

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 922-31C1AS		
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) UTU 0464		11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input 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	1558 FNL 1291 FWL	SE	31	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	44 FNL 1927 FWL	NE	31	9.0 S	22.0 E	S
At Total Depth	44 FNL 1927 FWL	NE	31	9.0 S	22.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 44		23. NUMBER OF ACRES IN DRILLING UNIT 207		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 432		26. PROPOSED DEPTH MD: 9584 TVD: 9306		
27. ELEVATION - GROUND LEVEL 4838		28. BOND NUMBER WYB000291		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

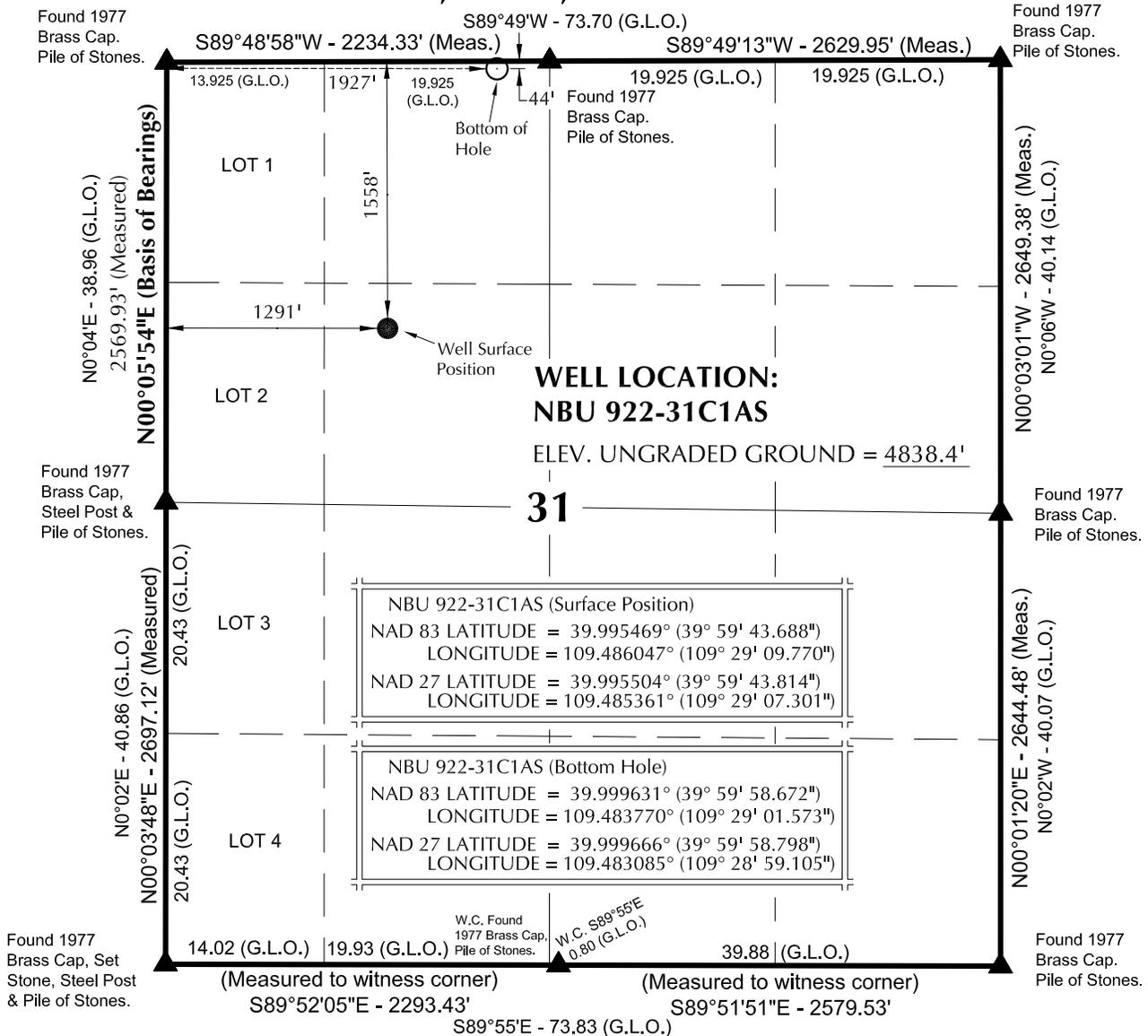
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN 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 43047510860000	APPROVAL  Permit Manager	

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9584		
Pipe	Grade	Length	Weight			
	Grade I-80 Buttress	9584	11.6			

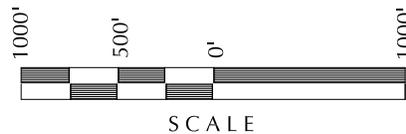
Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2050		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2050	28.0			

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



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 N22°49'53"E 1645.40' 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'.



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. Slaugh
 REGISTERED LAND SURVEYOR
 No. 6028691
 STATE OF UTAH

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



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

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

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

WELL PAD - NBU 922-31F

NBU 922-31C1AS
WELL PLAT
44' FNL, 1927' FWL (Bottom Hole)
NE ¼ NW ¼ OF SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-31F Pad

NBU 922-31C1AS

NBU 922-31C1AS

Plan: PLAN #1 3-26-10 RHS

Standard Planning Report

26 March, 2010



Weatherford®

'APIWellNo:43047510860000'



Project: UINTAH COUNTY, UTAH (nad 27)
 Site: NBU 922-31F Pad
 Well: NBU 922-31C1AS
 Wellbore: NBU 922-31C1AS
 Section: SECTION 31 T9S R22E
 SHL: 1558 FNL 1291 FWL
 Design: PLAN #1 3-26-10 RHS
 Latitude: 39° 59' 43.814 N
 Longitude: 109° 29' 7.300 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
1177.00	1177.49	GREEN RIVER
4462.00	4602.39	WASATCH
8022.00	8299.56	MESAVERDE

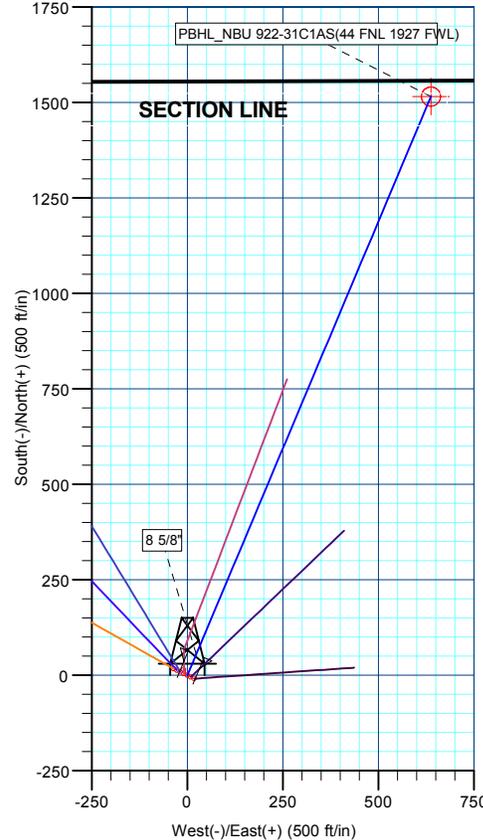
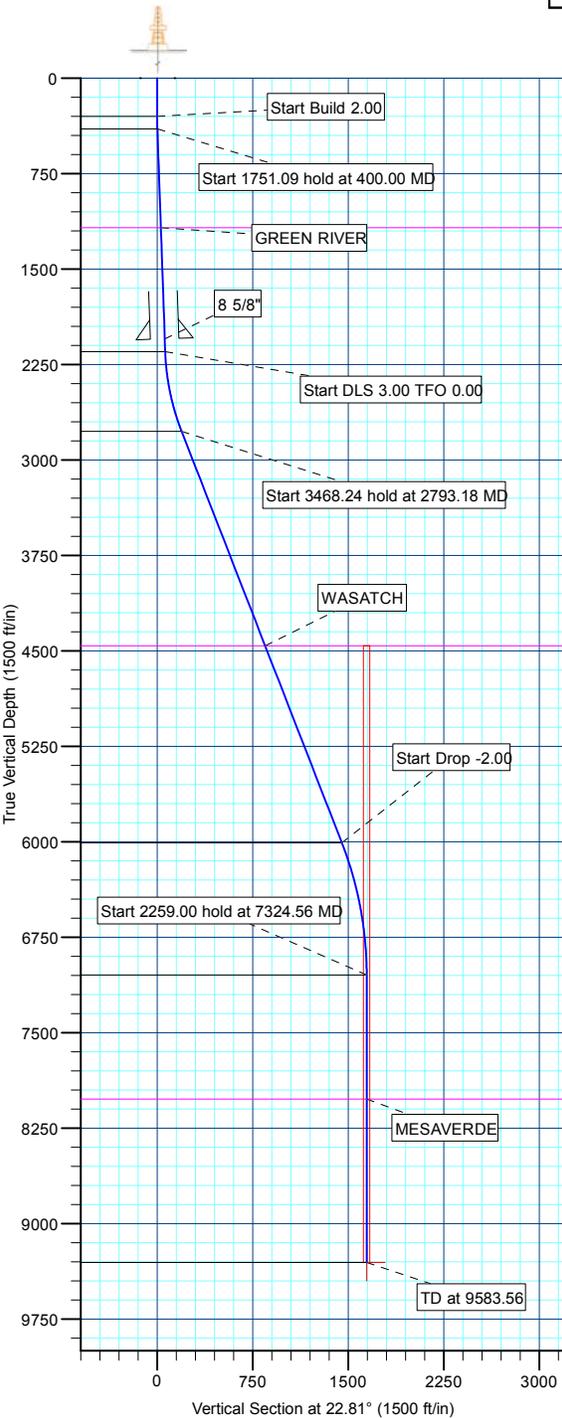
CASING DETAILS			
TVD	MD	Name	Size
2050.00	2051.03	8 5/8"	8.62

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
400.00	2.00	22.81	399.98	1.61	0.68	2.00	22.81	1.75	Start 1751.09 hold at 400.00 MD
2151.09	2.00	22.81	2150.00	57.94	24.37	0.00	0.00	62.86	Start DLS 3.00 TFO 0.00
2793.18	21.26	22.81	2775.95	176.71	74.32	3.00	0.00	191.70	Start 3468.24 hold at 2793.18 MD
6261.42	21.26	22.81	6008.09	1336.09	561.94	0.00	0.00	1449.45	Start Drop -2.00
7324.56	0.00	0.00	7047.00	1515.85	637.55	2.00	180.00	1644.46	Start 2259.00 hold at 7324.56 MD
9583.56	0.00	0.00	9306.00	1515.85	637.55	0.00	0.00	1644.46	TD at 9583.56

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9306.00	1515.85	637.55	39° 59' 58.798 N	109° 28' 59.106 W	Circle (Radius: 25.00)

WELL DETAILS: NBU 922-31C1AS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4836.00 Latitude	109° 29' 7.300 W Longitude	Slot
0.00	0.00	14528011.64	2064640.41	39° 59' 43.814 N	109° 29' 7.300 W	

LEGEND	
—	NBU 155 EXISTING, NBU 155 EXISTING, NBU 155 EXISTING V0
—	NBU 922-31C3AS, NBU 922-31C3AS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31C4CS, NBU 922-31C4CS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31D1BS, NBU 922-31D1BS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31D4BS, NBU 922-31D4BS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31D4CS, NBU 922-31D4CS, PLAN #1 3-26-10 RHS V0
—	NBU 922-31F1BS, NBU 922-31F1BS, PLAN #1 3-26-10 RHS V0
—	PLAN #1 3-26-10 RHS





Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31C1AS		
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 922-31C1AS					
Well Position	+N/-S	-17.48 ft	Northing:	14,528,011.64 ft	Latitude:	39° 59' 43.814 N
	+E/-W	36.14 ft	Easting:	2,064,640.41 ft	Longitude:	109° 29' 7.300 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,836.00 ft

Wellbore	NBU 922-31C1AS				
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	22.81

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	22.81	399.98	1.61	0.68	2.00	2.00	0.00	22.81	
2,151.09	2.00	22.81	2,150.00	57.94	24.37	0.00	0.00	0.00	0.00	
2,793.18	21.26	22.81	2,775.95	176.71	74.32	3.00	3.00	0.00	0.00	
6,261.42	21.26	22.81	6,008.09	1,336.09	561.94	0.00	0.00	0.00	0.00	
7,324.56	0.00	0.00	7,047.00	1,515.85	637.55	2.00	-2.00	0.00	180.00	
9,583.56	0.00	0.00	9,306.00	1,515.85	637.55	0.00	0.00	0.00	0.00	PBHL_NBU 922-31



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Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31C1AS		
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 1751.09 hold at 400.00 MD										
400.00	2.00	22.81	399.98	1.61	0.68	1.75	2.00	2.00	0.00	0.00
500.00	2.00	22.81	499.92	4.83	2.03	5.24	0.00	0.00	0.00	0.00
600.00	2.00	22.81	599.86	8.04	3.38	8.73	0.00	0.00	0.00	0.00
700.00	2.00	22.81	699.80	11.26	4.74	12.22	0.00	0.00	0.00	0.00
800.00	2.00	22.81	799.74	14.48	6.09	15.70	0.00	0.00	0.00	0.00
900.00	2.00	22.81	899.68	17.69	7.44	19.19	0.00	0.00	0.00	0.00
1,000.00	2.00	22.81	999.61	20.91	8.79	22.68	0.00	0.00	0.00	0.00
1,100.00	2.00	22.81	1,099.55	24.13	10.15	26.17	0.00	0.00	0.00	0.00
GREEN RIVER										
1,177.49	2.00	22.81	1,177.00	26.62	11.20	28.88	0.00	0.00	0.00	0.00
1,200.00	2.00	22.81	1,199.49	27.34	11.50	29.66	0.00	0.00	0.00	0.00
1,300.00	2.00	22.81	1,299.43	30.56	12.85	33.15	0.00	0.00	0.00	0.00
1,400.00	2.00	22.81	1,399.37	33.78	14.21	36.64	0.00	0.00	0.00	0.00
1,500.00	2.00	22.81	1,499.31	37.00	15.56	40.13	0.00	0.00	0.00	0.00
1,600.00	2.00	22.81	1,599.25	40.21	16.91	43.62	0.00	0.00	0.00	0.00
1,700.00	2.00	22.81	1,699.19	43.43	18.27	47.11	0.00	0.00	0.00	0.00
1,800.00	2.00	22.81	1,799.13	46.65	19.62	50.60	0.00	0.00	0.00	0.00
1,900.00	2.00	22.81	1,899.07	49.86	20.97	54.09	0.00	0.00	0.00	0.00
2,000.00	2.00	22.81	1,999.01	53.08	22.32	57.58	0.00	0.00	0.00	0.00
8 5/8"										
2,051.03	2.00	22.81	2,050.00	54.72	23.01	59.37	0.00	0.00	0.00	0.00
2,100.00	2.00	22.81	2,098.94	56.30	23.68	61.07	0.00	0.00	0.00	0.00
Start DLS 3.00 TFO 0.00										
2,151.09	2.00	22.81	2,150.00	57.94	24.37	62.86	0.00	0.00	0.00	0.00
2,200.00	3.47	22.81	2,198.86	60.09	25.27	65.19	3.00	3.00	0.00	0.00
2,300.00	6.47	22.81	2,298.47	68.07	28.63	73.85	3.00	3.00	0.00	0.00
2,400.00	9.47	22.81	2,397.49	80.85	34.00	87.71	3.00	3.00	0.00	0.00
2,500.00	12.47	22.81	2,495.65	98.38	41.38	106.73	3.00	3.00	0.00	0.00
2,600.00	15.47	22.81	2,592.69	120.63	50.73	130.86	3.00	3.00	0.00	0.00
2,700.00	18.47	22.81	2,688.32	147.53	62.05	160.04	3.00	3.00	0.00	0.00
Start 3468.24 hold at 2793.18 MD										
2,793.18	21.26	22.81	2,775.95	176.71	74.32	191.70	3.00	3.00	0.00	0.00
2,800.00	21.26	22.81	2,782.31	178.99	75.28	194.18	0.00	0.00	0.00	0.00
2,900.00	21.26	22.81	2,875.50	212.42	89.34	230.44	0.00	0.00	0.00	0.00
3,000.00	21.26	22.81	2,968.69	245.85	103.40	266.71	0.00	0.00	0.00	0.00
3,100.00	21.26	22.81	3,061.88	279.28	117.46	302.97	0.00	0.00	0.00	0.00
3,200.00	21.26	22.81	3,155.08	312.70	131.52	339.24	0.00	0.00	0.00	0.00
3,300.00	21.26	22.81	3,248.27	346.13	145.58	375.50	0.00	0.00	0.00	0.00
3,400.00	21.26	22.81	3,341.46	379.56	159.64	411.77	0.00	0.00	0.00	0.00
3,500.00	21.26	22.81	3,434.65	412.99	173.70	448.03	0.00	0.00	0.00	0.00
3,600.00	21.26	22.81	3,527.85	446.42	187.76	484.29	0.00	0.00	0.00	0.00
3,700.00	21.26	22.81	3,621.04	479.85	201.82	520.56	0.00	0.00	0.00	0.00
3,800.00	21.26	22.81	3,714.23	513.27	215.88	556.82	0.00	0.00	0.00	0.00
3,900.00	21.26	22.81	3,807.42	546.70	229.94	593.09	0.00	0.00	0.00	0.00
4,000.00	21.26	22.81	3,900.62	580.13	244.00	629.35	0.00	0.00	0.00	0.00
4,100.00	21.26	22.81	3,993.81	613.56	258.06	665.62	0.00	0.00	0.00	0.00
4,200.00	21.26	22.81	4,087.00	646.99	272.11	701.88	0.00	0.00	0.00	0.00
4,300.00	21.26	22.81	4,180.20	680.42	286.17	738.15	0.00	0.00	0.00	0.00
4,400.00	21.26	22.81	4,273.39	713.84	300.23	774.41	0.00	0.00	0.00	0.00
4,500.00	21.26	22.81	4,366.58	747.27	314.29	810.68	0.00	0.00	0.00	0.00



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Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site:	NBU 922-31F Pad	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31C1AS		
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)	
4,600.00	21.26	22.81	4,459.77	780.70	328.35	846.94	0.00	0.00	0.00	
WASATCH										
4,602.39	21.26	22.81	4,462.00	781.50	328.69	847.81	0.00	0.00	0.00	
4,700.00	21.26	22.81	4,552.97	814.13	342.41	883.21	0.00	0.00	0.00	
4,800.00	21.26	22.81	4,646.16	847.56	356.47	919.47	0.00	0.00	0.00	
4,900.00	21.26	22.81	4,739.35	880.99	370.53	955.74	0.00	0.00	0.00	
5,000.00	21.26	22.81	4,832.54	914.41	384.59	992.00	0.00	0.00	0.00	
5,100.00	21.26	22.81	4,925.74	947.84	398.65	1,028.26	0.00	0.00	0.00	
5,200.00	21.26	22.81	5,018.93	981.27	412.71	1,064.53	0.00	0.00	0.00	
5,300.00	21.26	22.81	5,112.12	1,014.70	426.77	1,100.79	0.00	0.00	0.00	
5,400.00	21.26	22.81	5,205.31	1,048.13	440.83	1,137.06	0.00	0.00	0.00	
5,500.00	21.26	22.81	5,298.51	1,081.56	454.89	1,173.32	0.00	0.00	0.00	
5,600.00	21.26	22.81	5,391.70	1,114.98	468.95	1,209.59	0.00	0.00	0.00	
5,700.00	21.26	22.81	5,484.89	1,148.41	483.01	1,245.85	0.00	0.00	0.00	
5,800.00	21.26	22.81	5,578.09	1,181.84	497.07	1,282.12	0.00	0.00	0.00	
5,900.00	21.26	22.81	5,671.28	1,215.27	511.13	1,318.38	0.00	0.00	0.00	
6,000.00	21.26	22.81	5,764.47	1,248.70	525.19	1,354.65	0.00	0.00	0.00	
6,100.00	21.26	22.81	5,857.66	1,282.13	539.25	1,390.91	0.00	0.00	0.00	
6,200.00	21.26	22.81	5,950.86	1,315.55	553.31	1,427.18	0.00	0.00	0.00	
Start Drop -2.00										
6,261.42	21.26	22.81	6,008.09	1,336.09	561.94	1,449.45	0.00	0.00	0.00	
6,300.00	20.49	22.81	6,044.14	1,348.76	567.27	1,463.20	2.00	-2.00	0.00	
6,400.00	18.49	22.81	6,138.41	1,379.51	580.21	1,496.56	2.00	-2.00	0.00	
6,500.00	16.49	22.81	6,233.78	1,407.22	591.86	1,526.62	2.00	-2.00	0.00	
6,600.00	14.49	22.81	6,330.14	1,431.84	602.21	1,553.32	2.00	-2.00	0.00	
6,700.00	12.49	22.81	6,427.38	1,453.34	611.26	1,576.65	2.00	-2.00	0.00	
6,800.00	10.49	22.81	6,525.37	1,471.70	618.98	1,596.57	2.00	-2.00	0.00	
6,900.00	8.49	22.81	6,623.99	1,486.90	625.37	1,613.06	2.00	-2.00	0.00	
7,000.00	6.49	22.81	6,723.13	1,498.92	630.43	1,626.10	2.00	-2.00	0.00	
7,100.00	4.49	22.81	6,822.67	1,507.74	634.14	1,635.67	2.00	-2.00	0.00	
7,200.00	2.49	22.81	6,922.48	1,513.35	636.50	1,641.76	2.00	-2.00	0.00	
7,300.00	0.49	22.81	7,022.44	1,515.75	637.51	1,644.36	2.00	-2.00	0.00	
Start 2259.00 hold at 7324.56 MD										
7,324.56	0.00	0.00	7,047.00	1,515.85	637.55	1,644.46	2.00	-2.00	0.00	
7,400.00	0.00	0.00	7,122.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,222.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,322.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,422.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,522.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,622.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,722.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,822.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,922.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
MESAVERDE										
8,299.56	0.00	0.00	8,022.00	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,022.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,122.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,222.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,322.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,422.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,522.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,622.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,722.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,822.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00	



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-31C1AS		
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	8,922.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00
9,300.00	0.00	0.00	9,022.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00
9,400.00	0.00	0.00	9,122.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00
9,500.00	0.00	0.00	9,222.44	1,515.85	637.55	1,644.46	0.00	0.00	0.00
TD at 9583.56 - PBHL_NBU 922-31C1AS(44 FNL 1927 FWL)									
9,583.56	0.00	0.00	9,306.00	1,515.85	637.55	1,644.46	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 922-31C1 - hit/miss target - Shape	0.00	0.00	9,306.00	1,515.85	637.55	14,529,538.10	2,065,252.11	39° 59' 58.798 N	109° 28' 59.106 W
	2,051.03	2,050.00	8 5/8"					8.62	11.00

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,177.49	1,177.00	GREEN RIVER				
4,602.39	4,462.00	WASATCH				
8,299.56	8,022.00	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	1.61	0.68	Start 1751.09 hold at 400.00 MD	
2,151.09	2,150.00	57.94	24.37	Start DLS 3.00 TFO 0.00	
2,793.18	2,775.95	176.71	74.32	Start 3468.24 hold at 2793.18 MD	
6,261.42	6,008.09	1,336.09	561.94	Start Drop -2.00	
7,324.56	7,047.00	1,515.85	637.55	Start 2259.00 hold at 7324.56 MD	
9,583.56	9,306.00	1,515.85	637.55	TD at 9583.56	



ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)
NBU 922-31F Pad
NBU 922-31C1AS**

**NBU 922-31C1AS
PLAN #1 3-26-10 RHS**

Anticollision Report

26 March, 2010





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	9,583.56	PLAN #1 3-26-10 RHS (NBU 922-31C1AS	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)	616.26	602.11	14.54	-8.80	0.623	Level 1, CC
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	900.00	885.68	17.60	-17.73	0.498	Level 1, SF
NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 E)	2,151.09	2,136.00	55.50	-32.61	0.630	Level 1, ES
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	300.00	300.00	9.97	8.88	9.130	CC, ES
NBU 922-31C3AS - NBU 922-31C3AS - PLAN #1 3-26-1	4,100.00	4,100.95	64.48	37.31	2.374	SF
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	300.00	300.00	9.97	8.88	9.130	CC, ES
NBU 922-31C4CS - NBU 922-31C4CS - PLAN #1 3-26-1	400.00	399.79	11.00	9.46	7.156	SF
NBU 922-31D1BS - NBU 922-31D1BS - PLAN #1 3-26-1	300.00	300.00	20.20	19.11	18.490	CC, ES
NBU 922-31D1BS - NBU 922-31D1BS - PLAN #1 3-26-1	2,151.09	2,148.96	75.43	65.87	7.892	SF
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	300.00	300.00	30.17	29.08	27.620	CC, ES
NBU 922-31D4BS - NBU 922-31D4BS - PLAN #1 3-26-1	500.00	496.52	39.57	37.58	19.816	SF
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	300.00	300.00	40.14	39.05	36.750	CC, ES
NBU 922-31D4CS - NBU 922-31D4CS - PLAN #1 3-26-1	2,100.00	2,095.98	113.39	104.15	12.263	SF
NBU 922-31F1BS - NBU 922-31F1BS - PLAN #1 3-26-1C	300.00	300.00	19.69	18.60	18.029	CC, ES
NBU 922-31F1BS - NBU 922-31F1BS - PLAN #1 3-26-1C	400.00	399.05	22.05	20.51	14.400	SF

Offset Design													NBU 922-31F Pad - NBU 155 EXISTING - NBU 155 EXISTING - NBU 155 EXISTING		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	-34.62	14.20	-9.80	22.22							
100.00	100.00	86.00	86.00	0.10	1.72	-34.62	14.20	-9.80	17.26	15.44	1.82	9.501				
200.00	200.00	186.00	186.00	0.32	5.44	-34.62	14.20	-9.80	17.26	11.50	5.76	2.996				
300.00	300.00	286.00	286.00	0.55	9.44	-34.62	14.20	-9.80	17.26	7.27	9.99	1.728				
400.00	399.98	385.98	385.98	0.77	13.44	-62.59	14.20	-9.80	16.39	2.18	14.21	1.153	Level 2			
500.00	499.92	485.92	485.92	1.00	17.44	-74.42	14.20	-9.80	15.10	-3.33	18.43	0.819	Level 1			
600.00	599.86	585.86	585.86	1.22	21.43	-87.77	14.20	-9.80	14.56	-8.10	22.66	0.642	Level 1			
616.26	616.11	602.11	602.11	1.26	22.08	-90.00	14.20	-9.80	14.54	-8.80	23.34	0.623	Level 1, CC			
700.00	699.80	685.80	685.80	1.45	25.43	-101.36	14.20	-9.80	14.84	-12.05	26.88	0.552	Level 1			
800.00	799.74	785.74	785.74	1.68	29.43	-113.78	14.20	-9.80	15.90	-15.21	31.10	0.511	Level 1			
900.00	899.68	885.68	885.68	1.91	33.43	-124.23	14.20	-9.80	17.60	-17.73	35.33	0.498	Level 1, SF			
1,000.00	999.61	985.61	985.61	2.14	37.42	-132.62	14.20	-9.80	19.77	-19.77	39.54	0.500	Level 1			
1,100.00	1,099.55	1,085.55	1,085.55	2.37	41.42	-139.24	14.20	-9.80	22.28	-21.48	43.76	0.509	Level 1			

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
1,200.00	1,199.49	1,185.49	1,185.49	2.60	45.42	-144.46	14.20	-9.80	25.03	-22.95	47.98	0.522	Level 1		
1,300.00	1,299.43	1,285.43	1,285.43	2.84	49.42	-148.62	14.20	-9.80	27.95	-24.26	52.20	0.535	Level 1		
1,400.00	1,399.37	1,385.37	1,385.37	3.07	53.41	-151.98	14.20	-9.80	30.98	-25.44	56.42	0.549	Level 1		
1,500.00	1,499.31	1,485.31	1,485.31	3.30	57.41	-154.74	14.20	-9.80	34.10	-26.54	60.64	0.562	Level 1		
1,600.00	1,599.25	1,585.25	1,585.25	3.53	61.41	-157.03	14.20	-9.80	37.29	-27.57	64.86	0.575	Level 1		
1,700.00	1,699.19	1,685.19	1,685.19	3.76	65.41	-158.95	14.20	-9.80	40.52	-28.56	69.08	0.587	Level 1		
1,800.00	1,799.13	1,785.13	1,785.13	3.99	69.41	-160.59	14.20	-9.80	43.80	-29.50	73.30	0.598	Level 1		
1,900.00	1,899.07	1,885.07	1,885.07	4.22	73.40	-162.00	14.20	-9.80	47.10	-30.42	77.52	0.608	Level 1		
2,000.00	1,999.01	1,985.01	1,985.01	4.46	77.40	-163.23	14.20	-9.80	50.43	-31.31	81.74	0.617	Level 1		
2,100.00	2,098.94	2,084.94	2,084.94	4.69	81.40	-164.30	14.20	-9.80	53.79	-32.18	85.96	0.626	Level 1		
2,151.09	2,150.00	2,136.00	2,136.00	4.81	83.44	-164.80	14.20	-9.80	55.50	-32.61	88.12	0.630	Level 1, ES		
2,200.00	2,198.86	2,184.86	2,184.86	4.92	85.39	-165.39	14.20	-9.80	57.76	-32.32	90.08	0.641	Level 1		
2,300.00	2,298.47	2,284.47	2,284.47	5.17	89.38	-167.23	14.20	-9.80	66.17	-27.72	93.89	0.705	Level 1		
2,400.00	2,397.49	2,383.49	2,383.49	5.45	93.34	-169.35	14.20	-9.80	79.75	-17.62	97.37	0.819	Level 1		
2,500.00	2,495.65	2,481.65	2,481.65	5.77	97.27	-171.31	14.20	-9.80	98.52	-1.97	100.49	0.980	Level 1		
2,600.00	2,592.69	2,578.69	2,578.69	6.12	101.15	-172.92	14.20	-9.80	122.44	19.25	103.19	1.187	Level 2		
2,700.00	2,688.32	2,674.32	2,674.32	6.54	104.97	-174.19	14.20	-9.80	151.45	45.99	105.46	1.436	Level 3		
2,793.18	2,775.95	2,761.95	2,761.95	6.98	108.48	-175.11	14.20	-9.80	182.99	75.84	107.15	1.708			
2,800.00	2,782.31	2,768.31	2,768.31	7.01	108.73	-175.18	14.20	-9.80	185.46	78.05	107.41	1.727			
2,900.00	2,875.50	2,861.50	2,861.50	7.54	112.46	-175.96	14.20	-9.80	221.63	110.49	111.13	1.994			
3,000.00	2,968.69	2,954.69	2,954.69	8.10	116.19	-176.53	14.20	-9.80	257.82	142.95	114.87	2.244			
3,100.00	3,061.88	3,047.88	3,047.88	8.68	119.92	-176.96	14.20	-9.80	294.04	175.41	118.62	2.479			
3,200.00	3,155.08	3,141.08	3,141.08	9.27	123.64	-177.29	14.20	-9.80	330.26	207.88	122.38	2.699			
3,300.00	3,248.27	3,234.27	3,234.27	9.88	127.37	-177.56	14.20	-9.80	366.50	240.35	126.14	2.905			
3,400.00	3,341.46	3,327.46	3,327.46	10.51	131.10	-177.78	14.20	-9.80	402.74	272.82	129.91	3.100			
3,500.00	3,434.65	3,420.65	3,420.65	11.14	134.83	-177.96	14.20	-9.80	438.98	305.30	133.68	3.284			
3,600.00	3,527.85	3,513.85	3,513.85	11.78	138.55	-178.12	14.20	-9.80	475.22	337.77	137.46	3.457			
3,700.00	3,621.04	3,607.04	3,607.04	12.43	142.28	-178.25	14.20	-9.80	511.47	370.24	141.24	3.621			
3,800.00	3,714.23	3,700.23	3,700.23	13.08	146.01	-178.37	14.20	-9.80	547.72	402.71	145.02	3.777			
3,900.00	3,807.42	3,793.42	3,793.42	13.74	149.74	-178.47	14.20	-9.80	583.98	435.17	148.80	3.925			
4,000.00	3,900.62	3,886.62	3,886.62	14.40	153.46	-178.56	14.20	-9.80	620.23	467.64	152.59	4.065			
4,100.00	3,993.81	3,979.81	3,979.81	15.07	157.19	-178.64	14.20	-9.80	656.49	500.11	156.38	4.198			
4,200.00	4,087.00	4,073.00	4,073.00	15.74	160.92	-178.71	14.20	-9.80	692.74	532.58	160.17	4.325			
4,300.00	4,180.20	4,166.20	4,166.20	16.42	164.65	-178.77	14.20	-9.80	729.00	565.04	163.96	4.446			
4,400.00	4,273.39	4,259.39	4,259.39	17.09	168.38	-178.83	14.20	-9.80	765.26	597.51	167.75	4.562			
4,500.00	4,366.58	4,352.58	4,352.58	17.77	172.10	-178.88	14.20	-9.80	801.52	629.97	171.55	4.672			
4,600.00	4,459.77	4,445.77	4,445.77	18.46	175.83	-178.93	14.20	-9.80	837.78	662.43	175.34	4.778			
4,700.00	4,552.97	4,538.97	4,538.97	19.14	179.56	-178.98	14.20	-9.80	874.03	694.90	179.14	4.879			
4,800.00	4,646.16	4,632.16	4,632.16	19.82	183.29	-179.02	14.20	-9.80	910.29	727.36	182.94	4.976			
4,900.00	4,739.35	4,725.35	4,725.35	20.51	187.01	-179.06	14.20	-9.80	946.55	759.82	186.74	5.069			
5,000.00	4,832.54	4,818.54	4,818.54	21.20	190.74	-179.09	14.20	-9.80	982.82	792.28	190.54	5.158			
5,100.00	4,925.74	4,911.74	4,911.74	21.89	194.47	-179.12	14.20	-9.80	1,019.08	824.74	194.34	5.244			
5,200.00	5,018.93	5,004.93	5,004.93	22.58	198.20	-179.15	14.20	-9.80	1,055.34	857.20	198.14	5.326			
5,300.00	5,112.12	5,098.12	5,098.12	23.27	201.92	-179.18	14.20	-9.80	1,091.60	889.66	201.94	5.406			
5,400.00	5,205.31	5,191.31	5,191.31	23.96	205.65	-179.21	14.20	-9.80	1,127.86	922.12	205.74	5.482			
5,500.00	5,298.51	5,284.51	5,284.51	24.65	209.38	-179.23	14.20	-9.80	1,164.12	954.57	209.55	5.555			
5,600.00	5,391.70	5,377.70	5,377.70	25.35	213.11	-179.26	14.20	-9.80	1,200.38	987.03	213.35	5.626			
5,700.00	5,484.89	5,470.89	5,470.89	26.04	216.84	-179.28	14.20	-9.80	1,236.65	1,019.49	217.16	5.695			
5,800.00	5,578.09	5,564.09	5,564.09	26.74	220.56	-179.30	14.20	-9.80	1,272.91	1,051.95	220.96	5.761			
5,900.00	5,671.28	5,657.28	5,657.28	27.43	224.29	-179.32	14.20	-9.80	1,309.17	1,084.40	224.77	5.825			
6,000.00	5,764.47	5,750.47	5,750.47	28.13	228.02	-179.34	14.20	-9.80	1,345.43	1,116.86	228.57	5.886			
6,100.00	5,857.66	5,843.66	5,843.66	28.82	231.75	-179.35	14.20	-9.80	1,381.70	1,149.32	232.38	5.946			

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor
6,200.00	5,950.86	5,936.86	5,936.86	29.52	235.47	-179.37	14.20	-9.80	1,417.96	1,181.77	236.19	6.004	
6,261.42	6,008.09	5,994.09	5,994.09	29.95	237.76	-179.38	14.20	-9.80	1,440.23	1,201.71	238.52	6.038	
6,300.00	6,044.14	6,030.14	6,030.14	30.19	239.21	-179.39	14.20	-9.80	1,453.98	1,212.83	241.15	6.029	
6,400.00	6,138.41	6,124.41	6,124.41	30.70	242.98	-179.41	14.20	-9.80	1,487.34	1,239.52	247.83	6.002	
6,500.00	6,233.78	6,219.78	6,219.78	31.17	246.79	-179.43	14.20	-9.80	1,517.39	1,263.08	254.31	5.967	
6,600.00	6,330.14	6,316.14	6,316.14	31.61	250.65	-179.44	14.20	-9.80	1,544.10	1,283.51	260.60	5.925	
6,700.00	6,427.38	6,413.38	6,413.38	32.00	254.54	-179.46	14.20	-9.80	1,567.43	1,300.78	266.65	5.878	
6,800.00	6,525.37	6,511.37	6,511.37	32.35	258.45	-179.47	14.20	-9.80	1,587.35	1,314.89	272.46	5.826	
6,900.00	6,623.99	6,609.99	6,609.99	32.65	262.40	-179.47	14.20	-9.80	1,603.84	1,325.84	278.00	5.769	
7,000.00	6,723.13	6,709.13	6,709.13	32.91	266.37	-179.48	14.20	-9.80	1,616.87	1,333.63	283.25	5.708	
7,100.00	6,822.67	6,808.67	6,808.67	33.13	270.35	-179.49	14.20	-9.80	1,626.44	1,338.26	288.19	5.644	
7,200.00	6,922.48	6,908.48	6,908.48	33.30	274.34	-179.49	14.20	-9.80	1,632.53	1,339.73	292.80	5.576	
7,300.00	7,022.44	7,008.44	7,008.44	33.42	278.34	-179.49	14.20	-9.80	1,635.13	1,338.07	297.06	5.504	
7,324.56	7,047.00	7,033.00	7,033.00	33.44	279.32	-156.68	14.20	-9.80	1,635.24	1,337.19	298.05	5.486	
7,400.00	7,122.44	7,108.44	7,108.44	33.51	282.34	-156.68	14.20	-9.80	1,635.24	1,334.05	301.19	5.429	
7,500.00	7,222.44	7,208.44	7,208.44	33.61	286.34	-156.68	14.20	-9.80	1,635.24	1,329.87	305.36	5.355	
7,600.00	7,322.44	7,308.44	7,308.44	33.71	290.34	-156.68	14.20	-9.80	1,635.24	1,325.70	309.54	5.283	
7,700.00	7,422.44	7,408.44	7,408.44	33.81	294.34	-156.68	14.20	-9.80	1,635.24	1,321.52	313.71	5.213	
7,800.00	7,522.44	7,508.44	7,508.44	33.91	298.34	-156.68	14.20	-9.80	1,635.24	1,317.35	317.89	5.144	
7,900.00	7,622.44	7,608.44	7,608.44	34.01	302.34	-156.68	14.20	-9.80	1,635.24	1,313.17	322.07	5.077	
8,000.00	7,722.44	7,708.44	7,708.44	34.11	306.34	-156.68	14.20	-9.80	1,635.24	1,308.99	326.25	5.012	
8,100.00	7,822.44	7,808.44	7,808.44	34.22	310.34	-156.68	14.20	-9.80	1,635.24	1,304.81	330.43	4.949	
8,200.00	7,922.44	7,908.44	7,908.44	34.32	314.34	-156.68	14.20	-9.80	1,635.24	1,300.63	334.61	4.887	
8,300.00	8,022.44	8,008.44	8,008.44	34.43	318.34	-156.68	14.20	-9.80	1,635.24	1,296.44	338.79	4.827	
8,400.00	8,122.44	8,108.44	8,108.44	34.54	322.34	-156.68	14.20	-9.80	1,635.24	1,292.26	342.98	4.768	
8,500.00	8,222.44	8,208.44	8,208.44	34.65	326.34	-156.68	14.20	-9.80	1,635.24	1,288.08	347.16	4.710	
8,600.00	8,322.44	8,308.44	8,308.44	34.76	330.34	-156.68	14.20	-9.80	1,635.24	1,283.89	351.34	4.654	
8,700.00	8,422.44	8,408.44	8,408.44	34.87	334.34	-156.68	14.20	-9.80	1,635.24	1,279.71	355.53	4.599	
8,800.00	8,522.44	8,508.44	8,508.44	34.98	338.34	-156.68	14.20	-9.80	1,635.24	1,275.52	359.71	4.546	
8,900.00	8,622.44	8,608.44	8,608.44	35.09	342.34	-156.68	14.20	-9.80	1,635.24	1,271.34	363.90	4.494	
9,000.00	8,722.44	8,708.44	8,708.44	35.21	346.34	-156.68	14.20	-9.80	1,635.24	1,267.15	368.09	4.443	
9,100.00	8,822.44	8,808.44	8,808.44	35.33	350.34	-156.68	14.20	-9.80	1,635.24	1,262.96	372.28	4.393	
9,200.00	8,922.44	8,908.44	8,908.44	35.44	354.34	-156.68	14.20	-9.80	1,635.24	1,258.77	376.47	4.344	
9,300.00	9,022.44	9,008.44	9,008.44	35.56	358.34	-156.68	14.20	-9.80	1,635.24	1,254.58	380.66	4.296	
9,400.00	9,122.44	9,108.44	9,108.44	35.68	362.34	-156.68	14.20	-9.80	1,635.24	1,250.39	384.85	4.249	
9,500.00	9,222.44	9,208.44	9,208.44	35.80	366.34	-156.68	14.20	-9.80	1,635.24	1,246.20	389.04	4.203	
9,583.56	9,306.00	9,292.00	9,292.00	35.90	369.68	-156.68	14.20	-9.80	1,635.24	1,242.70	392.54	4.166	



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-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	51.594	
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	399.84	399.82	0.77	0.77	-87.75	6.11	-8.96	10.64	9.10	1.54	6.910	
500.00	499.92	499.83	499.75	1.00	1.00	-89.31	9.60	-8.96	11.99	9.99	1.99	6.018	
600.00	599.86	599.82	599.68	1.22	1.23	-90.55	13.09	-8.96	13.34	10.89	2.45	5.450	
700.00	699.80	699.81	699.61	1.45	1.45	-91.56	16.58	-8.96	14.70	11.79	2.91	5.059	
800.00	799.74	799.80	799.54	1.68	1.68	-92.40	20.07	-8.96	16.06	12.69	3.36	4.773	
900.00	899.68	899.80	899.47	1.91	1.92	-93.11	23.56	-8.96	17.42	13.60	3.82	4.556	
1,000.00	999.61	999.79	999.40	2.14	2.15	-93.72	27.05	-8.96	18.79	14.51	4.29	4.385	
1,100.00	1,099.55	1,099.78	1,099.33	2.37	2.38	-94.24	30.54	-8.96	20.16	15.41	4.75	4.247	
1,200.00	1,199.49	1,199.77	1,199.26	2.60	2.61	-94.70	34.03	-8.96	21.53	16.32	5.21	4.134	
1,300.00	1,299.43	1,299.76	1,299.19	2.84	2.84	-95.10	37.52	-8.96	22.90	17.23	5.67	4.039	
1,400.00	1,399.37	1,399.75	1,399.12	3.07	3.07	-95.46	41.01	-8.96	24.27	18.14	6.13	3.959	
1,500.00	1,499.31	1,499.74	1,499.05	3.30	3.30	-95.78	44.50	-8.96	25.65	19.05	6.59	3.890	
1,600.00	1,599.25	1,599.73	1,598.98	3.53	3.53	-96.07	47.99	-8.96	27.02	19.96	7.06	3.830	
1,700.00	1,699.19	1,699.72	1,698.91	3.76	3.76	-96.33	51.48	-8.96	28.39	20.88	7.52	3.777	
1,800.00	1,799.13	1,799.71	1,798.84	3.99	4.00	-96.56	54.96	-8.96	29.77	21.79	7.98	3.730	
1,900.00	1,899.07	1,899.70	1,898.77	4.22	4.23	-96.78	58.45	-8.96	31.15	22.70	8.44	3.689	
2,000.00	1,999.01	1,999.69	1,998.70	4.46	4.46	-96.97	61.94	-8.96	32.52	23.62	8.90	3.652	
2,100.00	2,098.94	2,099.68	2,098.63	4.69	4.69	-97.15	65.43	-8.96	33.90	24.53	9.37	3.619	
2,151.09	2,150.00	2,151.12	2,150.03	4.81	4.81	-97.20	67.21	-8.81	34.45	24.85	9.60	3.588	
2,200.00	2,198.86	2,200.18	2,199.04	4.92	4.91	-97.42	69.26	-8.04	34.55	24.73	9.82	3.517	
2,300.00	2,298.47	2,300.36	2,298.86	5.17	5.16	-97.89	77.07	-5.06	34.87	24.55	10.32	3.378	
2,400.00	2,397.49	2,400.56	2,398.12	5.45	5.43	-98.28	89.76	-0.23	35.38	24.50	10.87	3.254	
2,500.00	2,495.65	2,500.77	2,496.55	5.77	5.74	-98.60	107.29	6.45	36.06	24.57	11.49	3.138	
2,600.00	2,592.69	2,600.99	2,593.87	6.12	6.09	-98.86	129.64	14.96	36.91	24.72	12.19	3.028	
2,700.00	2,688.32	2,701.23	2,689.81	6.54	6.49	-99.03	156.72	25.28	37.93	24.93	13.00	2.918	
2,793.18	2,775.95	2,794.54	2,777.77	6.98	6.92	-99.66	185.82	36.36	39.08	25.22	13.86	2.820	
2,800.00	2,782.31	2,801.36	2,784.18	7.01	6.96	-99.85	188.00	37.19	39.18	25.26	13.93	2.814	
2,900.00	2,875.50	2,901.33	2,878.12	7.54	7.46	-102.64	219.95	49.36	40.76	25.85	14.91	2.734	
3,000.00	2,968.69	3,001.30	2,972.05	8.10	7.98	-105.22	251.91	61.54	42.43	26.51	15.92	2.665	
3,100.00	3,061.88	3,101.26	3,065.99	8.68	8.53	-107.59	283.87	73.71	44.18	27.23	16.95	2.606	
3,200.00	3,155.08	3,201.23	3,159.93	9.27	9.09	-109.78	315.83	85.88	46.00	28.01	17.99	2.557	
3,300.00	3,248.27	3,301.20	3,253.87	9.88	9.67	-111.81	347.78	98.05	47.88	28.85	19.03	2.516	
3,400.00	3,341.46	3,401.17	3,347.80	10.51	10.26	-113.67	379.74	110.23	49.82	29.75	20.07	2.482	
3,500.00	3,434.65	3,501.14	3,441.74	11.14	10.85	-115.40	411.70	122.40	51.80	30.70	21.10	2.455	
3,600.00	3,527.85	3,601.11	3,535.68	11.78	11.46	-116.99	443.66	134.57	53.83	31.70	22.13	2.432	
3,700.00	3,621.04	3,701.08	3,629.62	12.43	12.07	-118.47	475.61	146.75	55.90	32.74	23.15	2.414	
3,800.00	3,714.23	3,801.04	3,723.55	13.08	12.69	-119.85	507.57	158.92	58.00	33.83	24.17	2.400	
3,900.00	3,807.42	3,901.01	3,817.49	13.74	13.31	-121.13	539.53	171.09	60.13	34.96	25.17	2.389	
4,000.00	3,900.62	4,000.98	3,911.43	14.40	13.94	-122.31	571.49	183.26	62.29	36.12	26.17	2.380	
4,100.00	3,993.81	4,100.95	4,005.37	15.07	14.57	-123.42	603.44	195.44	64.48	37.31	27.16	2.374 SF	
4,200.00	4,087.00	4,200.00	4,098.71	15.74	15.14	-125.02	634.41	207.23	67.12	39.11	28.01	2.396	
4,300.00	4,180.20	4,298.49	4,192.55	16.42	15.60	-128.61	662.34	217.87	71.73	43.34	28.39	2.527	
4,400.00	4,273.39	4,396.38	4,286.78	17.09	16.03	-133.62	687.10	227.30	78.83	50.46	28.37	2.779	
4,500.00	4,366.58	4,493.52	4,381.12	17.77	16.42	-139.24	708.68	235.52	88.91	60.86	28.06	3.169	
4,600.00	4,459.77	4,589.68	4,475.24	18.46	16.77	-144.80	727.09	242.53	102.36	74.75	27.61	3.707	
4,700.00	4,552.97	4,684.68	4,568.82	19.14	17.08	-149.85	742.37	248.35	119.36	92.18	27.18	4.391	
4,800.00	4,646.16	4,778.32	4,661.54	19.82	17.34	-154.22	754.58	253.01	139.95	113.09	26.86	5.211	
4,900.00	4,739.35	4,870.44	4,753.13	20.51	17.57	-157.88	763.83	256.53	164.05	137.38	26.67	6.150	

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	4,832.54	4,960.90	4,843.32	21.20	17.76	-160.92	770.23	258.96	191.54	164.92	26.62	7.196		
5,100.00	4,925.74	5,049.55	4,931.88	21.89	17.91	-163.42	773.91	260.37	222.29	195.61	26.67	8.334		
5,200.00	5,018.93	5,136.61	5,018.93	22.58	18.03	-165.48	775.04	260.80	256.14	229.33	26.82	9.552		
5,300.00	5,112.12	5,229.81	5,112.12	23.27	18.14	-167.27	775.04	260.80	291.52	264.48	27.04	10.781		
5,400.00	5,205.31	5,323.00	5,205.31	23.96	18.26	-168.66	775.04	260.80	327.09	299.75	27.35	11.961		
5,500.00	5,298.51	5,416.19	5,298.51	24.65	18.39	-169.79	775.04	260.80	362.80	335.10	27.70	13.096		
5,600.00	5,391.70	5,509.38	5,391.70	25.35	18.51	-170.71	775.04	260.80	398.61	370.51	28.10	14.187		
5,700.00	5,484.89	5,602.58	5,484.89	26.04	18.64	-171.48	775.04	260.80	434.49	405.98	28.51	15.238		
5,800.00	5,578.09	5,695.77	5,578.09	26.74	18.77	-172.13	775.04	260.80	470.44	441.49	28.95	16.250		
5,900.00	5,671.28	5,788.96	5,671.28	27.43	18.90	-172.69	775.04	260.80	506.43	477.03	29.40	17.225		
6,000.00	5,764.47	5,882.15	5,764.47	28.13	19.03	-173.18	775.04	260.80	542.45	512.59	29.86	18.166		
6,100.00	5,857.66	5,975.35	5,857.66	28.82	19.16	-173.61	775.04	260.80	578.51	548.18	30.33	19.073		
6,200.00	5,950.86	6,068.54	5,950.86	29.52	19.29	-173.98	775.04	260.80	614.59	583.78	30.81	19.949		
6,261.42	6,008.09	6,125.78	6,008.09	29.95	19.37	-174.19	775.04	260.80	636.76	605.65	31.10	20.471		
6,300.00	6,044.14	6,161.82	6,044.14	30.19	19.43	-174.34	775.04	260.80	650.45	619.12	31.33	20.763		
6,400.00	6,138.41	6,256.09	6,138.41	30.70	19.56	-174.69	775.04	260.80	683.68	651.81	31.86	21.457		
6,500.00	6,233.78	6,351.46	6,233.78	31.17	19.70	-174.96	775.04	260.80	713.62	681.25	32.37	22.049		
6,600.00	6,330.14	6,447.82	6,330.14	31.61	19.85	-175.19	775.04	260.80	740.24	707.40	32.83	22.547		
6,700.00	6,427.38	6,545.06	6,427.38	32.00	19.99	-175.38	775.04	260.80	763.49	730.23	33.26	22.956		
6,800.00	6,525.37	6,643.05	6,525.37	32.35	20.14	-175.53	775.04	260.80	783.35	749.70	33.65	23.282		
6,900.00	6,623.99	6,741.68	6,623.99	32.65	20.29	-175.64	775.04	260.80	799.79	765.80	33.99	23.529		
7,000.00	6,723.13	6,840.82	6,723.13	32.91	20.45	-175.73	775.04	260.80	812.79	778.50	34.29	23.701		
7,100.00	6,822.67	6,940.35	6,822.67	33.13	20.60	-175.80	775.04	260.80	822.33	787.78	34.55	23.799		
7,200.00	6,922.48	7,040.16	6,922.48	33.30	20.76	-175.84	775.04	260.80	828.41	793.64	34.77	23.827		
7,300.00	7,022.44	7,140.12	7,022.44	33.42	20.91	-175.85	775.04	260.80	831.00	796.06	34.94	23.785		
7,324.56	7,047.00	7,164.68	7,047.00	33.44	20.95	-153.04	775.04	260.80	831.11	796.13	34.97	23.764		
7,400.00	7,122.44	7,240.12	7,122.44	33.51	21.07	-153.04	775.04	260.80	831.11	795.86	35.25	23.579		
7,500.00	7,222.44	7,340.12	7,222.44	33.61	21.23	-153.04	775.04	260.80	831.11	795.48	35.63	23.327		
7,600.00	7,322.44	7,440.12	7,322.44	33.71	21.40	-153.04	775.04	260.80	831.11	795.10	36.01	23.080		
7,700.00	7,422.44	7,540.12	7,422.44	33.81	21.56	-153.04	775.04	260.80	831.11	794.71	36.39	22.837		
7,800.00	7,522.44	7,640.12	7,522.44	33.91	21.72	-153.04	775.04	260.80	831.11	794.33	36.78	22.598		
7,900.00	7,622.44	7,740.12	7,622.44	34.01	21.89	-153.04	775.04	260.80	831.11	793.94	37.16	22.363		
8,000.00	7,722.44	7,840.12	7,722.44	34.11	22.05	-153.04	775.04	260.80	831.11	793.56	37.55	22.133		
8,100.00	7,822.44	7,940.12	7,822.44	34.22	22.22	-153.04	775.04	260.80	831.11	793.17	37.94	21.906		
8,200.00	7,922.44	8,040.12	7,922.44	34.32	22.39	-153.04	775.04	260.80	831.11	792.78	38.33	21.683		
8,300.00	8,022.44	8,140.12	8,022.44	34.43	22.56	-153.04	775.04	260.80	831.11	792.39	38.72	21.464		
8,400.00	8,122.44	8,240.12	8,122.44	34.54	22.73	-153.04	775.04	260.80	831.11	791.99	39.11	21.248		
8,500.00	8,222.44	8,340.12	8,222.44	34.65	22.90	-153.04	775.04	260.80	831.11	791.60	39.51	21.037		
8,600.00	8,322.44	8,440.12	8,322.44	34.76	23.07	-153.04	775.04	260.80	831.11	791.21	39.90	20.829		
8,700.00	8,422.44	8,540.12	8,422.44	34.87	23.24	-153.04	775.04	260.80	831.11	790.81	40.30	20.624		
8,800.00	8,522.44	8,640.12	8,522.44	34.98	23.41	-153.04	775.04	260.80	831.11	790.41	40.70	20.423		
8,900.00	8,622.44	8,740.12	8,622.44	35.09	23.59	-153.04	775.04	260.80	831.11	790.01	41.09	20.225		
9,000.00	8,722.44	8,840.12	8,722.44	35.21	23.76	-153.04	775.04	260.80	831.11	789.62	41.49	20.031		
9,100.00	8,822.44	8,940.12	8,822.44	35.33	23.94	-153.04	775.04	260.80	831.11	789.22	41.89	19.839		
9,200.00	8,922.44	9,040.12	8,922.44	35.44	24.12	-153.04	775.04	260.80	831.11	788.81	42.29	19.651		
9,300.00	9,022.44	9,140.12	9,022.44	35.56	24.29	-153.04	775.04	260.80	831.11	788.41	42.69	19.466		
9,400.00	9,122.44	9,240.12	9,122.44	35.68	24.47	-153.04	775.04	260.80	831.11	788.01	43.10	19.284		
9,500.00	9,222.44	9,340.12	9,222.44	35.80	24.65	-153.04	775.04	260.80	831.11	787.61	43.50	19.105		
9,541.67	9,264.11	9,381.79	9,264.11	35.85	24.73	-153.04	775.04	260.80	831.11	787.44	43.67	19.032		
9,583.56	9,306.00	9,395.68	9,278.00	35.90	24.75	-153.04	775.04	260.80	831.58	787.80	43.78	18.995		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	-4.37	8.96	9.97						
100.00	100.00	100.00	100.00	0.10	0.10	115.99	-4.37	8.96	9.97	9.78	0.19	51.594			
200.00	200.00	200.00	200.00	0.32	0.32	115.99	-4.37	8.96	9.97	9.33	0.64	15.514			
300.00	300.00	300.00	300.00	0.55	0.55	115.99	-4.37	8.96	9.97	8.88	1.09	9.130 CC, ES			
400.00	399.98	399.79	399.75	0.77	0.77	89.48	-2.57	10.85	11.00	9.46	1.54	7.156 SF			
500.00	499.92	499.33	498.97	1.00	1.01	75.02	2.81	16.48	14.62	12.63	1.99	7.329			
600.00	599.86	598.13	596.92	1.22	1.27	57.78	11.67	25.76	22.86	20.38	2.47	9.246			
700.00	699.80	695.66	692.84	1.45	1.60	46.50	23.84	38.50	36.69	33.74	2.96	12.411			
800.00	799.74	791.47	786.06	1.68	2.00	39.93	39.07	54.44	55.94	52.50	3.45	16.238			
900.00	899.68	887.64	878.71	1.91	2.46	36.05	56.87	73.08	79.27	75.33	3.94	20.131			
1,000.00	999.61	984.71	972.15	2.14	2.96	33.89	75.03	92.09	103.06	98.65	4.41	23.348			
1,100.00	1,099.55	1,081.78	1,065.59	2.37	3.47	32.53	93.19	111.10	126.94	122.05	4.90	25.931			
1,200.00	1,199.49	1,178.85	1,159.04	2.60	3.98	31.61	111.35	130.12	150.87	145.49	5.38	28.034			
1,300.00	1,299.43	1,275.92	1,252.48	2.84	4.51	30.94	129.50	149.13	174.83	168.95	5.87	29.779			
1,400.00	1,399.37	1,372.99	1,345.93	3.07	5.03	30.43	147.66	168.14	198.80	192.43	6.36	31.239			
1,500.00	1,499.31	1,470.06	1,439.37	3.30	5.56	30.03	165.82	187.15	222.78	215.92	6.86	32.482			
1,600.00	1,599.25	1,567.13	1,532.81	3.53	6.09	29.71	183.98	206.16	246.77	239.41	7.36	33.551			
1,700.00	1,699.19	1,664.20	1,626.26	3.76	6.62	29.44	202.13	225.17	270.77	262.91	7.85	34.479			
1,800.00	1,799.13	1,761.27	1,719.70	3.99	7.15	29.22	220.29	244.18	294.77	286.42	8.35	35.293			
1,900.00	1,899.07	1,858.35	1,813.14	4.22	7.69	29.03	238.45	263.19	318.77	309.92	8.85	36.011			
2,000.00	1,999.01	1,955.42	1,906.59	4.46	8.22	28.87	256.61	282.20	342.78	333.43	9.35	36.649			
2,100.00	2,098.94	2,052.49	2,000.03	4.69	8.76	28.73	274.76	301.21	366.79	356.94	9.85	37.220			
2,151.09	2,150.00	2,102.08	2,047.77	4.81	9.03	28.66	284.04	310.92	379.06	368.95	10.11	37.490			
2,200.00	2,198.86	2,149.69	2,093.60	4.92	9.29	28.48	292.95	320.25	390.27	379.90	10.37	37.629			
2,300.00	2,298.47	2,260.64	2,200.83	5.17	9.79	28.51	312.60	340.83	408.40	397.50	10.90	37.454			
2,400.00	2,397.49	2,374.29	2,311.61	5.45	10.23	29.08	330.13	359.17	418.63	407.20	11.43	36.632			
2,500.00	2,495.65	2,488.53	2,423.78	5.77	10.62	30.20	345.06	374.80	420.94	408.98	11.96	35.202			
2,600.00	2,592.69	2,602.21	2,536.09	6.12	10.97	31.92	357.22	387.54	415.47	402.97	12.51	33.219			
2,700.00	2,688.32	2,714.18	2,647.23	6.54	11.26	34.36	366.56	397.32	402.58	389.48	13.10	30.721			
2,793.18	2,775.95	2,816.02	2,748.66	6.98	11.48	37.44	372.78	403.82	384.39	370.64	13.75	27.957			
2,800.00	2,782.31	2,823.36	2,755.98	7.01	11.49	37.68	373.14	404.21	382.86	369.05	13.80	27.737			
2,900.00	2,875.50	2,929.90	2,862.36	7.54	11.68	41.36	377.14	408.39	359.31	344.66	14.64	24.540			
3,000.00	2,968.69	3,034.31	2,966.74	8.10	11.82	45.69	378.74	410.07	334.23	318.63	15.60	21.425			
3,100.00	3,061.88	3,129.45	3,061.88	8.68	11.92	50.41	378.78	410.11	309.11	292.45	16.65	18.560			
3,200.00	3,155.08	3,222.64	3,155.08	9.27	12.03	55.75	378.78	410.11	286.32	268.48	17.84	16.046			
3,300.00	3,248.27	3,315.84	3,248.27	9.88	12.14	61.87	378.78	410.11	266.54	247.37	19.17	13.906			
3,400.00	3,341.46	3,409.03	3,341.46	10.51	12.26	68.77	378.78	410.11	250.48	229.89	20.59	12.166			
3,500.00	3,434.65	3,502.22	3,434.65	11.14	12.37	76.38	378.78	410.11	238.88	216.85	22.03	10.843			
3,600.00	3,527.85	3,595.42	3,527.85	11.78	12.49	84.51	378.78	410.11	232.41	209.02	23.39	9.937			
3,665.79	3,589.16	3,656.73	3,589.16	12.21	12.57	90.00	378.78	410.11	231.19	207.00	24.19	9.559			
3,700.00	3,621.04	3,688.61	3,621.04	12.43	12.61	92.86	378.78	410.11	231.52	206.96	24.56	9.427			
3,800.00	3,714.23	3,781.80	3,714.23	13.08	12.74	101.10	378.78	410.11	236.25	210.79	25.46	9.278			
3,900.00	3,807.42	3,874.99	3,807.42	13.74	12.86	108.90	378.78	410.11	246.29	220.20	26.09	9.440			
4,000.00	3,900.62	3,968.19	3,900.62	14.40	12.99	116.04	378.78	410.11	261.03	234.55	26.48	9.858			
4,100.00	3,993.81	4,061.38	3,993.81	15.07	13.12	122.41	378.78	410.11	279.72	253.02	26.69	10.478			
4,200.00	4,087.00	4,154.57	4,087.00	15.74	13.25	127.99	378.78	410.11	301.63	274.82	26.81	11.252			
4,300.00	4,180.20	4,247.76	4,180.20	16.42	13.39	132.83	378.78	410.11	326.10	299.23	26.87	12.135			
4,400.00	4,273.39	4,340.96	4,273.39	17.09	13.52	137.02	378.78	410.11	352.62	325.69	26.93	13.095			
4,500.00	4,366.58	4,434.15	4,366.58	17.77	13.66	140.65	378.78	410.11	380.75	353.75	27.00	14.103			
4,600.00	4,459.77	4,527.34	4,459.77	18.46	13.80	143.79	378.78	410.11	410.15	383.06	27.09	15.138			
4,700.00	4,552.97	4,620.53	4,552.97	19.14	13.94	146.52	378.78	410.11	440.58	413.36	27.22	16.184			
4,800.00	4,646.16	4,713.73	4,646.16	19.82	14.08	148.90	378.78	410.11	471.84	444.45	27.39	17.228			

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
4,900.00	4,739.35	4,806.92	4,739.35	20.51	14.23	151.00	378.78	410.11	503.76	476.18	27.58	18.263				
5,000.00	4,832.54	4,900.11	4,832.54	21.20	14.38	152.86	378.78	410.11	536.24	508.43	27.81	19.282				
5,100.00	4,925.74	4,993.31	4,925.74	21.89	14.52	154.50	378.78	410.11	569.18	541.11	28.07	20.279				
5,200.00	5,018.93	5,086.50	5,018.93	22.58	14.67	155.97	378.78	410.11	602.50	574.15	28.35	21.253				
5,300.00	5,112.12	5,179.69	5,112.12	23.27	14.82	157.29	378.78	410.11	636.14	607.48	28.65	22.201				
5,400.00	5,205.31	5,272.88	5,205.31	23.96	14.98	158.47	378.78	410.11	670.05	641.07	28.98	23.123				
5,500.00	5,298.51	5,366.08	5,298.51	24.65	15.13	159.55	378.78	410.11	704.20	674.88	29.32	24.016				
5,600.00	5,391.70	5,459.27	5,391.70	25.35	15.28	160.52	378.78	410.11	738.55	708.87	29.68	24.883				
5,700.00	5,484.89	5,552.46	5,484.89	26.04	15.44	161.41	378.78	410.11	773.08	743.02	30.06	25.722				
5,800.00	5,578.09	5,645.65	5,578.09	26.74	15.60	162.23	378.78	410.11	807.75	777.31	30.44	26.534				
5,900.00	5,671.28	5,738.85	5,671.28	27.43	15.76	162.98	378.78	410.11	842.57	811.72	30.84	27.320				
6,000.00	5,764.47	5,832.04	5,764.47	28.13	15.92	163.67	378.78	410.11	877.50	846.24	31.25	28.080				
6,100.00	5,857.66	5,925.23	5,857.66	28.82	16.08	164.30	378.78	410.11	912.53	880.86	31.67	28.815				
6,200.00	5,950.86	6,018.42	5,950.86	29.52	16.24	164.89	378.78	410.11	947.65	915.56	32.10	29.526				
6,261.42	6,008.09	6,075.66	6,008.09	29.95	16.34	165.24	378.78	410.11	969.27	936.91	32.36	29.951				
6,300.00	6,044.14	6,111.71	6,044.14	30.19	16.40	165.51	378.78	410.11	982.63	950.07	32.56	30.179				
6,400.00	6,138.41	6,205.97	6,138.41	30.70	16.57	166.15	378.78	410.11	1,015.09	982.05	33.04	30.725				
6,500.00	6,233.78	6,301.35	6,233.78	31.17	16.74	166.68	378.78	410.11	1,044.37	1,010.88	33.50	31.179				
6,600.00	6,330.14	6,397.71	6,330.14	31.61	16.91	167.13	378.78	410.11	1,070.43	1,036.50	33.93	31.547				
6,700.00	6,427.38	6,494.94	6,427.38	32.00	17.08	167.50	378.78	410.11	1,093.22	1,058.88	34.34	31.836				
6,800.00	6,525.37	6,592.93	6,525.37	32.35	17.26	167.81	378.78	410.11	1,112.70	1,077.98	34.72	32.050				
6,900.00	6,623.99	6,691.56	6,623.99	32.65	17.44	168.05	378.78	410.11	1,128.84	1,093.77	35.06	32.196				
7,000.00	6,723.13	6,790.70	6,723.13	32.91	17.62	168.24	378.78	410.11	1,141.60	1,106.23	35.37	32.275				
7,100.00	6,822.67	6,890.24	6,822.67	33.13	17.80	168.38	378.78	410.11	1,150.97	1,115.33	35.64	32.291				
7,200.00	6,922.48	6,990.05	6,922.48	33.30	17.99	168.46	378.78	410.11	1,156.94	1,121.06	35.88	32.246				
7,300.00	7,022.44	7,090.01	7,022.44	33.42	18.17	168.50	378.78	410.11	1,159.49	1,123.41	36.08	32.140				
7,324.56	7,047.00	7,114.57	7,047.00	33.44	18.22	-168.69	378.78	410.11	1,159.59	1,123.47	36.12	32.105				
7,400.00	7,122.44	7,190.01	7,122.44	33.51	18.36	-168.69	378.78	410.11	1,159.59	1,123.20	36.39	31.867				
7,500.00	7,222.44	7,290.01	7,222.44	33.61	18.54	-168.69	378.78	410.11	1,159.59	1,122.83	36.76	31.543				
7,600.00	7,322.44	7,390.01	7,322.44	33.71	18.73	-168.69	378.78	410.11	1,159.59	1,122.45	37.14	31.225				
7,700.00	7,422.44	7,490.01	7,422.44	33.81	18.92	-168.69	378.78	410.11	1,159.59	1,122.08	37.51	30.911				
7,800.00	7,522.44	7,590.01	7,522.44	33.91	19.11	-168.69	378.78	410.11	1,159.59	1,121.70	37.89	30.603				
7,900.00	7,622.44	7,690.01	7,622.44	34.01	19.30	-168.69	378.78	410.11	1,159.59	1,121.32	38.27	30.299				
8,000.00	7,722.44	7,790.01	7,722.44	34.11	19.49	-168.69	378.78	410.11	1,159.59	1,120.94	38.65	30.001				
8,100.00	7,822.44	7,890.01	7,822.44	34.22	19.68	-168.69	378.78	410.11	1,159.59	1,120.56	39.03	29.707				
8,200.00	7,922.44	7,990.01	7,922.44	34.32	19.88	-168.69	378.78	410.11	1,159.59	1,120.17	39.42	29.418				
8,300.00	8,022.44	8,090.01	8,022.44	34.43	20.07	-168.69	378.78	410.11	1,159.59	1,119.79	39.80	29.133				
8,400.00	8,122.44	8,190.01	8,122.44	34.54	20.26	-168.69	378.78	410.11	1,159.59	1,119.40	40.19	28.853				
8,500.00	8,222.44	8,290.01	8,222.44	34.65	20.46	-168.69	378.78	410.11	1,159.59	1,119.01	40.58	28.577				
8,600.00	8,322.44	8,390.01	8,322.44	34.76	20.65	-168.69	378.78	410.11	1,159.59	1,118.62	40.97	28.306				
8,700.00	8,422.44	8,490.01	8,422.44	34.87	20.85	-168.69	378.78	410.11	1,159.59	1,118.23	41.36	28.039				
8,800.00	8,522.44	8,590.01	8,522.44	34.98	21.04	-168.69	378.78	410.11	1,159.59	1,117.84	41.75	27.777				
8,900.00	8,622.44	8,690.01	8,622.44	35.09	21.24	-168.69	378.78	410.11	1,159.59	1,117.45	42.14	27.518				
9,000.00	8,722.44	8,790.01	8,722.44	35.21	21.44	-168.69	378.78	410.11	1,159.59	1,117.06	42.53	27.263				
9,100.00	8,822.44	8,890.01	8,822.44	35.33	21.63	-168.69	378.78	410.11	1,159.59	1,116.66	42.93	27.013				
9,200.00	8,922.44	8,990.01	8,922.44	35.44	21.83	-168.69	378.78	410.11	1,159.59	1,116.27	43.32	26.766				
9,300.00	9,022.44	9,090.01	9,022.44	35.56	22.03	-168.69	378.78	410.11	1,159.59	1,115.87	43.72	26.524				
9,400.00	9,122.44	9,190.01	9,122.44	35.68	22.23	-168.69	378.78	410.11	1,159.59	1,115.47	44.12	26.285				
9,500.00	9,222.44	9,290.01	9,222.44	35.80	22.43	-168.69	378.78	410.11	1,159.59	1,115.08	44.51	26.050				
9,523.19	9,245.63	9,313.20	9,245.63	35.83	22.48	-168.69	378.78	410.11	1,159.59	1,114.98	44.61	25.996				
9,583.56	9,306.00	9,328.57	9,261.00	35.90	22.51	-168.69	378.78	410.11	1,160.46	1,115.71	44.75	25.931				

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-64.36	8.74	-18.21	20.20						
100.00	100.00	100.00	100.00	0.10	0.10	-64.36	8.74	-18.21	20.20	20.00	0.19	104.492			
200.00	200.00	200.00	200.00	0.32	0.32	-64.36	8.74	-18.21	20.20	19.56	0.64	31.421			
300.00	300.00	300.00	300.00	0.55	0.55	-64.36	8.74	-18.21	20.20	19.11	1.09	18.490 CC, ES			
400.00	399.98	399.39	399.37	0.77	0.77	-89.24	10.21	-19.10	21.58	20.04	1.54	14.028			
500.00	499.92	499.33	499.25	1.00	1.00	-92.71	13.20	-20.91	24.43	22.44	1.99	12.289			
600.00	599.86	599.28	599.14	1.22	1.22	-95.44	16.18	-22.72	27.35	24.91	2.44	11.210			
700.00	699.80	699.23	699.03	1.45	1.45	-97.65	19.16	-24.53	30.32	27.43	2.89	10.477			
800.00	799.74	799.18	798.92	1.68	1.68	-99.46	22.14	-26.34	33.33	29.98	3.35	9.949			
900.00	899.68	899.13	898.81	1.91	1.91	-100.96	25.13	-28.15	36.37	32.56	3.81	9.552			
1,000.00	999.61	999.08	998.70	2.14	2.14	-102.24	28.11	-29.96	39.43	35.16	4.27	9.243			
1,100.00	1,099.55	1,099.03	1,098.59	2.37	2.37	-103.33	31.09	-31.77	42.50	37.78	4.72	8.997			
1,200.00	1,199.49	1,198.98	1,198.47	2.60	2.61	-104.27	34.07	-33.58	45.59	40.41	5.18	8.796			
1,300.00	1,299.43	1,298.93	1,298.36	2.84	2.84	-105.09	37.05	-35.39	48.69	43.05	5.64	8.629			
1,400.00	1,399.37	1,398.88	1,398.25	3.07	3.07	-105.82	40.04	-37.20	51.80	45.69	6.10	8.489			
1,500.00	1,499.31	1,498.83	1,498.14	3.30	3.30	-106.46	43.02	-39.01	54.91	48.35	6.56	8.369			
1,600.00	1,599.25	1,598.78	1,598.03	3.53	3.53	-107.04	46.00	-40.82	58.03	51.01	7.02	8.265			
1,700.00	1,699.19	1,698.73	1,697.92	3.76	3.77	-107.55	48.98	-42.63	61.16	53.68	7.48	8.175			
1,800.00	1,799.13	1,798.68	1,797.81	3.99	4.00	-108.02	51.96	-44.44	64.29	56.35	7.94	8.096			
1,900.00	1,899.07	1,898.63	1,897.70	4.22	4.23	-108.44	54.95	-46.25	67.42	59.02	8.40	8.025			
2,000.00	1,999.01	1,998.58	1,997.59	4.46	4.46	-108.82	57.93	-48.06	70.56	61.70	8.86	7.963			
2,100.00	2,098.94	2,098.53	2,097.47	4.69	4.69	-109.17	60.91	-49.87	73.70	64.38	9.32	7.906			
2,151.09	2,150.00	2,148.96	2,147.87	4.81	4.81	-109.21	62.59	-50.88	75.43	65.87	9.56	7.892 SF			
2,200.00	2,198.86	2,196.71	2,195.53	4.92	4.93	-108.94	65.12	-52.42	77.93	68.14	9.78	7.965			
2,300.00	2,298.47	2,293.95	2,292.26	5.17	5.18	-108.71	73.41	-57.45	86.47	76.20	10.27	8.417			
2,400.00	2,397.49	2,390.40	2,387.62	5.45	5.46	-108.81	85.79	-64.96	99.58	88.78	10.80	9.220			
2,500.00	2,495.65	2,485.79	2,481.08	5.77	5.77	-109.07	102.06	-74.84	117.18	105.80	11.38	10.300			
2,600.00	2,592.69	2,579.86	2,572.20	6.12	6.12	-109.35	122.00	-86.93	139.19	127.17	12.01	11.585			
2,700.00	2,688.32	2,672.36	2,660.58	6.54	6.52	-109.56	145.32	-101.08	165.48	152.75	12.73	13.001			
2,793.18	2,775.95	2,758.85	2,742.06	6.98	6.94	-109.77	170.11	-116.12	193.54	180.07	13.47	14.363			
2,800.00	2,782.31	2,765.32	2,748.14	7.01	6.97	-109.88	172.00	-117.26	195.68	182.14	13.53	14.458			
2,900.00	2,875.50	2,860.17	2,837.27	7.54	7.47	-111.15	199.73	-134.09	227.03	212.59	14.43	15.728			
3,000.00	2,968.69	2,955.02	2,926.41	8.10	7.99	-112.11	227.46	-150.91	258.46	243.08	15.38	16.805			
3,100.00	3,061.88	3,049.88	3,015.54	8.68	8.53	-112.87	255.19	-167.74	289.94	273.58	16.36	17.719			
3,200.00	3,155.08	3,144.73	3,104.68	9.27	9.09	-113.47	282.93	-184.56	321.46	304.08	17.38	18.497			
3,300.00	3,248.27	3,239.59	3,193.81	9.88	9.65	-113.97	310.66	-201.39	353.00	334.58	18.42	19.163			
3,400.00	3,341.46	3,334.44	3,282.95	10.51	10.23	-114.39	338.39	-218.21	384.56	365.08	19.48	19.737			
3,500.00	3,434.65	3,429.29	3,372.08	11.14	10.82	-114.74	366.12	-235.04	416.14	395.58	20.57	20.234			
3,600.00	3,527.85	3,524.15	3,461.22	11.78	11.42	-115.04	393.85	-251.86	447.74	426.07	21.66	20.667			
3,700.00	3,621.04	3,619.00	3,550.35	12.43	12.02	-115.31	421.59	-268.69	479.34	456.56	22.78	21.046			
3,800.00	3,714.23	3,713.85	3,639.49	13.08	12.63	-115.54	449.32	-285.51	510.95	487.05	23.90	21.379			
3,900.00	3,807.42	3,808.71	3,728.63	13.74	13.24	-115.74	477.05	-302.34	542.56	517.53	25.03	21.675			
4,000.00	3,900.62	3,903.56	3,817.76	14.40	13.86	-115.93	504.78	-319.16	574.19	548.01	26.17	21.938			
4,100.00	3,993.81	3,998.42	3,906.90	15.07	14.48	-116.09	532.51	-335.99	605.81	578.49	27.32	22.172			
4,200.00	4,087.00	4,093.27	3,996.03	15.74	15.11	-116.23	560.25	-352.81	637.44	608.96	28.48	22.383			
4,300.00	4,180.20	4,188.12	4,085.17	16.42	15.73	-116.37	587.98	-369.64	669.08	639.44	29.64	22.573			
4,400.00	4,273.39	4,282.98	4,174.30	17.09	16.36	-116.49	615.71	-386.46	700.71	669.91	30.81	22.745			
4,500.00	4,366.58	4,377.83	4,263.44	17.77	16.99	-116.60	643.44	-403.29	732.35	700.37	31.98	22.901			
4,600.00	4,459.77	4,472.68	4,352.57	18.46	17.63	-116.70	671.17	-420.11	763.99	730.84	33.15	23.043			
4,700.00	4,552.97	4,567.54	4,441.71	19.14	18.26	-116.79	698.91	-436.94	795.64	761.30	34.33	23.173			
4,800.00	4,646.16	4,662.39	4,530.84	19.82	18.90	-116.88	726.64	-453.76	827.28	791.77	35.52	23.293			
4,900.00	4,739.35	4,757.25	4,619.98	20.51	19.54	-116.96	754.37	-470.59	858.93	822.23	36.70	23.402			

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,832.54	4,852.10	4,709.11	21.20	20.18	-117.03	782.10	-487.41	890.58	852.69	37.89	23.503		
5,100.00	4,925.74	4,946.95	4,798.25	21.89	20.82	-117.10	809.83	-504.24	922.23	883.15	39.08	23.597		
5,200.00	5,018.93	5,041.81	4,887.38	22.58	21.46	-117.17	837.57	-521.06	953.88	913.60	40.28	23.684		
5,300.00	5,112.12	5,136.66	4,976.52	23.27	22.11	-117.23	865.30	-537.89	985.53	944.06	41.47	23.764		
5,400.00	5,205.31	5,231.51	5,065.65	23.96	22.75	-117.28	893.03	-554.71	1,017.18	974.51	42.67	23.839		
5,500.00	5,298.51	5,326.37	5,154.79	24.65	23.40	-117.34	920.76	-571.54	1,048.84	1,004.97	43.87	23.909		
5,600.00	5,391.70	5,421.22	5,243.92	25.35	24.04	-117.39	948.49	-588.36	1,080.49	1,035.42	45.07	23.974		
5,700.00	5,484.89	5,516.08	5,333.06	26.04	24.69	-117.43	976.23	-605.19	1,112.15	1,065.88	46.27	24.036		
5,800.00	5,578.09	5,610.93	5,422.19	26.74	25.33	-117.48	1,003.96	-622.01	1,143.80	1,096.33	47.47	24.093		
5,900.00	5,671.28	5,705.78	5,511.33	27.43	25.98	-117.52	1,031.69	-638.83	1,175.46	1,126.78	48.68	24.147		
6,000.00	5,764.47	5,800.64	5,600.47	28.13	26.63	-117.56	1,059.42	-655.66	1,207.11	1,157.23	49.89	24.198		
6,100.00	5,857.66	5,895.49	5,689.60	28.82	27.28	-117.60	1,087.15	-672.48	1,238.77	1,187.68	51.09	24.246		
6,200.00	5,950.86	6,010.33	5,798.27	29.52	27.88	-117.74	1,118.90	-691.74	1,269.69	1,217.42	52.26	24.293		
6,261.42	6,008.09	6,081.38	5,866.21	29.95	28.22	-117.92	1,136.66	-702.52	1,287.93	1,234.97	52.96	24.320		
6,300.00	6,044.14	6,126.19	5,909.31	30.19	28.42	-118.26	1,147.12	-708.87	1,298.99	1,245.59	53.40	24.327		
6,400.00	6,138.41	6,243.21	6,022.74	30.70	28.91	-119.11	1,171.71	-723.79	1,325.50	1,271.09	54.41	24.361		
6,500.00	6,233.78	6,361.34	6,138.33	31.17	29.34	-119.91	1,192.50	-736.39	1,348.88	1,293.55	55.33	24.378		
6,600.00	6,330.14	6,480.35	6,255.69	31.61	29.70	-120.67	1,209.30	-746.59	1,369.06	1,312.91	56.15	24.383		
6,700.00	6,427.38	6,600.01	6,374.42	32.00	30.01	-121.40	1,221.97	-754.28	1,386.01	1,329.15	56.86	24.376		
6,800.00	6,525.37	6,720.07	6,494.07	32.35	30.24	-122.10	1,230.42	-759.40	1,399.69	1,342.25	57.45	24.364		
6,900.00	6,623.99	6,840.28	6,614.17	32.65	30.41	-122.78	1,234.58	-761.93	1,410.10	1,352.17	57.92	24.345		
7,000.00	6,723.13	6,949.25	6,723.13	32.91	30.52	-123.37	1,235.05	-762.21	1,417.42	1,359.13	58.29	24.316		
7,100.00	6,822.67	7,048.78	6,822.67	33.13	30.63	-123.78	1,235.05	-762.21	1,422.73	1,364.13	58.60	24.278		
7,200.00	6,922.48	7,148.59	6,922.48	33.30	30.73	-124.04	1,235.05	-762.21	1,426.13	1,367.26	58.87	24.227		
7,300.00	7,022.44	7,248.55	7,022.44	33.42	30.84	-124.15	1,235.05	-762.21	1,427.59	1,368.50	59.09	24.161		
7,324.56	7,047.00	7,273.11	7,047.00	33.44	30.86	-101.34	1,235.05	-762.21	1,427.65	1,368.51	59.14	24.142		
7,400.00	7,122.44	7,348.55	7,122.44	33.51	30.95	-101.34	1,235.05	-762.21	1,427.65	1,368.35	59.30	24.076		
7,500.00	7,222.44	7,448.55	7,222.44	33.61	31.05	-101.34	1,235.05	-762.21	1,427.65	1,368.13	59.52	23.987		
7,600.00	7,322.44	7,548.55	7,322.44	33.71	31.16	-101.34	1,235.05	-762.21	1,427.65	1,367.91	59.74	23.897		
7,700.00	7,422.44	7,648.55	7,422.44	33.81	31.28	-101.34	1,235.05	-762.21	1,427.65	1,367.68	59.97	23.807		
7,800.00	7,522.44	7,748.55	7,522.44	33.91	31.39	-101.34	1,235.05	-762.21	1,427.65	1,367.45	60.19	23.717		
7,900.00	7,622.44	7,848.55	7,622.44	34.01	31.50	-101.34	1,235.05	-762.21	1,427.65	1,367.22	60.43	23.626		
8,000.00	7,722.44	7,948.55	7,722.44	34.11	31.62	-101.34	1,235.05	-762.21	1,427.65	1,366.99	60.66	23.536		
8,100.00	7,822.44	8,048.55	7,822.44	34.22	31.73	-101.34	1,235.05	-762.21	1,427.65	1,366.75	60.89	23.445		
8,200.00	7,922.44	8,148.55	7,922.44	34.32	31.85	-101.34	1,235.05	-762.21	1,427.65	1,366.51	61.13	23.353		
8,300.00	8,022.44	8,248.55	8,022.44	34.43	31.97	-101.34	1,235.05	-762.21	1,427.65	1,366.27	61.37	23.262		
8,400.00	8,122.44	8,348.55	8,122.44	34.54	32.09	-101.34	1,235.05	-762.21	1,427.65	1,366.03	61.62	23.170		
8,500.00	8,222.44	8,448.55	8,222.44	34.65	32.21	-101.34	1,235.05	-762.21	1,427.65	1,365.79	61.86	23.078		
8,600.00	8,322.44	8,548.55	8,322.44	34.76	32.33	-101.34	1,235.05	-762.21	1,427.65	1,365.54	62.11	22.986		
8,700.00	8,422.44	8,648.55	8,422.44	34.87	32.45	-101.34	1,235.05	-762.21	1,427.65	1,365.29	62.36	22.894		
8,800.00	8,522.44	8,748.55	8,522.44	34.98	32.58	-101.34	1,235.05	-762.21	1,427.65	1,365.04	62.61	22.802		
8,900.00	8,622.44	8,848.55	8,622.44	35.09	32.70	-101.34	1,235.05	-762.21	1,427.65	1,364.78	62.86	22.710		
9,000.00	8,722.44	8,948.55	8,722.44	35.21	32.83	-101.34	1,235.05	-762.21	1,427.65	1,364.53	63.12	22.618		
9,100.00	8,822.44	9,048.55	8,822.44	35.33	32.96	-101.34	1,235.05	-762.21	1,427.65	1,364.27	63.38	22.526		
9,200.00	8,922.44	9,148.55	8,922.44	35.44	33.08	-101.34	1,235.05	-762.21	1,427.65	1,364.01	63.64	22.433		
9,300.00	9,022.44	9,248.55	9,022.44	35.56	33.21	-101.34	1,235.05	-762.21	1,427.65	1,363.74	63.90	22.341		
9,400.00	9,122.44	9,348.55	9,122.44	35.68	33.34	-101.34	1,235.05	-762.21	1,427.65	1,363.48	64.17	22.249		
9,500.00	9,222.44	9,448.55	9,222.44	35.80	33.48	-101.34	1,235.05	-762.21	1,427.65	1,363.21	64.43	22.157		
9,583.56	9,306.00	9,532.11	9,306.00	35.90	33.59	-101.34	1,235.05	-762.21	1,427.65	1,362.99	64.66	22.080		



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	-64.24	13.11	-27.17	30.17						
100.00	100.00	100.00	100.00	0.10	0.10	-64.24	13.11	-27.17	30.17	29.98	0.19	156.085			
200.00	200.00	200.00	200.00	0.32	0.32	-64.24	13.11	-27.17	30.17	29.53	0.64	46.935			
300.00	300.00	300.00	300.00	0.55	0.55	-64.24	13.11	-27.17	30.17	29.08	1.09	27.620 CC, ES			
400.00	399.98	398.47	398.43	0.77	0.77	-88.46	14.95	-28.93	32.51	30.97	1.54	21.147			
500.00	499.92	496.52	496.17	1.00	1.01	-89.30	20.42	-34.15	39.57	37.58	2.00	19.816 SF			
600.00	599.86	593.68	592.53	1.22	1.27	-87.66	29.41	-42.73	51.35	48.88	2.47	20.790			
700.00	699.80	689.47	686.78	1.45	1.59	-85.20	41.74	-54.50	67.88	64.92	2.95	22.984			
800.00	799.74	783.45	778.31	1.68	1.98	-82.79	57.14	-69.20	89.15	85.70	3.44	25.886			
900.00	899.68	875.23	866.57	1.91	2.44	-80.72	75.30	-86.54	115.09	111.15	3.94	29.212			
1,000.00	999.61	966.71	953.25	2.14	2.97	-78.98	96.44	-106.71	145.59	141.14	4.45	32.737			
1,100.00	1,099.55	1,058.70	1,039.69	2.37	3.57	-77.67	119.19	-128.44	178.40	173.46	4.94	36.081			
1,200.00	1,199.49	1,153.09	1,128.39	2.60	4.20	-76.74	142.55	-150.73	211.30	205.86	5.44	38.850			
1,300.00	1,299.43	1,247.47	1,217.08	2.84	4.83	-76.06	165.90	-173.02	244.23	238.29	5.94	41.121			
1,400.00	1,399.37	1,341.86	1,305.77	3.07	5.48	-75.55	189.25	-195.32	277.19	270.74	6.45	43.007			
1,500.00	1,499.31	1,436.25	1,394.47	3.30	6.13	-75.14	212.61	-217.61	310.16	303.20	6.95	44.596			
1,600.00	1,599.25	1,530.64	1,483.16	3.53	6.78	-74.81	235.96	-239.90	343.14	335.67	7.47	45.951			
1,700.00	1,699.19	1,625.02	1,571.86	3.76	7.44	-74.54	259.31	-262.19	376.13	368.15	7.98	47.119			
1,800.00	1,799.13	1,719.41	1,660.55	3.99	8.10	-74.31	282.66	-284.48	409.13	400.63	8.50	48.135			
1,900.00	1,899.07	1,813.80	1,749.25	4.22	8.75	-74.12	306.02	-306.78	442.13	433.11	9.02	49.025			
2,000.00	1,999.01	1,908.19	1,837.94	4.46	9.41	-73.95	329.37	-329.07	475.13	465.60	9.54	49.813			
2,100.00	2,098.94	2,002.57	1,926.64	4.69	10.08	-73.80	352.72	-351.36	508.14	498.08	10.06	50.513			
2,151.09	2,150.00	2,050.79	1,971.95	4.81	10.41	-73.74	364.65	-362.75	525.01	514.68	10.33	50.840			
2,200.00	2,198.86	2,097.02	2,015.39	4.92	10.74	-73.26	376.09	-373.67	540.99	530.41	10.58	51.125			
2,300.00	2,298.47	2,191.81	2,104.46	5.17	11.40	-72.71	399.54	-396.05	572.60	561.46	11.13	51.430			
2,400.00	2,397.49	2,286.75	2,193.67	5.45	12.07	-72.66	423.03	-418.48	602.80	591.07	11.73	51.409			
2,500.00	2,495.65	2,381.59	2,282.79	5.77	12.74	-73.04	446.49	-440.88	631.71	619.35	12.36	51.091			
2,600.00	2,592.69	2,476.06	2,371.57	6.12	13.40	-73.78	469.87	-463.19	659.53	646.47	13.06	50.490			
2,700.00	2,688.32	2,569.91	2,459.76	6.54	14.06	-74.82	493.09	-485.35	686.51	672.68	13.84	49.619			
2,793.18	2,775.95	2,656.58	2,541.19	6.98	14.67	-76.02	514.53	-505.82	711.19	696.56	14.64	48.584			
2,800.00	2,782.31	2,662.89	2,547.12	7.01	14.71	-76.17	516.09	-507.31	712.99	698.29	14.70	48.497			
2,900.00	2,875.50	2,755.41	2,634.06	7.54	15.36	-78.27	538.98	-529.16	739.92	724.25	15.66	47.238			
3,000.00	2,968.69	2,847.93	2,721.01	8.10	16.02	-80.24	561.87	-551.01	767.77	751.10	16.68	46.035			
3,100.00	3,061.88	2,940.45	2,807.95	8.68	16.67	-82.07	584.76	-572.87	796.46	778.73	17.74	44.906			
3,200.00	3,155.08	3,032.97	2,894.89	9.27	17.32	-83.79	607.65	-594.72	825.90	807.07	18.83	43.863			
3,300.00	3,248.27	3,125.50	2,981.83	9.88	17.97	-85.39	630.55	-616.57	856.01	836.06	19.95	42.907			
3,400.00	3,341.46	3,218.02	3,068.77	10.51	18.62	-86.88	653.44	-638.42	886.72	865.62	21.09	42.037			
3,500.00	3,434.65	3,310.54	3,155.71	11.14	19.27	-88.29	676.33	-660.27	917.97	895.71	22.26	41.247			
3,600.00	3,527.85	3,418.14	3,256.98	11.78	19.97	-89.82	702.63	-685.38	949.41	925.91	23.50	40.404			
3,700.00	3,621.04	3,500.06	3,382.68	12.43	20.64	-91.70	731.55	-712.99	978.29	953.45	24.83	39.399			
3,800.00	3,714.23	3,683.59	3,511.65	13.08	21.23	-93.64	756.53	-736.84	1,003.93	977.77	26.16	38.373			
3,900.00	3,807.42	3,818.18	3,643.14	13.74	21.73	-95.65	777.29	-756.65	1,026.41	998.93	27.48	37.353			
4,000.00	3,900.62	3,953.24	3,776.29	14.40	22.15	-97.75	793.60	-772.22	1,045.81	1,017.05	28.77	36.354			
4,100.00	3,993.81	4,088.18	3,910.24	15.07	22.47	-99.94	805.35	-783.44	1,062.30	1,032.27	30.02	35.385			
4,200.00	4,087.00	4,222.40	4,044.08	15.74	22.71	-102.23	812.50	-790.26	1,076.04	1,044.82	31.22	34.466			
4,300.00	4,180.20	4,355.32	4,176.94	16.42	22.86	-104.61	815.10	-792.74	1,087.29	1,054.93	32.36	33.599			
4,400.00	4,273.39	4,451.77	4,273.39	17.09	22.94	-106.39	815.11	-792.76	1,097.67	1,064.33	33.34	32.926			
4,500.00	4,366.58	4,544.96	4,366.58	17.77	23.02	-108.08	815.11	-792.76	1,109.13	1,074.84	34.28	32.353			
4,600.00	4,459.77	4,638.15	4,459.77	18.46	23.10	-109.73	815.11	-792.76	1,121.64	1,086.43	35.20	31.861			
4,700.00	4,552.97	4,731.35	4,552.97	19.14	23.19	-111.36	815.11	-792.76	1,135.17	1,099.07	36.10	31.444			
4,800.00	4,646.16	4,824.54	4,646.16	19.82	23.27	-112.94	815.11	-792.76	1,149.69	1,112.71	36.97	31.095			
4,900.00	4,739.35	4,917.73	4,739.35	20.51	23.36	-114.49	815.11	-792.76	1,165.15	1,127.33	37.82	30.808			

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-26-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,000.00	4,832.54	5,010.92	4,832.54	21.20	23.45	-116.01	815.11	-792.76	1,181.53	1,142.89	38.64	30.577			
5,100.00	4,925.74	5,104.12	4,925.74	21.89	23.54	-117.48	815.11	-792.76	1,198.78	1,159.34	39.44	30.397			
5,200.00	5,018.93	5,197.31	5,018.93	22.58	23.63	-118.92	815.11	-792.76	1,216.86	1,176.66	40.21	30.263			
5,300.00	5,112.12	5,290.50	5,112.12	23.27	23.72	-120.32	815.11	-792.76	1,235.75	1,194.79	40.96	30.172			
5,400.00	5,205.31	5,383.69	5,205.31	23.96	23.82	-121.68	815.11	-792.76	1,255.40	1,213.72	41.68	30.120			
5,500.00	5,298.51	5,476.89	5,298.51	24.65	23.92	-123.00	815.11	-792.76	1,275.78	1,233.40	42.38	30.102			
5,600.00	5,391.70	5,570.08	5,391.70	25.35	24.01	-124.28	815.11	-792.76	1,296.85	1,253.79	43.06	30.116			
5,700.00	5,484.89	5,663.27	5,484.89	26.04	24.11	-125.52	815.11	-792.76	1,318.58	1,274.86	43.72	30.160			
5,800.00	5,578.09	5,756.47	5,578.09	26.74	24.21	-126.73	815.11	-792.76	1,340.95	1,296.59	44.36	30.229			
5,900.00	5,671.28	5,849.66	5,671.28	27.43	24.32	-127.90	815.11	-792.76	1,363.91	1,318.93	44.98	30.322			
6,000.00	5,764.47	5,942.85	5,764.47	28.13	24.42	-129.03	815.11	-792.76	1,387.43	1,341.85	45.58	30.437			
6,100.00	5,857.66	6,036.04	5,857.66	28.82	24.53	-130.13	815.11	-792.76	1,411.50	1,365.33	46.17	30.571			
6,200.00	5,950.86	6,129.24	5,950.86	29.52	24.63	-131.20	815.11	-792.76	1,436.08	1,389.34	46.74	30.722			
6,261.42	6,008.09	6,186.47	6,008.09	29.95	24.70	-131.83	815.11	-792.76	1,451.42	1,404.33	47.09	30.824			
6,300.00	6,044.14	6,222.52	6,044.14	30.19	24.74	-132.37	815.11	-792.76	1,460.98	1,413.64	47.34	30.865			
6,400.00	6,138.41	6,316.79	6,138.41	30.70	24.85	-133.64	815.11	-792.76	1,484.45	1,436.55	47.90	30.994			
6,500.00	6,233.78	6,412.16	6,233.78	31.17	24.96	-134.76	815.11	-792.76	1,505.90	1,457.49	48.42	31.103			
6,600.00	6,330.14	6,508.52	6,330.14	31.61	25.08	-135.74	815.11	-792.76	1,525.22	1,476.32	48.90	31.189			
6,700.00	6,427.38	6,605.76	6,427.38	32.00	25.19	-136.57	815.11	-792.76	1,542.27	1,492.92	49.35	31.253			
6,800.00	6,525.37	6,703.75	6,525.37	32.35	25.31	-137.27	815.11	-792.76	1,556.96	1,507.20	49.75	31.293			
6,900.00	6,623.99	6,802.37	6,623.99	32.65	25.44	-137.84	815.11	-792.76	1,569.20	1,519.08	50.12	31.307			
7,000.00	6,723.13	6,901.51	6,723.13	32.91	25.56	-138.29	815.11	-792.76	1,578.94	1,528.48	50.45	31.295			
7,100.00	6,822.67	7,001.05	6,822.67	33.13	25.69	-138.62	815.11	-792.76	1,586.11	1,535.37	50.75	31.256			
7,200.00	6,922.48	7,100.86	6,922.48	33.30	25.81	-138.82	815.11	-792.76	1,590.69	1,539.69	51.00	31.190			
7,300.00	7,022.44	7,200.82	7,022.44	33.42	25.94	-138.91	815.11	-792.76	1,592.65	1,541.44	51.22	31.095			
7,324.56	7,047.00	7,225.38	7,047.00	33.44	25.98	-116.10	815.11	-792.76	1,592.73	1,541.47	51.27	31.067			
7,400.00	7,122.44	7,300.82	7,122.44	33.51	26.07	-116.10	815.11	-792.76	1,592.73	1,541.28	51.45	30.954			
7,500.00	7,222.44	7,400.82	7,222.44	33.61	26.21	-116.10	815.11	-792.76	1,592.73	1,541.02	51.71	30.800			
7,600.00	7,322.44	7,500.82	7,322.44	33.71	26.34	-116.10	815.11	-792.76	1,592.73	1,540.76	51.97	30.646			
7,700.00	7,422.44	7,600.82	7,422.44	33.81	26.47	-116.10	815.11	-792.76	1,592.73	1,540.50	52.24	30.491			
7,800.00	7,522.44	7,700.82	7,522.44	33.91	26.61	-116.10	815.11	-792.76	1,592.73	1,540.23	52.50	30.337			
7,900.00	7,622.44	7,800.82	7,622.44	34.01	26.74	-116.10	815.11	-792.76	1,592.73	1,539.97	52.77	30.183			
8,000.00	7,722.44	7,900.82	7,722.44	34.11	26.88	-116.10	815.11	-792.76	1,592.73	1,539.69	53.04	30.029			
8,100.00	7,822.44	8,000.82	7,822.44	34.22	27.02	-116.10	815.11	-792.76	1,592.73	1,539.42	53.31	29.876			
8,200.00	7,922.44	8,100.82	7,922.44	34.32	27.16	-116.10	815.11	-792.76	1,592.73	1,539.15	53.59	29.722			
8,300.00	8,022.44	8,200.82	8,022.44	34.43	27.30	-116.10	815.11	-792.76	1,592.73	1,538.87	53.86	29.569			
8,400.00	8,122.44	8,300.82	8,122.44	34.54	27.45	-116.10	815.11	-792.76	1,592.73	1,538.59	54.14	29.416			
8,500.00	8,222.44	8,400.82	8,222.44	34.65	27.59	-116.10	815.11	-792.76	1,592.73	1,538.31	54.43	29.264			
8,600.00	8,322.44	8,500.82	8,322.44	34.76	27.73	-116.10	815.11	-792.76	1,592.73	1,538.02	54.71	29.112			
8,700.00	8,422.44	8,600.82	8,422.44	34.87	27.88	-116.10	815.11	-792.76	1,592.73	1,537.74	55.00	28.960			
8,800.00	8,522.44	8,700.82	8,522.44	34.98	28.03	-116.10	815.11	-792.76	1,592.73	1,537.45	55.29	28.809			
8,900.00	8,622.44	8,800.82	8,622.44	35.09	28.17	-116.10	815.11	-792.76	1,592.73	1,537.16	55.58	28.658			
9,000.00	8,722.44	8,900.82	8,722.44	35.21	28.32	-116.10	815.11	-792.76	1,592.73	1,536.86	55.87	28.508			
9,100.00	8,822.44	9,000.82	8,822.44	35.33	28.47	-116.10	815.11	-792.76	1,592.73	1,536.57	56.17	28.358			
9,200.00	8,922.44	9,100.82	8,922.44	35.44	28.62	-116.10	815.11	-792.76	1,592.73	1,536.27	56.46	28.209			
9,300.00	9,022.44	9,200.82	9,022.44	35.56	28.77	-116.10	815.11	-792.76	1,592.73	1,535.97	56.76	28.060			
9,400.00	9,122.44	9,300.82	9,122.44	35.68	28.93	-116.10	815.11	-792.76	1,592.73	1,535.67	57.06	27.912			
9,500.00	9,222.44	9,400.82	9,222.44	35.80	29.08	-116.10	815.11	-792.76	1,592.73	1,535.37	57.37	27.765			
9,583.56	9,306.00	9,484.38	9,306.00	35.90	29.21	-116.10	815.11	-792.76	1,592.73	1,535.11	57.62	27.642			



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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													Warning	
Reference				Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-64.18	17.48	-36.14	40.14					
100.00	100.00	100.00	100.00	0.10	0.10	-64.18	17.48	-36.14	40.14	39.95	0.19	207.678		
200.00	200.00	200.00	200.00	0.32	0.32	-64.18	17.48	-36.14	40.14	39.50	0.64	62.449		
300.00	300.00	300.00	300.00	0.55	0.55	-64.18	17.48	-36.14	40.14	39.05	1.09	36.750 CC, ES		
400.00	399.98	398.57	398.55	0.77	0.76	-89.17	18.31	-37.62	41.80	40.27	1.53	27.270		
500.00	499.92	498.44	498.36	1.00	0.98	-93.14	20.02	-40.65	45.33	43.36	1.98	22.927		
600.00	599.86	598.33	598.19	1.22	1.21	-96.52	21.73	-43.69	49.05	46.63	2.42	20.238		
700.00	699.80	698.22	698.02	1.45	1.44	-99.42	23.44	-46.73	52.92	50.04	2.87	18.416		
800.00	799.74	798.12	797.85	1.68	1.67	-101.92	25.15	-49.77	56.90	53.57	3.33	17.112		
900.00	899.68	898.01	897.68	1.91	1.90	-104.09	26.86	-52.81	60.97	57.20	3.78	16.139		
1,000.00	999.61	997.90	997.52	2.14	2.13	-105.98	28.57	-55.84	65.12	60.89	4.23	15.389		
1,100.00	1,099.55	1,097.79	1,097.35	2.37	2.36	-107.65	30.28	-58.88	69.34	64.65	4.69	14.795		
1,200.00	1,199.49	1,197.68	1,197.18	2.60	2.59	-109.12	31.99	-61.92	73.60	68.46	5.14	14.315		
1,300.00	1,299.43	1,297.58	1,297.01	2.84	2.82	-110.43	33.70	-64.96	77.91	72.32	5.60	13.920		
1,400.00	1,399.37	1,397.47	1,396.84	3.07	3.05	-111.61	35.41	-68.00	82.26	76.21	6.05	13.590		
1,500.00	1,499.31	1,497.36	1,496.67	3.30	3.29	-112.66	37.11	-71.04	86.64	80.13	6.51	13.310		
1,600.00	1,599.25	1,597.25	1,596.50	3.53	3.52	-113.62	38.82	-74.08	91.04	84.07	6.97	13.070		
1,700.00	1,699.19	1,697.14	1,696.33	3.76	3.75	-114.48	40.53	-77.11	95.47	88.04	7.42	12.863		
1,800.00	1,799.13	1,797.04	1,796.17	3.99	3.98	-115.27	42.24	-80.15	99.91	92.03	7.88	12.682		
1,900.00	1,899.07	1,896.93	1,896.00	4.22	4.22	-115.99	43.95	-83.19	104.37	96.04	8.33	12.522		
2,000.00	1,999.01	1,996.82	1,995.83	4.46	4.45	-116.65	45.66	-86.23	108.85	100.06	8.79	12.381		
2,100.00	2,098.94	2,096.98	2,094.92	4.69	4.68	-117.24	47.39	-89.30	113.39	104.15	9.25	12.263 SF		
2,151.09	2,150.00	2,144.54	2,143.41	4.81	4.80	-117.25	48.70	-91.64	116.56	107.09	9.48	12.298		
2,200.00	2,198.86	2,190.86	2,189.58	4.92	4.92	-117.08	50.52	-94.88	120.89	111.19	9.70	12.464		
2,300.00	2,298.47	2,284.72	2,282.78	5.17	5.17	-117.22	55.89	-104.43	134.53	124.36	10.17	13.229		
2,400.00	2,397.49	2,376.93	2,373.72	5.45	5.46	-117.76	63.33	-117.69	154.54	143.88	10.66	14.495		
2,500.00	2,495.65	2,466.95	2,461.69	5.77	5.77	-118.45	72.66	-134.32	180.79	169.60	11.18	16.170		
2,600.00	2,592.69	2,554.30	2,546.11	6.12	6.11	-119.07	83.64	-153.89	213.09	201.36	11.73	18.161		
2,700.00	2,688.32	2,638.59	2,626.51	6.54	6.49	-119.53	96.02	-175.94	251.22	238.90	12.33	20.380		
2,793.18	2,775.95	2,717.90	2,701.19	6.98	6.89	-119.88	109.07	-199.21	291.52	278.58	12.94	22.535		
2,800.00	2,782.31	2,723.96	2,706.89	7.01	6.92	-120.01	110.09	-201.02	294.58	281.59	12.99	22.684		
2,900.00	2,875.50	2,812.94	2,790.50	7.54	7.40	-121.59	124.97	-227.55	339.55	325.82	13.73	24.729		
3,000.00	2,968.69	2,901.91	2,874.11	8.10	7.91	-122.80	139.86	-254.09	384.68	370.16	14.51	26.503		
3,100.00	3,061.88	2,990.89	2,957.72	8.68	8.43	-123.76	154.75	-280.62	429.91	414.58	15.33	28.040		
3,200.00	3,155.08	3,079.86	3,041.33	9.27	8.97	-124.54	169.64	-307.16	475.23	459.05	16.18	29.378		
3,300.00	3,248.27	3,168.84	3,124.94	9.88	9.52	-125.18	184.53	-333.69	520.60	503.56	17.04	30.545		
3,400.00	3,341.46	3,257.81	3,208.55	10.51	10.08	-125.72	199.42	-360.23	566.02	548.09	17.93	31.567		
3,500.00	3,434.65	3,346.79	3,292.16	11.14	10.66	-126.18	214.31	-386.77	611.47	592.64	18.83	32.466		
3,600.00	3,527.85	3,435.76	3,375.77	11.78	11.23	-126.58	229.20	-413.30	656.95	637.20	19.75	33.259		
3,700.00	3,621.04	3,524.73	3,459.38	12.43	11.82	-126.92	244.09	-439.84	702.45	681.77	20.68	33.963		
3,800.00	3,714.23	3,613.71	3,542.99	13.08	12.41	-127.22	258.98	-466.37	747.97	726.34	21.62	34.589		
3,900.00	3,807.42	3,702.68	3,626.60	13.74	13.00	-127.49	273.86	-492.91	793.50	770.92	22.57	35.150		
4,000.00	3,900.62	3,791.66	3,710.21	14.40	13.60	-127.73	288.75	-519.44	839.04	815.51	23.53	35.652		
4,100.00	3,993.81	3,880.63	3,793.82	15.07	14.20	-127.94	303.64	-545.98	884.60	860.10	24.50	36.104		
4,200.00	4,087.00	3,981.22	3,888.52	15.74	14.84	-128.19	320.24	-575.55	929.89	904.39	25.50	36.465		
4,300.00	4,180.20	4,096.33	3,998.13	16.42	15.43	-128.63	337.42	-606.17	973.18	946.69	26.48	36.745		
4,400.00	4,273.39	4,213.80	4,111.36	17.09	15.95	-129.25	352.71	-633.44	1,014.10	986.67	27.43	36.967		
4,500.00	4,366.58	4,333.31	4,227.77	17.77	16.42	-130.04	365.93	-656.99	1,052.66	1,024.31	28.35	37.137		
4,600.00	4,459.77	4,454.49	4,346.85	18.46	16.84	-130.99	376.90	-676.54	1,088.86	1,059.64	29.21	37.271		
4,700.00	4,552.97	4,576.92	4,468.01	19.14	17.19	-132.09	385.46	-691.80	1,122.75	1,092.72	30.03	37.385		
4,800.00	4,646.16	4,700.18	4,590.64	19.82	17.48	-133.33	391.52	-702.60	1,154.42	1,123.63	30.79	37.492		
4,900.00	4,739.35	4,823.81	4,714.06	20.51	17.69	-134.71	395.00	-708.80	1,183.97	1,152.49	31.48	37.614		

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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	4,832.54	4,942.32	4,832.54	21.20	17.85	-136.14	395.91	-710.41	1,211.56	1,179.47	32.09	37.750	
5,100.00	4,925.74	5,035.52	4,925.74	21.89	17.96	-137.26	395.91	-710.41	1,238.81	1,206.14	32.67	37.915	
5,200.00	5,018.93	5,128.71	5,018.93	22.58	18.08	-138.34	395.91	-710.41	1,266.51	1,233.27	33.24	38.097	
5,300.00	5,112.12	5,221.90	5,112.12	23.27	18.20	-139.38	395.91	-710.41	1,294.64	1,260.83	33.80	38.298	
5,400.00	5,205.31	5,315.09	5,205.31	23.96	18.33	-140.37	395.91	-710.41	1,323.16	1,288.80	34.35	38.515	
5,500.00	5,298.51	5,408.29	5,298.51	24.65	18.45	-141.33	395.91	-710.41	1,352.05	1,317.16	34.89	38.746	
5,600.00	5,391.70	5,501.48	5,391.70	25.35	18.58	-142.25	395.91	-710.41	1,381.29	1,345.86	35.43	38.989	
5,700.00	5,484.89	5,594.67	5,484.89	26.04	18.70	-143.13	395.91	-710.41	1,410.86	1,374.90	35.95	39.242	
5,800.00	5,578.09	5,687.86	5,578.09	26.74	18.83	-143.97	395.91	-710.41	1,440.73	1,404.26	36.47	39.503	
5,900.00	5,671.28	5,781.06	5,671.28	27.43	18.96	-144.78	395.91	-710.41	1,470.89	1,433.91	36.98	39.771	
6,000.00	5,764.47	5,874.25	5,764.47	28.13	19.09	-145.57	395.91	-710.41	1,501.32	1,463.83	37.49	40.045	
6,100.00	5,857.66	5,967.44	5,857.66	28.82	19.23	-146.32	395.91	-710.41	1,532.00	1,494.01	37.99	40.324	
6,200.00	5,950.86	6,060.63	5,950.86	29.52	19.36	-147.04	395.91	-710.41	1,562.93	1,524.44	38.49	40.606	
6,261.42	6,008.09	6,117.87	6,008.09	29.95	19.44	-147.47	395.91	-710.41	1,582.03	1,543.24	38.79	40.781	
6,300.00	6,044.14	6,153.92	6,044.14	30.19	19.50	-147.86	395.91	-710.41	1,593.86	1,554.84	39.03	40.841	
6,400.00	6,138.41	6,248.19	6,138.41	30.70	19.63	-148.79	395.91	-710.41	1,622.71	1,583.14	39.57	41.008	
6,500.00	6,233.78	6,343.56	6,233.78	31.17	19.78	-149.60	395.91	-710.41	1,648.84	1,608.75	40.09	41.132	
6,600.00	6,330.14	6,439.92	6,330.14	31.61	19.92	-150.30	395.91	-710.41	1,672.17	1,631.59	40.57	41.216	
6,700.00	6,427.38	6,537.15	6,427.38	32.00	20.07	-150.89	395.91	-710.41	1,692.62	1,651.60	41.02	41.261	
6,800.00	6,525.37	6,635.14	6,525.37	32.35	20.22	-151.39	395.91	-710.41	1,710.15	1,668.71	41.44	41.269	
6,900.00	6,623.99	6,733.77	6,623.99	32.65	20.37	-151.79	395.91	-710.41	1,724.70	1,682.88	41.82	41.242	
7,000.00	6,723.13	6,832.91	6,723.13	32.91	20.52	-152.10	395.91	-710.41	1,736.23	1,694.07	42.16	41.181	
7,100.00	6,822.67	6,932.45	6,822.67	33.13	20.68	-152.33	395.91	-710.41	1,744.70	1,702.24	42.46	41.086	
7,200.00	6,922.48	7,032.26	6,922.48	33.30	20.83	-152.47	395.91	-710.41	1,750.10	1,707.37	42.73	40.957	
7,300.00	7,022.44	7,132.22	7,022.44	33.42	20.99	-152.53	395.91	-710.41	1,752.41	1,709.45	42.96	40.794	
7,324.56	7,047.00	7,156.78	7,047.00	33.44	21.03	-129.72	395.91	-710.41	1,752.50	1,709.50	43.01	40.749	
7,400.00	7,122.44	7,232.22	7,122.44	33.51	21.15	-129.72	395.91	-710.41	1,752.50	1,709.27	43.23	40.539	
7,500.00	7,222.44	7,332.22	7,222.44	33.61	21.31	-129.72	395.91	-710.41	1,752.50	1,708.97	43.54	40.252	
7,600.00	7,322.44	7,432.22	7,322.44	33.71	21.48	-129.72	395.91	-710.41	1,752.50	1,708.66	43.85	39.968	
7,700.00	7,422.44	7,532.22	7,422.44	33.81	21.64	-129.72	395.91	-710.41	1,752.50	1,708.34	44.16	39.685	
7,800.00	7,522.44	7,632.22	7,522.44	33.91	21.80	-129.72	395.91	-710.41	1,752.50	1,708.03	44.48	39.404	
7,900.00	7,622.44	7,732.22	7,622.44	34.01	21.97	-129.72	395.91	-710.41	1,752.50	1,707.71	44.79	39.125	
8,000.00	7,722.44	7,832.22	7,722.44	34.11	22.13	-129.72	395.91	-710.41	1,752.50	1,707.39	45.11	38.848	
8,100.00	7,822.44	7,932.22	7,822.44	34.22	22.30	-129.72	395.91	-710.41	1,752.50	1,707.07	45.43	38.574	
8,200.00	7,922.44	8,032.22	7,922.44	34.32	22.47	-129.72	395.91	-710.41	1,752.50	1,706.75	45.76	38.301	
8,300.00	8,022.44	8,132.22	8,022.44	34.43	22.64	-129.72	395.91	-710.41	1,752.50	1,706.42	46.08	38.030	
8,400.00	8,122.44	8,232.22	8,122.44	34.54	22.81	-129.72	395.91	-710.41	1,752.50	1,706.09	46.41	37.762	
8,500.00	8,222.44	8,332.22	8,222.44	34.65	22.98	-129.72	395.91	-710.41	1,752.50	1,705.76	46.74	37.495	
8,600.00	8,322.44	8,432.22	8,322.44	34.76	23.15	-129.72	395.91	-710.41	1,752.50	1,705.43	47.07	37.231	
8,700.00	8,422.44	8,532.22	8,422.44	34.87	23.33	-129.72	395.91	-710.41	1,752.50	1,705.10	47.40	36.969	
8,800.00	8,522.44	8,632.22	8,522.44	34.98	23.50	-129.72	395.91	-710.41	1,752.50	1,704.76	47.74	36.709	
8,900.00	8,622.44	8,732.22	8,622.44	35.09	23.68	-129.72	395.91	-710.41	1,752.50	1,704.43	48.08	36.452	
9,000.00	8,722.44	8,832.22	8,722.44	35.21	23.85	-129.72	395.91	-710.41	1,752.50	1,704.09	48.42	36.196	
9,100.00	8,822.44	8,932.22	8,822.44	35.33	24.03	-129.72	395.91	-710.41	1,752.50	1,703.75	48.76	35.943	
9,200.00	8,922.44	9,032.22	8,922.44	35.44	24.21	-129.72	395.91	-710.41	1,752.50	1,703.40	49.10	35.692	
9,300.00	9,022.44	9,132.22	9,022.44	35.56	24.38	-129.72	395.91	-710.41	1,752.50	1,703.06	49.44	35.444	
9,400.00	9,122.44	9,232.22	9,122.44	35.68	24.56	-129.72	395.91	-710.41	1,752.50	1,702.71	49.79	35.198	
9,500.00	9,222.44	9,332.22	9,222.44	35.80	24.74	-129.72	395.91	-710.41	1,752.50	1,702.37	50.14	34.954	
9,543.12	9,265.56	9,375.34	9,265.56	35.85	24.82	-129.72	395.91	-710.41	1,752.50	1,702.21	50.29	34.849	
9,583.56	9,306.00	9,389.78	9,280.00	35.90	24.85	-129.72	395.91	-710.41	1,752.70	1,702.31	50.38	34.788	



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	116.35	-8.74	17.65	19.69						
100.00	100.00	100.00	100.00	0.10	0.10	116.35	-8.74	17.65	19.69	19.50	0.19	101.886			
200.00	200.00	200.00	200.00	0.32	0.32	116.35	-8.74	17.65	19.69	19.05	0.64	30.637			
300.00	300.00	300.00	300.00	0.55	0.55	116.35	-8.74	17.65	19.69	18.60	1.09	18.029 CC, ES			
400.00	399.98	399.05	399.00	0.77	0.76	94.61	-8.57	20.21	22.05	20.51	1.53	14.400 SF			
500.00	499.92	497.69	497.33	1.00	0.99	93.50	-8.04	27.85	28.96	26.98	1.98	14.606			
600.00	599.86	595.44	594.26	1.22	1.25	89.26	-7.18	40.40	40.41	37.96	2.45	16.476			
700.00	699.80	691.81	689.07	1.45	1.59	84.88	-6.00	57.60	56.64	53.70	2.94	19.297			
800.00	799.74	789.36	784.41	1.68	1.97	81.60	-4.58	78.18	76.13	72.71	3.42	22.275			
900.00	899.68	887.35	880.17	1.91	2.39	79.63	-3.16	98.92	95.83	91.94	3.89	24.629			
1,000.00	999.61	985.35	975.94	2.14	2.81	78.33	-1.73	119.66	115.60	111.24	4.37	26.472			
1,100.00	1,099.55	1,083.35	1,071.71	2.37	3.25	77.41	-0.31	140.40	135.42	130.57	4.85	27.940			
1,200.00	1,199.49	1,181.35	1,167.48	2.60	3.69	76.73	1.12	161.14	155.26	149.93	5.33	29.132			
1,300.00	1,299.43	1,279.34	1,263.24	2.84	4.13	76.20	2.54	181.88	175.11	169.30	5.81	30.119			
1,400.00	1,399.37	1,377.34	1,359.01	3.07	4.57	75.78	3.97	202.62	194.98	188.68	6.30	30.946			
1,500.00	1,499.31	1,475.34	1,454.78	3.30	5.02	75.44	5.39	223.36	214.85	208.07	6.79	31.650			
1,600.00	1,599.25	1,573.34	1,550.54	3.53	5.47	75.15	6.82	244.10	234.74	227.46	7.28	32.256			
1,700.00	1,699.19	1,671.33	1,646.31	3.76	5.92	74.91	8.24	264.84	254.62	246.85	7.77	32.782			
1,800.00	1,799.13	1,769.33	1,742.08	3.99	6.37	74.70	9.67	285.58	274.51	266.25	8.26	33.244			
1,900.00	1,899.07	1,867.33	1,837.85	4.22	6.82	74.53	11.09	306.32	294.40	285.66	8.75	33.651			
2,000.00	1,999.01	1,965.33	1,933.61	4.46	7.27	74.37	12.52	327.06	314.30	305.06	9.24	34.014			
2,100.00	2,098.94	2,063.32	2,029.38	4.69	7.72	74.23	13.94	347.80	334.20	324.46	9.73	34.339			
2,151.09	2,150.00	2,113.39	2,078.31	4.81	7.95	74.17	14.67	358.39	344.36	334.38	9.98	34.492			
2,200.00	2,198.86	2,164.96	2,128.74	4.92	8.16	73.95	15.41	369.14	353.77	343.54	10.23	34.586			
2,300.00	2,298.47	2,275.55	2,237.41	5.17	8.54	74.32	16.81	389.59	369.66	358.91	10.75	34.398			
2,400.00	2,397.49	2,386.82	2,347.38	5.45	8.86	75.73	17.97	406.46	381.04	369.74	11.30	33.712			
2,500.00	2,495.65	2,497.95	2,457.72	5.77	9.14	78.12	18.88	419.58	388.33	376.41	11.92	32.582			
2,600.00	2,592.69	2,608.08	2,567.46	6.12	9.38	81.46	19.52	428.90	392.26	379.65	12.61	31.103			
2,700.00	2,688.32	2,716.42	2,675.64	6.54	9.56	85.72	19.90	434.46	393.88	380.48	13.40	29.403			
2,793.18	2,775.95	2,815.07	2,774.27	6.98	9.70	90.46	20.03	436.41	394.54	380.33	14.21	27.771			
2,800.00	2,782.31	2,822.19	2,781.39	7.01	9.71	90.83	20.03	436.44	394.59	380.32	14.27	27.655			
2,900.00	2,875.50	2,916.30	2,875.50	7.54	9.83	95.77	20.03	436.45	396.86	381.71	15.15	26.190			
3,000.00	2,968.69	3,009.49	2,968.69	8.10	9.95	100.57	20.03	436.45	402.39	386.34	16.04	25.085			
3,100.00	3,061.88	3,102.68	3,061.88	8.68	10.08	105.23	20.03	436.45	411.05	394.14	16.91	24.308			
3,200.00	3,155.08	3,195.88	3,155.08	9.27	10.21	109.70	20.03	436.45	422.66	404.91	17.74	23.819			
3,300.00	3,248.27	3,289.07	3,248.27	9.88	10.34	113.92	20.03	436.45	436.97	418.44	18.53	23.577			
3,400.00	3,341.46	3,382.26	3,341.46	10.51	10.48	117.89	20.03	436.45	453.74	434.47	19.27	23.542			
3,500.00	3,434.65	3,475.45	3,434.65	11.14	10.62	121.59	20.03	436.45	472.71	452.74	19.96	23.678			
3,600.00	3,527.85	3,568.65	3,527.85	11.78	10.76	125.02	20.03	436.45	493.61	473.00	20.61	23.951			
3,700.00	3,621.04	3,661.84	3,621.04	12.43	10.90	128.18	20.03	436.45	516.22	495.00	21.21	24.336			
3,800.00	3,714.23	3,755.03	3,714.23	13.08	11.04	131.09	20.03	436.45	540.31	518.53	21.78	24.809			
3,900.00	3,807.42	3,848.22	3,807.42	13.74	11.19	133.76	20.03	436.45	565.71	543.39	22.32	25.350			
4,000.00	3,900.62	3,941.42	3,900.62	14.40	11.34	136.21	20.03	436.45	592.24	569.41	22.83	25.943			
4,100.00	3,993.81	4,034.61	3,993.81	15.07	11.49	138.46	20.03	436.45	619.75	596.43	23.32	26.575			
4,200.00	4,087.00	4,127.80	4,087.00	15.74	11.64	140.53	20.03	436.45	648.13	624.33	23.80	27.234			
4,300.00	4,180.20	4,221.00	4,180.20	16.42	11.80	142.44	20.03	436.45	677.26	653.00	24.26	27.913			
4,400.00	4,273.39	4,314.19	4,273.39	17.09	11.95	144.19	20.03	436.45	707.05	682.33	24.72	28.603			
4,500.00	4,366.58	4,407.38	4,366.58	17.77	12.11	145.80	20.03	436.45	737.43	712.26	25.17	29.298			
4,600.00	4,459.77	4,500.57	4,459.77	18.46	12.27	147.29	20.03	436.45	768.31	742.69	25.61	29.995			
4,700.00	4,552.97	4,593.77	4,552.97	19.14	12.43	148.67	20.03	436.45	799.64	773.59	26.06	30.688			
4,800.00	4,646.16	4,686.96	4,646.16	19.82	12.59	149.95	20.03	436.45	831.38	804.88	26.50	31.376			
4,900.00	4,739.35	4,780.15	4,739.35	20.51	12.75	151.14	20.03	436.45	863.47	836.53	26.94	32.054			

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



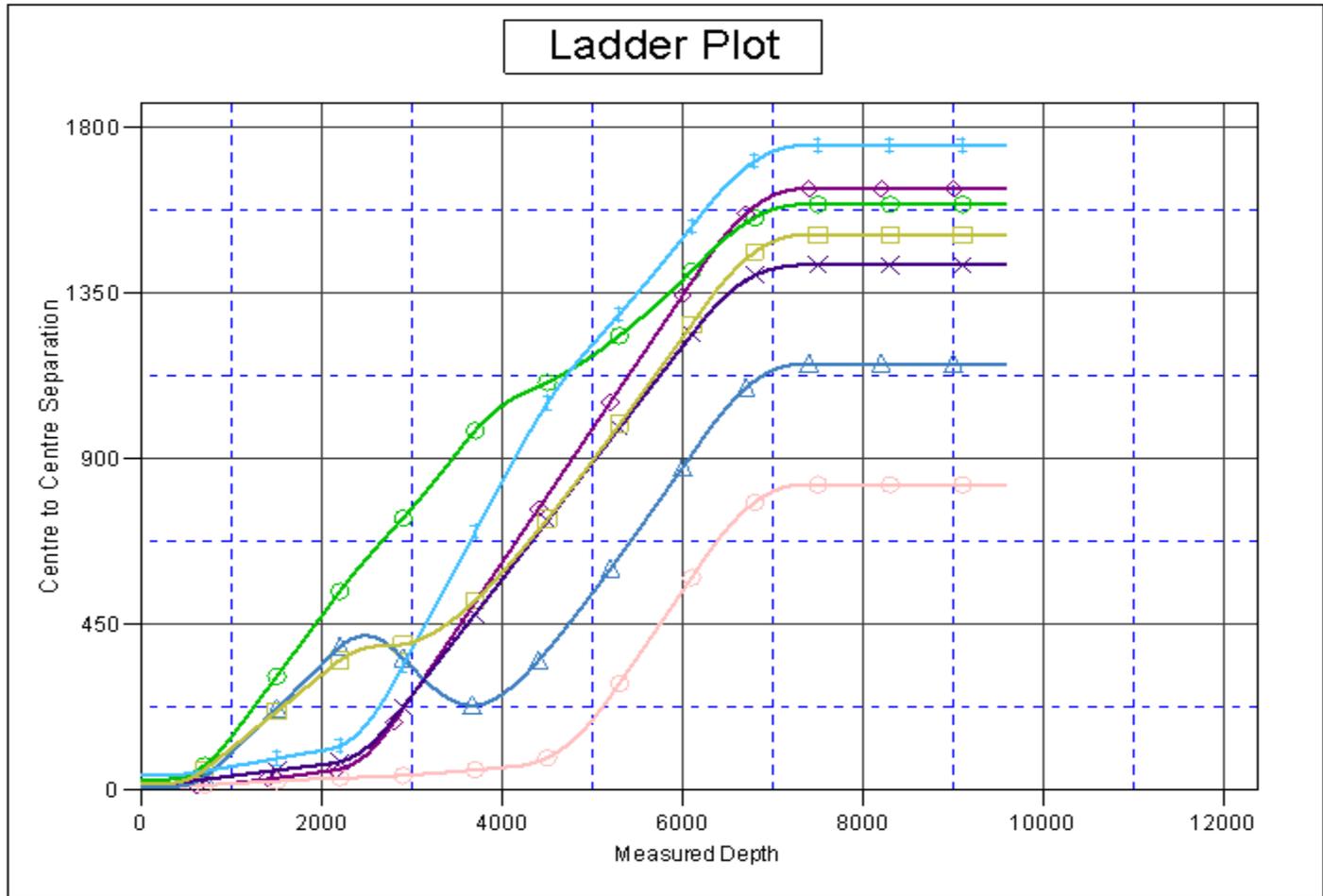
Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4850.00ft (Original Well Elev)
Reference Site:	NBU 922-31F Pad	MD Reference:	WELL @ 4850.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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	4,832.54	4,873.34	4,832.54	21.20	12.92	152.24	20.03	436.45	895.88	868.50	27.38	32.723			
5,100.00	4,925.74	4,966.54	4,925.74	21.89	13.08	153.27	20.03	436.45	928.58	900.76	27.82	33.379			
5,200.00	5,018.93	5,059.73	5,018.93	22.58	13.25	154.23	20.03	436.45	961.53	933.27	28.26	34.023			
5,300.00	5,112.12	5,152.92	5,112.12	23.27	13.42	155.13	20.03	436.45	994.71	966.01	28.71	34.653			
5,400.00	5,205.31	5,246.11	5,205.31	23.96	13.59	155.97	20.03	436.45	1,028.10	998.95	29.15	35.268			
5,500.00	5,298.51	5,339.31	5,298.51	24.65	13.76	156.75	20.03	436.45	1,061.68	1,032.08	29.60	35.869			
5,600.00	5,391.70	5,432.50	5,391.70	25.35	13.93	157.50	20.03	436.45	1,095.43	1,065.38	30.05	36.455			
5,700.00	5,484.89	5,525.69	5,484.89	26.04	14.10	158.19	20.03	436.45	1,129.34	1,098.84	30.50	37.025			
5,800.00	5,578.09	5,618.89	5,578.09	26.74	14.28	158.85	20.03	436.45	1,163.39	1,132.43	30.96	37.581			
5,900.00	5,671.28	5,712.08	5,671.28	27.43	14.45	159.47	20.03	436.45	1,197.57	1,166.15	31.41	38.122			
6,000.00	5,764.47	5,805.27	5,764.47	28.13	14.63	160.06	20.03	436.45	1,231.86	1,199.99	31.87	38.648			
6,100.00	5,857.66	5,898.46	5,857.66	28.82	14.80	160.62	20.03	436.45	1,266.27	1,233.93	32.34	39.159			
6,200.00	5,950.86	5,991.66	5,950.86	29.52	14.98	161.14	20.03	436.45	1,300.78	1,267.98	32.80	39.657			
6,261.42	6,008.09	6,048.89	6,008.09	29.95	15.09	161.45	20.03	436.45	1,322.02	1,288.93	33.09	39.955			
6,300.00	6,044.14	6,084.94	6,044.14	30.19	15.16	161.73	20.03	436.45	1,335.15	1,301.84	33.31	40.088			
6,400.00	6,138.41	6,179.21	6,138.41	30.70	15.34	162.37	20.03	436.45	1,367.06	1,333.23	33.83	40.415			
6,500.00	6,233.78	6,274.58	6,233.78	31.17	15.52	162.92	20.03	436.45	1,395.86	1,361.54	34.32	40.669			
6,600.00	6,330.14	6,370.94	6,330.14	31.61	15.71	163.38	20.03	436.45	1,421.50	1,386.71	34.79	40.857			
6,700.00	6,427.38	6,468.18	6,427.38	32.00	15.90	163.78	20.03	436.45	1,443.93	1,408.69	35.23	40.984			
6,800.00	6,525.37	6,566.17	6,525.37	32.35	16.09	164.10	20.03	436.45	1,463.10	1,427.46	35.64	41.053			
6,900.00	6,623.99	6,664.79	6,623.99	32.65	16.28	164.36	20.03	436.45	1,478.98	1,442.97	36.01	41.070			
7,000.00	6,723.13	6,763.93	6,723.13	32.91	16.48	164.57	20.03	436.45	1,491.55	1,455.20	36.35	41.035			
7,100.00	6,822.67	6,863.47	6,822.67	33.13	16.67	164.71	20.03	436.45	1,500.78	1,464.14	36.65	40.952			
7,200.00	6,922.48	6,963.28	6,922.48	33.30	16.87	164.81	20.03	436.45	1,506.66	1,469.75	36.91	40.822			
7,300.00	7,022.44	7,063.24	7,022.44	33.42	17.07	164.84	20.03	436.45	1,509.17	1,472.04	37.13	40.645			
7,324.56	7,047.00	7,087.80	7,047.00	33.44	17.12	-172.34	20.03	436.45	1,509.27	1,472.09	37.18	40.594			
7,400.00	7,122.44	7,163.24	7,122.44	33.51	17.27	-172.34	20.03	436.45	1,509.27	1,471.83	37.44	40.310			
7,500.00	7,222.44	7,263.24	7,222.44	33.61	17.47	-172.34	20.03	436.45	1,509.27	1,471.47	37.81	39.922			
7,600.00	7,322.44	7,363.24	7,322.44	33.71	17.67	-172.34	20.03	436.45	1,509.27	1,471.10	38.17	39.539			
7,700.00	7,422.44	7,463.24	7,422.44	33.81	17.87	-172.34	20.03	436.45	1,509.27	1,470.73	38.54	39.162			
7,800.00	7,522.44	7,563.24	7,522.44	33.91	18.07	-172.34	20.03	436.45	1,509.27	1,470.36	38.91	38.790			
7,900.00	7,622.44	7,663.24	7,622.44	34.01	18.27	-172.34	20.03	436.45	1,509.27	1,469.99	39.28	38.424			
8,000.00	7,722.44	7,763.24	7,722.44	34.11	18.48	-172.34	20.03	436.45	1,509.27	1,469.62	39.65	38.063			
8,100.00	7,822.44	7,863.24	7,822.44	34.22	18.68	-172.34	20.03	436.45	1,509.27	1,469.25	40.03	37.708			
8,200.00	7,922.44	7,963.24	7,922.44	34.32	18.88	-172.34	20.03	436.45	1,509.27	1,468.87	40.40	37.357			
8,300.00	8,022.44	8,063.24	8,022.44	34.43	19.09	-172.34	20.03	436.45	1,509.27	1,468.49	40.78	37.012			
8,400.00	8,122.44	8,163.24	8,122.44	34.54	19.29	-172.34	20.03	436.45	1,509.27	1,468.11	41.16	36.672			
8,500.00	8,222.44	8,263.24	8,222.44	34.65	19.50	-172.34	20.03	436.45	1,509.27	1,467.74	41.54	36.337			
8,600.00	8,322.44	8,363.24	8,322.44	34.76	19.70	-172.34	20.03	436.45	1,509.27	1,467.35	41.92	36.006			
8,700.00	8,422.44	8,463.24	8,422.44	34.87	19.91	-172.34	20.03	436.45	1,509.27	1,466.97	42.30	35.681			
8,800.00	8,522.44	8,563.24	8,522.44	34.98	20.11	-172.34	20.03	436.45	1,509.27	1,466.59	42.68	35.360			
8,900.00	8,622.44	8,663.24	8,622.44	35.09	20.32	-172.34	20.03	436.45	1,509.27	1,466.20	43.07	35.044			
9,000.00	8,722.44	8,763.24	8,722.44	35.21	20.53	-172.34	20.03	436.45	1,509.27	1,465.82	43.45	34.733			
9,100.00	8,822.44	8,863.24	8,822.44	35.33	20.73	-172.34	20.03	436.45	1,509.27	1,465.43	43.84	34.426			
9,200.00	8,922.44	8,963.24	8,922.44	35.44	20.94	-172.34	20.03	436.45	1,509.27	1,465.04	44.23	34.124			
9,300.00	9,022.44	9,063.24	9,022.44	35.56	21.15	-172.34	20.03	436.45	1,509.27	1,464.65	44.62	33.826			
9,400.00	9,122.44	9,163.24	9,122.44	35.68	21.36	-172.34	20.03	436.45	1,509.27	1,464.26	45.01	33.533			
9,500.00	9,222.44	9,263.24	9,222.44	35.80	21.57	-172.34	20.03	436.45	1,509.27	1,463.87	45.40	33.244			
9,583.56	9,306.00	9,346.80	9,306.00	35.90	21.74	-172.34	20.03	436.45	1,509.27	1,463.54	45.73	33.005			



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 922-31C1AS
 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°



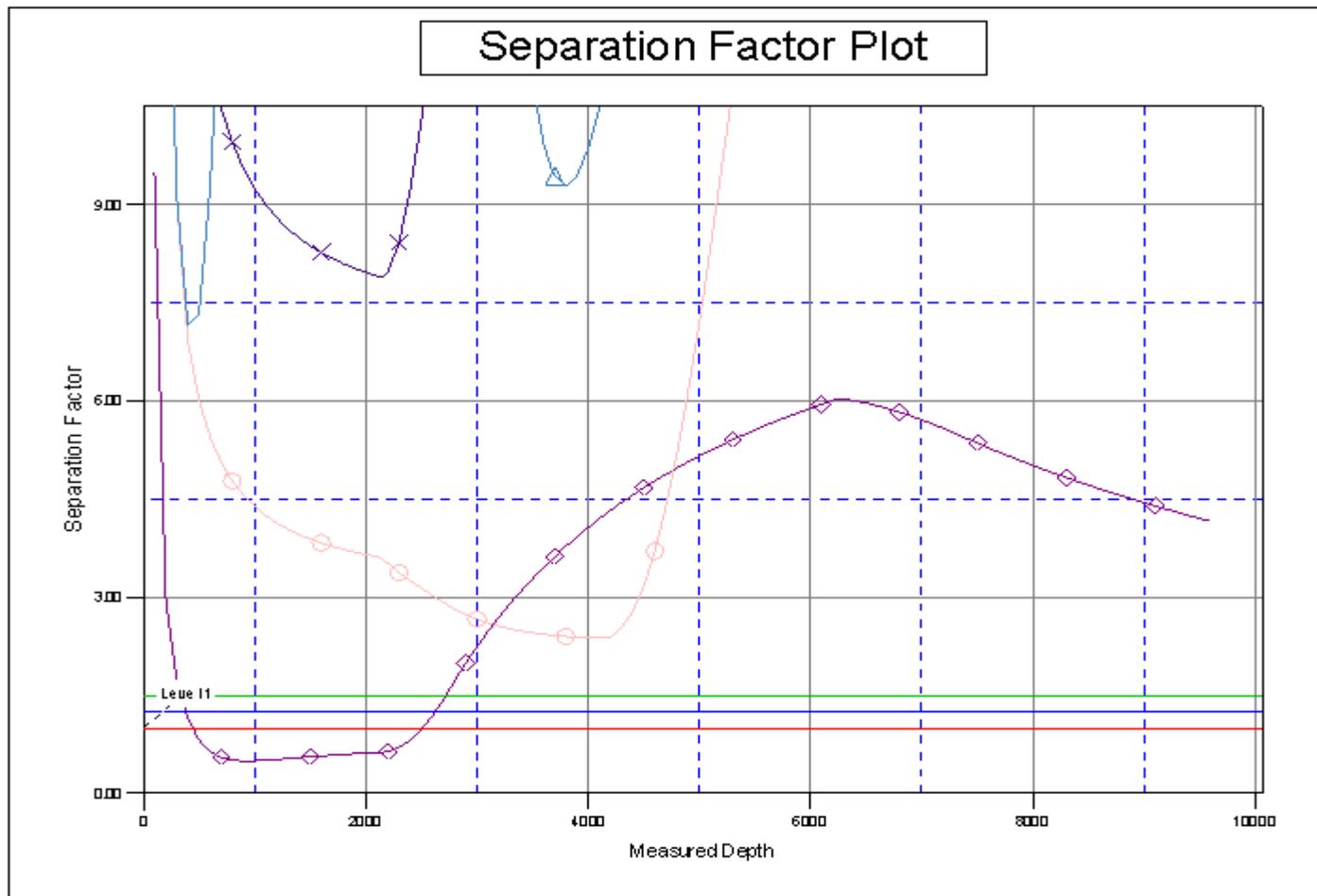
LEGEND

- EXISTING, NBU 155 EXISTING, NBU 155 EXISTING \0
- 1C3AS, NBU 922-31C3AS, PLAN#1 3-26-10 RHS \0
- 31C4CS, NBU 922-31C4CS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D1BS, NBU 922-31D1BS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D4BS, NBU 922-31D4BS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D4CS, NBU 922-31D4CS, 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 922-31C1AS
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 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-31C1AS	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 922-31C1AS
 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
- 1C3AS, NBU 922-31C3AS, PLAN#1 3-26-10 RHS \0
- 31C4CS, NBU 922-31C4CS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D1BS, NBU 922-31D1BS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D4BS, NBU 922-31D4BS, PLAN#1 3-26-10 RHS \0
- NBU 922-31D4CS, NBU 922-31D4CS, PLAN#1 3-26-10 RHS \0
- NBU 922-31F1BS, NBU 922-31F1BS, PLAN#1 3-26-10 RHS \0

NBU 922-31C1AS

Pad: NBU 922-31F

Surface: 1,558' FNL 1,291' FWL (SE/4NW/4)

BHL: 44' FNL 1,927' FWL (NE/4NW/4)

Section 31 T9S R22E

Uintah, Utah

Mineral Lease: UTU 0464

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	1,177'	
Birds Nest	1,520'	Water
Mahogany	1,898'	Water
Wasatch	4,462'	Gas
Mesaverde	7,047'	Gas
MVU2	8,022'	Gas
MVL1	8,619'	Gas
TVD	9,306'	
TD	9,584'	

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 9,306' TVD, approximately equals 5,701 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,654 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.

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)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

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

10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

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 2,050	28.00	IJ-55	LTC	0.88	1.96	6.00
PRODUCTION	4-1/2"	0 to 9,584	11.60	I-80	BTC	2.07	1.09	2.87

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.62

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 3,654 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 5,701 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	1,550'	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	3,954'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	330	40%	11.00	3.38
	TAIL	5,630'	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.

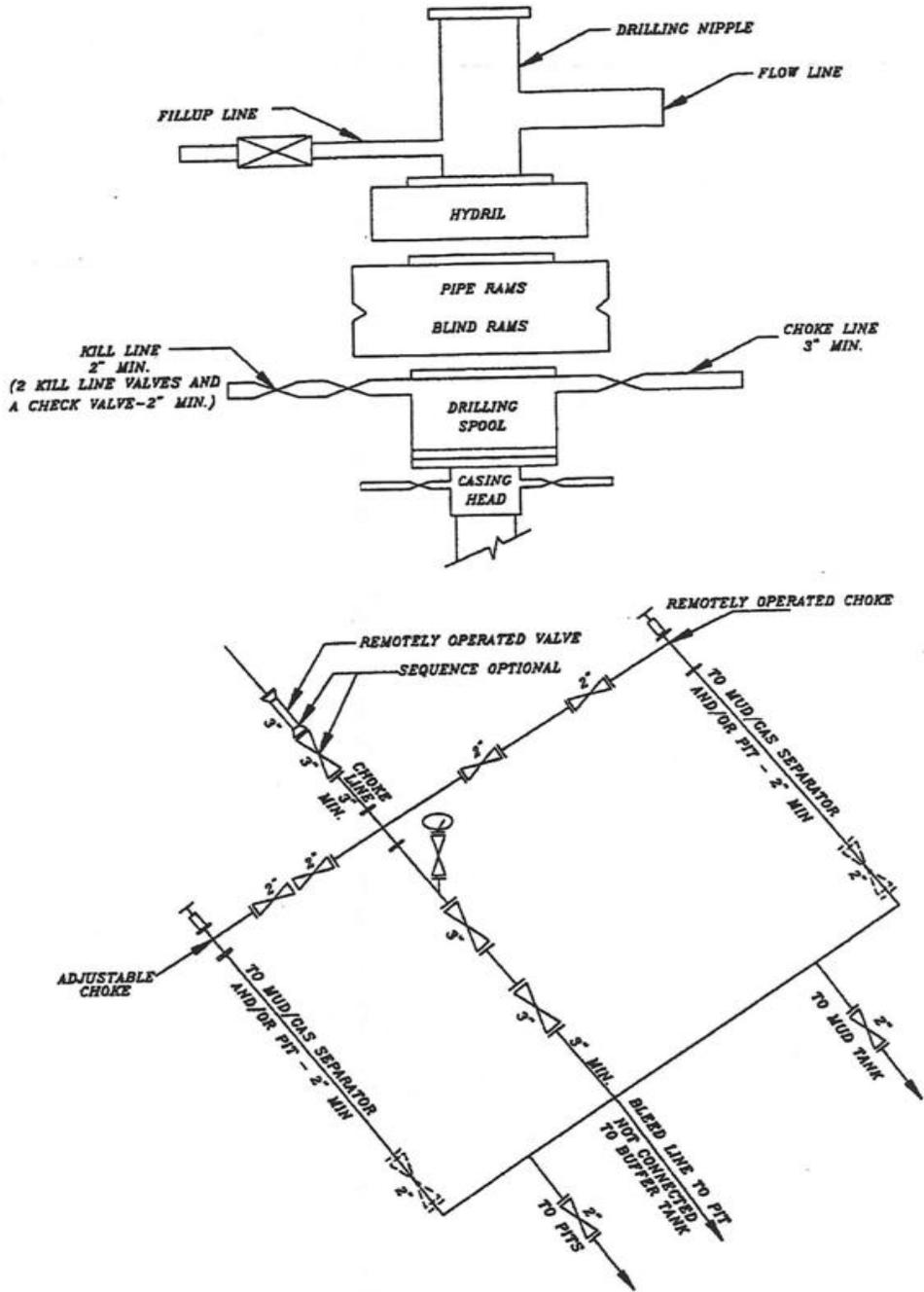
Surveys will be taken at 1,000' minimum intervals.

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

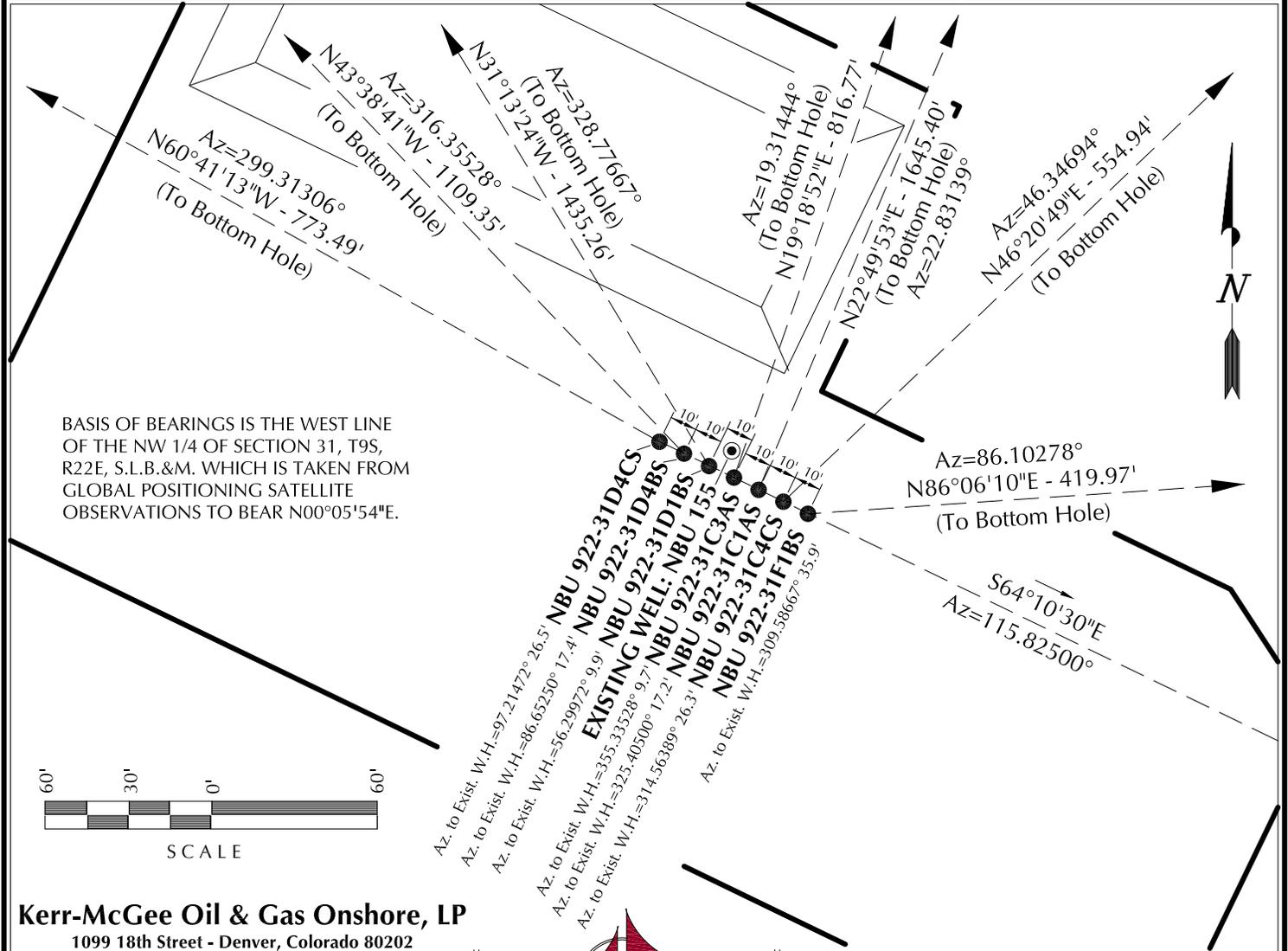
EXHIBIT A NBU 922-31C1AS



SCHMATIC DIAGRAM OF 5,000 PSI BOP STACK

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

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



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

WELL PAD - NBU 922-31F

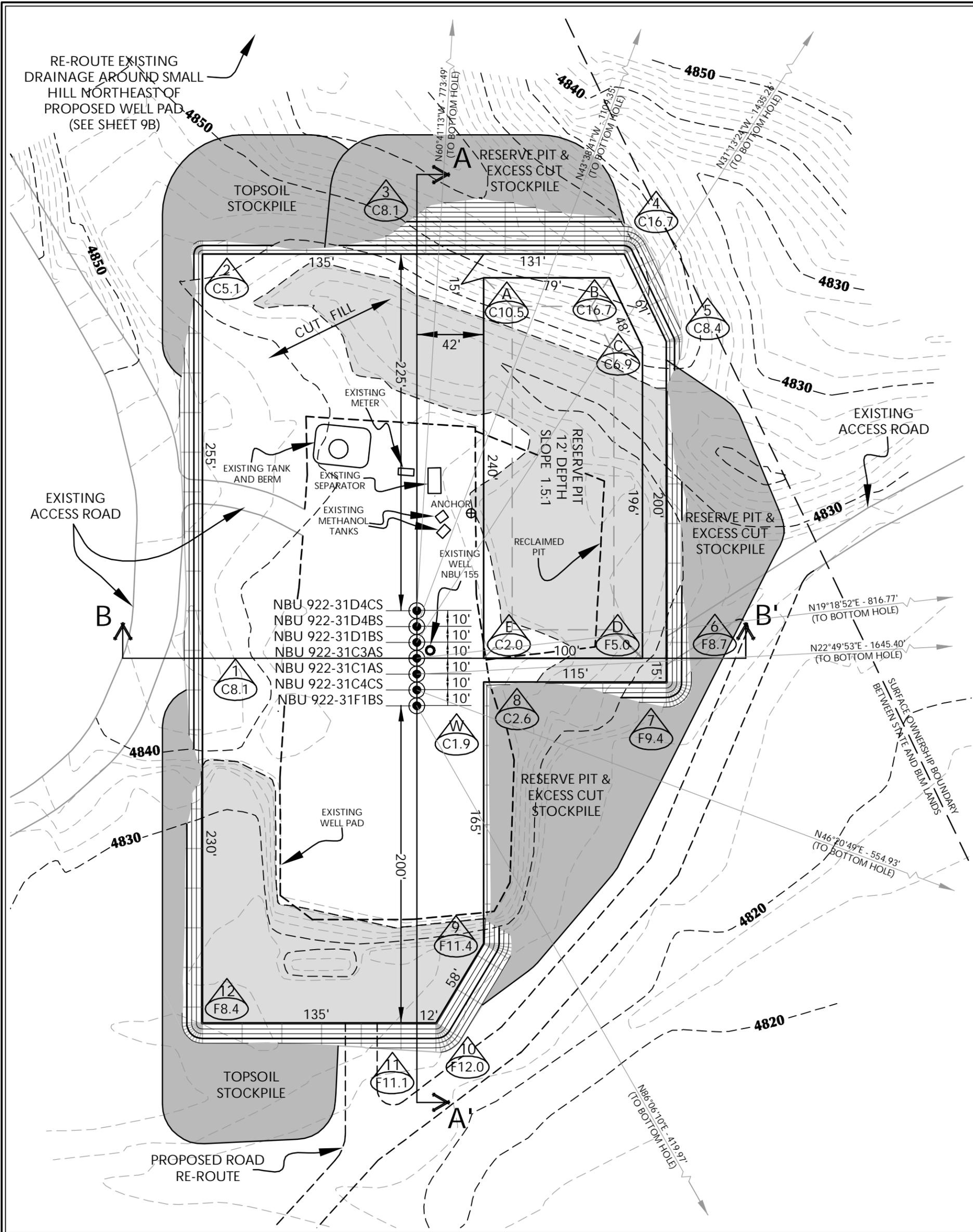
WELL PAD INTERFERENCE PLAT
 WELLS - NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.

609

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

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

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



WELL PAD - NBU 922-31F DESIGN SUMMARY

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

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

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

WELL PAD LEGEND

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



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

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



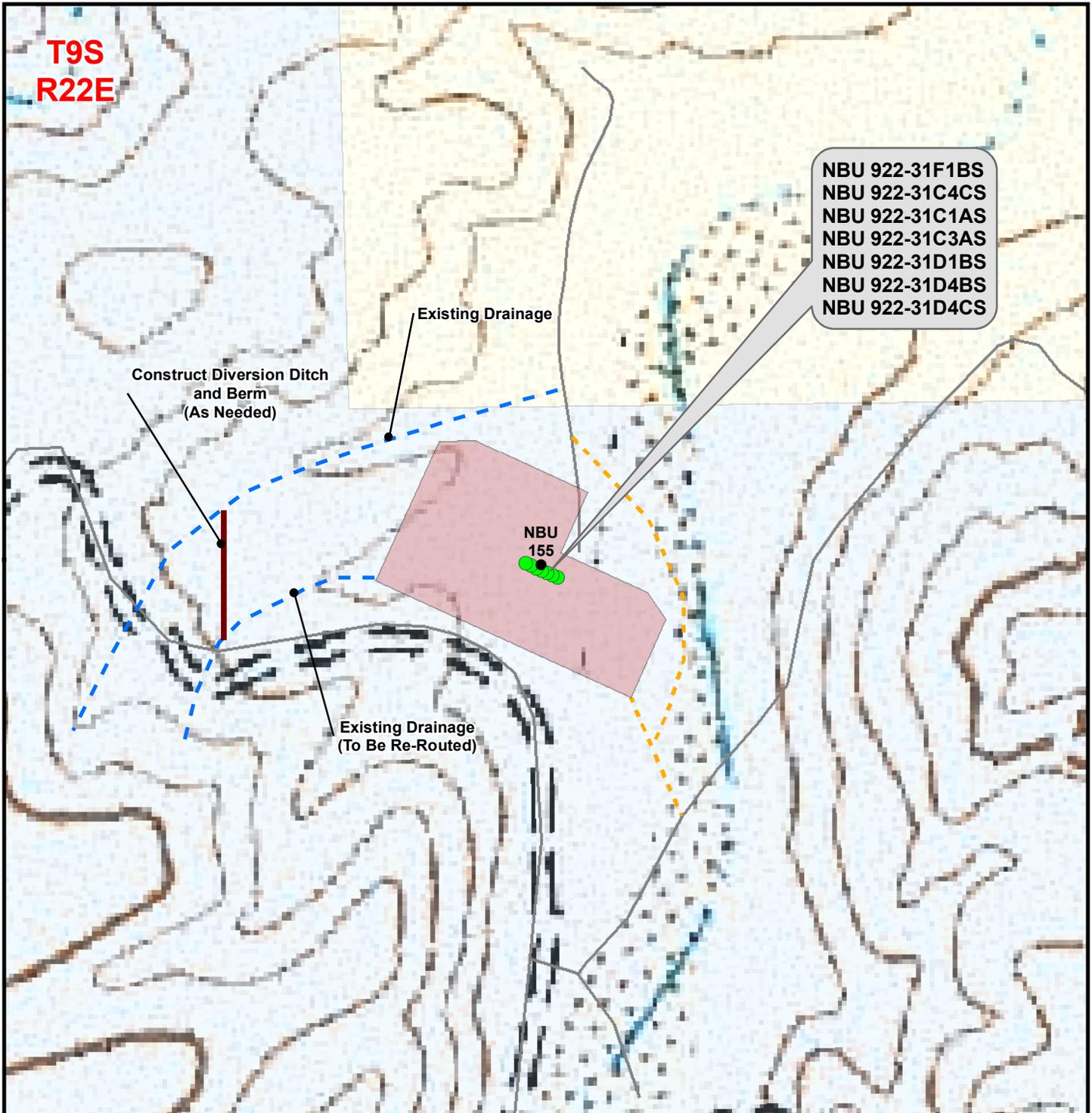
CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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

(435) 789-1365

Scale: 1"=60' Date: 3/9/10
 REVISED: SEA 3/18/10

SHEET NO: **9A** 9A OF 18



Legend

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

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

WELL PAD - NBU 922-31F

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

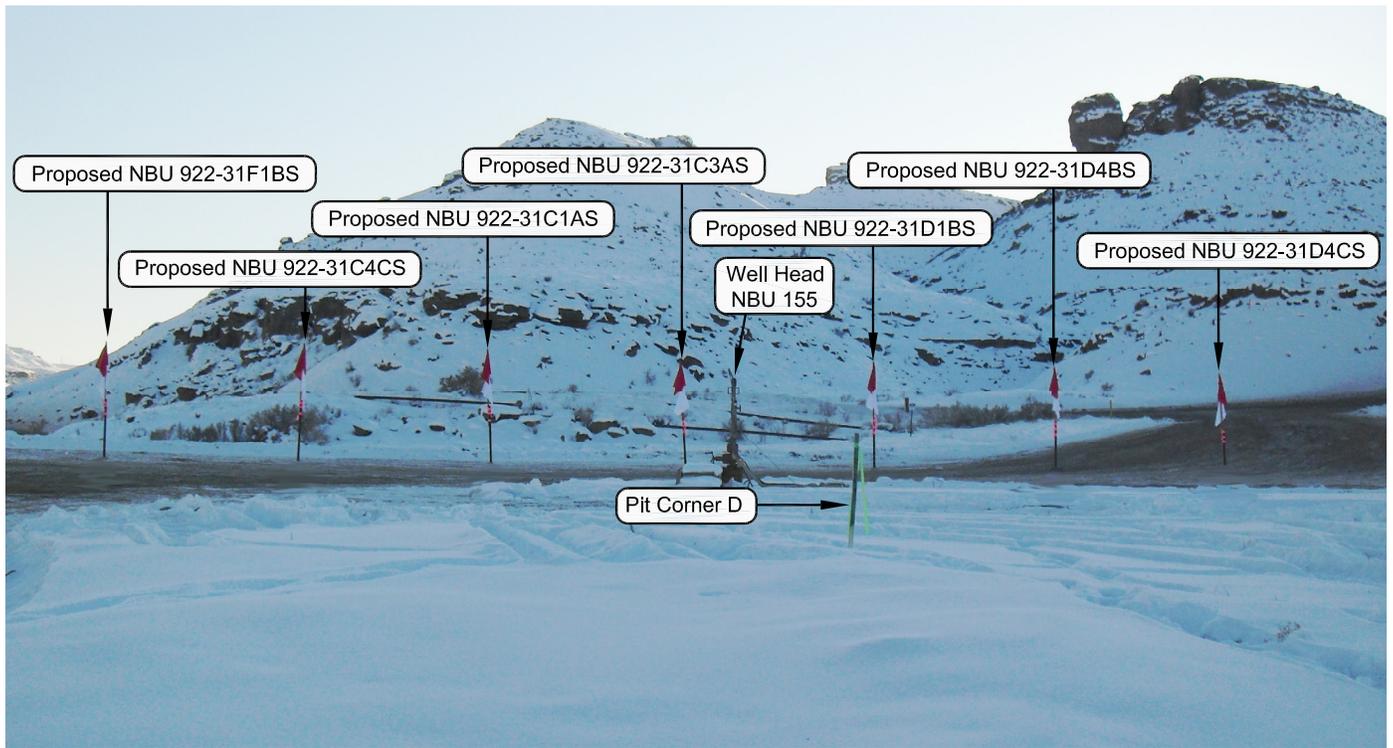


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY

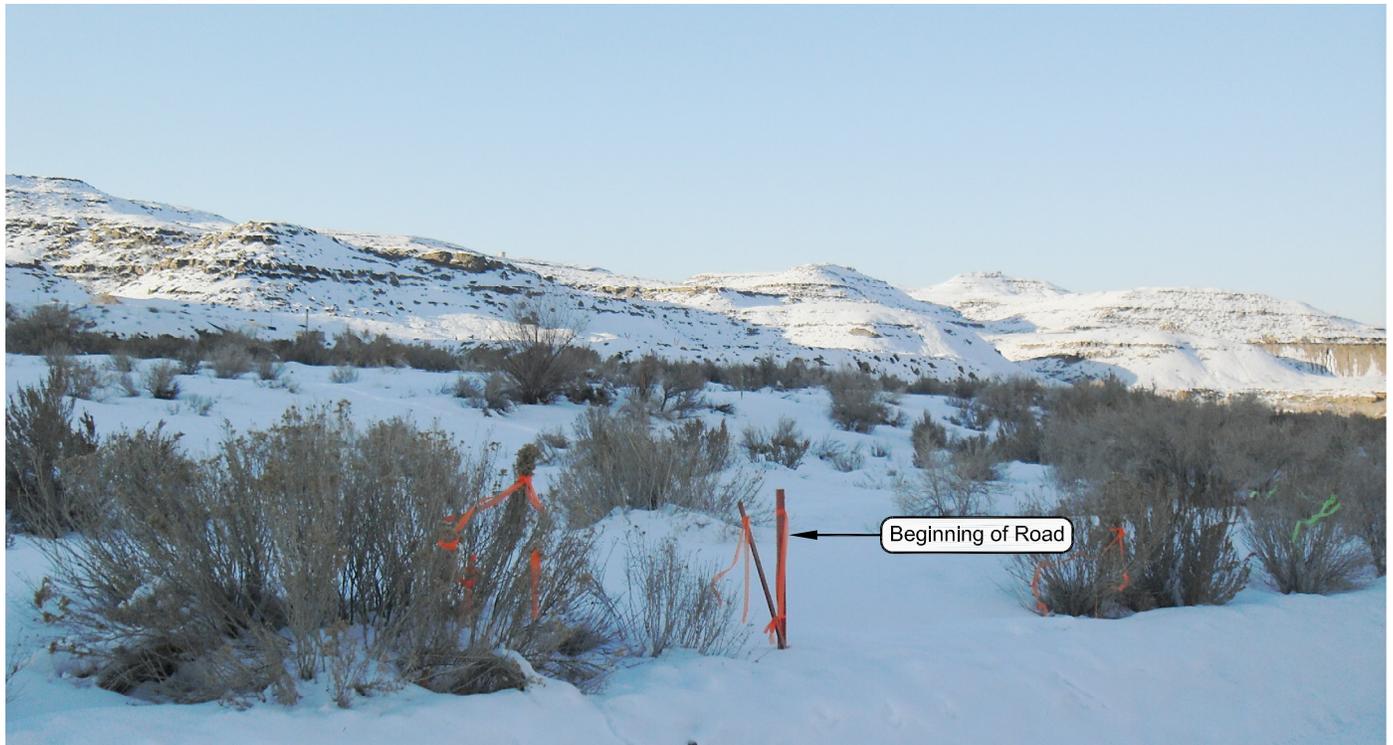


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

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

Well Pad - NBU 922-31F

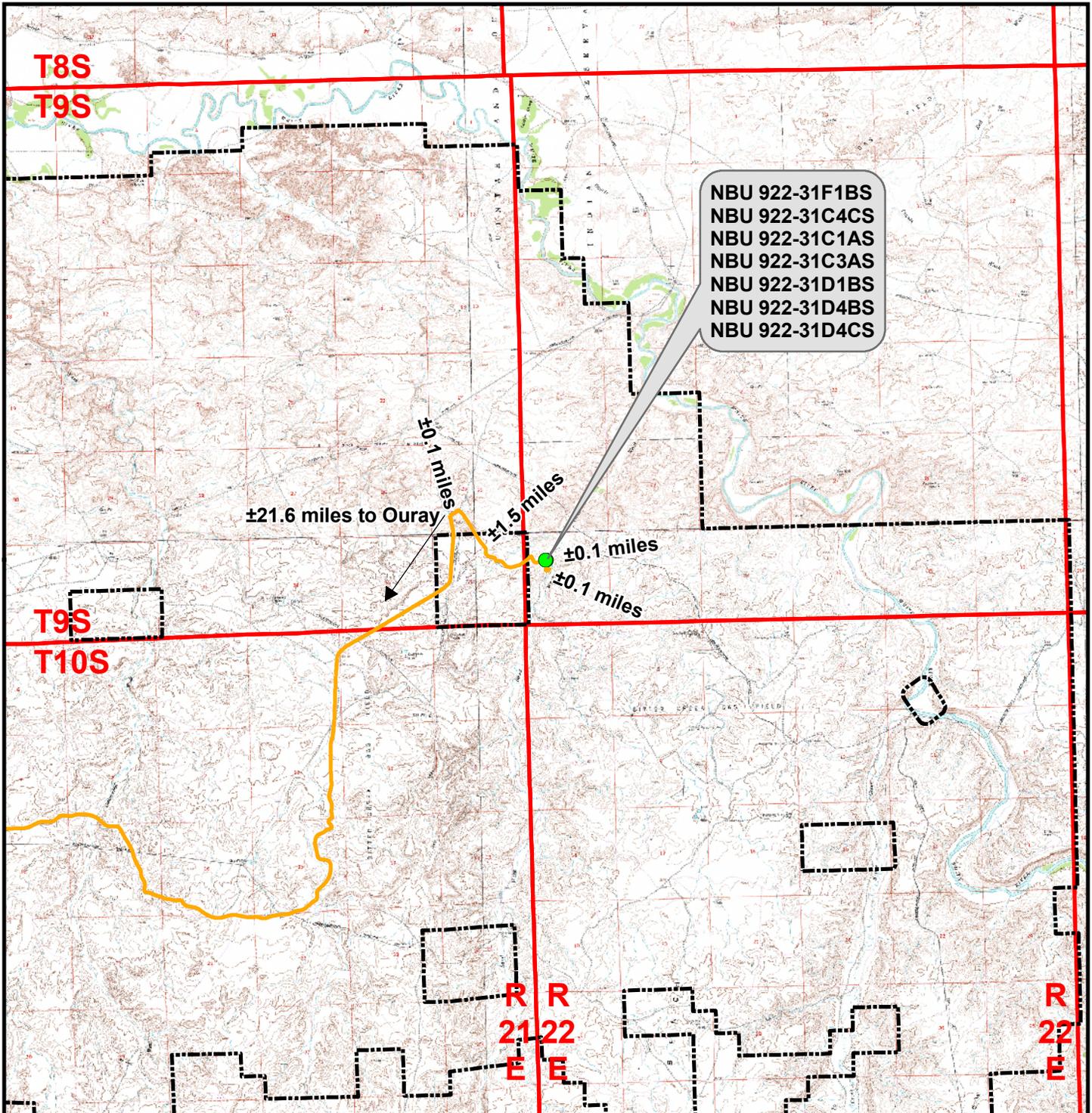
NBU 922-31F1BS,
 NBU 922-31C4CS, NBU 922-31C1AS,
 NBU 922-31C3AS, NBU 922-31D1BS,
 NBU 922-31D4BS & NBU 922-31D4CS
 LOCATION PHOTOS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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 371 Coffeen Avenue
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 Fax 307-674-0182

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
 ±1.5 miles
 ±21.6 miles to Ouray
 ±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

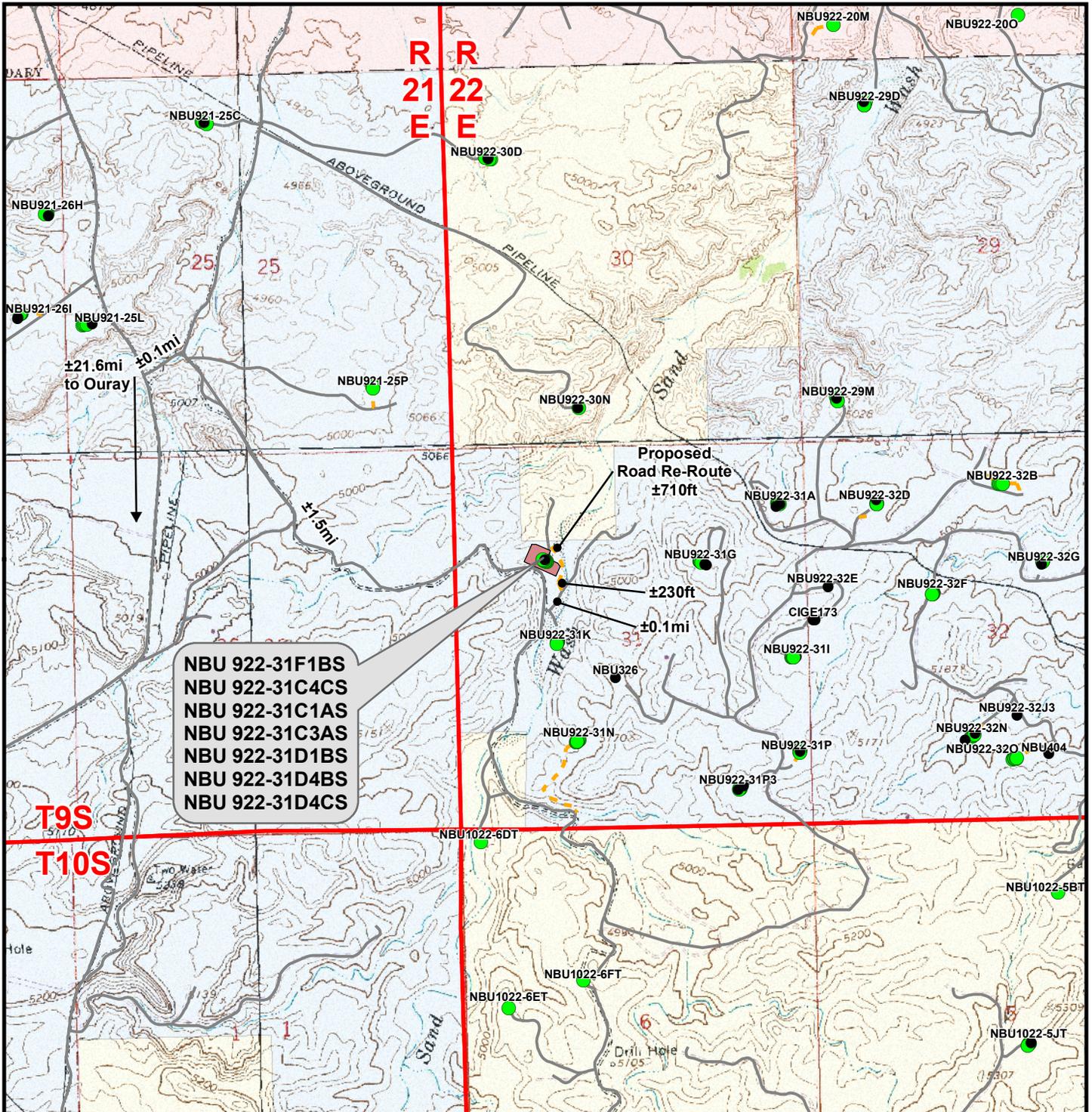
WELL PAD - NBU 922-31F

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

Legend

Total Proposed Road Length: ±940ft

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

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

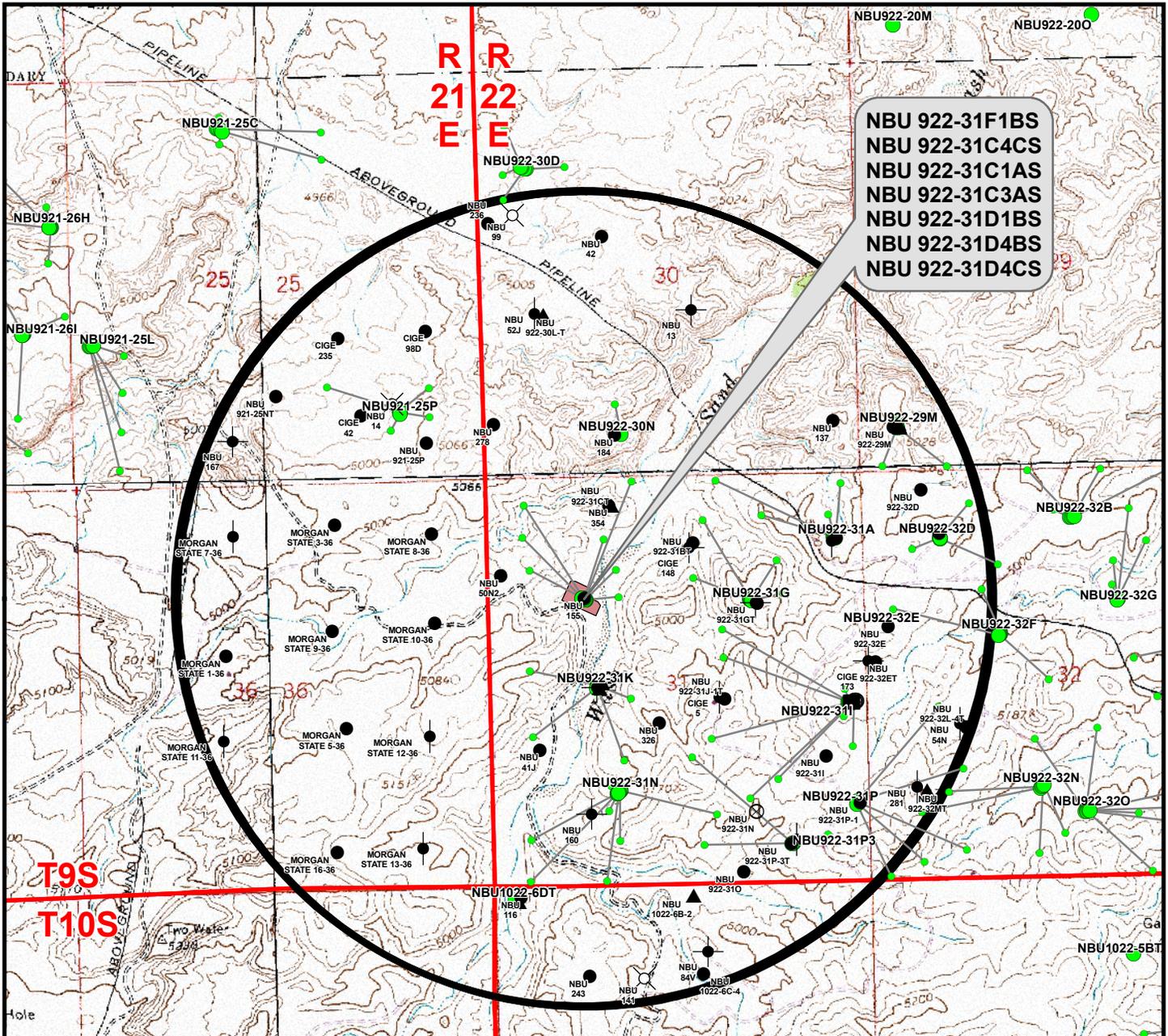
WELL PAD - NBU 922-31F

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

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Mar 2010	14 14 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	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)
- ☒ Dry hole marker, buried
- ⊕ Inactive
- ⊗ Returned APD (Unapproved)
- ⊗ Drilling Operations Suspended

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

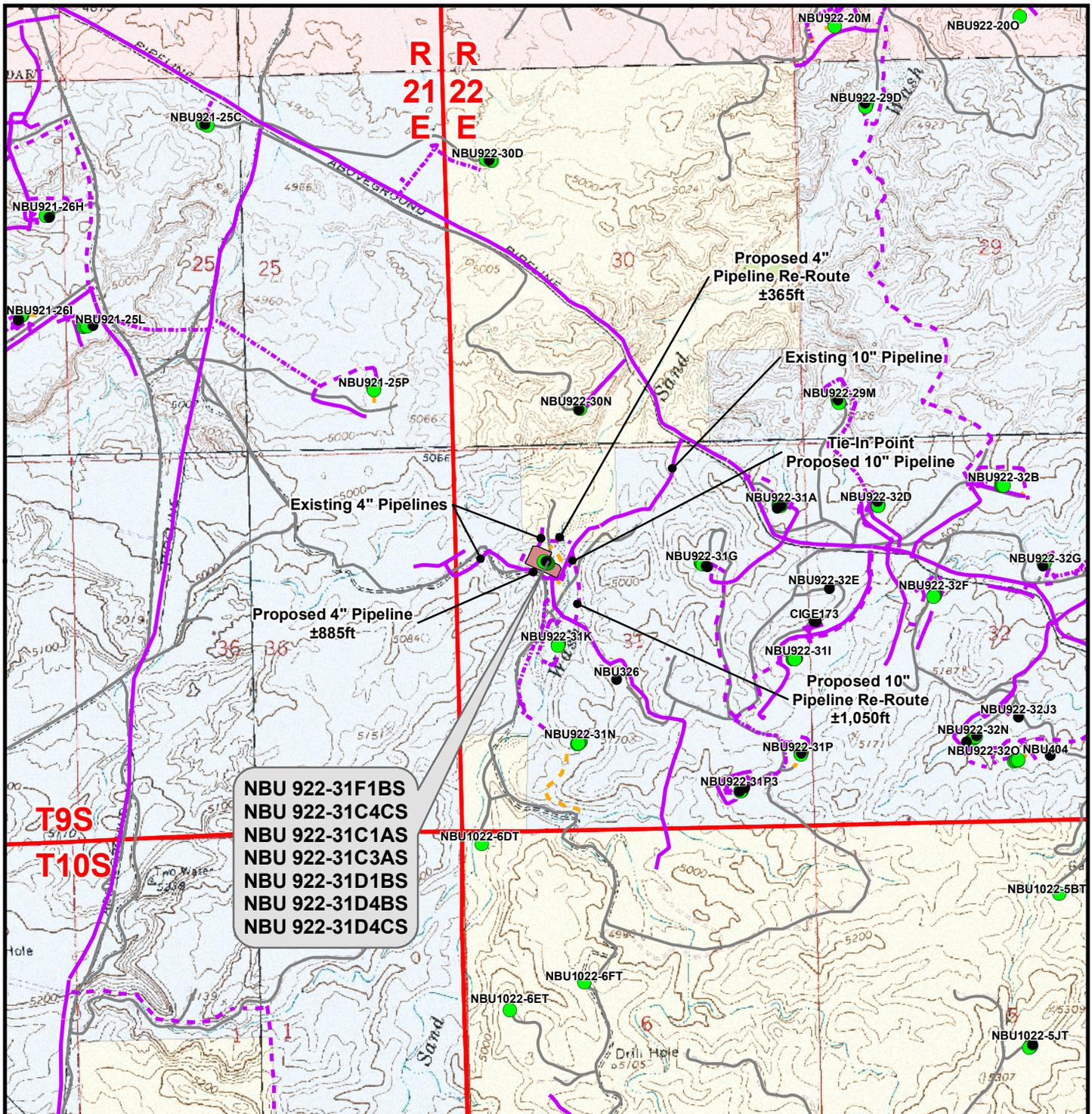
WELL PAD - NBU 922-31F

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

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

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

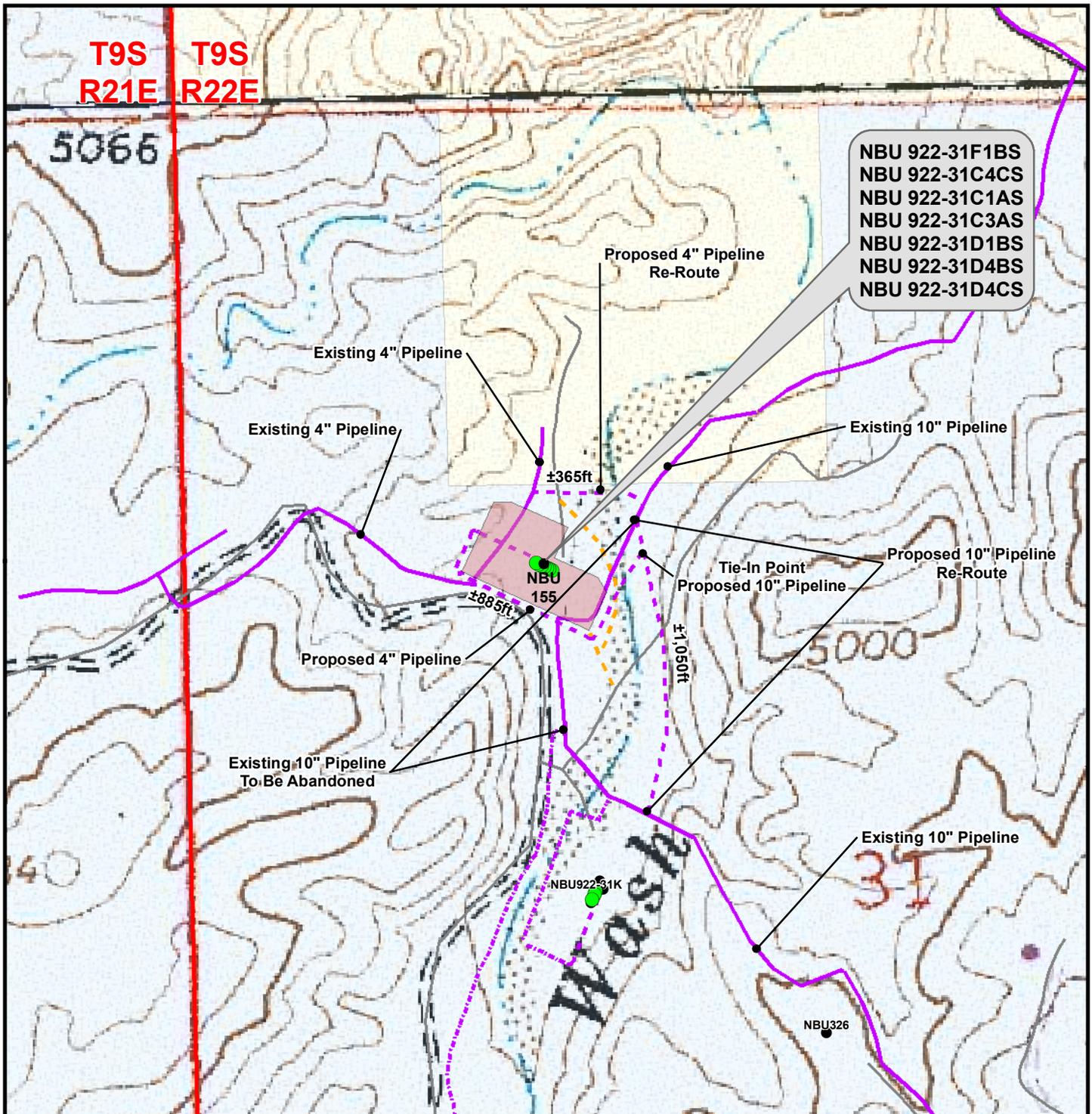
WELL PAD - NBU 922-31F

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

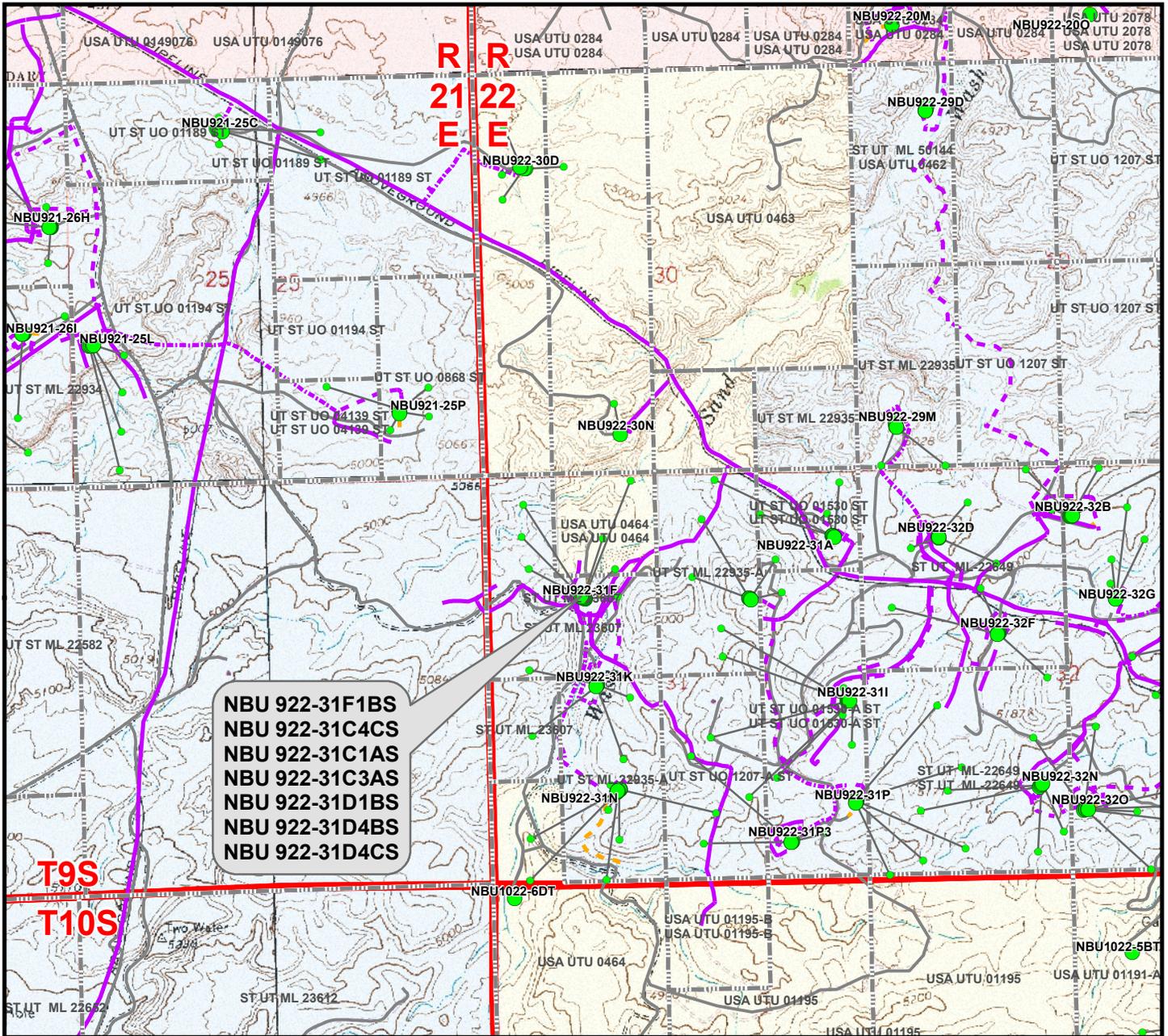
WELL PAD - NBU 922-31F

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

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

WELL PAD - NBU 922-31F

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

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



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

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

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

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

NBU 922-31C1AS

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

NBU 922-31C3AS

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

NBU 922-31C4CS

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

NBU 922-31D1BS

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

NBU 922-31D4BS

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

NBU 922-31D4CS

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

NBU 922-31F1BS

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

Pad: NBU 922-31F
Section 31 T9S R22E

Uintah, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

ONSHORE ORDER NO. 1

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

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

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

Directional Drilling:

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

A. Existing Roads:

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

B. Planned Access Roads:

See MDP for additional details on road construction.

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

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

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

Please refer to Topo Map C.

D. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

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

The following guidelines will apply if the well is productive.

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

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

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

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

The gas gathering pipeline information is planned as follows:

Gas Gathering Pipeline size: Buried 8" pipeline.

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

The liquid gathering pipeline information is planned as follows:

Liquid Gathering Pipeline size: Buried 6" pipeline.

Liquid Gathering Pipeline material: Flex Steel

E. Location and Type of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

G. Methods of Handling Waste Materials:

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

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

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

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

Bonanza Evaporation Pond in Sec. 2 T10S R23E

H. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

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

See MDP for additional details on Well Site Layout.

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

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

J. Plans for Reclamation of the Surface:

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

K. Surface Ownership:

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

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

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

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

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

L. Other Information:

See MDP for additional details on Other Information.

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

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

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

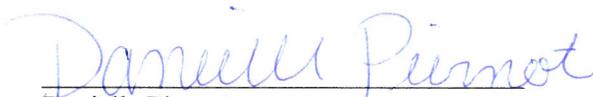
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542 and by Bureau of Land Management Nationwide Bond WYB000291.

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


Danielle Piernot

May 5, 2010
Date



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

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

April 8, 2010

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

Re: Directional Drilling R649-3-11
NBU 922-31C1AS
T9S R22E
Section 31: SENW (Surface) / NENW (Bottom Hole)
Surface Footages: 1558' FNL, 1291' FWL
Bottom Hole Footages: 44' FNL, 1927' 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 922-31C1AS 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)**

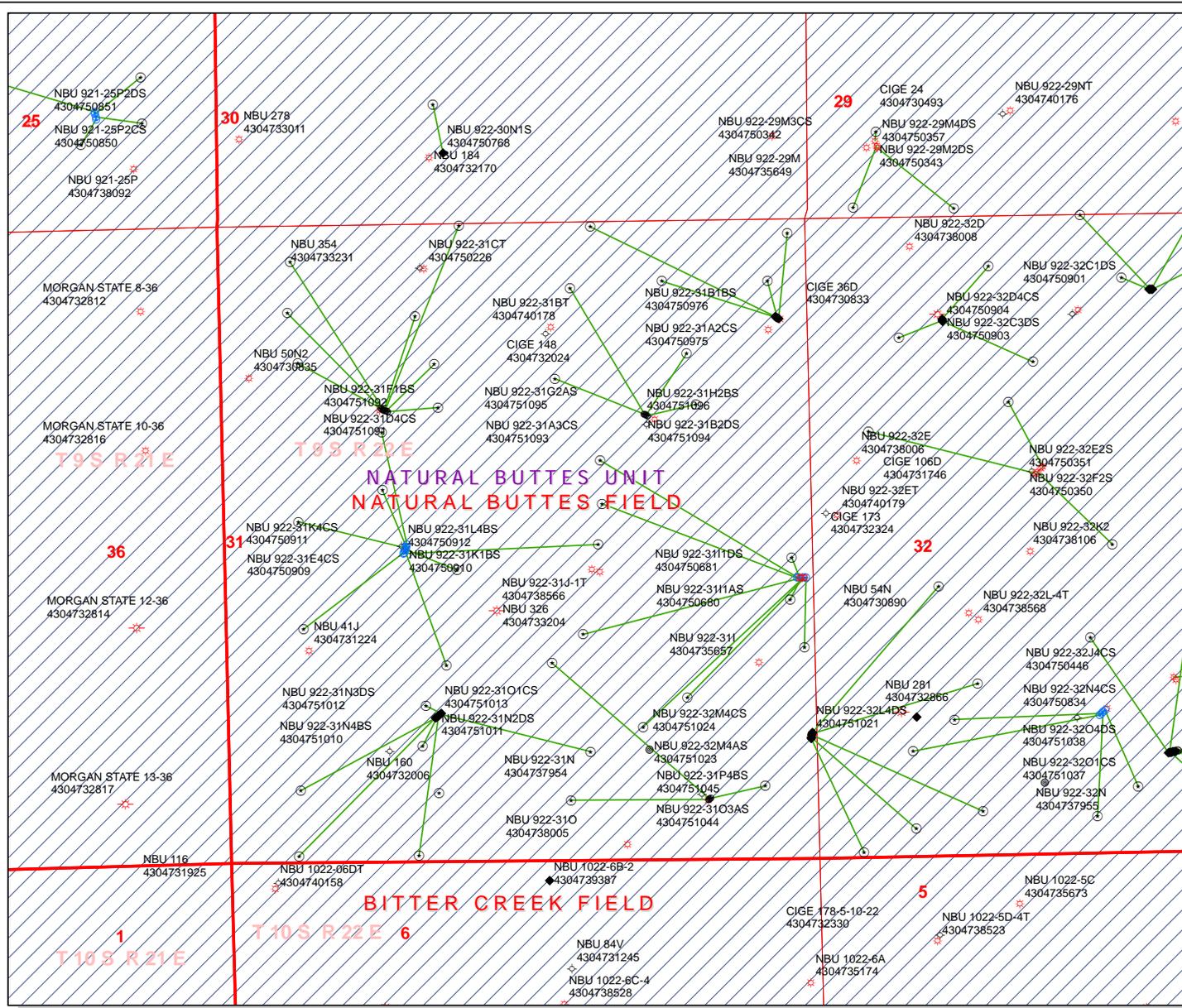
Archy Bench
Topographic Quadrangle
Uintah County, Utah

March 3, 2010

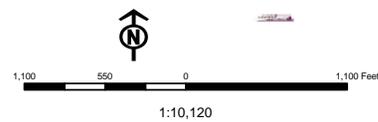
Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

API Number: 4304751086
Well Name: NBU 922-31C1AS
Township 09.0 S Range 22.0 E Section 31
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason



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



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

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

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

Thanks.
-Jim

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

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

May 13, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

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

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

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:5-13-10

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 922-31C1AS				
API Number	43047510860000	APD No	2638	Field/Unit	NATURAL BUTTES
Location: 1/4,1/4	SENW	Sec	31	Tw	9.0S
GPS Coord (UTM)	629299	4428145	Rng	22.0E	1558 FNL 1291 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 292 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

5/17/2010

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
2638	43047510860000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31C1AS	Unit		NATURAL BUTTES	
Field	NATURAL BUTTES	Type of Work		DRILL	
Location	SEW 31 9S 22E S 1558 FNL 1291 FWL GPS Coord (UTM) 629314E 4428157N				

Geologic Statement of Basis

The mineral rights for the proposed well are owned by the Federal Government. The BLM will be the agency responsible for evaluating and approving the proposed drilling, casing and cementing programs.

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

5/17/2010

Utah Division of Oil, Gas and Mining

Page 2

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: 43047510860000

WELL NAME: NBU 922-31C1AS

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: 1558 FNL 1291 FWL

Engineering Review:

BOTTOM: 0044 FNL 1927 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99559

LONGITUDE: -109.48523

UTM SURF EASTINGS: 629314.00

NORTHINGS: 4428157.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0464

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: FEDERAL - WYB000291

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
4 - Federal Approval - dmason
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 922-31C1AS
API Well Number: 43047510860000
Lease Number: UTU 0464
Surface Owner: STATE
Approval Date: 5/20/2010

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:

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

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the

Statement of Basis (copy attached).

Notification Requirements:

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

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

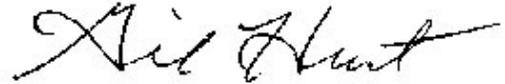
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

Reporting Requirements:

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

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

Approved By:



Gil Hunt
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: UTU 0464
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 922-31C1AS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510860000	
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: 1558 FNL 1291 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: 5/20/2011 <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"/> 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 checked="" 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>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>		
		<p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: <u>04/14/2011</u></p> <p>By: <u></u></p>
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 4/7/2011	



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 43047510860000

API: 43047510860000

Well Name: NBU 922-31C1AS

Location: 1558 FNL 1291 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: 5/20/2010

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: 4/7/2011

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: UTU 0464
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 922-31C1AS
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 5/1/2012 <input type="checkbox"/> 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.

The operator is requesting the approval of the following changes to the originally approved APD: 1. Surface Location Change (New Plat is Attached) From = 1558 FNL/ 1291 FWL To = 975 FNL/ 2224 FEL (Bottom Hole will remaining the same) 2. Proposed Total Depth (New Drilling Program Attached) 4. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) 5. Change to a Directional Well (Directional Drilling Survey Attached) 6. Surface Use Plan of Operation (Updated Plan Attached) 7. Updated Topos & Directions (Attached)

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

Date: May 03, 2012

By: 

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

Application for Permit to Drill

Statement of Basis

6/5/2012

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
6041	43-047-51086-00-00		GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-31C1AS	Unit	NATURAL BUTTES		
Field	NATURAL BUTTES		Type of Work		
Location	SENW 31 9S 22E S 975 FNL 2224 FWL GPS Coord (UTM) 629659E 4428545N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,050' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 31. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect ground water in this area.

Brad Hill
APD Evaluator

6/5/2012
Date / Time

Surface Statement of Basis

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

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

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

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

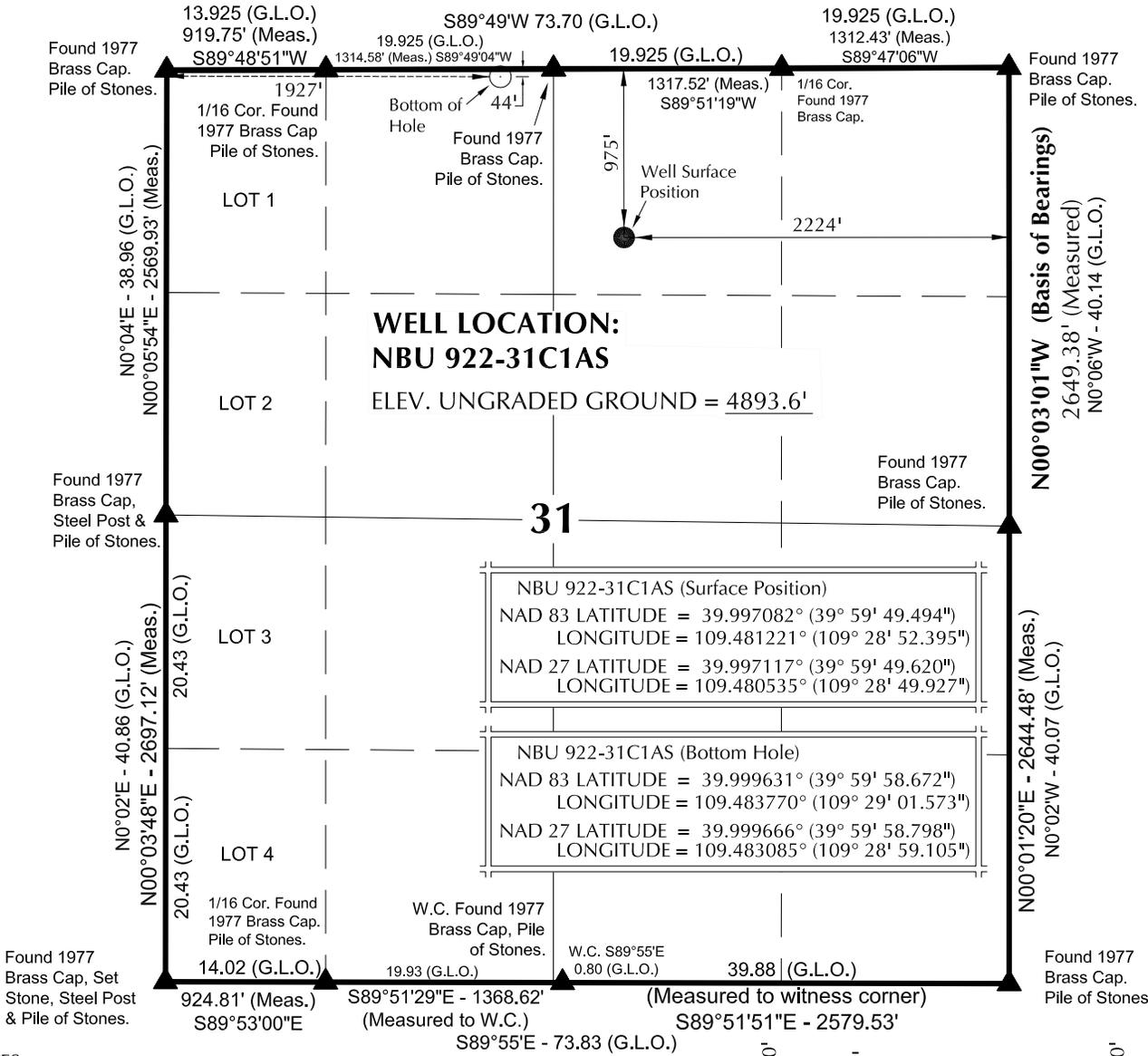
David Hackford
Onsite Evaluator

5/23/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

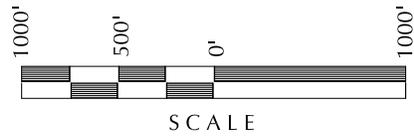
Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the east side of the location.

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



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 N37°33'05"W 1171.96' 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'.



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.

11-04-11
 No. 6028691
JOHN R. LAUGH
 PROFESSIONAL LAND SURVEYOR
 REGISTRATION No. 6028691
 STATE OF UTAH

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

WELL PAD: NBU 922-31B

**NBU 922-31C1AS
 WELL PLAT
 44' FNL, 1927' FWL (Bottom Hole)
 NE ¼ NW ¼ OF SECTION 31, T9S, R22E,
 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

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

DATE SURVEYED: 10-25-11	SURVEYED BY: M.S.B.	SHEET NO: 3 3 OF 18
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'		Date Last Revised: 11-04-11 T.J.R.

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 922-31B
WELLS – NBU 922-30O4BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
Section 31, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit right and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 1.5 miles to a service road to the southeast. Exit right and proceed in a southeasterly direction along the service road approximately 75 feet to a second service road to the northeast. Exit left and proceed in a northeasterly direction along the second service road approximately 0.4 miles to the proposed well pad.

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

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 922-31C1AS**

Surface:	975 FNL / 2224 FEL	NWNE
BHL:	44 FNL / 1927 FWL	NENW

Section 31 T9S R22E

Unitah County, Utah
Mineral Lease: UTU-464**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	1,230'	
Birds Nest	1,577'	Water
Mahogany	2,031'	Water
Wasatch	4,514'	Gas
Mesaverde	7,123'	Gas
Sego	9,316'	Gas
Castlegate	9,384'	Gas
Blackhawk	9,821'	Gas
TVD	10,421'	
TD	10,607'	

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 10421' TVD, approximately equals
 6,878 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,633 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.

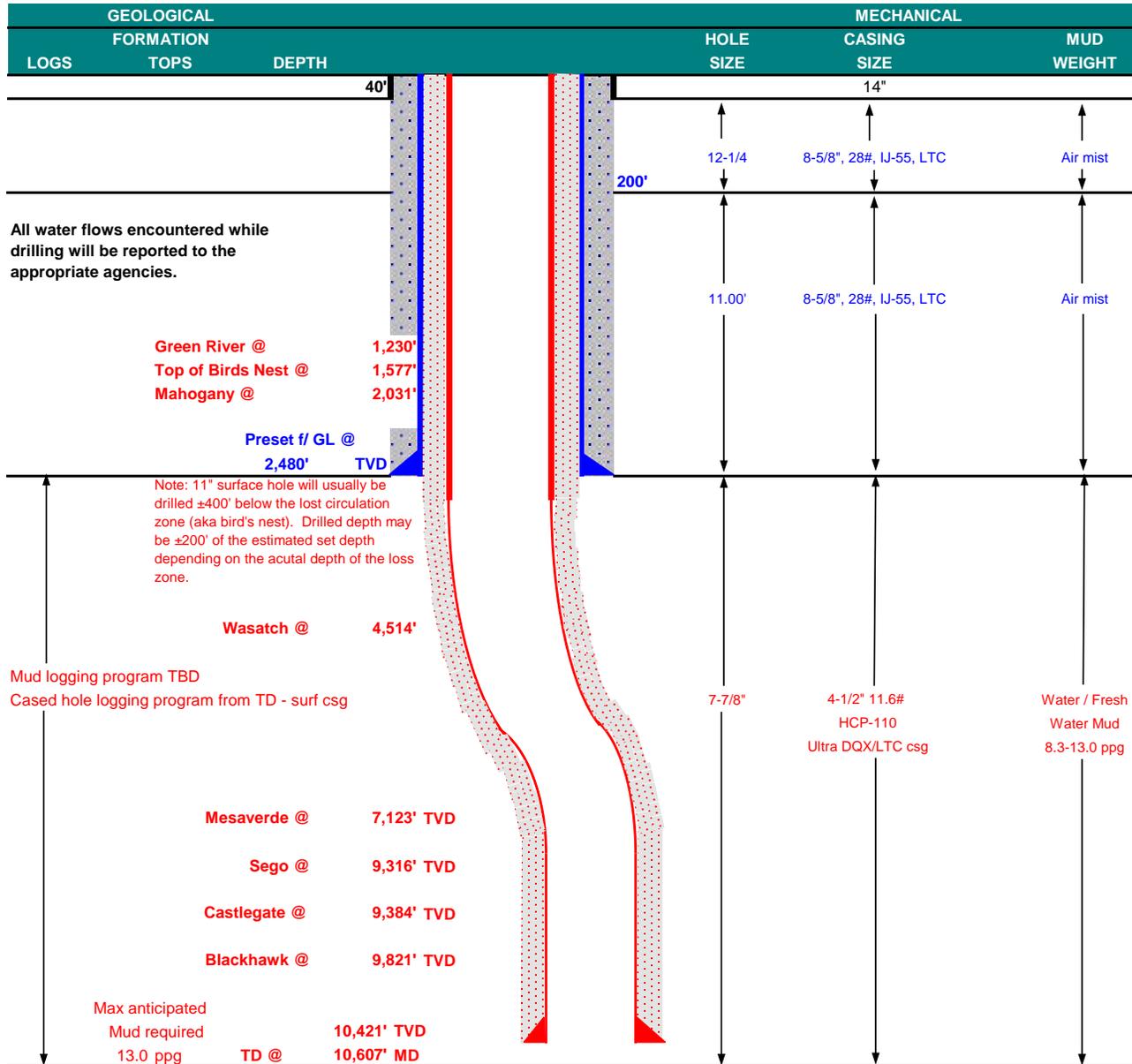
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	April 11, 2012			
WELL NAME	NBU 922-31C1AS		TD	10,421'	TVD	10,607' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,892'
SURFACE LOCATION	NWNE	975 FNL	2224 FEL	Sec 31	T 9S	R 22E	
	Latitude:	39.997082	Longitude:	-109.481221		NAD 83	
BTM HOLE LOCATION	NENW	44 FNL	1927 FWL	Sec 31	T 9S	R 22E	
	Latitude:	39.999631	Longitude:	-109.483770		NAD 83	
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), SITLA (Surface), UDOGM Tri-County Health Dept.						





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,480	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						2.17	1.62	5.72	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	10,690	8,650	279,000	367,174
						1.19	1.23		3.72
	4-1/2"	5,000 to 10,607'	11.60	HCP-110	LTC	1.19	1.23	5.35	

Surface Casing:

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

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs) 1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized						
SURFACE Option 2	LEAD 1,980'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	180	35%	11.00	3.82
	TAIL 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD 4,007'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL 6,600'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,560	35%	14.30	1.31

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

FLOAT EQUIPMENT & CENTRALIZERS

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

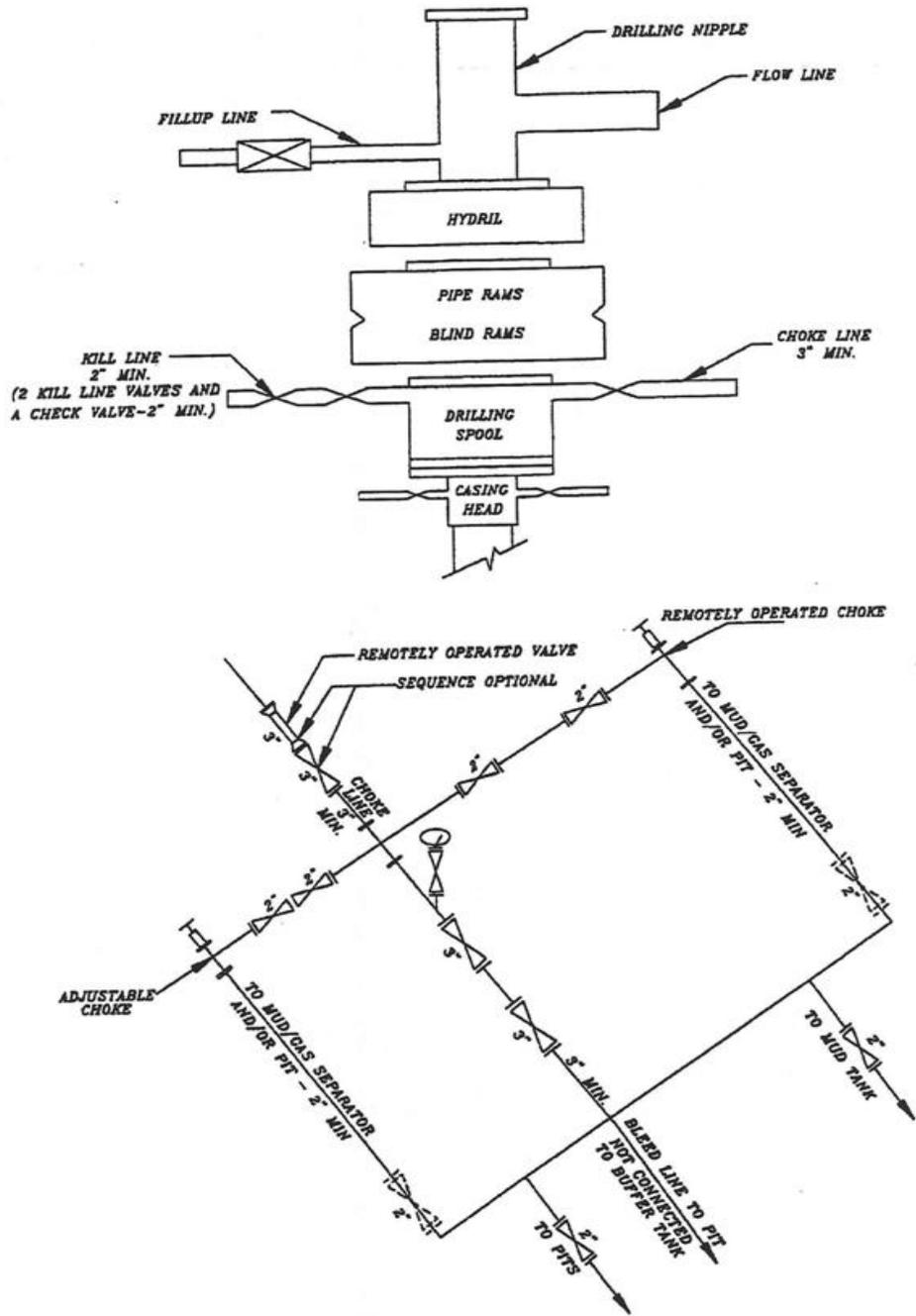
ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.
 BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.
 Surveys will be taken at 1,000' minimum intervals.
 Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

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

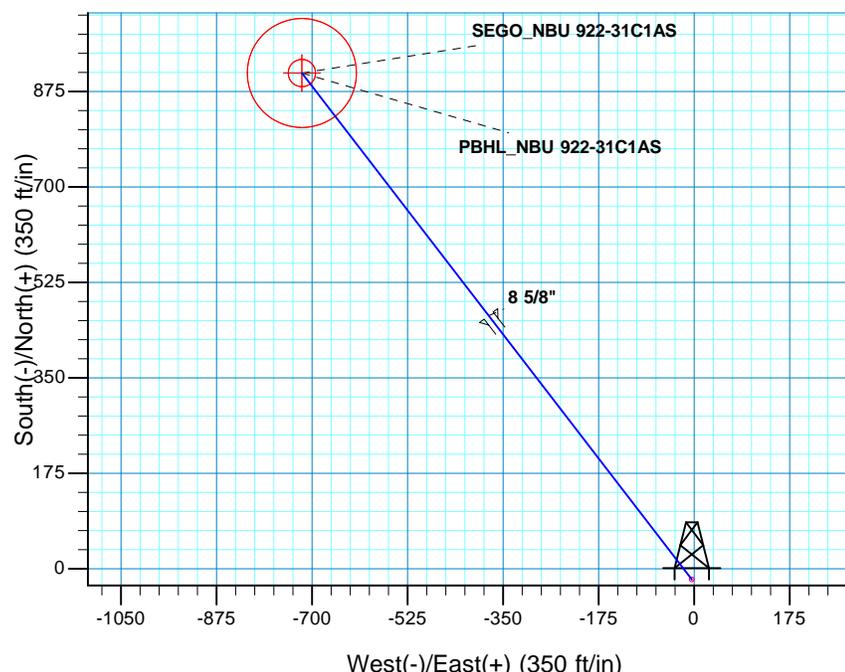
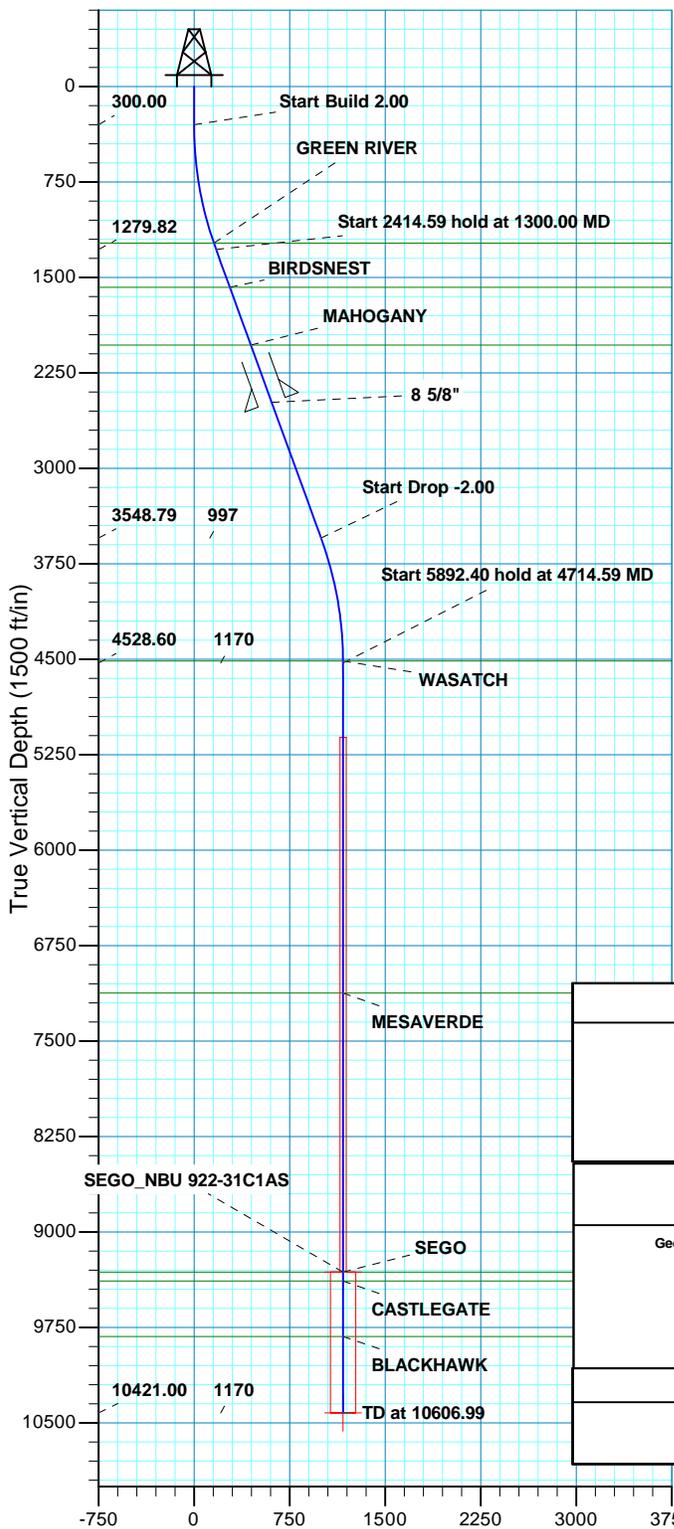
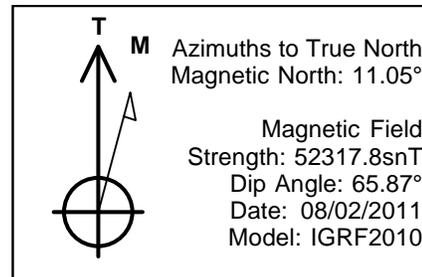
DATE: _____
DATE: _____

EXHIBIT A NBU 922-31C1AS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

WELL DETAILS: NBU 922-31C1AS									
GL 4892 & KB 4 @ 4896.00ft (ASSUMED)									
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
	-19.30	-4.20	14528622.03	2065982.13	39.997117	-109.480535			
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
SEGO	9316.00	909.08	-718.50	14529538.10	2065252.11	39.999666	-109.483085	Circle (Radius: 25.00)	
- plan hits target center									
PBHL	10421.00	909.08	-718.50	14529538.10	2065252.11	39.999666	-109.483085	Circle (Radius: 100.00)	
- plan hits target center									



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	-19.30	-4.20	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-19.30	-4.20	0.00	0.00	0.00	
1300.00	20.00	322.43	1279.82	117.63	-109.56	2.00	322.43	172.55	
3714.59	20.00	322.43	3548.79	772.15	-613.15	0.00	0.00	997.34	
4714.59	0.00	0.00	4528.60	909.08	-718.50	2.00	180.00	1169.89	
10606.99	0.00	0.00	10421.00	909.08	-718.50	0.00	0.00	1169.89	PBHL_NBU 922-31C1AS

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 31 T9S R22E			
System Datum: Mean Sea Level			

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	D
1230.00	1247.16	GREEN RIVER	
1577.00	1616.26	BIRDSNEST	
2031.00	2099.39	MAHOGANY	
4514.00	4699.99	WASATCH	
7123.00	7308.99	MESAVERDE	
9316.00	9501.99	SEGO	
9384.00	9569.99	CASTLEGATE	
9821.00	10006.99	BLACKHAWK	

CASING DETAILS			
TVD	MD	Name	Size
2481.00	2578.27	8 5/8"	8.625



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 922-31B PAD

NBU 922-31C1AS

OH

Plan: PLAN #2

Standard Planning Report

08 March, 2012





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Site NBU 922-31B PAD
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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

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

Well	NBU 922-31C1AS, 975 FNL 2224 FEL					
Well Position	+N/-S	-19.30 ft	Northing:	14,528,622.03 usft	Latitude:	39.997117
	+E/-W	-4.20 ft	Easting:	2,065,982.13 usft	Longitude:	-109.480535
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,892.00 ft

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

Design	PLAN #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	-19.30	-4.20	319.54

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	-19.30	-4.20	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-19.30	-4.20	0.00	0.00	0.00	0.00	
1,300.00	20.00	322.43	1,279.82	117.63	-109.56	2.00	2.00	0.00	322.43	
3,714.59	20.00	322.43	3,548.79	772.15	-613.15	0.00	0.00	0.00	0.00	
4,714.59	0.00	0.00	4,528.60	909.08	-718.50	2.00	-2.00	0.00	180.00	
10,606.99	0.00	0.00	10,421.00	909.08	-718.50	0.00	0.00	0.00	0.00	PBHL_NBU 922-31C



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Site NBU 922-31B PAD
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	-19.30	-4.20	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	-19.30	-4.20	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	-19.30	-4.20	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	-19.30	-4.20	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	322.43	399.98	-17.92	-5.27	1.74	2.00	2.00	0.00
500.00	4.00	322.43	499.84	-13.77	-8.46	6.97	2.00	2.00	0.00
600.00	6.00	322.43	599.45	-6.87	-13.77	15.67	2.00	2.00	0.00
700.00	8.00	322.43	698.70	2.79	-21.20	27.84	2.00	2.00	0.00
800.00	10.00	322.43	797.47	15.19	-30.74	43.47	2.00	2.00	0.00
900.00	12.00	322.43	895.62	30.31	-42.38	62.52	2.00	2.00	0.00
1,000.00	14.00	322.43	993.06	48.14	-56.09	84.99	2.00	2.00	0.00
1,100.00	16.00	322.43	1,089.64	68.65	-71.88	110.84	2.00	2.00	0.00
1,200.00	18.00	322.43	1,185.27	91.82	-89.70	140.04	2.00	2.00	0.00
1,247.16	18.94	322.43	1,230.00	103.67	-98.82	154.96	2.00	2.00	0.00
GREEN RIVER									
1,300.00	20.00	322.43	1,279.82	117.63	-109.56	172.55	2.00	2.00	0.00
Start 2414.59 hold at 1300.00 MD									
1,400.00	20.00	322.43	1,373.78	144.73	-130.41	206.71	0.00	0.00	0.00
1,500.00	20.00	322.43	1,467.75	171.84	-151.27	240.87	0.00	0.00	0.00
1,600.00	20.00	322.43	1,561.72	198.95	-172.12	275.03	0.00	0.00	0.00
1,616.26	20.00	322.43	1,577.00	203.35	-175.51	280.58	0.00	0.00	0.00
BIRDSNEST									
1,700.00	20.00	322.43	1,655.69	226.05	-192.98	309.18	0.00	0.00	0.00
1,800.00	20.00	322.43	1,749.66	253.16	-213.84	343.34	0.00	0.00	0.00
1,900.00	20.00	322.43	1,843.63	280.27	-234.69	377.50	0.00	0.00	0.00
2,000.00	20.00	322.43	1,937.60	307.37	-255.55	411.66	0.00	0.00	0.00
2,099.39	20.00	322.43	2,031.00	334.32	-276.28	445.61	0.00	0.00	0.00
MAHOGANY									
2,100.00	20.00	322.43	2,031.57	334.48	-276.41	445.82	0.00	0.00	0.00
2,200.00	20.00	322.43	2,125.54	361.59	-297.26	479.98	0.00	0.00	0.00
2,300.00	20.00	322.43	2,219.51	388.70	-318.12	514.14	0.00	0.00	0.00
2,400.00	20.00	322.43	2,313.48	415.80	-338.97	548.30	0.00	0.00	0.00
2,500.00	20.00	322.43	2,407.45	442.91	-359.83	582.45	0.00	0.00	0.00
2,578.27	20.00	322.43	2,481.00	464.13	-376.16	609.19	0.00	0.00	0.00
8 5/8"									
2,600.00	20.00	322.43	2,501.42	470.02	-380.69	616.61	0.00	0.00	0.00
2,700.00	20.00	322.43	2,595.39	497.12	-401.54	650.77	0.00	0.00	0.00
2,800.00	20.00	322.43	2,689.35	524.23	-422.40	684.93	0.00	0.00	0.00
2,900.00	20.00	322.43	2,783.32	551.34	-443.26	719.09	0.00	0.00	0.00
3,000.00	20.00	322.43	2,877.29	578.45	-464.11	753.25	0.00	0.00	0.00
3,100.00	20.00	322.43	2,971.26	605.55	-484.97	787.41	0.00	0.00	0.00
3,200.00	20.00	322.43	3,065.23	632.66	-505.82	821.57	0.00	0.00	0.00
3,300.00	20.00	322.43	3,159.20	659.77	-526.68	855.72	0.00	0.00	0.00
3,400.00	20.00	322.43	3,253.17	686.87	-547.54	889.88	0.00	0.00	0.00
3,500.00	20.00	322.43	3,347.14	713.98	-568.39	924.04	0.00	0.00	0.00
3,600.00	20.00	322.43	3,441.11	741.09	-589.25	958.20	0.00	0.00	0.00
3,700.00	20.00	322.43	3,535.08	768.20	-610.11	992.36	0.00	0.00	0.00
3,714.59	20.00	322.43	3,548.79	772.15	-613.15	997.34	0.00	0.00	0.00
Start Drop -2.00									
3,800.00	18.29	322.43	3,629.47	794.35	-630.23	1,025.32	2.00	-2.00	0.00
3,900.00	16.29	322.43	3,724.95	817.91	-648.35	1,055.00	2.00	-2.00	0.00
4,000.00	14.29	322.43	3,821.40	838.81	-664.44	1,081.34	2.00	-2.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Site NBU 922-31B PAD
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,100.00	12.29	322.43	3,918.72	857.03	-678.46	1,104.30	2.00	-2.00	0.00
4,200.00	10.29	322.43	4,016.78	872.55	-690.40	1,123.86	2.00	-2.00	0.00
4,300.00	8.29	322.43	4,115.46	885.34	-700.24	1,139.98	2.00	-2.00	0.00
4,400.00	6.29	322.43	4,214.65	895.40	-707.98	1,152.66	2.00	-2.00	0.00
4,500.00	4.29	322.43	4,314.21	902.71	-713.60	1,161.87	2.00	-2.00	0.00
4,600.00	2.29	322.43	4,414.04	907.26	-717.11	1,167.60	2.00	-2.00	0.00
4,699.99	0.29	322.43	4,514.00	909.05	-718.48	1,169.86	2.00	-2.00	0.00
WASATCH									
4,700.00	0.29	322.43	4,514.01	909.05	-718.48	1,169.86	2.00	-2.00	0.00
4,714.59	0.00	0.00	4,528.60	909.08	-718.50	1,169.89	2.00	-2.00	0.00
Start 5892.40 hold at 4714.59 MD									
4,800.00	0.00	0.00	4,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
4,900.00	0.00	0.00	4,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,000.00	0.00	0.00	4,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,100.00	0.00	0.00	4,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,200.00	0.00	0.00	5,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,300.00	0.00	0.00	5,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,400.00	0.00	0.00	5,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,500.00	0.00	0.00	5,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,600.00	0.00	0.00	5,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,700.00	0.00	0.00	5,514.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,800.00	0.00	0.00	5,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
5,900.00	0.00	0.00	5,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,000.00	0.00	0.00	5,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,100.00	0.00	0.00	5,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,200.00	0.00	0.00	6,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,300.00	0.00	0.00	6,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,400.00	0.00	0.00	6,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,500.00	0.00	0.00	6,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,600.00	0.00	0.00	6,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,700.00	0.00	0.00	6,514.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,800.00	0.00	0.00	6,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
6,900.00	0.00	0.00	6,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,000.00	0.00	0.00	6,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,100.00	0.00	0.00	6,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,200.00	0.00	0.00	7,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,300.00	0.00	0.00	7,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,308.99	0.00	0.00	7,123.00	909.08	-718.50	1,169.89	0.00	0.00	0.00
MESAVERDE									
7,400.00	0.00	0.00	7,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,500.00	0.00	0.00	7,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,600.00	0.00	0.00	7,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,700.00	0.00	0.00	7,514.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,800.00	0.00	0.00	7,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
7,900.00	0.00	0.00	7,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,000.00	0.00	0.00	7,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,100.00	0.00	0.00	7,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,200.00	0.00	0.00	8,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,300.00	0.00	0.00	8,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,400.00	0.00	0.00	8,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,500.00	0.00	0.00	8,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,600.00	0.00	0.00	8,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00
8,700.00	0.00	0.00	8,514.01	909.08	-718.50	1,169.89	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Site NBU 922-31B PAD
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,800.00	0.00	0.00	8,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,501.99	0.00	0.00	9,316.00	909.08	-718.50	1,169.89	0.00	0.00	0.00	
SEGO - SEGO_NBU 922-31C1AS										
9,569.99	0.00	0.00	9,384.00	909.08	-718.50	1,169.89	0.00	0.00	0.00	
CASTLEGATE										
9,600.00	0.00	0.00	9,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,514.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,614.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,714.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,814.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,006.99	0.00	0.00	9,821.00	909.08	-718.50	1,169.89	0.00	0.00	0.00	
BLACKHAWK										
10,100.00	0.00	0.00	9,914.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,014.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,114.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,214.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,314.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,414.01	909.08	-718.50	1,169.89	0.00	0.00	0.00	
10,606.99	0.00	0.00	10,421.00	909.08	-718.50	1,169.89	0.00	0.00	0.00	
TD at 10606.99 - PBHL_NBU 922-31C1AS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SEGO_NBU 922-31C1A - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,316.00	909.08	-718.50	14,529,538.10	2,065,252.11	39.999666	-109.483085	
PBHL_NBU 922-31C1A: - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,421.00	909.08	-718.50	14,529,538.10	2,065,252.11	39.999666	-109.483085	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,578.27	2,481.00	8 5/8"	8.625	11.000		



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Site NBU 922-31B PAD
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 4892 & KB 4 @ 4896.00ft (ASSUMED)
Site:	NBU 922-31B PAD	North Reference:	True
Well:	NBU 922-31C1AS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,247.16	1,230.00	GREEN RIVER			
1,616.26	1,577.00	BIRDSNEST			
2,099.39	2,031.00	MAHOGANY			
4,699.99	4,514.00	WASATCH			
7,308.99	7,123.00	MESAVERDE			
9,501.99	9,316.00	SEGO			
9,569.99	9,384.00	CASTLEGATE			
10,006.99	9,821.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	-19.30	-4.20	Start Build 2.00	
1,300.00	1,279.82	117.63	-109.56	Start 2414.59 hold at 1300.00 MD	
3,714.59	3,548.79	772.15	-613.15	Start Drop -2.00	
4,714.59	4,528.60	909.08	-718.50	Start 5892.40 hold at 4714.59 MD	
10,606.99	10,421.00	909.08	-718.50	TD at 10606.99	

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

Surface Use Plan of Operations
 1 of 13

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

NBU 922-31B PAD

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

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

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

A. Existing Roads:

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

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

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

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Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

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

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

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

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

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

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

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

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

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

No new access road is proposed. Please see Topo B

C. Location of Existing Wells:

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A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 922-31BT, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on April 11, 2012. The CIGE 148 has been plugged and abandoned since December 23, 2008. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

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

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

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

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

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

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

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

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

- $\pm 340'$ (0.1 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 2,040'$ (0.4 miles) – Section 31 T9S R22E (NW/4 NE/4) – On-lease UT ST ML-22935-A, SITLA surface and UTU-464, BLM surface, New 6" buried liquid gathering pipeline from the south edge of the pad and traveling southwest to tie-in to the existing buried liquid gathering line at SE/4 NW/4 of Section 31.

Pipeline Gathering Construction

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

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

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

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

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

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

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

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

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

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

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

The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

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

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

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

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

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

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

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

E. Location and Types of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Construction Materials:

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

G. Methods for Handling Waste:

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

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

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

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

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

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

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

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

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

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

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

Materials Management

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

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

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

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

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

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

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

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

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

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

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

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

J. Plans for Surface Reclamation:

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

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

Interim Reclamation

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

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

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

Final Reclamation

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

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

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

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

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

Measures Common to Interim and Final Reclamation

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

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

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

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

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

Weed Control

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

4/11/2012

Monitoring

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

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

K. Surface/Mineral Ownership:

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

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

L. Other Information:

Cultural and Paleontological Resources

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

Resource Reports:

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

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

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

Proposed Action Annual Emissions Tables:

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

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

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

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

Uintah Basin Data

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

Surface Use Plan of Operations
13 of 13

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

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

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

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

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

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

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

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



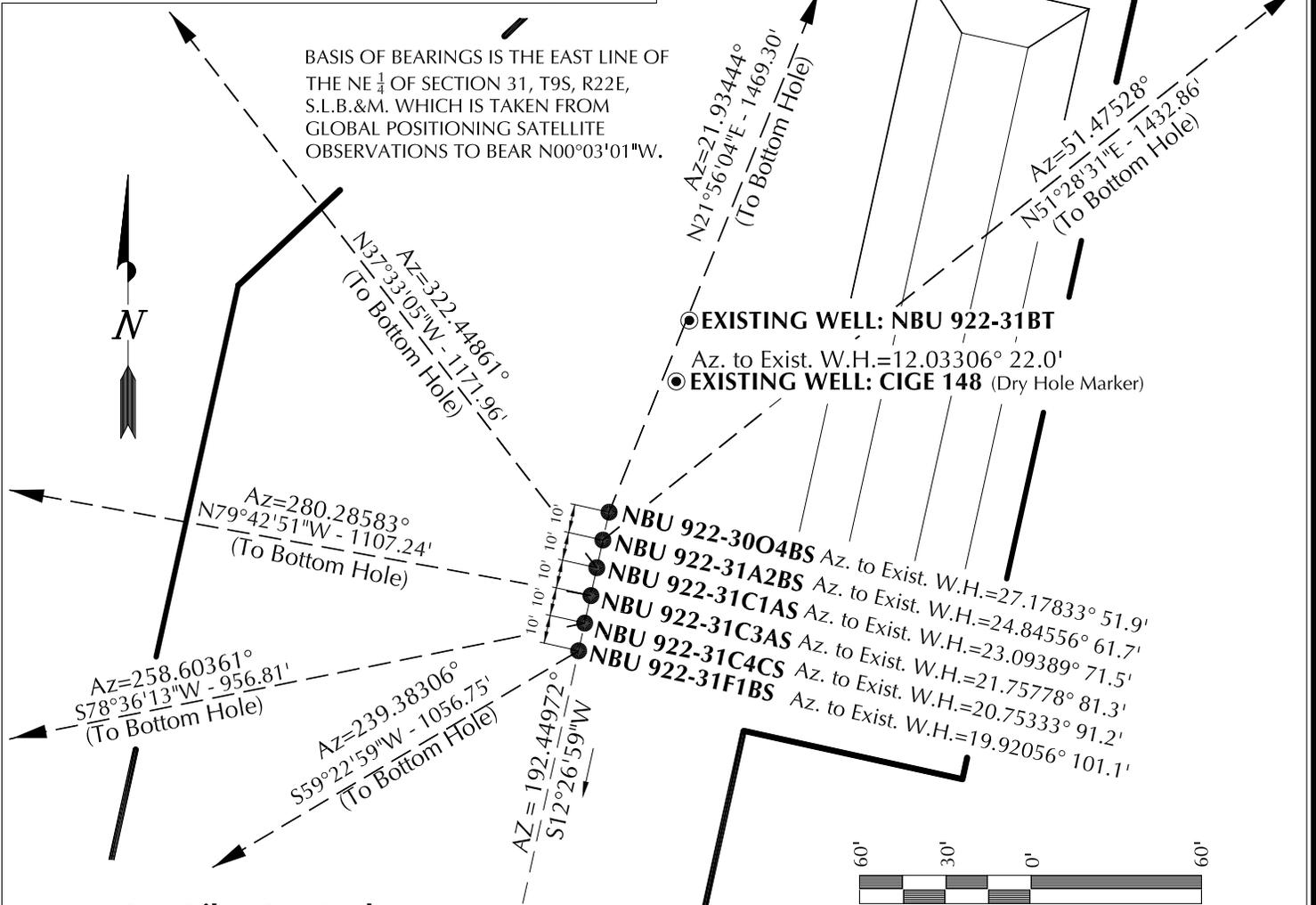
Gina T. Becker

April 11, 2012
Date

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

RELATIVE COORDINATES - From Surface Position to Bottom Hole

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



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

WELL PAD - NBU 922-31B

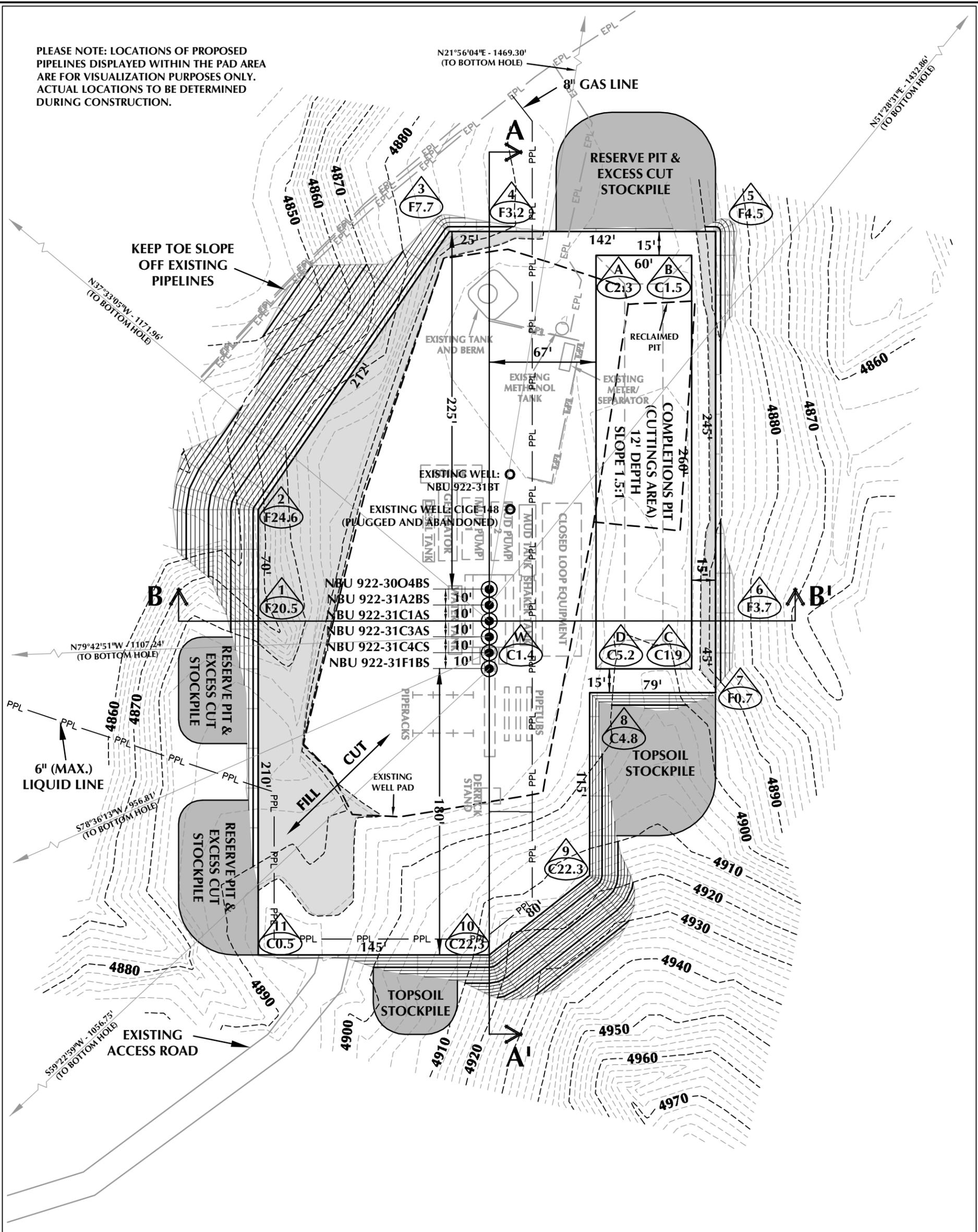
WELL PAD INTERFERENCE PLAT
WELLS - NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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

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

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

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



WELL PAD - NBU 922-31B (CLOSED LOOP) DESIGN SUMMARY

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

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

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



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 2155 North Main Street
 Sheridan, WY 82801
 Phone 307-674-0609
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WELL PAD QUANTITIES

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

COMPLETIONS PIT QUANTITIES

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

WELL PAD LEGEND

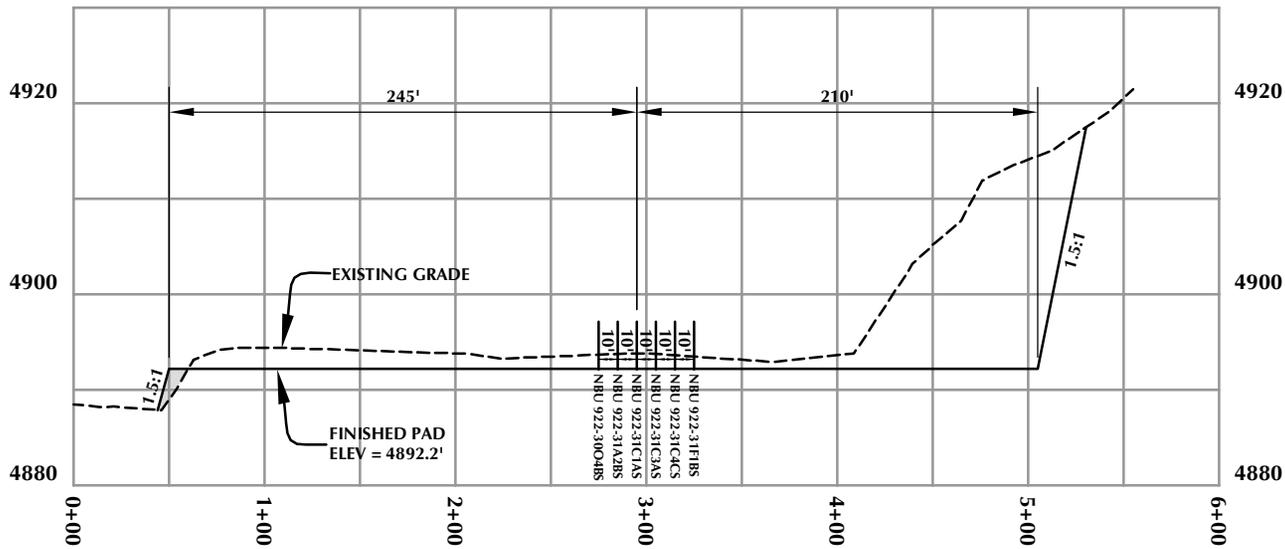
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



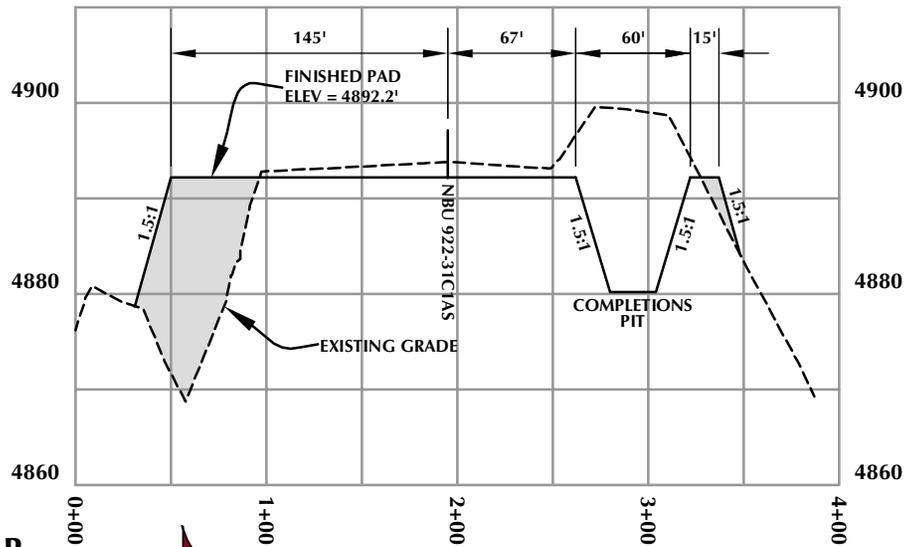
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

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

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



CROSS SECTION A-A'



CROSS SECTION B-B'

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1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-31B

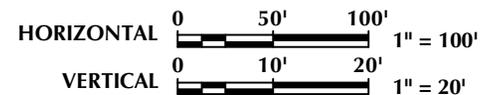
WELL PAD - CROSS SECTIONS
NBU 922-3004BS, NBU 922-31A2BS,
NBU 922-31C1AS, NBU 922-31C3AS,
NBU 922-31C4CS & NBU 922-31F1BS
LOCATED IN SECTION 31, T9S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



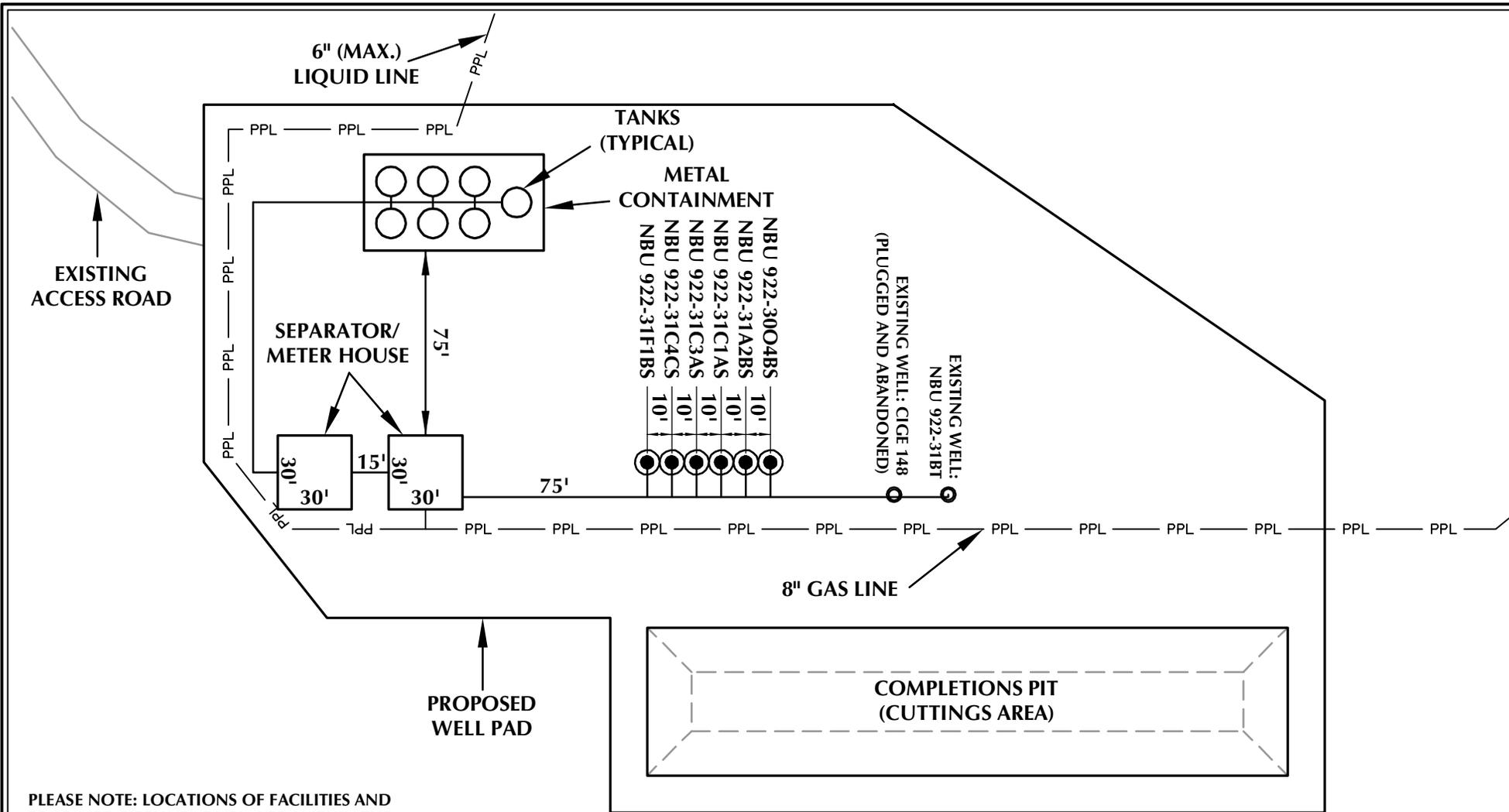
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
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ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



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



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

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

WELL PAD - NBU 922-31B

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



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

WELL PAD LEGEND

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



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

Date: 1/4/11

SHEET NO:

REVISED:

JFE
11/4/11

10 10 OF 18

K:\MADARRO\2010\010_36_NBU_FOCUS_SEC_922-30\DWGS\NBU 922-31B\NBU 922-31B.dwg, 11/2/2011 5:54:42 PM, kimberly

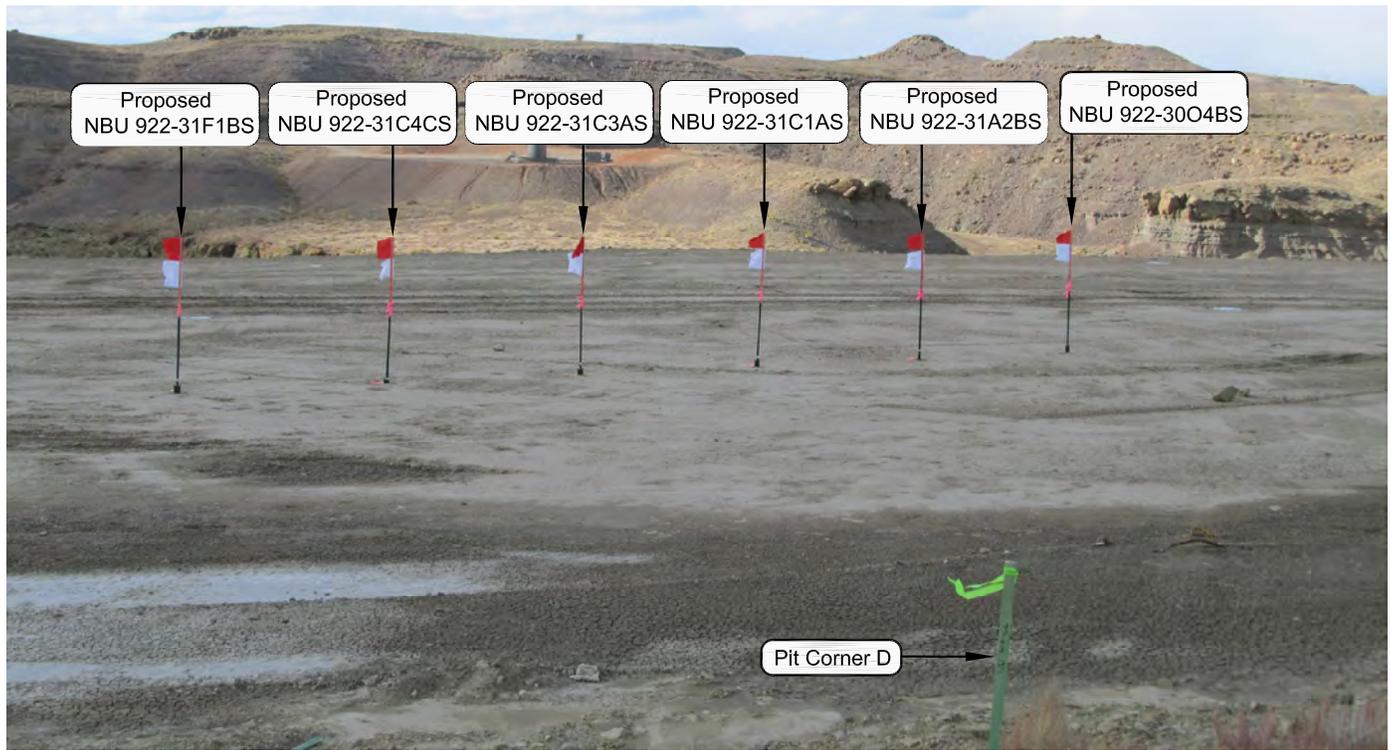


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

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

WELL PAD - NBU 922-31B

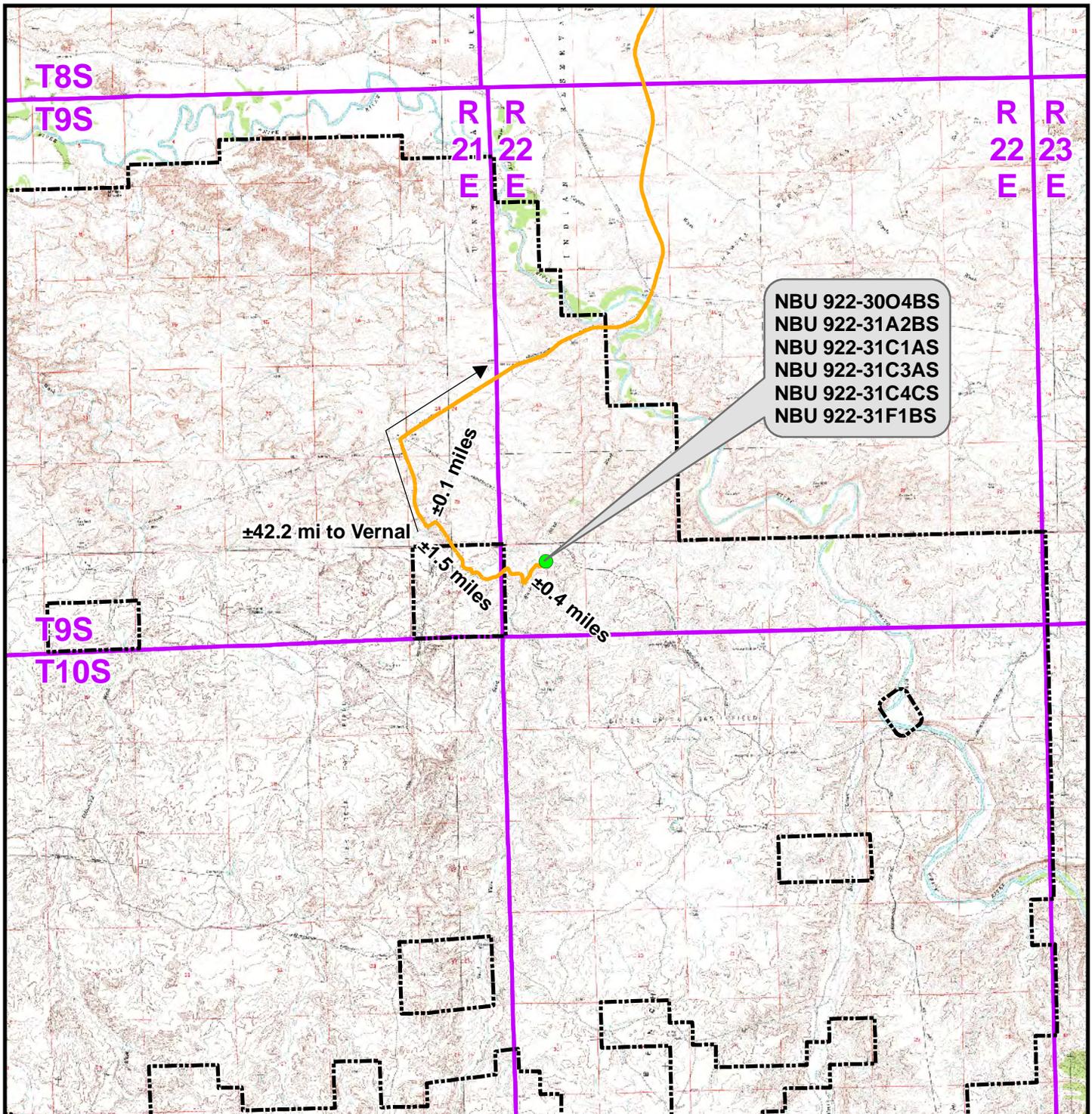
LOCATION PHOTOS
 NBU 922-3004BS, NBU 922-31A2BS,
 NBU 922-31C1AS, NBU 922-31C3AS,
 NBU 922-31C4CS & NBU 922-31F1BS
 LOCATED IN SECTION 31, T9S, R22E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 10-25-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 11
DATE DRAWN: 08-02-10	DRAWN BY: B.M.	
Date Last Revised: 11-04-11 T.J.R.		11 OF 18



Legend

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

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

WELL PAD - NBU 922-31B

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

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

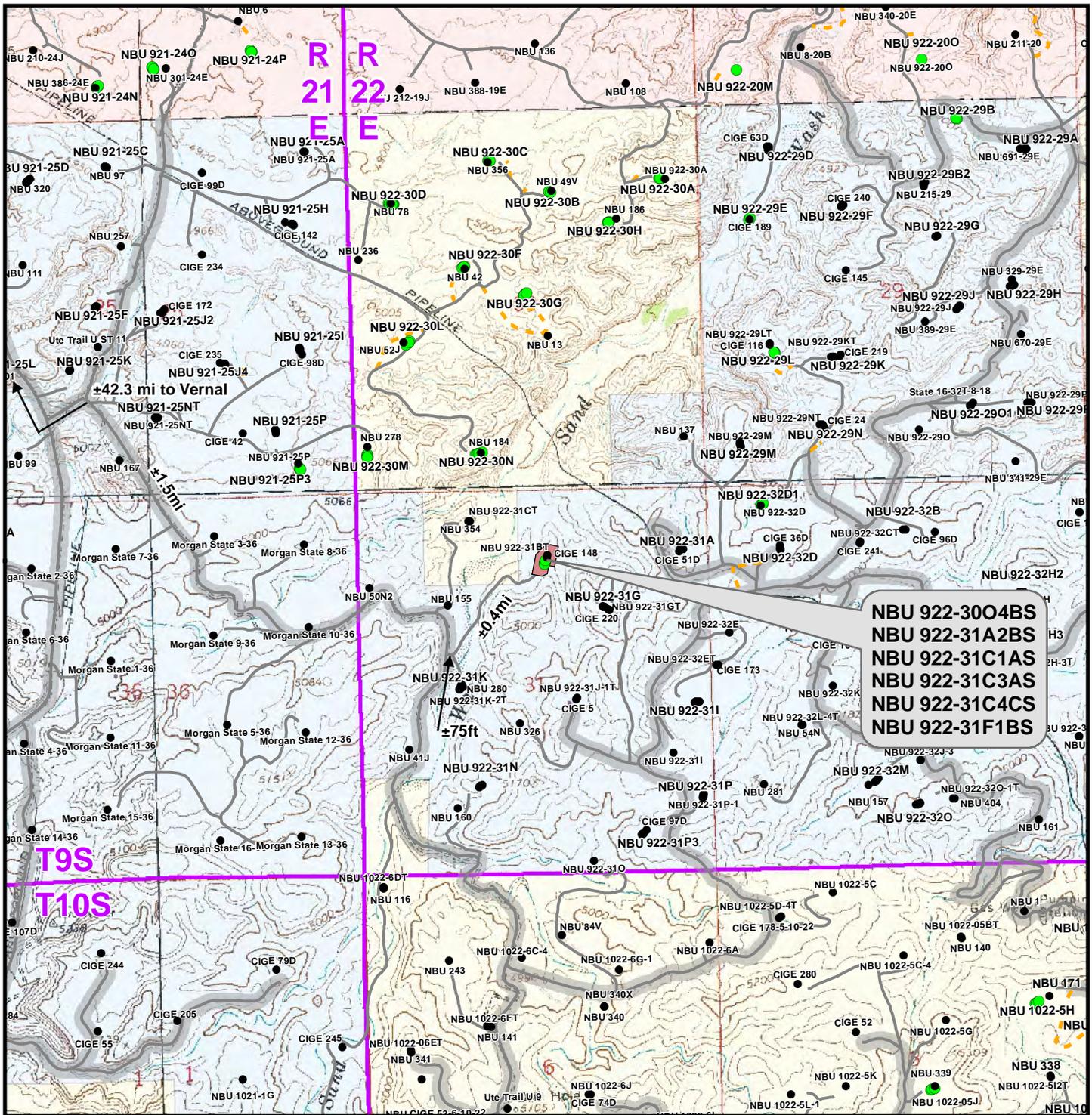
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	12 12 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 4 Nov 2011	



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

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

WELL PAD - NBU 922-31B

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

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

1099 18th Street
 Denver, Colorado 80202



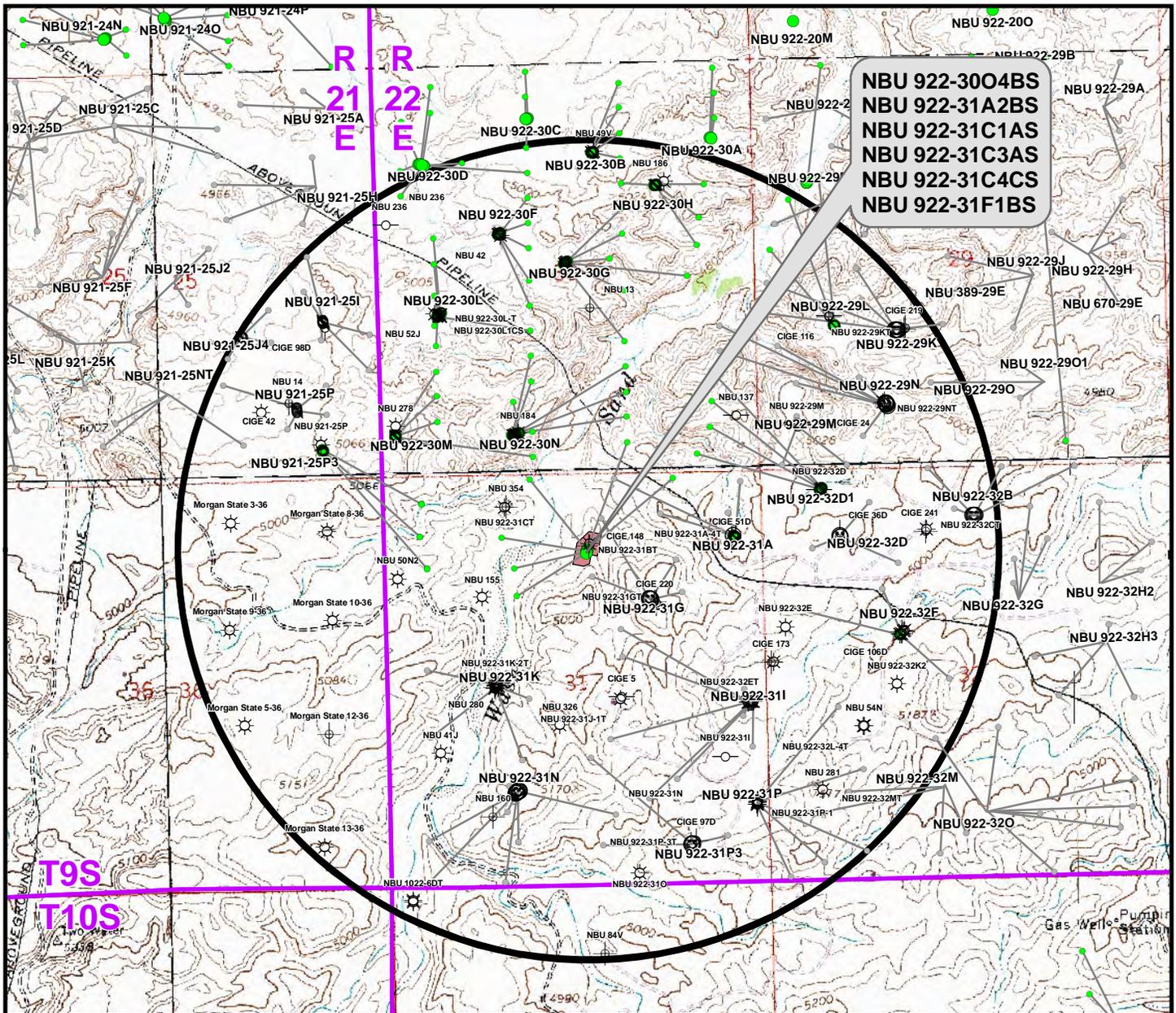
CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182



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

SHEET NO:

13 OF 18



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

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

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

Legend

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

WELL PAD - NBU 922-31B

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

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

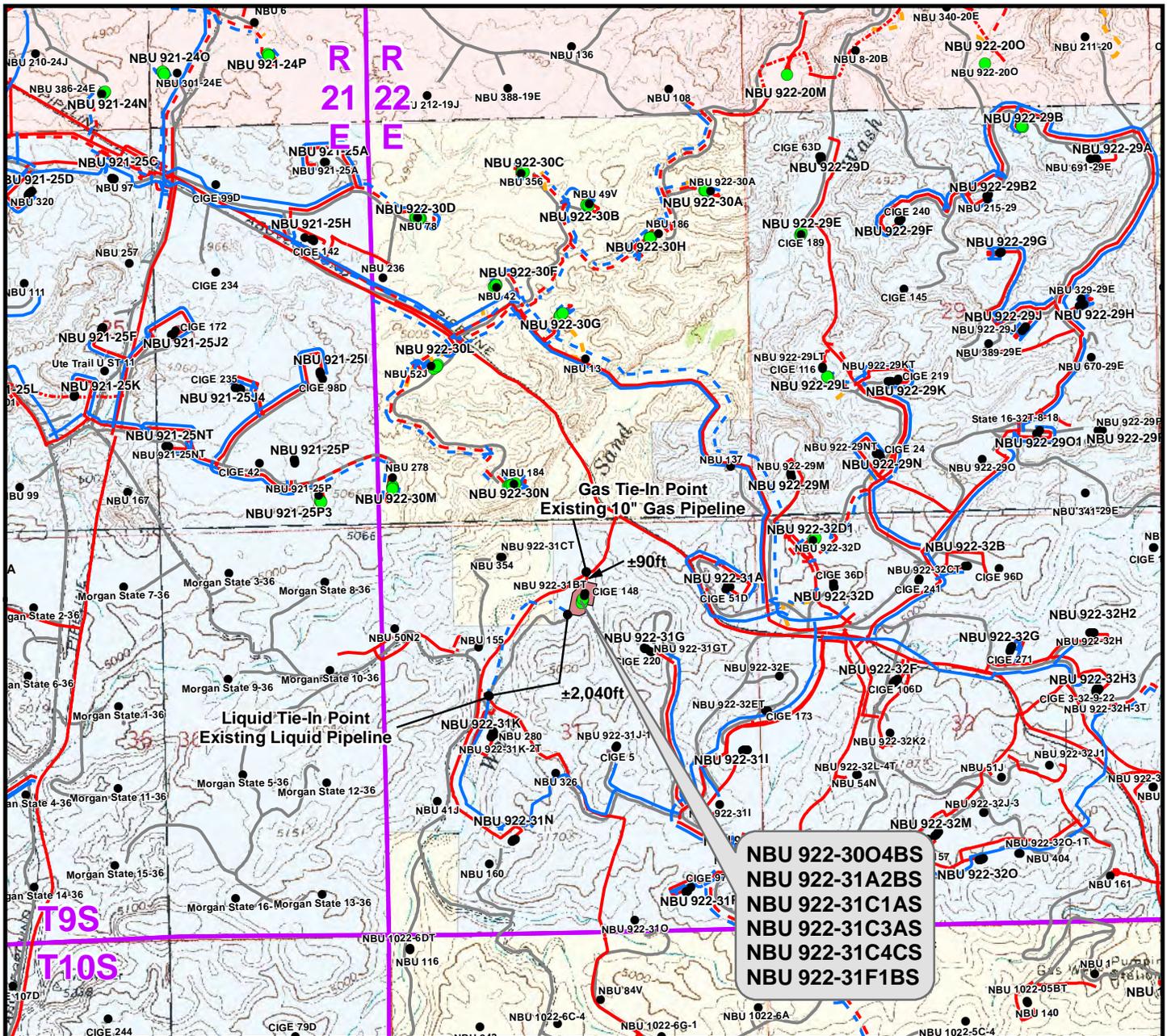


CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182



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

SHEET NO:
14
 14 OF 18



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

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

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

Legend

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

WELL PAD - NBU 922-31B

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

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

1099 18th Street
 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED: TL

NAD83 USP Central

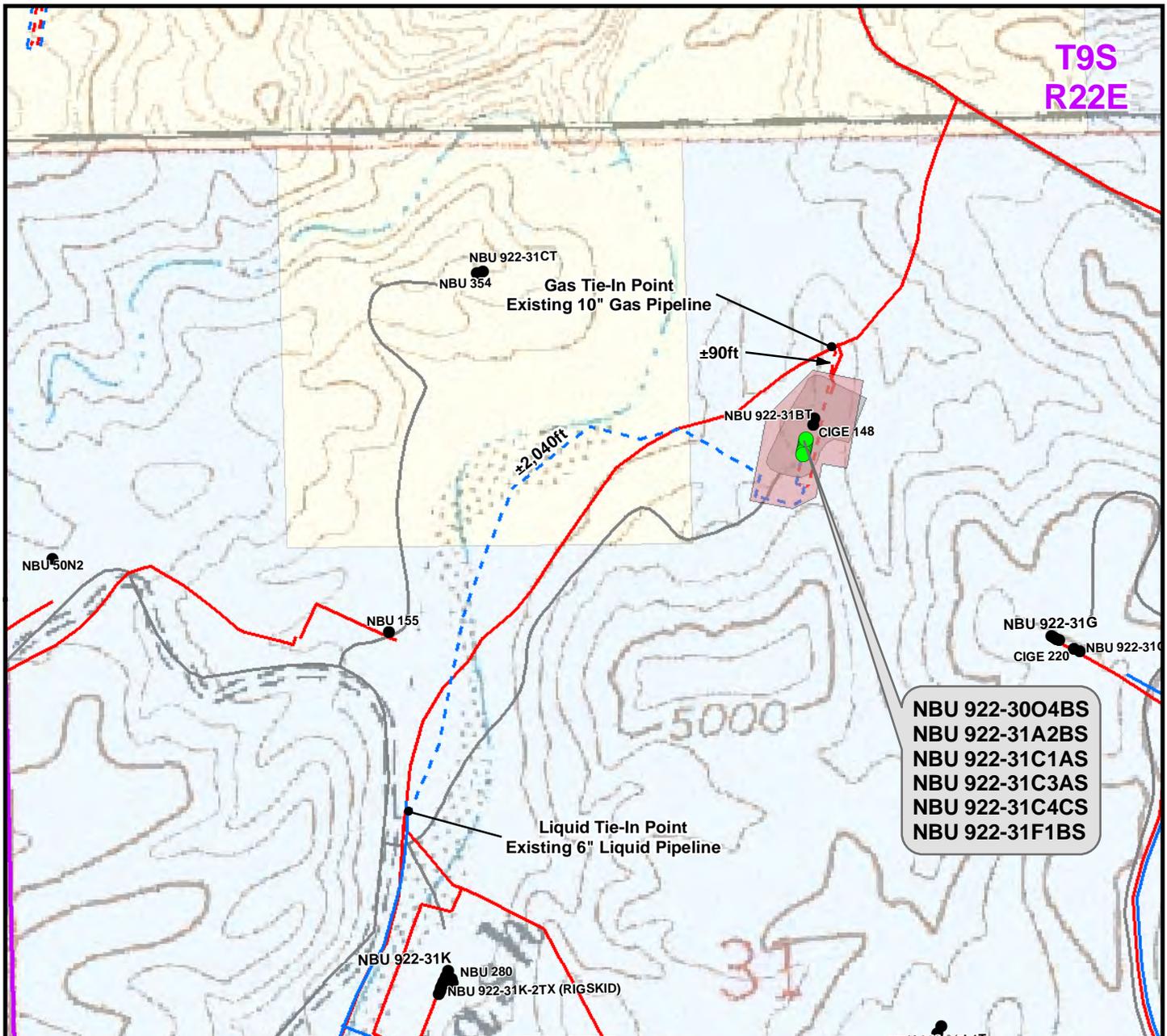
DATE: 14 Jan 2011

DATE: 4 Nov 2011

SHEET NO:

15

15 OF 18



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

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

Legend

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

WELL PAD - NBU 922-31B

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

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

1099 18th Street
 Denver, Colorado 80202

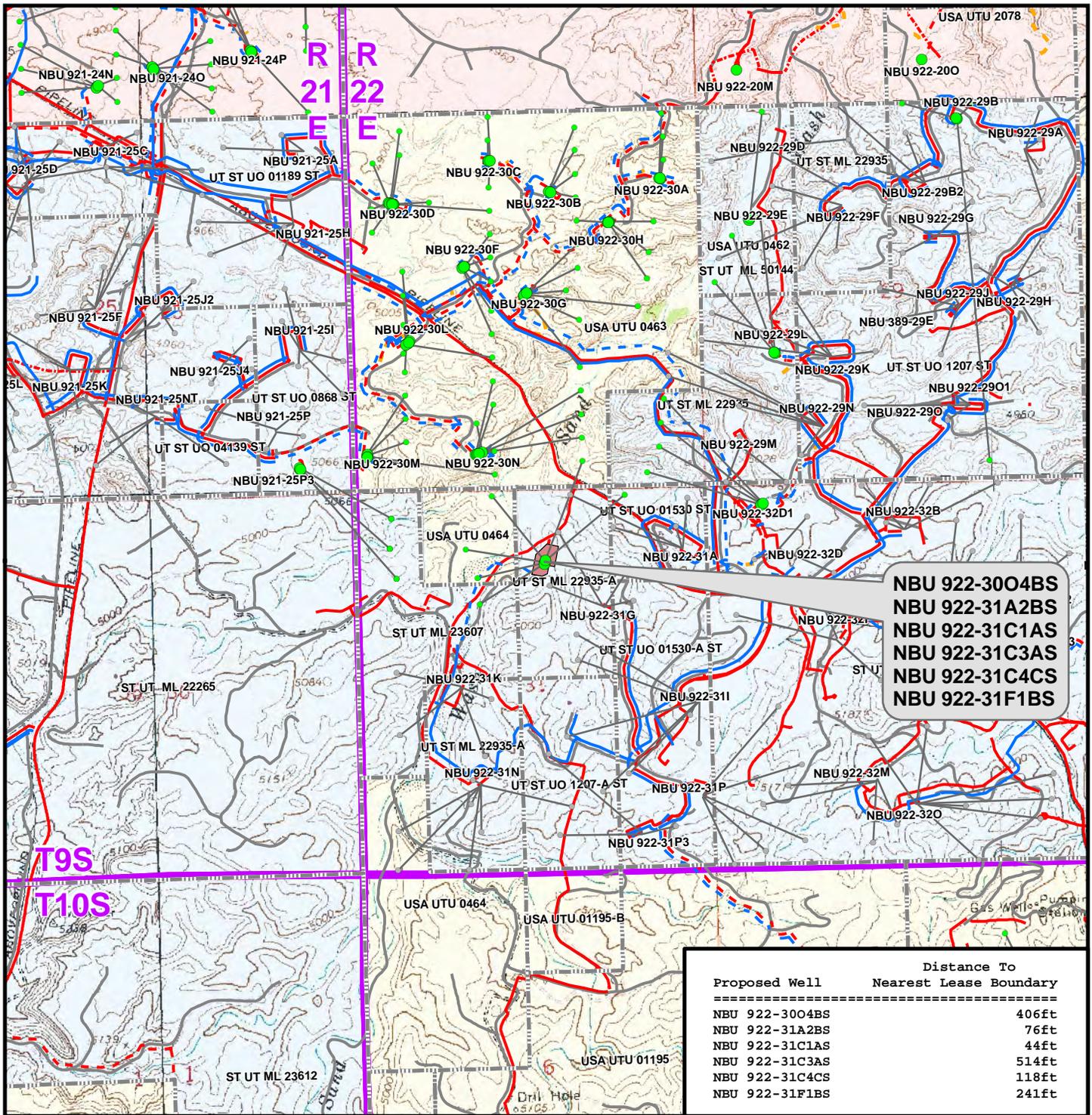


CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182



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

SHEET NO:
16 OF 18



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

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

Legend

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Grey dot)
- Bottom Hole - Existing (Black dot)
- Well Path (Black line)
- Well Pad (Red shaded area)
- Lease Boundary (Black dashed line)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow shaded area)
- Indian Reservation (Red shaded area)
- State (Blue shaded area)
- Private (White shaded area)

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

**Kerr-McGee Oil &
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SCALE: 1" = 2,000ft

DRAWN: TL

REVISED: TL

NAD83 USP Central

DATE: 14 Jan 2011

DATE: 4 Nov 2011

SHEET NO:
17

17 OF 18

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 922-31C1AS	
9. API NUMBER: 43047510860000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well	1. TYPE OF WELL Gas Well
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 31 Township: 09.0S Range: 22.0E Meridian: S	

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

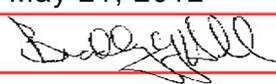
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 5/19/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: May 21, 2012

By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 5/15/2012	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047510860000

API: 43047510860000

Well Name: NBU 922-31C1AS

Location: 0975 FNL 2224 FWL QTR SENW SEC 31 TWP 090S RNG 220E MER S

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

Date Original Permit Issued: 5/20/2010

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: Danielle Piernot

Date: 5/15/2012

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510860000
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: 0975 FNL 2224 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: 6/22/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The operator is asking to re-route the liquid pipeline route. After the onsite with UDOGM/SITLA/BLM, the BLM required the operator to move the liquid pipeline route. Attached is an updated SUPO, pad & facilities design and topos. No other changes were required.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 July 16, 2012

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

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

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

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

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

A. Existing Roads:

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

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

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

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

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

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

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

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

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

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

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

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

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

No new access road is proposed. Please see Topo B

C. Location of Existing Wells:

6/21/2012

RECEIVED: Jun. 22, 2012

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 922-31BT, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on April 11, 2012. The CIGE 148 has been plugged and abandoned since December 23, 2008. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

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

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

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

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

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

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

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

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

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

Pipeline Gathering Construction

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

6/21/2012

RECEIVED: Jun. 22, 2012

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

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

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

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

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

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

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

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

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

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

The Anadarko Completions Transportation System (ACTS) information:

Please refer to Exhibit C for ACTs Lines

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

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

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

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

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

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

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

E. Location and Types of Water Supply:

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

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

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

No water well is to be drilled on this lease.

F. Construction Materials:

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

G. Methods for Handling Waste:

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

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

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

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

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

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

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

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

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

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

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

Materials Management

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

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

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

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

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

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

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

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

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

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

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

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

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

J. Plans for Surface Reclamation:

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

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

Interim Reclamation

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

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

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

Final Reclamation

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

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

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

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

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

Measures Common to Interim and Final Reclamation

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

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

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

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

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

Weed Control

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

6/21/2012

Monitoring

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

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

K. Surface/Mineral Ownership:

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

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

L. Other Information:

Cultural and Paleontological Resources

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

Resource Reports:

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

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

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

Proposed Action Annual Emissions Tables:

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

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

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

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

Uintah Basin Data

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

Surface Use Plan of Operations
13 of 13

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

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

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

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

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

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

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

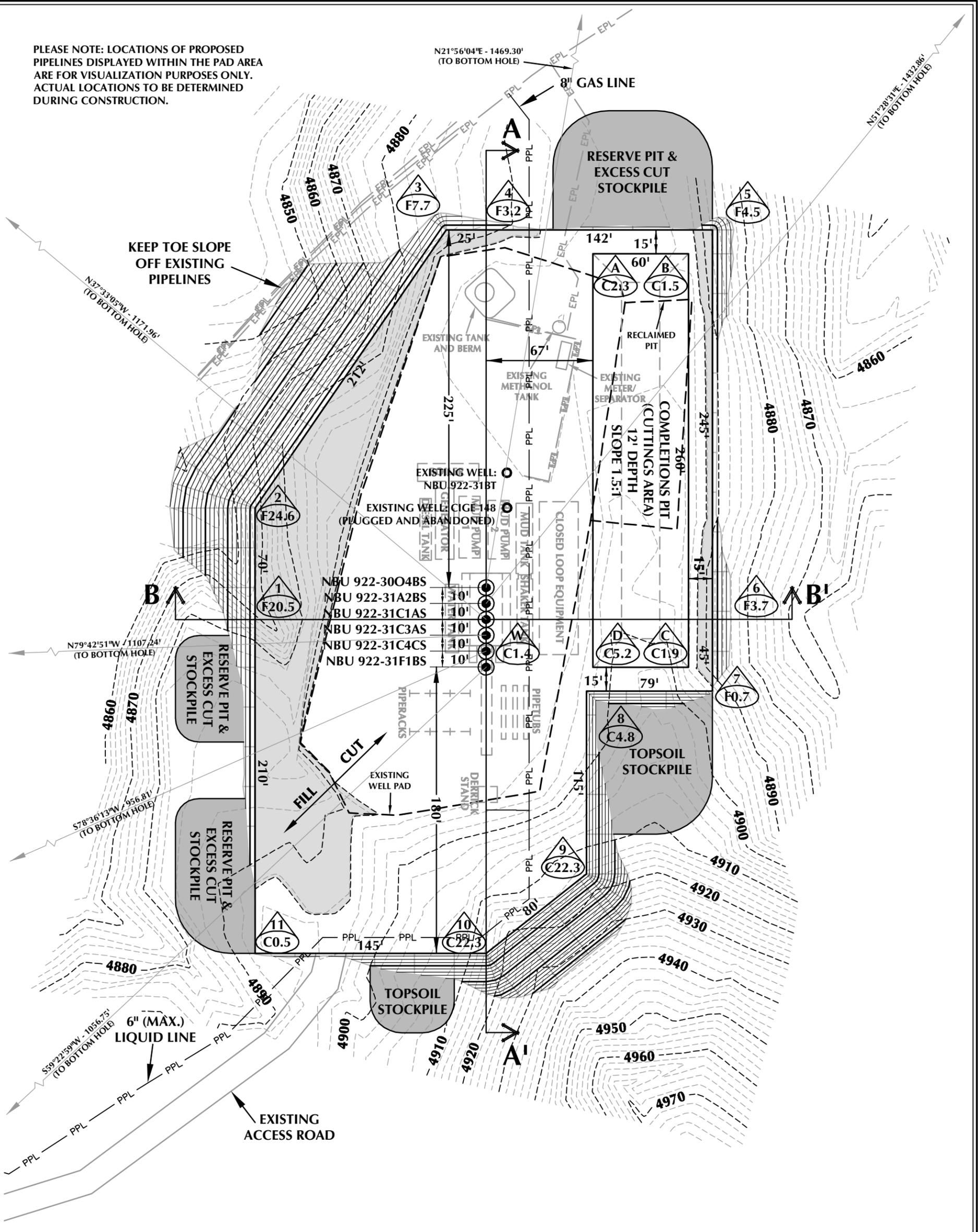
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan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



Gina T. Becker

June 21, 2012
Date

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



WELL PAD - NBU 922-31B (CLOSED LOOP) DESIGN SUMMARY

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

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

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



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

WELL PAD QUANTITIES

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

COMPLETIONS PIT QUANTITIES

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

WELL PAD LEGEND

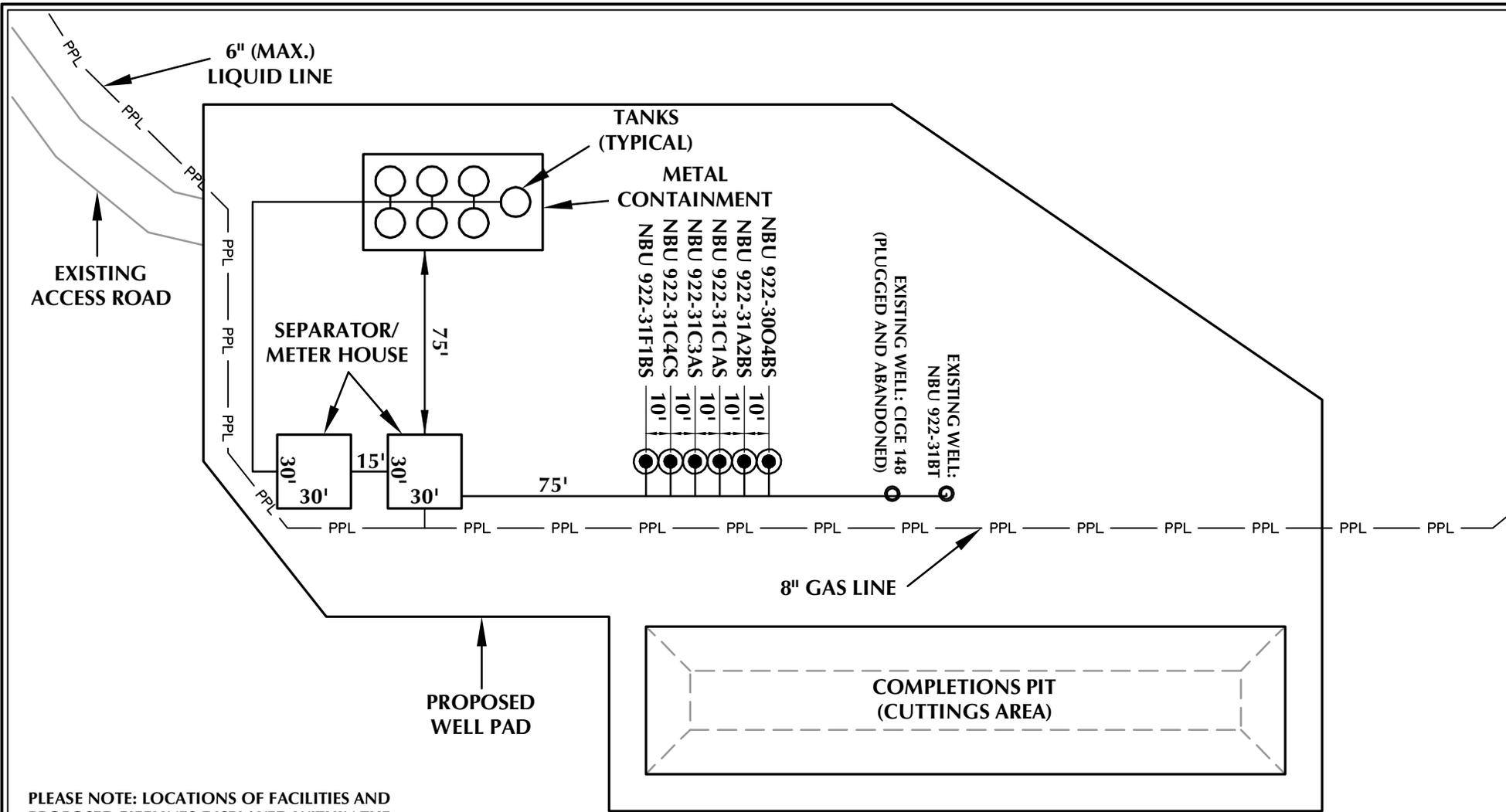
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



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

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

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



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

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

WELL PAD - NBU 922-31B

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



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

WELL PAD LEGEND

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



HORIZONTAL 0 30' 60' 1" = 60'

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

(435) 789-1365

Scale: 1"=60'

Date: 1/4/11

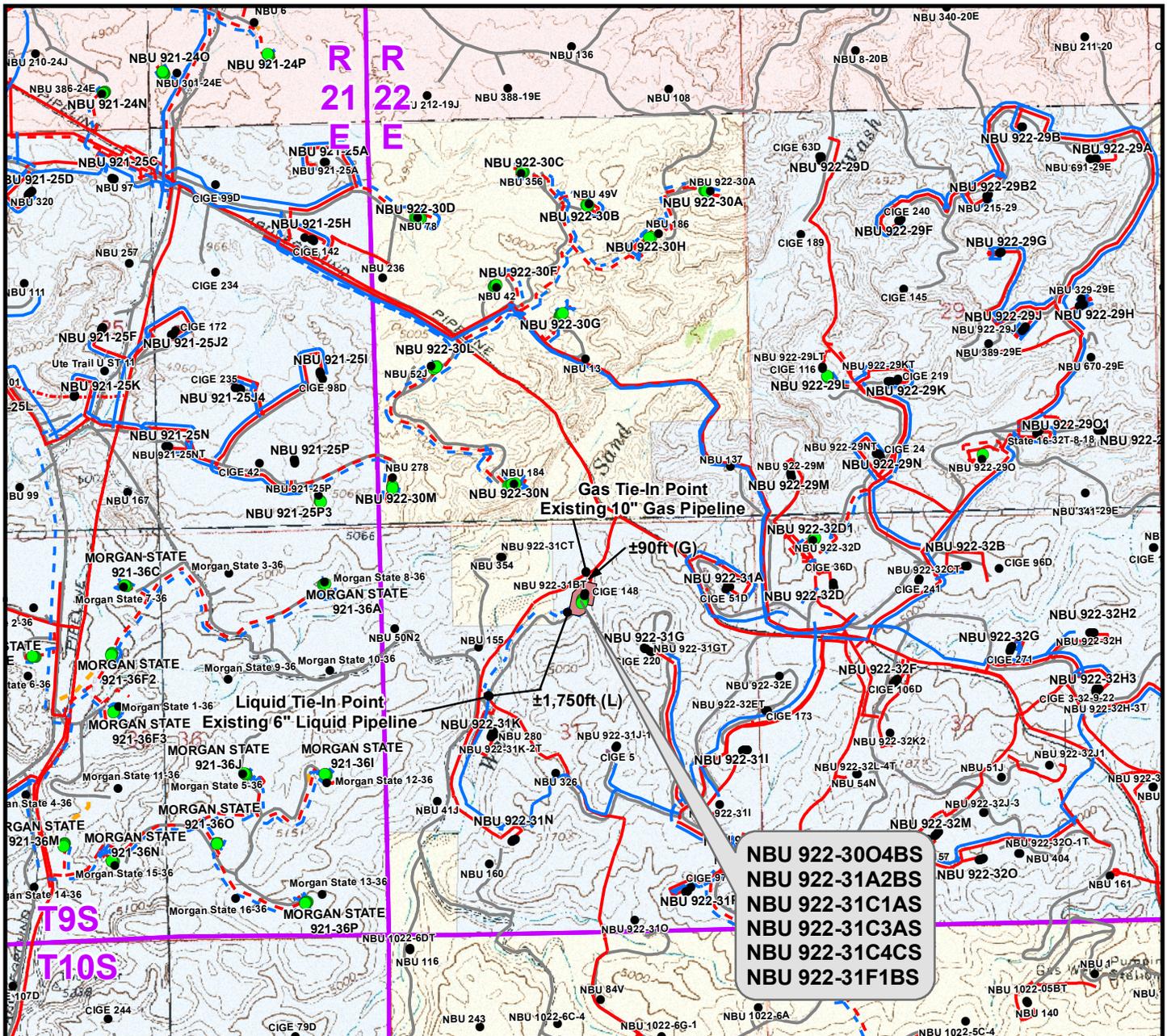
SHEET NO:

REVISED:

DJD
6/14/12

10 10 OF 18

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

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

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

Legend

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

WELL PAD - NBU 922-31B

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

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

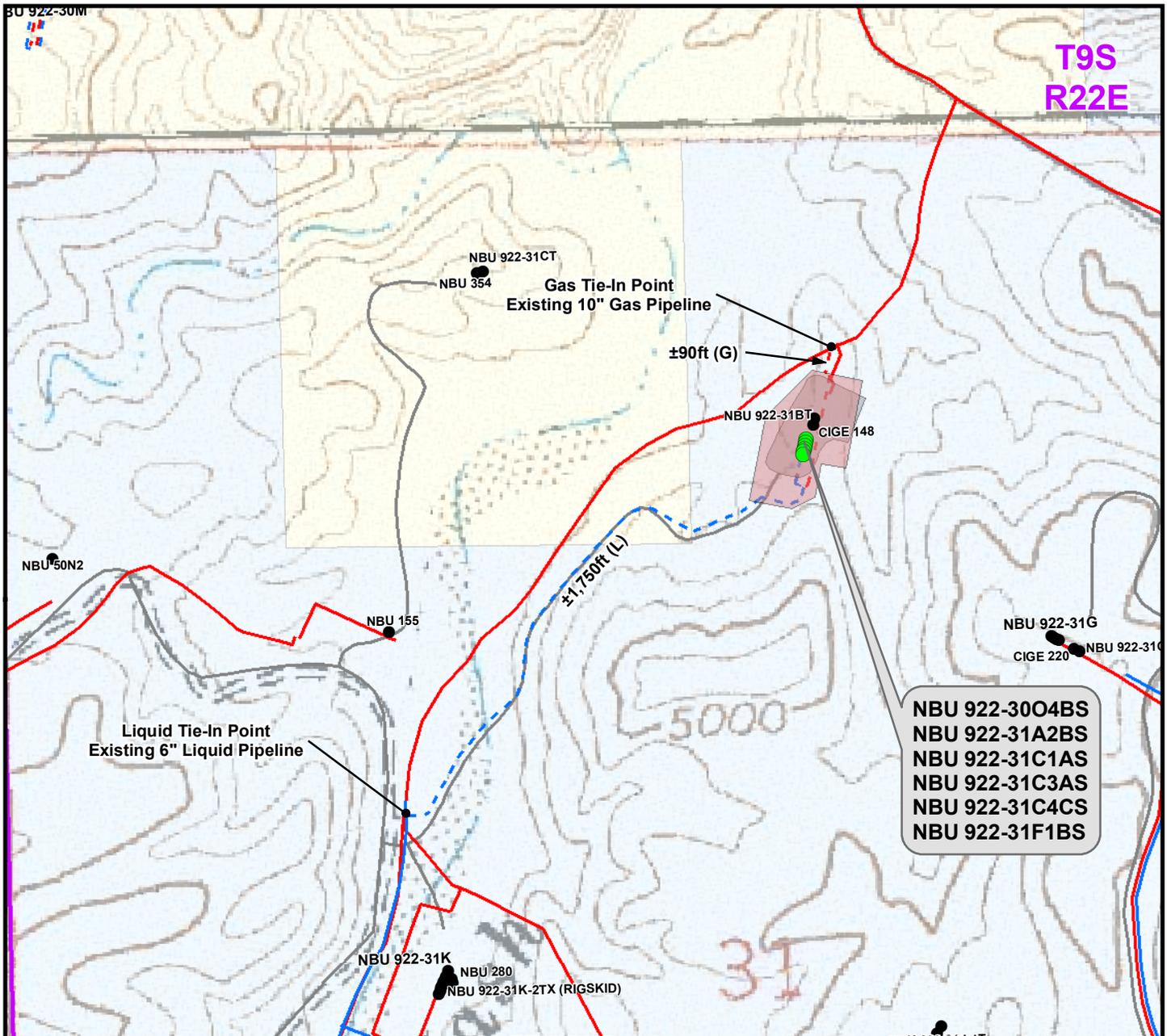
1099 18th Street
 Denver, Colorado 80202

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

N

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

SHEET NO:
15 OF 18



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

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±215ft	Proposed 8" (Meter House to Edge of Pad)	±375ft
Proposed 6" (Max.) (Edge of Pad to Existing 6" Liquid Pipeline)	±1,750ft	Proposed 8" (Edge of Pad to Existing 10" Gas Pipeline)	±90ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,965ft	TOTAL PROPOSED GAS PIPELINE =	±465ft

Legend

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

WELL PAD - NBU 922-31B

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

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

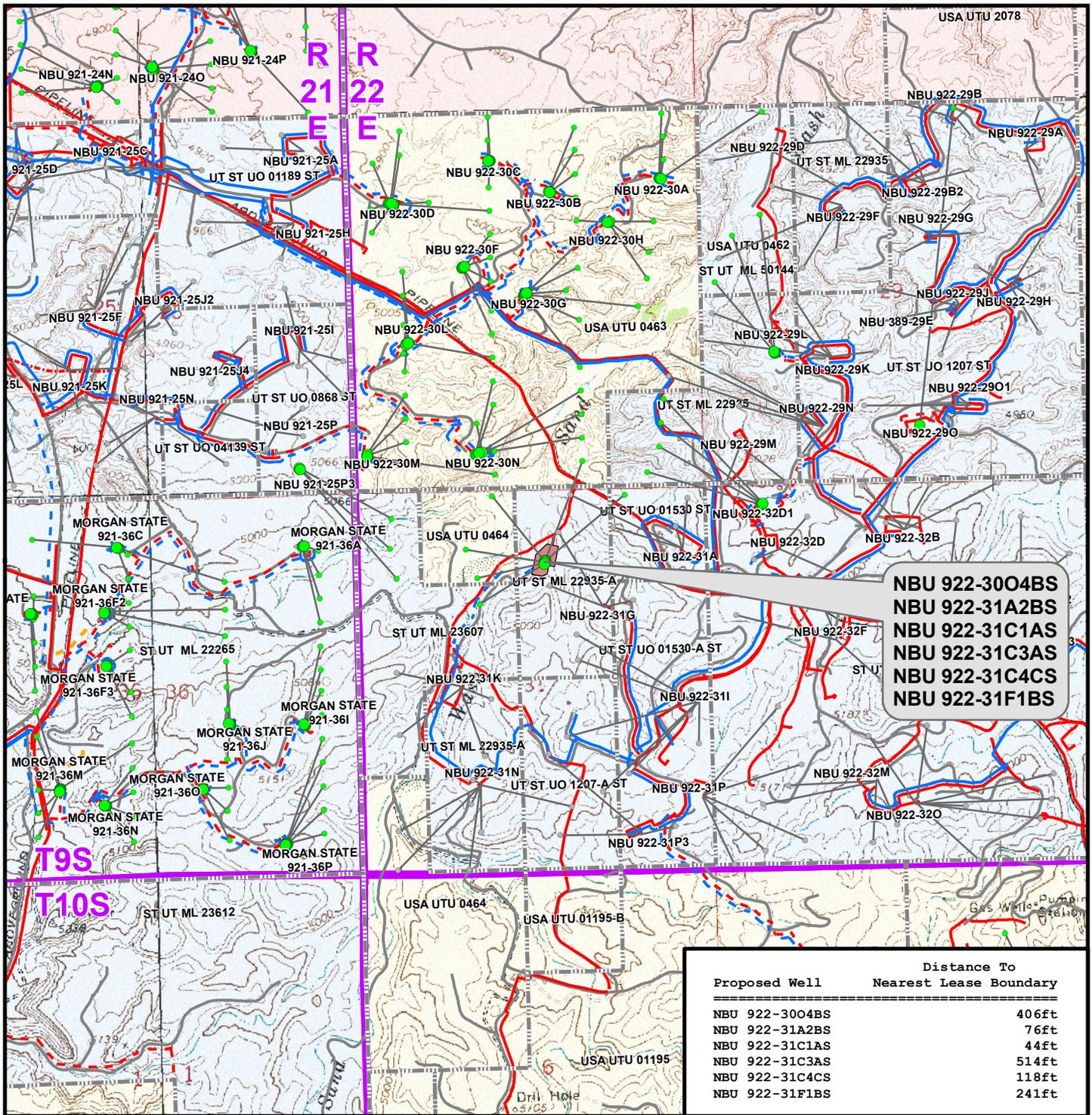
1099 18th Street
 Denver, Colorado 80202



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



SCALE: 1" = 500ft	NAD83 USP Central	16 16 OF 18
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 15 June 2012	



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

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

Legend

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

WELL PAD - NBU 922-31B

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

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

1099 18th Street
 Denver, Colorado 80202

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

N

SCALE: 1" = 2,000ft	NAD83 USP Central	17
DRAWN: TL	DATE: 14 Jan 2011	
REVISED: TL	DATE: 15 June 2012	

SHEET NO:
17 OF 18

RECEIVED

MAY 05 2010
APR 20 2012

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM, Vernal Utah

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-464
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. If Unit or CA Agreement, Name and No. UTU63047A Natural Buttes Unit
3a. Address P.O. BOX 173779 DENVER, COLORADO 80202-3779		8. Lease Name and Well No. NBU 922-31C1AS
3b. Phone No. (include area code) PHONE 720-929-6086 FAX 720-929-7086		9. API Well No. 4304751086
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface NWNE 975 FNL 2224 FEL LAT = 39.997082 LONG = -109.481221 At proposed prod. Zone NENW 44 FNL 1927 FWL LAT = 39.999631 LONG = -109.48377		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from the nearest town or post office* Approximately 44 miles Southeast from Vernal, Utah		11. Sec., T., R., M., or Bk. and Survey or Area 31 T 9S R 22E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 44	16. No. of acres in lease 206.97	12. County or Parish UINTAH
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 465	19. Proposed Depth 10607 MD 10421 TVD	13. State UT
21. Elevations (Show whether DF, RT, GR, etc.) 4892.2 GR	22. Approximate date work will start* 7/13/2012	17. Spacing Unit dedicated to this well RECEIVED FEB 13 2013 DIV. OF OIL, GAS & MINING WYB000291
23. Estimated duration 60-90 DAYS		24. Attachments

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

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

25. Signature 	Name (Printed/ Typed) GINA T BECKER	Date April 13, 2012
Title REGULATORY ANALYST II		

Approved By (Signature) 	Name (Printed/ Typed) Jerry Kenczka	Date JAN 22 2013
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

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

Kerr-McGee Oil & Gas Onshore, L.P. hereby certifies that it is authorized by the proper lease interest owners and responsible under the terms and conditions of the lease to conduct lease operations associated with this application.

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED

10RRH0377AE

NO NOS

UDOGM



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



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Kerr McGee Oil & Gas Onshore Location: NWNE, Sec. 31, T9S, R22E
Well No: NBU 922-31C1AS Lease No: UTU-464
43-047-51086 Agreement: NATURAL BUTTES UNIT

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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

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

NOTIFICATION REQUIREMENTS

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

***SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

SITE SPECIFIC COA's

None due to State Surface.

**DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)**

SITE SPECIFIC DOWNHOLE COAs:

- A Gamma Ray Log shall be run from TD to surface.

Variances Granted:

Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for two truck/trailer mounted air compressors located within 40 feet from the well bore and 60' from the blooie line.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.

FIT test. Variance granted due to well-known geology and problems that can occur with FIT test.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a

test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510860000
10. PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 5/20/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: May 14, 2013
By:

NAME (PLEASE PRINT) Teena Paulo	PHONE NUMBER 720 929-6236	TITLE Staff Regulatory Specialist
SIGNATURE N/A	DATE 5/10/2013	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047510860000

API: 43047510860000

Well Name: NBU 922-31C1AS

Location: 0975 FNL 2224 FWL QTR NWNE SEC 31 TWNP 090S RNG 220E MER S

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

Date Original Permit Issued: 5/20/2010

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

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

Signature: Teena Paulo

Date: 5/10/2013

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510860000
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: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE 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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 8/7/2013	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:100px;" type="text"/>

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

Spud well 08/07/2013 @ 11:30. MIRU Triple A Bucket Rig, drill 20" conductor hole to 40', run 14", 36.7# schedule 10 conductor pipe, cement with 28 sacks ready mix. Anticipated surface spud date and surface casing cement 08/14/2013.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 August 09, 2013

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 8/9/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510860000
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: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE 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: 10/4/2013	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<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.

No new activity since last report. Well TD at 2,636 ft.

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510860000
5. PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input 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: 1/2/2014	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Drilling to TD, currently at 8,349.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 January 03, 2014**

NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBER 720 929 6582	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 1/2/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464
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 922-31C1AS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 31 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047510860000
PHONE NUMBER: 720 929-6100	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: Uintah
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 3/31/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The NBU 922-31C1AS was placed on production 03/31/2014 after a new well completion. Producing from the MESAVERDE.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 April 01, 2014**

NAME (PLEASE PRINT) Doreen Green	PHONE NUMBER 435 781-9758	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 4/1/2014	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0464	

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 922-31C1AS
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047510860000
---	---

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6111	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
---	--------------------------------------	--

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0975 FNL 2224 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE 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"/> 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"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/2/2014			

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

Started completing the well. Well TD at 9,535 ft.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 April 08, 2014

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

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU464

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____			7. Unit or CA Agreement Name and No. UTU63047A		
2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE			8. Lease Name and Well No. NBU 922-31C1AS		
3. Address P.O. BOX 173779 DENVER, CO 82017			9. API Well No. 43-047-51086		
3a. Phone No. (include area code) Ph: 720-929-6000			10. Field and Pool, or Exploratory NATURAL BUTTES		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NWNE 975FNL 2224FEL 39.997082 N Lat, 109.481221 W Lon At top prod interval reported below NENW 42FNL 1919FWL At total depth NENW 59FNL 1941FWL			11. Sec., T., R., M., or Block and Survey or Area Sec 31 T9S R22E Mer SLB		
14. Date Spudded 08/07/2013		15. Date T.D. Reached 01/02/2014		16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 03/31/2014	
17. Elevations (DF, KB, RT, GL)* 4916 KB		18. Total Depth: MD 9535 TVD 9342		19. Plug Back T.D.: MD 9467 TVD 9274	
20. Depth Bridge Plug Set: MD TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) RADIAL CBL/GR/CCL/TEMP		22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis)	

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 J-55	28.0	24	2627		905		0	
7.875	4.500 I-80	11.6	24	9514		3300		1558	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8914							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	7399	9333	7399 TO 9333	0.410	189	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
7399 TO 9333	PUMP 10,411 BBLS SLICKWATER, 48 BBLS 15% ACID, AND 213,864 LBS 30/50 SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/31/2014	04/08/2014	24	→	0.0	1892.0	0.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg. 1438 SI	Csg. Press. 2060.0	24 Hr. Rate →	Oil BBL 0	Gas MCF 1892	Water BBL 0	Gas:Oil Ratio	Well Status PGW	

28a. Production - Interval B

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

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

ELECTRONIC SUBMISSION #242295 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER	1297
				BIRD'S NEST	1687
				MAHOGANY	2159
				WASATCH	4740
				MESAVERDE	7388

32. Additional remarks (include plugging procedure):

The first 210 ft. of the surface hole was drilled with a 12 ? in. bit. The remainder of surface hole was drilled with an 11 in. bit. A DV tool was placed in the well from 5031 feet ? 5033 feet. DQX csg was run from surface to 5009 ft.; LTC csg was run from 5009 ft. to 9514 ft. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

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

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

**Electronic Submission #242295 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name (please print) ILA BEALE Title STAFF REGULATORY SPECIALIST

Signature (Electronic Submission) Date 04/15/2014

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

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

RECEIVED: Apr. 15, 2014

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/15/2013	2:30 - 5:00	2.50	MIRU	01	C	P	64	SKID RIG 20' / RIG UP DIVERTER & FLOW LINE / SPOT RIG MAT OVER WELL / SPOT RIG OVER WELL / SET CAT WALK & PIPE RACKS / HOOK UP AND PRIME PUMP.
	5:00 - 5:30	0.50	DRLSUR	23		P	64	PRE SPUD JOB SAFETY MEETING WITH RIG CREW, PEAK CREW, AND SCIENTIFIC CREW / REVIEW AND COMPARE DIRECTIONAL PLANS WITH DIRECTIONAL DRILLERS PRIOR TO SPUD TO CONFIRM WE ARE DRILLING NBU 922-31C1AS.
	5:30 - 6:00	0.50	DRLSUR	02	B	P	64	PICK UP 12 1/4" BIT AND 8", 7:8, 4.0 STG, 1.83 ADJ BEND MUD MOTOR. TRIP IN HOLE.
	6:00 - 7:00	1.00	DRLSUR	02	B	P	64	DRILL 12.25" SURFACE HOLE F/ 44'- T/ 210' BIT ROP= 166' @ 166 FPH WOB= 5-15 K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491 GPM @ 120 SPM STAND PIPE PRESSURE ON/OFF BOTTOM = 800 / 600 TORQUE ON/OFF BOTTOM = 1,700 / 700 UP/DN/ROT = 22/20/20 PEAK ON LINE MUD WT = 8.4 HOLE ISSUES = NONE
	7:00 - 7:30	0.50	DRLSUR	02	B	P	230	TRIP OUT OF HOLE / LAY DOWN 12 1/4" BIT
	8:00 - 8:30	0.50	DRLSUR	02	B	P	230	PICK UP 11" BIT & DIRECTIONAL ASSEMBLY, SCRIBE MUD MOTOR. TRIP IN HOLE
	8:30 - 12:00	3.50	DRLSUR	02	B	P	230	DRILL 11". SURFACE HOLE, F/ 210' - T/ 800', 590' @ 168.5 FPH WEIGHT ON BIT 18-21 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,060 / 825 TORQUE ON OFF = 3,100 / 1,800 UP/DOWN/ ROT 49/46/48 K. DRAG 1 K. PEAK ON LINE MUD WT 8.4 SLID 90' = 15.85% 6' ABOVE & 3.3' RIGHT OF THE LINE HOLE ISSUES = NONE

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:00 - 17:00	5.00	DRLSUR	02	B	P	820	DRILL 11". SURFACE HOLE, F/ 590' - T/ 1,310', 720' @ 144 FPH WEIGHT ON BIT 18-21 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,060 / 825 TORQUE ON OFF = 3,100 / 1,800 UP/DOWN/ ROT 58/47/52 K. DRAG 6 K. PEAK ON LINE MUD WT 8.4 SLID 68' = 10.93% 2.9' ABOVE & 2.2' LEFT OF THE LINE HOLE ISSUES = NONE
	17:00 - 17:30	0.50	DRLSUR	02	B	P	1330	RIG SERVICE
	17:30 - 0:00	6.50	DRLSUR	02	B	P	1330	DRILL 11". SURFACE HOLE, F/ 1,310' - T/ 1,820', 510' @ 78 FPH WEIGHT ON BIT 18-21 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF(BOTTOM) 1,120 / 910 TORQUE ON OFF = 2,900 / 1,500 UP/DOWN/ ROT 70/50/60 K. DRAG 6 K. PEAK ON LINE MUD WT 8.4 SLID 54' = 12.86% 7' ABOVE & 5.7' RIGHT OF THE LINE HOLE ISSUES = NONE
8/16/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1840	DRILL 11" SURFACE HOLE, F/ 1,820' - T/ 2,150', (330' @ 55 FPH) WEIGHT ON BIT 18-21 K. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. PUMPING 491 GALLON PER MINUTE AT 120 STROKES PER MINUTES. PUMP PRESSURE ON/OFF BOTTOM = 1,190 / 980 TORQUE ON/OFF BOTTOM = 2,900 / 1,500 UP/DOWN/ ROT 78/58/65 K. DRAG 13 K. PEAK ON LINE MUD WT 8.4 SLID 45' = 12.50% 6.5' ABOVE & 1.0' LEFT OF THE LINE HOLE ISSUES = NONE

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date:
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 13:00	7.00	DRLSUR	02	B	P	2170	DRILL 11". SURFACE HOLE 2,150'-2,636', (486', 69'/PER HOUR) TD @ 8/16/2013 13:00 WEIGHT ON BIT 15-20 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF(BOTTOM) 1,342/1,142. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 85/65/75 K. DRAG 10 K. SLIDING 15' PER 90'OF ROTATION GETTING 1.5 DEGREE BUILD RATES CURRENTLY 1.6' HIGH AND 0.8' LEFT OF THE LINE CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. PEAK ENERGY ON LINE AND RUNNING RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	13:00 - 15:00	2.00	DRLSUR	05	A	P	2636	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, MUD TANKS FULL.
	15:00 - 19:00	4.00	CSGSUR	06	D	P	2636	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA.
	19:00 - 19:30	0.50	CSGSUR	06	D	P	2636	PRE JOB SAFETY MEETING, MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	19:30 - 22:30	3.00	CSGSUR	12	C	P	2636	RUN 59 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 59 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,606.59' KB. SET TOP OF BAFFLE PLATE @ 2,561.56' KB.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date:
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:30 - 0:00	1.50	CSGSUR	12	E	P	2636	<p>PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RELEASE RIG @ 8/16/2013 00:00 RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING.</p> <p>PRESSURE TEST LINES TO 1,500 PSI.</p> <p>PUMP 142.6 BBLS OF WATER AHEAD CLEARING SHOE.</p> <p>MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT.</p> <p>MIX AND PUMP 280 SX OF PREMIUM LEAD CEMENT WITH 16% GEL, 10 LB/SX GILSONITE, 2 LB/SX GR-3, 3% SALT, & 0.25 LB/SX FLOCELE. 142.6 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX.</p> <p>MIX & PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>DROP PLUG ON FLY.</p> <p>DISPLACE WITH 159.9 BBLS OF FRESH WATER. PARTIAL RETURNS THROUGH OUT JOB.</p> <p>FINAL LIFT OF 500 PSI AT 3.5 BBL/MINUTE.</p> <p>BUMPED PLUG @ 820 PSI. HELD @ 820 PSI FOR 5 MINUTES WITHOUT BLEED OFF.</p> <p>TESTED FLOAT AND FLOAT HELD.</p> <p>SHUT DOWN AND WASH UP</p> <p>TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 100 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 20.4 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX.</p> <p>NO CEMENT RETURNS TO SURFACE</p> <p>SHUT DOWN AND WASH UP.</p> <p>WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 175 sx (35.8 bbls.)</p> <p>SAME CEMENT, NO RETURNS TO SURFACE.</p> <p>SHUT DOWN AND WASH UP.</p> <p>WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 175 sx (35.8 bbls.)</p> <p>SAME CEMENT, 3 BBLS CEMENT RETURNS TO SURFACE.</p> <p>RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 08/17/2013 07:00)</p>
12/28/2013	4:30 - 5:30	1.00	MIRU3	01	C	P	2636	SKID RIG OVER NBU 922-31C1AS
	5:30 - 7:00	1.50	PRPSPD	14	A	P	2636	NIPPLE UP BOPE
	7:00 - 13:30	6.50	PRPSPD	15	A	P	2636	<p>HOLD SAFETY MEETING, RUN TEST ASSY, TEST BOP WITH A-1 TESTERS - TEST ANNULAR TO 250 PSI LOW/ 5 MIN 2500 PSI HIGH 10 MIN, PIPE & BLIND RAMS, FLOOR VALVES, IBOP, HCR VALVE, KILL LINE VALVES, TEST BOP'S, CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, HOLD ACCUMULATOR FUNCTION TEST, TEST CSG 1500 PSI - 30 MIN, CHANGE GATE SEAL ON PIPE AND BLIND RAMS RIG DOWN,</p>
	13:30 - 14:00	0.50	PRPSPD	14	B	P	2636	SET WEAR BUSHING
	14:00 - 15:30	1.50	PRPSPD	09	A	P	2636	SLIP AND CUT 88" OF DRILL LINE

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 17:00	1.50	PRSPD	01	G	P	2636	CHANGE OUT I-BOB VALVE
	17:00 - 19:00	2.00	PRSPD	06	A	P	2636	PICK UP MOTOR AND BIT, PICK UP DIRECTIONAL TOOLS AND SCRIBE MOTOR
	19:00 - 20:00	1.00	PRSPD	06	A	P	2636	TRIP IN HOLE TO TOP OF CEMENT
	20:00 - 21:00	1.00	DRLPRC	02	F	P	2636	DRILL CEMENT, BAFFLE, FLOAT SHOE
	21:00 - 0:00	3.00	DRLPRC	02	B	P	2636	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,636' TO 2,959' (323' @ 107 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 8.9 PPG / VIS- 29 PRESSURE ON/OFF(BOTTOM) 1,700/1,200. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 110/90/100 K. DRAG 10 K. TORQUE = ON/OFF (BOTTOM) 12K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 17.85' LEFT / 13.44' HI OF THE LINE WITH 76' OF SLIDE @ 21.47%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/29/2013	0:00 - 6:00	6.00	DRLPRC	02	B	P	2959	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 2,959' TO 3,467' (498' @ 83 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 8.9 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 1,800/1,600. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 110/90/100 K. DRAG 10 K. TORQUE = ON/OFF (BOTTOM) 10K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 25.44' LEFT / 19.32' HIGH OF THE LINE WITH 87' OF SLIDE @ 29%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date:
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRC	02	B	P	3467	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 3,467' TO 3,880' (416' @ 70 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 8.9 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,000/1,800. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 120/100/110 K. DRAG 10 K. TORQUE = ON/OFF (BOTTOM) 10K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 20' LEFT / 30.53' HIGH OF THE LINE WITH 92' OF SLIDE @ 17%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 15:00	3.00	DRLPRC	02	B	P	3880	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 3,880' TO 4,165' (285' @ 95 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 8.9 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,100/1,800. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 120/100/110 K. DRAG 10 K. TORQUE = ON/OFF (BOTTOM) 10K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 20' LEFT / 30.53' HIGH OF THE LINE WITH 92' OF SLIDE @ 17%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	15:00 - 15:30	0.50	DRLPRC	07	A	P	4165	RIG SERVICE

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 18:00	2.50	DRLPRC	02	B	P	4165	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,165' TO 4,451' (286' @ 114 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 8.9 PPG / VIS- 32 PRESSURE ON/OFF(BOTTOM) 2,200/1,900. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 125/102/112 K. DRAG 13 K. TORQUE = ON/OFF (BOTTOM) 10K / 4K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 12.76' LEFT / .43' HIGH OF THE LINE WITH 97' OF SLIDE @ 17%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLPRV	02	B	P	4451	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 4,451' TO 5,308' (857' @ 142 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 34 PRESSURE ON/OFF(BOTTOM) 2,400/2,000. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 145/115/125 K. DRAG 20 K. TORQUE = ON/OFF (BOTTOM) 14K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 9.0' NORTH / 11.95' WEST OF THE LINE WITH 24' OF SLIDE @ 3%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/30/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	5308	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,308' TO 5,927' (614' @ 102 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.4 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 160/125/138 K. DRAG 22 K. TORQUE = ON/OFF (BOTTOM) 14K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.4' NORTH / 11.84' WEST OF THE LINE WITH 21' OF SLIDE @ 5%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 8:00	2.00	DRLPRV	08	A	S	5927	***ASSESS HYDRAULIC LEAK ON TOP DRIVE.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:00 - 8:30	0.50	DRLPRV	02	B	P	5927	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,927' TO 5,971' (49' @ 98 FPH). DRILL DOWN TO WORK ON TOP DRIVE.
	8:30 - 15:00	6.50	DRLPRV	08	A	S	5971	REPAIR HYDRAULIC HOSE ON THE TOP DRIVE. MAIN PRESSURE HOSE IN THE SERVICE LOOP.
	15:00 - 18:00	3.00	DRLPRV	02	B	P	5971	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 5,971' TO 6,257' (286' @ 95 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.4 PPG / VIS- 36 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 200/125/140 K. DRAG 60 K. TORQUE = ON/OFF (BOTTOM) 14K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.51' NORTH / 15.31' WEST OF THE LINE WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLPRV	02	B	P	6257	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,257' TO 6,826' (569' @ 95 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 35 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 225/120/155 K. DRAG 70 K. TORQUE = ON/OFF (BOTTOM) 14K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.48' SOUTH / 13.30' WEST OF THE LINE WITH 112' OF SLIDE @ 23%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/31/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	6826	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 6,826' TO 7,239' (413' @ 69 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 30 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 195/143/1172 K. DRAG 23 K. TORQUE = ON/OFF (BOTTOM) 15K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY .87' SOUTH /11.71 ' WEST OF THE LINE WITH 13' OF SLIDE @ 5%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 13:00	7.00	DRLPRV	02	B	P	7239	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,239' TO 7,599' (360' @ 51 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 35 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 203/143/175 K. DRAG 28 K. TORQUE = ON/OFF (BOTTOM) 16K / 9K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.39' NORTH / 5.03' WEST OF THE LINE WITH 42' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	13:00 - 13:30	0.50	DRLPRV	07	A	P	7599	RIG SERVICE

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW			Spud Date: 8/15/2013		
Project: UTAH-UINTAH		Site: NBU 922-31B PAD		Rig Name No: PROPETRO 12/12, SST 54/54	
Event: DRILLING		Start Date: 8/1/2013		End Date:	
Active Datum: RKB @4,916.00usft (above Mean Sea Level)			UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:30 - 18:00	4.50	DRLPRV	02	B	P	7599	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,599' TO 7,937' (338' @ 56 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 35 PRESSURE ON/OFF(BOTTOM) 2,500/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 206/145/177 K. DRAG 29 K. TORQUE = ON/OFF (BOTTOM) 17K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 5.39' NORTH / 5.03' WEST OF THE LINE WITH 19' OF SLIDE @ 6%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLPRV	02	B	P	7937	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 7,937' TO 8,349' (412' @ 68 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 35 PRESSURE ON/OFF(BOTTOM) 2,550/2,100. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 275/125/183 K. DRAG 92 K. TORQUE = ON/OFF (BOTTOM) 21K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 13.62' NORTH / 5.39' WEST OF THE LINE WITH 10' OF SLIDE @ 2.5%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/1/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	8349	DRILLING AND SLIDING 7 7/8" PRODUCTION HOLE FROM 8,349' TO 8,762' (413' @ 69 FPH). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE=160. GALLONS PER MINUTE=563. MUD WEIGHT = 9.1 PPG / VIS- 33 PRESSURE ON/OFF(BOTTOM) 2,600/2,200. ROTARY RPM 60, MOTOR RPM 130, TOTAL RPM 190. UP/DOWN/ ROT 280/130/186 K. DRAG 94 K. TORQUE = ON/OFF (BOTTOM) 21K / 12K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 14.51' NORTH / 6.71' WEST OF THE LINE WITH 5' OF SLIDE @ 2%. CIRCULATE CLOSED LOOP SYSTEM. RUNNING VOLUME THROUGH 2 CENTRIFUGE AND DEWATERING, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	6:00 - 11:30	5.50	DRLPRV	02	B	P	8762	DRILL / SLIDE/ SURVEY / F/ 8,762' TO 9,024' = 262' @ 47.6 FPH WOB 20,000 - 24,000 TOP DRIVE RPM 50 - 60 MUD MOTOR RPM 129 PUMPS 160 SPM= 563 GPM PUMP PRESSURE ON/OFF BTM 2,680 / 2,500 TORQUE ON/OFF BTM 18,610 / 17,770 PICK UP WT 255,000 SLACK OFF WT 178,000 ROT WT 192,000 SLIDE 0' = 0% 6.10' NORTH & 2.47' WEST OF THE LINE MUD WT 9.1 VIS 33 - START HEAVY MUD @ 9,020' ZECO ON LINE RUNNING 2 CENTRIFUGE CONVENTIONAL NO HOLE ISSUES 2' FLARE WHILE DRILLING STARTING @ 9,000'
	11:30 - 12:00	0.50	DRLPRV	08	A	Z	9024	*** FAILURE: PASON DRILLING RECORDER SHUT DOWN - REBOOT PASON
	12:00 - 15:30	3.50	DRLPRV	02	B	P	9024	DRILL / SLIDE/ SURVEY / F/ 9,024' TO 9,111' = 87' @ 24.8 FPH WOB 20,000 - 24,000 TOP DRIVE RPM 50 - 60 MUD MOTOR RPM 114 PUMPS 140 SPM= 492 GPM PUMP PRESSURE ON/OFF BTM 2,560 / 2,255 TORQUE ON/OFF BTM 19,760 / 13,700 PICK UP WT 248,000 SLACK OFF WT 152,000 ROT WT 200,000 SLIDE 0' = 0% 3.27' NORTH & 0.46' EAST OF THE LINE MUD WT 10.7 VIS 38 ZECO ON LINE RUNNING 1 CENTRIFUGE CONVENTIONAL HOLE ISSUES SEEPING 10 BBL PER HOUR

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

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

Event: DRILLING

Start Date: 8/1/2013

End Date:

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 16:00	0.50	DRLPRV	07	A	P	9111	RIG SERVICE
	16:00 - 0:00	8.00	DRLPRV	02	B	P	9111	DRILL / SLIDE/ SURVEY / F/ 9,111' TO 9,313' = 202' @ 25.3 FPH WOB 20,000 - 24,000 TOP DRIVE RPM 50 - 55 MUD MOTOR RPM 114 PUMPS 140 SPM= 492 GPM PUMP PRESSURE ON/OFF BTM 2,530 / 2,300 TORQUE ON/OFF BTM 19,200 / 15,000 PICK UP WT 275,000 SLACK OFF WT 130,000 ROT WT 196,000 SLIDE 0' = 0% 2.01' SOUTH & 5.35' EAST OF THE LINE MUD WT 11.3 VIS 36 ZECO OFF LINE HOLE ISSUES SEEPING 10 BBL PER HOUR
1/2/2014	0:00 - 7:30	7.50	DRLPRV	02	B	P	9313	DRILL / SLIDE/ SURVEY / F/ 9,313' TO 9,535' = 222' @ 29.6 FPH WOB 20,000 - 24,000 TOP DRIVE RPM 55 - 60 MUD MOTOR RPM 114 PUMPS 140 SPM= 492 GPM PUMP PRESSURE ON/OFF BTM 2,670 / 2,330 TORQUE ON/OFF BTM 17,200 / 14,000 PICK UP WT 275,000 SLACK OFF WT 130,000 ROT WT 197,000 SLIDE 0' = 0% 12.95' SOUTH & 15.13' EAST OF THE LINE MUD WT 11.5 VIS 36 ZECO OFF LINE HOLE ISSUES SEEPING 10 BBL PER HOUR
	7:30 - 8:30	1.00	DRLPRV	05	C	P	9535	CIRCULATE & CONDITION HOLE
	8:30 - 11:00	2.50	DRLPRV	06	E	P	9535	10 STAND WIPER TRIP
	11:00 - 12:30	1.50	DRLPRV	05	C	P	9535	CIRCULATE & CONDITION HOLE / MUD WT 11.5, VIS 36 / SHAKERS CLEAN / NO FLARE
	12:30 - 20:00	7.50	DRLPRV	06	D	P	9535	TRIP OUT OF HOLE TO RUN CASING / LAY DOWN MWD & MUD MOTOR
	20:00 - 20:30	0.50	DRLPRV	06	D	P	9535	PULL WEAR BUSHING
	20:30 - 0:00	3.50	CSGPRO	12	C	P	9535	PJSM, RIG UP FRANKS CASING CREW AND RAN 4.5" PRODUCTION CASING, 101 JOINTS OF 4.5", 11.6#, I-80, LT&C AND 113 JOINTS OF 4.5", 11.6#, I-80, DQX CASING WITH WEATHERFORD FLOAT GUIDE SHOE AND FLOAT COLLAR LOCATED 1 JOINT ABOVE SHOE. 15 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS AND EVERY THIRD COLLAR TO 7,837'. MARKER JOINT SET AT 7,307'. DV TOOL SET @ 5,033'. CROSS OVER JOINT SET @ 5,031'. LANDED CASING AT 9,514' ON CAMERON CASING HANGER SET IN WELL HEAD.FLOAT COLLAR TOP @ 9,467'.

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: PROPETRO 12/12, SST 54/54
Event: DRILLING		Start Date: 8/1/2013	End Date:
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/3/2014	0:00 - 5:30	5.50	CSGPRO	12	C	P	9535	FINISH RUNNING 4.5" PRODUCTION CASING, 101 JOINTS OF 4.5", 11.6#, I-80, LT&C AND 113 JOINTS OF 4.5", 11.6#, I-80, DQX CASING WITH WEATHERFORD FLOAT GUIDE SHOE AND FLOAT COLLAR LOCATED 1 JOINT ABOVE SHOE. 15 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS AND EVERY THIRD COLLAR TO 7,837'. MARKER JOINT SET AT 7,307'. DV TOOL SET @ 5,033'. CROSS OVER JOINT SET @ 5,031'. LANDED CASING AT 9,514' ON CAMERON CASING HANGER SET IN WELL HEAD.FLOAT COLLAR TOP @ 9,467'. NOTE: WASHED CASING THROUGH TIGHT HOLE 8,612' TO 8,672'.
	5:30 - 8:00	2.50	CSGPRO	05	D	P	9535	CIRCULATE CASING WITH RIG PUMP / 4' FLARE BOTTOMS UP
	8:00 - 11:00	3.00	CSGPRO	12	E	P	9535	PJSM, RIG UP BAKER HUGHES CEMENTERS & CEMENT FIRST STAGE TEST LINES TO 5,000 PSI. PUMP 25 BBLS FRESH WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 950 SX 50:50 POZ LEAD CEMENT WITH 0.05% STATIC FREE + 10% SODIUM CHLORIDE + 0.55% R-3 + 0.5% EC-1 + 0.25 LBS/SX CELLO FLAKE + 0.002 GPS FP-6L + 0.7% SMS + 2% GELL + 5 LBS/SX KOL-SEAL / 228 BBLS OF SLURRY MIXED @ 14.3 PPG WITH YIELD OF 1.35 CF/SX. TAILED IN WITH WASH UP PUMP AND LINES DROP PLUG DISPLACEMENT WITH 70 BBLS FRESH WATER CONTINUE TO DISPLACE WITH 77.15 BBLS OF 11.5 PPG MUD 1,850 PSI FINAL LIFT PRESSURE BUMP PLUG 500 PSI OVER TEST FLOAT. FLOAT HELD PRESSURE UP TO 4601 PSI TO OPEN DV TOOL 10 BBLS OF FLUSH WATER BACK TO SURFACE NO CEMENT TO SURFACE
	11:00 - 15:00	4.00	CSGPRO	05	D	P	9535	CIRCULATE SECOND STAGE WITH RIG PUMP

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	
Event: DRILLING		Rig Name No: PROPETRO 12/12, SST 54/54	
Start Date: 8/1/2013		End Date:	
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:00 - 17:00	2.00	CSGPRO	12	E	P	9535	PJSM, PUMP SECOND STAGE PRIMARY CEMENT JOB PUMP 25 BBLS FRESH WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 640 SX PREMIUN LITE II CEMENT + 0.05% STATIC FREE + 2% CACL2 + 0.25 LB/SX CELLO FLAKE + 5 LB/SX KOLSEAL + 0.4% FL-52 + 0.4% SMS + 6% GEL 229 BBL OF SLURRY MIXED @ 12.5 PPG WITH YIELD OF 2.01 CF/SX. 2ND TAIL MIX & PUMP 60 SX G CEMENT + 1% CACL2 + 0.4% SMS 12.3 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.16 CF/SX. DROP PLUG DISPLACEMENT WITH 78.2 BBLS FRESH WATER 1168 PSI FINAL LIFT PRESSURE BUMP PLUG TO 2878 PSI TO CLOSE DV TOOL TEST DV TOOL. TOOL HELD. 5 BBLS CEMENT BACK TO SURFACE.
	17:00 - 17:30	0.50	CSGPRO	12	C	P	9535	PULL LANDING JOINT / SET WELL HEAD PACK OFF
	17:30 - 18:00	0.50	CSGPRO	14	A	P	9535	NIPPLE DOWN BOP / RELEASE RIG @ 18:00, 1/3/2014

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-31C1AS YELLOW	Wellbore No.	OH
Well Name	NBU 922-31C1AS	Wellbore Name	NBU 922-31C1AS
Report No.	1	Report Date	3/17/2014
Project	UTAH-UINTAH	Site	NBU 922-31B PAD
Rig Name/No.		Event	COMPLETION
Start Date	2/12/2014	End Date	3/31/2014
Spud Date	8/15/2013	Active Datum	RKB @4,916.00usft (above Mean Sea Level)
UWI	NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,399.0 (usft)-9,333.0 (usft)	Start Date/Time	3/17/2014 12:00AM
No. of Intervals	58	End Date/Time	3/17/2014 12:00AM
Total Shots	189	Net Perforation Interval	63.00 (usft)
Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/17/2014 12:00AM	MESAVERDE/			7,399.0	7,400.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/17/2014 12:00AM	MESAVERDE/			7,410.0	7,411.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,457.0	7,458.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,496.0	7,497.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,572.0	7,573.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,605.0	7,606.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,630.0	7,632.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,677.0	7,678.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,744.0	7,745.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,763.0	7,764.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,778.0	7,779.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,793.0	7,794.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,809.0	7,810.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,874.0	7,875.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,909.0	7,910.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			7,956.0	7,957.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,016.0	8,017.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,053.0	8,054.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,082.0	8,083.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,110.0	8,111.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,146.0	8,147.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,201.0	8,203.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

RECEIVED : Apr. 15, 2014

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/17/2014 12:00AM	MESAVERDE/			8,289.0	8,290.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,304.0	8,305.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,326.0	8,327.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,443.0	8,444.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,462.0	8,463.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,523.0	8,525.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,559.0	8,560.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,587.0	8,588.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,617.0	8,618.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,649.0	8,650.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,668.0	8,669.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,706.0	8,707.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,724.0	8,725.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,743.0	8,744.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,776.0	8,777.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,807.0	8,808.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,825.0	8,826.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,841.0	8,842.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,871.0	8,872.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,892.0	8,893.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,914.0	8,916.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

RECEIVED : Apr. 15, 2014

2.1 Perforated Interval (Continued)

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/17/2014 12:00AM	MESAVERDE/			8,951.0	8,952.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,969.0	8,970.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			8,979.0	8,980.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,007.0	9,008.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,043.0	9,044.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,066.0	9,067.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,077.0	9,078.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,087.0	9,088.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,123.0	9,124.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,130.0	9,131.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,151.0	9,152.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,172.0	9,173.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,289.0	9,290.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,298.0	9,299.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
3/17/2014 12:00AM	MESAVERDE/			9,331.0	9,333.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

3 Plots

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW

Spud Date: 8/15/2013

Project: UTAH-UINTAH

Site: NBU 922-31B PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

Start Date: 2/12/2014

End Date: 3/31/2014

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

UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/13/2014	11:00 - 17:00	6.00	SUBSPR	32	F	P		RU IPS, CTU, RIH TAGGED CEMENT @ 4,915 DRILLED OUT CEMENT @ DV TOOL, 2 HRS, CONTINUED IN HOLE TAGGED @ 9440 CLEANED OUT TO 9,456, ACTS LIKE FLOAT COLLAR, FC SUPPOSED TO BE @ 9,467 CIRCULATED HOLE CLEAN POOH, RD CTU, INSTALL WELL HEAD SWIFN
2/18/2014	-							
3/5/2014	9:00 - 10:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -70 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 520 PSI HELD FOR 5 MIN LOST -306 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1 BBL H2O
3/17/2014	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 11:00	3.75	FRAC	37	E	P		MIRU CASED HOLE SOLUTIONS, RIH PERF STG #1 AS DESIGNED, SWIFN
3/18/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA
	6:30 - 15:30	9.00	FRAC	36	H	P		FRAC WELLS ON PAD
3/19/2014	6:00 - 6:15	0.25	FRAC	48		P		HSM-JSA
	6:15 - 18:00	11.75	FRAC	36	H	P		FRAC STG #1) WHP 1605 PSI, BRK 3750 PSI @ 4.1 BPM. ISIP 2743 PSI, FG. 0.74 ISIP 2922 PSI, FG. 0.76, NPI 179 PSI, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC. FRAC STG #2) WHP 2032 PSI, BRK 2633 PSI @ 6.3 BPM. ISIP 2240 PSI, FG. 0.69 ISIP 2717 PSI, FG. 0.74, NPI 477 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, SWI, SDFN.
3/20/2014	6:00 - 6:15	0.25	FRAC	48		P		HSM-JSA

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-31C1AS YELLOW		Spud Date: 8/15/2013	
Project: UTAH-UINTAH		Site: NBU 922-31B PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 2/12/2014	End Date: 3/31/2014
Active Datum: RKB @4,916.00usft (above Mean Sea Level)		UWI: NW/NE/0/9/S/22/E/31/0/0/26/PM/N/975/E/0/2224/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:15 - 17:00	10.75	FRAC	36	H	P		FRAC STG #3) WHP 1488 PSI, BRK 4369 PSI @ 5.6 BPM. ISIP 2848 PSI, FG. 0.76 ISIP 2796 PSI, FG. 0.75, NPI -52 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC. FRAC STG #4) WHP 1508 PSI, BRK 4710 PSI @ 4.3 BPM. ISIP 2561 PSI, FG. 0.73 ISIP 2516 PSI, FG. 0.73, NPI -45 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, SWI, SDFN. HSM-JSA
3/22/2014	6:00 - 6:15	0.25	FRAC	48		P		
	6:15 - 18:30	12.25	FRAC	36	H	P		FRAC STG #5) WHP 1583 PSI, BRK 4239 PSI @ 5.2 BPM. ISIP 2573 PSI, FG. 0.74 ISIP 2348 PSI, FG. 0.72, NPI -225 PSI, X/O TO WL. SET CBP & PERF STG #6 AS DESIGNED, X/O TO FRAC. FRAC STG #6) WHP 1592 PSI, BRK 4413 PSI @ 6.2 BPM. ISIP 2580 PSI, FG. 0.76 ISIP 2539 PSI, FG. 0.72, NPI -41 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 1819 PSI, BRK 6057 PSI @ 5.3 BPM. ISIP 1874 PSI, FG. 0.68 ISIP 2244 PSI, FG. 0.73, NPI 370 PSI, X/O TO WL. SET CBP & PERF STG #8 AS DESIGNED, SWI, SDFN. HSM-JSA
3/23/2014	7:00 - 7:15	0.25	FRAC	48		P		
	7:15 - 14:00	6.75	FRAC	36	H	P		FRAC STG #8) WHP 1127 PSI, BRK 2358 PSI @ 5.7 BPM. ISIP 1703 PSI, FG. 0.67 ISIP 2302 PSI, FG. 0.74, NPI 599 PSI, X/O TO WL. SET KILL PLUG RDMO WL & FRAC EQUIP. TOTAL CLEAN FLUID- 10459 BBLS TOTAL SAND- 213864 LBS RIGGING UP
3/28/2014	7:00 - 7:30	0.50	DRLOUT	48		P		
	7:30 - 15:00	7.50	DRLOUT	31	I	P		MIRU, NDWH, NU BOP'S, BJD, PU POBS, BIT, SN, TIH 150 JTS J-55 TBG, PU 6' PUP, 83 JTS L-80, TIH TAG KILL PLUG, 233JTS, PU PWR SWIVEL BREAK CIRC, TEST BOP'S 3000#, ,SWIFN
3/31/2014	7:00 - 7:30	0.50	DRLOUT	48		P		MILLING CBP'S



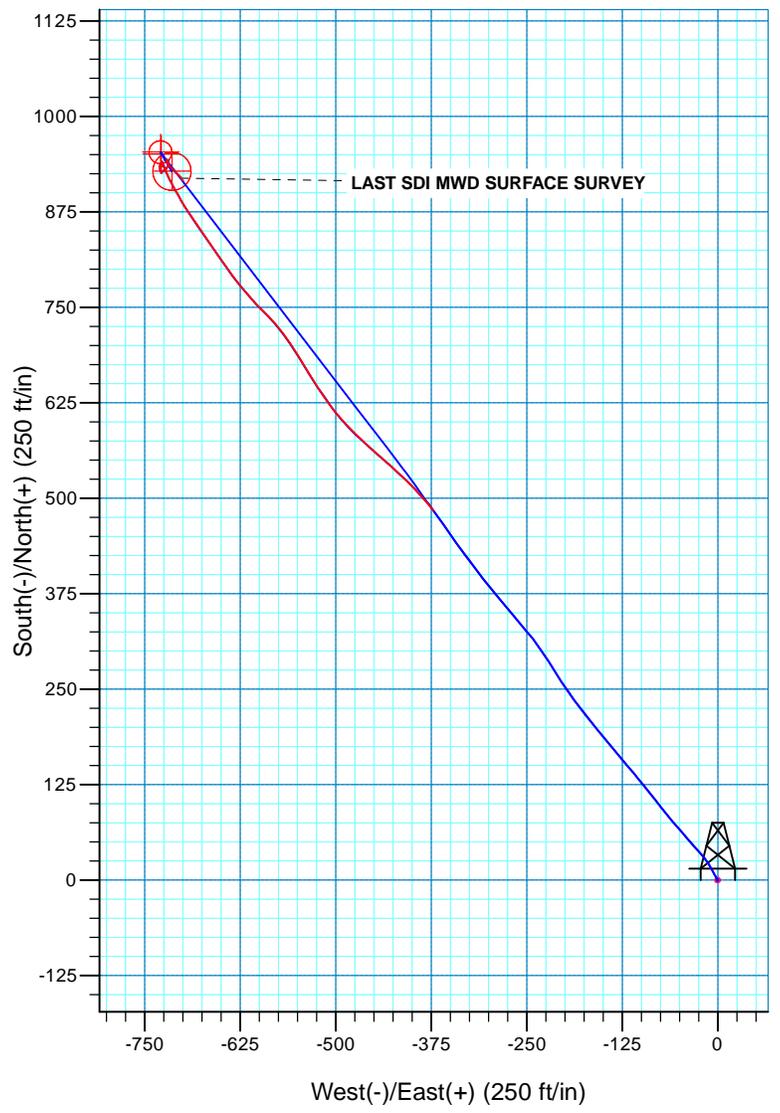
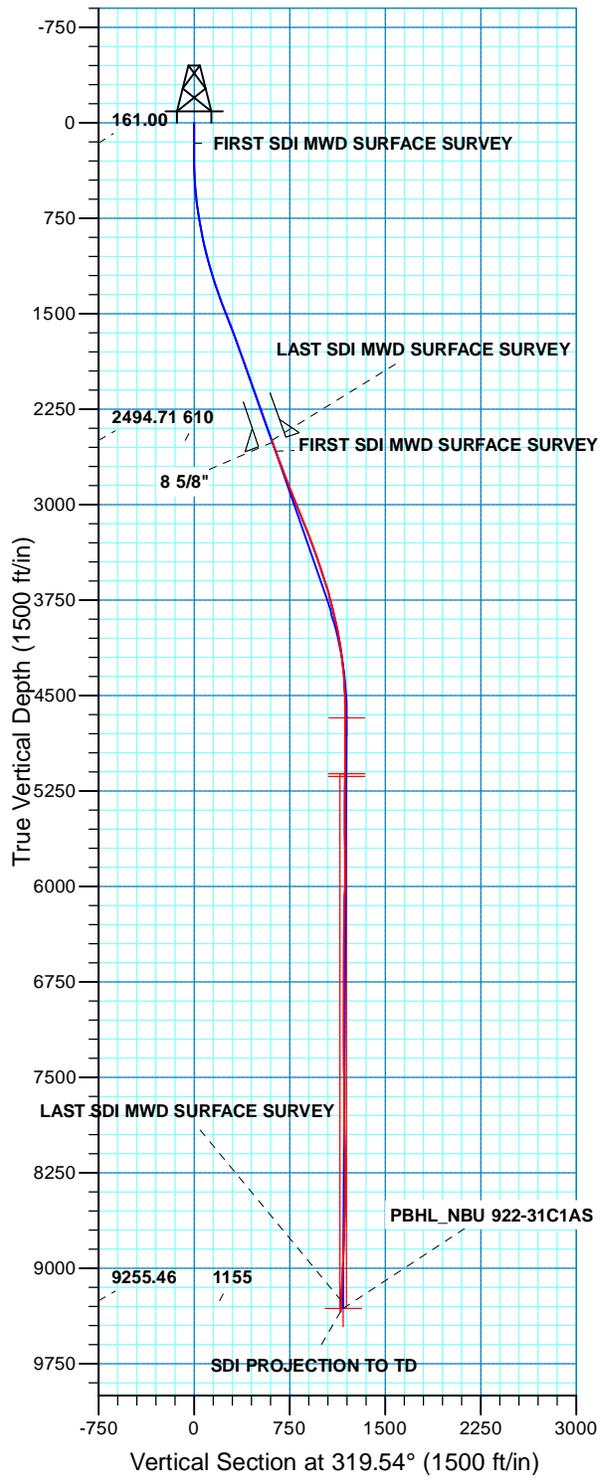
WELL DETAILS: NBU 922-31C1AS

GL 4892 & KB 24 @ 4916.00ft (SST 54)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14528622.03	2065982.13	39.9971170	-109.4805350

Azimuths to True North
 Magnetic North: 10.84°

 Magnetic Field
 Strength: 52014.2snT
 Dip Angle: 65.80°
 Date: 10/29/2013
 Model: BGGM2013



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
 Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 12N (114 W to 108 W)
 Location: SECTION 31 T9S R2E
 System Datum: Mean Sea Level

REC



Scientific Drilling

US ROCKIES REGION PLANNING

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

NBU 922-31B PAD

NBU 922-31C1AS

OH

Design: OH

Standard Survey Report

06 January, 2014





Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31C1AS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31C1AS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 922-31B PAD, SECTION 31 T9S R22E				
Site Position:		Northing:	14,528,641.40 usft	Latitude:	39.9971700
From:	Lat/Long	Easting:	2,065,986.00 usft	Longitude:	-109.4805200
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.98 °

Well	NBU 922-31C1AS, 975 FNL 2224 FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,528,622.03 usft	Latitude:	39.9971170
	+E/-W	0.00 ft	Easting:	2,065,982.13 usft	Longitude:	-109.4805350
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,892.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/29/2013	10.84	65.80	52,014

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	319.54	

Survey Program	Date	1/6/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
20.00	2,591.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,680.00	9,535.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161.00	0.53	204.76	161.00	-0.59	-0.27	-0.27	0.38	0.38	0.00	
FIRST SDI MWD SURFACE SURVEY										
247.00	0.63	2.68	247.00	-0.48	-0.42	-0.10	1.32	0.12	183.63	
360.00	1.64	340.61	359.97	1.66	-0.93	1.87	0.96	0.89	-19.53	
445.00	2.99	325.70	444.90	4.64	-2.58	5.21	1.73	1.59	-17.54	
545.00	5.03	331.64	544.65	10.66	-6.13	12.09	2.08	2.04	5.94	
635.00	7.31	329.58	634.13	19.07	-10.90	21.58	2.54	2.53	-2.29	
725.00	9.35	322.21	723.17	29.78	-18.28	34.53	2.55	2.27	-8.19	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31C1AS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31C1AS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
815.00	10.98	318.20	811.76	41.95	-28.48	50.40	1.97	1.81	-4.46	
905.00	11.80	317.77	899.99	55.16	-40.38	68.17	0.92	0.91	-0.48	
995.00	13.10	319.09	987.87	69.68	-53.24	87.56	1.48	1.44	1.47	
1,085.00	14.45	321.30	1,075.28	86.15	-66.94	108.99	1.61	1.50	2.46	
1,175.00	16.26	322.36	1,162.06	104.89	-81.66	132.80	2.04	2.01	1.18	
1,265.00	17.59	321.75	1,248.16	125.55	-97.77	158.97	1.49	1.48	-0.68	
1,355.00	19.93	319.64	1,333.38	147.92	-116.13	187.91	2.71	2.60	-2.34	
1,445.00	20.66	320.69	1,417.79	171.90	-136.12	219.12	0.91	0.81	1.17	
1,535.00	21.63	320.25	1,501.73	196.93	-156.79	251.58	1.09	1.08	-0.49	
1,625.00	20.76	321.59	1,585.64	222.19	-177.30	284.11	1.11	-0.97	1.49	
1,715.00	19.83	325.53	1,670.06	247.27	-195.85	315.23	1.84	-1.03	4.38	
1,805.00	20.49	328.12	1,754.54	273.23	-212.81	345.99	1.23	0.73	2.88	
1,895.00	20.89	325.33	1,838.74	299.81	-230.26	377.53	1.18	0.44	-3.10	
1,985.00	19.03	321.35	1,923.33	324.47	-248.56	408.17	2.56	-2.07	-4.42	
2,075.00	18.55	319.48	2,008.54	346.81	-267.02	437.15	0.86	-0.53	-2.08	
2,165.00	19.70	319.29	2,093.57	369.19	-286.22	466.63	1.28	1.28	-0.21	
2,255.00	19.79	322.19	2,178.28	392.73	-305.45	497.02	1.09	0.10	3.22	
2,345.00	19.98	324.18	2,262.91	417.23	-323.79	527.57	0.78	0.21	2.21	
2,435.00	19.60	323.52	2,347.60	441.84	-341.76	557.95	0.49	-0.42	-0.73	
2,525.00	19.45	325.04	2,432.42	466.26	-359.33	587.93	0.59	-0.17	1.69	
2,591.00	19.17	324.12	2,494.71	484.04	-371.97	609.67	0.63	-0.42	-1.39	
LAST SDI MWD SURFACE SURVEY										
2,680.00	19.79	315.81	2,578.63	506.69	-391.04	639.28	3.19	0.70	-9.34	
FIRST SDI MWD SURFACE SURVEY										
2,774.00	22.07	313.44	2,666.43	530.24	-414.96	672.72	2.59	2.43	-2.52	
2,869.00	21.02	311.59	2,754.79	553.83	-440.66	707.34	1.32	-1.11	-1.95	
2,965.00	20.66	311.42	2,844.51	576.46	-466.24	741.16	0.38	-0.38	-0.18	
3,060.00	22.86	319.41	2,932.75	601.57	-490.82	776.21	3.88	2.32	8.41	
3,155.00	22.77	324.78	3,020.33	630.60	-513.43	812.98	2.19	-0.09	5.65	
3,251.00	22.34	327.76	3,108.99	661.21	-533.88	849.54	1.27	-0.45	3.10	
3,346.00	21.81	328.74	3,197.03	691.57	-552.67	884.83	0.68	-0.56	1.03	
3,441.00	19.87	321.61	3,285.82	719.32	-571.86	918.39	3.36	-2.04	-7.51	
3,537.00	18.91	315.20	3,376.38	743.15	-592.96	950.21	2.43	-1.00	-6.68	
3,633.00	19.87	319.06	3,466.94	766.51	-614.61	982.04	1.67	1.00	4.02	
3,728.00	18.38	322.84	3,556.70	790.64	-634.24	1,013.14	2.04	-1.57	3.98	
3,823.00	16.71	326.62	3,647.28	813.99	-650.80	1,041.65	2.13	-1.76	3.98	
3,918.00	15.12	323.90	3,738.64	835.41	-665.62	1,067.56	1.85	-1.67	-2.86	
4,012.00	14.42	326.71	3,829.53	855.09	-679.26	1,091.40	1.07	-0.74	2.99	
4,107.00	12.49	326.09	3,921.92	873.51	-691.49	1,113.34	2.04	-2.03	-0.65	
4,203.00	11.08	330.49	4,015.90	890.15	-701.82	1,132.71	1.74	-1.47	4.58	
4,298.00	8.53	329.43	4,109.50	904.17	-709.91	1,148.62	2.69	-2.68	-1.12	
4,393.00	7.73	332.04	4,203.55	915.88	-716.48	1,161.80	0.93	-0.84	2.75	
4,489.00	5.98	339.28	4,298.86	926.26	-721.28	1,172.81	2.03	-1.82	7.54	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31C1AS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31C1AS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,583.00	3.43	337.43	4,392.53	933.44	-724.09	1,180.09	2.72	-2.71	-1.97	
4,679.00	2.20	333.92	4,488.42	937.74	-726.01	1,184.61	1.29	-1.28	-3.66	
4,774.00	0.98	341.89	4,583.38	940.15	-727.06	1,187.13	1.30	-1.28	8.39	
4,869.00	0.26	320.82	4,678.37	941.09	-727.45	1,188.10	0.78	-0.76	-22.18	
4,965.00	0.18	142.84	4,774.37	941.14	-727.50	1,188.16	0.46	-0.08	-185.40	
5,060.00	0.70	135.37	4,869.37	940.61	-727.00	1,187.44	0.55	0.55	-7.86	
5,154.00	0.88	173.69	4,963.36	939.48	-726.51	1,186.27	0.58	0.19	40.77	
5,250.00	0.79	195.93	5,059.35	938.11	-726.62	1,185.29	0.35	-0.09	23.17	
5,345.00	0.79	176.42	5,154.34	936.83	-726.75	1,184.40	0.28	0.00	-20.54	
5,440.00	0.35	223.35	5,249.34	935.97	-726.91	1,183.85	0.64	-0.46	49.40	
5,535.00	0.35	50.12	5,344.34	935.94	-726.89	1,183.81	0.74	0.00	-182.35	
5,629.00	0.62	135.28	5,438.33	935.76	-726.31	1,183.30	0.73	0.29	90.60	
5,724.00	1.14	278.19	5,533.33	935.53	-726.88	1,183.50	1.77	0.55	150.43	
5,819.00	0.79	294.45	5,628.31	935.94	-728.42	1,184.80	0.46	-0.37	17.12	
5,914.00	0.53	258.59	5,723.31	936.12	-729.44	1,185.61	0.50	-0.27	-37.75	
6,008.00	0.44	230.64	5,817.30	935.81	-730.15	1,185.83	0.27	-0.10	-29.73	
6,104.00	0.79	179.93	5,913.30	934.91	-730.43	1,185.33	0.64	0.36	-52.82	
6,199.00	1.14	168.68	6,008.29	933.33	-730.25	1,184.01	0.42	0.37	-11.84	
6,294.00	1.32	169.65	6,103.26	931.33	-729.86	1,182.23	0.19	0.19	1.02	
6,389.00	0.69	173.03	6,198.25	929.68	-729.60	1,180.81	0.67	-0.66	3.56	
6,483.00	0.44	131.68	6,292.24	928.88	-729.26	1,179.98	0.49	-0.27	-43.99	
6,578.00	0.79	161.30	6,387.24	928.02	-728.78	1,179.01	0.49	0.37	31.18	
6,673.00	0.88	164.64	6,482.23	926.69	-728.37	1,177.74	0.11	0.09	3.52	
6,768.00	0.35	75.87	6,577.22	926.06	-727.90	1,176.95	0.99	-0.56	-93.44	
6,864.00	1.11	21.37	6,673.22	927.00	-727.28	1,177.26	0.99	0.79	-56.77	
6,959.00	0.97	60.22	6,768.20	928.26	-726.24	1,177.55	0.74	-0.15	40.89	
7,054.00	0.97	61.46	6,863.19	929.04	-724.84	1,177.23	0.02	0.00	1.31	
7,149.00	0.79	86.06	6,958.18	929.47	-723.48	1,176.68	0.44	-0.19	25.89	
7,245.00	0.88	43.61	7,054.17	930.05	-722.31	1,176.36	0.64	0.09	-44.22	
7,340.00	1.22	16.58	7,149.15	931.55	-721.52	1,176.98	0.62	0.36	-28.45	
7,434.00	1.06	46.95	7,243.14	933.10	-720.60	1,177.57	0.66	-0.17	32.31	
7,529.00	0.92	26.31	7,338.12	934.38	-719.62	1,177.91	0.40	-0.15	-21.73	
7,625.00	0.97	5.29	7,434.11	935.88	-719.20	1,178.78	0.36	0.05	-21.90	
7,720.00	0.44	45.99	7,529.10	936.94	-718.86	1,179.36	0.73	-0.56	42.84	
7,815.00	0.44	88.53	7,624.10	937.20	-718.24	1,179.16	0.34	0.00	44.78	
7,911.00	0.29	331.79	7,720.10	937.42	-717.98	1,179.16	0.65	-0.16	-121.60	
8,005.00	1.06	345.08	7,814.09	938.47	-718.32	1,180.18	0.83	0.82	14.14	
8,100.00	0.88	338.22	7,909.08	940.00	-718.82	1,181.66	0.23	-0.19	-7.22	
8,195.00	0.88	338.93	8,004.07	941.36	-719.35	1,183.04	0.01	0.00	0.75	
8,291.00	0.88	326.45	8,100.05	942.66	-720.02	1,184.47	0.20	0.00	-13.00	
8,386.00	0.44	293.05	8,195.05	943.41	-720.76	1,185.52	0.60	-0.46	-35.16	
8,482.00	0.51	220.41	8,291.05	943.23	-721.38	1,185.78	0.59	0.07	-75.67	
8,577.00	0.79	161.04	8,386.04	942.29	-721.44	1,185.11	0.72	0.29	-62.49	
8,672.00	1.06	165.52	8,481.03	940.82	-721.01	1,183.71	0.29	0.28	4.72	



Survey Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 922-31C1AS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Site:	NBU 922-31B PAD	MD Reference:	GL 4892 & KB 24 @ 4916.00ft (SST 54)
Well:	NBU 922-31C1AS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,767.00	1.09	147.01	8,576.01	939.21	-720.29	1,182.02	0.37	0.03	-19.48	
8,863.00	1.67	145.65	8,671.98	937.29	-719.01	1,179.72	0.61	0.60	-1.42	
8,958.00	2.03	131.97	8,766.93	935.02	-716.98	1,176.68	0.60	0.38	-14.40	
9,053.00	2.46	134.49	8,861.86	932.47	-714.27	1,172.98	0.46	0.45	2.65	
9,148.00	2.29	139.15	8,956.78	929.60	-711.57	1,169.05	0.27	-0.18	4.91	
9,243.00	2.46	137.22	9,051.70	926.67	-708.95	1,165.12	0.20	0.18	-2.03	
9,339.00	2.81	135.46	9,147.60	923.48	-705.90	1,160.71	0.37	0.36	-1.83	
9,434.00	2.99	138.80	9,242.47	919.96	-702.63	1,155.91	0.26	0.19	3.52	
9,447.00	2.81	140.20	9,255.46	919.46	-702.21	1,155.25	1.49	-1.38	10.77	
LAST SDI MWD SURFACE SURVEY										
9,535.00	2.81	140.20	9,343.35	916.14	-699.44	1,150.94	0.00	0.00	0.00	
SDI PROJECTION TO TD										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
161.00	161.00	-0.59	-0.27	FIRST SDI MWD SURFACE SURVEY	
2,591.00	2,494.71	484.04	-371.97	LAST SDI MWD SURFACE SURVEY	
2,680.00	2,578.63	506.69	-391.04	FIRST SDI MWD SURFACE SURVEY	
9,447.00	9,255.46	919.46	-702.21	LAST SDI MWD SURFACE SURVEY	
9,535.00	9,343.35	916.14	-699.44	SDI PROJECTION TO TD	

Checked By: _____ Approved By: _____ Date: _____