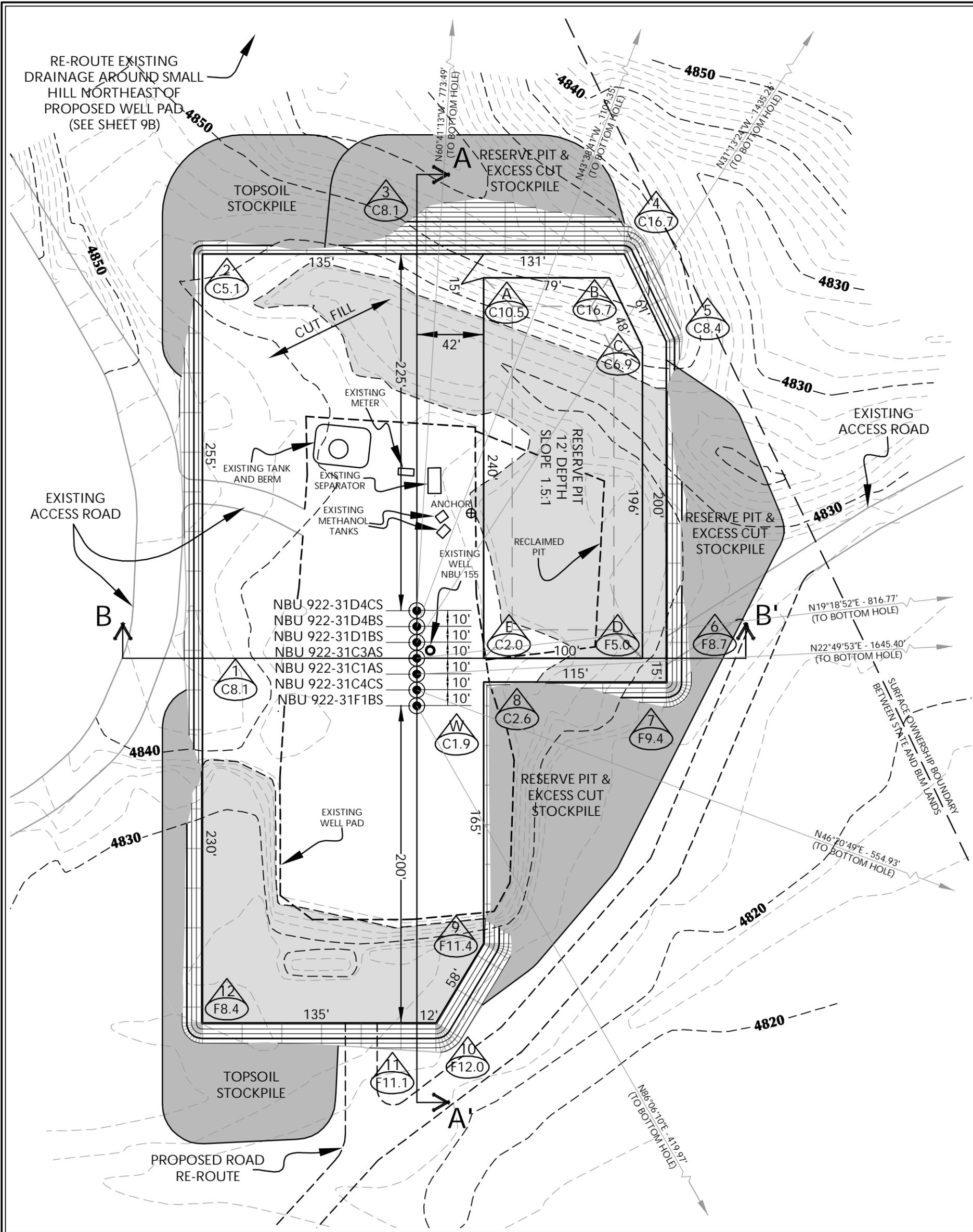
CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

TIMBERLINE

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

(435) 789-1365

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'	Date Last Revised: 3-4-10 M.W.W.	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)



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

Kerr-McGee Oil & Gas Onshore, LP
 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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 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

Scale: 1"=60'

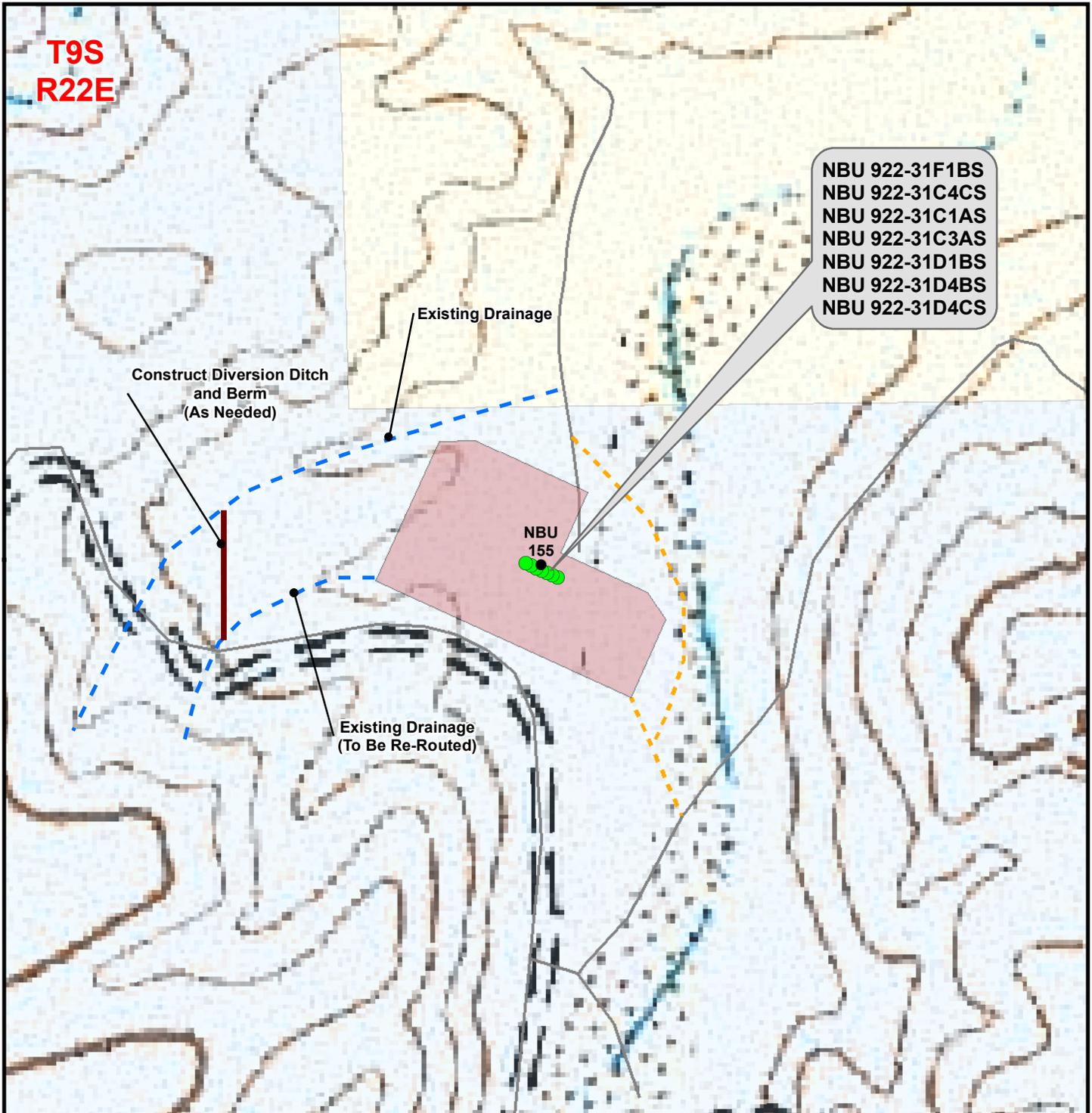
Date: 3/9/10

SHEET NO:

REVISED:

SEA 3/18/10

9A 9A OF 18



Legend

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

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 1099 18th Street, Denver, Colorado 80202

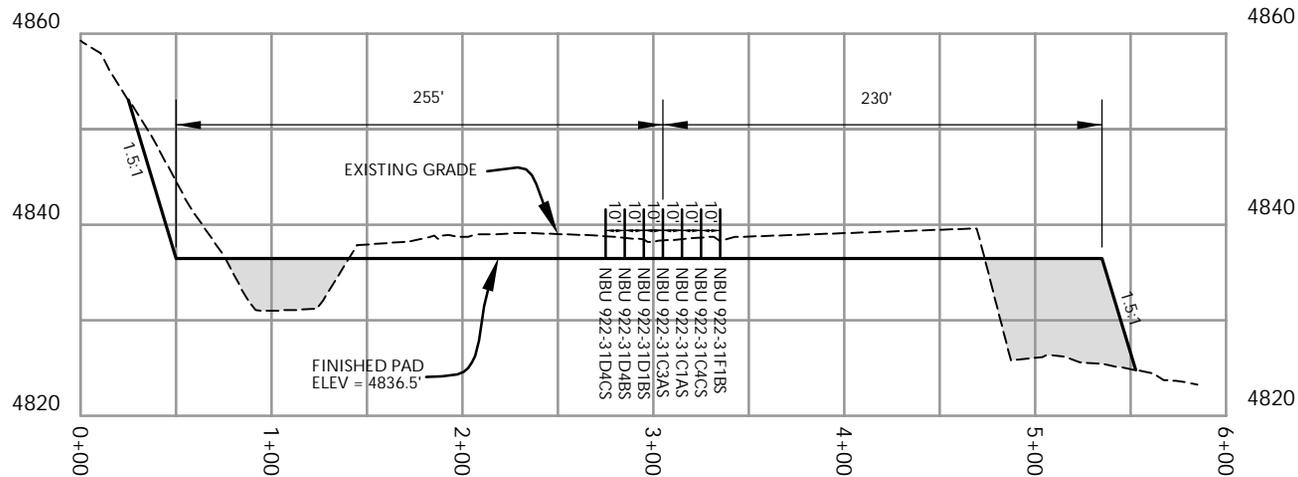
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NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
DIVERSION STRUCTURE LOCATION
 LOCATED IN SECTION 31, T9S, R22E
 S.L.B.&M., UINTAH COUNTY, UTAH

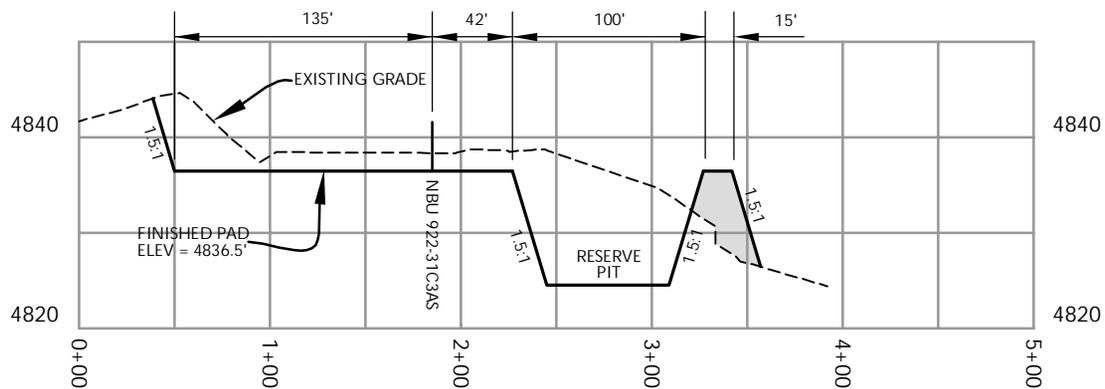
609
CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



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



CROSS SECTION A-A'



CROSS SECTION B-B'

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

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WELL PAD - NBU 922-31F

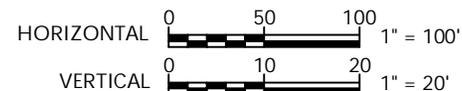
WELL PAD - CROSS SECTIONS
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NBU 922-31C4CS, NBU 922-31C1AS,
NBU 922-31C3AS, NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH



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Scale: 1"=100'

Date: 3/9/10

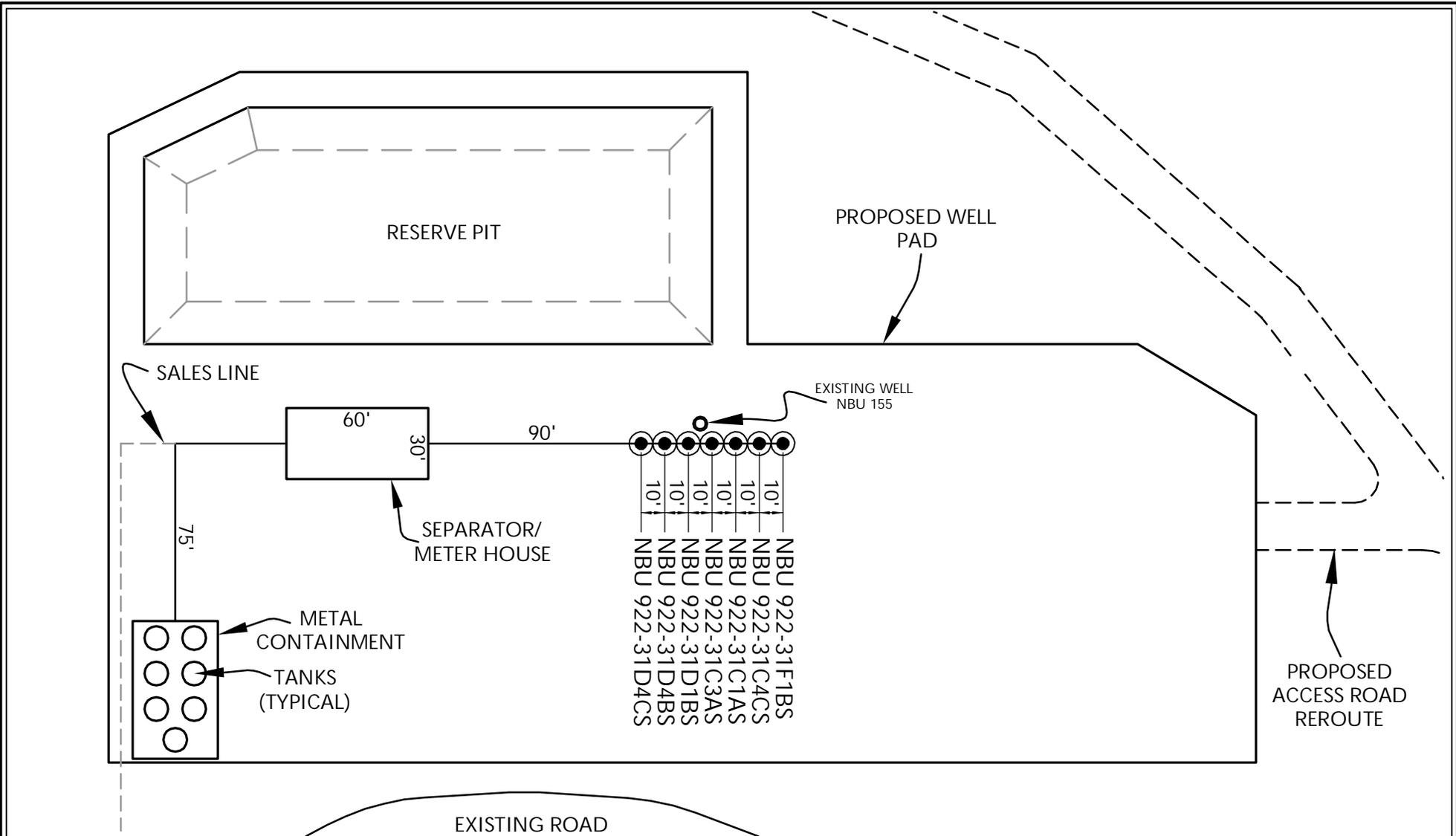
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10 OF 18

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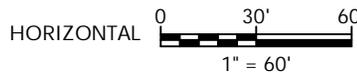
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street - Denver, Colorado 80202

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



WELL PAD LEGEND

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

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

(435) 789-1365

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

REVISED:

SHEET NO:

11

11 OF 18

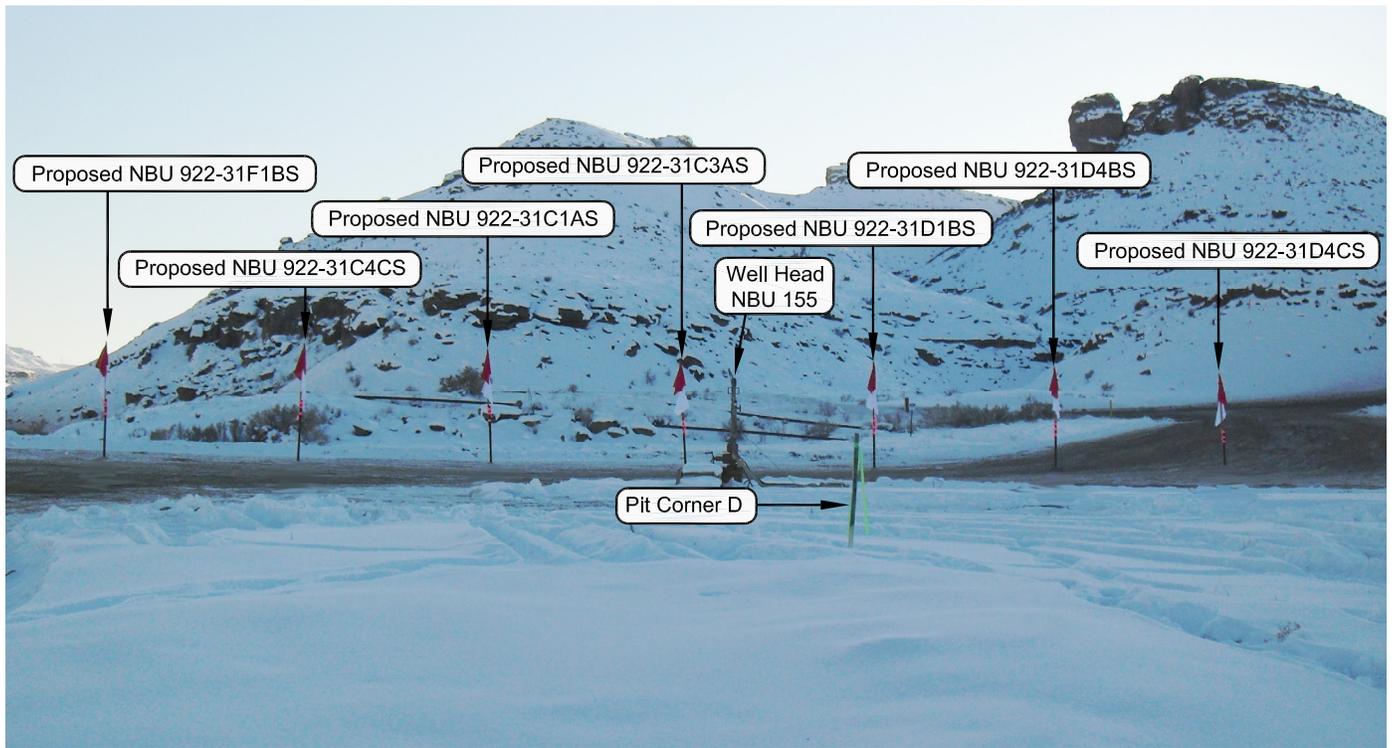


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

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

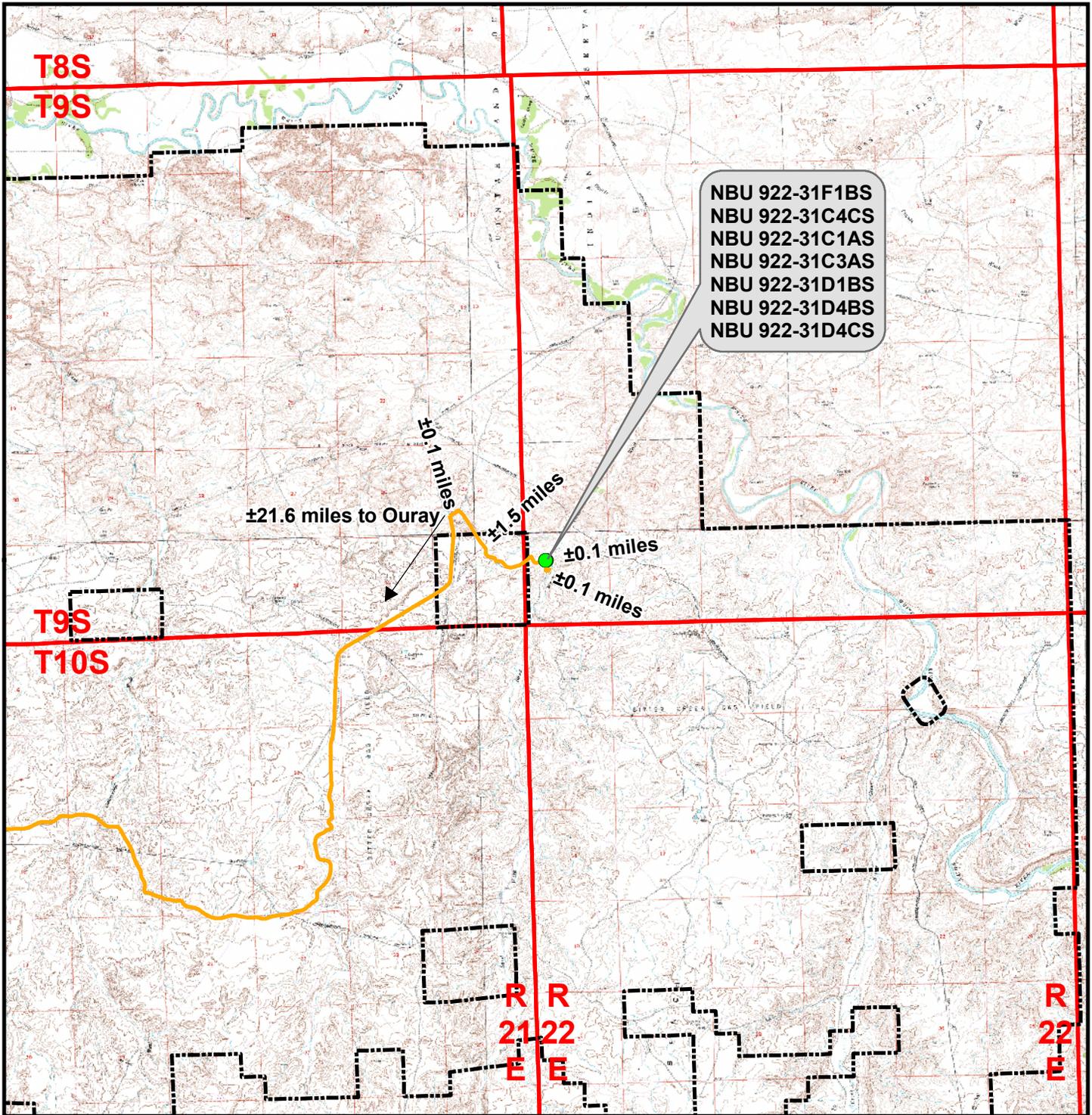
NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATION PHOTOS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

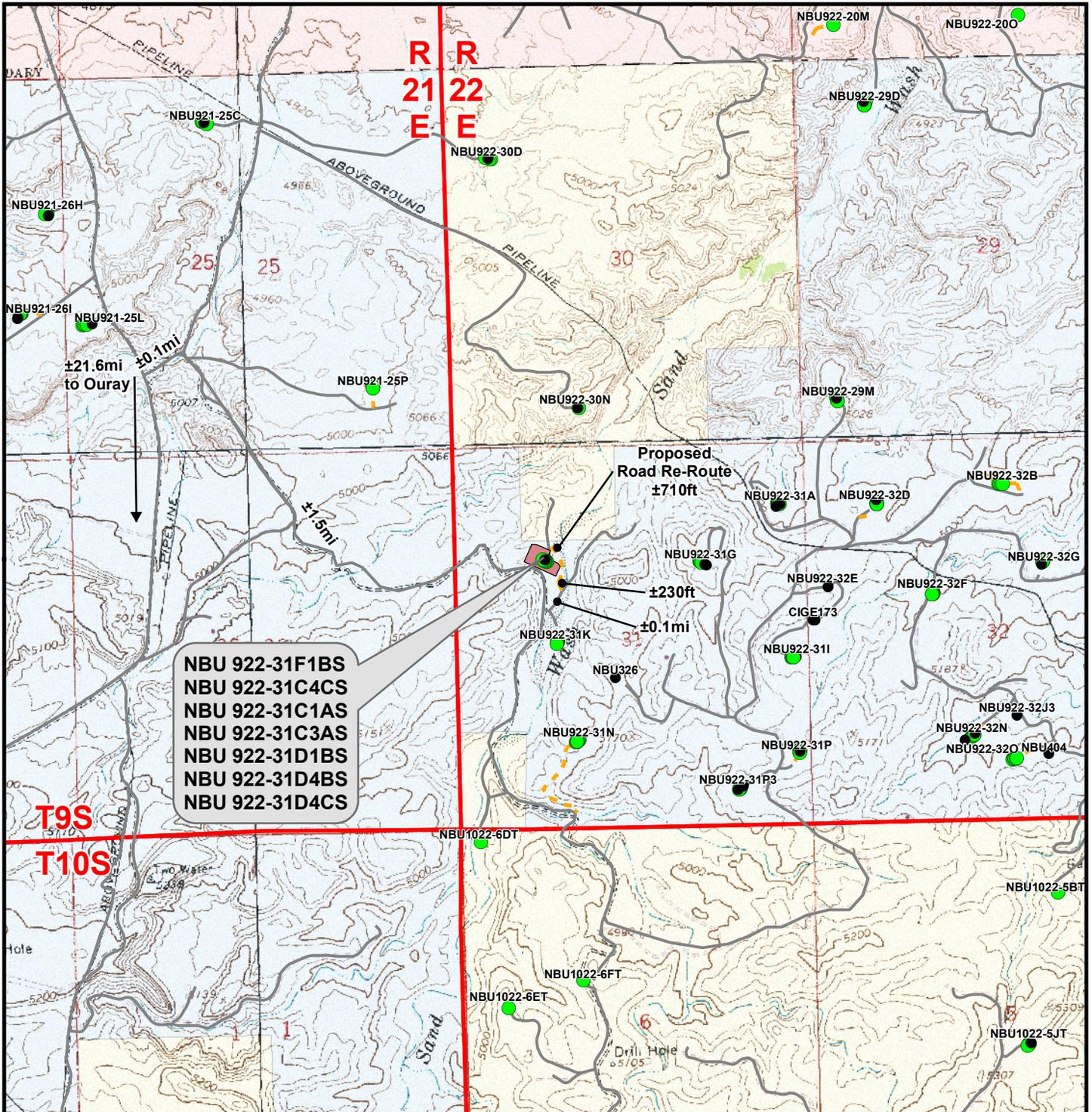
WELL PAD - NBU 922-31F

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

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



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 8 Mar 2010	13 13 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 Road Re-Route
 ±710ft

±230ft

±0.1mi

±1.5mi

±21.6mi to Ouray

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

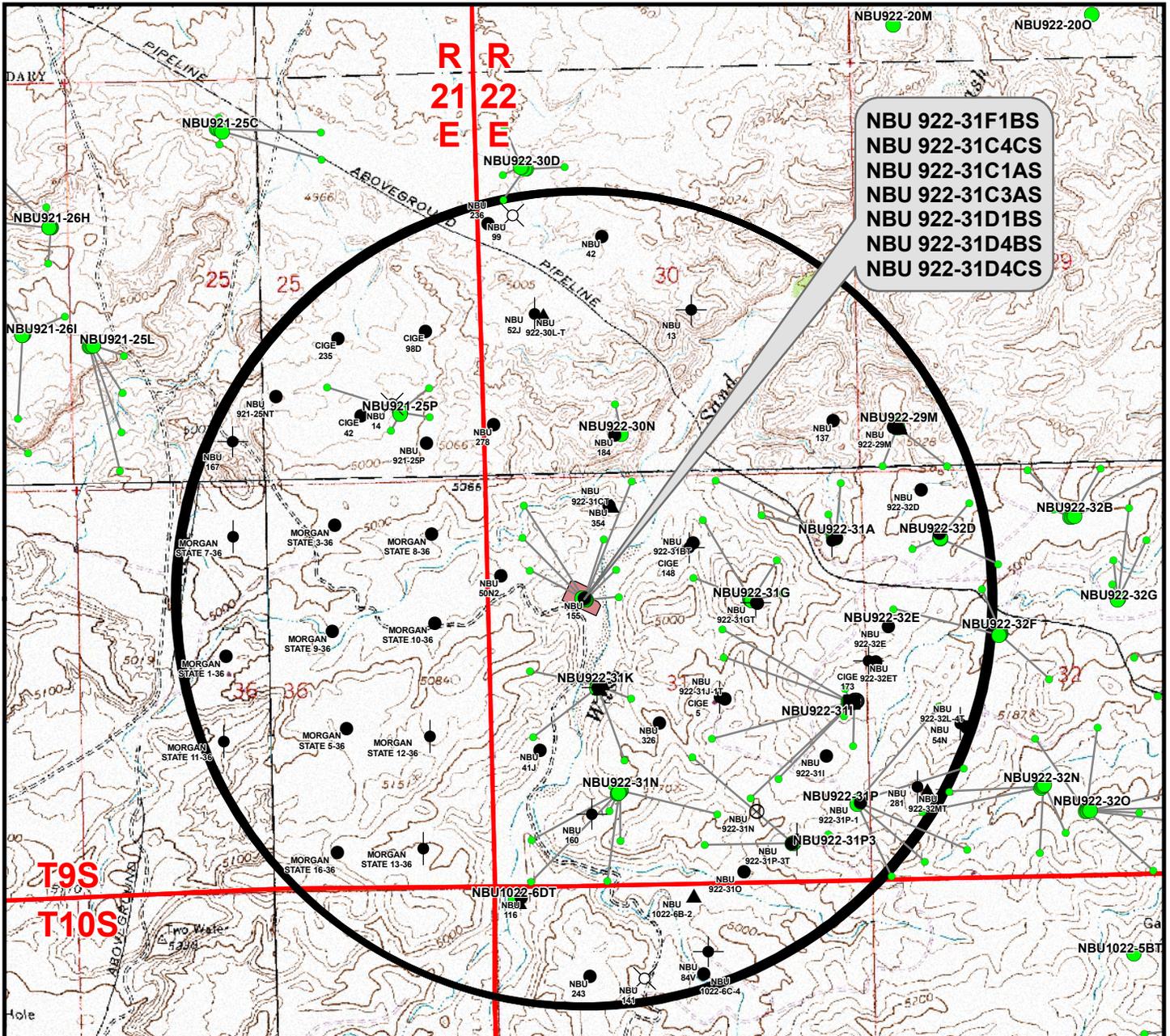
WELL PAD - NBU 922-31F

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

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

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

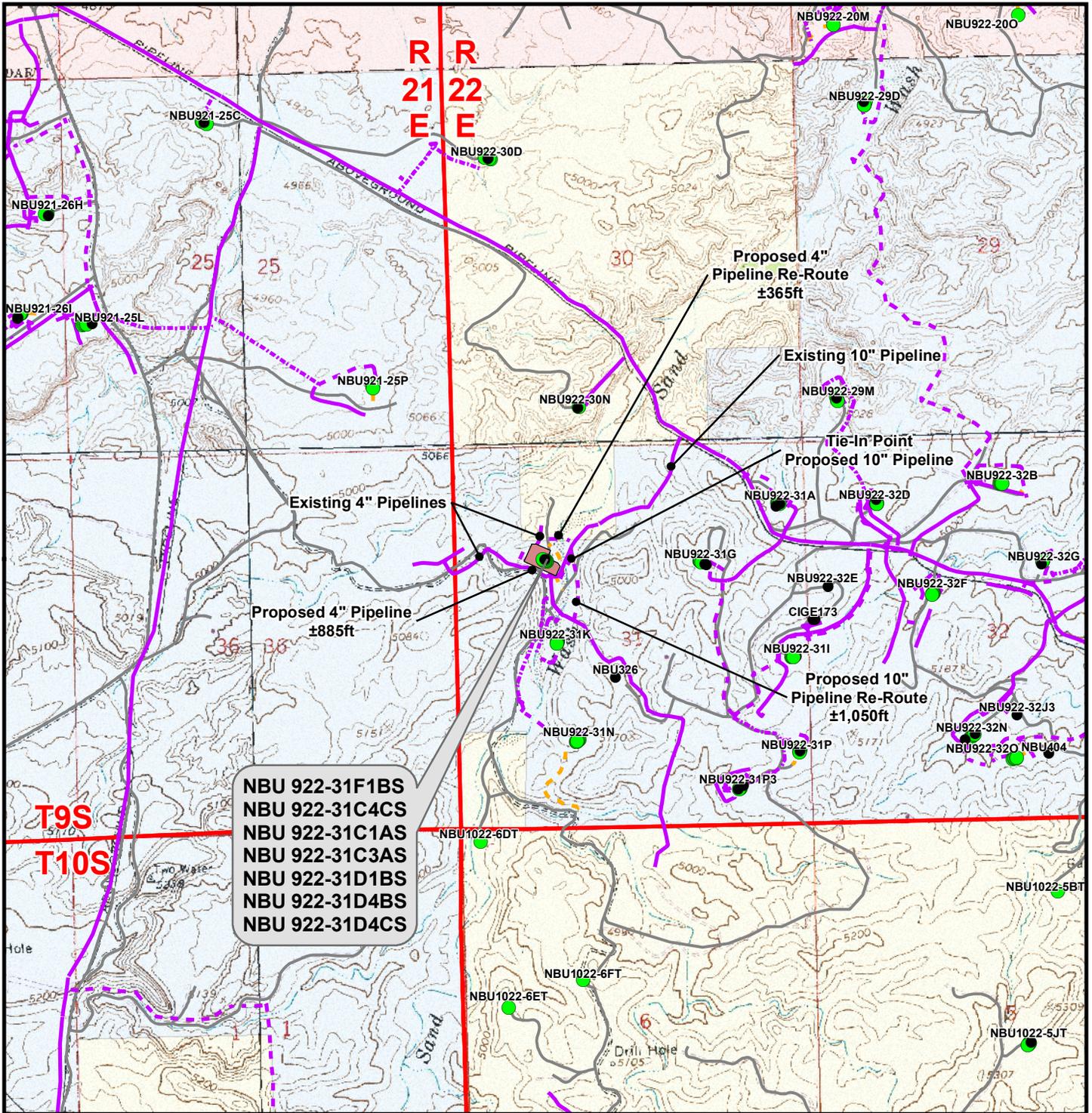
WELL PAD - NBU 922-31F

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

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	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

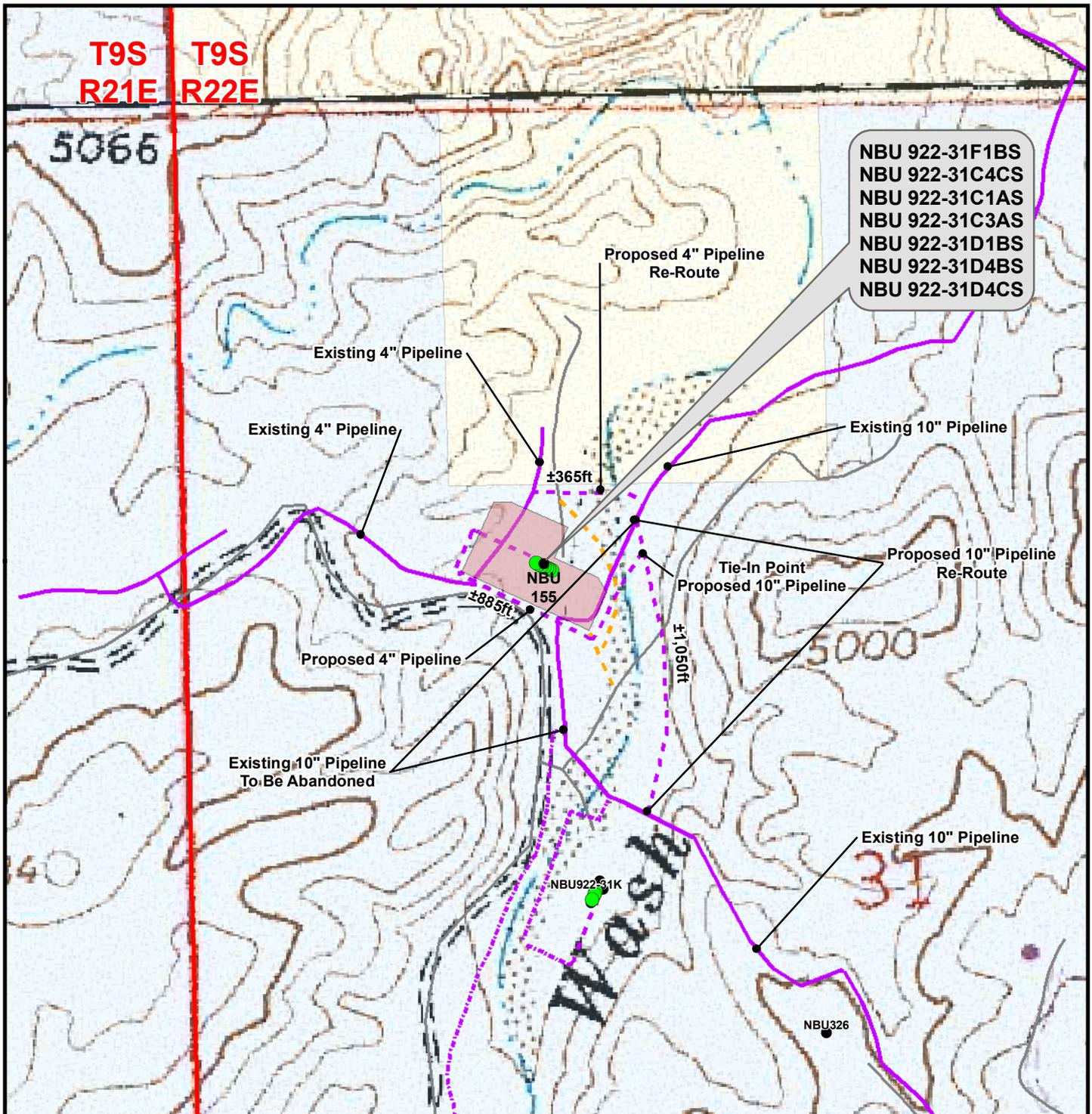
WELL PAD - NBU 922-31F

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

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	16
Revised:	Date:	



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

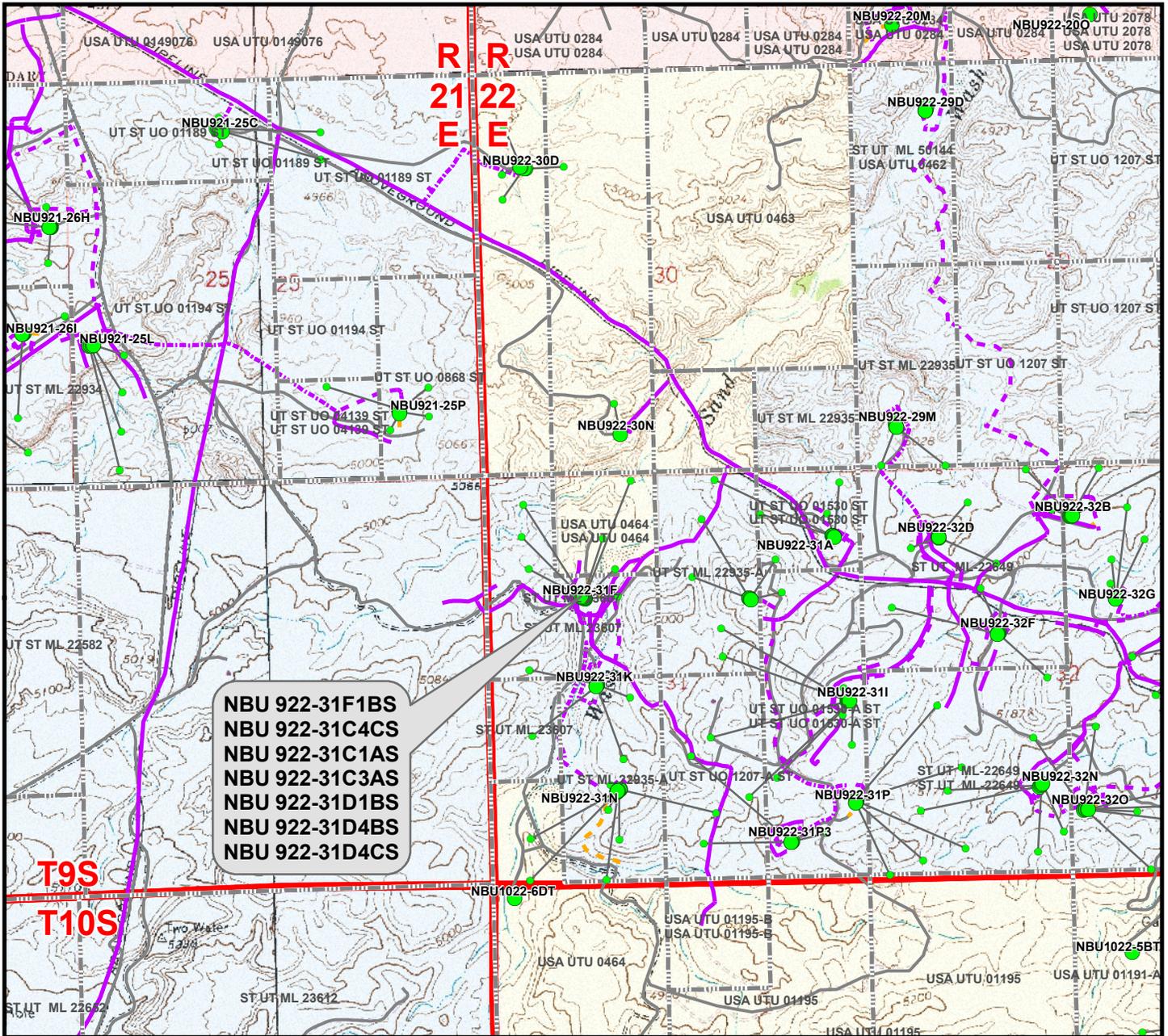
WELL PAD - NBU 922-31F

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
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Lease Boundary
- Pipeline - Proposed
- Pipeline - To Be Upgraded
- Pipeline - Existing
- 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 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

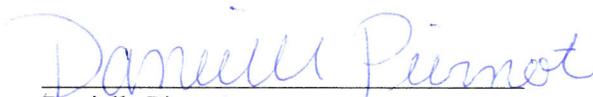
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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 922-31D1BS
T9S R22E
Section 31: SENW (Surface) / NWNW (Bottom Hole)
Surface Footages: 1550' FNL, 1273' FWL
Bottom Hole Footages: 320' FNL, 527' 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 922-31D1BS 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: 4304751089
Well Name: NBU 922-31D1BS
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

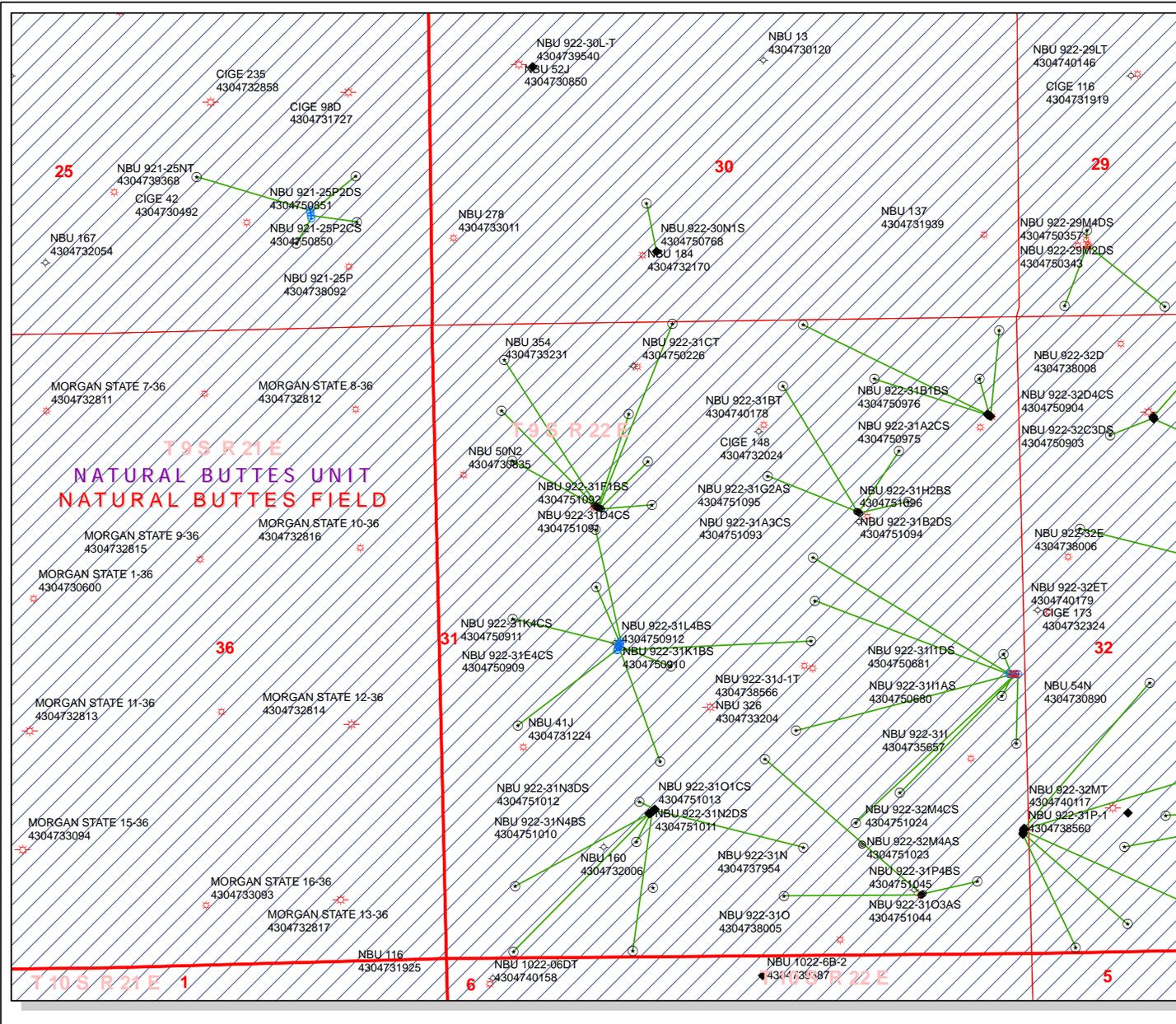
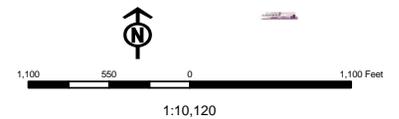
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Query

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

Fields

- Sections
- Township



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 922-31D1BS 4304751089		
String	Surf	Prod	
Casing Size(")	8.625	4.500	
Setting Depth (TVD)	2020	9314	
Previous Shoe Setting Depth (TVD)	40	2020	
Max Mud Weight (ppg)	8.3	12.0	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3390	7780	
Operators Max Anticipated Pressure (psi)	5682	11.7	

Calculations	Surf String	8.625	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	875	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	633	NO air drill
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	431	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	439	NO Reasonable depth in area
Required Casing/BOPE Test Pressure=		2020	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

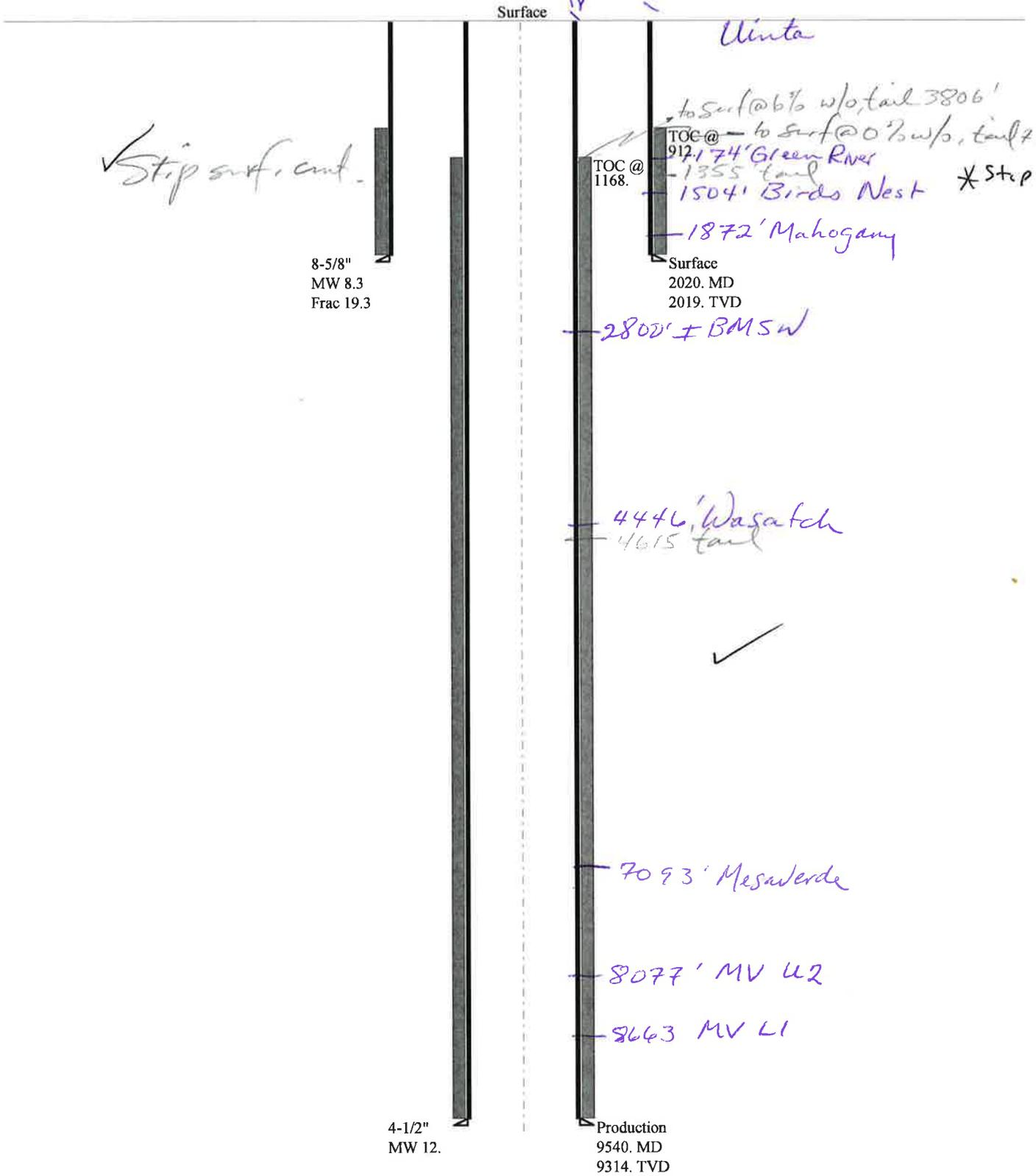
Calculations	Prod String	4.500	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	5812	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4694	YES
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3763	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4207	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2020	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

43047510890000 NBU 922-31D1BS

Casing Schematic



Well name:	43047510890000 NBU 922-31D1BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-51089
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: 102 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 912 ft

Burst

Max anticipated surface pressure: 1,778 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,020 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: 1,772 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 58 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 2 °

Re subsequent strings:

Next setting depth: 9,254 ft
Next mud weight: 12.000 ppg
Next setting BHP: 5,768 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,020 ft
Injection pressure: 2,020 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	2020	8.625	28.00	I-55	LT&C	2019	2020	7.892	79992
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	874	1880	2.152	2020	3390	1.68	56.5	348	6.16 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 2019 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:	43047510890000 NBU 922-31D1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51089
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 12.000 ppg
 Internal fluid density: 1.000 ppg

Burst

Max anticipated surface pressure: 3,757 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP: 5,806 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor: 1.125

Burst:

Design factor: 1.00

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: 7,869 ft

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 204 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 1,168 ft

Directional Info - Build & Drop

Kick-off point: 300 ft
 Departure at shoe: 1435 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	9540	4.5	11.60	I-80	LT&C	9314	9540	3.875	125928
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	5322	6360	1.195	5806	7780	1.34	108	212	1.96 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 9314 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to 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 922-31D1BS				
API Number	43047510890000	APD No	2641	Field/Unit	NATURAL BUTTES
Location: 1/4,1/4	SENW	Sec	31	Tw	9.0S
GPS Coord (UTM)	629299	4428145	Rng	22.0E	1550 FNL 1273 FWL
			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
2641	43047510890000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31D1BS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	SEW 31 9S 22E S 1550 FNL 1273 FWL GPS Coord (UTM) 629309E 4428159N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,020' 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.

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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: 43047510890000

WELL NAME: NBU 922-31D1BS

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: 1550 FNL 1273 FWL

Engineering Review:

BOTTOM: 0320 FNL 0527 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99562

LONGITUDE: -109.48530

UTM SURF EASTINGS: 629309.00

NORTHINGS: 4428159.00

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) - bhill
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 922-31D1BS
API Well Number: 43047510890000
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.

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

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.

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 922-31D1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510890000	
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: 1550 FNL 1273 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>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>05/16/2011</u></p> <p>By: </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 43047510890000

API: 43047510890000

Well Name: NBU 922-31D1BS

Location: 1550 FNL 1273 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

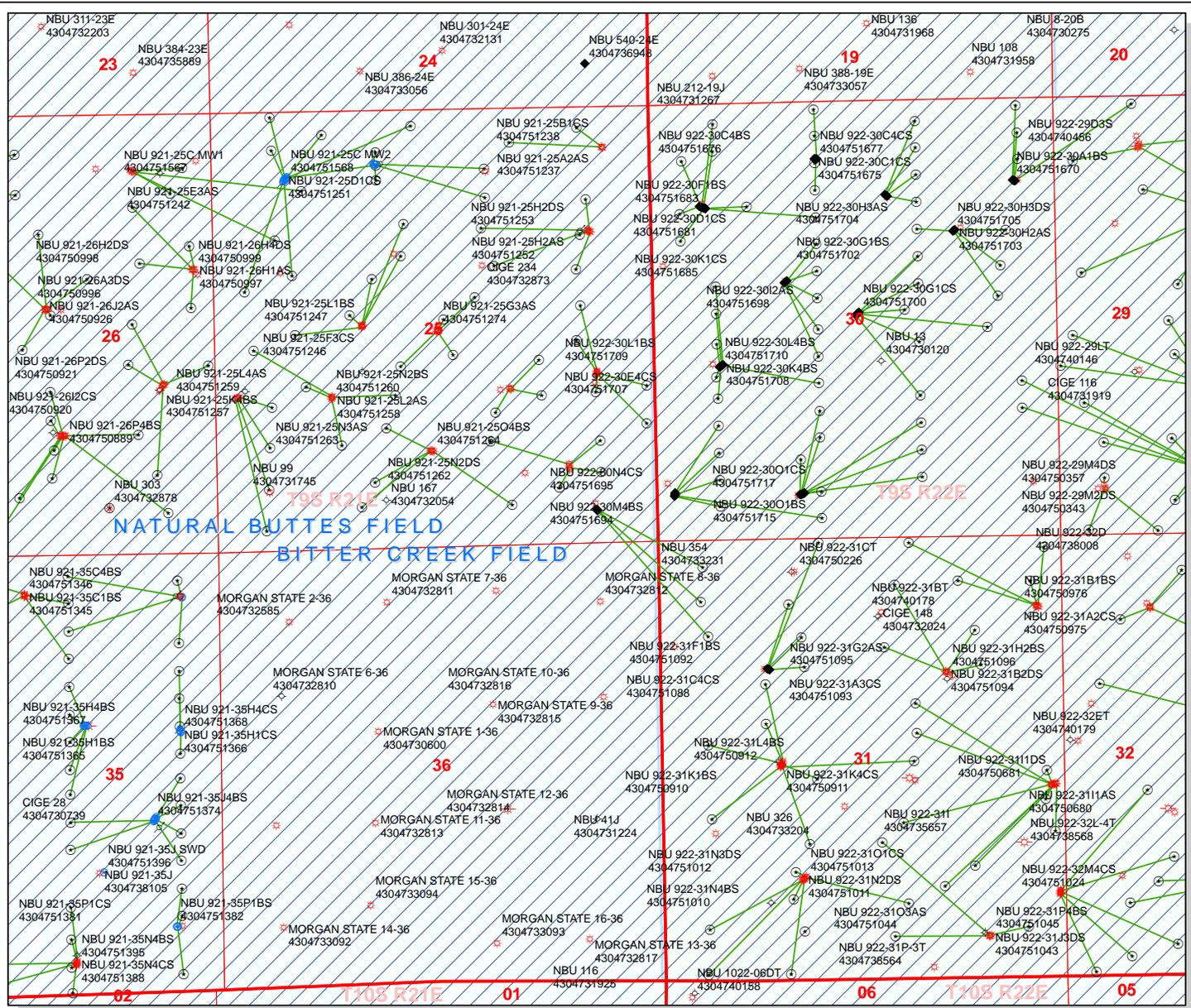
Title: Regulatory Analyst II **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 922-31D1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047510890000
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: 0405 FNL 0728 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: 9/27/2011 <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 checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <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.		
<p>The operator is requesting the approval of the following changes to the originally approved APD: 1. Surface Location (New Plat is Attached) 2. Proposed Total Depth (New Drilling Program and Directional Survey Attached) 3. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) 4. Roads, Gas and Liquid Pipeline Routes (Plat Package Documents Attached) 5. Surface Use Plan of Operations (Attached) 6. Drill Through Letter (Attached)</p>		
		<p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>10/27/2011</u></p> <p>By: <u><i>Dark K. Quist</i></u></p>
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 9/27/2011

API Number: 4304751089
Well Name: NBU 922-31D1BS
 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 | Wells Query |
| STATUS | 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 GEOTHERML | PA - Plugged Abandoned |
| PP OIL | PGW - Producing Gas Well |
| SECONDARY | POW - Producing Oil Well |
| TERMINATED | RET - Returned APD |
| Fields | STATUS |
| Unknown | SGW - Shut-in Gas Well |
| ABANDONED | SOW - Shut-in Oil Well |
| ACTIVE | TA - Temp. Abandoned |
| COMBINED | TW - Test Well |
| INACTIVE | WDW - Water Disposal |
| STORAGE | WWI - Water Injection Well |
| TERMINATED | WSW - Water Supply Well |



Well name:	43047510890000 NBU 922-31D1BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51089
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

Environment:

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

Burst

Max anticipated surface pressure: 2,110 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,398 psi

No backup mud specified.

Burst:

Design factor 1.00

Cement top: 1,382 ft

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: 2,177 ft

Directional well information:

Kick-off point 300 ft
Departure at shoe: 580 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 20 °

Re subsequent strings:

Next setting depth: 9,312 ft
Next mud weight: 12.000 ppg
Next setting BHP: 5,805 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,398 ft
Injection pressure: 2,398 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	2490	8.625	28.00	I-55	LT&C	2398	2490	7.892	98604
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	1038	1880	1.812	2398	3390	1.41	67.1	348	5.18 J

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

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

Date: October 27, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2398 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

Engineering responsibility for use of this design will be that of the purchaser.

RECEIVED Sep. 27, 2011

Well name:	43047510890000 NBU 922-31D1BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-51089
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 12.000 ppg
Internal fluid density: 1.000 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 207 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,332 ft

Burst

Max anticipated surface pressure: 3,822 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,907 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)

Directional well information:

Kick-off point 300 ft
Departure at shoe: 1448 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: .64 °

Tension is based on air weight.
Neutral point: 8,004 ft

Estimated cost: 194,093 (\$)

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 (\$)
2	5000	4.5	11.60	I-80	DQX	4777	5000	3.875	132000
1	4704	4.5	11.60	I-80	LT&C	9476	9704	3.875	62093

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
2	2730	5816	2.131	4873	7780	1.60	109.9	267	2.43 J
1	5415	6360	1.175	5907	7780	1.32	54.5	212	3.89 J

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

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

Date: October 27, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9476 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

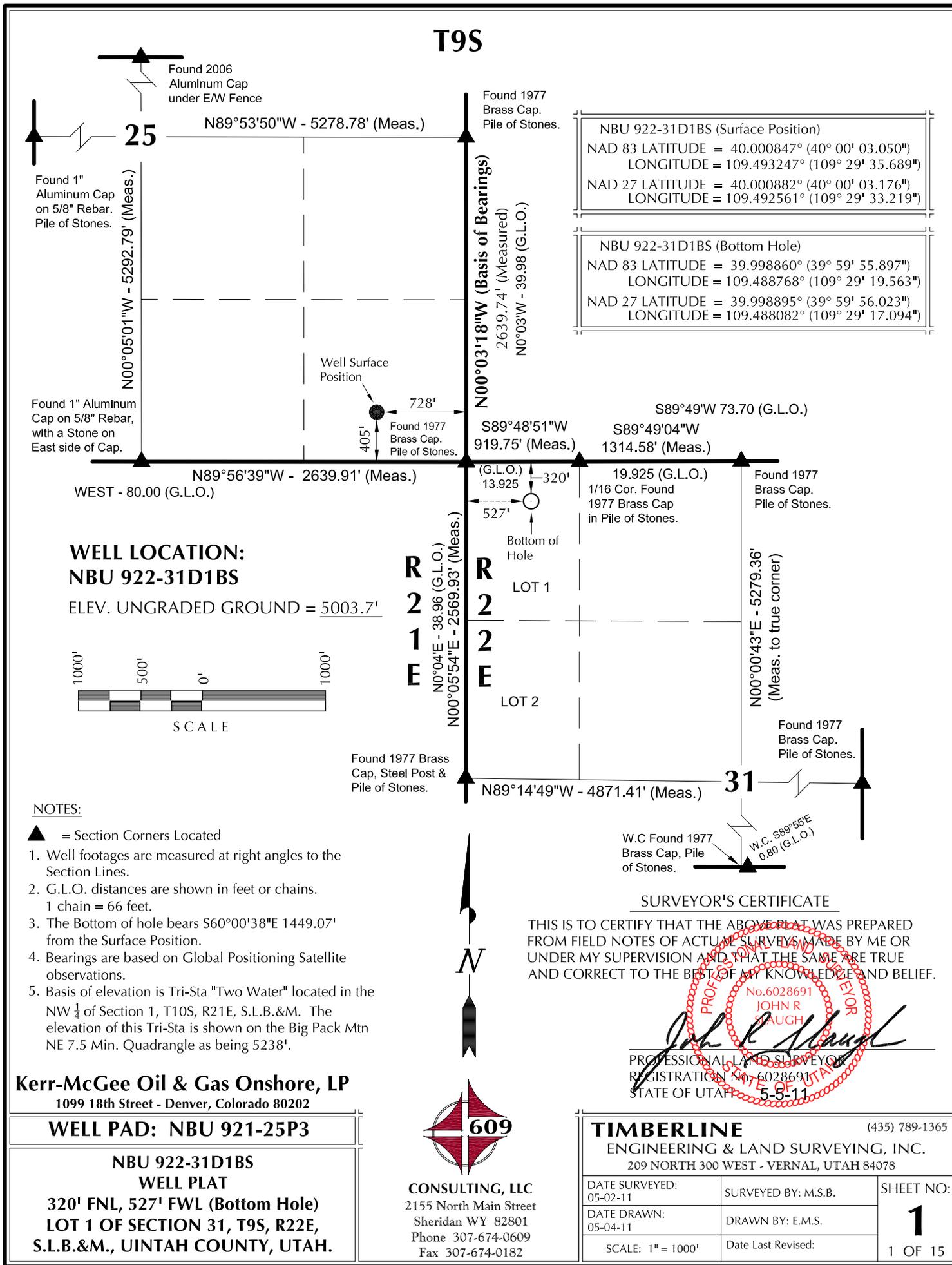
Burst strength is not adjusted for tension.

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

Engineering responsibility for use of this design will be that of the purchaser.

RECEIVED Sep. 27, 2011

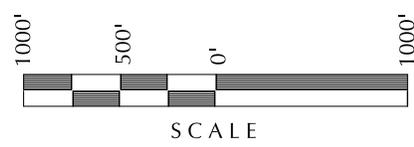
T9S



NBU 922-31D1BS (Surface Position)
 NAD 83 LATITUDE = 40.000847° (40° 00' 03.050")
 LONGITUDE = 109.493247° (109° 29' 35.689")
 NAD 27 LATITUDE = 40.000882° (40° 00' 03.176")
 LONGITUDE = 109.492561° (109° 29' 33.219")

NBU 922-31D1BS (Bottom Hole)
 NAD 83 LATITUDE = 39.998860° (39° 59' 55.897")
 LONGITUDE = 109.488768° (109° 29' 19.563")
 NAD 27 LATITUDE = 39.998895° (39° 59' 56.023")
 LONGITUDE = 109.488082° (109° 29' 17.094")

WELL LOCATION:
NBU 922-31D1BS
 ELEV. UNGRADED GROUND = 5003.7'



NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- 3. The Bottom of hole bears S60°00'38"E 1449.07' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. 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'.

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

WELL PAD: NBU 921-25P3

NBU 922-31D1BS
WELL PLAT
 320' FNL, 527' FWL (Bottom Hole)
 LOT 1 OF SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.

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

SURVEYOR'S CERTIFICATE

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

John R. Laugh
 No. 6028691
JOHN R. LAUGH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH 5-5-11

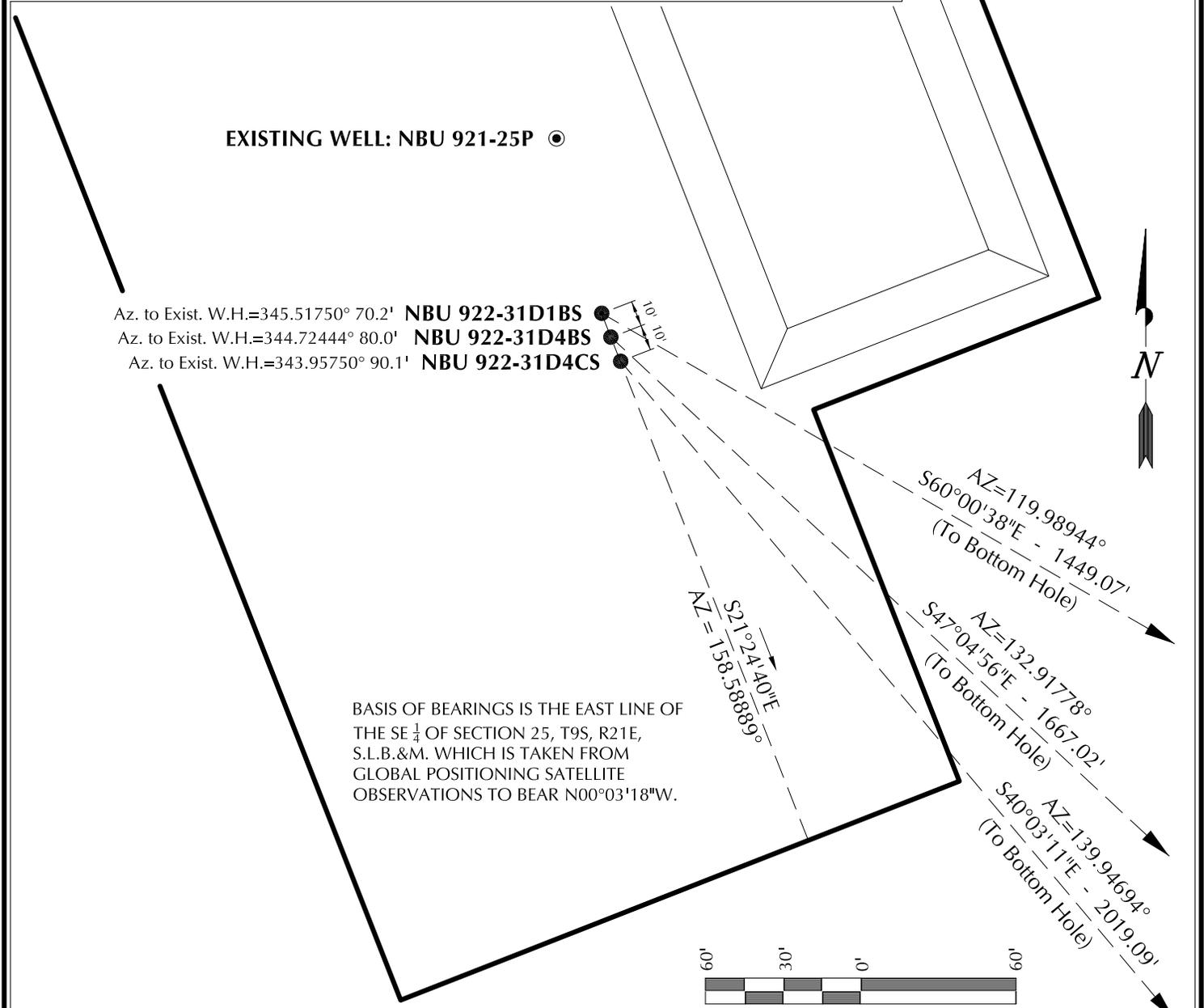
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 05-02-11	SURVEYED BY: M.S.B.	SHEET NO: 1
DATE DRAWN: 05-04-11	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		1 OF 15

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-31D1BS	40°00'03.050"	109°29'35.689"	40°00'03.176"	109°29'33.219"	405' FSL 728' FEL	39°59'55.897"	109°29'19.563"	39°59'56.023"	109°29'17.094"	320' FNL 527' FWL
NBU 922-31D4BS	40°00'02.958"	109°29'35.644"	40°00'03.084"	109°29'33.173"	396' FSL 725' FEL	39°59'51.747"	109°29'19.956"	39°59'51.873"	109°29'17.487"	740' FNL 497' FWL
NBU 922-31D4CS	40°00'02.866"	109°29'35.595"	40°00'02.992"	109°29'33.124"	387' FSL 721' FEL	39°59'47.600"	109°29'18.898"	39°59'47.726"	109°29'16.429"	1160' FNL 580' FWL
NBU 921-25P	40°00'03.721"	109°29'35.915"	40°00'03.847"	109°29'33.445"	473' FSL 746' FEL	39.996556°	109.488583°	39.996591°	109.487897°	

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-31D1BS	-724.3'	1,255.1'	NBU 922-31D4BS	-1,135.2'	1,220.8'	NBU 922-31D4CS	-1,545.5'	1,299.3'



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

WELL PAD - NBU 921-25P3

WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.



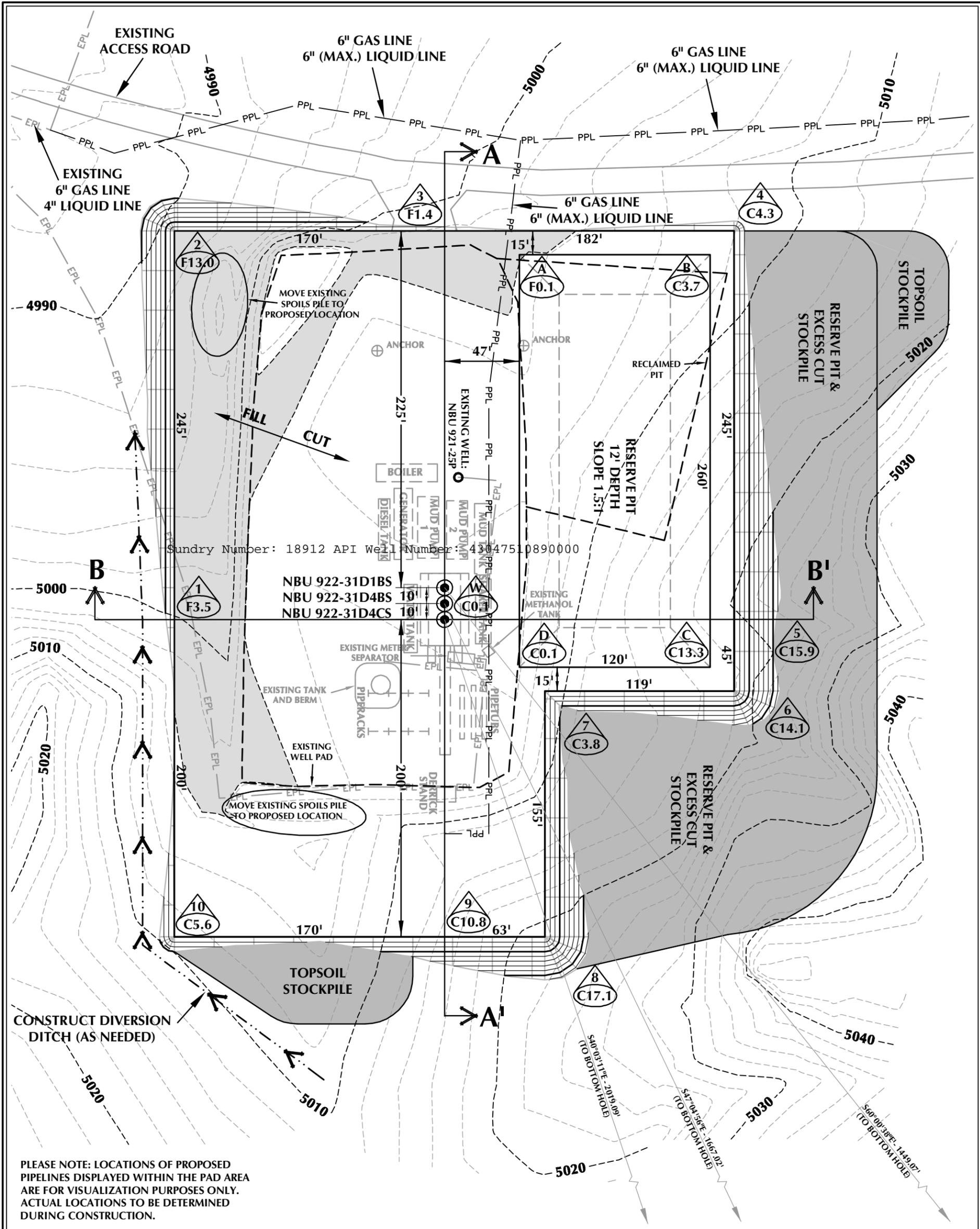
CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

TIMBERLINE

(435) 789-1365

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

DATE SURVEYED: 05-02-11	SURVEYED BY: M.S.B.	SHEET NO: 4
DATE DRAWN: 05-04-11	DRAWN BY: E.M.S.	
SCALE: 1" = 60'	Date Last Revised:	4 OF 15



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

WELL PAD - NBU 921-25P3 DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5003.8'
 FINISHED GRADE ELEVATION = 5003.7'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.65 ACRES
 TOTAL DISTURBANCE AREA = 4.93 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 921-25P3
WELL PAD - LOCATION LAYOUT
 NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 25, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH



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

WELL PAD QUANTITIES
TOTAL CUT FOR WELL PAD = 14,960 C.Y.
TOTAL FILL FOR WELL PAD = 5,622 C.Y.
TOPSOIL @ 6" DEPTH = 1,894 C.Y.
EXCESS MATERIAL = 9,338 C.Y.

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

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

WELL PAD LEGEND

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



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

SCALE: 1"=60' DATE: 5/24/11 SHEET NO: **5**
 REVISED: 5 OF 15

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-31D1BS**

Surface: 405 FSL / 728 FEL SESE
 BHL: 320 FNL / 527 FWL NWNW

Section 25 T9S R21E

Uintah County, 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	1342	
Birds Nest	1672	Water
Mahogany	2040	Water
Wasatch	4617	Gas
Mesaverde	7278	Gas
MVU2	8245	Gas
MVL1	8831	Gas
TVD	9476	
TD	9704	

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 9476' TVD, approximately equals
 6,065 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,967 psi (bottom hole pressure
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the 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

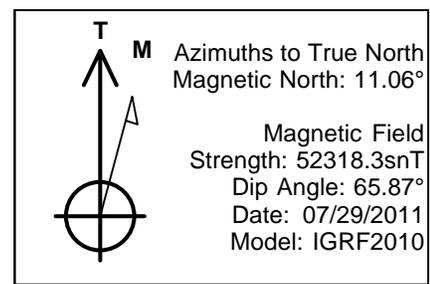
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

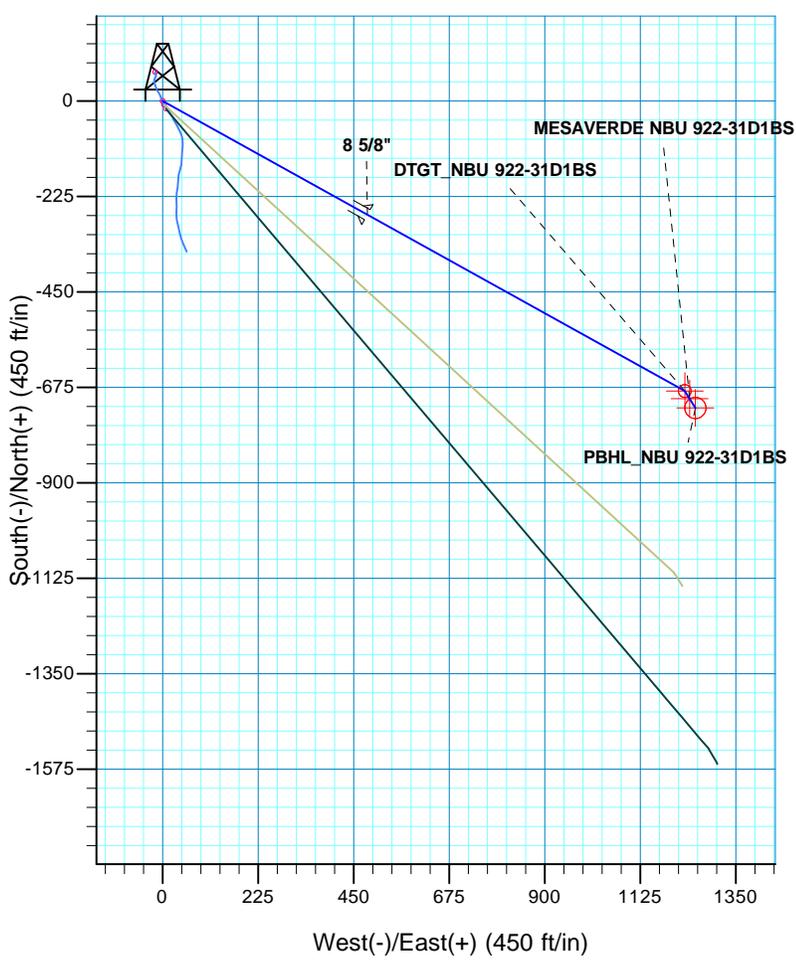
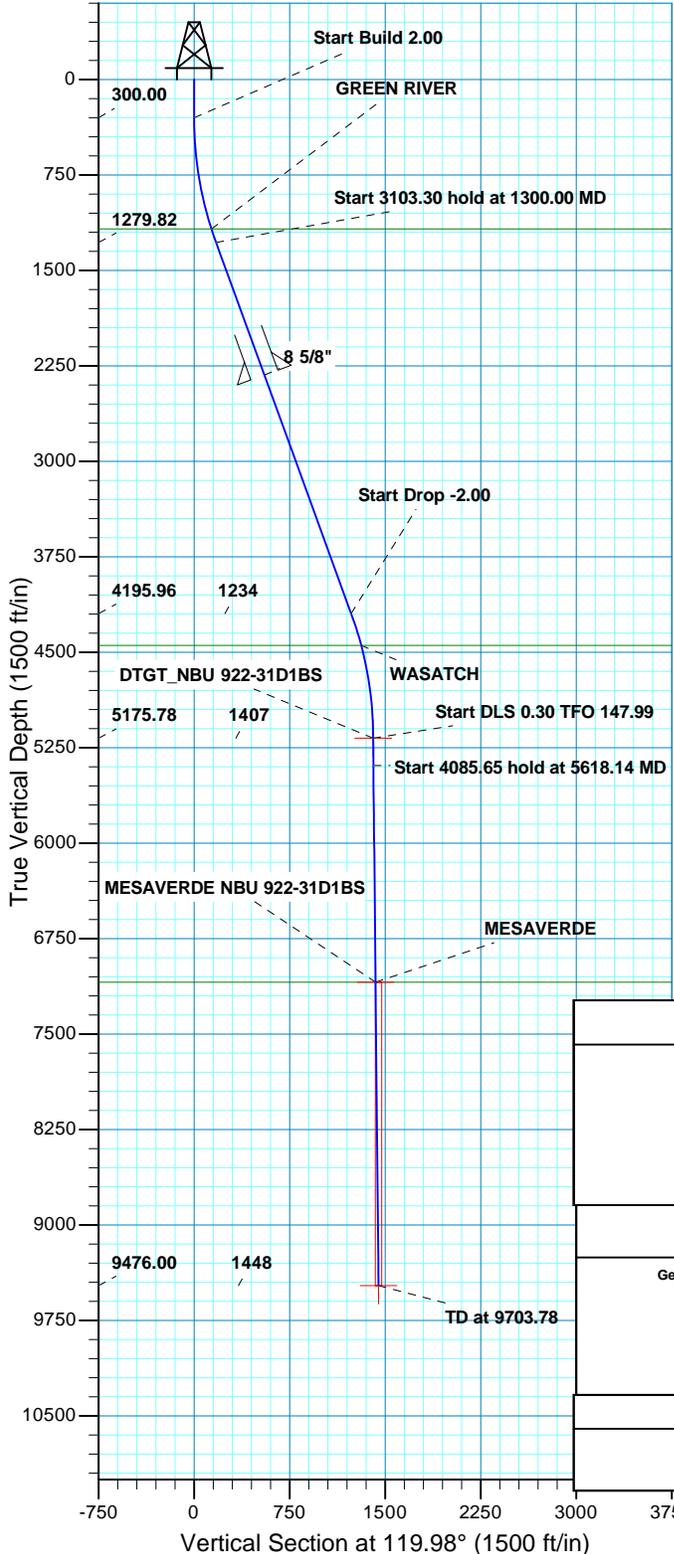
Please refer to the attached Drilling Program.



Project: Uintah County, UT UTM12
 Site: NBU 921-25P3 PAD
 Well: NBU 922-31D1BS
 Wellbore: OH
 Design: PLAN #1 SURFACE



WELL DETAILS: NBU 922-31D1BS						
GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14529935.87	2062590.61	40° 0' 3.175 N	109° 29' 33.220 W	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude Longitude Shape
DTGT	5175.78	-683.66	1229.66	14529273.11	2063831.65	39° 59' 56.417 N 109° 29' 17.416 W Circle (Radius: 15.00)
- plan hits target center						
MESAVERDE	7093.00	-701.59	1240.87	14529255.37	2063843.17	39° 59' 56.240 N 109° 29' 17.272 W Point
- plan misses target center by 0.79ft at 7320.64ft MD (7093.01 TVD, -700.92 N, 1240.45 E)						
PBHL	9476.00	-723.65	1254.66	14529233.55	2063857.33	39° 59' 56.022 N 109° 29' 17.095 W Circle (Radius: 25.00)
- plan hits target center						



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	119.07	1279.82	-83.95	151.00	2.00	119.07	172.75	
4403.30	20.00	119.07	4195.96	-599.71	1078.66	0.00	0.00	1234.01	
5403.30	0.00	0.00	5175.78	-683.66	1229.66	2.00	180.00	1406.75	DTGT_NBU 922-31D1BS
5618.14	0.64	147.99	5390.61	-684.68	1230.30	0.30	147.99	1407.82	
9703.78	0.64	147.99	9476.00	-723.65	1254.66	0.00	0.00	1448.39	PBHL_NBU 922-31D1BS

PROJECT DETAILS: Uintah County, UT UTM12		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 - Western US		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Location: SECTION 25 T9S R21E		
System Datum: Mean Sea Level		

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1174.00	1188.16	GREEN RIVER
4446.00	4665.39	WASATCH
7093.00	7320.63	MESAVERDE

CASING DETAILS			
TVD	MD	Name	Size
2322.00	2409.07	8 5/8"	8.625



Kerr McGee Oil and Gas Onshore LP

**Uintah County, UT UTM12
NBU 921-25P3 PAD
NBU 922-31D1BS**

OH

Plan: PLAN #1 SURFACE

Standard Planning Report

30 August, 2011





SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Site:	NBU 921-25P3 PAD	North Reference:	True
Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 SURFACE		

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 921-25P3 PAD, SECTION 25 T9S R21E				
Site Position:		Northing:	14,529,935.88 usft	Latitude:	40° 0' 3.175 N
From:	Lat/Long	Easting:	2,062,590.61 usft	Longitude:	109° 29' 33.220 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.97 °

Well	NBU 922-31D1BS, 405' FSL 728' FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,529,935.88 usft	Latitude:	40° 0' 3.175 N
	+E/-W	0.00 ft	Easting:	2,062,590.61 usft	Longitude:	109° 29' 33.220 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,004.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/29/11	11.06	65.87	52,318

Design	PLAN #1 SURFACE			
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	119.98

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	119.07	1,279.82	-83.95	151.00	2.00	2.00	0.00	119.07	
4,403.30	20.00	119.07	4,195.96	-599.71	1,078.66	0.00	0.00	0.00	0.00	
5,403.30	0.00	0.00	5,175.78	-683.66	1,229.66	2.00	-2.00	0.00	180.00	DTGT_NBU 922-31D
5,618.14	0.64	147.99	5,390.61	-684.68	1,230.30	0.30	0.30	68.88	147.99	
9,703.78	0.64	147.99	9,476.00	-723.65	1,254.66	0.00	0.00	0.00	0.00	PBHL_NBU 922-31D



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Site:	NBU 921-25P3 PAD	North Reference:	True
Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 SURFACE		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	119.07	399.98	-0.85	1.53	1.74	2.00	2.00	2.00	0.00
500.00	4.00	119.07	499.84	-3.39	6.10	6.98	2.00	2.00	2.00	0.00
600.00	6.00	119.07	599.45	-7.63	13.72	15.69	2.00	2.00	2.00	0.00
700.00	8.00	119.07	698.70	-13.55	24.37	27.88	2.00	2.00	2.00	0.00
800.00	10.00	119.07	797.47	-21.15	38.04	43.52	2.00	2.00	2.00	0.00
900.00	12.00	119.07	895.62	-30.42	54.71	62.59	2.00	2.00	2.00	0.00
1,000.00	14.00	119.07	993.06	-41.35	74.37	85.09	2.00	2.00	2.00	0.00
1,100.00	16.00	119.07	1,089.64	-53.93	96.99	110.96	2.00	2.00	2.00	0.00
1,188.16	17.76	119.07	1,174.00	-66.37	119.37	136.56	2.00	2.00	2.00	0.00
GREEN RIVER										
1,200.00	18.00	119.07	1,185.27	-68.13	122.55	140.20	2.00	2.00	2.00	0.00
1,300.00	20.00	119.07	1,279.82	-83.95	151.00	172.75	2.00	2.00	2.00	0.00
Start 3103.30 hold at 1300.00 MD										
1,400.00	20.00	119.07	1,373.78	-100.57	180.89	206.94	0.00	0.00	0.00	0.00
1,500.00	20.00	119.07	1,467.75	-117.19	210.78	241.14	0.00	0.00	0.00	0.00
1,600.00	20.00	119.07	1,561.72	-133.81	240.68	275.34	0.00	0.00	0.00	0.00
1,700.00	20.00	119.07	1,655.69	-150.43	270.57	309.54	0.00	0.00	0.00	0.00
1,800.00	20.00	119.07	1,749.66	-167.05	300.46	343.74	0.00	0.00	0.00	0.00
1,900.00	20.00	119.07	1,843.63	-183.67	330.36	377.93	0.00	0.00	0.00	0.00
2,000.00	20.00	119.07	1,937.60	-200.29	360.25	412.13	0.00	0.00	0.00	0.00
2,100.00	20.00	119.07	2,031.57	-216.91	390.14	446.33	0.00	0.00	0.00	0.00
2,200.00	20.00	119.07	2,125.54	-233.53	420.03	480.53	0.00	0.00	0.00	0.00
2,300.00	20.00	119.07	2,219.51	-250.15	449.93	514.72	0.00	0.00	0.00	0.00
2,400.00	20.00	119.07	2,313.48	-266.77	479.82	548.92	0.00	0.00	0.00	0.00
2,409.07	20.00	119.07	2,322.00	-268.27	482.53	552.02	0.00	0.00	0.00	0.00
8 5/8"										
2,500.00	20.00	119.07	2,407.45	-283.39	509.71	583.12	0.00	0.00	0.00	0.00
2,600.00	20.00	119.07	2,501.42	-300.01	539.60	617.32	0.00	0.00	0.00	0.00
2,700.00	20.00	119.07	2,595.39	-316.63	569.50	651.52	0.00	0.00	0.00	0.00
2,800.00	20.00	119.07	2,689.35	-333.25	599.39	685.71	0.00	0.00	0.00	0.00
2,900.00	20.00	119.07	2,783.32	-349.87	629.28	719.91	0.00	0.00	0.00	0.00
3,000.00	20.00	119.07	2,877.29	-366.49	659.17	754.11	0.00	0.00	0.00	0.00
3,100.00	20.00	119.07	2,971.26	-383.10	689.07	788.31	0.00	0.00	0.00	0.00
3,200.00	20.00	119.07	3,065.23	-399.72	718.96	822.50	0.00	0.00	0.00	0.00
3,300.00	20.00	119.07	3,159.20	-416.34	748.85	856.70	0.00	0.00	0.00	0.00
3,400.00	20.00	119.07	3,253.17	-432.96	778.74	890.90	0.00	0.00	0.00	0.00
3,500.00	20.00	119.07	3,347.14	-449.58	808.64	925.10	0.00	0.00	0.00	0.00
3,600.00	20.00	119.07	3,441.11	-466.20	838.53	959.30	0.00	0.00	0.00	0.00
3,700.00	20.00	119.07	3,535.08	-482.82	868.42	993.49	0.00	0.00	0.00	0.00
3,800.00	20.00	119.07	3,629.05	-499.44	898.32	1,027.69	0.00	0.00	0.00	0.00
3,900.00	20.00	119.07	3,723.02	-516.06	928.21	1,061.89	0.00	0.00	0.00	0.00
4,000.00	20.00	119.07	3,816.99	-532.68	958.10	1,096.09	0.00	0.00	0.00	0.00
4,100.00	20.00	119.07	3,910.95	-549.30	987.99	1,130.29	0.00	0.00	0.00	0.00
4,200.00	20.00	119.07	4,004.92	-565.92	1,017.89	1,164.48	0.00	0.00	0.00	0.00
4,300.00	20.00	119.07	4,098.89	-582.54	1,047.78	1,198.68	0.00	0.00	0.00	0.00
4,400.00	20.00	119.07	4,192.86	-599.16	1,077.67	1,232.88	0.00	0.00	0.00	0.00
4,403.30	20.00	119.07	4,195.96	-599.71	1,078.66	1,234.01	0.00	0.00	0.00	0.00



SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Site:	NBU 921-25P3 PAD	North Reference:	True
Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 SURFACE		

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 Drop -2.00									
4,500.00	18.07	119.07	4,287.37	-615.03	1,106.22	1,265.54	2.00	-2.00	0.00
4,600.00	16.07	119.07	4,382.96	-629.29	1,131.87	1,294.88	2.00	-2.00	0.00
4,665.39	14.76	119.07	4,446.00	-637.73	1,147.05	1,312.25	2.00	-2.00	0.00
WASATCH									
4,700.00	14.07	119.07	4,479.52	-641.92	1,154.58	1,320.87	2.00	-2.00	0.00
4,800.00	12.07	119.07	4,576.93	-652.91	1,174.34	1,343.47	2.00	-2.00	0.00
4,900.00	10.07	119.07	4,675.06	-662.23	1,191.12	1,362.66	2.00	-2.00	0.00
5,000.00	8.07	119.07	4,773.81	-669.89	1,204.89	1,378.42	2.00	-2.00	0.00
5,100.00	6.07	119.07	4,873.05	-675.87	1,215.64	1,390.72	2.00	-2.00	0.00
5,200.00	4.07	119.07	4,972.65	-680.16	1,223.35	1,399.54	2.00	-2.00	0.00
5,300.00	2.07	119.07	5,072.50	-682.76	1,228.03	1,404.89	2.00	-2.00	0.00
5,400.00	0.07	119.07	5,172.48	-683.66	1,229.66	1,406.75	2.00	-2.00	0.00
5,403.30	0.00	0.00	5,175.78	-683.66	1,229.66	1,406.75	2.00	-2.00	0.00
Start DLS 0.30 TFO 147.99 - DTGT_NBU 922-31D1BS									
5,500.00	0.29	147.99	5,272.48	-683.87	1,229.79	1,406.97	0.30	0.30	0.00
5,600.00	0.59	147.99	5,372.48	-684.52	1,230.19	1,407.65	0.30	0.30	0.00
5,618.14	0.64	147.99	5,390.61	-684.68	1,230.30	1,407.82	0.30	0.30	0.00
Start 4085.65 hold at 5618.14 MD									
5,700.00	0.64	147.99	5,472.47	-685.47	1,230.79	1,408.63	0.00	0.00	0.00
5,800.00	0.64	147.99	5,572.46	-686.42	1,231.38	1,409.63	0.00	0.00	0.00
5,900.00	0.64	147.99	5,672.46	-687.37	1,231.98	1,410.62	0.00	0.00	0.00
6,000.00	0.64	147.99	5,772.45	-688.33	1,232.57	1,411.61	0.00	0.00	0.00
6,100.00	0.64	147.99	5,872.44	-689.28	1,233.17	1,412.61	0.00	0.00	0.00
6,200.00	0.64	147.99	5,972.44	-690.23	1,233.77	1,413.60	0.00	0.00	0.00
6,300.00	0.64	147.99	6,072.43	-691.19	1,234.36	1,414.59	0.00	0.00	0.00
6,400.00	0.64	147.99	6,172.42	-692.14	1,234.96	1,415.59	0.00	0.00	0.00
6,500.00	0.64	147.99	6,272.42	-693.10	1,235.56	1,416.58	0.00	0.00	0.00
6,600.00	0.64	147.99	6,372.41	-694.05	1,236.15	1,417.57	0.00	0.00	0.00
6,700.00	0.64	147.99	6,472.41	-695.00	1,236.75	1,418.56	0.00	0.00	0.00
6,800.00	0.64	147.99	6,572.40	-695.96	1,237.34	1,419.56	0.00	0.00	0.00
6,900.00	0.64	147.99	6,672.39	-696.91	1,237.94	1,420.55	0.00	0.00	0.00
7,000.00	0.64	147.99	6,772.39	-697.86	1,238.54	1,421.54	0.00	0.00	0.00
7,100.00	0.64	147.99	6,872.38	-698.82	1,239.13	1,422.54	0.00	0.00	0.00
7,200.00	0.64	147.99	6,972.37	-699.77	1,239.73	1,423.53	0.00	0.00	0.00
7,300.00	0.64	147.99	7,072.37	-700.73	1,240.33	1,424.52	0.00	0.00	0.00
7,320.63	0.64	147.99	7,093.00	-700.92	1,240.45	1,424.73	0.00	0.00	0.00
MESAVERDE									
7,320.64	0.64	147.99	7,093.01	-700.92	1,240.45	1,424.73	0.00	0.00	0.00
MESAVERDE NBU 922-31D1BS									
7,400.00	0.64	147.99	7,172.36	-701.68	1,240.92	1,425.52	0.00	0.00	0.00
7,500.00	0.64	147.99	7,272.36	-702.63	1,241.52	1,426.51	0.00	0.00	0.00
7,600.00	0.64	147.99	7,372.35	-703.59	1,242.12	1,427.50	0.00	0.00	0.00
7,700.00	0.64	147.99	7,472.34	-704.54	1,242.71	1,428.50	0.00	0.00	0.00
7,800.00	0.64	147.99	7,572.34	-705.50	1,243.31	1,429.49	0.00	0.00	0.00
7,900.00	0.64	147.99	7,672.33	-706.45	1,243.90	1,430.48	0.00	0.00	0.00
8,000.00	0.64	147.99	7,772.32	-707.40	1,244.50	1,431.47	0.00	0.00	0.00
8,100.00	0.64	147.99	7,872.32	-708.36	1,245.10	1,432.47	0.00	0.00	0.00
8,200.00	0.64	147.99	7,972.31	-709.31	1,245.69	1,433.46	0.00	0.00	0.00
8,300.00	0.64	147.99	8,072.30	-710.26	1,246.29	1,434.45	0.00	0.00	0.00
8,400.00	0.64	147.99	8,172.30	-711.22	1,246.89	1,435.45	0.00	0.00	0.00



SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Site:	NBU 921-25P3 PAD	North Reference:	True
Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 SURFACE		

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)	
8,500.00	0.64	147.99	8,272.29	-712.17	1,247.48	1,436.44	0.00	0.00	0.00	
8,600.00	0.64	147.99	8,372.29	-713.13	1,248.08	1,437.43	0.00	0.00	0.00	
8,700.00	0.64	147.99	8,472.28	-714.08	1,248.67	1,438.43	0.00	0.00	0.00	
8,800.00	0.64	147.99	8,572.27	-715.03	1,249.27	1,439.42	0.00	0.00	0.00	
8,900.00	0.64	147.99	8,672.27	-715.99	1,249.87	1,440.41	0.00	0.00	0.00	
9,000.00	0.64	147.99	8,772.26	-716.94	1,250.46	1,441.40	0.00	0.00	0.00	
9,100.00	0.64	147.99	8,872.25	-717.89	1,251.06	1,442.40	0.00	0.00	0.00	
9,200.00	0.64	147.99	8,972.25	-718.85	1,251.66	1,443.39	0.00	0.00	0.00	
9,300.00	0.64	147.99	9,072.24	-719.80	1,252.25	1,444.38	0.00	0.00	0.00	
9,400.00	0.64	147.99	9,172.24	-720.76	1,252.85	1,445.38	0.00	0.00	0.00	
9,500.00	0.64	147.99	9,272.23	-721.71	1,253.44	1,446.37	0.00	0.00	0.00	
9,600.00	0.64	147.99	9,372.22	-722.66	1,254.04	1,447.36	0.00	0.00	0.00	
9,700.00	0.64	147.99	9,472.22	-723.62	1,254.64	1,448.36	0.00	0.00	0.00	
9,703.78	0.64	147.99	9,476.00	-723.65	1,254.66	1,448.39	0.00	0.00	0.00	
TD at 9703.78 - PBHL_NBU 922-31D1BS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
DTGT_NBU 922-31D1B - hit/miss target - Shape	0.00	0.00	5,175.78	-683.66	1,229.66	14,529,273.12	2,063,831.65	39° 59' 56.417 N	109° 29' 17.416 W	
- plan hits target center - Circle (radius 15.00)										
MESAVERDE NBU 922- - plan misses target center by 0.79ft at 7320.64ft MD (7093.01 TVD, -700.92 N, 1240.45 E) - Point	0.00	0.00	7,093.00	-701.59	1,240.87	14,529,255.38	2,063,843.16	39° 59' 56.240 N	109° 29' 17.272 W	
PBHL_NBU 922-31D1B: - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,476.00	-723.65	1,254.66	14,529,233.55	2,063,857.32	39° 59' 56.022 N	109° 29' 17.095 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,409.07	2,322.00	8 5/8"	8.625	11.000		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,188.16	1,174.00	GREEN RIVER				
4,665.39	4,446.00	WASATCH				
7,320.63	7,093.00	MESAVERDE				



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 922-31D1BS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5004' & KN 4' @ 5008.00ft (PROPETRO 12)
Site:	NBU 921-25P3 PAD	North Reference:	True
Well:	NBU 922-31D1BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 SURFACE		

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	-83.95	151.00	Start 3103.30 hold at 1300.00 MD
4,403.30	4,195.96	-599.71	1,078.66	Start Drop -2.00
5,403.30	5,175.78	-683.66	1,229.66	Start DLS 0.30 TFO 147.99
5,618.14	5,390.61	-684.68	1,230.30	Start 4085.65 hold at 5618.14 MD
9,703.78	9,476.00	-723.65	1,254.66	TD at 9703.78



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		DQX
							COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,490	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						7,780	6,350	279,000	267,035
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.03		5.69
						1.11	1.03	6.32	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe
 Fracture at surface shoe with 0.1 psi/ft gas gradient above
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	Option 1 TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	1,990'	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	4,114'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	310	20%	11.00	3.38
	TAIL	5,590'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,320	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. 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.

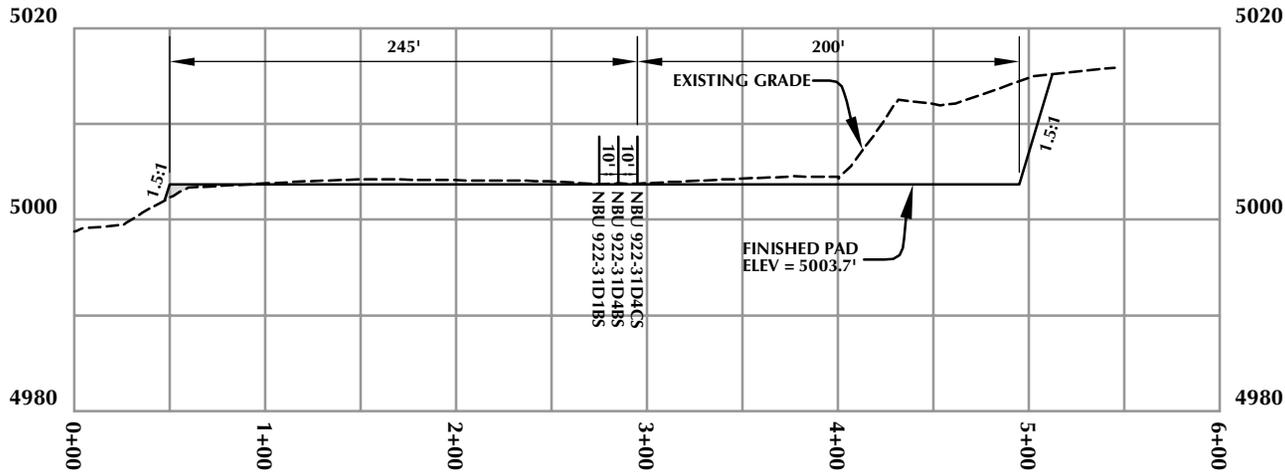
Surveys will be taken at 1,000' minimum intervals.

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

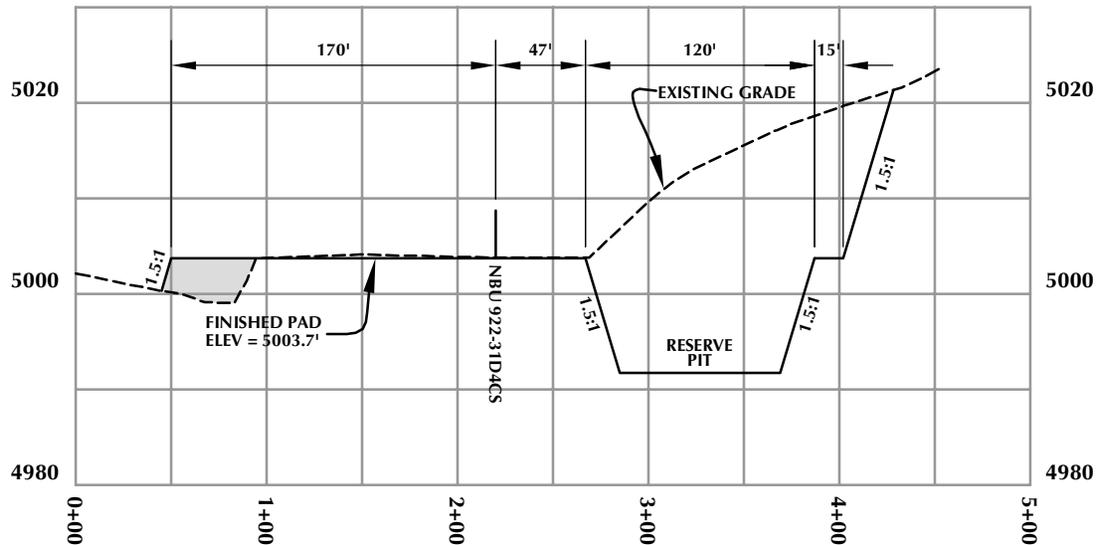
DRILLING ENGINEER: _____ **DATE:** _____
 Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____
 Kenny Gathings / Lovel Young





CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-25P3

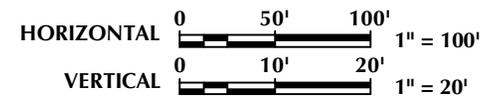
WELL PAD - CROSS SECTIONS
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., Uintah County, Utah



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

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

(435) 789-1365



Scale: 1"=100'

Date: 5/20/11

SHEET NO:

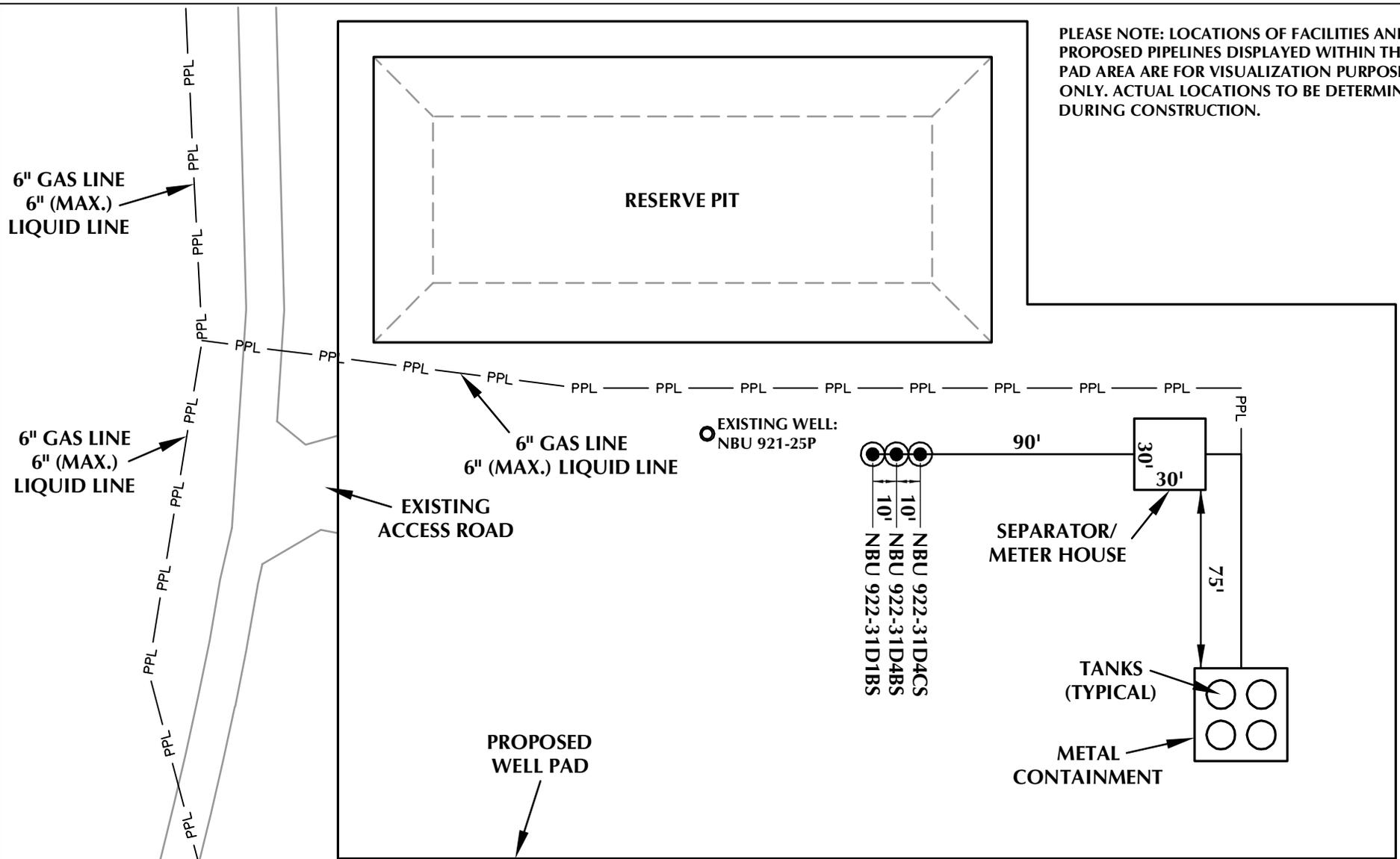
REVISED:

6

6 OF 15

RECEIVED Sep. 27, 2011

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 921-25P3

WELL PAD - FACILITIES DIAGRAM
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC
2155 North Main Street
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 (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=60' Date: 5/20/11
REVISED:

SHEET NO:
7
7 OF 15

K:\MADRID\2010\010\010_31_NBU_FOCUS_SEC_921-25\DWGS\NBU_921-25P3\NBU_921-25P3 DIRECTIONAL.dwg, 5/22/2011 12:59:07 PM, tiffany

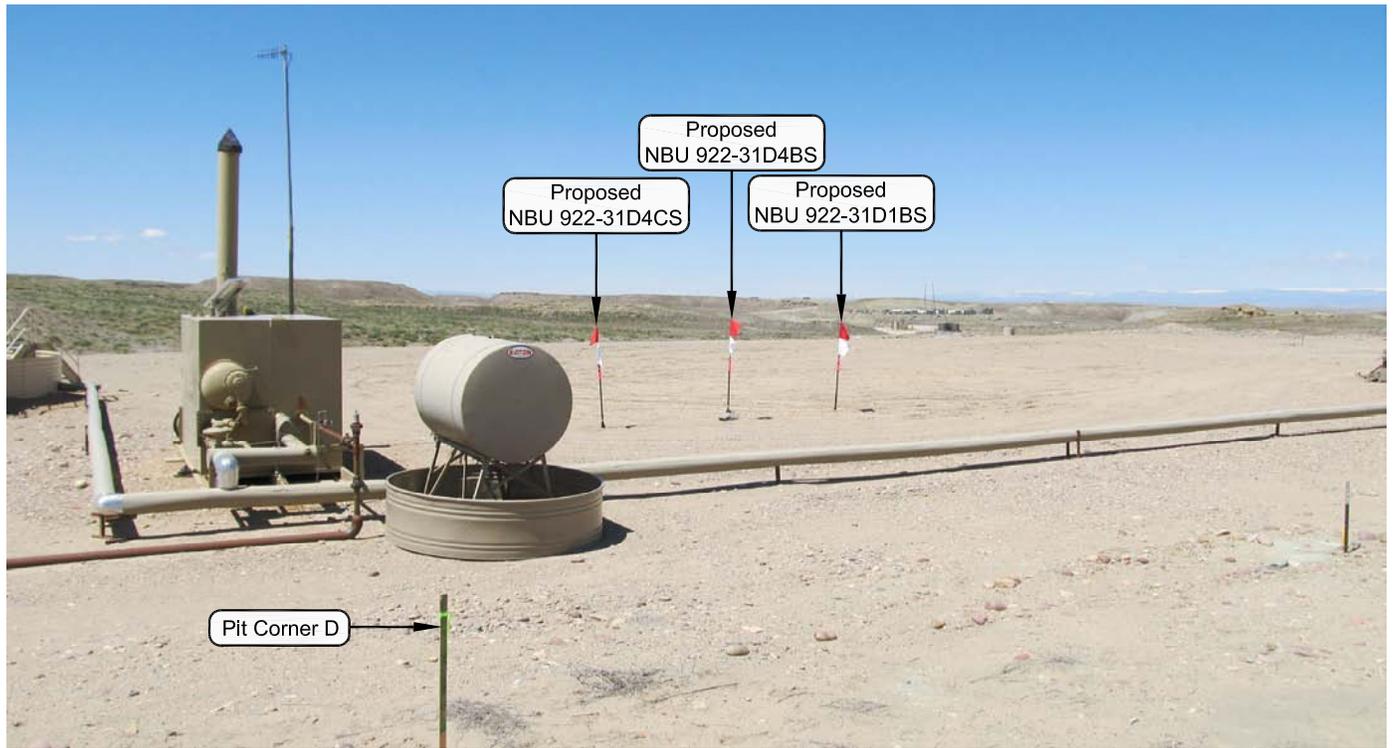


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

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

WELL PAD - NBU 921-25P3

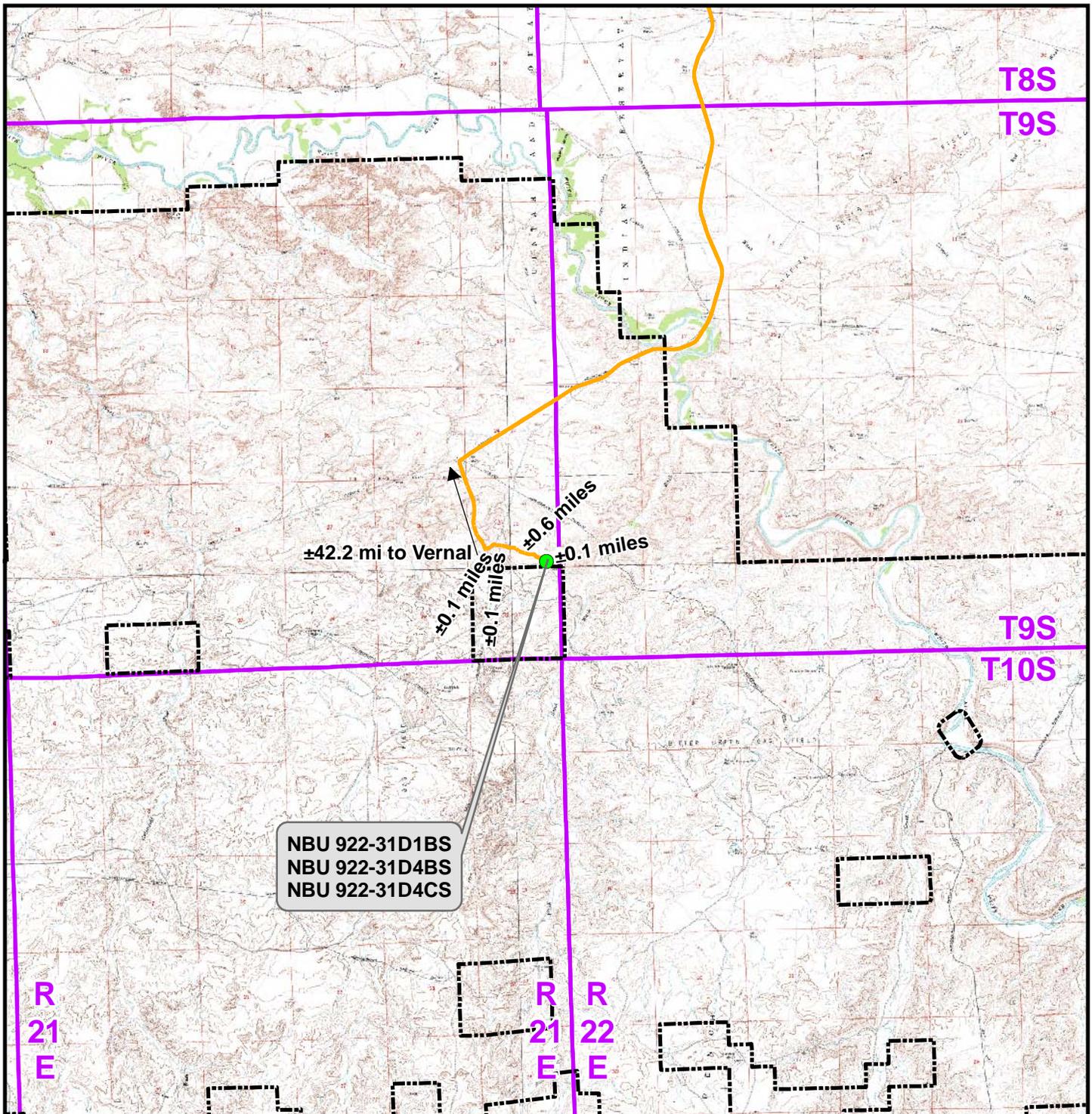
LOCATION PHOTOS
 NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 25, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

DATE PHOTOS TAKEN: 05-02-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 8 8 OF 15
DATE DRAWN: 05-04-11	DRAWN BY: E.M.S.	
Date Last Revised:		



Legend

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

Distance From Well Pad - NBU 921-25P3 To Unit Boundary: ±387ft

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

WELL PAD - NBU 921-25P3

TOPO A
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

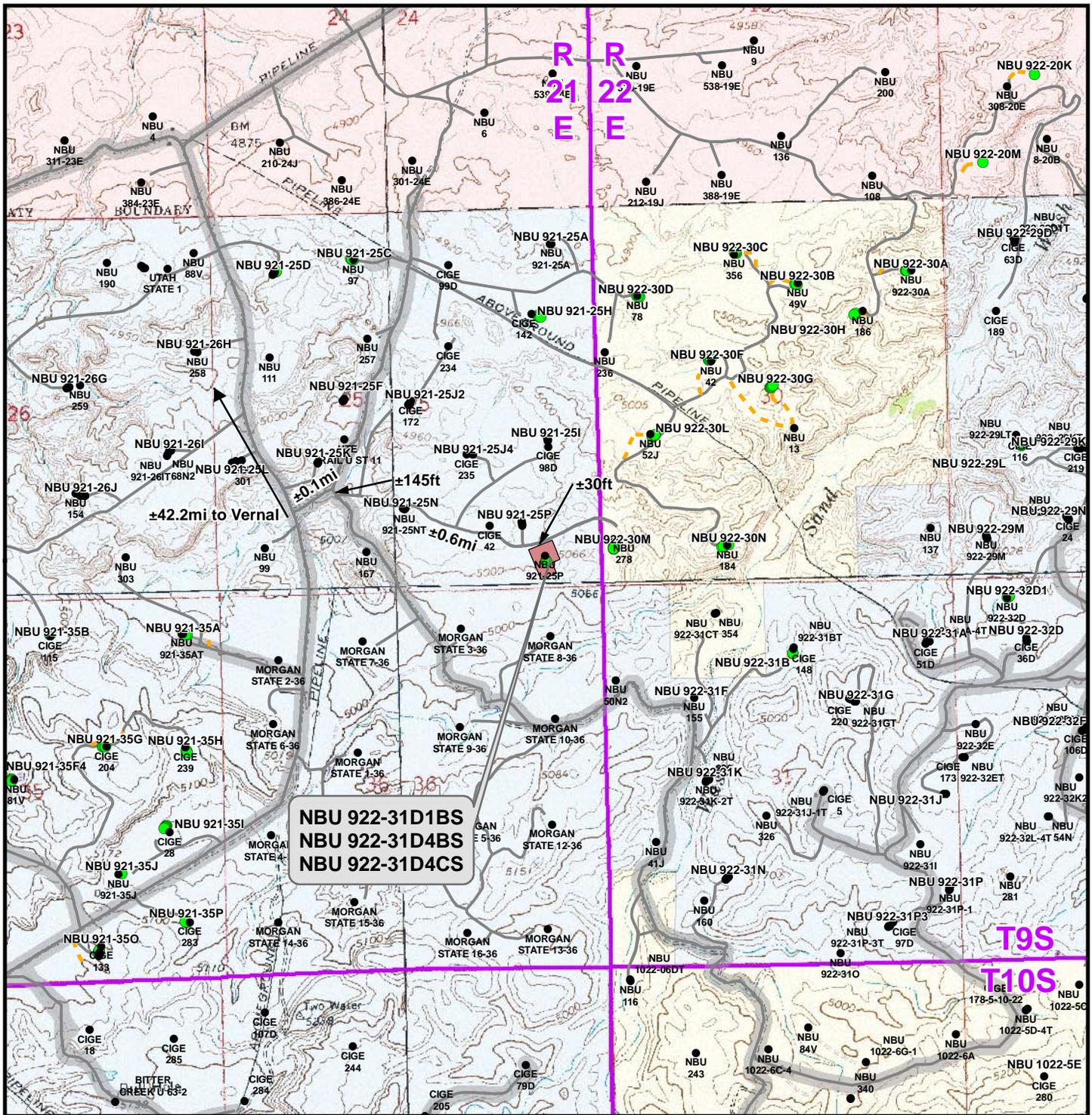


CONSULTING, LLC
2155 North Main Street
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Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central
Drawn: KGS	Date: 20 May 2011
Revised:	Date:

Sheet No:
9
9 of 15



**NBU 922-31D1BS
NBU 922-31D4BS
NBU 922-31D4CS**

Legend

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

Total Proposed Road Length: ±0ft

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

WELL PAD - NBU 921-25P3

TOPO B
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

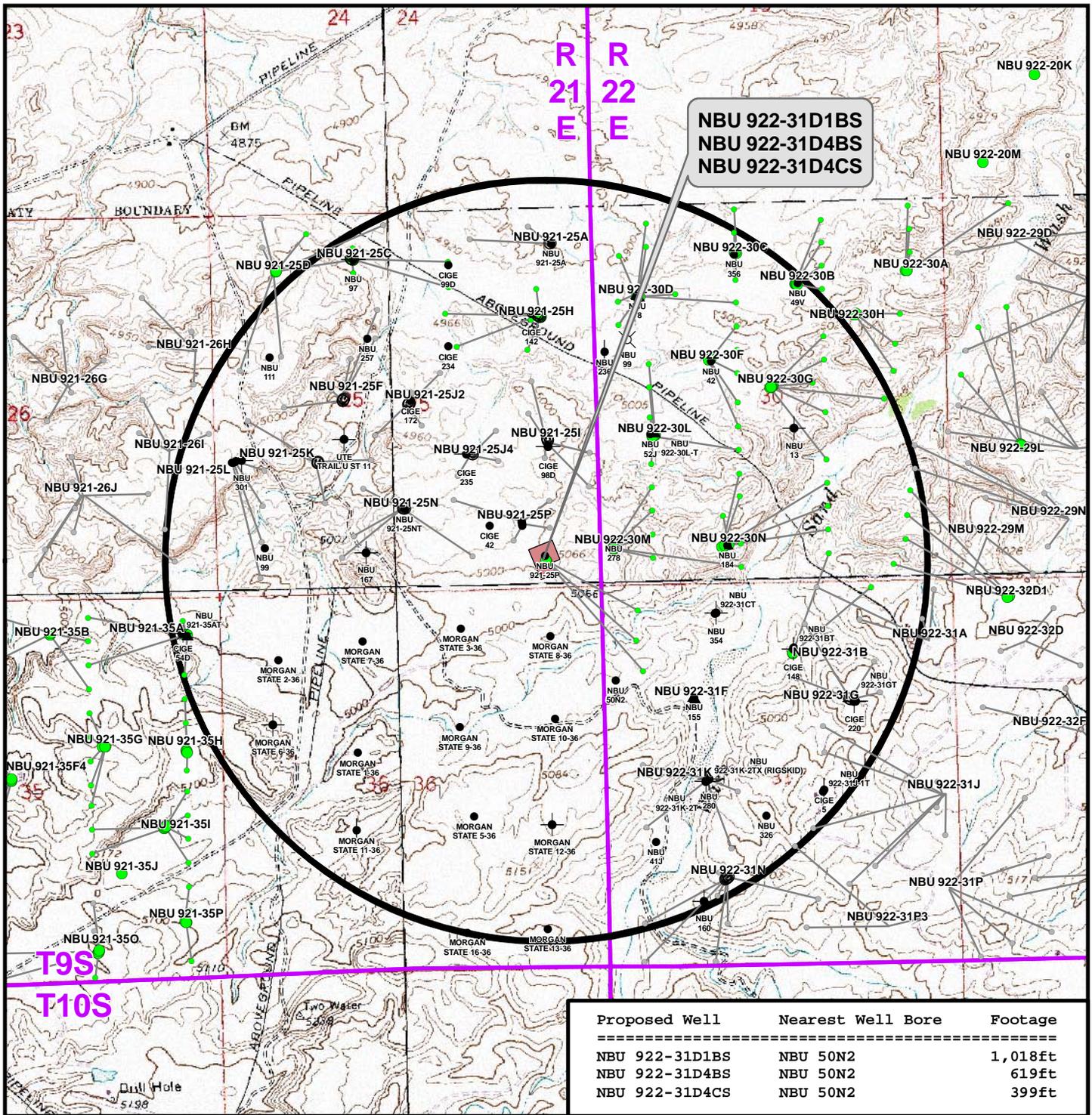


CONSULTING, LLC
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Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: KGS	Date: 24 May 2011	10
Revised:	Date:	

10 of 15



Proposed Well	Nearest Well Bore	Footage
NBU 922-31D1BS	NBU 50N2	1,018ft
NBU 922-31D4BS	NBU 50N2	619ft
NBU 922-31D4CS	NBU 50N2	399ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius

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

- Producing
- Temporarily-Abandoned
- ✱ Active
- Shut-In
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Location Abandoned
- ⊗ Drilling Operations Suspended
- ⊗ Dry hole marker, buried
- ⊗ Returned APD (Unapproved)

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

WELL PAD - NBU 921-25P3

TOPO C
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH

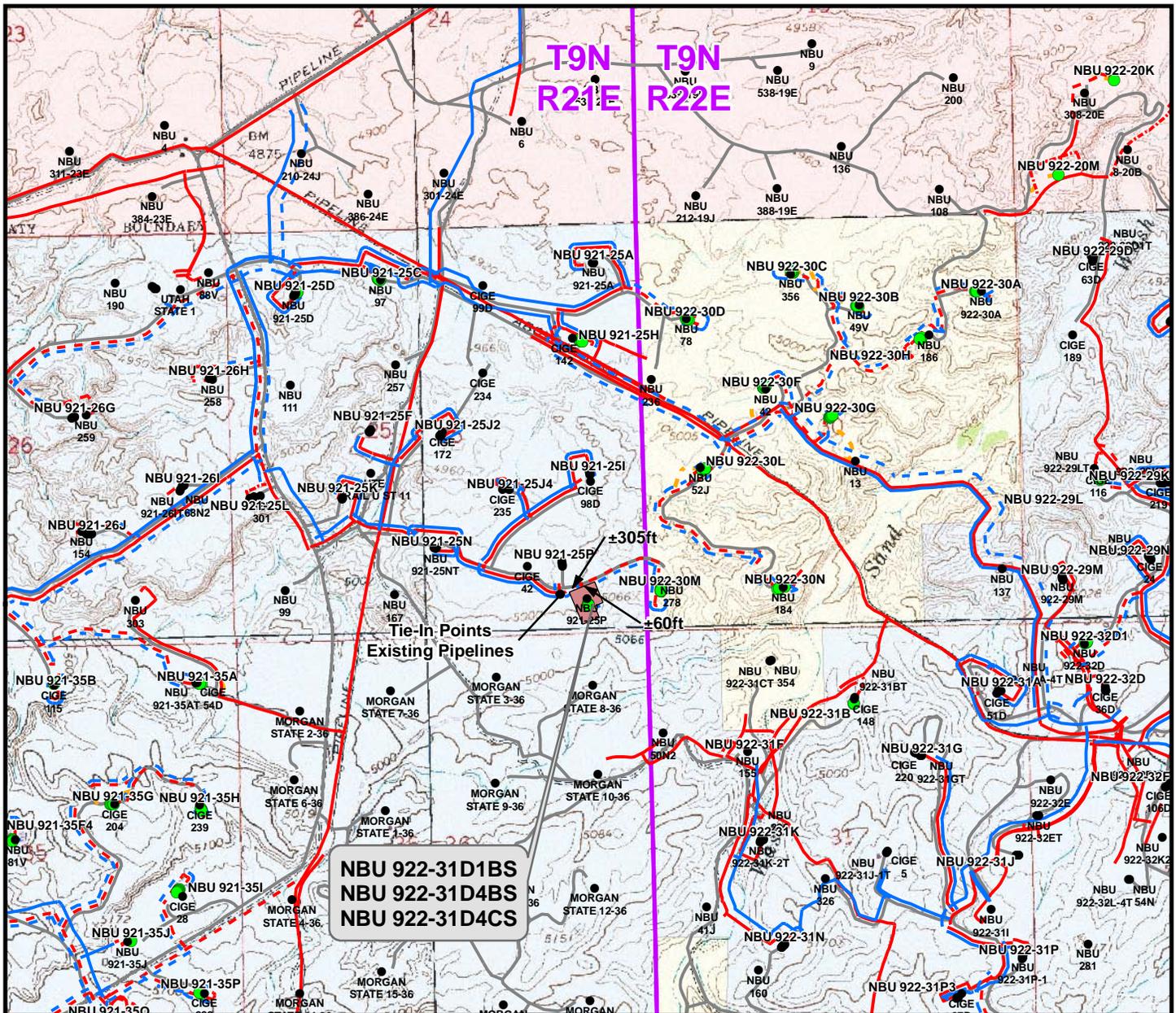


609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **11** of 15

Drawn: KGS | Date: 24 May 2011

Revised: | Date:



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±440ft	Buried 6" (Meter House to Edge of Pad)	±440ft
Buried 6" (Max.) (Edge of Pad to 30M Intersection)	±60ft	Buried 6" (Edge of Pad to 30M Intersection)	±60ft
Buried 6" (Max.) (30M Intersection to 25P Intersection)	±305ft	Buried 6" (30M Intersection to 25P Intersection)	±305ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±805ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±805ft

Legend

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

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

WELL PAD - NBU 921-25P3

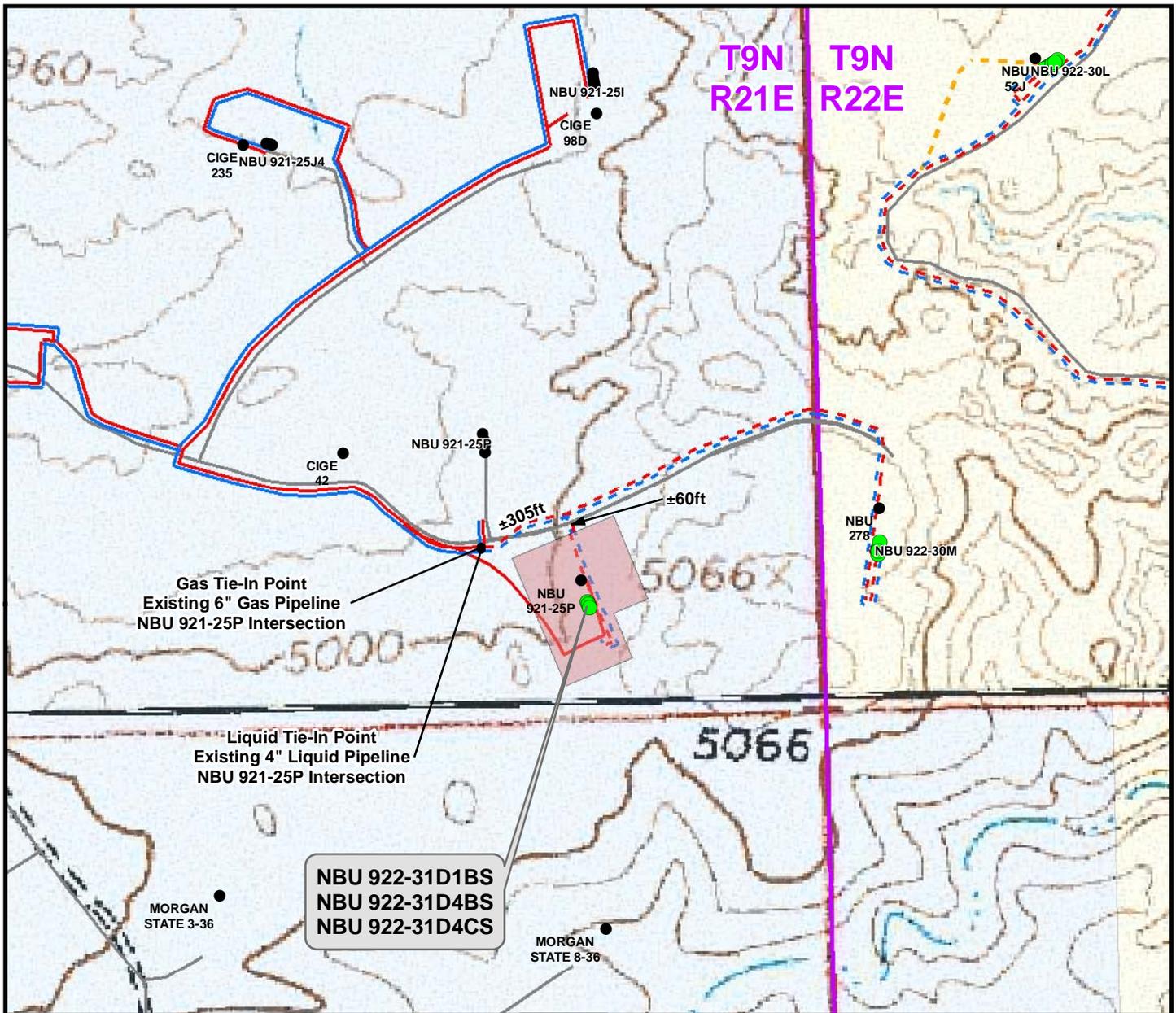
TOPO D
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609

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

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: KGS	Date: 24 May 2011	12
Revised:	Date:	

12 of 15



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
=====	=====	=====	=====
Buried 6" (Max.) (Meter House to Edge of Pad)	±440ft	Buried 6" (Meter House to Edge of Pad)	±440ft
Buried 6" (Max.) (Edge of Pad to 30M Intersection)	±60ft	Buried 6" (Edge of Pad to 30M Intersection)	±60ft
Buried 6" (Max.) (30M Intersection to 25P Intersection)	±305ft	Buried 6" (30M Intersection to 25P Intersection)	±305ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±805ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±805ft

Legend

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

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

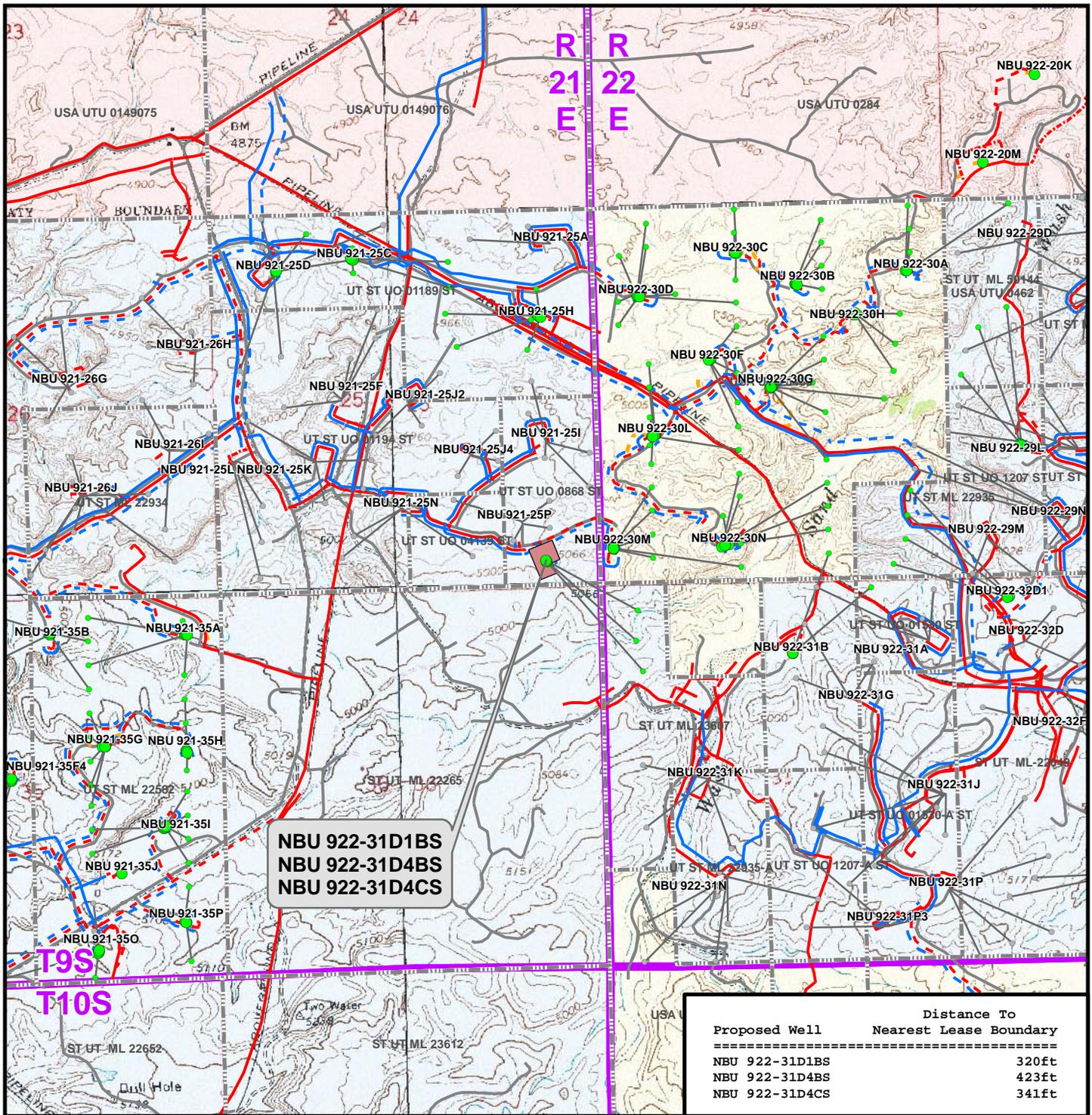
WELL PAD - NBU 921-25P3

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
 2155 North Main Street
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 Fax (307) 674-0182



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: KGS	Date: 20 May 2011	13
Revised:	Date:	



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

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

WELL PAD - NBU 921-25P3

TOPO E
NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: KGS	Date: 24 May 2011	14
Revised:	Date:	

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**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-25P3
WELLS – NBU 922-31D1BS,
NBU 922-31D4BS & NBU 922-31D4CS
Section 25, T9S, R21E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 145 feet to a service road to the east. Exit left and proceed in an easterly, then southeasterly direction along the service road approximately 0.6 miles to an existing access road to the southeast. Exit right and proceed in a southeasterly direction approximately 30 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.1 miles in a southerly direction.

NBU 922-31D1BS			
Surface:	405 FSL / 728 FEL	SESE	Lot
BHL:	320 FNL / 527 FWL	NWNW	Lot 1
NBU 922-31D4BS			
Surface:	396 FSL / 725 FEL	SESE	Lot
BHL:	740 FNL / 497 FWL	NWNW	Lot 1
NBU 922-31D4CS			
Surface:	387 FSL / 721 FEL	SESE	Lot
BHL:	1160 FNL / 580 FWL	NWNW	Lot 1

Pad: NBU 921-25P3 PAD

Section 31 T9S R22E
Mineral Lease: ML 23607

Uintah County, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

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 lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed. (see Topo Map B). Applicable Uintah County encroachment and/or pipeline

crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 921-25P. The NBU 921-25P well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 03, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 805'$ and the individual segments are broken up as follows:

$\pm 440'$ (0.08 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 365'$ (0.01 miles) –New 6" buried gas pipeline from the edge of pad to the proposed 6" buried gas pipeline at the 922-30M intersection. Then travel in a westerly direction to the tie-in point at the existing 6" gas pipeline at the 921-25P intersection. Please refer to Topo D and D2.

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

$\pm 440'$ (0.08 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

$\pm 365'$ (0.07 miles) –New 6" buried liquid pipeline from the edge of pad to the proposed 6" buried liquid pipeline at the 922-30M intersection. Then travel in a westerly direction to the tie-in point at the existing 4" liquid pipeline at the 921-25P intersection. Please refer to Topo D and D2.

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.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. 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. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot 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 proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

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.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, 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 and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
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
Ouray #1 SWD in Sec. 1 T9S R21E
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. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). 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/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product 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 release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

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

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months 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. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

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 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.

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.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

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.

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 and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; 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 and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

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. This 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 includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

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.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at 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 KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and

abandonment plan. 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, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

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.

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

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope 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 and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. 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 site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

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

L. Other Information:

None

NBU 922-31D1BS/ 31D4BS/ 31D4CS

Surface Use Plan of Operations

8 of 8

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 for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, 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

September 27, 2011

Date



Kerr-McGee Oil & Gas Onshore LP

A wholly owned subsidiary of Anadarko Petroleum Corporation

1099 18th Street, Suite 1800
Denver, CO 80202
720-929-6000 (main)

August 11, 2011

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

Re: Exception location to Spacing Order 173-14
NBU 922-31D1BS
Surface Location:
T9S-R21E-Sec. 25: 405' FSL, 728' FEL (SE/4SE/4)
Bottomhole Location:
T9S-R22E-Sec. 31: 320' FNL, 527' FWL (NW/4NW/4)
Uintah County, Utah

Dear Ms. Mason:

Kerr-McGee Oil & Gas Onshore LP (KMG) has submitted a permit to drill the NBU 922-31D1BS well (Well) to test the Wasatch and Mesaverde formations. The Well is located within the area covered by Order No. 173-14 and is within an exception location area. As shown on the enclosed survey plat, the surface location of the well is less than 460' from the unit boundary due to a limited amount of topographically acceptable surface locations and an effort by KMG to use existing pad locations to limit surface disturbance.

Additionally, as shown on the enclosed survey plat, the directional wellbore path of the Well begins in Sec. 25-9S-21E, crosses through uncommitted Sec. 36-9S-21E and reaches the intended bottomhole location in Sec. 31-9S-22E. Although the wellbore path will be crossing potentially productive formations as it passes through uncommitted Sec. 36-9S-21E, the Well will not be completed in any location within uncommitted Sec. 36-9S-21E and will not be completed less than 460' from the unit boundary. To address potential issues regarding trespass, the State of Utah School and Institutional Trust Lands Administration (SITLA) has received proper notice, has raised no objection and is evidenced by the signature of an authorized agent of SITLA below. KMG has also agreed to provide SITLA a copy of the cased or open hole log with perforation depths and a measured wellbore path drilling survey once the well is completed.

KMG is the operator and owner of 100% of the operating rights in the Wasatch and Mesaverde formations in Sec. 25-9S-21E, Sec. 36-9S-21E and Sec. 31-9S-22E. KMG does not object to the exception location requested herein.

Please contact the undersigned at 720-929-6351 or at robert.spencer@anadarko.com should you have any questions.

RECEIVED Sep. 27, 2011

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 922-31D1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 31 Township: 09.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047510890000
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: 2/23/2012	<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"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<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. MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 02/23/2012 AT 0700 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 02, 2012		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 2/24/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 922-31D1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510890000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 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 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: 3/2/2012	<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.

MIRU AIR RIG ON FEBRUARY 28, 2012. DRILLED SURFACE HOLE TO 2,680'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 March 06, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/2/2012	

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
 Well Name/Number NBU 922-31D1BS
 Qtr/Qtr SE/SE Section 31 Township 9S Range 22E
 Lease Serial Number ML-23607
 API Number 4304751089

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 02/23/2012 0800 HRS AM PM

Casing – Please report time casing run starts, not cementing times.

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

RECEIVED
FEB 22 2012
 DIV. OF OIL, GAS & MINING

Date/Time 02/27/2012 0800 HRS AM PM

BOPE

- Initial BOPE test at surface casing point
- BOPE test at intermediate casing point
- 30 day BOPE test
- Other

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT
LOVEL YOUNG AT 435.781.7051 FOR MORE

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

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
 Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751089	NBU 922-31D1B		SESE	31	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/23/2012		2/29/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 02/23/2012 AT 0700 HRS. BHL NWDW							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751090	NBU 922-31D4BS		SESE	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/23/2012		2/29/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 02/23/2012 AT 02/23/2012 AT 1000 HRS. BHL S31 R22E NWDW							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751091	NBU 922-31D4CS		SESE	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/23/2012		2/29/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 02/23/2012 AT 1300 HRS. BHL: S31 R22E NWDW							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

2/24/2012

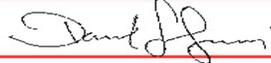
Date

RECEIVED

FEB 27 2012

(5/2000)

Oil, Gas & Mining

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 922-31D1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510890000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 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: 3/21/2012	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	<input type="checkbox"/> SPUD REPORT Date of Spud:
<input type="checkbox"/> DRILLING REPORT Report Date:	OTHER: <input type="text" value="Pit Refurb/ ACTS"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.		
Approved by the Utah Division of Oil, Gas and Mining		Date: <u>March 28, 2012</u>
By: <u></u>		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 3/21/2012	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047510890000

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

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 922-31D1BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510890000
	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: 4/17/2012	<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.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2680' TO 9740' ON 4/16/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P318 RIG ON 4/17/2012 @ 23:59 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 May 09, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 4/19/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 922-31D1BS	
9. API NUMBER: 43047510890000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 31 Township: 09.0S Range: 22.0E Meridian: S	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 PHONE NUMBER: 720 929-6511	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
1. TYPE OF WELL Gas Well	
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.	
SUNDRY NOTICES AND REPORTS ON WELLS	

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: 7/5/2012	<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 SUBJECT WELL WAS PLACED ON PRODUCTION ON 7/5/2012 AT TIME 3:30 P.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 July 11, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 7/9/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23607
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 922-31D1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510890000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0405 FNL 0728 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 25 Township: 09.0S Range: 21.0E 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: 8/16/2012	<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 type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Correct Surface Location"/>

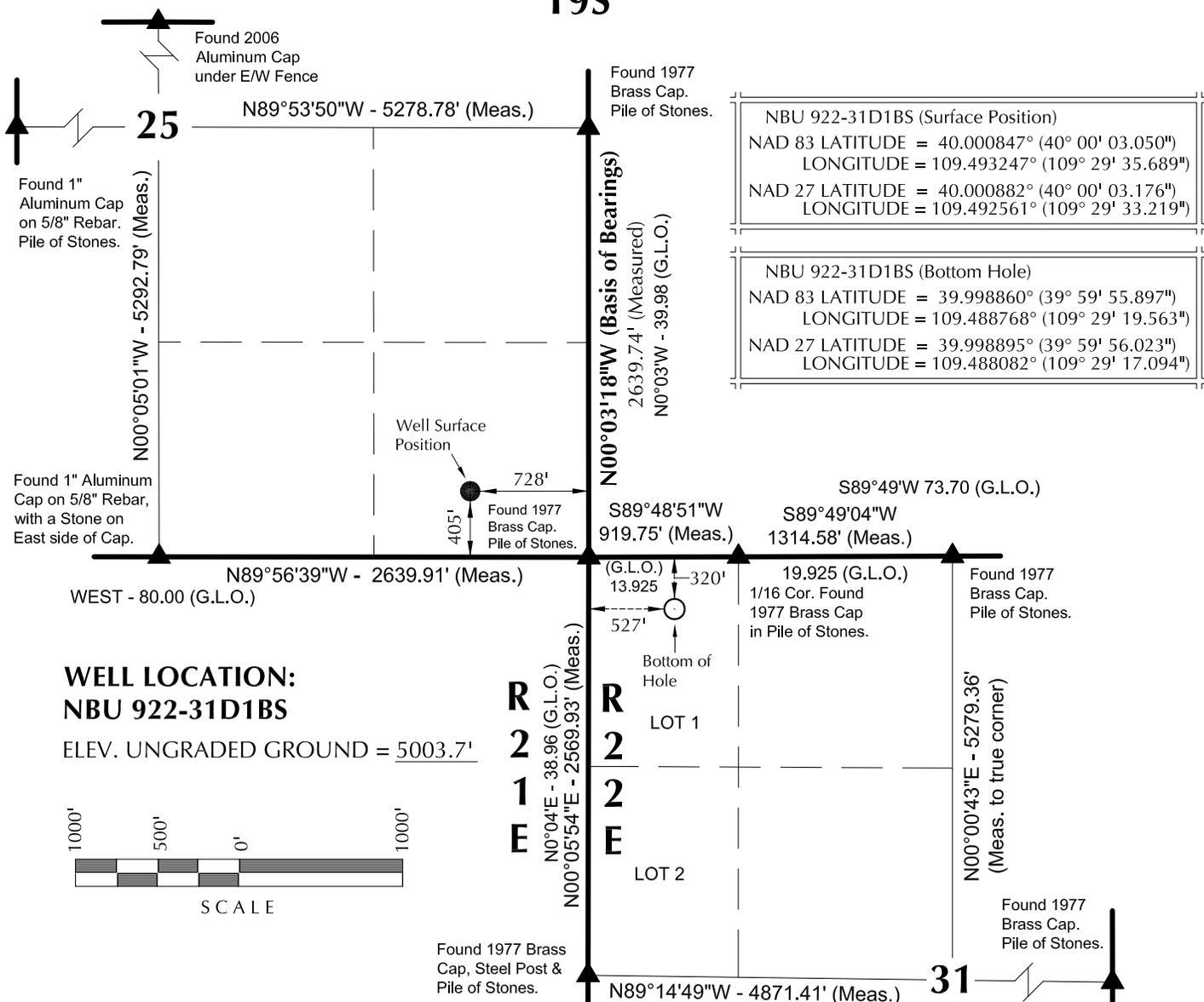
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests to update the surface location (Section, Township, and Range) of this well to match the approved well plat submitted in the approved sundry on 10/27/2011. Please see a copy of the approved final well plat for the correct surface location. The location should be SESE of Section 25, Township 9 South, Range 21 East.

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**
August 17, 2012

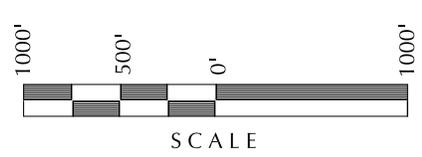
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 8/16/2012	

T9S



NBU 922-31D1BS (Surface Position)	
NAD 83 LATITUDE =	40.000847° (40° 00' 03.050")
LONGITUDE =	109.493247° (109° 29' 35.689")
NAD 27 LATITUDE =	40.000882° (40° 00' 03.176")
LONGITUDE =	109.492561° (109° 29' 33.219")
NBU 922-31D1BS (Bottom Hole)	
NAD 83 LATITUDE =	39.998860° (39° 59' 55.897")
LONGITUDE =	109.488768° (109° 29' 19.563")
NAD 27 LATITUDE =	39.998895° (39° 59' 56.023")
LONGITUDE =	109.488082° (109° 29' 17.094")

WELL LOCATION:
NBU 922-31D1BS
 ELEV. UNGRADED GROUND = 5003.7'



- NOTES:**
- ▲ = Section Corners Located
 - 1. Well footages are measured at right angles to the Section Lines.
 - 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
 - 3. The Bottom of hole bears S60°00'38"E 1449.07' from the Surface Position.
 - 4. Bearings are based on Global Positioning Satellite observations.
 - 5. 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'.

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

WELL PAD: NBU 921-25P3

NBU 922-31D1BS
WELL PLAT
 320' FNL, 527' FWL (Bottom Hole)
 LOT 1 OF SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.

609

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

SURVEYOR'S CERTIFICATE

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

John R. Haugh
 No. 6028691
JOHN R. HAUGH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION NO. 6028691
 STATE OF UTAH 5-5-11

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

DATE SURVEYED: 05-02-11	SURVEYED BY: M.S.B.	SHEET NO: 1 1 OF 15
DATE DRAWN: 05-04-11	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		Date Last Revised: