

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

FORM 3

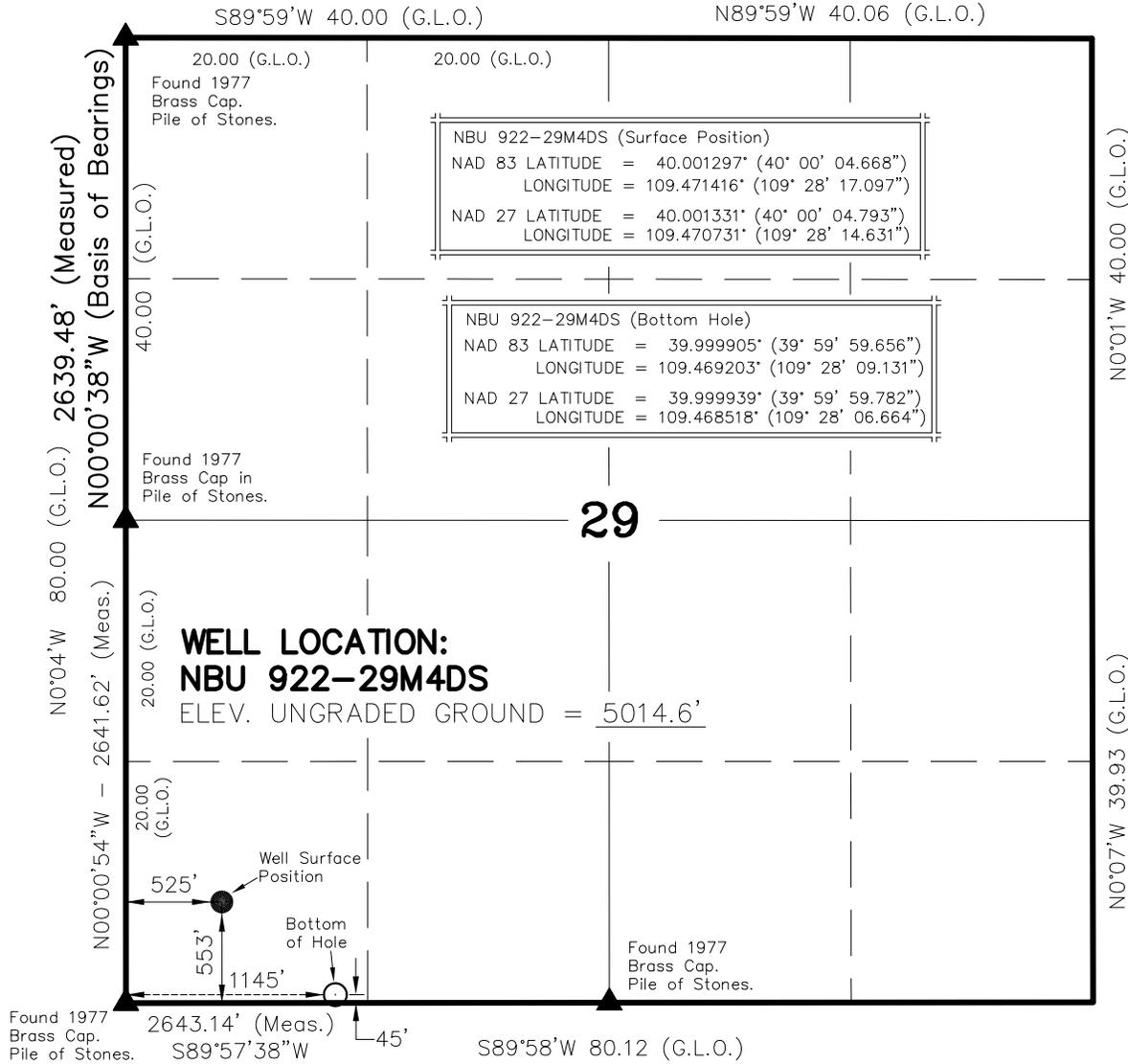
AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 922-29M4DS	
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES	
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES	
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6587	
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL mary.mondragon@anadarko.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22935			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>	
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	553 FSL 525 FWL	SWSW	29	9.0 S	22.0 E	S	
Top of Uppermost Producing Zone	45 FSL 1145 FWL	SWSW	29	9.0 S	22.0 E	S	
At Total Depth	45 FSL 1145 FWL	SWSW	29	9.0 S	22.0 E	S	
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 45			23. NUMBER OF ACRES IN DRILLING UNIT 203	
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 800			26. PROPOSED DEPTH MD: 9445 TVD: 9300	
27. ELEVATION - GROUND LEVEL 5015			28. BOND NUMBER 22013542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496	
ATTACHMENTS							
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES							
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER				<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)				<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)				<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
NAME Kathy Schneebeck-Dulnoan			TITLE Staff Regulatory Analyst			PHONE 720 929-6007	
SIGNATURE			DATE 04/16/2009			EMAIL Kathy.SchneebeckDulnoan@anadarko.com	
API NUMBER ASSIGNED 43047503570000			APPROVAL  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9445		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	9445	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2400		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2400	36.0			

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



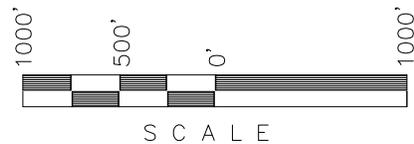
NOTES:

- ▲ = 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 S50°43'00"E 801.15' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

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

NBU 922-29M4DS
WELL PLAT
 45' FSL, 1145' FWL (Bottom Hole)
 SW ¼ SW ¼ OF SECTION 29, 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



SURVEYOR'S CERTIFICATE

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

Kathy R. Kay
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 362251
 STATE OF UTAH

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

DATE SURVEYED: 10-10-08	SURVEYED BY: M.S.B.	SHEET 3
DATE DRAWN: 01-29-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 02-12-09	OF 12



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Plan: Design #1

Standard Planning Report

25 March, 2009



Weatherford®



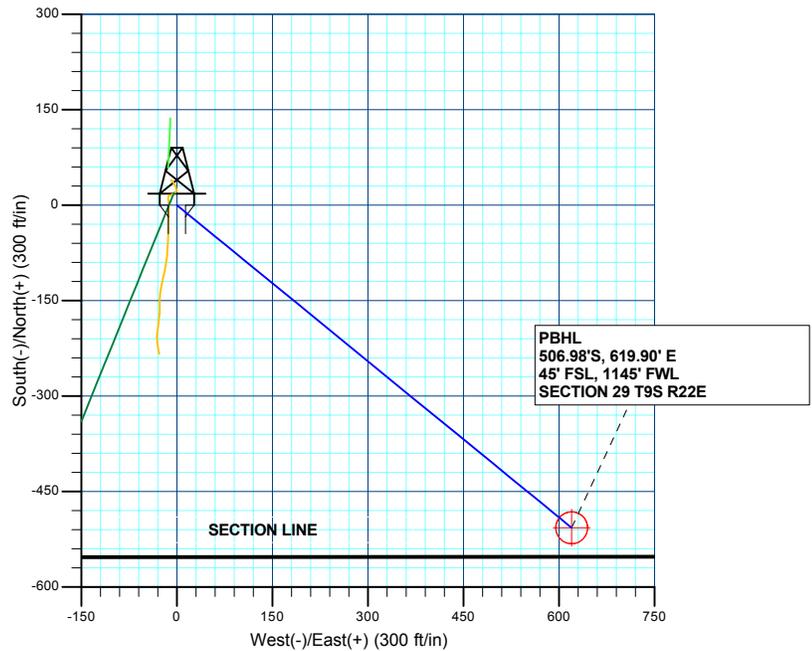
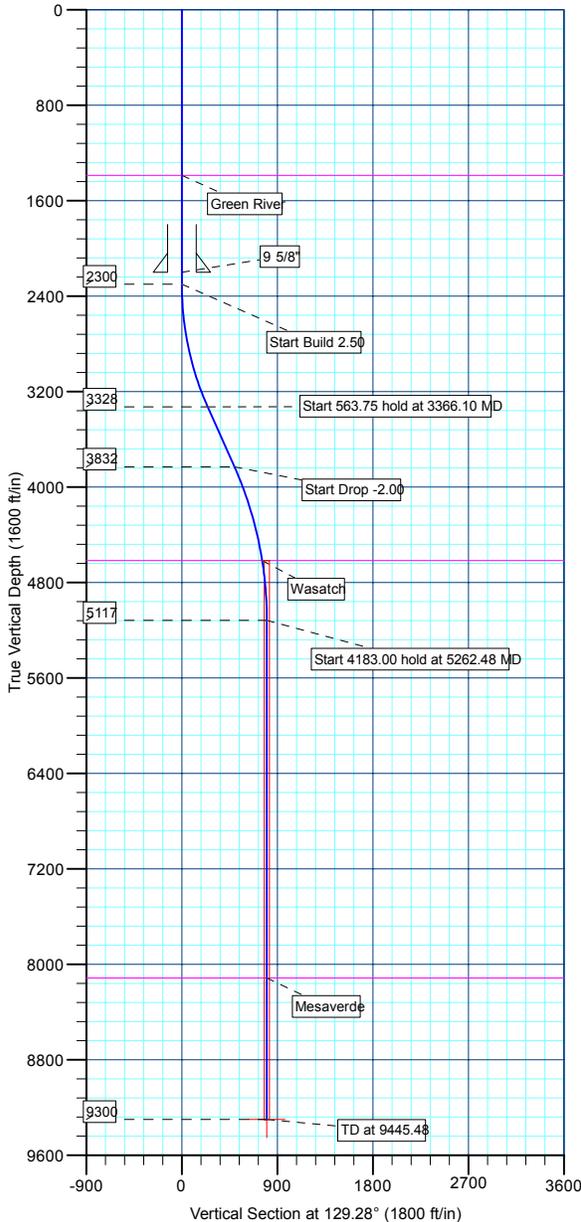
WELL DETAILS: NBU 922-29M4DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	5012.00 Latitude	Longitude	Slot
0.00	0.00	14530203.55	2068701.78	40° 0' 4.792 N	109° 28' 14.632 W	

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9300.00	-506.98	619.90	39° 59' 59.780 N	109° 28' 6.665 W	Circle (Radius: 25.00)

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	
3366.10	26.65	129.28	3328.07	-154.17	188.51	2.50	129.28	243.52	
3929.86	26.65	129.28	3831.92	-314.27	384.27	0.00	0.00	496.41	
5262.48	0.00	0.00	5117.00	-506.98	619.90	2.00	180.00	800.81	
9445.48	0.00	0.00	9300.00	-506.98	619.90	0.00	0.00	800.81	PBHL_NBU 922-29M4DS



KB ELEV: WELL @ 5030.00ft (Original Well Elev)
 GRD ELEV: 5012.00



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1388.00	1388.00	Green River
4617.00	4759.91	Wasatch
8115.00	8260.48	Mesaverde

CASING DETAILS			
TVD	MD	Name	Size
2200.00	2200.00	9 5/8"	9.62

Plan: Design #1 (NBU 922-29M4DS/NBU 922-29M4DS)
 Created By: Robert H. Scott



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site:	NBU 922-29M PAD	North Reference:	True
Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-29M4DS		
Design:	Design #1		

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2008	3/20/2009	11.38	65.96	52,571

Design	Design #1			
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	129.28

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	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,366.10	26.65	129.28	3,328.07	-154.17	188.51	2.50	2.50	0.00	129.28	
3,929.86	26.65	129.28	3,831.92	-314.27	384.27	0.00	0.00	0.00	0.00	
5,262.48	0.00	0.00	5,117.00	-506.98	619.90	2.00	-2.00	0.00	180.00	
9,445.48	0.00	0.00	9,300.00	-506.98	619.90	0.00	0.00	0.00	0.00	PBHL_NBU 922-29



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site:	NBU 922-29M PAD	North Reference:	True
Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-29M4DS		
Design:	Design #1		

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 2.50									
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	2.50	129.28	2,399.97	-1.38	1.69	2.18	2.50	2.50	0.00
2,500.00	5.00	129.28	2,499.75	-5.52	6.75	8.72	2.50	2.50	0.00
2,600.00	7.50	129.28	2,599.14	-12.41	15.18	19.61	2.50	2.50	0.00
2,700.00	10.00	129.28	2,697.97	-22.04	26.95	34.82	2.50	2.50	0.00
2,800.00	12.50	129.28	2,796.04	-34.39	42.05	54.33	2.50	2.50	0.00
2,900.00	15.00	129.28	2,893.17	-49.44	60.45	78.09	2.50	2.50	0.00
3,000.00	17.50	129.28	2,989.17	-67.15	82.11	106.07	2.50	2.50	0.00
3,100.00	20.00	129.28	3,083.85	-87.50	106.99	138.21	2.50	2.50	0.00
3,200.00	22.50	129.28	3,177.05	-110.44	135.04	174.46	2.50	2.50	0.00
3,300.00	25.00	129.28	3,268.57	-135.94	166.22	214.73	2.50	2.50	0.00
Start 563.75 hold at 3366.10 MD									
3,366.10	26.65	129.28	3,328.07	-154.17	188.51	243.52	2.50	2.50	0.00
3,400.00	26.65	129.28	3,358.36	-163.79	200.28	258.73	0.00	0.00	0.00
3,500.00	26.65	129.28	3,447.74	-192.19	235.00	303.59	0.00	0.00	0.00
3,600.00	26.65	129.28	3,537.11	-220.59	269.73	348.44	0.00	0.00	0.00
3,700.00	26.65	129.28	3,626.49	-248.99	304.45	393.30	0.00	0.00	0.00
3,800.00	26.65	129.28	3,715.86	-277.39	339.17	438.16	0.00	0.00	0.00
3,900.00	26.65	129.28	3,805.24	-305.79	373.90	483.02	0.00	0.00	0.00
Start Drop -2.00									
3,929.86	26.65	129.28	3,831.92	-314.27	384.27	496.41	0.00	0.00	0.00
4,000.00	25.25	129.28	3,894.99	-333.70	408.03	527.10	2.00	-2.00	0.00
4,100.00	23.25	129.28	3,986.16	-359.70	439.82	568.17	2.00	-2.00	0.00
4,200.00	21.25	129.28	4,078.71	-383.67	469.13	606.04	2.00	-2.00	0.00
4,300.00	19.25	129.28	4,172.52	-405.58	495.92	640.65	2.00	-2.00	0.00
4,400.00	17.25	129.28	4,267.49	-425.40	520.16	671.96	2.00	-2.00	0.00
4,500.00	15.25	129.28	4,363.49	-443.12	541.82	699.94	2.00	-2.00	0.00
4,600.00	13.25	129.28	4,460.41	-458.70	560.87	724.55	2.00	-2.00	0.00
4,700.00	11.25	129.28	4,558.13	-472.13	577.29	745.77	2.00	-2.00	0.00
Wasatch									
4,759.91	10.05	129.28	4,617.00	-479.14	585.86	756.84	2.00	-2.00	0.00
4,800.00	9.25	129.28	4,656.53	-483.39	591.07	763.56	2.00	-2.00	0.00
4,900.00	7.25	129.28	4,755.49	-492.48	602.17	777.91	2.00	-2.00	0.00
5,000.00	5.25	129.28	4,854.89	-499.37	610.60	788.80	2.00	-2.00	0.00
5,100.00	3.25	129.28	4,954.61	-504.06	616.33	796.21	2.00	-2.00	0.00
5,200.00	1.25	129.28	5,054.52	-506.54	619.37	800.13	2.00	-2.00	0.00
Start 4183.00 hold at 5262.48 MD									
5,262.48	0.00	0.00	5,117.00	-506.98	619.90	800.81	2.00	-2.00	-206.91
5,300.00	0.00	0.00	5,154.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,400.00	0.00	0.00	5,254.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,500.00	0.00	0.00	5,354.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,600.00	0.00	0.00	5,454.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,700.00	0.00	0.00	5,554.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,800.00	0.00	0.00	5,654.52	-506.98	619.90	800.81	0.00	0.00	0.00
5,900.00	0.00	0.00	5,754.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,000.00	0.00	0.00	5,854.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,100.00	0.00	0.00	5,954.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,200.00	0.00	0.00	6,054.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,300.00	0.00	0.00	6,154.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,400.00	0.00	0.00	6,254.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,500.00	0.00	0.00	6,354.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,600.00	0.00	0.00	6,454.52	-506.98	619.90	800.81	0.00	0.00	0.00



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Site:	NBU 922-29M PAD	North Reference:	True
Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-29M4DS		
Design:	Design #1		

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)
6,700.00	0.00	0.00	6,554.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,800.00	0.00	0.00	6,654.52	-506.98	619.90	800.81	0.00	0.00	0.00
6,900.00	0.00	0.00	6,754.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,000.00	0.00	0.00	6,854.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,100.00	0.00	0.00	6,954.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,200.00	0.00	0.00	7,054.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,300.00	0.00	0.00	7,154.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,400.00	0.00	0.00	7,254.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,500.00	0.00	0.00	7,354.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,600.00	0.00	0.00	7,454.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,700.00	0.00	0.00	7,554.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,800.00	0.00	0.00	7,654.52	-506.98	619.90	800.81	0.00	0.00	0.00
7,900.00	0.00	0.00	7,754.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,000.00	0.00	0.00	7,854.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,100.00	0.00	0.00	7,954.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,200.00	0.00	0.00	8,054.52	-506.98	619.90	800.81	0.00	0.00	0.00
Mesaverde									
8,260.48	0.00	0.00	8,115.00	-506.98	619.90	800.81	0.00	0.00	0.00
8,300.00	0.00	0.00	8,154.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,400.00	0.00	0.00	8,254.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,500.00	0.00	0.00	8,354.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,600.00	0.00	0.00	8,454.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,700.00	0.00	0.00	8,554.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,800.00	0.00	0.00	8,654.52	-506.98	619.90	800.81	0.00	0.00	0.00
8,900.00	0.00	0.00	8,754.52	-506.98	619.90	800.81	0.00	0.00	0.00
9,000.00	0.00	0.00	8,854.52	-506.98	619.90	800.81	0.00	0.00	0.00
9,100.00	0.00	0.00	8,954.52	-506.98	619.90	800.81	0.00	0.00	0.00
9,200.00	0.00	0.00	9,054.52	-506.98	619.90	800.81	0.00	0.00	0.00
9,300.00	0.00	0.00	9,154.52	-506.98	619.90	800.81	0.00	0.00	0.00
9,400.00	0.00	0.00	9,254.52	-506.98	619.90	800.81	0.00	0.00	0.00
PBHL_NBU 922-29M4DS									
9,445.48	0.00	0.00	9,300.00	-506.98	619.90	800.81	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 922-29M4DS - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	9,300.00	-506.98	619.90	14,529,707.29	2,069,330.28	39° 59' 59.780 N	109° 28' 6.665 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,200.00	2,200.00	9 5/8"	9.62	12.25	



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site:	NBU 922-29M PAD	North Reference:	True
Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 922-29M4DS		
Design:	Design #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,388.00	1,388.00	Green River			
4,759.91	4,617.00	Wasatch			
8,260.48	8,115.00	Mesaverde			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,300.00	2,300.00	0.00	0.00	Start Build 2.50	
3,366.10	3,328.07	-154.17	188.51	Start 563.75 hold at 3366.10 MD	
3,929.86	3,831.92	-314.27	384.27	Start Drop -2.00	
5,262.48	5,117.00	-506.98	619.90	Start 4183.00 hold at 5262.48 MD	
9,445.48	9,300.00	-506.98	619.90	TD at 9445.48	



ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)
NBU 922-29M PAD
NBU 922-29M4DS**

**NBU 922-29M4DS
Design #1**

Anticollision Report

25 March, 2009





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
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	3/20/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	9,445.48	Design #1 (NBU 922-29M4DS)	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
Offset Well - Wellbore - Design						
NBU 922-29M PAD						
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	2,095.79	2,096.03	18.21	8.95	1.966	CC
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	2,100.00	2,100.24	18.21	8.93	1.963	ES
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	2,300.00	2,300.16	19.30	9.30	1.931	SF
NBU 922-29M2DS - NBU 922-29M2DS - Design #1	2,300.00	2,300.00	60.22	50.15	5.978	CC, ES, SF
NBU 922-29M3CS - NBU 922-29M3CS - Design #1	2,348.96	2,349.31	20.16	9.89	1.963	CC
NBU 922-29M3CS - NBU 922-29M3CS - Design #1	2,400.00	2,400.66	20.26	9.79	1.935	ES, SF

Offset Design	NBU 922-29M PAD - NBU 922-29M EXISTING - NBU 922-29M EXISTING - NBU 922-29M EXISTING												Offset Site Error:	0.00 ft
Survey Program:	100-NS-GYRO-MS												Offset Well Error:	0.00 ft
Reference	Offset		Semi Major Axis			Distance				Minimum Separation	Separation Factor	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	-13.22	39.33	-9.24	40.41					
100.00	100.00	100.13	100.13	0.09	0.11	-12.65	39.26	-8.81	40.24	40.04	0.20	199.724		
200.00	200.00	200.50	200.50	0.32	0.36	-11.82	38.61	-8.08	39.45	38.77	0.67	58.648		
300.00	300.00	300.43	300.41	0.54	0.61	-11.01	37.57	-7.31	38.28	37.12	1.15	33.208		
400.00	400.00	400.47	400.45	0.77	0.87	-10.07	36.56	-6.49	37.13	35.49	1.64	22.643		
500.00	500.00	500.26	500.23	0.99	1.14	-9.20	35.75	-5.79	36.21	34.09	2.13	17.025		
600.00	600.00	600.47	600.43	1.22	1.40	-8.35	34.91	-5.12	35.28	32.67	2.61	13.496		
700.00	700.00	700.27	700.22	1.44	1.66	-7.48	34.05	-4.47	34.35	31.25	3.10	11.075		
800.00	800.00	800.47	800.43	1.67	1.92	-6.75	33.15	-3.92	33.38	29.80	3.59	9.310		
900.00	900.00	900.44	900.39	1.89	2.18	-6.05	31.96	-3.39	32.14	28.07	4.07	7.900		
1,000.00	1,000.00	1,000.37	1,000.31	2.12	2.44	-4.82	30.92	-2.61	31.03	26.48	4.56	6.811		
1,100.00	1,100.00	1,100.42	1,100.35	2.34	2.71	-3.48	29.89	-1.82	29.95	24.90	5.05	5.936		
1,200.00	1,200.00	1,200.58	1,200.49	2.56	2.95	-3.14	28.45	-1.56	28.50	22.98	5.52	5.167		
1,300.00	1,300.00	1,300.67	1,300.57	2.79	3.19	-3.00	26.51	-1.39	26.55	20.57	5.98	4.439		
1,400.00	1,400.00	1,400.65	1,400.52	3.01	3.45	-2.10	24.39	-0.89	24.41	17.95	6.46	3.777		
1,500.00	1,500.00	1,500.62	1,500.47	3.24	3.69	-2.29	22.27	-0.89	22.29	15.37	6.93	3.218		
1,600.00	1,600.00	1,600.43	1,600.26	3.46	3.89	-4.73	20.54	-1.70	20.61	13.26	7.35	2.804		
1,700.00	1,700.00	1,700.21	1,700.03	3.69	4.03	-8.94	19.66	-3.09	19.90	12.18	7.71	2.580		
1,800.00	1,800.00	1,800.38	1,800.18	3.91	4.17	-13.60	18.82	-4.55	19.37	11.28	8.08	2.396		
1,900.00	1,900.00	1,900.28	1,900.07	4.14	4.34	-18.43	17.76	-5.92	18.72	10.24	8.48	2.208		
2,000.00	2,000.00	2,000.29	2,000.06	4.36	4.52	-23.71	16.82	-7.39	18.37	9.50	8.88	2.070		

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



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 100-NS-GYRO-MS													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			
2,095.79	2,095.79	2,096.03	2,095.79	4.58	4.69	-28.91	15.94	-8.80	18.21	8.95	9.26	1.966	CC		
2,100.00	2,100.00	2,100.24	2,100.00	4.59	4.69	-29.14	15.91	-8.87	18.21	8.93	9.28	1.963	ES		
2,200.00	2,200.00	2,200.10	2,199.85	4.81	4.84	-33.49	15.54	-10.28	18.64	8.99	9.65	1.932			
2,300.00	2,300.00	2,300.16	2,299.90	5.04	4.96	-36.10	15.59	-11.37	19.30	9.30	10.00	1.931	SF		
2,400.00	2,399.97	2,400.22	2,399.96	5.24	5.14	-169.49	15.19	-12.33	21.70	11.33	10.37	2.093			
2,500.00	2,499.75	2,500.12	2,499.85	5.42	5.37	-174.04	14.38	-13.00	28.04	17.28	10.76	2.606			
2,600.00	2,599.14	2,599.81	2,599.53	5.62	5.63	-177.35	13.11	-13.26	38.22	27.07	11.15	3.427			
2,700.00	2,697.97	2,698.69	2,698.40	5.83	5.89	-179.71	11.41	-13.54	52.53	41.00	11.53	4.557			
2,800.00	2,796.04	2,797.22	2,796.91	6.07	6.14	179.09	9.72	-13.63	71.05	59.16	11.88	5.978			
2,900.00	2,893.17	2,895.71	2,895.37	6.36	6.40	178.37	7.45	-13.17	93.07	80.85	12.22	7.617			
3,000.00	2,989.17	2,991.83	2,991.44	6.69	6.65	177.61	4.39	-12.88	118.94	106.40	12.53	9.491			
3,100.00	3,083.85	3,087.20	3,086.76	7.09	6.90	176.98	1.07	-13.08	149.24	136.41	12.83	11.632			
3,200.00	3,177.05	3,181.31	3,180.80	7.57	7.15	176.63	-2.21	-13.16	183.56	170.45	13.11	14.004			
3,300.00	3,268.57	3,273.96	3,273.40	8.14	7.39	176.45	-5.50	-13.14	221.83	208.46	13.37	16.595			
3,366.10	3,328.07	3,334.31	3,333.71	8.57	7.55	176.36	-7.74	-13.12	249.25	235.72	13.53	18.423			
3,400.00	3,358.36	3,365.08	3,364.46	8.81	7.63	176.35	-8.92	-13.10	263.73	250.04	13.69	19.262			
3,500.00	3,447.74	3,455.93	3,455.23	9.54	7.87	176.28	-12.54	-13.06	306.38	292.19	14.18	21.602			
3,600.00	3,537.11	3,546.90	3,546.11	10.30	8.11	176.17	-16.51	-13.11	348.89	334.21	14.69	23.758			
3,700.00	3,626.49	3,638.14	3,637.25	11.10	8.35	176.04	-20.84	-13.24	391.28	376.08	15.20	25.742			
3,800.00	3,715.86	3,729.80	3,728.80	11.92	8.59	175.91	-25.40	-13.28	433.46	417.74	15.73	27.565			
3,900.00	3,805.24	3,821.19	3,820.07	12.76	8.84	175.79	-30.13	-13.19	475.44	459.18	16.26	29.643			
3,929.86	3,831.92	3,848.03	3,846.87	13.01	8.91	175.76	-31.53	-13.17	487.97	471.56	16.42	29.722			
4,000.00	3,894.99	3,911.40	3,910.16	13.55	9.08	175.72	-34.84	-13.19	516.69	499.76	16.93	30.512			
4,100.00	3,986.16	4,002.83	4,001.46	14.22	9.32	175.65	-39.62	-13.40	555.05	537.40	17.66	31.434			
4,200.00	4,078.71	4,097.23	4,095.73	14.85	9.57	175.55	-44.56	-13.62	590.19	571.82	18.37	32.126			
4,300.00	4,172.52	4,192.88	4,191.25	15.45	9.83	175.45	-49.56	-13.68	621.93	602.86	19.07	32.620			
4,400.00	4,267.49	4,287.69	4,285.93	16.01	10.08	175.34	-54.52	-13.75	650.35	630.61	19.73	32.954			
4,500.00	4,363.49	4,383.15	4,381.26	16.51	10.33	175.20	-59.50	-14.03	675.61	655.23	20.38	33.152			
4,600.00	4,460.41	4,480.84	4,478.82	16.97	10.59	175.03	-64.60	-14.44	697.59	676.59	21.00	33.216			
4,700.00	4,558.13	4,579.57	4,577.41	17.38	10.86	174.85	-69.75	-14.77	716.11	694.52	21.60	33.159			
4,800.00	4,656.53	4,676.83	4,674.54	17.74	11.11	174.66	-74.70	-15.07	731.26	709.11	22.16	33.006			
4,900.00	4,755.49	4,773.93	4,771.55	18.06	11.37	174.48	-79.24	-15.41	743.26	720.57	22.68	32.770			
5,000.00	4,854.89	4,872.36	4,869.87	18.32	11.64	174.29	-83.53	-15.83	752.04	728.87	23.17	32.451			
5,100.00	4,954.61	4,971.34	4,968.76	18.54	11.90	174.06	-87.81	-16.37	757.49	733.85	23.64	32.049			
5,200.00	5,054.52	5,070.65	5,067.97	18.71	12.16	173.79	-92.14	-17.06	759.57	735.51	24.06	31.568			
5,262.48	5,117.00	5,132.76	5,130.01	18.79	12.33	-57.12	-94.94	-17.58	759.16	734.86	24.30	31.236			
5,300.00	5,154.52	5,170.04	5,167.25	18.83	12.43	-57.25	-96.65	-17.93	758.53	734.05	24.48	30.992			
5,400.00	5,254.52	5,270.58	5,267.67	18.96	12.69	-57.59	-101.41	-18.97	756.84	731.89	24.95	30.338			
5,500.00	5,354.52	5,371.60	5,368.57	19.09	12.96	-57.95	-106.42	-19.98	755.04	729.62	25.42	29.701			
5,600.00	5,454.52	5,471.51	5,468.34	19.22	13.23	-58.32	-111.54	-20.97	753.17	727.28	25.90	29.085			
5,700.00	5,554.52	5,571.00	5,567.69	19.35	13.49	-58.70	-116.65	-22.00	751.38	725.01	26.37	28.494			
5,800.00	5,654.52	5,669.92	5,666.48	19.49	13.76	-59.07	-121.66	-23.08	749.69	722.85	26.84	27.929			
5,900.00	5,754.52	5,768.63	5,765.07	19.62	14.02	-59.43	-126.44	-24.20	748.19	720.87	27.32	27.390			
6,000.00	5,854.52	5,870.45	5,866.77	19.76	14.29	-59.79	-131.25	-25.31	746.73	718.93	27.80	26.861			
6,100.00	5,954.52	5,973.69	5,969.88	19.90	14.56	-60.16	-136.41	-26.08	744.88	716.59	28.29	26.332			
6,200.00	6,054.52	6,075.06	6,071.11	20.04	14.83	-60.53	-141.68	-26.55	742.70	713.93	28.77	25.812			
6,300.00	6,154.52	6,175.79	6,171.70	20.18	15.10	-60.90	-146.94	-26.87	740.42	711.16	29.26	25.306			
6,400.00	6,254.52	6,277.41	6,273.18	20.33	15.38	-61.26	-152.26	-27.01	738.01	708.27	29.75	24.810			
6,500.00	6,354.52	6,379.30	6,374.94	20.47	15.65	-61.62	-157.58	-26.83	735.36	705.13	30.23	24.322			
6,600.00	6,454.52	6,477.47	6,472.97	20.62	15.91	-61.96	-162.70	-26.57	732.66	701.95	30.71	23.855			
6,700.00	6,554.52	6,574.70	6,570.06	20.77	16.17	-62.32	-167.77	-26.70	730.34	699.15	31.19	23.415			
6,800.00	6,654.52	6,672.77	6,668.00	20.92	16.43	-62.69	-172.82	-27.15	728.36	696.69	31.67	22.997			

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



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft	
Survey Program: 100-NS-GYRO-MS													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
6,900.00	6,754.52	6,771.16	6,766.27	21.07	16.70	-63.05	-177.68	-27.72	726.63	694.48	32.15	22.598			
7,000.00	6,854.52	6,870.22	6,865.22	21.22	16.96	-63.40	-182.34	-28.38	725.10	692.46	32.64	22.215			
7,100.00	6,954.52	6,969.58	6,964.47	21.37	17.23	-63.74	-186.80	-29.01	723.67	690.55	33.12	21.847			
7,200.00	7,054.52	7,069.95	7,064.74	21.53	17.49	-64.08	-191.25	-29.66	722.30	688.68	33.61	21.488			
7,300.00	7,154.52	7,170.72	7,165.40	21.68	17.76	-64.45	-196.12	-30.37	720.83	686.73	34.11	21.135			
7,400.00	7,254.52	7,273.03	7,267.57	21.84	18.04	-64.85	-201.41	-31.03	719.20	684.60	34.60	20.784			
7,500.00	7,354.52	7,375.98	7,370.38	22.00	18.31	-65.25	-206.77	-31.25	717.19	682.09	35.10	20.430			
7,600.00	7,454.52	7,477.22	7,471.48	22.16	18.58	-65.62	-212.00	-31.05	714.87	679.27	35.60	20.082			
7,700.00	7,554.52	7,577.96	7,572.10	22.32	18.85	-65.97	-216.97	-30.62	712.45	676.36	36.09	19.741			
7,800.00	7,654.52	7,679.73	7,673.75	22.48	19.12	-66.32	-221.95	-29.96	709.88	673.30	36.58	19.405			
7,900.00	7,754.52	7,781.75	7,775.62	22.64	19.39	-66.69	-227.36	-29.15	707.03	669.95	37.08	19.068			
8,000.00	7,854.52	7,884.03	7,877.75	22.81	19.66	-67.07	-232.87	-28.02	703.89	666.32	37.57	18.734			
8,039.17	7,893.69	7,900.00	7,893.69	22.87	19.70	-67.12	-233.68	-27.78	702.98	665.28	37.70	18.647			
8,100.00	7,954.52	7,900.00	7,893.69	22.97	19.70	-67.12	-233.68	-27.78	705.61	667.78	37.82	18.655			
8,200.00	8,054.52	7,900.00	7,893.69	23.14	19.70	-67.12	-233.68	-27.78	721.14	683.11	38.03	18.963			
8,300.00	8,154.52	7,900.00	7,893.69	23.30	19.70	-67.12	-233.68	-27.78	749.81	711.57	38.24	19.610			
8,400.00	8,254.52	7,900.00	7,893.69	23.47	19.70	-67.12	-233.68	-27.78	790.18	751.73	38.44	20.555			
8,500.00	8,354.52	7,900.00	7,893.69	23.64	19.70	-67.12	-233.68	-27.78	840.56	801.91	38.65	21.749			
8,600.00	8,454.52	7,900.00	7,893.69	23.81	19.70	-67.12	-233.68	-27.78	899.28	860.43	38.86	23.144			
8,700.00	8,554.52	7,900.00	7,893.69	23.98	19.70	-67.12	-233.68	-27.78	964.82	925.76	39.06	24.698			
8,800.00	8,654.52	7,900.00	7,893.69	24.15	19.70	-67.12	-233.68	-27.78	1,035.88	996.61	39.27	26.377			
8,900.00	8,754.52	7,900.00	7,893.69	24.33	19.70	-67.12	-233.68	-27.78	1,111.40	1,071.92	39.48	28.150			
9,000.00	8,854.52	7,900.00	7,893.69	24.50	19.70	-67.12	-233.68	-27.78	1,190.54	1,150.85	39.69	29.996			
9,100.00	8,954.52	7,900.00	7,893.69	24.67	19.70	-67.12	-233.68	-27.78	1,272.61	1,232.71	39.90	31.895			
9,200.00	9,054.52	7,900.00	7,893.69	24.85	19.70	-67.12	-233.68	-27.78	1,357.09	1,316.99	40.11	33.835			
9,300.00	9,154.52	7,900.00	7,893.69	25.02	19.70	-67.12	-233.68	-27.78	1,443.56	1,403.24	40.32	35.804			
9,400.00	9,254.52	7,900.00	7,893.69	25.20	19.70	-67.12	-233.68	-27.78	1,531.68	1,491.15	40.53	37.792			
9,445.48	9,300.00	7,900.00	7,893.69	25.28	19.70	-67.12	-233.68	-27.78	1,572.22	1,531.60	40.62	38.701			



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	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 Tooflance (°)	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	-13.17	58.64	-13.73	60.22						
100.00	100.00	100.00	100.00	0.09	0.09	-13.17	58.64	-13.73	60.22	60.04	0.18	326.751			
200.00	200.00	200.00	200.00	0.32	0.32	-13.17	58.64	-13.73	60.22	59.59	0.63	95.013			
300.00	300.00	300.00	300.00	0.54	0.54	-13.17	58.64	-13.73	60.22	59.14	1.08	55.588			
400.00	400.00	400.00	400.00	0.77	0.77	-13.17	58.64	-13.73	60.22	58.69	1.53	39.287			
500.00	500.00	500.00	500.00	0.99	0.99	-13.17	58.64	-13.73	60.22	58.24	1.98	30.378			
600.00	600.00	600.00	600.00	1.22	1.22	-13.17	58.64	-13.73	60.22	57.79	2.43	24.763			
700.00	700.00	700.00	700.00	1.44	1.44	-13.17	58.64	-13.73	60.22	57.34	2.88	20.900			
800.00	800.00	800.00	800.00	1.67	1.67	-13.17	58.64	-13.73	60.22	56.89	3.33	18.079			
900.00	900.00	900.00	900.00	1.89	1.89	-13.17	58.64	-13.73	60.22	56.44	3.78	15.930			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-13.17	58.64	-13.73	60.22	55.99	4.23	14.237			
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-13.17	58.64	-13.73	60.22	55.54	4.68	12.869			
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-13.17	58.64	-13.73	60.22	55.09	5.13	11.741			
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-13.17	58.64	-13.73	60.22	54.64	5.58	10.795			
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-13.17	58.64	-13.73	60.22	54.19	6.03	9.990			
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-13.17	58.64	-13.73	60.22	53.75	6.48	9.297			
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-13.17	58.64	-13.73	60.22	53.30	6.93	8.694			
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-13.17	58.64	-13.73	60.22	52.85	7.38	8.164			
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-13.17	58.64	-13.73	60.22	52.40	7.83	7.695			
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-13.17	58.64	-13.73	60.22	51.95	8.28	7.277			
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-13.17	58.64	-13.73	60.22	51.50	8.73	6.902			
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	-13.17	58.64	-13.73	60.22	51.05	9.17	6.564			
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-13.17	58.64	-13.73	60.22	50.60	9.62	6.257			
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	-13.17	58.64	-13.73	60.22	50.15	10.07	5.978	CC, ES, SF		
2,400.00	2,399.97	2,397.91	2,397.89	5.24	5.26	-143.16	60.31	-13.65	63.60	53.11	10.49	6.062			
2,500.00	2,499.75	2,495.14	2,494.99	5.42	5.48	-144.89	65.27	-13.42	73.77	62.89	10.88	6.671			
2,600.00	2,599.14	2,592.25	2,591.78	5.62	5.70	-146.96	73.21	-13.04	90.45	79.19	11.26	8.035			
2,700.00	2,697.97	2,689.92	2,689.07	5.83	5.92	-149.38	81.71	-12.65	111.41	99.79	11.62	9.586			
2,800.00	2,796.04	2,786.60	2,785.38	6.07	6.14	-151.81	90.13	-12.25	136.27	124.30	11.97	11.384			
2,900.00	2,893.17	2,882.12	2,880.54	6.36	6.36	-154.06	98.45	-11.87	165.10	152.80	12.30	13.419			
3,000.00	2,989.17	2,976.30	2,974.36	6.69	6.58	-156.06	106.65	-11.48	197.95	185.33	12.62	15.685			
3,100.00	3,083.85	3,068.95	3,066.66	7.09	6.80	-157.80	114.71	-11.11	234.80	221.88	12.92	18.170			
3,200.00	3,177.05	3,163.61	3,161.02	7.57	6.99	-159.45	122.19	-10.76	275.02	261.84	13.17	20.875			
3,300.00	3,268.57	3,257.40	3,254.62	8.14	7.17	-161.06	128.07	-10.48	317.99	304.58	13.41	23.720			
3,366.10	3,328.07	3,318.83	3,315.98	8.57	7.28	-162.08	131.08	-10.34	347.93	334.38	13.55	25.674			
3,400.00	3,358.36	3,350.27	3,347.39	8.81	7.34	-162.71	132.37	-10.28	363.55	349.86	13.69	26.558			
3,500.00	3,447.74	3,443.70	3,440.78	9.54	7.51	-164.40	135.19	-10.15	409.06	394.95	14.10	29.004			
3,600.00	3,537.11	3,538.14	3,535.21	10.30	7.68	-165.88	136.49	-10.09	453.66	439.13	14.53	31.227			
3,700.00	3,626.49	3,629.42	3,626.49	11.10	7.86	-167.16	136.58	-10.08	497.59	482.62	14.97	33.229			
3,800.00	3,715.86	3,718.79	3,715.86	11.92	8.06	-168.21	136.58	-10.08	541.62	526.17	15.45	35.062			
3,900.00	3,805.24	3,808.17	3,805.24	12.76	8.26	-169.10	136.58	-10.08	585.77	569.84	15.93	36.775			
3,929.86	3,831.92	3,834.85	3,831.92	13.01	8.32	-169.34	136.58	-10.08	598.98	582.90	16.07	37.264			
4,000.00	3,894.99	3,897.92	3,894.99	13.55	8.46	-169.98	136.58	-10.08	629.27	612.74	16.53	38.066			
4,100.00	3,986.16	3,989.09	3,986.16	14.22	8.66	-170.73	136.58	-10.08	669.85	652.68	17.17	39.006			
4,200.00	4,078.71	4,081.64	4,078.71	14.85	8.86	-171.35	136.58	-10.08	707.32	689.51	17.80	39.726			
4,300.00	4,172.52	4,175.46	4,172.52	15.45	9.07	-171.85	136.58	-10.08	741.60	723.18	18.42	40.256			
4,400.00	4,267.49	4,270.42	4,267.49	16.01	9.28	-172.27	136.58	-10.08	772.64	753.62	19.02	40.619			
4,500.00	4,363.49	4,366.42	4,363.49	16.51	9.49	-172.61	136.58	-10.08	800.40	780.80	19.60	40.837			
4,600.00	4,460.41	4,463.34	4,460.41	16.97	9.71	-172.90	136.58	-10.08	824.83	804.67	20.16	40.924			
4,700.00	4,558.13	4,561.06	4,558.13	17.38	9.92	-173.12	136.58	-10.08	845.89	825.21	20.69	40.894			
4,800.00	4,656.53	4,659.46	4,656.53	17.74	10.14	-173.31	136.58	-10.08	863.57	842.38	21.19	40.757			
4,900.00	4,755.49	4,758.42	4,755.49	18.06	10.36	-173.45	136.58	-10.08	877.82	856.16	21.66	40.523			

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



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	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	4,854.89	4,857.82	4,854.89	18.32	10.58	-173.55	136.58	-10.08	888.64	866.53	22.11	40.198			
5,100.00	4,954.61	4,957.54	4,954.61	18.54	10.80	-173.62	136.58	-10.08	896.00	873.48	22.52	39.787			
5,200.00	5,054.52	5,057.46	5,054.52	18.71	11.03	-173.66	136.58	-10.08	899.90	877.00	22.90	39.294			
5,262.48	5,117.00	5,119.93	5,117.00	18.79	11.17	-44.39	136.58	-10.08	900.58	877.46	23.12	38.956			
5,300.00	5,154.52	5,157.45	5,154.52	18.83	11.25	-44.39	136.58	-10.08	900.58	877.31	23.27	38.702			
5,400.00	5,254.52	5,257.45	5,254.52	18.96	11.47	-44.39	136.58	-10.08	900.58	876.89	23.69	38.022			
5,500.00	5,354.52	5,357.45	5,354.52	19.09	11.69	-44.39	136.58	-10.08	900.58	876.48	24.10	37.364			
5,600.00	5,454.52	5,457.45	5,454.52	19.22	11.92	-44.39	136.58	-10.08	900.58	876.06	24.52	36.726			
5,700.00	5,554.52	5,557.45	5,554.52	19.35	12.14	-44.39	136.58	-10.08	900.58	875.64	24.94	36.108			
5,800.00	5,654.52	5,657.45	5,654.52	19.49	12.36	-44.39	136.58	-10.08	900.58	875.22	25.36	35.509			
5,900.00	5,754.52	5,757.45	5,754.52	19.62	12.58	-44.39	136.58	-10.08	900.58	874.80	25.78	34.929			
6,000.00	5,854.52	5,857.45	5,854.52	19.76	12.81	-44.39	136.58	-10.08	900.58	874.37	26.21	34.366			
6,100.00	5,954.52	5,957.45	5,954.52	19.90	13.03	-44.39	136.58	-10.08	900.58	873.95	26.63	33.820			
6,200.00	6,054.52	6,057.45	6,054.52	20.04	13.25	-44.39	136.58	-10.08	900.58	873.53	27.05	33.290			
6,300.00	6,154.52	6,157.45	6,154.52	20.18	13.48	-44.39	136.58	-10.08	900.58	873.10	27.48	32.775			
6,400.00	6,254.52	6,257.45	6,254.52	20.33	13.70	-44.39	136.58	-10.08	900.58	872.68	27.90	32.275			
6,500.00	6,354.52	6,357.45	6,354.52	20.47	13.92	-44.39	136.58	-10.08	900.58	872.25	28.33	31.790			
6,600.00	6,454.52	6,457.45	6,454.52	20.62	14.15	-44.39	136.58	-10.08	900.58	871.82	28.76	31.318			
6,700.00	6,554.52	6,557.45	6,554.52	20.77	14.37	-44.39	136.58	-10.08	900.58	871.40	29.18	30.859			
6,800.00	6,654.52	6,657.45	6,654.52	20.92	14.59	-44.39	136.58	-10.08	900.58	870.97	29.61	30.413			
6,900.00	6,754.52	6,757.45	6,754.52	21.07	14.82	-44.39	136.58	-10.08	900.58	870.54	30.04	29.978			
7,000.00	6,854.52	6,857.45	6,854.52	21.22	15.04	-44.39	136.58	-10.08	900.58	870.11	30.47	29.556			
7,100.00	6,954.52	6,957.45	6,954.52	21.37	15.26	-44.39	136.58	-10.08	900.58	869.68	30.90	29.145			
7,200.00	7,054.52	7,057.45	7,054.52	21.53	15.49	-44.39	136.58	-10.08	900.58	869.25	31.33	28.744			
7,300.00	7,154.52	7,157.45	7,154.52	21.68	15.71	-44.39	136.58	-10.08	900.58	868.82	31.76	28.354			
7,400.00	7,254.52	7,257.45	7,254.52	21.84	15.93	-44.39	136.58	-10.08	900.58	868.39	32.19	27.974			
7,500.00	7,354.52	7,357.45	7,354.52	22.00	16.16	-44.39	136.58	-10.08	900.58	867.95	32.63	27.604			
7,600.00	7,454.52	7,457.45	7,454.52	22.16	16.38	-44.39	136.58	-10.08	900.58	867.52	33.06	27.243			
7,700.00	7,554.52	7,557.45	7,554.52	22.32	16.61	-44.39	136.58	-10.08	900.58	867.09	33.49	26.891			
7,800.00	7,654.52	7,657.45	7,654.52	22.48	16.83	-44.39	136.58	-10.08	900.58	866.66	33.92	26.547			
7,900.00	7,754.52	7,757.45	7,754.52	22.64	17.05	-44.39	136.58	-10.08	900.58	866.22	34.36	26.212			
8,000.00	7,854.52	7,857.45	7,854.52	22.81	17.28	-44.39	136.58	-10.08	900.58	865.79	34.79	25.885			
8,100.00	7,954.52	7,957.45	7,954.52	22.97	17.50	-44.39	136.58	-10.08	900.58	865.35	35.23	25.566			
8,200.00	8,054.52	8,057.45	8,054.52	23.14	17.72	-44.39	136.58	-10.08	900.58	864.92	35.66	25.254			
8,300.00	8,154.52	8,157.45	8,154.52	23.30	17.95	-44.39	136.58	-10.08	900.58	864.48	36.10	24.950			
8,400.00	8,254.52	8,257.45	8,254.52	23.47	18.17	-44.39	136.58	-10.08	900.58	864.05	36.53	24.652			
8,500.00	8,354.52	8,357.45	8,354.52	23.64	18.40	-44.39	136.58	-10.08	900.58	863.61	36.97	24.361			
8,600.00	8,454.52	8,457.45	8,454.52	23.81	18.62	-44.39	136.58	-10.08	900.58	863.18	37.40	24.077			
8,700.00	8,554.52	8,557.45	8,554.52	23.98	18.84	-44.39	136.58	-10.08	900.58	862.74	37.84	23.800			
8,800.00	8,654.52	8,657.45	8,654.52	24.15	19.07	-44.39	136.58	-10.08	900.58	862.30	38.28	23.528			
8,900.00	8,754.52	8,757.45	8,754.52	24.33	19.29	-44.39	136.58	-10.08	900.58	861.87	38.71	23.262			
9,000.00	8,854.52	8,857.45	8,854.52	24.50	19.52	-44.39	136.58	-10.08	900.58	861.43	39.15	23.003			
9,100.00	8,954.52	8,957.45	8,954.52	24.67	19.74	-44.39	136.58	-10.08	900.58	860.99	39.59	22.748			
9,200.00	9,054.52	9,057.45	9,054.52	24.85	19.96	-44.39	136.58	-10.08	900.58	860.55	40.03	22.499			
9,300.00	9,154.52	9,157.45	9,154.52	25.02	20.19	-44.39	136.58	-10.08	900.58	860.11	40.46	22.256			
9,400.00	9,254.52	9,257.45	9,254.52	25.20	20.41	-44.39	136.58	-10.08	900.58	859.68	40.90	22.017			
9,445.48	9,300.00	9,302.93	9,300.00	25.28	20.51	-44.39	136.58	-10.08	900.58	859.48	41.10	21.910			



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	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	-12.84	19.67	-4.48	20.17				
100.00	100.00	100.00	100.00	0.09	0.09	-12.84	19.67	-4.48	20.17	19.99	0.18	109.445	
200.00	200.00	200.00	200.00	0.32	0.32	-12.84	19.67	-4.48	20.17	19.54	0.63	31.824	
300.00	300.00	300.00	300.00	0.54	0.54	-12.84	19.67	-4.48	20.17	19.09	1.08	18.619	
400.00	400.00	400.00	400.00	0.77	0.77	-12.84	19.67	-4.48	20.17	18.64	1.53	13.159	
500.00	500.00	500.00	500.00	0.99	0.99	-12.84	19.67	-4.48	20.17	18.19	1.98	10.175	
600.00	600.00	600.00	600.00	1.22	1.22	-12.84	19.67	-4.48	20.17	17.74	2.43	8.294	
700.00	700.00	700.00	700.00	1.44	1.44	-12.84	19.67	-4.48	20.17	17.29	2.88	7.000	
800.00	800.00	800.00	800.00	1.67	1.67	-12.84	19.67	-4.48	20.17	16.84	3.33	6.056	
900.00	900.00	900.00	900.00	1.89	1.89	-12.84	19.67	-4.48	20.17	16.39	3.78	5.336	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-12.84	19.67	-4.48	20.17	15.94	4.23	4.769	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-12.84	19.67	-4.48	20.17	15.49	4.68	4.311	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-12.84	19.67	-4.48	20.17	15.04	5.13	3.933	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-12.84	19.67	-4.48	20.17	14.59	5.58	3.616	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-12.84	19.67	-4.48	20.17	14.14	6.03	3.346	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-12.84	19.67	-4.48	20.17	13.69	6.48	3.114	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-12.84	19.67	-4.48	20.17	13.24	6.93	2.912	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-12.84	19.67	-4.48	20.17	12.79	7.38	2.734	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-12.84	19.67	-4.48	20.17	12.35	7.83	2.577	
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-12.84	19.67	-4.48	20.17	11.90	8.28	2.437	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-12.84	19.67	-4.48	20.17	11.45	8.73	2.312	
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	-12.84	19.67	-4.48	20.17	11.00	9.17	2.199	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-12.84	19.67	-4.48	20.17	10.55	9.62	2.096	
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	-12.84	19.67	-4.48	20.17	10.10	10.07	2.002	
2,348.96	2,348.96	2,349.31	2,349.31	5.14	5.13	-143.90	19.18	-4.68	20.16	9.89	10.27	1.963 CC	
2,400.00	2,399.97	2,400.66	2,400.63	5.24	5.24	-149.52	17.62	-5.31	20.26	9.79	10.47	1.935 ES, SF	
2,500.00	2,499.75	2,500.91	2,500.65	5.42	5.41	-169.76	11.51	-7.79	22.41	11.62	10.79	2.076	
2,600.00	2,599.14	2,600.36	2,599.50	5.62	5.59	167.79	1.45	-11.86	30.39	19.27	11.11	2.735	
2,700.00	2,697.97	2,698.62	2,696.62	5.83	5.78	152.50	-12.38	-17.46	45.47	34.01	11.46	3.968	
2,800.00	2,796.04	2,795.35	2,791.50	6.07	5.99	143.55	-29.76	-24.50	66.87	55.02	11.85	5.644	
2,900.00	2,893.17	2,890.22	2,883.71	6.36	6.24	138.14	-50.39	-32.85	93.79	81.51	12.28	7.637	
3,000.00	2,989.17	2,984.78	2,975.00	6.69	6.52	135.14	-73.26	-42.12	125.18	112.42	12.76	9.811	
3,100.00	3,083.85	3,078.66	3,065.61	7.09	6.82	134.20	-96.01	-51.33	159.60	146.32	13.28	12.021	
3,200.00	3,177.05	3,171.41	3,155.14	7.57	7.15	134.27	-118.50	-60.44	196.87	183.04	13.83	14.234	
3,300.00	3,268.57	3,262.87	3,243.41	8.14	7.49	134.84	-140.67	-69.42	237.02	222.60	14.43	16.430	
3,366.10	3,328.07	3,322.53	3,300.99	8.57	7.72	135.35	-155.13	-75.27	265.17	250.33	14.84	17.868	
3,400.00	3,358.36	3,352.95	3,330.36	8.81	7.84	135.89	-162.50	-78.26	279.95	264.86	15.09	18.552	
3,500.00	3,447.74	3,442.69	3,416.97	9.54	8.20	137.19	-184.26	-87.07	323.64	307.78	15.85	20.415	
3,600.00	3,537.11	3,532.43	3,503.59	10.30	8.58	138.19	-206.01	-95.88	367.43	350.78	16.65	22.063	
3,700.00	3,626.49	3,622.17	3,590.20	11.10	8.96	138.97	-227.76	-104.69	411.30	393.81	17.49	23.520	
3,800.00	3,715.86	3,711.90	3,676.82	11.92	9.36	139.61	-249.52	-113.50	455.21	436.86	18.35	24.811	
3,900.00	3,805.24	3,801.64	3,763.43	12.76	9.76	140.13	-271.27	-122.31	499.16	479.93	19.23	25.957	
3,929.86	3,831.92	3,828.43	3,789.29	13.01	9.88	140.27	-277.76	-124.94	512.29	492.79	19.50	26.273	
4,000.00	3,894.99	3,891.69	3,850.34	13.55	10.18	140.93	-293.10	-131.15	542.54	522.39	20.16	26.914	
4,100.00	3,986.16	3,982.87	3,938.35	14.22	10.60	141.58	-315.20	-140.10	583.59	562.51	21.08	27.690	
4,200.00	4,078.71	4,075.13	4,027.40	14.85	11.04	141.96	-337.56	-149.16	622.12	600.12	22.00	28.274	
4,300.00	4,172.52	4,168.36	4,117.39	15.45	11.48	142.11	-360.16	-158.31	658.12	635.19	22.93	28.697	
4,400.00	4,267.49	4,267.35	4,213.16	16.01	11.89	142.11	-383.35	-167.71	691.28	667.47	23.81	29.032	
4,500.00	4,363.49	4,368.90	4,312.05	16.51	12.26	142.12	-404.78	-176.38	721.06	696.43	24.63	29.271	
4,600.00	4,460.41	4,471.94	4,412.96	16.97	12.63	142.12	-424.02	-184.17	747.36	721.95	25.41	29.414	
4,700.00	4,558.13	4,576.29	4,515.70	17.38	12.97	142.13	-440.93	-191.02	770.12	743.99	26.13	29.475	
4,800.00	4,656.53	4,681.78	4,620.03	17.74	13.30	142.13	-455.37	-196.87	789.28	762.49	26.79	29.466	

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



Weatherford International Ltd.
Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

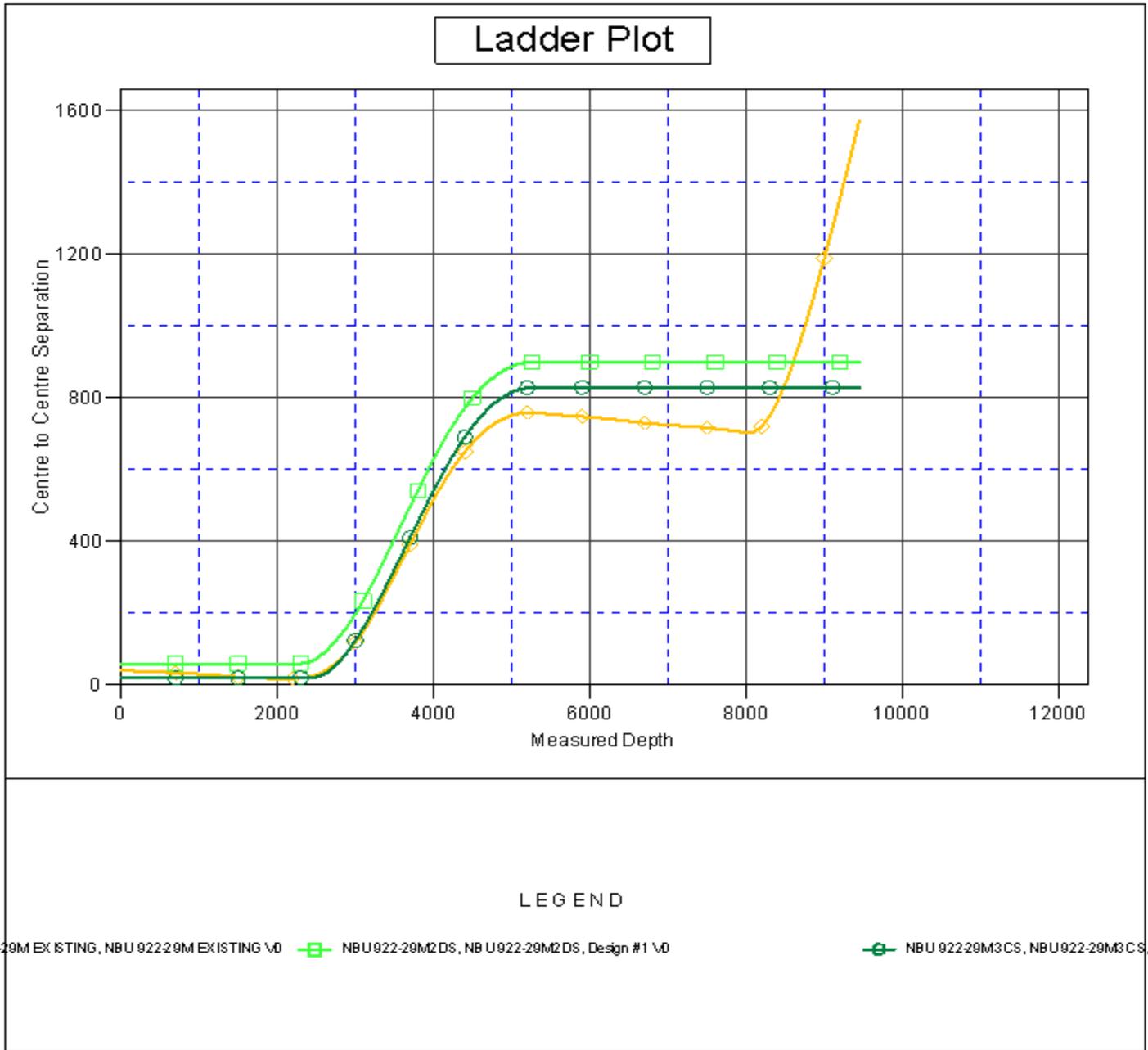
Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.00	4,755.49	4,788.23	4,725.71	18.06	13.60	142.13	-467.23	-201.67	804.79	777.41	27.38	29.393		
5,000.00	4,854.89	4,895.45	4,832.47	18.32	13.87	142.13	-476.41	-205.39	816.62	788.72	27.91	29.262		
5,100.00	4,954.61	5,003.23	4,940.02	18.54	14.11	142.12	-482.84	-208.00	824.73	796.37	28.36	29.077		
5,200.00	5,054.52	5,111.38	5,048.10	18.71	14.32	142.10	-486.46	-209.46	829.10	800.36	28.75	28.841		
5,262.48	5,117.00	5,179.04	5,115.75	18.79	14.43	-88.64	-487.28	-209.80	829.93	800.99	28.94	28.673		
5,300.00	5,154.52	5,217.81	5,154.52	18.83	14.49	-88.64	-487.31	-209.81	829.94	800.88	29.06	28.556		
5,400.00	5,254.52	5,317.81	5,254.52	18.96	14.65	-88.64	-487.31	-209.81	829.94	800.56	29.38	28.245		
5,500.00	5,354.52	5,417.81	5,354.52	19.09	14.81	-88.64	-487.31	-209.81	829.94	800.24	29.71	27.938		
5,600.00	5,454.52	5,517.81	5,454.52	19.22	14.98	-88.64	-487.31	-209.81	829.94	799.91	30.03	27.634		
5,700.00	5,554.52	5,617.81	5,554.52	19.35	15.14	-88.64	-487.31	-209.81	829.94	799.58	30.36	27.335		
5,800.00	5,654.52	5,717.81	5,654.52	19.49	15.31	-88.64	-487.31	-209.81	829.94	799.25	30.69	27.038		
5,900.00	5,754.52	5,817.81	5,754.52	19.62	15.47	-88.64	-487.31	-209.81	829.94	798.91	31.03	26.746		
6,000.00	5,854.52	5,917.81	5,854.52	19.76	15.64	-88.64	-487.31	-209.81	829.94	798.57	31.37	26.458		
6,100.00	5,954.52	6,017.81	5,954.52	19.90	15.81	-88.64	-487.31	-209.81	829.94	798.23	31.71	26.173		
6,200.00	6,054.52	6,117.81	6,054.52	20.04	15.98	-88.64	-487.31	-209.81	829.94	797.89	32.05	25.893		
6,300.00	6,154.52	6,217.81	6,154.52	20.18	16.16	-88.64	-487.31	-209.81	829.94	797.54	32.40	25.616		
6,400.00	6,254.52	6,317.81	6,254.52	20.33	16.33	-88.64	-487.31	-209.81	829.94	797.19	32.75	25.343		
6,500.00	6,354.52	6,417.81	6,354.52	20.47	16.51	-88.64	-487.31	-209.81	829.94	796.84	33.10	25.074		
6,600.00	6,454.52	6,517.81	6,454.52	20.62	16.68	-88.64	-487.31	-209.81	829.94	796.49	33.45	24.809		
6,700.00	6,554.52	6,617.81	6,554.52	20.77	16.86	-88.64	-487.31	-209.81	829.94	796.13	33.81	24.548		
6,800.00	6,654.52	6,717.81	6,654.52	20.92	17.04	-88.64	-487.31	-209.81	829.94	795.77	34.17	24.291		
6,900.00	6,754.52	6,817.81	6,754.52	21.07	17.22	-88.64	-487.31	-209.81	829.94	795.41	34.53	24.037		
7,000.00	6,854.52	6,917.81	6,854.52	21.22	17.40	-88.64	-487.31	-209.81	829.94	795.05	34.89	23.788		
7,100.00	6,954.52	7,017.81	6,954.52	21.37	17.58	-88.64	-487.31	-209.81	829.94	794.69	35.25	23.542		
7,200.00	7,054.52	7,117.81	7,054.52	21.53	17.76	-88.64	-487.31	-209.81	829.94	794.32	35.62	23.300		
7,300.00	7,154.52	7,217.81	7,154.52	21.68	17.95	-88.64	-487.31	-209.81	829.94	793.95	35.99	23.062		
7,400.00	7,254.52	7,317.81	7,254.52	21.84	18.13	-88.64	-487.31	-209.81	829.94	793.58	36.36	22.827		
7,500.00	7,354.52	7,417.81	7,354.52	22.00	18.32	-88.64	-487.31	-209.81	829.94	793.21	36.73	22.596		
7,600.00	7,454.52	7,517.81	7,454.52	22.16	18.51	-88.64	-487.31	-209.81	829.94	792.84	37.10	22.369		
7,700.00	7,554.52	7,617.81	7,554.52	22.32	18.69	-88.64	-487.31	-209.81	829.94	792.46	37.48	22.145		
7,800.00	7,654.52	7,717.81	7,654.52	22.48	18.88	-88.64	-487.31	-209.81	829.94	792.09	37.85	21.924		
7,900.00	7,754.52	7,817.81	7,754.52	22.64	19.07	-88.64	-487.31	-209.81	829.94	791.71	38.23	21.707		
8,000.00	7,854.52	7,917.81	7,854.52	22.81	19.26	-88.64	-487.31	-209.81	829.94	791.33	38.61	21.494		
8,100.00	7,954.52	8,017.81	7,954.52	22.97	19.45	-88.64	-487.31	-209.81	829.94	790.95	38.99	21.284		
8,200.00	8,054.52	8,117.81	8,054.52	23.14	19.64	-88.64	-487.31	-209.81	829.94	790.56	39.38	21.077		
8,300.00	8,154.52	8,217.81	8,154.52	23.30	19.83	-88.64	-487.31	-209.81	829.94	790.18	39.76	20.873		
8,400.00	8,254.52	8,317.81	8,254.52	23.47	20.03	-88.64	-487.31	-209.81	829.94	789.80	40.15	20.673		
8,500.00	8,354.52	8,417.81	8,354.52	23.64	20.22	-88.64	-487.31	-209.81	829.94	789.41	40.53	20.475		
8,600.00	8,454.52	8,517.81	8,454.52	23.81	20.41	-88.64	-487.31	-209.81	829.94	789.02	40.92	20.281		
8,700.00	8,554.52	8,617.81	8,554.52	23.98	20.61	-88.64	-487.31	-209.81	829.94	788.63	41.31	20.090		
8,800.00	8,654.52	8,717.81	8,654.52	24.15	20.80	-88.64	-487.31	-209.81	829.94	788.24	41.70	19.902		
8,900.00	8,754.52	8,817.81	8,754.52	24.33	21.00	-88.64	-487.31	-209.81	829.94	787.85	42.09	19.717		
9,000.00	8,854.52	8,917.81	8,854.52	24.50	21.19	-88.64	-487.31	-209.81	829.94	787.46	42.49	19.534		
9,100.00	8,954.52	9,017.81	8,954.52	24.67	21.39	-88.64	-487.31	-209.81	829.94	787.06	42.88	19.355		
9,200.00	9,054.52	9,117.81	9,054.52	24.85	21.59	-88.64	-487.31	-209.81	829.94	786.67	43.28	19.178		
9,300.00	9,154.52	9,217.81	9,154.52	25.02	21.79	-88.64	-487.31	-209.81	829.94	786.27	43.67	19.004		
9,400.00	9,254.52	9,317.81	9,254.52	25.20	21.99	-88.64	-487.31	-209.81	829.94	785.87	44.07	18.833		
9,445.48	9,300.00	9,363.29	9,300.00	25.28	22.08	-88.64	-487.31	-209.81	829.94	785.69	44.25	18.756		

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 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

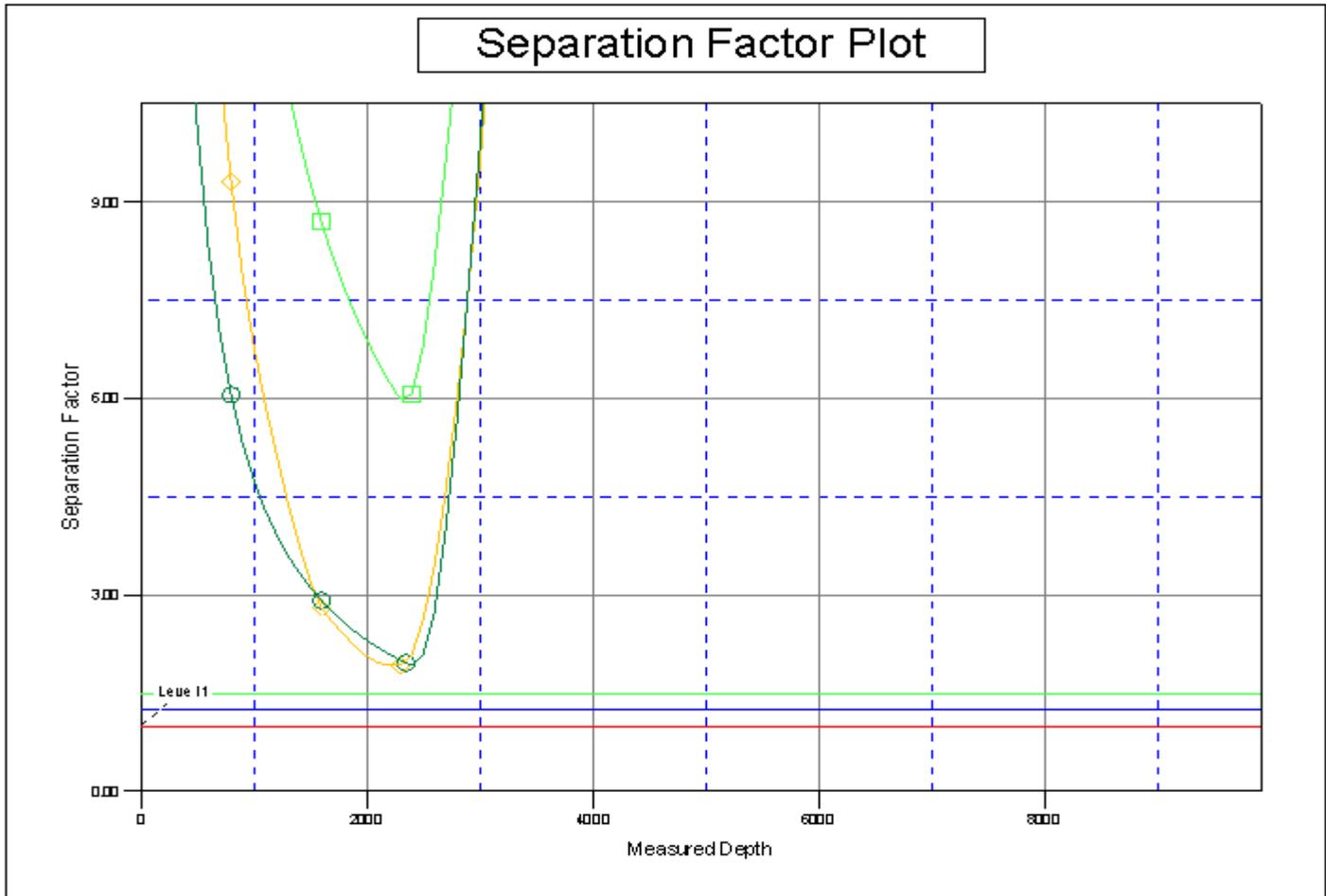
Reference Depths are relative to WELL @ 5030.00ft (Original Well Elev) Coordinates are relative to: NBU 922-29M4DS
 Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
 Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.98°





Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 922-29M4DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 5030.00ft (Original Well Elev)
Reference Site:	NBU 922-29M PAD	MD Reference:	WELL @ 5030.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 922-29M4DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 922-29M4DS	Database:	EDM 2003.21 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5030.00ft (Original Well Elev) Coordinates are relative to: NBU 922-29M4DS
 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: 0.98°



LEGEND

2-29M EXISTING, NBU 922-29M EXISTING \0 ■ NBU 922-29M2DS, NBU 922-29M2DS, Design #1 \0 ● NBU 922-29M3CS, NBU 922-29M3CS, L



Weatherford®

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Robert Scott

Email: robert.scott@weatherford.com

NBU 922-29M4DS

Pad: NBU 922-29M

Surface: 553' FSL, 525' FWL (SW/4SW/4)

BHL: 45' FSL 1,145' FWL (SW/4SW/4)

Sec. 29 T9S R22E

Uintah, Utah

Mineral Lease: ML22935

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	1,384'	
Birds Nest	1,700'	Water
Mahogany	2,176'	Water
Wasatch	4,613'	Gas
Mesaverde	7,190'	Gas
MVU2	8,111'	Gas
MVL1	8,681'	Gas
TVD	9,300'	
TD	9,445'	

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 9,445' TD, approximately equals 5,590 psi (calculated at 0.57 psi/foot).

Maximum anticipated surface pressure equals approximately 3,458 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

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

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

Conclusion

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

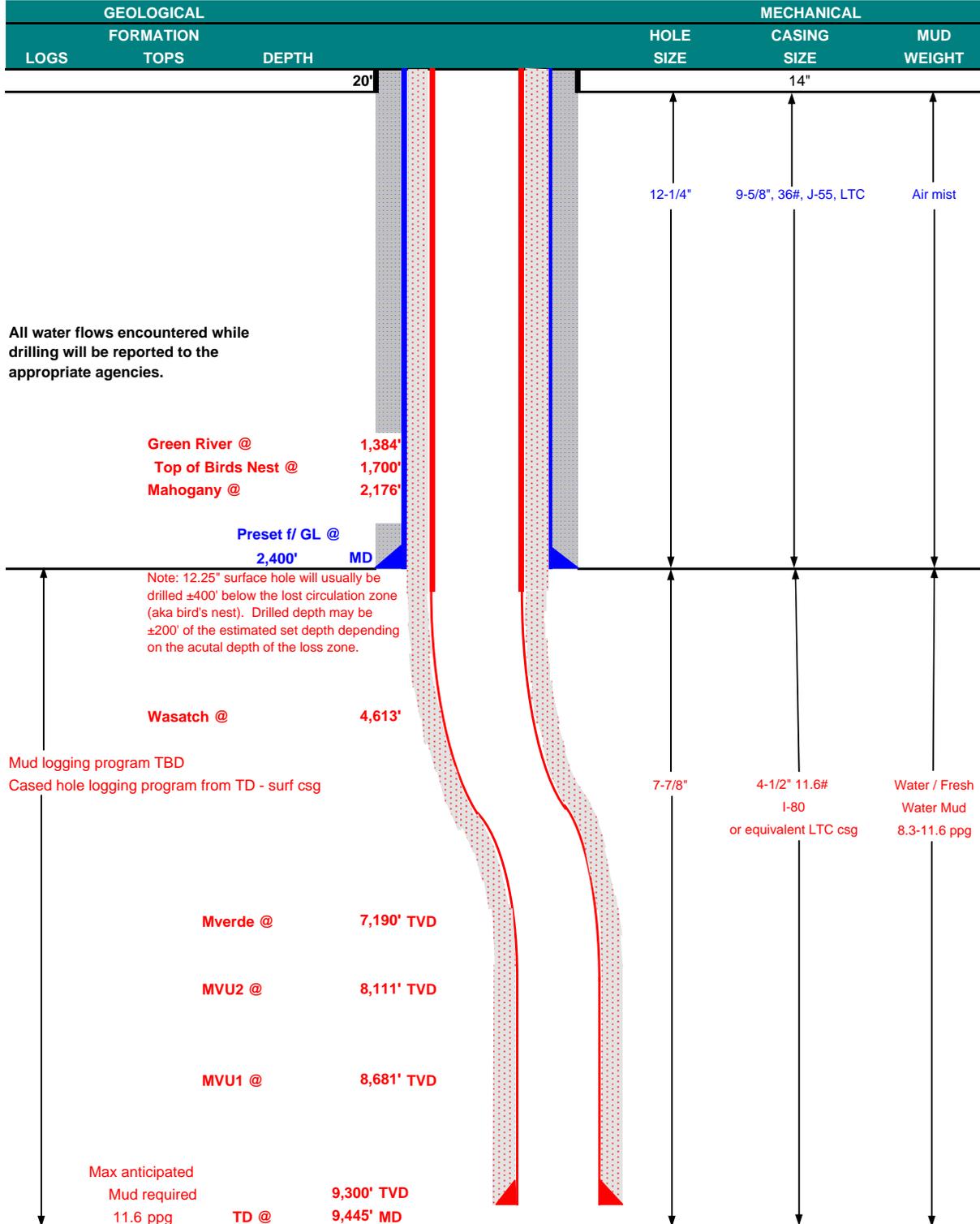
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	June 8, 2009			
WELL NAME	NBU 922-29M4DS		TD	9,300'	TVD	9,445' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	5,015' GL KB 5,030'
SURFACE LOCATION	SW/4 SW/4 553' FSL 525' FWL		Sec 29	T 9S	R 22E		
	Latitude: 40.001331		Longitude: -109.470731		NAD 27		
BTM HOLE LOCATION	SW/4 SW/4 45' FSL 1,145' FWL		Sec 29	T 9S	R 22E		
	Latitude: 39.999939		Longitude: -109.468518		NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.						





**KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM**

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,400	36.00	J-55	LTC	0.97	1.80	6.67
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9,445	11.60	I-80	LTC	2.18	1.13	2.10

- 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 = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MASP 3,458 psi
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)
MABHP 5,590 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD	
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18	
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18	
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized						
Option 2	LEAD	1,900'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	450	35%	12.60	1.81	
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18	
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18	
PRODUCTION	LEAD	4,105'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	390	40%	11.00	3.38	
	TAIL	5,340'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,310	40%	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.

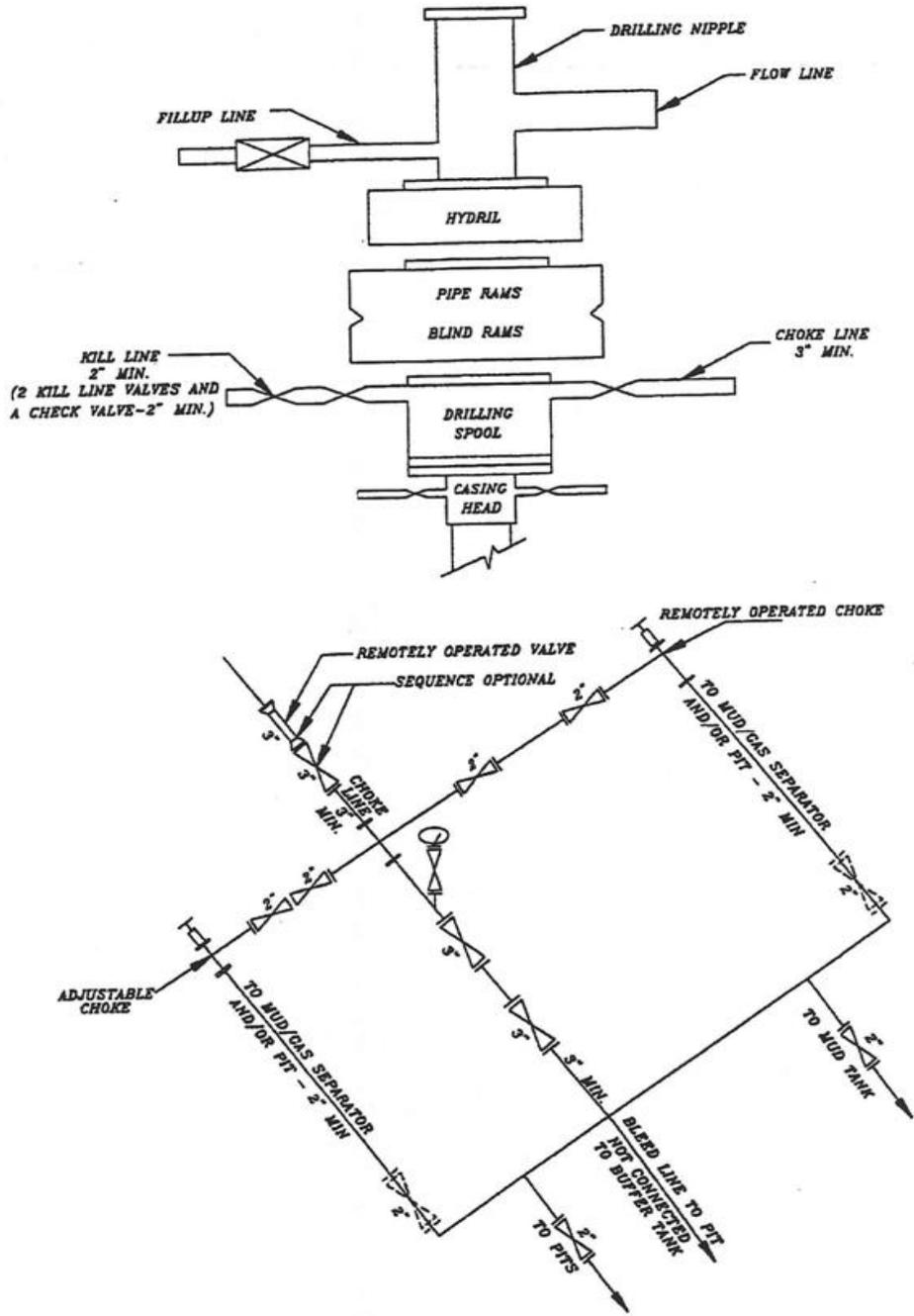
ADDITIONAL INFORMATION

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 922-29M4DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

WELL PAD INTERFERENCE PLAT

DIRECTIONAL PAD - NBU 922-29M



RELATIVE COORDINATES		
From Surface Position to Bottom Hole		
WELL	NORTH	EAST
922-29M2DS	78'	4'
922-29M3CS	-507'	-205'
922-29M4DS	-507'	620'

BASIS OF BEARINGS IS THE WEST LINE OF THE NW 1/4 OF SECTION 29, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL SATELLITE POSITIONING OBSERVATIONS TO BEAR N00°00'38"W.

SURFACE POSITION FOOTAGES:

NBU 922-29M2DS
611' FSL & 511' FWL

NBU 922-29M3CS
572' FSL & 520' FWL

NBU 922-29M4DS
553' FSL & 525' FWL

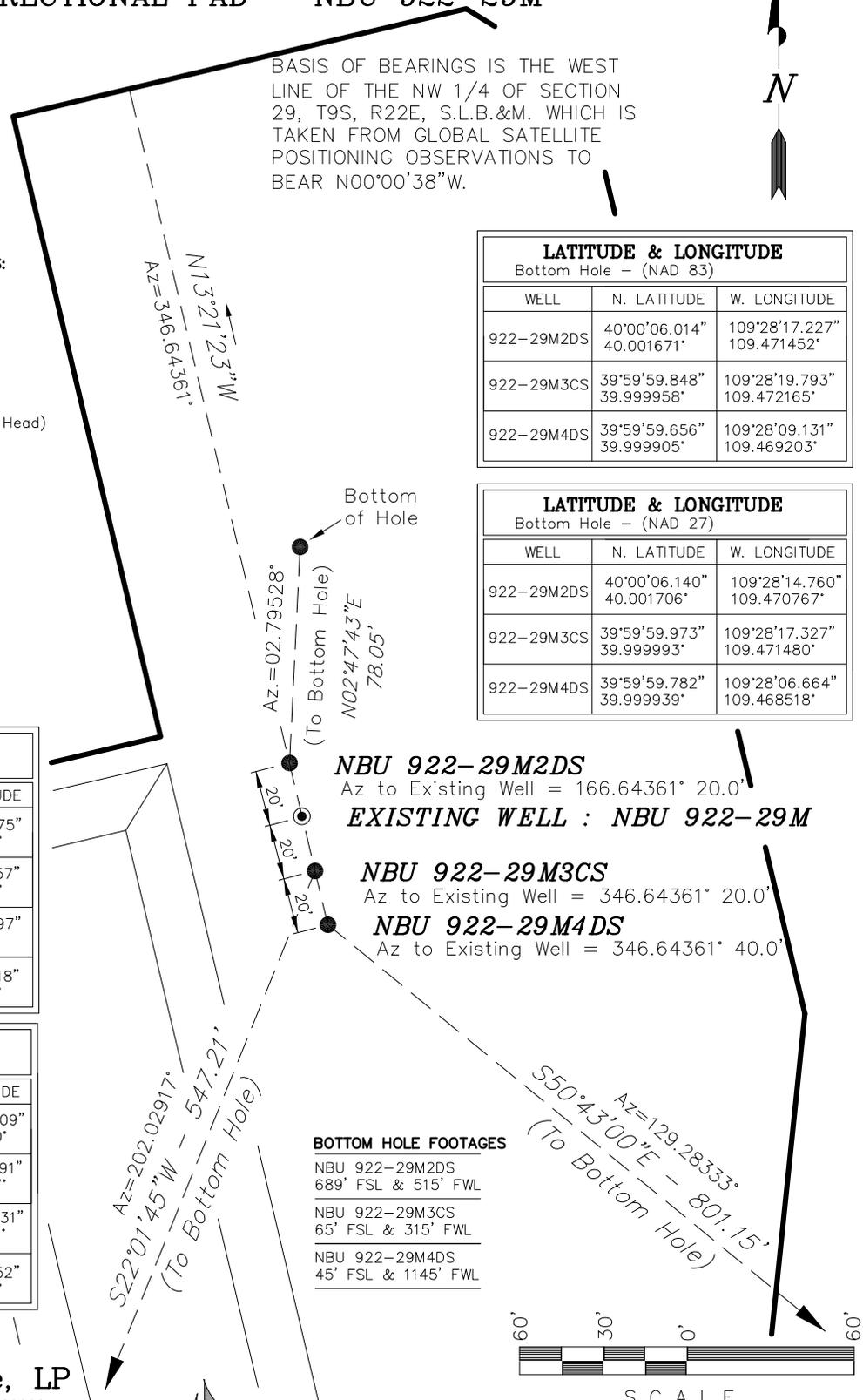
NBU 922-29M (Existing Well Head)
592' FSL, & 516' FWL

LATITUDE & LONGITUDE		
Bottom Hole - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
922-29M2DS	40°00'06.014" 40.001671°	109°28'17.227" 109.471452°
922-29M3CS	39°59'59.848" 39.999958°	109°28'19.793" 109.472165°
922-29M4DS	39°59'59.656" 39.999905°	109°28'09.131" 109.469203°

LATITUDE & LONGITUDE		
Bottom Hole - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
922-29M2DS	40°00'06.140" 40.001706°	109°28'14.760" 109.470767°
922-29M3CS	39°59'59.973" 39.999993°	109°28'17.327" 109.471480°
922-29M4DS	39°59'59.782" 39.999939°	109°28'06.664" 109.468518°

LATITUDE & LONGITUDE		
Surface Position - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
922-29M2DS	40°00'05.244" 40.001457°	109°28'17.275" 109.471465°
922-29M3CS	40°00'04.860" 40.001350°	109°28'17.157" 109.471433°
922-29M4DS	40°00'04.668" 40.001297°	109°28'17.097" 109.471416°
Existing Well NBU 922-29M	40°00'05.054" 40.001404°	109°28'17.218" 109.471450°

LATITUDE & LONGITUDE		
Surface Position - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
922-29M2DS	40°00'05.370" 40.001492°	109°28'14.809" 109.470780°
922-29M3CS	40°00'04.985" 40.001385°	109°28'14.691" 109.470747°
922-29M4DS	40°00'04.793" 40.001331°	109°28'14.631" 109.470731°
Existing Well NBU 922-29M	40°00'05.180" 40.001439°	109°28'14.752" 109.470764°



NBU 922-29M2DS
Az to Existing Well = 166.64361° 20.0'

EXISTING WELL : NBU 922-29M

NBU 922-29M3CS
Az to Existing Well = 346.64361° 20.0'

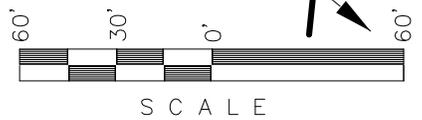
NBU 922-29M4DS
Az to Existing Well = 346.64361° 40.0'

BOTTOM HOLE FOOTAGES

NBU 922-29M2DS
689' FSL & 515' FWL

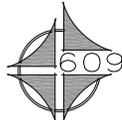
NBU 922-29M3CS
65' FSL & 315' FWL

NBU 922-29M4DS
45' FSL & 1145' FWL



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

NBU 922-29M2DS,
NBU 922-29M3CS & NBU 922-29M4DS
LOCATED IN SECTION 29, T9S, R22E,
S.L.B.&M. UINTAH COUNTY, UTAH.

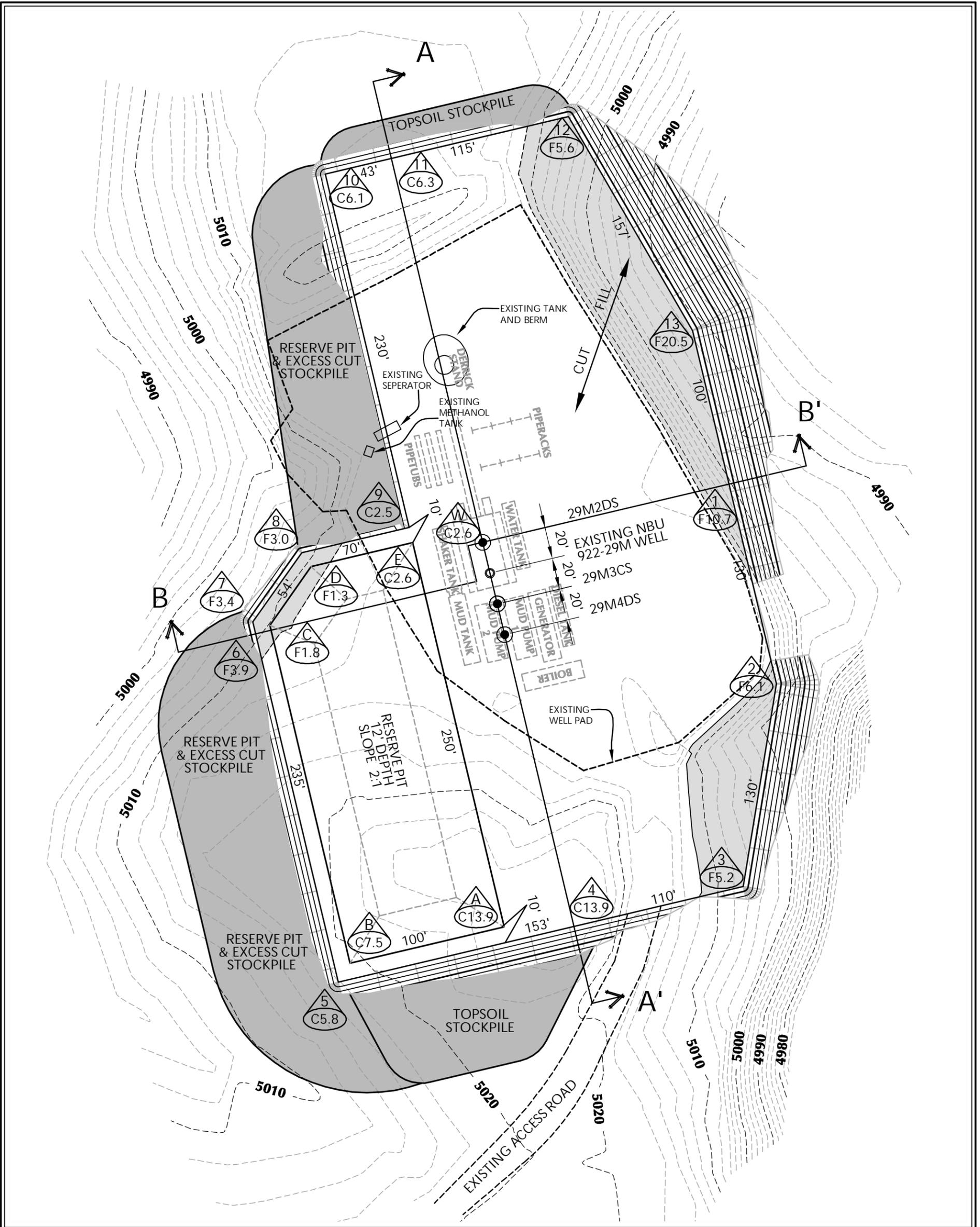


CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

DATE SURVEYED: 10-10-08	SURVEYED BY: M.S.B.
DATE DRAWN: 01-29-09	DRAWN BY: M.W.W.
REVISED: 02-24-09	

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET
4
OF 12



WELL PAD NBU 922-29M QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 5,014.6'
 FINISHED GRADE ELEVATION = 5,012.0'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 17,783 C.Y.
 TOTAL FILL FOR WELL PAD = 10,357 C.Y.
 TOPSOIL @ 6" DEPTH = 1,654 C.Y.
 EXCESS MATERIAL = 7,426 C.Y.
 TOTAL DISTURBANCE = 3.35 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 28,210 BARRELS
 RESERVE PIT VOLUME
 +/- 7,580 CY

WELL PAD LEGEND

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



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

**KERR-MCGEE OIL & GAS
 ONSHORE L.P.**

1099 18th Street - Denver, Colorado 80202

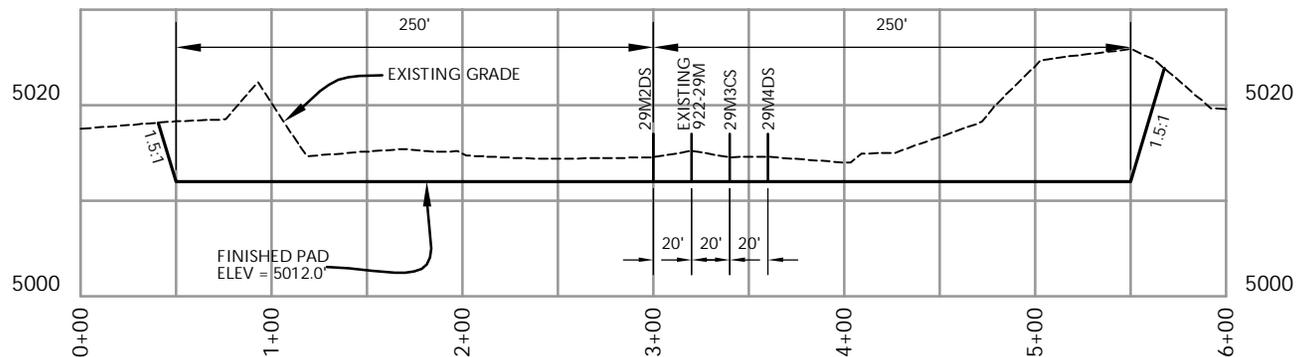


CONSULTING, LLC
 371 Coffeen Avenue
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 Phone 307-674-0609
 Fax 307-674-0182

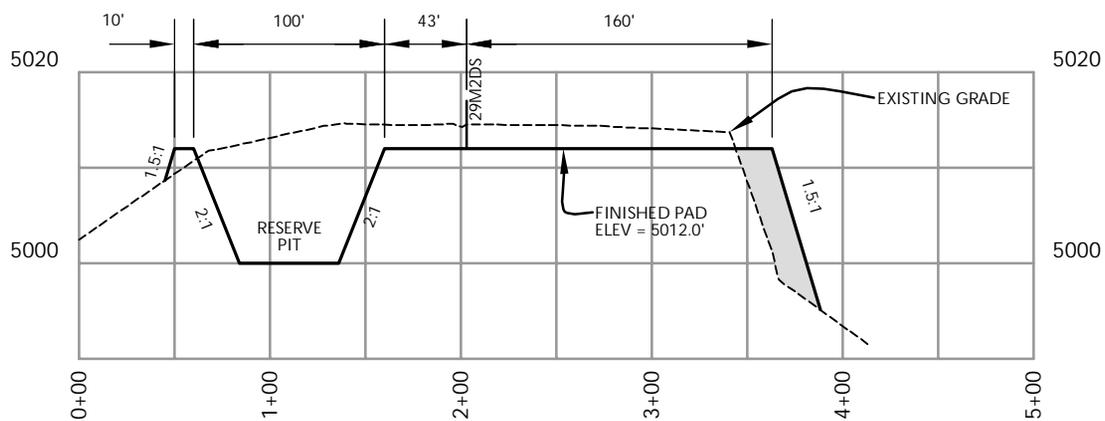
**WELL PAD - LOCATION LAYOUT
 NBU 922-29M2DS,
 NBU 922-29M3CS & NBU 922-29M4DS
 LOCATED IN SECTION 29, T.9S., R.22E.
 S.L.B.&M., UINTAH COUNTY, UTAH**

Scale: 1"=60'	Date: 2/18/09	SHEET NO: 5
REVISED:		5 OF 12

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 Engineering & Land Surveying, Inc.
 38 WEST 100 NORTH VERNAL, UTAH 84078



CROSS SECTION A-A'



CROSS SECTION B-B'

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

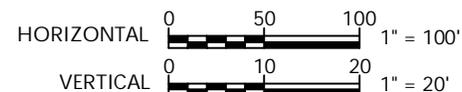
KERR-MCGEE OIL & GAS
ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS
NBU 922-29M2DS,
NBU 922-29M3CS & NBU 922-29M4DS
LOCATED IN SECTION 29, T.9S., R.22E.
S.L.B.&M., Uintah County, Utah



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

Scale: 1"=100'	Date: 2/18/09	SHEET NO:
REVISED:		6 OF 12



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38 WEST 100 NORTH VERNAL, UTAH 84078

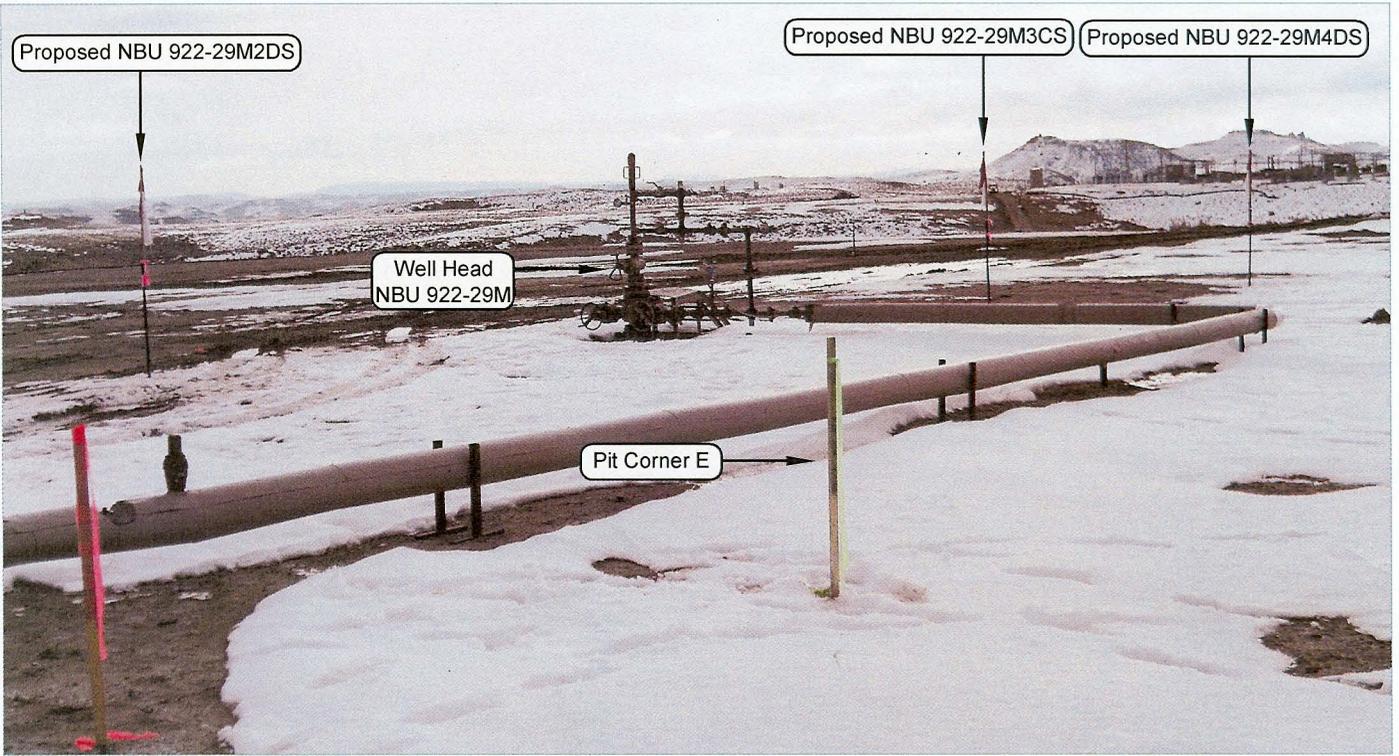


PHOTO VIEW: FROM CORNER E TO LOCATION STAKES

CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM EXISTING ROAD

CAMERA ANGLE: NORTHWESTERLY

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



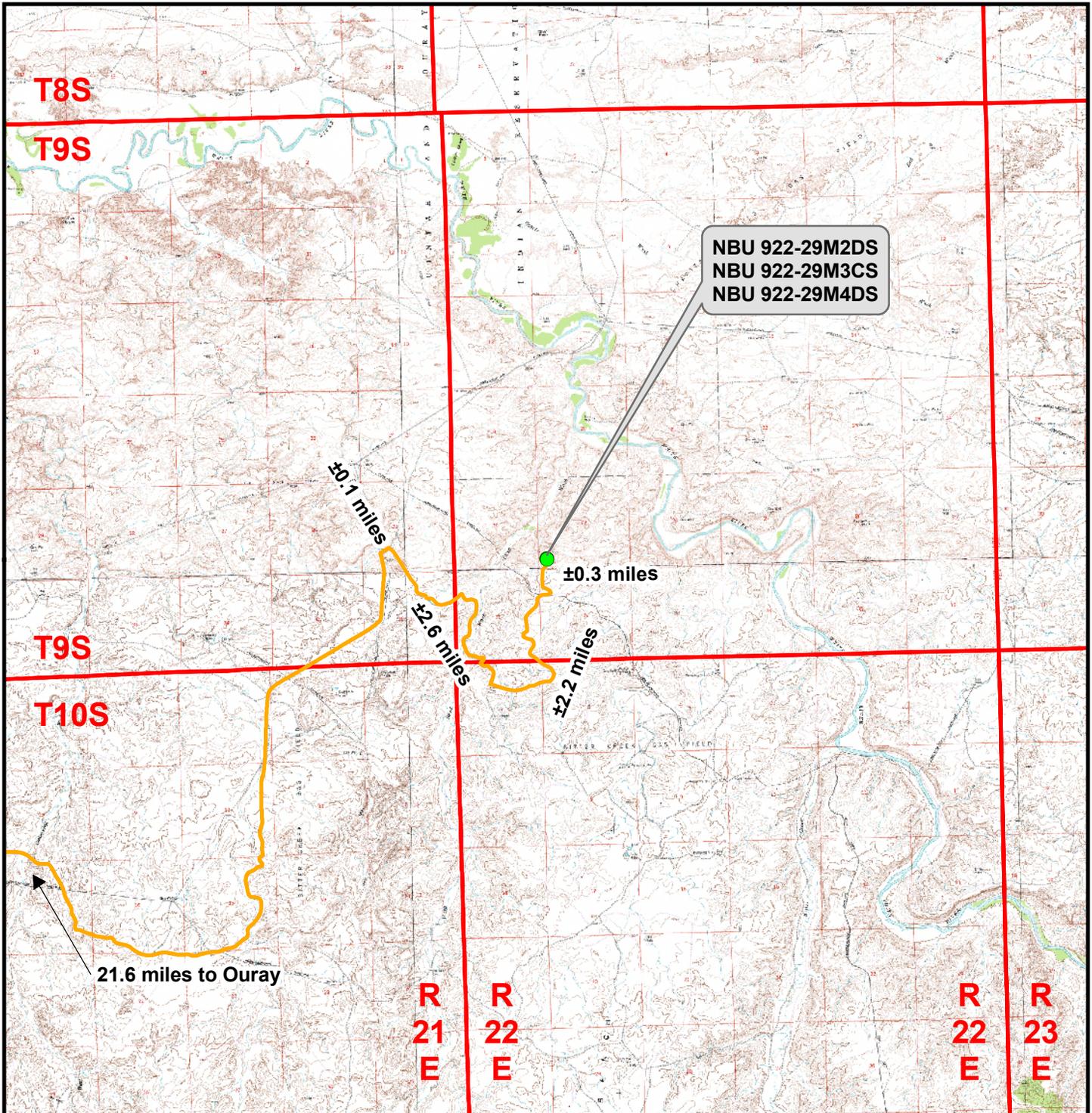
CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

LOCATION PHOTOS		DATE TAKEN: 10-10-08
		DATE DRAWN: 01-29-09
TAKEN BY: M.S.B.	DRAWN BY: M.W.W.	REVISED: 02-24-09

NBU 922-29M2DS,
 NBU 922-29M3CS & NBU 922-29M4DS
 LOCATED IN SECTION 29, T9S, R22E,
 S.L.B.&M. UINTAH COUNTY, UTAH.

Timberline (435) 789-1365
 Engineering & Land Surveying, Inc.
 209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET
7
 OF 12



Legend

- Proposed Well Location
- Access Route - Proposed

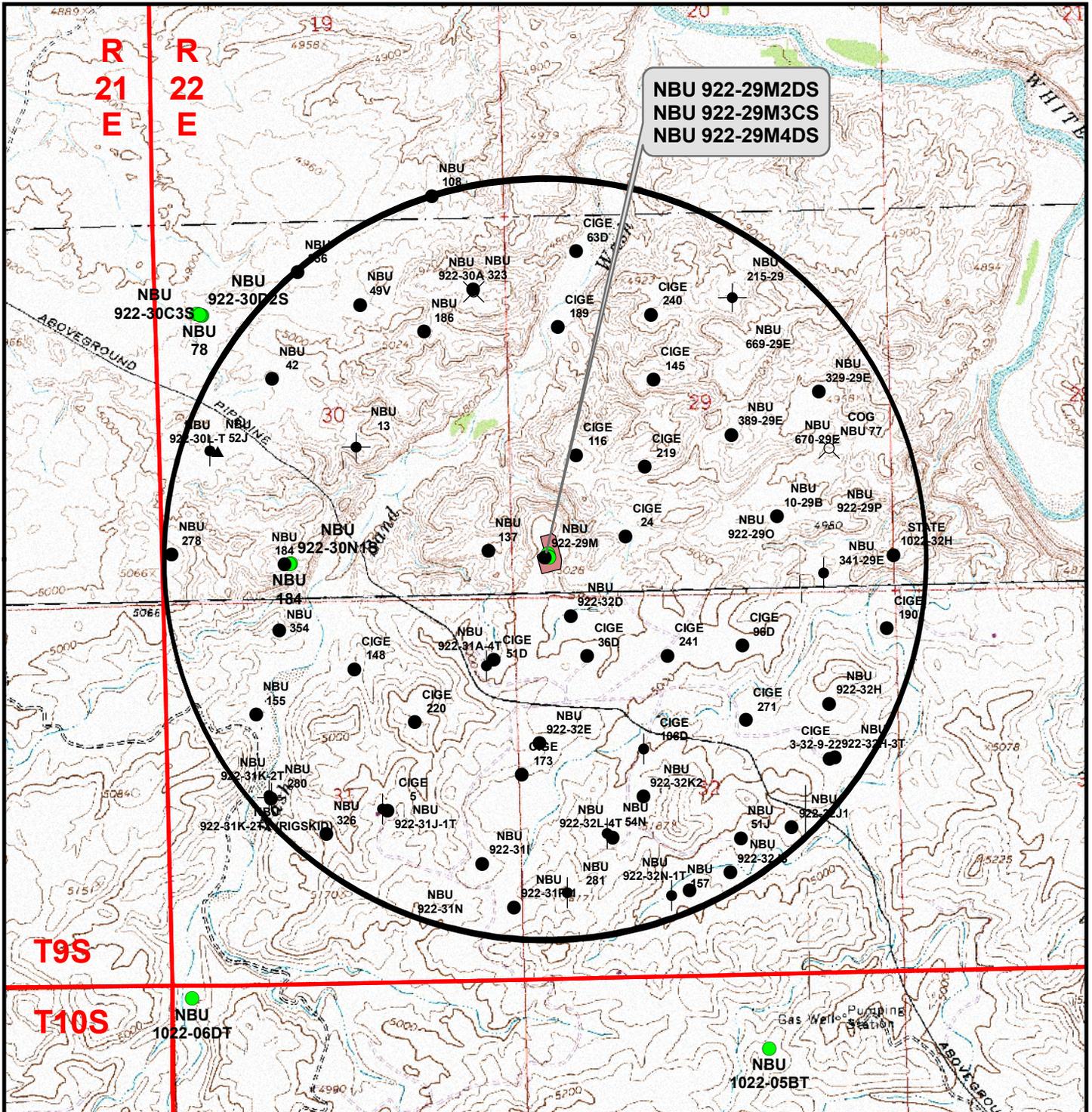
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

**NBU 922-29M2DS,
 NBU 922-29M3CS & NBU 922-29M4DS
 Topo A
 Located In Section 29, 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: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 24 Feb 2009	8
Revised:	Date:	



NBU 922-29M2DS
 NBU 922-29M3CS
 NBU 922-29M4DS

Legend

- Well - Proposed
- Well - 1 Mile Radius
- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced; Not yet complete)
- ⊗ Location Abandoned
- Temporarily-Abandoned
- ⊖ Plugged and Abandoned
- Well Pad
- Shut-In

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

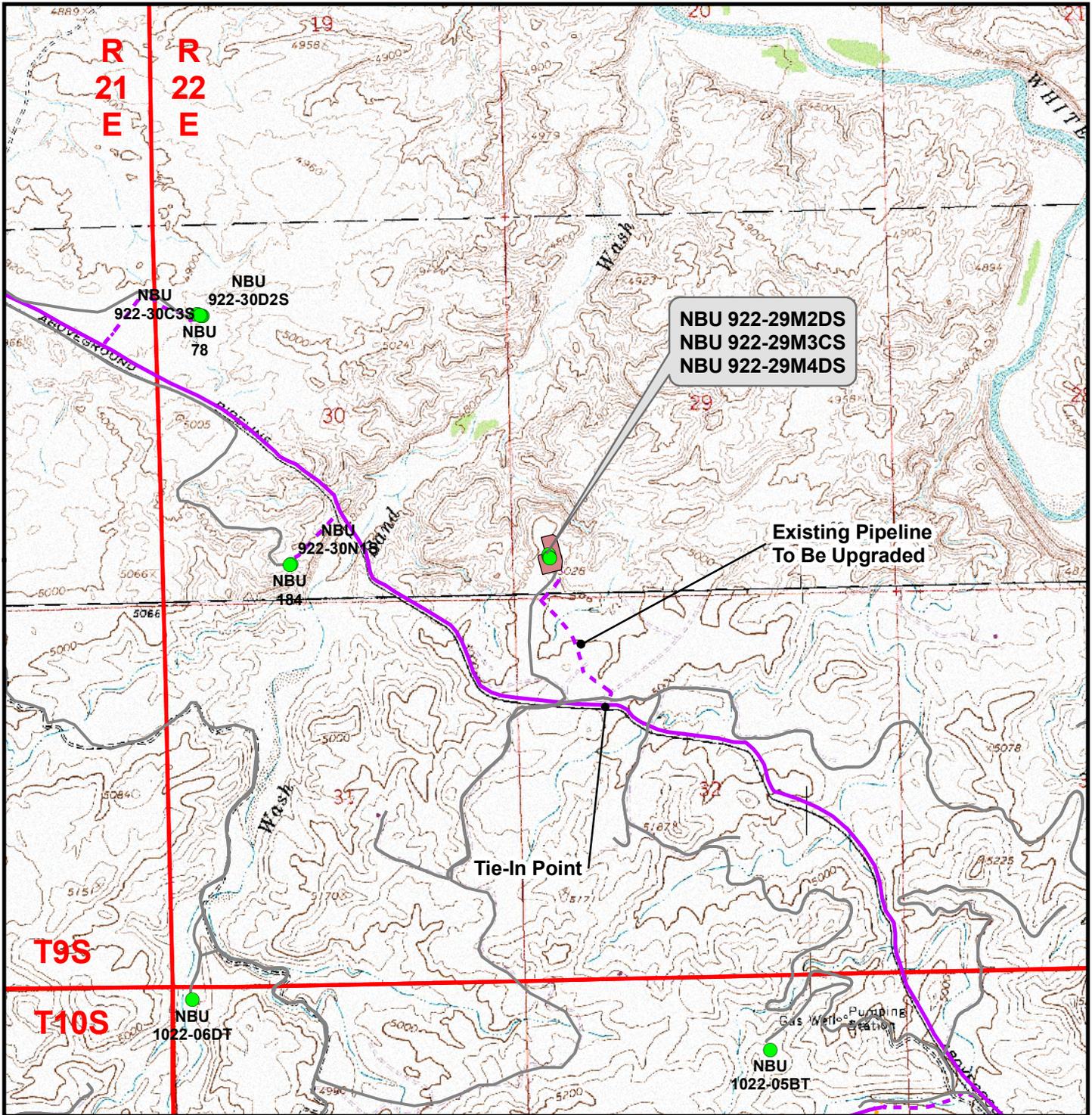
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

**NBU 922-29M2DS,
 NBU 922-29M3CS & NBU 922-29M4DS
 Topo C
 Located In Section 29, 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" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 24 Feb 2009	10
Revised:	Date:	



Legend

- Well - Proposed
- Well Pad
- - - Road - Proposed
- - - Pipeline - Proposed
- Road - Existing
- Pipeline - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±2,360ft
 Proposed Pipeline Length Around Pad: ±660ft

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

**NBU 922-29M2DS,
 NBU 922-29M3CS & NBU 922-29M4DS
 Topo D
 Located In Section 29, 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" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 24 Feb 2009	11 11 of 12
Revised:	Date:	

Kerr-McGee Oil & Gas Onshore, LP
NBU 922-29M2DS, NBU 922-29M3CS, NBU 922-29M4DS
Section 29, 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 BEARING NORTHEAST. EXIT RIGHT AND PROCEED IN A NORTHEASERLY DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 0.1 MILES TO A SECOND CLASS D COUNTY ROAD BEARING SOUTHEAST. EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG THE SECOND CLASS D COUNTY ROAD APPROXIMATELY 2.6 MILES TO A THIRD CLASS D COUNTY ROAD BEARING EASTERLY. EXIT LEFT AND PROCEED IN AN EASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE THIRD CLASS D COUNTY ROAD APPROXIMATELY 2.2 MILES TO THE EXISTING ACCESS ROAD WHICH RUNS TO THE NBU 922-29M WELL PAD. EXIT RIGHT AND PROCEED IN A NORTHERLY DIRECTION ALONG THE ACCESS ROAD APPROXIMATELY 0.3 MILES TO THE EXISTING NBU 922-29M WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 57.5 MILES IN A SOUTHERLY DIRECTION.

Kerr-McGee Oil & Gas Onshore LP

NBU 922-29M2DS

Surface: 611' FSL, 511' FWL (SW/4SW/4)
BHL: 689' FSL 515' FWL (SW/4SW/4)

NBU 922-29M3CS

Surface: 572' FSL, 520' FWL (SW/4SW/4)
BHL: 65' FSL 315' FWL (SW/4SW/4)

NBU 922-29M4DS

Surface: 553' FSL, 525' FWL (SW/4SW/4)
BHL: 45' FSL 1,145' FWL (SW/4SW/4)

Section 29 Township 9 South Range 22 East
Pad: NBU 922-29M
Uintah, Utah
Surface: State
Minerals: State – ML22935

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

Directional Drilling:

In accordance with 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.

1. Existing Roads:

Refer to Topo Map A for directions to the location.

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

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

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

2. Planned Access Roads:

Approximately ± 0.0 mi. ($\pm 0'$) of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

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.

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

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

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

5. Location and Type of Water Supply:

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

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.

6. Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

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.

8. Ancillary Facilities:

None are anticipated.

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

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

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

39 inch net wire 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.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Form 9 shall be submitted.

10. Plans for Reclamation of the Surface:

Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

Kerr-McGee Oil & Gas Onshore LP
NBU 922-29M2DS/ 29M3CS/ 29M4DS

Page 6
Surface Use and Operations Plan

11. Surface/Mineral Ownership:

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

12. Other Information:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

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

Kathy Schneebeck Dulnoan
Staff Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6226

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.

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.


Kathy Schneebeck Dulnoan

April 8, 2009
Date

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Multi-Well Pads and Pipeline Upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E)

Archy Bench & Red Wash SW
Topographic Quadrangles
Uintah County, Utah

March 25, 2009

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

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E) was conducted by Stephen Sandau and Thomas Temme on March 20, 2009. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

BLM, 2008: BLM IM 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources. USDI – BLM Washington Office directive, October 29, 2008 replaces the Condition Classification System from Handbook H-8270-1. The following section outlines the new Potential Fossil Yield Classification (PFYC) System. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.

- **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
- **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
 - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
 - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Kerr McGee's proposed multi-well pads, and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), in the Sand Wash area, 0.5-5 miles west of the White River on East Bench, and some 19-26 miles southeast of Ouray, UT. The project area can be found on the Arch Bench and Red Wash SW 7.5 minute U. S. Geological Survey Quadrangle Maps, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

NBU #922-29M2DS, M4DS & M3CS

The proposed pipeline upgrade begins in the NW/NW quarter-quarter section of Sec. 32, T 9 S, R 22 E, and heads north for about 2500 feet before joining the proposed multi-well pad located on the existing pad "NBU #922-29M" in the SW/SW quarter-quarter section of Sec. 29 (Figure 1). The project area is situated in hilly terrain of ridges, ravines and valleys cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, and purplish brown mudstones and

siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and tan, fine-grained, sub-quartzitic sandstone; cut by several paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides and valleys throughout the project area.

Numerous isolated turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. Most fragments were moderately to well preserved, and moderately to highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in the colluvium in the middle portion of the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown sandstones and in the colluvium throughout the project area.

NBU #1022-901S, L4S, M1S & M4S

The proposed pipeline upgrade and multi-well pad is located on the existing pad "CIGE #298" in the SE/SW quarter-quarter section of Sec. 9, T 10 S, R 22 E (Figure 1). The project area is situated in hilly terrain cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, small mudflats, and alluvium/colluvium consisting of locally derived and transported clasts of green and tan sandstone, green, purplish brown, and tan siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, tan, and orangish tan mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and cut by several paleo-channels of greenish tan and greenish gray, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides capped by thick beds of channel sandstone throughout the project area.

Numerous isolated bone and turtle shell fragments were observed in the colluvium and *in situ* in medium to coarse-grained sandstones throughout the project area. Most fragments were moderately preserved and highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in colluvium in the northeastern portion of the proposed multi-well pad. Two individual concentrations of large mammal limb bone fragments were observed in the southern portion of the proposed multi-well pad, one sourcing from gray mudstone and one sourcing from orangish tan mudstone. Identifiable mammalian bone fragments include a sesamoid, humeral head, proximal tibia, distal tibia, distal calcaneum, and distal femur. A small concentration of mammal mandible fragments was observed in gray/green disaggregated mudstone, next to the southeastern corner of the existing pad. A few ichnofossil burrow casts, presumably of *Planolites*, were observed in colluvium throughout the project area. The area where the fossils were discovered is designated as the new vertebrate fossil locality "42Un2536V."

NBU #1022-10C1BS, B2AS, B4BS & A4BS

The proposed pipeline upgrade begins in the SE/NW quarter-quarter section of Sec. 10, T 10 S, R 22 E, and heads northeast for about 2500 feet before joining the proposed multi-well pad on the existing pad "NBU #231" located in the NW/NE and NE/NE quarter-quarter sections of Sec. 10 (Figure 1). The project area is situated in hilly terrain of ridges and ravines cut by modern

drainages, next to a deep river cut canyon of the White River. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, purplish brown, and tan mudstones and siltstones inter-bedded with tan, green, and purplish brown fine-grained, sub-quartzitic sandstone cut by numerous large paleo-channels of tan, medium to coarse-grained, cross-bedded, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area. Three isolated, moderately to well preserved, and moderately to highly weathered turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown sandstones and in the colluvium throughout the project area.

NBU #1022-18O1AS, I4BS, P1DS & P4AS

The proposed pipeline upgrade begins in the NE/NE quarter-quarter section of Sec. 19, T 10 S, R 22 E, and heads south-southeast for about 1100 feet before joining the proposed multi-well pad on the existing pad "NBU #1022-18D" located in the NW/NW quarter-quarter section of Sec. 18 (Figure 2). The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tannish brown silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan, medium-grained, sub-lithic sandstones; green and purplish brown siltstones; and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.

A few isolated bone and turtle shell fragments were observed in the colluvium throughout the project area. Most fragments were moderately preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown siltstones and in the colluvium throughout the project area.

NBU #1022-19H1AS, H2BS, A3BS & A1CS

The proposed pipeline upgrade begins in the NE/NE quarter-quarter section of Sec. 19, T 10 S, R 22 E, and heads south-southeast for about 700 feet before joining the proposed multi-well pad on the existing pad "NBU #1022-20D" located in the NW/NW quarter-quarter section of Sec. 20 (Figure 2). The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tan to orangish tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of green and purplish brown, fine-grained, sub-lithic sandstones; purplish brown and tan siltstones, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of

green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone cut by paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.

Infrequent isolated bone (? mammal rib fragment) and turtle shell fragments were observed in the colluvium at the base of the surrounding hills. Most fragments were moderately to well preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown and green sandstones and in the colluvium throughout the project area.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
<p>“NBU #922-29M2DS, M4DS & M3CS” (Sec. 29 & 32, T 9 S, R 22 E)</p>	<p>The project area is situated in hilly terrain of ridges, ravines and valleys cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, and purplish brown mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and tan, fine-grained, sub-quartzic sandstone; cut by several paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides and valleys throughout the project area.</p>	<p>Numerous isolated turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. Most fragments were moderately to well preserved and moderately to highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in the colluvium in the middle portion of the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of <i>Planolites</i>, were observed in the purplish brown sandstones and in the colluvium throughout the project area.</p> <p>Class 3a</p>

<p>“NBU #1022-901S, L4S, M1S & M4S” (Sec. 9, T 10 S, R 22 E)</p>	<p>The project area is situated in hilly terrain cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, small mudflats, and alluvium/colluvium consisting of locally derived and transported clasts of green and tan sandstone, green, purplish brown, and tan siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, tan, and orangish tan mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and cut by several paleo-channels of greenish tan and greenish gray, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides capped by thick beds of channel sandstone throughout the project area.</p>	<p>Numerous isolated bone and turtle shell fragments were observed in the colluvium and <i>in situ</i> in medium to coarse-grained sandstones throughout the project area. Most fragments were moderately preserved and highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in colluvium in the northeastern portion of the proposed multi-well pad. Two individual concentrations of large mammal limb bone fragments were observed in the southern portion of the proposed multi-well pad, one sourcing from gray mudstone and one sourcing from orangish tan mudstone. Identifiable mammalian bone fragments include a sesamoid, humeral head, proximal tibia, distal tibia, distal calcaneum, and distal femur. A small concentration of mammal mandible fragments was observed in gray/green disaggregated mudstone, next to the southeastern corner of the existing pad. A few ichnofossil burrow casts, presumably of <i>Planolites</i>, were observed in colluvium throughout the project area. The area where the fossils were discovered is designated as the new vertebrate fossil locality “42Un2536V.” Class 5a</p>
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<p>“NBU #1022-10C1BS, B2AS, B4BS & A4BS” (Sec. 10, T 10 S, R 22 E)</p>	<p>The project area is situated in hilly terrain of ridges and ravines cut by modern drainages, next to a deep river cut canyon of the White River. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, purplish brown, and tan mudstones and siltstones inter-bedded with tan, green, and purplish brown fine-grained, sub-quartzic sandstone cut by numerous large paleo-channels of tan, medium to coarse-grained, cross-bedded, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.</p>	<p>Three isolated, moderately to well preserved, and moderately to highly weathered turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of <i>Planolites</i>, were observed in the purplish brown sandstones and in the colluvium throughout the project area. Class 3b</p>
<p>“NBU #1022-18O1AS, I4BS, P1DS & P4AS” (Sec. 18 & 19, T 10 S, R22 E)</p>	<p>The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tannish brown silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan, medium-grained, sub-lithic sandstones; green and purplish brown siltstones; and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.</p>	<p>A few isolated bone and turtle shell fragments were observed in the colluvium throughout the project area. Most fragments were moderately preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of <i>Planolites</i>, were observed in the purplish brown siltstones and in the colluvium throughout the project area. Class 3a</p>

<p>“NBU #1022-19H1AS, H2BS, A3BS & A1CS” (Sec. 19 & 20, T 10 S, R22 E)</p>	<p>The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tan to orangish tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of green and purplish brown, fine-grained, sub-lithic sandstones; purplish brown and tan siltstones, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones interbedded with green and purplish brown, fine-grained, sub-lithic sandstone cut by paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.</p>	<p>Infrequent isolated bone (? mammal rib fragment) and turtle shell fragments were observed in the colluvium at the base of the surrounding hills. Most fragments were moderately to well preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of <i>Planolites</i>, were observed in the purplish brown and green sandstones and in the colluvium throughout the project area.</p> <p>Class 3a</p>
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RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed multi-well pads, and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E). The well pads and the associated pipeline upgrades covered in this report showed some signs of vertebrate fossils, therefore, we advise the following recommendations.

Due to a number of vertebrate fossils found in and around the proposed location for "NBU #1022-9O1S, L4S, M1S & M4S" we recommend that a permitted paleontologist be present to monitor the construction process of the access road, pipeline and well pad.

Furthermore, we recommend that no other paleontological restrictions should be placed on the development of the remainder of the projects included in this report.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.

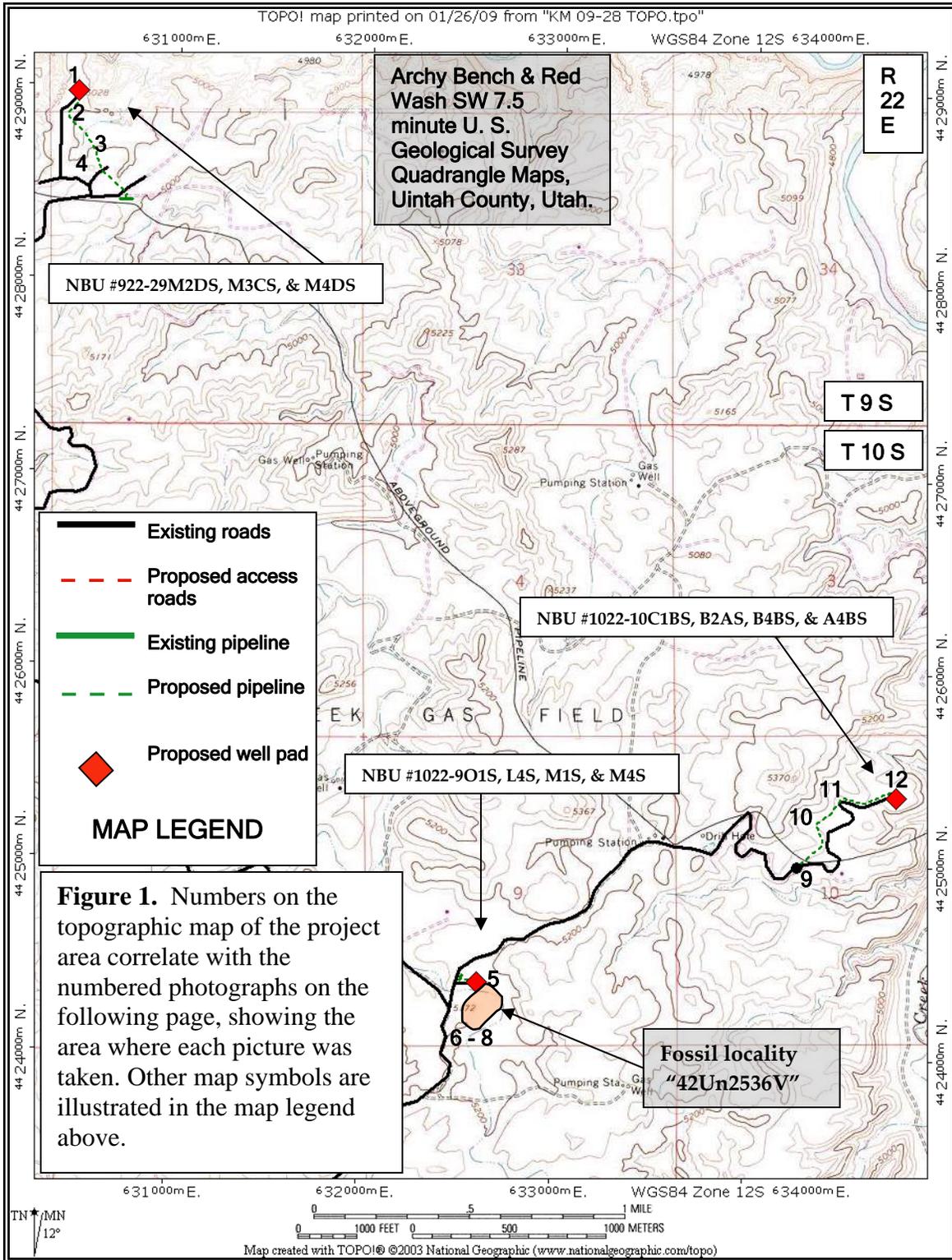


Figure 1. *continued...*

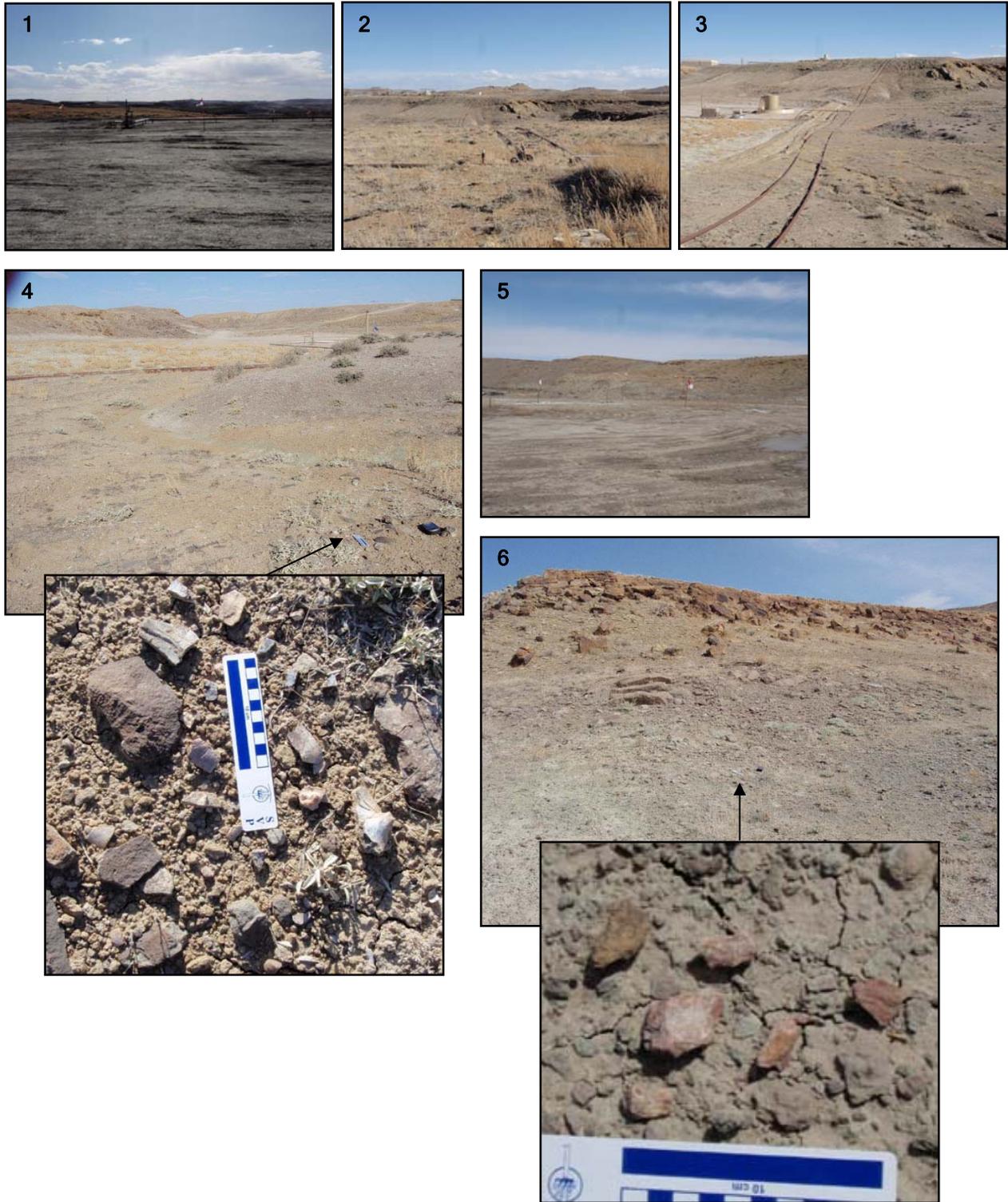
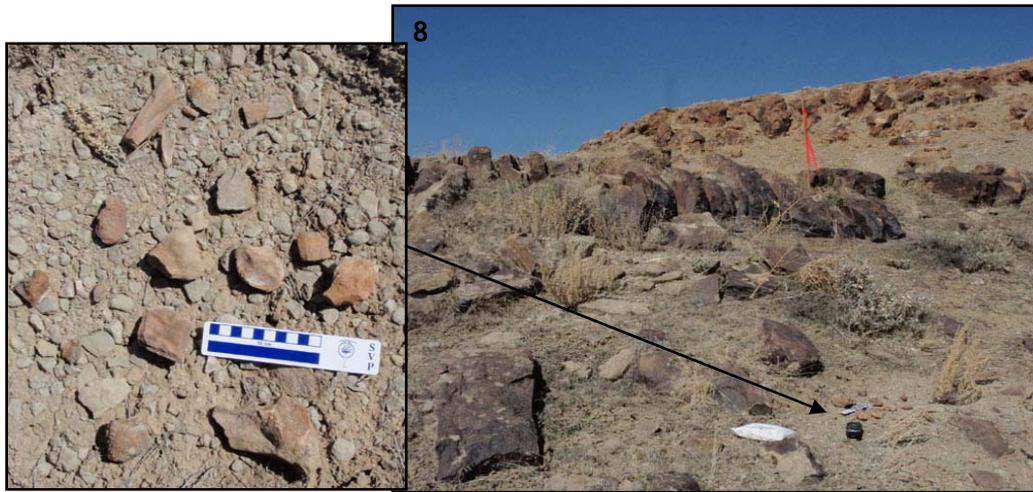
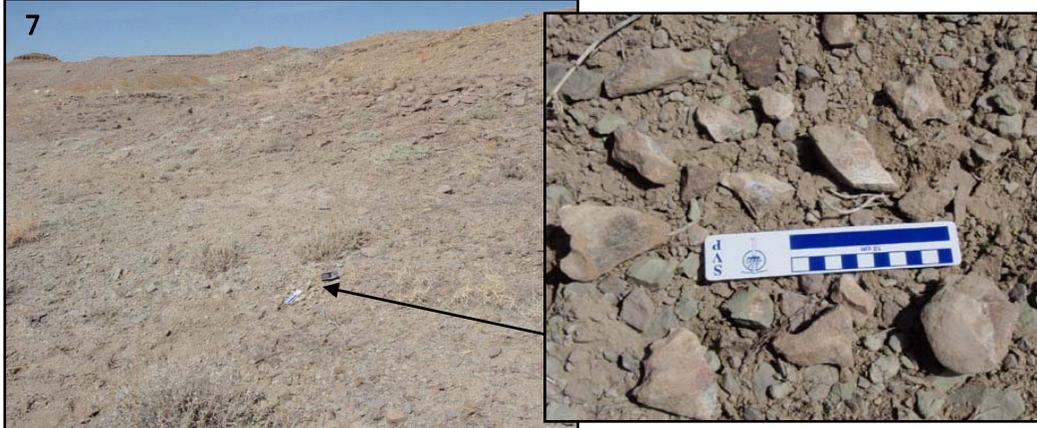
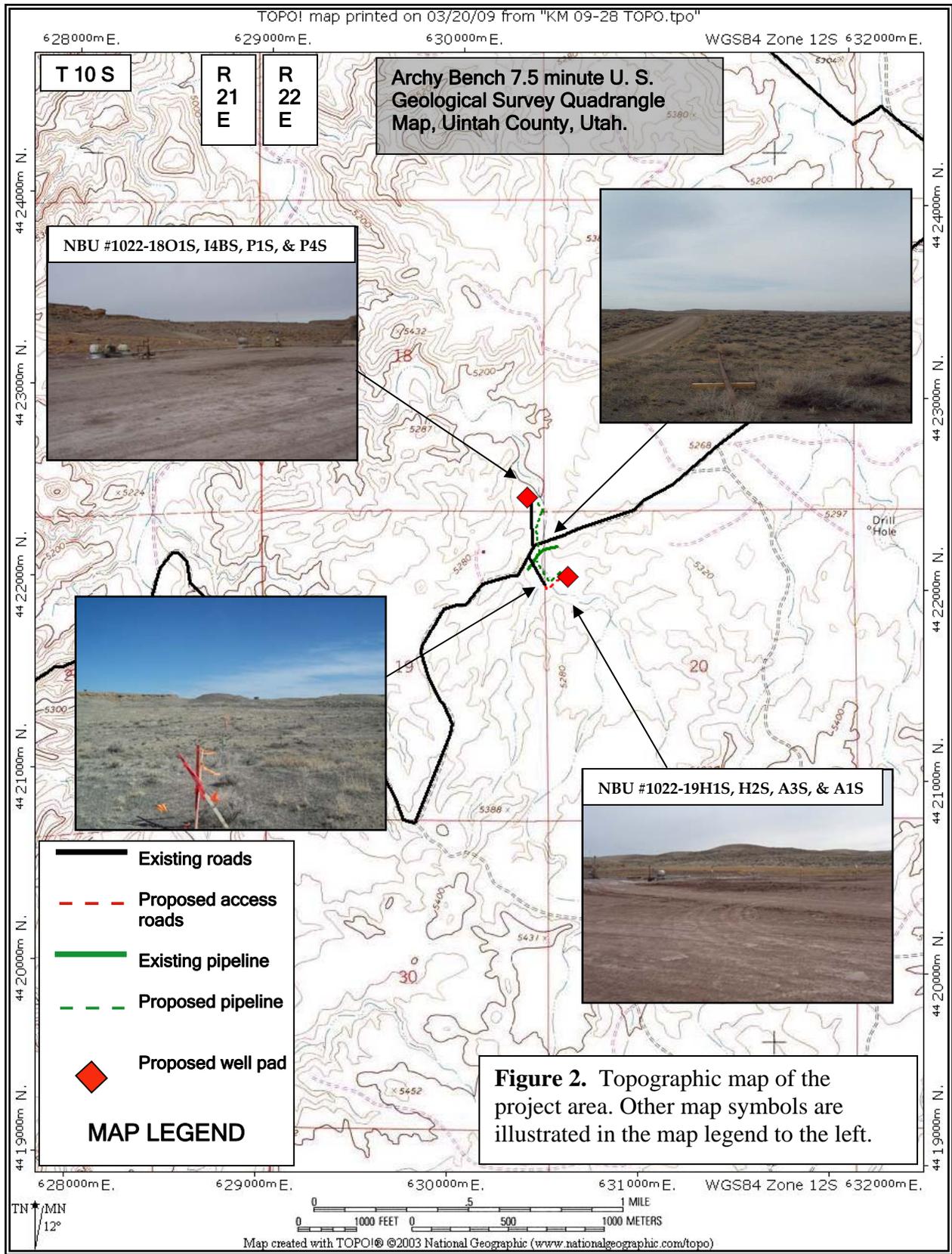


Figure 1. *continued...*





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Kerr-McGee Oil & Gas Onshore LP

1099 18th Street, Suite 1800
Denver, CO 80202-1918
P.O. Box 173779
Denver, CO 80217-3779
720-929-6000

April 8, 2009

Mrs. 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 922-29M4DS
T9S-R22E
Section 29: SWSW
Surface: 553' FSL, 525' FWL
Bottom Hole: 45' FSL, 1145' FWL
Uintah County, Utah

Dear Mrs. Mason:

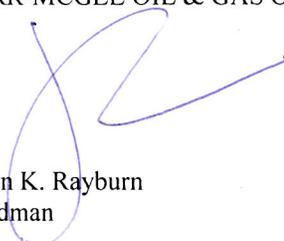
Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 922-29M4DS 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,

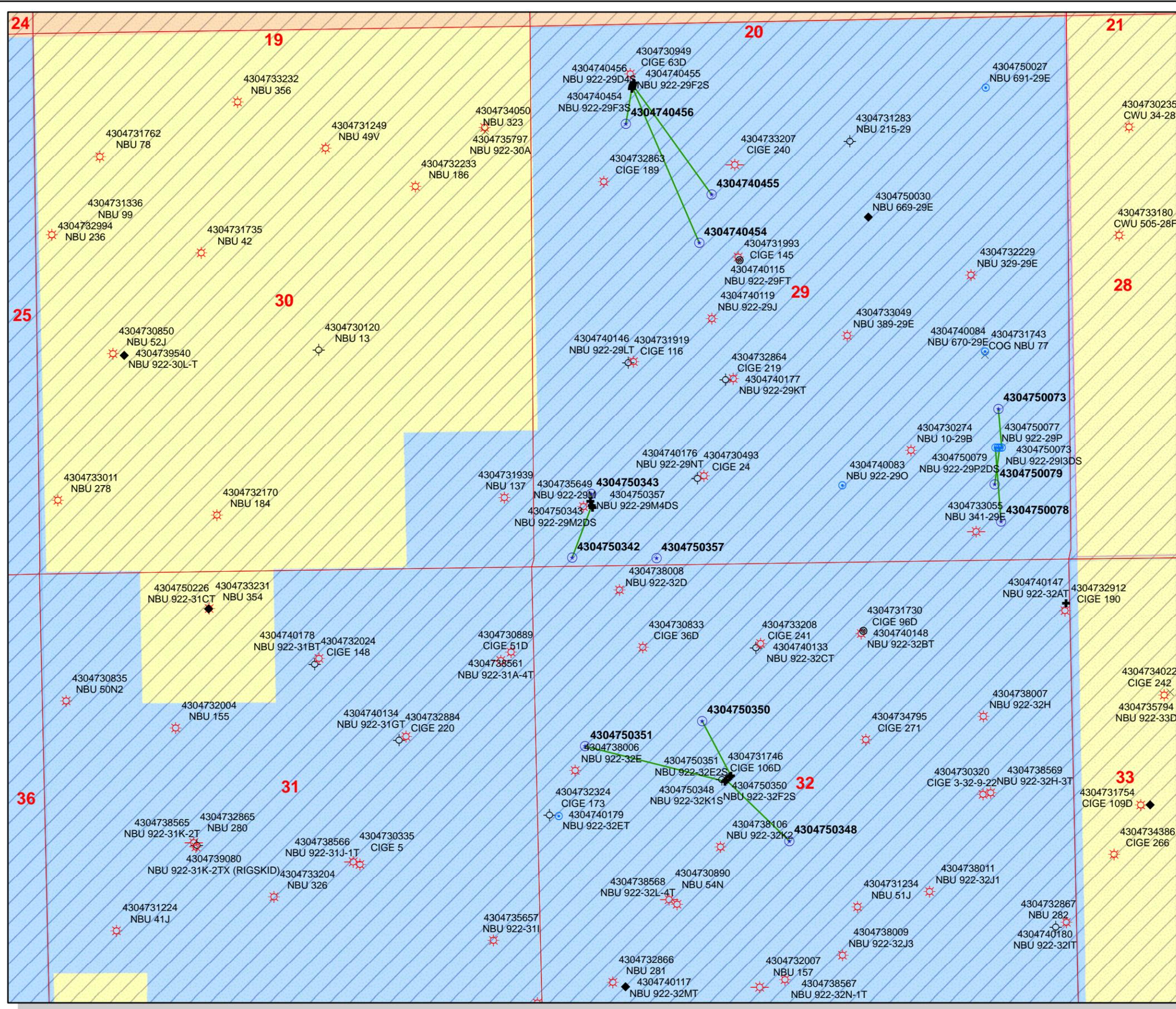
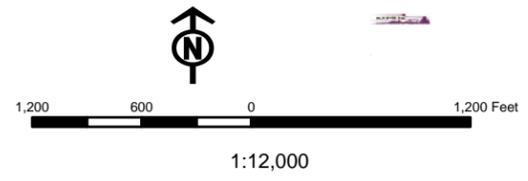
KERR-MCGEE OIL & GAS ONSHORE LP


Jason K. Rayburn
Landman

API Number: 4304750357
Well Name: NBU 922-29M4DS
Township 09.0 S Range 22.0 E Section 29
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason

Units	Wells Query Events
ACTIVE	<call other values>
EXPLORATORY	GIS_STAT_TYPE
GAS STORAGE	<Null>
NF PP OIL	APD
NF SECONDARY	DRL
PI OIL	GI
PP GAS	GS
PP GEOTHERML	LA
PP OIL	NEW
SECONDARY	OPS
TERMINATED	PA
Fields	PGW
ACTIVE	POW
COMBINED	RET
Sections	SGW
	SOW
	TA
	TW
	WD
	WI
	WS



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)

April 24, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District
From: Michael Coulthard, Petroleum Engineer
Subject: 2009 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 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
43-047-50357	NBU 922-29M4DS	Sec 29 T09S R22E 0553 FSL 0525 FWL
	BHL	Sec 29 T09S R22E 0045 FSL 1145 FWL
43-047-50359	NBU 1022-10B4BS	Sec 10 T10S R22E 1066 FNL 1483 FEL
	BHL	Sec 10 T10S R22E 0703 FNL 1680 FEL
43-047-50360	NBU 1022-10B2AS	Sec 10 T10S R22E 1066 FNL 1503 FEL
	BHL	Sec 10 T10S R22E 0244 FNL 1966 FEL
43-047-50361	NBU 1022-10A4BS	Sec 10 T10S R22E 1067 FNL 1463 FEL
	BHL	Sec 10 T10S R22E 0805 FNL 0621 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:4-24-09

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 5/5/2009 4:42 PM
Subject: Well approvals 5/5/09

CC: Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

EC 98-16 (4304750251)
NBU 922-29M3CS (4304750342)
NBU 922-29M2DS (4304750343)

NBU 921-26B3S (4304750364)
NBU 921-26D1BS (4304750363)
NBU 921-26D1CS (4304750362)

NBU 922-29M4DS (4304750357)
NBU 922-29M3CS (4304750342)
NBU 922-29M2DS (4304750343)

NBU 1022-10C1BS (4304750358)
NBU 1022-10B2AS (4304750360)
NBU 1022-10A4BS (4304750361)
NBU 1022-10B4BS (4304750359)

-Jim

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

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-29M4DS 430475035		
String	Surf	Prod	
Casing Size(")	9.625	4.500	
Setting Depth (TVD)	2400	9445	
Previous Shoe Setting Depth (TVD)	40	2400	
Max Mud Weight (ppg)	8.3	11.6	
BOPE Proposed (psi)	500	5000	
Casing Internal Yield (psi)	3520	7780	
Operators Max Anticipated Pressure (psi)	5590	11.4	

Calculations	Surf String	9.625	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1040	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	752	NO
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	512	NO OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	521	NO Reasonable depth in area, no expected pressures
Required Casing/BOPE Test Pressure=		2400	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

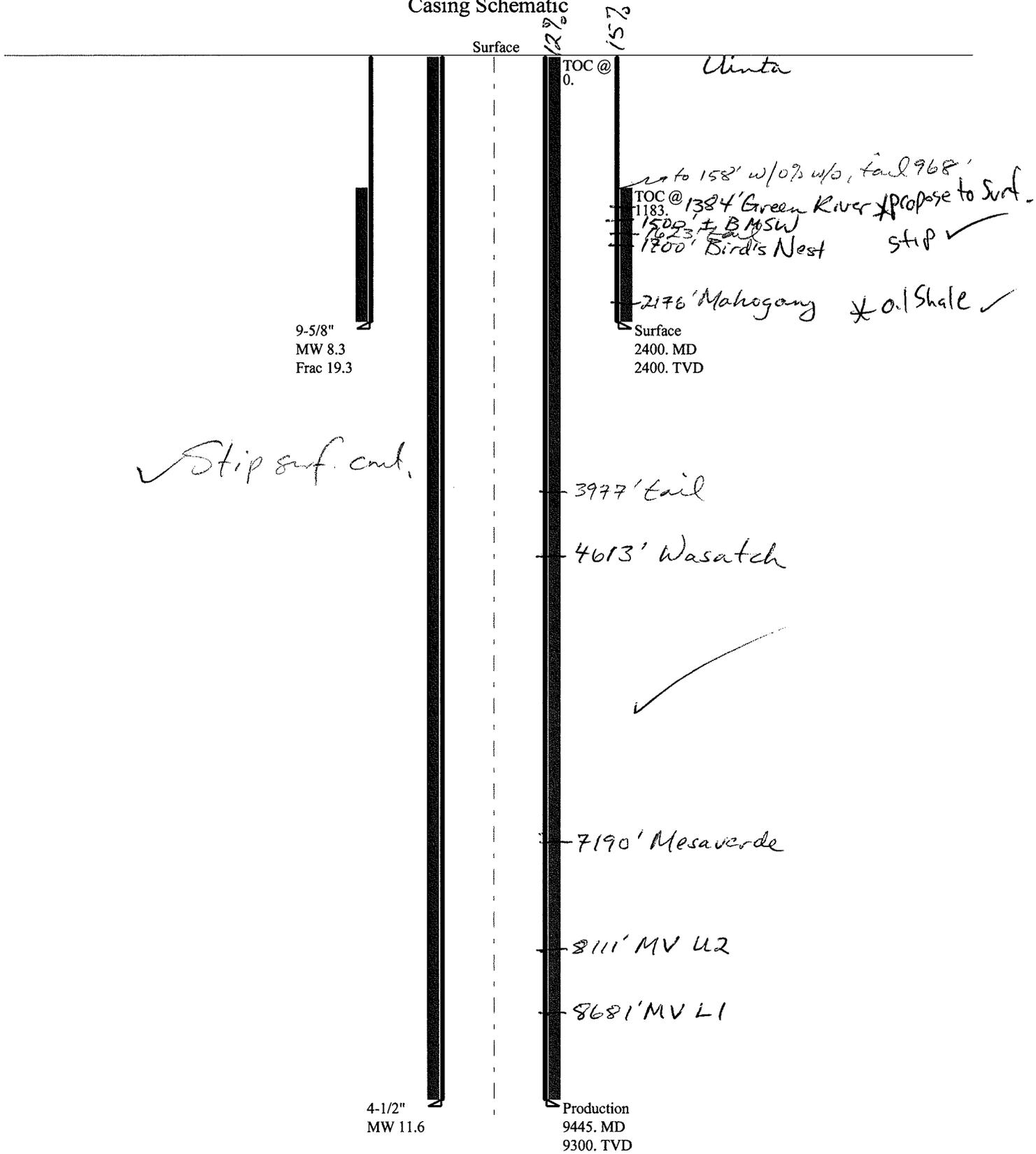
Calculations	Prod String	4.500	"
Max BPH (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	5697	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4564	YES
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3619	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4147	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2400	psi *Assumes 1psi/ft frac gradient

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

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

43047503570000 NBU 922-29M4DS

Casing Schematic



Well name:	43047503570000 NBU 922-29M4DS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-50357
Location:	UINTAH COUNTY		

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

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

Cement top: 1,183 ft

Burst

Max anticipated surface pressure: 2,112 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,400 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 2,104 ft

Directional Info - Build & Drop

Kick-off point 2300 ft
Departure at shoe: 2 ft
Maximum dogleg: 2.5 °/100ft
Inclination at shoe: 2.5 °

Re subsequent strings:

Next setting depth: 9,300 ft
Next mud weight: 11.600 ppg
Next setting BHP: 5,604 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,400 ft
Injection pressure: 2,400 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2400	9.625	36.00	J-55	LT&C	2400	2400	8.796	19625
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1038	1961	1.889	2400	3520	1.47	86.4	453	5.24 J

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

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

Date: June 9,2009
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2400 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	43047503570000 NBU 922-29M4DS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-50357
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 11.600 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

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

Cement top: Surface

Burst

Max anticipated surface pressure: 3,558 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,604 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 7,832 ft

Directional Info - Build & Drop

Kick-off point 2300 ft
Departure at shoe: 801 ft
Maximum dogleg: 2.5 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	9445	4.5	11.60	I-80	LT&C	9300	9445	3.875	124674
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5604	6360	1.135	5604	7780	1.39	107.9	212	1.97 J

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

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

Date: June 9, 2009
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9300 ft, a mud weight of 11.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.											
Well Name	NBU 922-29M4DS											
API Number	43047503570000	APD No	1409	Field/Unit	NATURAL BUTTES							
Location: 1/4,1/4	SWSW	Sec	29	Tw	9.0S	Rng	22.0E	553	FSL	525	FWL	
GPS Coord (UTM)	630534	4428830	Surface Owner									

Participants

Floyd Bartlett (DOGM), Ed Bonner (SITLA), Ramie Hoopes, Clay Einerson, Griz Oleen, Tony Kzneck, Charles Chase (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

This location is in a tributary of the Sand Wash drainage of the Natural Buttes Unit approximately 21.6 road miles southeast of Ouray, Ut.. The Seep Ridge Road, Uintah County roads and existing oil field development roads access the site. Sand Wash, the major drainage in the area, drains northerly to the White River a distance of approximately 1 1/2 miles. The area is characterized by narrow ridges and steep sided hills, which are frequently divided by narrow to wide valley bottoms. Sand Wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. Washes are sometimes rimmed with exposed sand stone bedrock cliffs.

Three additional gas wells are proposed on an enlarged pad that currently contains the NBU 922-29M producing gas well. Continued operation of this well is planned. The additional wells are the NBU 922-29M2DS, 29M3CS and the 29M4DS. A steep near vertical break-off on the southwest side between Corners 6-8 limits the desired enlargement of the reserve pit. Rounding between Corners C and D is planned. This area has a fill to 1.8 feet. Additional rounding is recommended. A 10-foot wide bank is required as planned. In the pit area, excavated spoils and fill material must remain on the benched area so it can be recovered. The area between Corners 3 and 2 is also steep. Rounding is already planned but additional rounding at Corner 3 is desirable. The excess stockpile between Corners 8 and 10 must not expand beyond where it can also be recovered. Other areas planned for enlargement are suitable. With the adjustments the location should be suitable and stable for drilling and operating the wells.

Both the surface and minerals are owned by SITLA. Ed Bonner of SITLA reviewed the site and had no concerns regarding the proposal except as covered above.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location. He provided Ed Bonner of SITLA and Ramie Hoopes of Kerr McGee a written wildlife evaluation and a copy of a recommended seed mix to be used for re-vegetating the disturbed area.

Vegetation in the non-disturbed area includes halogeton, black sagebrush, shadscale and annuals.

Sheep, antelope and small mammals and birds.

Soils are a shallow rocky sandy loam.

The reserve pit is planned in an area of cut in the southwest corner of the location. Dimensions are 100' x 150' x 12' deep with 2' of freeboard. Rounding between Corners C and D is planned. This area is within a fill to 1.8 feet. Additional rounding is recommended. A 10-foot wide bank is required as planned. A liner with a minimum thickness of 30 mils. and a felt sub-liner thick enough to cushion the rocks are required.

On 5/13/2009 the following met and discussed the changes incorporated in the above description. Floyd Bartlett (DOGM), Clay Einerson, Lovell Young (Kerr McGee), and Kolby Kay (Timberline Engineering and Land Surveying).

Surface Use Plan

Current Surface Use

Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 313 Length 500	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation in the non-disturbed area includes halogeton, black sagebrush, shadscale and annuals.

Sheep, antelope and small mammals and birds.

Soil Type and Characteristics

Soils are a shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

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)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	High permeability	20
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	45	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut in the southwest corner of the location. Dimensions are 100' x 150' x 12' deep with 2' of freeboard. Rounding between Corners C and D is planned. This area is within a fill to 1.8 feet. Additional rounding is recommended. A 10-foot wide bank is required as planned. A liner with a minimum thickness of 30 mils. and a felt sub-liner thick enough to cushion the rocks are required.

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

Other Observations / Comments

On 5/13/2009 the following met and discussed the changes incorporated in the above description. Floyd Bartlett (DOGM), Clay Einerson, Lovell Young (Kerr McGee), and Kolby Kay (Timberline Engineering and Land Surveying).

Floyd Bartlett
Evaluator

4/28/2009
Date / Time

Application for Permit to Drill Statement of Basis

6/17/2009

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1409	43047503570000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 922-29M4DS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	SWSW 29 9S 22E S 553 FSL 525 FWL GPS Coord (UTM) 630550E 4428817N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,400' 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 1,500'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. 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. Any usable ground water.

Brad Hill
APD Evaluator

5/20/2009
Date / Time

Surface Statement of Basis

This location is in a tributary of the Sand Wash drainage of the Natural Buttes Unit approximately 21.6 road miles southeast of Ouray, Ut.. The Seep Ridge Road, Uintah County roads and existing oil field development roads access the site. Sand Wash, the major drainage in the area, drains northerly to the White River a distance of approximately 1 1/2 miles. The area is characterized by narrow ridges and steep sided hills, which are frequently divided by narrow to wide valley bottoms. Sand Wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. Washes are sometimes rimmed with exposed sand stone bedrock cliffs.

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Floyd Bartlett
Onsite Evaluator

4/28/2009
Date / Time

Application for Permit to Drill Statement of Basis

6/17/2009

Utah Division of Oil, Gas and Mining

Page 2

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.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 4/16/2009

API NO. ASSIGNED: 43047503570000

WELL NAME: NBU 922-29M4DS

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

PHONE NUMBER: 720 929-6007

CONTACT: Kathy Schneebeck-Dulnoan

PROPOSED LOCATION: SWSW 29 090S 220E

Permit Tech Review:

SURFACE: 0553 FSL 0525 FWL

Engineering Review:

BOTTOM: 0045 FSL 1145 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 40.00135

LONGITUDE: -109.47064

UTM SURF EASTINGS: 630550.00

NORTHINGS: 4428817.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22935

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 22013542
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Permit #43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingle Approved

LOCATION AND SITING:

- R649-2-3.
Unit: NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
Board Cause No: Cause 173-14
Effective Date: 12/2/1999
Siting: 460' fr u bdry & uncomm. tract
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhll
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmacdonald



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
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 922-29M4DS
API Well Number: 43047503570000
Lease Number: ML 22935
Surface Owner: STATE
Approval Date: 6/24/2009

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

Commingling:

In accordance with Board Cause No. 173-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

General:

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

Conditions of Approval:

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

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

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

Surface casing shall be cemented to the surface.

Notification Requirements:

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

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

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

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

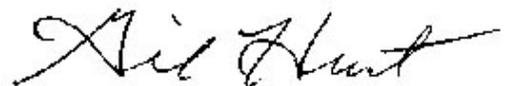
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office
(801) 733-0983 home

Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:



Gil Hunt
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
---	---

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 922-29M4DS
------------------------------------	---

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000
---	---

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
---	--	--

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 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: 9/3/2009	<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: _____

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 09/03/2009 AT 13:00 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 September 03, 2009

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 9/3/2009

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/6/2009	<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: _____

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

MIRU PROPETRO AIR RIG ON 09/04/2009. DRILLED 12 1/4" SURFACE HOLE TO 2400'. RAN 9 5/8" 36# J-55 SURFACE CSG. PMP 350 SX PREM CLASS G @15.8 PPG 1.15 YIELD. 5 GAL/MIX H2O DISPLACE PLUG W/179 BBLS WATER BUMPED PLUG FLOAT HELD TOP OUT W/350 SX PREM CLASS G @15.8 PPG 1.15 YIELD. NO CMT TO SURFACE. WORT

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 September 14, 2009

NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 9/10/2009

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 9/14/2009	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Frac Factory Refurb pit"/>

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

Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad KMG is also requesting to utilize this pit as a staging pit to be utilized for other completion operations in the area. There will be 2 - 400 bbl upright skim tanks placed on location. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the skim tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the attached well location completion fluids will be recycled in this pit and utilized for other frac jobs in the area.

Approved by the Utah Division of Oil, Gas and Mining

Date: September 22, 2009

By:

NAME (PLEASE PRINT) Raleen White	PHONE NUMBER 720 929-6666	TITLE Sr. Regulatory Analyst
SIGNATURE N/A		DATE 9/14/2009



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047503570000

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

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

Date: September 22, 2009

By: 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/15/2009	<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: _____

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

FINISHED DRILLING FROM 2400' TO 9535' ON 10/09/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMPED 40 BBLS WATER SPACER. LEAD CM W/465 SX CLASS G PREM LITE @ 12.2 PPG, 2.13 YIELD. TAILED CMT W/135 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.26 YIELD. DROPPED PLUG @ 3200 PSI, FLOATS HELD W/1 BBL RETURN, GOOD CIRC THROUGHOUT CMT JOB W/26 BBLS CMT TO SURFACE. R/DN. RELEASE ENSIGN RIG 146 ON 10/15/2009 AT 18:00 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 October 19, 2009

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 10/16/2009

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/26/2009	<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: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
 THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 12/26/2009 AT 2:15 P.M. PLEASE REFER TO THE ATTACHED CHRONOLOGICAL WELL HISTORY.

Accepted by the
 Utah Division of
 Oil, Gas and Mining
FOR RECORD ONLY
 January 04, 2010

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 12/30/2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED]	Spud Conductor: 9/3/2009	Spud Date: 9/4/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 10/15/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/4/2009	15:00 - 18:00	3.00	MIRU	01	B	P		MIRU
	18:00 - 19:00	1.00	DRLSUR	02	A	P		SPUD 18:00 9/4/09, DA F/44 TO 120
	19:00 - 22:00	3.00	DRLSUR	06	A	P		POOH L/D HAMMER, P/U DIR TOOLS TIH
	22:00 - 0:00	2.00	DRLSUR	02	D	P		DA F/120 TO 350, W/PDC, 420 GAL/MIN
9/5/2009	0:00 - 0:00	24.00	DRLSUR	02	D	P		DIR DRILL F/350 TO TD 2400', PUMP 10BBLS/MIN, & 2200 CFM, PSI1800, WOB 20K, CIRC & CONDITION TO LDDP
9/6/2009	0:00 - 1:00	1.00	DRLSUR	05	C	P		LDDP & BHA F/CASING RUN
	1:00 - 6:00	5.00	DRLSUR	06	A	P		
	6:00 - 9:00	3.00	CSG	12	C	P		RUN 54 JTS #36 J55 9.625 CSG TO 2376', RIG RELEASE 9/6/09 09:00, MOVE TO 29M3CS
	9:00 - 12:00	3.00	CSG	12	E	P		PUMP 350 SX TAIL CEMENT 15.8LB, 1.15 YLD, 5 GAL/MIX H2O, DISPLACE PLUG 179BBLS WATER, BUMPPLUG, FLOAT HELD, TOP OUT W/350SX 15.8LB 1.15 YLD 5/MIX, NO CEMENT TO SURFACE
9/25/2009	0:00 - 6:00	6.00	MIRU	01	A	P		IDLE
	6:00 - 18:00	12.00	MIRU	01	B	P		100% RIG ON LOCATION - 100% SET IN - 50% RIGGED UP
	18:00 - 0:00	6.00	MIRU	01	B	P		IDLE
9/26/2009	0:00 - 6:00	6.00	MIRU	01	B	P		RURT (IDLE)
	6:00 - 20:00	14.00	MIRU	01	B	P		RURT - 65% RIGGED UP - RAISED DERRICK @ 11:00hrs - BROKE SNAKE BETWEEN DRILL LINE & PULL IN LINE WHEN PULLING IN DRILL LINE, RE-STRUNG PULL IN CABLE FINISHED STRING UP & SECURED TO DRAWWORKS @ 20:00 HRS
9/27/2009	20:00 - 0:00	4.00	MIRU	01	B	P		RURT (IDLE)
	0:00 - 6:00	6.00	MIRU	01	B	P		RURT (IDLE)
	6:00 - 14:00	8.00	MIRU	01	B	P		RURT, 95% RIGGED UP -
	14:00 - 0:00	10.00	MIRU	01	B	Z		TROUBLE SHOT IRON DERRICK HAND, UNABLE TO OPEN POWER SHOE TO RELEASE FROM STOW POSITION, TECH ON LOCATION, BAD ROTATING HYD COMPENSATOR VALVE IDH OPERATING BUT WITH PROBLEMS - LOWERED DERRICK BOARD - CONNECT BLOCKS TO TOP DRIVE, LOWERED TOP DRIVE TO RIG FLOOR LEVEL - TOP DRIVE WILL TURN BUT NO HYD, BAD COUPLING & BAD HYD PUMP - TECH'S ON LOCATION REPAIR SAME
9/28/2009	0:00 - 11:30	11.50	MIRU	01	B	Z		RURT - REPAIR IRON DERRICK HAND
	11:30 - 14:30	3.00	DRLPRO	14	A	P		N/UP BOPE, FLOW LINE, CHOKE LINE, FLARE & PANIC LINE
	14:30 - 15:00	0.50	DRLPRO	15	A	P		TEST BOPE - P/UP JT DP TO TEST
	15:00 - 19:30	4.50	DRLPRO	08	A	Z		BLOCK GUIDES JUMPED OUT OF TRACK IN DERRICK - REMOVE TRACK GUIDES FROM BLOCKS
	19:30 - 23:30	4.00	DRLPRO	15	A	P		TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, HCR, FLOOR VALVES, IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500
9/29/2009	23:30 - 0:00	0.50	DRLPRO	14	B	P		INSTALL WEARBUSHING
	0:00 - 1:30	1.50	DRLPRO	06	A	P		P/UP BIT #1, MM & DIRECTIONAL BHA

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: ENSIGN 146/146, PROPETRO/
 Event: DRILLING Start Date: 7/21/2009 End Date: 10/15/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	1:30 - 19:30	18.00	DRLPRO	08	B	Z		REPAIR TOP DRIVE - WAIT ON NEW HYD PUMP & COUPLING FROM CASPER - REPLACE HYD PUMP & COUPLING - CONTINUE TROUBLESHOT FOR POSSIBLE CAUSE OF PUMP FAILURES - UNABLE TO ISOLATE CAUSE OF FAILURE - REVERSED SUNXCTION & DISCHARGE LINES FROM HYD PUMP - RUN TOP DRIVE HYD 1 HOUR CHECKING FOR ANY OVER HEATING - RAN NORMAL
	19:30 - 23:00	3.50	DRLPRO	06	A	P		CONTINUE P/UP BHA RIH TO 650' - MAKE & BREAK HWDP
9/30/2009	23:00 - 0:00	1.00	DRLPRO	08	B	Z		WORK ON DRAWWORKS - DRAWWORKS OFFLINE - UNABLE TO RESET AND PUT ON LINE
	0:00 - 1:30	1.50	DRLPRO	08	A	Z		TROUBLESHOOT DRAWWORKS - REMOVED DELTA BOARD (BAD) DRAWWORKS @ 80% RIH W/DP
	1:30 - 3:30	2.00	DRLPRO	06	A	P		REPLACE FUSES IN IRON ROUGH NECK
	3:30 - 4:00	0.50	DRLPRO	08	B	Z		RIH DP TO 2238'
	4:00 - 5:00	1.00	DRLPRO	06	A	P		LEVEL DERRICK - INSTALL ROTATING HEAD
	5:00 - 6:00	1.00	DRLPRO	07	B	P		CALIBRATE PASON DEPTH SENSOR, PUMP STROKES, WEIGHT SENSOR
	6:00 - 7:30	1.50	DRLPRO	07	A	P		DRILL CMT, FE & RATHOLE F/2238' TO 2410'
	7:00 - 9:00	2.00	DRLPRO	02	F	P		DRILL & SLIDE F/ 2410 TO 2785 - WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 1800 ROP 220/250 DIFF. PSI 350/400 - SLIDES 2510-2525 2556-2571 2601-2618 2646-2659 2692-2704 2782-2794 2827-2841 2918-2933 2963-2978
	9:00 - 14:00	5.00	DRLPRO	02	C	P		RIG SERVICE
	14:00 - 14:30	0.50	DRLPRO	07	A	P		DRILL & SLIDE F/ 2785 TO 3462 WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 1850 ROP200/240 DIFF. PSI 350/400 - SLIDES 3054-3084 3145-3175 3235-3250 3326-3356 3416-3446 3507-3547 3779-3799
10/1/2009	14:30 - 0:00	9.50	DRLPRO	02	C	P		DRILL & SLIDE F/ 3462 - 4144 - WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 1950 DIFF. PSI . 150/200 - SLIDES 3507-3547 3779-3799
	0:00 - 11:00	11.00	DRLPRO	02	C	P		RIG SERVICE
	11:00 - 11:30	0.50	DRLPRO	07	A	P		DRILL & SLIDE F/ 4144 TO 4869 WOB 18/20 RPM 45/ 50 SPM 116 GPM 486 SPP 2000 DIFF. PSI. 400 - SLIDES - 3824-3844 3869-3890 3914-3929 3960-3980 4005-4022 4052-4082 4098-4128 4186-4216 4232-4265 4277-4307 BEGIN 20 FT. SLIDES TO HELP CLOSE IN 4322-4346 4367-4397 4413-4443 4503-4523 4549-4569 4594-4606 4639-4651 4730-4738 4775-4795 4812-4831
	11:30 - 0:00	12.50	DRLPRO	02	C	P		DRILL & SLIDE F/ 4869 TO 5546 WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 1950 DIFF PSI 350 - SLIDES 5204-5229 5229-5250 5274-5293 5321-5352 5364-5375 5410-5450 5455-5475 5500-5510 5681-5701
10/2/2009	0:00 - 13:00	13.00	DRLPRO	02	C	P		RIG SERVICE
	13:00 - 13:30	0.50	DRLPRO	07	A	P		REPLACE BOLTS ON TOPDRIVE
	13:30 - 15:00	1.50	DRLPRO	08	A	Z		DRIL & SLIDE F/ 5546 TO 6120 WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 2050 DIFF PSI 360 SLIDES 5862-5882 6044-6064
	15:00 - 0:00	9.00	DRLPRO	02	C	P		DRILL & SLIDE F/ 6120 TO 6769 WOB 18/20 RPM 45/50 SPM 116 GPM 486 SPP 2050 DIFF PSI 250/300 - SLIDES 6497-6520 6587-6603 6723-6734
10/3/2009	0:00 - 14:00	14.00	DRLPRO	02	C	P		RIG SERVICE
	14:00 - 14:30	0.50	DRLPRO	07	A	P		

RECEIVED December 30, 2009

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: ENSIGN 146/146, PROPETRO/
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 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/4/2009	14:30 - 0:00	9.50	DRLPRO	02	C	P		DRILL F/ 6769 TO 7145 WOB 20/25 RPM 45/50 SPM 116 GPM 486 SPP 2200 DIFF. PSI. 350
	0:00 - 16:00	16.00	DRLPRO	02	C	P		DRILL & SLIDE F/ 7145 TO 7632 WOB 20/25 RPM 45/50 SPM 100 GPM 420 SPP 2300 DIFF. PSI. 200/250 - SLIDES 7494-7499 7539-7556 RIG SERVICE
	16:00 - 16:30	0.50	DRLPRO	07	A	P		
	16:30 - 22:00	5.50	DRLPRO	02	C	P		DRILL & SLIDE F/ 7632 TO 7731 WOB 25 RPM 50/55 SPM 100 GPM 420 SPP 2250 DIFF. PSI. 250 - SLIDE 7720-7731 MOTOR FAILED
10/5/2009	22:00 - 22:30	0.50	DRLPRO	05	A	Z		CIRC. & MIX LCM SWEEP & PILL FOR TRIP OUT
	22:30 - 0:00	1.50	DRLPRO	08	B	Z		REPAIR SUCTION VALVE IN MUD TANKS
	0:00 - 0:30	0.50	DRLPRO	08	B	Z		REPAIR SUCTION LINE
	0:30 - 1:30	1.00	DRLPRO	06	G	Z		T.O.H TO CHANGE OUT MUD MOTOR
	1:30 - 3:30	2.00	DRLPRO	08	A	Z		TROUBLE SHOOT IRON DERRICKHAND - GRABBER NOT RELEASING
	3:30 - 7:30	4.00	DRLPRO	06	G	Z		T.O.H TO CHANGE OUT MUD MOTOR
	7:30 - 8:00	0.50	DRLPRO	08	A	Z		POWER SHOE ON IRON DERRICKHAND NOT WORKING
	8:00 - 11:00	3.00	DRLPRO	06	G	Z		T.O.H TO CHANGE OUT MUD MOTOR
	11:00 - 14:00	3.00	DRLPRO	08	A	Z		WORK ON POWER SHOE ON IRON DERRICKMAN
	14:00 - 15:30	1.50	DRLPRO	06	H	Z		T.O.H TO CHANGE MUD MOTOR
10/6/2009	15:30 - 16:30	1.00	DRLPRO	06	H	Z		PULL BATTERY PACK & MWD - L/D MOTOR & BIT - BIT WAS CORED OUT
	16:30 - 17:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	17:00 - 19:30	2.50	DRLPRO	06	G	Z		RESET & CALIBRATE MWD TOOL - STAB IN MONEL MAKE UP & RIH
	19:30 - 21:30	2.00	DRLPRO	08	A	Z		WORK ON IRON ROUGHNECK
	21:30 - 22:30	1.00	DRLPRO	06	G	Z		TRIP IN THE HOLE
	22:30 - 0:00	1.50	DRLPRO	08	A	Z		REPAIR IRON DERRICKHAND
	0:00 - 2:00	2.00	DRLPRO	06	G	P		TRIP IN INSTALL ROTATING RUBBER
	2:00 - 3:30	1.50	DRLPRO	08	A	Z		WORK ON IRON ROUGHNECK
	3:30 - 5:00	1.50	DRLPRO	06	G	P		TRIP IN HOLE TO SHOE
	5:00 - 6:00	1.00	DRLPRO	05	G	P		FILL PIPE @ SHOE POP OFF ON BOTH PUMPS WASHED OUT
10/7/2009	6:00 - 13:00	7.00	DRLPRO	08	A	Z		CHANGE OUT POWER SHOE ON IRON DERRICKHAND - CHANGE OUT POP ON PUMPS TO OTECO VALVES
	13:00 - 16:00	3.00	DRLPRO	06	A	Z		WENT TO CIRC. BEFORE RUNNING IN HOLE DRILLSTRING PLUGGED - T.O.H - MWD TOOL WAS PACKED OFF
	16:00 - 0:00	8.00	DRLPRO	06	A	Z		L/D PLUGGED MWD TOOLS - P/U NEW TOOLS & SCRIBE - CIRC. THROUGH MOTOR CLEAR T.I.H - BREAK CIRC. @ SHOE & 4000'
	0:00 - 0:30	0.50	DRLPRO	06	A	P		T.I.H FILL PIPE @ SHOE & 4000 FT. HIT TIGHT SPOT @ 4570 CIRC. PACKED OFF
	0:30 - 7:00	6.50	DRLPRO	22	M	X		WORK UP OUT OF TIGHT HOLE CAME FREE GOT RETURNS CIRC. WORK BACK DOWN PACKED OFF LOST RETURNS WORK BACK OUT CAME FREE CIRC. GOOD MUD AROUND HOLE WASH AND REAM F/ 4570 TO 4700
	7:00 - 9:00	2.00	DRLPRO	06	A	P		TRIP IN F/ 4700 TO 6771
	9:00 - 10:00	1.00	DRLPRO	22	M	X		FILL PIPE & WORK TIGHT HOLE
	10:00 - 10:30	0.50	DRLPRO	06	A	P		TRIP IN F / 6771 TO 7585
	10:30 - 12:30	2.00	DRLPRO	03	E	P		WASH & REAM F/ 7585 TO 7731 - FAN IN NEW BIT ON BTM.

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: ENSIGN 146/146, PROPETRO/
 Event: DRILLING Start Date: 7/21/2009 End Date: 10/15/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:30 - 13:30	1.00	DRLPRO	02	C	P		DRILL F/ 7731 TO 7766 - WOB 18 RPM 55 SPM 116 GPM 486 SPP 2900 DIFF. PSI 200 MW 10.8 VIS. 40 BGG 40-50
	13:30 - 14:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	14:00 - 0:00	10.00	DRLPRO	02	C	P		DRILL & SLIDE F/ 7766 TO 8086 - WOB 18 RPM 55 SPM 116 GPM 486 SPP 2900 DIFF. PSI. 200 MW 11.0 VIS 45 BGG 40-50 - SLIDES 7765-7781 7858-7871 8039-8059
10/8/2009	0:00 - 2:00	2.00	DRLPRO	02	C	P		DRILL & SLIDE F/ 8086 TO 8175 - WOB 18/20, RPM 55, BH RPM 118, SPM 100, SPP 2700, DIFF. 200, TORQ ON/OFF 17/8, MW 11.1 VIS 50, BGG 70-80, SLIDES - 8039-8059
	2:00 - 4:00	2.00	DRLPRO	08	A	Z		BLACKED OUT RIG - AIR FILTERS WERE PLUGGED ON ENGINES W/ SAND FROM SAND BLASTING RIG - WEIGHT INDICATOR & CAMERAS WERE MALFUNCTIONING ASWELL
	4:00 - 13:00	9.00	DRLPRO	02	C	P		DRILL & SLIDE F/ 8175 TO 8583 - WOB 18/20 RPM 55, BH RPM 118, SPM 100 SPP 2700,DIFF. 200/250, TORQ ON/OFF 17/10, MW 11.4 VIS 46, BGG 80/90, SLIDES 8312-8322
	13:00 - 13:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	13:30 - 0:00	10.50	DRLPRO	02	C	P		DRILL & SLIDE F/ 8583 TO - 8901 WOB 20, RPM 55, BH RPM 118, SPM 100, SPP 2700, DIFF 150/200, TORQ ON/OFF 18/12, MW 11.9 VIS 44, BGG 70/80, SLIDES 8765-8775 8855-8860
10/9/2009	0:00 - 18:30	18.50	DRLPRO	02	C	P		DRILL & SLIDE F/ 8901 TO 9535 - WOB 20/24, RPM 55, BH RPM 122, SPM 100, SPP 2800, DIFF 250/300, TORQ ON/OFF 18/16, MW 12 VIS 50, BGG 60/70
	18:30 - 21:00	2.50	DRLPRO	05	C	P		PUMP SWEEP & CIRC. BTMS UP WORKING PIPE
	21:00 - 0:00	3.00	DRLPRO	06	E	P		WIPER TRIP TO SHOE PUMP 10 STD. OFF BTM. ROTATE 20 STDS. OFF BTM. PUMP PILL & POOH 265K TO PULL OFF BTM. 80K OVER STRING WT.
10/10/2009	0:00 - 6:30	6.50	DRLPRO	06	E	P		ROTATE OUT 16 STDS. PUMP PILL POOH - HIT TIGHT SPOT @ 5300 FT. & 4400 FT. BACK REAMED THROUGH
	6:30 - 9:30	3.00	DRLPRO	08	C	Z		WIPER TRIP OUT OF THE HOLE - AT 06:30 AM 9 1/2 HRS FOR TRIP TIME WAS UP - 1000 FPH
	9:30 - 17:00	7.50	DRLPRO	06	E	P		TRIP BACK IN HOLE FROM SHOE, HIT BRIDGE @ 5324,5510
	17:00 - 19:00	2.00	DRLPRO	05	A	P		CIRC. & CONDITION MUD FOR LOGS
	19:00 - 20:00	1.00	DRLPRO	06	B	P		PUMP 4 STDS. OFF BTM - PULLING 240K OFF BTM, 60K OVER STRING WT.
	20:00 - 20:30	0.50	DRLPRO	08	A	Z		CHANGE OUT GRABBER DIES ON TOP DRIVE
	20:30 - 0:00	3.50	DRLPRO	06	B	P		PUMP 6 MORE STDS. - PULLING 230K, 50K OVER STRING WT. - ROT. 12 MORE STDS. THEN STRAIGHT PULLED TO 7200 FT. @ MID NIGHT
10/11/2009	0:00 - 2:00	2.00	DRLPRO	06	B	P		CONTINUE TRIPPING OUT F/ 7200 TO 5200 - ROTATED THROUGH TIGHT SPOT
	2:00 - 3:00	1.00	DRLPRO	22	A	X		WORK DOWN STUCK PIPE @ 5100 FT. CAME FREE AFTER AN HR. OF WORKING
	3:00 - 4:00	1.00	DRLPRO	06	B	P		ROTATE & PUMP OUT F/ 5100 TO 4800
	4:00 - 5:00	1.00	DRLPRO	08	B	Z		WORK ON IRON DERRICKHAND
	5:00 - 7:00	2.00	DRLPRO	06	B	P		TRIP OUT F/ 4800 TO 3600 - @ 07:00 TRIP TIME WENT ON ENSIGN 1000 FPH LIMIT
	7:00 - 8:30	1.50	DRLPRO	08	C	Z		CONTINUE TRIPPING OUT OF HOLE F/ 3800 TO 2300
	8:30 - 10:00	1.50	DRLPRO	08	B	Z		REPAIR HYDROLIC HOSE ON ELEVATORS
	10:00 - 14:00	4.00	DRLPRO	08	C	Z		TRIP OUT F/ 2300 - BREAK OUT & L/D DIRECTIONAL TOOLS, MUD MOTOR & BIT

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: ENSIGN 146/146, PROPETRO/
 Event: DRILLING Start Date: 7/21/2009 End Date: 10/15/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/12/2009	14:00 - 18:00	4.00	DRLPRO	11	D	S		HELD SAFETY MEETING W/ WEATHERFORD & RIGGED UP WIRELINE RUN IN HOLE HIT BRIDGE @ 4613 TRIED WORKING DOWN FOR 20 MIN. LOGGED OUT F/ 4613 TO SURFACE - BLEW RADIATOR HOSE CANCELED LOGS P.O.O.H
	18:00 - 21:00	3.00	DRLPRO	06	B	P		HELD SAFETY MEETING ON NEW TASKS FOR RUNNING LATCH SUB WHILE TRIPPING - P/U WEATHERFORD BHA MAKE UP, PICKED UP 22 JTS. DP. TO REPLACE DRILLING BHA, RABBIT DID'T GO THROUGH HEAVY WT.
	21:00 - 0:00	3.00	DRLPRO	08	B	Z		IRON DERRICKHAND POWER SHOE WON'T RELEASE
	0:00 - 1:30	1.50	DRLPRO	08	B	Z		POWER SHOE NOT RELEASING
	1:30 - 3:00	1.50	DRLPRO	06	B	P		MOVED HWDP SO WE COULD GET TO THE DP, PLANNED ON USING HWDP, HWDP DID NOT DRIFT
	3:00 - 15:30	12.50	DRLPRO	06	B	P		TRIP IN WITH LOGGING LATCH SUB COULD NOT SET MORE THAN 15K ON TOOL, WASHED THROUGH TIGHT SPOT @ 4659,5206,7500, TRIP IN TO 9528
	15:30 - 18:30	3.00	DRLPRO	05	A	X		BEGAN TO CIRC. HAD GOOD RETURNS & THEN LOST ALL RETURNS MIX LCM PUMP 20% DOWN HOLE MAINTAIN VIS & WT @ 46 12.2
	18:30 - 19:30	1.00	DRLPRO	06	K	X		PULLED 5 STDS.
	19:30 - 20:00	0.50	DRLPRO	05	A	X		CIRC. 30 SPM NO RETURNS, GOT 390 BBLs. FROM H&P 298
	20:00 - 21:00	1.00	DRLPRO	08	B	Z		VALVES BAD IN MUD PUMP #2 , BROKE SUCTION VALVES FOR #1 IN MUD TANK, SWAP VALVES FROM #2 TO #1
	21:00 - 21:30	0.50	DRLPRO	05	A	X		CIRC. 30 SPM NO RETURNS, DROPPED MUD WT. 11.5 LCM 26%
	10/13/2009	21:30 - 22:30	1.00	DRLPRO	06	F	X	
22:30 - 23:00		0.50	DRLPRO	05	A	X		CIRC. 30 SPM NO RETURNS, CIRC. ACROSS TOP OF HOLE GOT RETURNS HOLE IS FULL PULL 5 STDS.
23:00 - 23:30		0.50	DRLPRO	06	F	X		
23:30 - 0:00		0.50	DRLPRO	05	A	X		CIRC. 30 SPM. NO RETURNS
0:00 - 2:30		2.50	DRLPRO	22	G	X		PUMP WITH NO RETURNS
2:30 - 4:00		1.50	DRLPRO	22	G	X		PULL 10 STDS. OUT OF HOLE
4:00 - 8:30		4.50	DRLPRO	22	G	X		PUMP 30 SPM NO RETURNS PUMP 35% LCM DOWN HOLE
8:30 - 9:30		1.00	DRLPRO	22	G	X		TRIP OUT 9 STDS. TO 6400 FT.
9:30 - 12:30		3.00	DRLPRO	22	G	X		PUMP 30 SPM 40 % LCM, 10.2 MW, PARTIAL RETURNS
12:30 - 13:00		0.50	DRLPRO	22	G	X		PULL 1 STD. IRON DERRICKHAND GRABBER WON'T CLOSE
13:00 - 15:00		2.00	DRLPRO	05	A	X		CIRC. W/ FULL RETURNS, DISPLACE 12.2 MUD W/ 10.2 CIRC. GAS FROM WELL, 20 FT. FLARE
10/14/2009		15:00 - 16:00	1.00	DRLPRO	08	B	Z	
	16:00 - 17:00	1.00	DRLPRO	05	A	P		CIRC. & MIX UP A 12.5# PILL TO TRIP IN
	17:00 - 18:30	1.50	DRLPRO	06	B	P		TRIP IN 12 STDS. 7442 FT.
	18:30 - 20:00	1.50	DRLPRO	05	A	P		CIRC. W/ 11.4 MW, FULL RETURNS, 5 FT. FLARE
	20:00 - 21:30	1.50	DRLPRO	06	B	P		TRIP IN 13 STDS. 8802 FT.
	21:30 - 22:30	1.00	DRLPRO	05	A	P		CIRC. W/ 11.8 MW, FULL RETURNS, 30 FT. FLARE
	22:30 - 0:00	1.50	DRLPRO	22	C	X		TOOK 30 BBL. KICK, P/U SHUT IN, 260 SICP 48 SIDDP BUILT 12.1# MUD CIRC. KICK FROM WELL 60 SPM
	0:00 - 1:30	1.50	DRLPRO	05	A	P		CONTINUE CIRC OUT GAS

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: ENSIGN 146/146, PROPETRO/
 Event: DRILLING Start Date: 7/21/2009 End Date: 10/15/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	1:30 - 2:00	0.50	DRLPRO	06	A	P		RIH F/8802' TO 9535'
	2:00 - 4:30	2.50	DRLPRO	05	B	P		CIRC OUT GAS - RAISE MW F/11.8 TO 12.2 - MAX GAS 7336,
	4:30 - 17:00	12.50	DRLPRO	11	D	P		R/UP WEATHERFORD LOGGING TOOLS & EQUIPMENT - RIH LOGGING TOOLS INSIDE DP, LATCH & RELEASE LOGGING TOOLS - POOH WIRELINE, POOH LOGGING TOOL ON DP @ 3 min/std (TIGHT @ 5080' PULLED 100K OVER STRING WT)
	17:00 - 18:00	1.00	DRLPRO	06	A	P		RE-POSITION HWDP IN DERRICK SO DRILL PIPE WILL RACK EVENLY ON BOTH SIDES
	18:00 - 22:30	4.50	DRLPRO	11	D	P		CONTINUE POOH DP W/LOGGING TOOLS F/2300' TO SURFACE - LOGGING TOOLS AT SURFACE OBSERVED DAMAGED CALIBER ARM CAUSED FROM OVERPULL @ 5080' TO FREE DRILL PIPE - NO GAMMA RAY DATA FROM THIS DEPTH UP - R/DN WEATHERFORD EQUIPMENT - DOWN LOAD LOGGING DATA
	22:30 - 23:00	0.50	DRLPRO	14	B	P		RETRIEVE WEARBUSHING
	23:00 - 0:00	1.00	DRLPRO	12	A	P		HPJSM - R/UP FRANKS CASING TOOLS & EQUIPMENT
10/15/2009	0:00 - 10:00	10.00	CSG	12	C	P		RUN 226 JTS & 1 MARKER JT 4.5" 11.60 I-80 BTC PROD CASING FLOAT SHOE @ 9517', FLOAT COLLAR @ 9473'
	10:00 - 11:30	1.50	CSG	05	A	P		CIRC GAS OUT - MAX GAS 5181, NO FLARE , 12.2 CUT TO 11.9 (LOST 200 BBLs MUD ON RUNNING CASING & CIRC)
	11:30 - 14:30	3.00	CSG	12	E	P		HPJSM, R/UP HALLIBURTON, TEST LINES 5000 PSI, CEMENT 4.5" PROD CASING - PUMPED 40 BBLs WATER SPACER, 465 SKS LEAD 12.2 PPG YIELD 2.13, 1350 SKS TAIL 14.3 PPG YIELD 1.26, DROPPED PLUG & DISPLACED W/147 BBLs FRESH WATER W/.01 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G @ 2600 PSI, BUMPED PLUG @ 3200 PSI, FLOATS HELD W/1 BBL RETURN, GOOD CIRC THROUGHOUT CMT JOB W/26 BBLs CMT TO SURFACE - R/DN HALLIBURTON
	14:30 - 15:00	0.50	CSG	12	C	P		LAND CASING & VERIFY - L/OUT LANDING JOINT
	15:00 - 18:00	3.00	CSG	14	A	P		N/DN BOPE - CLEAN RIG TANKS - TRANSFER 300 BBLs MUD TO PRE-MIX TANK - RELEASE RIG @ 1800 HRS 10/15/09

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED]		Spud Conductor: 9/3/2009		Spud Date: 9/4/2009	
Project: UTAH-UINTAH		Site: NBU 922-29M PAD		Rig Name No: LEED 733/733	
Event: COMPLETION		Start Date: 12/11/2009		End Date: 12/29/2009	
Active Datum: RKB @5,029.00ft (above Mean Sea Level)			UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/14/2009	7:00 - 7:15	0.25	ALL	48		P		HSM, FRACING W/ DEFITS, COLD WEATHERFORD
	7:15 - 23:00	15.75	ALL	36	E	P		MIRU SCHLUMBERGER FRAC EQUIP & SCHLUMBERGER WIRELINE, P/T SURFACE LINES TO 8500#, FRAC MESAVERDE 9146'-9293' 40 HOLES. STG #1] BRK DN PERFS @ #, INJ RT=, INJ PSI=#, ISIP=#, FG=, PUMP'D BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=# FG=, AR=, AP=#, MR=, MP=#, NPI= /40 CALC PERFS OPEN 100% STG #2 DEFIT] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN. SET CBP @ 9036' PERF MESA VERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, 8940'-8944' 4 SPF, 90* PH, 16 HOLES, PUT IN HALIBURTON SURFACE GAUGES, WHP=700#, BRK DN PERFS @ 2817#, INJT RT=5.5, PUMP'D 24 BBLS, ISIP=2490#, FG=.71 WAIT 6 HRS [TIME 12:11] PERF MESAVERDEDE 9002'-9006' 4 SPF, 90* PH, 16 HOLES. 8980'-8982' 4 SPF, 90* PH, 8 HOLES. [40 HOLES] TIME 19:40] WHP=1177# BRK DN PERFS @ 2645#, INJT RT=51.7, INJT PSI=5200#, ISIP=2125#, FG=.67, PUMP'D 1071 BBLS SLK WTR W/ 41868# 30/50 MESH W/ 5000# RESIN COAT IN TAIL. ISIP=2850#, FG=.75, AR=46.2, AP=4468#, MR=51.7, NPI=725#, 30/40 CALC PERFS OPEN 75%. STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN. SET CBP @ 8876' PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE. 8844'-8846' 4 SPF, 90* PH, 8 HOLES. 8820'-8822' 4 SPF, 90* PH, 8 HOLES. 8768'-8770' 4 SPF, 90* PH, 8 HOLES. 8740'-8744' 4 SPF, 90* PH, 16 HOLES. [40 HOLES] SAND MASTER WENT DN SWI. HSM, FRACING / WIRELINE
12/15/2009	7:00 - 7:15	0.25	COMP	48		P		

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: LEED 733/733
 Event: COMPLETION Start Date: 12/11/2009 End Date: 12/29/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:13	9.97	COMP	36	E	P		<p>FRAC STG #3, MESAVERDE 8740'-8846' 40 HOLES. WHP=1400#, BRK DN PERFS @ 3220#, INJ RT=49.8, INJ PSI=6050#, ISIP=2600#, FG=.73, PUMP'D 1085 BBLS SLK WTR W/ 42515# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2630#, FG=.73, AR=44.3, AP=4527#, MR=49.9, MP=6113#, NPI=30#, 25/40 CALC PERFS OPEN</p> <p>DEFIT STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8812', PERF MESAVERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 8600'-8610' 4 SPF, 90* PH, 40 HOLES.</p> <p>WHP=2036#, BRK DN PERFS @ 3436#, RT=5.6, ISIP=2260#, FG=.69 [TIME 10:14]</p> <p>16:30 PULL HALL GAUGES. GOOD INFO.</p> <p>STG #4]17:08 OPEN WELL T/ FRAC STG# 4. WHP=1476#, BRK DN PERFS @ 5.6 BPM @ 3220#, INJ RT=39 BPM, INJ PSI=4660#, ISIP=2269# FG=.69, PUMP'D 626 BBLS SLK WTR W/ 21,469# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2626#, FG=.74, AR=41, AP=4073#, MR=52, MP=5626#, NPI=357#, 35/40 CALC PERFS OPEN. 17:37 SW</p> <p>D-FIT STG 5) P/U 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8530' P/U PERF F/ 8497'-00', 4 SPF, 12 HOLES. POOH. RU HAL SURFACE GAUGES.</p> <p>WHP=1614#, BRK DN PERFS @ 3497#, RT=4.8, ISIP=2394#, FG=.71 [TIME 20:06] SD ON THIS WELL FOR NIGHT.</p>
12/16/2009	7:00 - 7:15 7:15 -	0.25	COMP COMP	48 36		P E		<p>STG# 5] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, PERF MESAVERDE. 8442'-8443' 4 SPF, 90* PH, 4 HOLES. 8395'-8398' 4 SPF, 90* PH, 12 HOLES. 8341'-8344' 4 SPF, 90* PH, 12 HOLES [40 HOLES]</p> <p>FRAC STG #5] WHP=974#, BRK DN PERFS @ 2478#, INJ RT=51.8, INJ PSI=4800#, ISP=1766#, FG=.64, PUMP'D 1255.6 BBLS SLK WTR W/ 48733# 30/50 MESH W/ 5000# RESIN COAT IN TAIL. ISIP=2210#, FG=.69, AR46.8, AP=3836#, MR=52, MP=5628#, NPI=444#, 29/40 CALC PERFS OPEN 73%.</p> <p>STG #6 DEFIT] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8250', PERF MESAVERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 8148'-8150' 4 SPF, 90* PH, 8 HOLES.</p> <p>WHP=1500# BRK DN PERFS=4962#, RT=5.5, ISIP=1950#, FG=.67. [TIME 13:21]</p>

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: LEED 733/733
 Event: COMPLETION Start Date: 12/11/2009 End Date: 12/29/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/17/2009	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STG 6)08:00 OPEN WELL. PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF F/ 7994'-96', 4 SPF, 8 HOLES. 8068'-70', 4 SPF, 8 HOLES. 8190'-92', 4 SPF, 8 HOLES. 8218'-20', 4 SPF, 8 HOLES. POOH. 09:26 OPEN WELL. WHP=1231#, BRK DN PERFS @ 2387# @ 6.4 BPM, ISIP=1782#, FG=.65, PERFS OPEN CALC= INJ RT=51.8, INJ PSI=4900# = 69% , PUMP'D 1214 BBLs SLK WTR W/ 49,297# 30/50 MESH & TAIL IN W/ 5000# 20/40 TLC. ISIP=2335#, FG=.68, AR=46.1, AP=3902#, MR=51.9, MP=6118#, NPI=553#.
12/18/2009	7:00 - 7:15	0.25	COMP	48		P		D-FIT STG 7)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH SET CBP @ 7936' P/U PERF F/ 7650'-53', 4 SPF, 12 HOLES. POOH. RU HAL SURFACE GAUGES. WHP=484 PSI, BRK @ 3876 PSI, RT= 5.7, ISIP 2562 PSI, FG= .75. (TIME 19:18) 19:30 SDFN. HSM,

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: LEED 733/733
 Event: COMPLETION Start Date: 12/11/2009 End Date: 12/29/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 23:59	16.73	COMP	36	E	P		<p>CHECK DATA FROM HALIBURTON SURFACE GAUGES, READING WRONG PRESSURES, NEEDLE VALVE TO GAUGES CLOSED HAD TO REDEFIT.</p> <p>WHP=702#, BRK DN FROM PREVIOUS BRK 3876' PUMP 24 BBLS ISIP=2137#, FG=70 TIME 10:54</p> <p>TIME 18:00 HRS WAITING TO HERE IF GOOD DATA. 18:20 MAKE DECISION TO GO AHEAD W/ FRAC.</p> <p>STG #7] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, PERF MESAVERDE, GOT DN TO 2500' COULD NOT READ SWITCHES. PULLED UP HOLE SWITCHES STARTED TO READ CONTINUED TO RIH, SHOT BOTTOM GUN & SHORTED OUT. POOH FIXED PROBLEM. 18:45 TO 20:45 7904'-7906' 4 SPF, 90* PH, 8 HOLES. 7856'-7858' 4 SPF, 90* PH, 8 HOLES. 7801'-7802' 4 SPF, 90* PH, 4 HOLES. 7792'-7793' 4 SPF, 90* PH, 4 HOLES [36 HOLES]</p> <p>WHP=825#, BRK DN PERFS @ 2073#, INJ RT=48, INJ PSI=5500#, ISIP=1800#, FG=66, PUMP'D 991 BBLS SLK WTR W/ 39447# 30/50 MESH W/ 5000# RESIN COAT IN TAIL. ISIP=2200#, FG=71, AR=44.2, AP=4175#, MR=51.9, MP=6430#, NPI =400#, 25/36 CALC PERFS OPEN 70%</p> <p>STG #8 DEFIT] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 7593' PERF MESAVERDE USING 3-3/8 EXPPEND [SLICK] 23 GRM, 0.36" HOLE 7472'-7475' 4 SPF, 90* PH, 12 HOLES. P/U RIH W/ HALIBURTON DN HOLE GAUGES, SET @ 7422' WHP=668#, BRK DN PERFS @ 4427#, RT=5.0, ISIP=1900#, FG=67. TIME 23:40 SDFN. HSM. SIME OPS</p>
12/19/2009	7:00 - 7:15	0.25	COMP	48		P		

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: LEED 733/733
 Event: COMPLETION Start Date: 12/11/2009 End Date: 12/29/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/M/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 18:00	10.75	COMP	36	B	P		FRAC, STG 8)POOH W/ DELSCO SLICK LINE. LD HAL DOWN HOLE GAUGES. (WAIT 40 MIN T/ READ INFO OFF HAL GAUGES. GOOD INFO.) PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH PERF F/ 7395'-98', 4 SPF, 12 HOLES. 7560'-63', 4 SPF, 12 HOLES. POOH. 11:20 OPEN WELL. WHP=390#, BRK DN PERFS @ 2230# @ 6.2 BPM, ISIP=1797#, FG=67, PERFS OPEN CALC= INJ RT=50, INJ PSI=5200# = 72% , PUMP'D 1605 BBLS SLK WTR W/ 49,670 # 30/50 MESH & TAIL IN W/ 5000# 20/40 TLC. ISIP=2250#, FG=.73, AR=46.3, AP=3746#, MR=50.6, MP=5557#, NPI=453#. 12:06 SWI. X-OVER FOR WL. D-FIT ONLY STG 9)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH SET CBP @ 7362' P/U PERF F/ 7330'-32', 4 SPF, 8 HOLES. POOH. PU HALLIBURTON DOWN HOLE GAUGES W/ DELSCO SLICKLINE. RIH SET GAUGES @ 7320'. D-FIT ONLY STG 9) 14:21 OPEN WELL. WHP= 447#, BRK= 2072#, RT = 4.8 BPM, ISIP = 1898#, FG = .69. (TIME 14:21) RDMO SCHLUMBERGER FRAC SERV. WAIT 6HR'S ON D-FIT. 20:30 POOH W/ HAL DOWN HOLE GAUGES. RDMO DELSCO SLICK LINE. PU 4 1/2 8K HAL CBP. RIH SET CBP @ 7280'. POOH, RD SCHLUMBERGER WL. JSA- RUSU. PU TBG FIN ROADING TO LOCATION. RD FRAC EQUIP. RUSU. ND FRAC VALVES. NU BOP. RU FLOOR AND TBG EQUIP. SPOT TBG. MU 3-7/8" MILL, POBS, 1.87" XN, RIH AS MEAS AND PU 229-JTS 2-3/8" L-80 TBG. TAG PLUG AT 7280'. PU PWR SWIVEL. FILL HOLE. P-TEST TO 2500#. GOOD. EST CIRC AND D/O PLUGS. #1 (DFIT ONLY). NO SAND D/O PLUG IN 7 MIN. RIH. TAG SAND. AS START PMPING, PMP BROKE DOWN. RD PWR SWIVEL. POOH AS LD 4-JTS. DRAIN AND RUN BACK IN W/ 2-JTS. WINTERIZE EQUIP. SDFN. JSA- D/O PLUGS.
12/21/2009	6:45 - 7:00	0.25	COMP	48		P		
	7:00 - 11:30	4.50	COMP	30	A	P		
	11:30 - 17:00	5.50	COMP	31	I	P		
12/22/2009	9:15 - 9:30	0.25	COMP	48		P		

RECEIVED December 30, 2009

**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED] Spud Conductor: 9/3/2009 Spud Date: 9/4/2009
 Project: UTAH-UINTAH Site: NBU 922-29M PAD Rig Name No: LEED 733/733
 Event: COMPLETION Start Date: 12/11/2009 End Date: 12/29/2009
 Active Datum: RKB @5,029.00ft (above Mean Sea Level) UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	9:30 - 20:30	11.00	COMP	44	C	P		SICP 0. X-OUT RIG PMP. EST CIRC. D/O PLUGS. #2- NO SAND ON CBP AT 7362'. D/O N 10-MIN. 25# INC. RIH #3- C/O 42' SAND TO CBP AT 7593'. D/O IN 15 MIN. 50# INC. RIH. #4- C/O 32' SAND TO CBP AT 7936'. D/O IN 18 MIN. 100# INC. RIH. #5- C/O 32' SAND TO CBP AT 8250'. D/O IN 10 MIN. 50# INC. RIH. #6- C/O 20' SAND TO CBP AT 8530'. D/O IN 12 MIN. 150# INC. PUSH UPHOLE. THEN RIH. #7- C/O 30' SAND TO CBP AT 8640'. D/O IN 15 MIN. 100# INC. RIH. #8- C/O 30' SAND TO CBP AT 8876'. D/O IN 25 MIN. 75# INC. RIH. #9- C/O 34' SAND TO CBP AT 9036'. D/O IN 8 MIN. 25# INC. RIH. PBSD. C/O 56' SAND TO PBSD AT 9349' (56' RATHOLE) W/ 294-JTS IN. CIRC CLEAN. RD PWR SWIVEL. POOH AS LD 14-JTS TBG. PU 7" 5K HANGER. LUB IN AND FLUSH BOWL. LAND 280-JTS 2-3/8" L-80 TBG W/ EOT AT 8912.43'. RD FLOOR. ND BOP. NU WH. PMP OFF BIT SUB AT 1400. HOOK UP FLOW LINES. TURN WELL OVER TO FLOW BACK CREW. DRAIN UP AND WINTERIZE. SDFN. TBG DETAIL KB 13.00 7" 5K CAMERON HNGR 1.00 280-JTS 2-3/8" L-80 8896.23 1.87" XN (FE) 2.20 EOT 8912.43 PMP 9475 BBL 313 JTS OUT RCVR 2275 BBL 33 JTS IN LTR 7200 BBL
12/23/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2350#, TP 1750#, 20/64" CK, 60 BWPH, 1/2 CUP SAND, - GAS TTL BBLs RECOVERED: 2995 BBLs LEFT TO RECOVER: 6480
12/24/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2900#, TP 1750#, 20/64" CK, 45 BWPH, 1/4 CUP SAND, - GAS TTL BBLs RECOVERED: 4175 BBLs LEFT TO RECOVER: 5300
12/25/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2750#, TP 1750#, 20/64" CK, 35 BWPH, TBLSP SAND, - GAS TTL BBLs RECOVERED: 5015 BBLs LEFT TO RECOVER: 4460
12/26/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2550#, TP 1650#, 20/64" CK, 25 BWPH, TEASP SAND, - GAS TTL BBLs RECOVERED: 5660 BBLs LEFT TO RECOVER: 3815
	14:15 -		PROD	50				WELL TURNED TO SALE @ 1415 HR ON 12/26/09 - FTP 1500#, CP 2550#, 1.8 MCFD, 25 BWPD, 20/64" CK
12/27/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2500#, TP 1400#, 20/64" CK, 20 BWPH, 1/2 TSP SAND, - GAS TTL BBLs RECOVERED: 6140 BBLs LEFT TO RECOVER: 3335

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**US ROCKIES REGION
Operation Summary Report**

Well: NBU 922-29M4DS [RED]	Spud Conductor: 9/3/2009	Spud Date: 9/4/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/29/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/28/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1499#, 20/64" CK, 17 BWPH, TRACE SAND, 1906 GAS TTL BBLS RECOVERED: 6578 BBLS LEFT TO RECOVER: 2897
	7:00 -			33	A			7 AM FLBK REPORT: CP 2350#, TP 1350#, 20/64" CK, 17 BWPH, TRACE SAND, 1956 GAS TTL BBLS RECOVERED: 6663 BBLS LEFT TO RECOVER: 2812

RECEIVED December 30, 2009

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

AMENDED REPORT FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
ML 22935

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME

8. WELL NAME and NUMBER:
NBU 922-29M4DS

9. API NUMBER:
4304750357

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
SWSW 29 9S 22E

12. COUNTY
UINTAH

13. STATE
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

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

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

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6100

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: **SWSW 553 FSL & 525 FWL**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **SWSW 060 FSL & 1147 FWL SEC.29-9S-22E**
AT TOTAL DEPTH: **SWSW 023 FSL & 1149 FWL SEC.29-9S-22E**

14. DATE SPUDDED: 9/3/2009 15. DATE T.D. REACHED: 10/9/2009 16. DATE COMPLETED: 12/26/2009 ABANDONED READY TO PRODUCE 17. ELEVATIONS (DF, RKB, RT, GL): 5015

18. TOTAL DEPTH: MD 9,535 TVD 9,413 19. PLUG BACK T.D.: MD 9,473 TVD 9,351 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
*GR/CBL Triple Combo Quisply
Hole Volume Log*

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
12 1/4"	9 5/8 J-55	36#		2,386		700			
7 7/8"	4 1/2 I-80	11.6#		9,517		1815			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,912							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) MESAVERDE	7,330	9,293			7,330 9,293	0.36	312	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7,330-9,293	PMP 9,475 BBLs SLICK H2O & 357,376 LBS 30/50 SD.

29. ENCLOSED ATTACHMENTS:

- ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: **RECEIVED**

30. WELL STATUS:

PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 12/26/2009		TEST DATE: 1/6/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,992	WATER – BBL: 280	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,250	CSG. PRESS. 1,800	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,992	WATER – BBL: 280	INTERVAL STATUS: PROD

INTERVAL B (As shown in item #26)

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

INTERVAL C (As shown in item #26)

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

INTERVAL D (As shown in item #26)

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

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

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,370				
MAHOGANY	1,704				
WASATCH	4,714	7,301			
MESAVERDE	7,301	9,525			

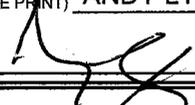
35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE END OF WELL REPORT.

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

NAME (PLEASE PRINT) ANDY LYTLE

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 1/25/2010

This report must be submitted within 30 days of

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

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

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

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

Phone: 801-538-5340

Fax: 801-359-3940



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Standard Survey Report

12 October, 2009



Weatherford®

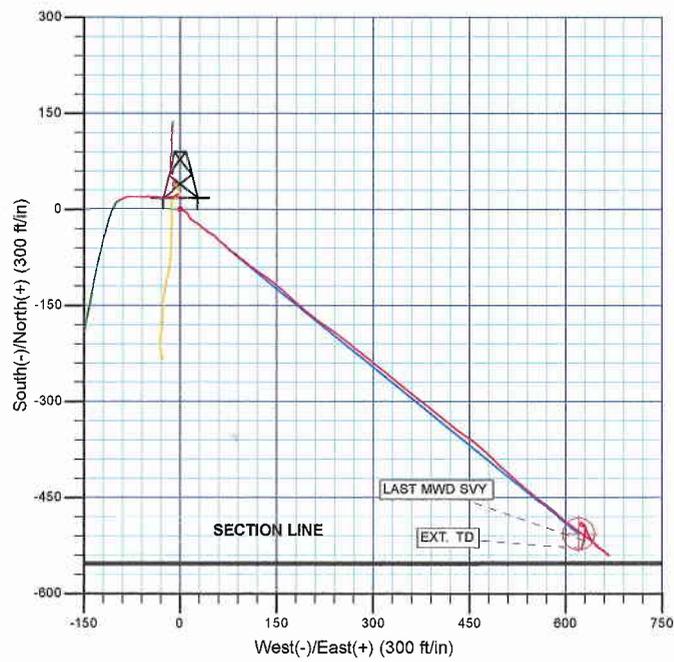
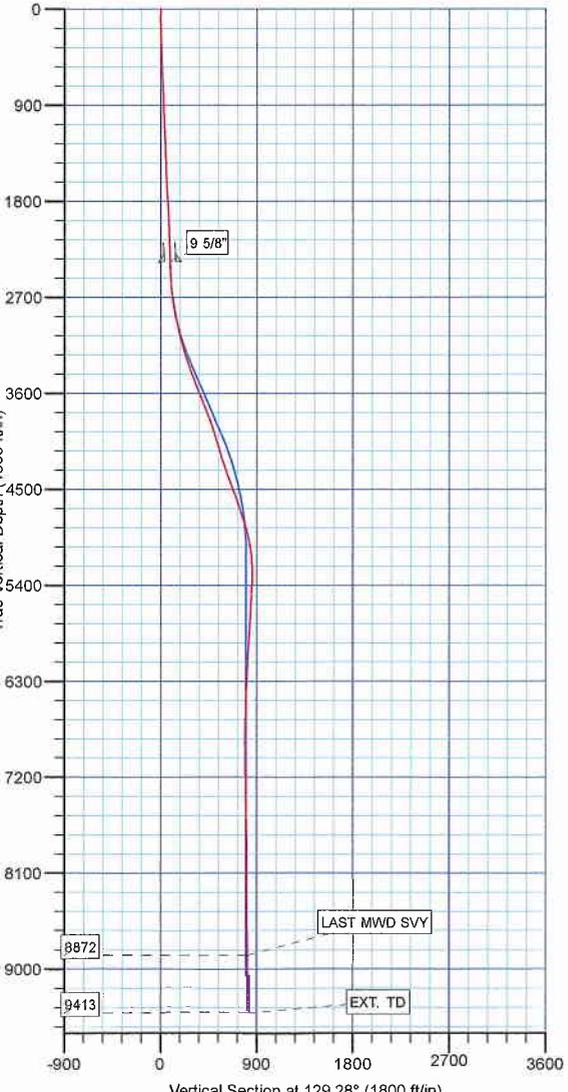
WELL DETAILS: NBU 922-29M4DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	5012.00	Latitude	Longitude
0.00	0.00	14530203.55	2068701.78	40° 0' 4.792 N	109° 28' 14.632 W	Slot

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9394.00	-506.98	619.9039° 59'	59.780 N	109° 28' 6.665 W	Circle (Radius: 25.00)

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
2410.00	1.82	136.85	2408.12	-55.99	69.34	0.00	0.00	89.12		
2476.00	1.82	136.85	2474.09	-57.52	70.77	0.00	0.00	91.19		
3334.44	23.26	129.15	3307.19	-175.84	213.18	2.50	-8.31	276.34		
4073.00	23.26	129.15	3985.72	-359.98	439.35	0.00	0.00	567.99		
5235.95	0.00	0.00	5117.00	-506.98	619.90	2.00	180.00	800.81		
9512.95	0.00	0.00	9394.00	-506.98	619.90	0.00	0.00	800.81		PBHL_NBU 922-29M4DS



KB ELEV: KB @ 5026.00ft (KB ELEVATION)
GRD ELEV: 5012.00



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4617.00	4733.38	Wasatch
8115.00	8233.95	Mesaverde



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Survey Report - Geographic

12 October, 2009



Weatherford®

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date 10/12/2009				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,203.55	2,068,701.78	40° 0' 4.792 N	109° 28' 14.632 W
110.00	0.09	18.21	110.00	0.08	0.03	14,530,203.64	2,068,701.80	40° 0' 4.792 N	109° 28' 14.631 W
200.00	1.15	111.74	199.99	-0.19	0.89	14,530,203.38	2,068,702.67	40° 0' 4.790 N	109° 28' 14.620 W
290.00	1.86	110.54	289.96	-1.03	3.09	14,530,202.57	2,068,704.89	40° 0' 4.781 N	109° 28' 14.592 W
380.00	2.19	127.95	379.91	-2.60	5.82	14,530,201.05	2,068,707.64	40° 0' 4.766 N	109° 28' 14.557 W
470.00	2.69	123.69	469.82	-4.83	8.93	14,530,198.88	2,068,710.79	40° 0' 4.744 N	109° 28' 14.517 W
560.00	2.31	143.95	559.74	-7.47	11.76	14,530,196.29	2,068,713.66	40° 0' 4.718 N	109° 28' 14.481 W
650.00	2.56	153.82	649.66	-10.74	13.71	14,530,193.05	2,068,715.67	40° 0' 4.685 N	109° 28' 14.455 W
740.00	2.38	146.82	739.58	-14.11	15.62	14,530,189.72	2,068,717.64	40° 0' 4.652 N	109° 28' 14.431 W
830.00	2.25	124.20	829.50	-16.66	18.10	14,530,187.20	2,068,720.16	40° 0' 4.627 N	109° 28' 14.399 W
920.00	1.00	129.45	919.47	-18.16	20.17	14,530,185.75	2,068,722.26	40° 0' 4.612 N	109° 28' 14.372 W
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	14,530,184.50	2,068,724.63	40° 0' 4.599 N	109° 28' 14.342 W
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	14,530,182.55	2,068,728.25	40° 0' 4.580 N	109° 28' 14.296 W
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	14,530,179.99	2,068,731.96	40° 0' 4.554 N	109° 28' 14.249 W
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	14,530,177.38	2,068,735.22	40° 0' 4.527 N	109° 28' 14.208 W
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	14,530,175.09	2,068,738.16	40° 0' 4.504 N	109° 28' 14.170 W
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	14,530,172.96	2,068,741.11	40° 0' 4.483 N	109° 28' 14.133 W
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	14,530,170.69	2,068,743.74	40° 0' 4.460 N	109° 28' 14.100 W
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	14,530,168.31	2,068,746.90	40° 0' 4.436 N	109° 28' 14.060 W
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	14,530,166.04	2,068,750.92	40° 0' 4.413 N	109° 28' 14.008 W
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	14,530,163.43	2,068,755.00	40° 0' 4.386 N	109° 28' 13.957 W
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	14,530,160.58	2,068,758.37	40° 0' 4.357 N	109° 28' 13.914 W
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	14,530,157.85	2,068,760.98	40° 0' 4.330 N	109° 28' 13.881 W
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	14,530,155.19	2,068,763.38	40° 0' 4.303 N	109° 28' 13.851 W
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	14,530,153.16	2,068,765.81	40° 0' 4.283 N	109° 28' 13.820 W
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	14,530,151.60	2,068,768.38	40° 0' 4.267 N	109° 28' 13.787 W
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	14,530,150.07	2,068,770.60	40° 0' 4.251 N	109° 28' 13.759 W
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	14,530,147.58	2,068,773.07	40° 0' 4.226 N	109° 28' 13.728 W
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	14,530,144.24	2,068,775.87	40° 0' 4.193 N	109° 28' 13.693 W
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	14,530,139.33	2,068,782.45	40° 0' 4.143 N	109° 28' 13.609 W
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	14,530,132.45	2,068,792.32	40° 0' 4.073 N	109° 28' 13.484 W
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	14,530,122.56	2,068,804.28	40° 0' 3.974 N	109° 28' 13.332 W
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	14,530,112.30	2,068,818.21	40° 0' 3.870 N	109° 28' 13.155 W
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	14,530,102.44	2,068,833.35	40° 0' 3.770 N	109° 28' 12.963 W
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	14,530,090.48	2,068,849.69	40° 0' 3.649 N	109° 28' 12.756 W
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	14,530,075.23	2,068,868.17	40° 0' 3.495 N	109° 28' 12.522 W
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	14,530,057.33	2,068,888.87	40° 0' 3.315 N	109° 28' 12.260 W
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	14,530,039.17	2,068,911.12	40° 0' 3.131 N	109° 28' 11.978 W
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	14,530,021.89	2,068,935.54	40° 0' 2.957 N	109° 28' 11.668 W
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	14,530,003.88	2,068,960.97	40° 0' 2.774 N	109° 28' 11.345 W
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	14,529,982.87	2,068,987.99	40° 0' 2.562 N	109° 28' 11.002 W
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	14,529,961.72	2,069,015.20	40° 0' 2.348 N	109° 28' 10.657 W
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	14,529,941.87	2,069,040.62	40° 0' 2.148 N	109° 28' 10.335 W
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	14,529,922.30	2,069,065.45	40° 0' 1.950 N	109° 28' 10.020 W
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	14,529,904.50	2,069,088.46	40° 0' 1.771 N	109° 28' 9.729 W
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	14,529,887.83	2,069,109.98	40° 0' 1.602 N	109° 28' 9.456 W
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	14,529,871.36	2,069,130.95	40° 0' 1.436 N	109° 28' 9.190 W
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	14,529,856.23	2,069,152.26	40° 0' 1.283 N	109° 28' 8.920 W
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	14,529,839.98	2,069,174.56	40° 0' 1.118 N	109° 28' 8.637 W
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	14,529,819.88	2,069,196.93	40° 0' 0.916 N	109° 28' 8.354 W
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	14,529,798.49	2,069,220.49	40° 0' 0.700 N	109° 28' 8.056 W
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	14,529,777.94	2,069,244.85	40° 0' 0.493 N	109° 28' 7.747 W
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	14,529,767.83	2,069,257.06	40° 0' 0.391 N	109° 28' 7.592 W
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	14,529,758.54	2,069,268.66	40° 0' 0.297 N	109° 28' 7.445 W
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	14,529,741.39	2,069,290.59	40° 0' 0.124 N	109° 28' 7.167 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	14,529,724.21	2,069,313.03	39° 59' 59.951 N	109° 28' 6.883 W
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	14,529,708.58	2,069,334.09	39° 59' 59.792 N	109° 28' 6.616 W
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	14,529,695.43	2,069,351.74	39° 59' 59.659 N	109° 28' 6.392 W
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	14,529,684.93	2,069,364.68	39° 59' 59.554 N	109° 28' 6.228 W
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	14,529,678.57	2,069,372.71	39° 59' 59.489 N	109° 28' 6.126 W
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	14,529,675.47	2,069,376.75	39° 59' 59.458 N	109° 28' 6.075 W
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	14,529,674.51	2,069,376.98	39° 59' 59.448 N	109° 28' 6.072 W
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	14,529,676.65	2,069,374.10	39° 59' 59.470 N	109° 28' 6.108 W
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	14,529,680.02	2,069,370.91	39° 59' 59.504 N	109° 28' 6.149 W
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	14,529,683.01	2,069,367.16	39° 59' 59.534 N	109° 28' 6.196 W
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	14,529,685.28	2,069,362.38	39° 59' 59.557 N	109° 28' 6.257 W
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	14,529,688.69	2,069,358.31	39° 59' 59.592 N	109° 28' 6.309 W
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	14,529,692.97	2,069,355.18	39° 59' 59.635 N	109° 28' 6.348 W
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	14,529,697.71	2,069,351.57	39° 59' 59.682 N	109° 28' 6.393 W
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	14,529,702.55	2,069,347.75	39° 59' 59.731 N	109° 28' 6.441 W
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	14,529,707.12	2,069,345.07	39° 59' 59.776 N	109° 28' 6.475 W
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	14,529,711.47	2,069,343.14	39° 59' 59.820 N	109° 28' 6.499 W
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	14,529,715.61	2,069,341.50	39° 59' 59.861 N	109° 28' 6.519 W
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	14,529,719.68	2,069,339.95	39° 59' 59.901 N	109° 28' 6.538 W
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	14,529,722.56	2,069,337.77	39° 59' 59.930 N	109° 28' 6.565 W
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	14,529,724.36	2,069,335.52	39° 59' 59.948 N	109° 28' 6.594 W
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	14,529,725.16	2,069,334.07	39° 59' 59.956 N	109° 28' 6.612 W
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	14,529,725.10	2,069,333.24	39° 59' 59.956 N	109° 28' 6.623 W
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	14,529,724.62	2,069,332.71	39° 59' 59.951 N	109° 28' 6.630 W
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	14,529,723.76	2,069,332.14	39° 59' 59.943 N	109° 28' 6.637 W
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	14,529,722.67	2,069,331.76	39° 59' 59.932 N	109° 28' 6.642 W
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	14,529,721.33	2,069,331.69	39° 59' 59.919 N	109° 28' 6.644 W
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	14,529,720.74	2,069,332.28	39° 59' 59.913 N	109° 28' 6.636 W
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	14,529,720.72	2,069,333.88	39° 59' 59.912 N	109° 28' 6.616 W
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	14,529,719.99	2,069,335.75	39° 59' 59.905 N	109° 28' 6.592 W
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	14,529,719.65	2,069,336.45	39° 59' 59.901 N	109° 28' 6.583 W
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	14,529,719.40	2,069,337.23	39° 59' 59.899 N	109° 28' 6.573 W
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	14,529,718.49	2,069,338.88	39° 59' 59.890 N	109° 28' 6.552 W
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	14,529,717.73	2,069,340.82	39° 59' 59.882 N	109° 28' 6.527 W
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	14,529,717.26	2,069,341.60	39° 59' 59.877 N	109° 28' 6.517 W
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	14,529,716.26	2,069,341.51	39° 59' 59.867 N	109° 28' 6.519 W
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	14,529,715.24	2,069,341.18	39° 59' 59.857 N	109° 28' 6.523 W
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	14,529,714.42	2,069,340.44	39° 59' 59.849 N	109° 28' 6.533 W
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	14,529,713.35	2,069,340.06	39° 59' 59.839 N	109° 28' 6.538 W
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	14,529,712.03	2,069,339.96	39° 59' 59.826 N	109° 28' 6.539 W
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	14,529,710.80	2,069,339.80	39° 59' 59.813 N	109° 28' 6.542 W
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	14,529,709.39	2,069,339.75	39° 59' 59.800 N	109° 28' 6.543 W
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	14,529,708.21	2,069,339.83	39° 59' 59.788 N	109° 28' 6.542 W
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	14,529,706.67	2,069,339.84	39° 59' 59.773 N	109° 28' 6.542 W
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	14,529,703.96	2,069,339.46	39° 59' 59.746 N	109° 28' 6.548 W
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	14,529,700.90	2,069,338.83	39° 59' 59.716 N	109° 28' 6.556 W
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	14,529,697.79	2,069,338.46	39° 59' 59.685 N	109° 28' 6.562 W
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	14,529,697.43	2,069,338.43	39° 59' 59.682 N	109° 28' 6.562 W
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	14,529,694.79	2,069,337.88	39° 59' 59.656 N	109° 28' 6.570 W
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	14,529,690.24	2,069,336.55	39° 59' 59.611 N	109° 28' 6.588 W
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	14,529,684.62	2,069,335.15	39° 59' 59.556 N	109° 28' 6.607 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
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Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date	10/12/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00	0.09	18.21	110.00	0.08	0.03	-0.03	0.08	0.08	0.00
200.00	1.15	111.74	199.99	-0.19	0.89	0.80	1.29	1.18	103.92
290.00	1.86	110.54	289.96	-1.03	3.09	3.05	0.79	0.79	-1.33
380.00	2.19	127.95	379.91	-2.60	5.82	6.15	0.77	0.37	19.34
470.00	2.69	123.69	469.82	-4.83	8.93	9.97	0.59	0.56	-4.73
560.00	2.31	143.95	559.74	-7.47	11.76	13.83	1.06	-0.42	22.51
650.00	2.56	153.82	649.66	-10.74	13.71	17.41	0.54	0.28	10.97
740.00	2.38	146.82	739.58	-14.11	15.62	21.02	0.39	-0.20	-7.78
830.00	2.25	124.20	829.50	-16.66	18.10	24.56	1.02	-0.14	-25.13
920.00	1.00	129.45	919.47	-18.16	20.17	27.11	1.40	-1.39	5.83
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	29.75	1.66	1.60	-16.81
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	33.79	0.63	0.41	10.42

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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)
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	38.29	0.24	0.14	3.89
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	42.47	0.68	-0.62	6.11
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	46.20	0.35	0.00	-8.33
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	49.83	0.21	-0.14	3.61
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	53.30	0.30	-0.07	7.63
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	57.26	0.99	0.77	-14.30
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	61.81	0.27	0.13	-4.59
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	66.63	0.65	0.21	11.39
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	71.04	0.90	-0.83	6.81
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	74.79	0.25	-0.07	5.69
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	78.32	0.22	-0.21	-1.94
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	81.49	0.71	-0.34	-17.50
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	84.46	0.07	0.07	-0.28
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	87.16	0.30	0.00	8.91
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	90.64	0.47	-0.18	13.41
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	94.91	2.41	2.40	-4.65
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	103.12	3.39	2.85	-21.05
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	115.13	2.83	2.47	10.44
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	130.64	2.35	2.34	1.23
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	147.93	1.64	0.51	-8.08
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	165.92	0.27	0.24	0.57
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	186.17	3.16	2.89	5.77
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	210.12	2.83	2.78	1.94
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	237.45	1.81	1.78	1.10
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	266.17	1.62	0.70	-4.58
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	296.05	1.49	0.58	-4.18
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	327.17	2.26	1.77	4.08
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	361.39	2.36	2.27	1.65
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	395.85	2.02	-1.92	-1.65
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	428.10	1.12	-0.83	2.09
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	459.72	0.86	-0.66	-1.60
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	488.81	2.61	-2.60	0.51
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	516.03	0.63	-0.62	-0.42
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	542.69	0.42	-0.21	1.24
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	568.79	2.14	-0.07	-7.37
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	596.37	3.10	1.78	8.38
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	626.38	2.79	2.30	4.76
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	658.12	1.37	-0.21	-3.88
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	689.98	0.37	0.27	-0.69
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	705.83	0.29	0.00	-0.82
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	720.69	6.10	-5.98	-3.62
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	748.53	0.30	-0.27	0.42
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	776.79	1.03	0.89	-1.65
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	803.00	3.47	-3.47	-0.28
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	825.01	3.02	-3.02	0.55
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	841.67	4.45	-4.33	5.66
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	851.91	5.09	-4.92	-12.33
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	857.00	2.48	-2.20	21.43
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	857.78	3.79	-1.11	170.70
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	854.19	2.36	2.26	19.23
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	849.60	1.00	-0.76	12.78
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	844.80	1.78	1.02	-27.62
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	839.64	0.52	-0.41	-5.56
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	834.34	2.16	0.62	34.75

Company: ANADARKO PETROLEUM CORP.
 Project: Uintah County, Utah (nad 27)
 Site: NBU 922-29M PAD
 Well: NBU 922-29M4DS
 Wellbore: NBU 922-29M4DS
 Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
 TVD Reference: KB @ 5026.00ft (KB ELEVATION)
 MD Reference: KB @ 5026.00ft (KB ELEVATION)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 2003.21 Single User Db

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)
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	829.22	0.90	-0.89	-1.64
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	823.46	1.78	1.78	-0.42
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	817.45	1.40	-1.39	-2.22
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	812.52	1.15	0.14	19.51
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	808.31	0.95	-0.90	-5.69
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	804.46	0.66	0.41	10.57
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	800.73	0.66	-0.50	-8.80
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	797.23	1.25	-0.46	-28.93
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	794.34	0.69	-0.69	0.27
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	792.71	1.11	-0.90	-36.67
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	792.10	0.44	-0.34	-31.32
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	791.98	0.35	0.20	-35.71
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	792.06	0.21	0.21	-1.94
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	792.44	0.40	0.00	-30.90
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	793.22	0.22	0.21	-3.57
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	794.05	1.55	-0.14	-117.37
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	795.32	0.67	0.48	26.92
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	797.23	0.52	0.07	23.11
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	797.99	1.14	-0.92	-34.45
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	798.76	0.00	0.00	0.00
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	800.61	0.76	0.64	19.83
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	802.61	0.87	-0.35	-34.67
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	803.52	1.61	-0.69	118.55
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	804.06	0.41	0.21	-31.53
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	804.44	0.69	0.00	54.67
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	804.36	0.13	-0.13	-1.51
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	804.73	0.59	0.27	-41.08
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	805.47	0.08	-0.08	0.14
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	806.11	0.12	-0.07	7.55
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	806.94	0.44	0.34	-17.22
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	807.73	0.68	-0.68	3.44
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	808.70	1.16	1.16	1.26
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	810.07	0.73	0.56	15.80
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	811.48	0.21	-0.07	-5.77
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	813.12	0.20	0.13	-4.30
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	813.31	0.55	-0.32	12.52
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	814.52	0.55	-0.27	14.34
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	816.30	0.35	-0.34	-2.14
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	818.68	0.00	0.00	0.00

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047503570000
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: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 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: 6/28/2011 <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 checked="" type="checkbox"/> OTHER	
	<input checked="" 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 type="text" value="Wellhead Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>The operator requests approval to conduct wellhead/casing repair operations on the subject well location. Please find the attached procedure for the proposed repair work on the subject well location.</p> <p style="text-align: right;">Approved by the Utah Division of Oil, Gas and Mining</p> <p style="text-align: right;">Date: <u>07/11/2011</u></p> <p style="text-align: right;">By: <u><i>Derek Duff</i></u></p>		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A		DATE 6/28/2011

WORKORDER #:

Name: NBU 922-29M4DS - [922-29M PAD]
Surface Location: SWSW Sec. 29, T9S, R22E
 Uintah County, UT

6/16/2011

API: 4304750357 **LEASE#:** ML-22935

ELEVATIONS: 5015' GL 5029' KB

TOTAL DEPTH: 9535' **PBTD:** 9473'

SURFACE CASING: 9 5/8", 36# J-55 @ 2386'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 9517'
 TOC @ 374' per CBL

PERFORATIONS: Mesaverde 7330' - 9293'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.0155
9.625" 36# J-55	8.921	2020	3520	3.247	0.434	0.0773
Annular Capacities						
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565	0.01

GEOLOGICAL TOPS:

1370' Green River
 1704' Mahogany
 4714' Wasatch
 7301' Mesaverde

NBU 922-29M4DS- WELLHEAD REPAIR PROCEDURE

PREP-WORK PRIOR TO MIRU:

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
3. Open casing valve and record pressures.
4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
5. Open the relief valve and blow well down to the atmosphere.
6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. POOH w/ tubing laying down extra tubing.
5. Rig up wireline service. RIH and set CBP @ ~7280'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

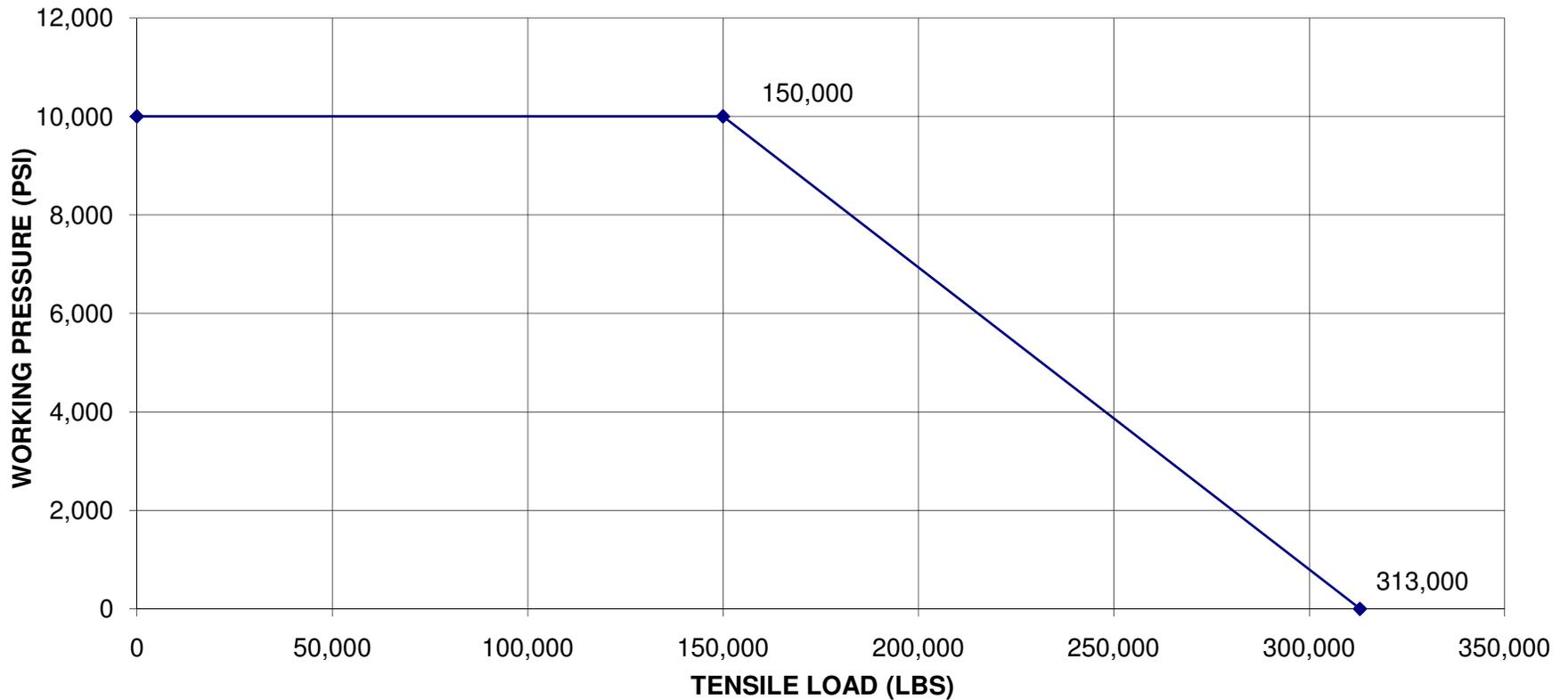
1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. POOH, LD cutters and casing.
3. PU 7 3/8" overshot with 4 1/2" right hand standard wicker grapple, 1 - 4 3/4" drill collar with 3 1/2" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.
4. TIH w/ skirted mill and dress off the fish top for approximately 1/2 hour. TOO H.
5. PU & RIH w/ 4 1/2" 10k external casing patch on 4 1/2" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 3500 psi.
7. Install slips. Land casing w/ 80,000# tension.
8. Cut-off and dress 4 1/2" casing stub.
9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7230'. Clean out to PBSD (9473').
10. POOH, land tbg and pump off POBS.
11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
2. POOH, LD cutters and casing.
3. PU 4 1/2" overshot. RIH, latch fish. Pick string weight to neutral.
4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
5. Back-off casing, POOH.

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ± 7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ± 7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 3500 psi.
8. Install slips. Land casing w/ 80,000# tension.
9. Cut-off and dress 4 1/2" casing stub.
10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7230'. Clean out to PBSD (9473').
11. POOH, land tbg and pump off POBS.
12. NUWH, RDMO. Turn well over to production ops.

**STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH
4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L
LOGAN ASSEMBLY NO. 510L-005 -000**



COLLAPSE PRESSURE:
11,222 PSI @ 0 TENSILE
8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield:
Tensile Strength w/ 0 Int. Press.= 472,791lbs.
Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

RECEIVED Jun. 28, 2011

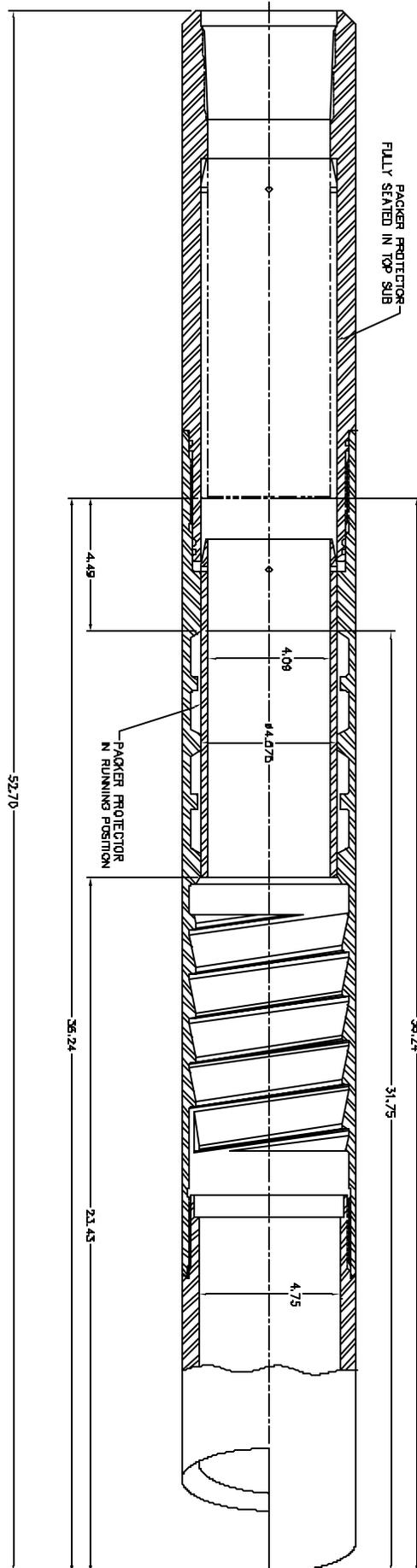


Logan High Pressure Casing Patches Assembly Procedure

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
6. Install the Cutlipped Guide into the lower end of the Bowl.
7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



510L-005-001 4-1/2" LOGAN HP CASING PATCH

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
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 922-29M4DS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047503570000	
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: 0553 FSL 0525 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/1/2011 <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 checked="" type="checkbox"/> OTHER	
	<input checked="" 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 type="text" value="Wellhead Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
THE OPERATOR HAS CONCLUDED WELLHEAD/CASING REPAIRS ON THE SUBJECT WELL LOCATION. PLEASE SEE THE ATTACHED CHRONOLOGICAL HISTORY FOR DETAILS OF THE OPERATIONS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/1/2011	

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-29M4DS		Spud Conductor: 9/3/2009		Spud Date: 9/4/2009				
Project: UTAH-UINTAH		Site: NBU 922-29M PAD		Rig Name No: SWABBCO 6/6				
Event: WELL WORK EXPENSE		Start Date: 8/9/2011		End Date: 8/11/2011				
Active Datum: RKB @5,029.00ft (above Mean Sea Level)		UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/553.00/W/0/525.00/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/9/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= WELL CONTROL
	7:15 - 17:00	9.75	WO/REP	30		P		FWP= 200 PSI PMP 20 BBLS TMAC DWN TBG TO CONTROL WELL ND WELLHEAD NU BOPS PMP 20 BBLS TMAC DWN CSG TO CONTROL WELL UNLAND TUBING LD HNGR POOH W/ 286 JNTS LD 73 JNTS DUE TO INT SCALE LD BHA RU W/L RIH W/ GAUGE RING TO 7300' PU CIBP RIH SET @ 7270' DUMP BAIL 2 SKS CEM FILL HOLE W/ TMAC PRESS TEST TO 500# RD FLOOR & TUBING EQUIP SIW SDFN
8/10/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= W/L SAFETY
	7:15 - 17:00	9.75	WO/REP	30		P		SIWP= 0 PSI ND BOPS & W/H PU INT CUTTER RIH CUT BELOW 4' PUP , PU OVERSHOT RIH OVER CSK RU TONGS & W/L APPLY LH TORQUE RIH W/ OVERSHOT TO 1ST COLLAR B/O CSG POOH PU 10' PUP & JNT THREAD ONTO CSK TORQUE ALL TO 7000# NU & TEST TO 3500 PSI SET SLIPS @ 90000# NU WELLHEAD & BOPS RU FLOOR & TUBING EQUIP PU BIT RIH TAG CEM @ 7235' PU PWR SWVL SIW SDFN
8/11/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 17:00	9.75	WO/REP	30		P		SIWP= 0 PSI EST CIRC W/ FOAM AIR UNIT DRILL THRU CEM & CIBP @ 7270' W/ 100# INCREASE CIRC CLEAN CONTINUE TO RIH TAG @ 9140' EST CIRC C/O & DRILL TO PBTD @ 9349' TAG SOLID CIRC CLEAN POOH LD 8 JNTS LAND TUBING ON HNGR W/ 286 JNTS EOT @ 9092.70' RIH W/ BROACH TO XN NPL RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD PMP OFF BIT SUB

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 922-29M4DS

Api No: 43-047-50357 Lease Type: STATE

Section 29 Township 09S Range 22E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

SPUDDED:

Date 09/03/2009

Time 1:00 PM

How DRY

Drilling will Commence: _____

Reported by KENNY MORRIS

Telephone # (435) 828-1691

Date 09/03/2009 Signed CHD

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750357	NBU 922-29M4DS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 13:00 HRS. <u>BHL = SWSW</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750342	NBU 922-29M3CS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 11:15 HRS. <u>BHL = SWSW</u>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750343	NBU 922-29M2DS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 9:15 HRS. <u>BHL = SWSW</u>							

ACTION CODES:

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

RECEIVED

SEP 03 2009

ANDY LYTLE

Name (Please Print)

[Signature]
Signature

REGULATORY ANALYST

Title

9/3/2009

Date

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE LP		8. WELL NAME and NUMBER: NBU 922-29M4DS
3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217		9. API NUMBER: 4304750357
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: SWSW 553 FSL & 525 FWL AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSW 060 FSL & 1147 FWL SEC.29-9S-22E AT TOTAL DEPTH: SWSW 023 FSL & 1149 FWL SEC.29-9S-22E		10 FIELD AND POOL, OR WILDCAT NATURAL BUTTES
		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 9S 22E
		12. COUNTY UINTAH
		13. STATE UTAH

14. DATE SPURRED: 9/3/2009	15. DATE T.D. REACHED: 10/9/2009	16. DATE COMPLETED: 12/26/2009	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5015
18. TOTAL DEPTH: MD 9,535 TVD 9,413	19. PLUG BACK T.D.: MD 9,473 TVD 9,351	20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) <i>GR/CBL Triple Combo Assembly Hole Volume Log</i>	23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)
--	---

24. CASING AND LINER RECORD (Report all strings set in well)									
HOLE SIZE	SIZE/GRADE	WEIGHT (#ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
12 1/4"	9 5/8 J-55	36#		2,386		700			
7 7/8"	4 1/2 I-80	11.6#		9,517		1815			

25. TUBING RECORD								
SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,912							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) MESAVERDE	7,330	9,293			7,330 9,293	0.36	312	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7,330-9,293	PMP 9,475 BBLs SLICK H2O & 357,376 LBS 30/50 SD.

29. ENCLOSED ATTACHMENTS: <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION	<input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS	<input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: RECEIVED	<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PROD
---	--	--	---

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 12/26/2009		TEST DATE: 1/6/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 1,992	WATER - BBL: 280	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,250	CSG. PRESS. 1,800	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 1,992	WATER - BBL: 280	INTERVAL STATUS: PROD

INTERVAL B (As shown in Item #26)

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

INTERVAL C (As shown in Item #26)

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

INTERVAL D (As shown in Item #26)

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

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

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,370				
MAHOGANY	1,704				
WASATCH	4,714	7,301			
MESAVERDE	7,301	9,525			

34. FORMATION (Log) MARKERS:

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE END OF WELL REPORT.

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

NAME (PLEASE PRINT) ANDY LYTLE TITLE REGULATORY ANALYST
 SIGNATURE  DATE 1/25/2010

This report must be submitted within 30 days of

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

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

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

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

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



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Standard Survey Report

12 October, 2009



Weatherford®

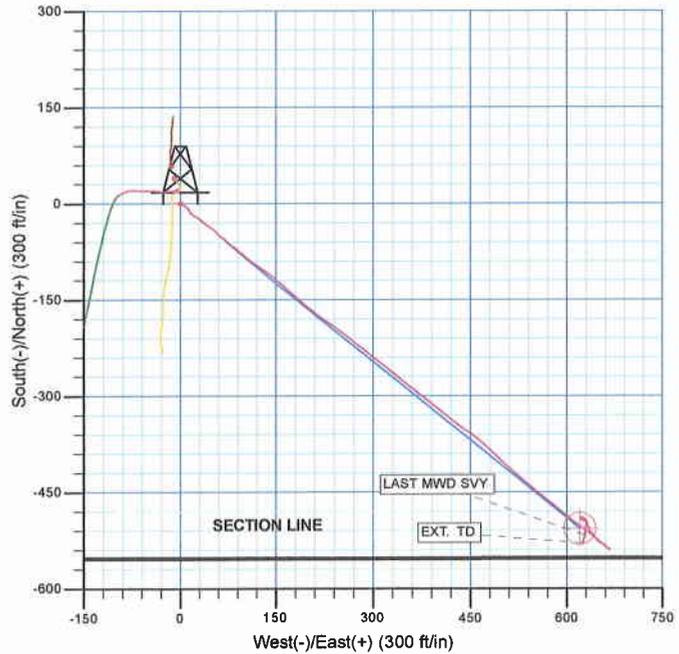
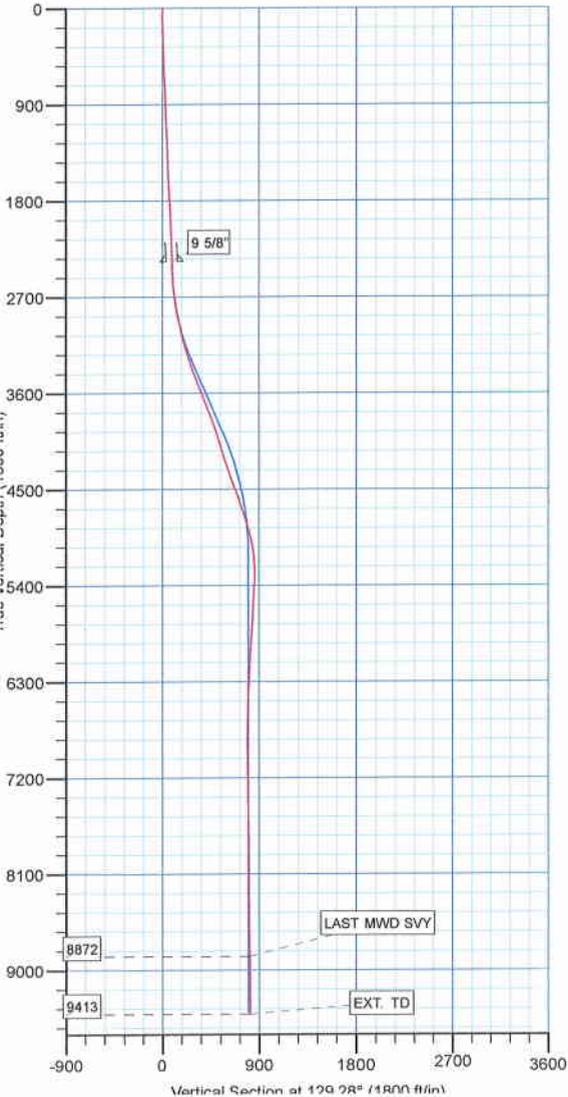
WELL DETAILS: NBU 922-29M4DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	5012.00 Latitude	Longitude	Slot
0.00	0.00	14530203.55	2068701.78	40° 0' 4.792 N	109° 28' 14.632 W	

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9394.00	-506.98	619.9039° 59'	59.780 N	109° 28' 6.665 W	Circle (Radius: 25.00)

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
	2410.00	1.82	136.85	2408.12	-55.99	69.34	0.00	0.00	89.12	
	2476.00	1.82	136.85	2474.09	-57.52	70.77	0.00	0.00	91.19	
	3334.44	23.26	129.15	3307.19	-175.84	213.18	2.50	-8.31	276.34	
	4073.00	23.26	129.15	3985.72	-359.98	439.35	0.00	0.00	567.99	
	5235.95	0.00	0.00	5117.00	-506.98	619.90	2.00	180.00	800.81	
	9512.95	0.00	0.00	9394.00	-506.98	619.90	0.00	0.00	800.81	PBHL_NBU 922-29M4DS



KB ELEV: KB @ 5026.00ft (KB ELEVATION)
 GRD ELEV: 5012.00



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4617.00	4733.38	Wasatch
8115.00	8233.95	Mesaverde



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Survey Report - Geographic

12 October, 2009



Weatherford®

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date	10/12/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,203.55	2,068,701.78	40° 0' 4.792 N	109° 28' 14.632 W
110.00	0.09	18.21	110.00	0.08	0.03	14,530,203.64	2,068,701.80	40° 0' 4.792 N	109° 28' 14.631 W
200.00	1.15	111.74	199.99	-0.19	0.89	14,530,203.38	2,068,702.67	40° 0' 4.790 N	109° 28' 14.620 W
290.00	1.86	110.54	289.96	-1.03	3.09	14,530,202.57	2,068,704.89	40° 0' 4.781 N	109° 28' 14.592 W
380.00	2.19	127.95	379.91	-2.60	5.82	14,530,201.05	2,068,707.64	40° 0' 4.766 N	109° 28' 14.557 W
470.00	2.69	123.69	469.82	-4.83	8.93	14,530,198.88	2,068,710.79	40° 0' 4.744 N	109° 28' 14.517 W
560.00	2.31	143.95	559.74	-7.47	11.76	14,530,196.29	2,068,713.66	40° 0' 4.718 N	109° 28' 14.481 W
650.00	2.56	153.82	649.66	-10.74	13.71	14,530,193.05	2,068,715.67	40° 0' 4.685 N	109° 28' 14.455 W
740.00	2.38	146.82	739.58	-14.11	15.62	14,530,189.72	2,068,717.64	40° 0' 4.652 N	109° 28' 14.431 W
830.00	2.25	124.20	829.50	-16.66	18.10	14,530,187.20	2,068,720.16	40° 0' 4.627 N	109° 28' 14.399 W
920.00	1.00	129.45	919.47	-18.16	20.17	14,530,185.75	2,068,722.26	40° 0' 4.612 N	109° 28' 14.372 W
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	14,530,184.50	2,068,724.63	40° 0' 4.599 N	109° 28' 14.342 W
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	14,530,182.55	2,068,728.25	40° 0' 4.580 N	109° 28' 14.296 W
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	14,530,179.99	2,068,731.96	40° 0' 4.554 N	109° 28' 14.249 W
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	14,530,177.38	2,068,735.22	40° 0' 4.527 N	109° 28' 14.208 W
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	14,530,175.09	2,068,738.16	40° 0' 4.504 N	109° 28' 14.170 W
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	14,530,172.96	2,068,741.11	40° 0' 4.483 N	109° 28' 14.133 W
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	14,530,170.69	2,068,743.74	40° 0' 4.460 N	109° 28' 14.100 W
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	14,530,168.31	2,068,746.90	40° 0' 4.436 N	109° 28' 14.060 W
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	14,530,166.04	2,068,750.92	40° 0' 4.413 N	109° 28' 14.008 W
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	14,530,163.43	2,068,755.00	40° 0' 4.386 N	109° 28' 13.957 W
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	14,530,160.58	2,068,758.37	40° 0' 4.357 N	109° 28' 13.914 W
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	14,530,157.85	2,068,760.98	40° 0' 4.330 N	109° 28' 13.881 W
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	14,530,155.19	2,068,763.38	40° 0' 4.303 N	109° 28' 13.851 W
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	14,530,153.16	2,068,765.81	40° 0' 4.283 N	109° 28' 13.820 W
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	14,530,151.60	2,068,768.38	40° 0' 4.267 N	109° 28' 13.787 W
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	14,530,150.07	2,068,770.60	40° 0' 4.251 N	109° 28' 13.759 W
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	14,530,147.58	2,068,773.07	40° 0' 4.226 N	109° 28' 13.728 W
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	14,530,144.24	2,068,775.87	40° 0' 4.193 N	109° 28' 13.693 W
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	14,530,139.33	2,068,782.45	40° 0' 4.143 N	109° 28' 13.609 W
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	14,530,132.45	2,068,792.32	40° 0' 4.073 N	109° 28' 13.484 W
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	14,530,122.56	2,068,804.28	40° 0' 3.974 N	109° 28' 13.332 W
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	14,530,112.30	2,068,818.21	40° 0' 3.870 N	109° 28' 13.155 W
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	14,530,102.44	2,068,833.35	40° 0' 3.770 N	109° 28' 12.963 W
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	14,530,090.48	2,068,849.69	40° 0' 3.649 N	109° 28' 12.756 W
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	14,530,075.23	2,068,868.17	40° 0' 3.495 N	109° 28' 12.522 W
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	14,530,057.33	2,068,888.87	40° 0' 3.315 N	109° 28' 12.260 W
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	14,530,039.17	2,068,911.12	40° 0' 3.131 N	109° 28' 11.978 W
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	14,530,021.89	2,068,935.54	40° 0' 2.957 N	109° 28' 11.668 W
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	14,530,003.88	2,068,960.97	40° 0' 2.774 N	109° 28' 11.345 W
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	14,529,982.87	2,068,987.99	40° 0' 2.562 N	109° 28' 11.002 W
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	14,529,961.72	2,069,015.20	40° 0' 2.348 N	109° 28' 10.657 W
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	14,529,941.87	2,069,040.62	40° 0' 2.148 N	109° 28' 10.335 W
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	14,529,922.30	2,069,065.45	40° 0' 1.950 N	109° 28' 10.020 W
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	14,529,904.50	2,069,088.46	40° 0' 1.771 N	109° 28' 9.729 W
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	14,529,887.83	2,069,109.98	40° 0' 1.602 N	109° 28' 9.456 W
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	14,529,871.36	2,069,130.95	40° 0' 1.436 N	109° 28' 9.190 W
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	14,529,856.23	2,069,152.26	40° 0' 1.283 N	109° 28' 8.920 W
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	14,529,839.98	2,069,174.56	40° 0' 1.118 N	109° 28' 8.637 W
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	14,529,819.88	2,069,196.93	40° 0' 0.916 N	109° 28' 8.354 W
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	14,529,798.49	2,069,220.49	40° 0' 0.700 N	109° 28' 8.056 W
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	14,529,777.94	2,069,244.85	40° 0' 0.493 N	109° 28' 7.747 W
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	14,529,767.83	2,069,257.06	40° 0' 0.391 N	109° 28' 7.592 W
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	14,529,758.54	2,069,268.66	40° 0' 0.297 N	109° 28' 7.445 W
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	14,529,741.39	2,069,290.59	40° 0' 0.124 N	109° 28' 7.167 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	14,529,724.21	2,069,313.03	39° 59' 59.951 N	109° 28' 6.883 W
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	14,529,708.58	2,069,334.09	39° 59' 59.792 N	109° 28' 6.616 W
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	14,529,695.43	2,069,351.74	39° 59' 59.659 N	109° 28' 6.392 W
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	14,529,684.93	2,069,364.68	39° 59' 59.554 N	109° 28' 6.228 W
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	14,529,678.57	2,069,372.71	39° 59' 59.489 N	109° 28' 6.126 W
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	14,529,675.47	2,069,376.75	39° 59' 59.458 N	109° 28' 6.075 W
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	14,529,674.51	2,069,376.98	39° 59' 59.448 N	109° 28' 6.072 W
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	14,529,676.65	2,069,374.10	39° 59' 59.470 N	109° 28' 6.108 W
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	14,529,680.02	2,069,370.91	39° 59' 59.504 N	109° 28' 6.149 W
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	14,529,683.01	2,069,367.16	39° 59' 59.534 N	109° 28' 6.196 W
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	14,529,685.28	2,069,362.38	39° 59' 59.557 N	109° 28' 6.257 W
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	14,529,688.69	2,069,358.31	39° 59' 59.592 N	109° 28' 6.309 W
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	14,529,692.97	2,069,355.18	39° 59' 59.635 N	109° 28' 6.348 W
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	14,529,697.71	2,069,351.57	39° 59' 59.682 N	109° 28' 6.393 W
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	14,529,702.55	2,069,347.75	39° 59' 59.731 N	109° 28' 6.441 W
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	14,529,707.12	2,069,345.07	39° 59' 59.776 N	109° 28' 6.475 W
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	14,529,711.47	2,069,343.14	39° 59' 59.820 N	109° 28' 6.499 W
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	14,529,715.61	2,069,341.50	39° 59' 59.861 N	109° 28' 6.519 W
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	14,529,719.68	2,069,339.95	39° 59' 59.901 N	109° 28' 6.538 W
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	14,529,722.56	2,069,337.77	39° 59' 59.930 N	109° 28' 6.565 W
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	14,529,724.36	2,069,335.52	39° 59' 59.948 N	109° 28' 6.594 W
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	14,529,725.16	2,069,334.07	39° 59' 59.956 N	109° 28' 6.612 W
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	14,529,725.10	2,069,333.24	39° 59' 59.956 N	109° 28' 6.623 W
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	14,529,724.62	2,069,332.71	39° 59' 59.951 N	109° 28' 6.630 W
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	14,529,723.76	2,069,332.14	39° 59' 59.943 N	109° 28' 6.637 W
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	14,529,722.67	2,069,331.76	39° 59' 59.932 N	109° 28' 6.642 W
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	14,529,721.33	2,069,331.69	39° 59' 59.919 N	109° 28' 6.644 W
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	14,529,720.74	2,069,332.28	39° 59' 59.913 N	109° 28' 6.636 W
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	14,529,720.72	2,069,333.88	39° 59' 59.912 N	109° 28' 6.616 W
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	14,529,719.99	2,069,335.75	39° 59' 59.905 N	109° 28' 6.592 W
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	14,529,719.65	2,069,336.45	39° 59' 59.901 N	109° 28' 6.583 W
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	14,529,719.40	2,069,337.23	39° 59' 59.899 N	109° 28' 6.573 W
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	14,529,718.49	2,069,338.88	39° 59' 59.890 N	109° 28' 6.552 W
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	14,529,717.73	2,069,340.82	39° 59' 59.882 N	109° 28' 6.527 W
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	14,529,717.26	2,069,341.60	39° 59' 59.877 N	109° 28' 6.517 W
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	14,529,716.26	2,069,341.51	39° 59' 59.867 N	109° 28' 6.519 W
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	14,529,715.24	2,069,341.18	39° 59' 59.857 N	109° 28' 6.523 W
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	14,529,714.42	2,069,340.44	39° 59' 59.849 N	109° 28' 6.533 W
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	14,529,713.35	2,069,340.06	39° 59' 59.839 N	109° 28' 6.538 W
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	14,529,712.03	2,069,339.96	39° 59' 59.826 N	109° 28' 6.539 W
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	14,529,710.80	2,069,339.80	39° 59' 59.813 N	109° 28' 6.542 W
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	14,529,709.39	2,069,339.75	39° 59' 59.800 N	109° 28' 6.543 W
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	14,529,708.21	2,069,339.83	39° 59' 59.788 N	109° 28' 6.542 W
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	14,529,706.67	2,069,339.84	39° 59' 59.773 N	109° 28' 6.542 W
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	14,529,703.96	2,069,339.46	39° 59' 59.746 N	109° 28' 6.548 W
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	14,529,700.90	2,069,338.83	39° 59' 59.716 N	109° 28' 6.556 W
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	14,529,697.79	2,069,338.46	39° 59' 59.685 N	109° 28' 6.562 W
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	14,529,697.43	2,069,338.43	39° 59' 59.682 N	109° 28' 6.562 W
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	14,529,694.79	2,069,337.88	39° 59' 59.656 N	109° 28' 6.570 W
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	14,529,690.24	2,069,336.55	39° 59' 59.611 N	109° 28' 6.588 W
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	14,529,684.62	2,069,335.15	39° 59' 59.556 N	109° 28' 6.607 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date	10/12/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00	0.09	18.21	110.00	0.08	0.03	-0.03	0.08	0.08	0.00
200.00	1.15	111.74	199.99	-0.19	0.89	0.80	1.29	1.18	103.92
290.00	1.86	110.54	289.96	-1.03	3.09	3.05	0.79	0.79	-1.33
380.00	2.19	127.95	379.91	-2.60	5.82	6.15	0.77	0.37	19.34
470.00	2.69	123.69	469.82	-4.83	8.93	9.97	0.59	0.56	-4.73
560.00	2.31	143.95	559.74	-7.47	11.76	13.83	1.06	-0.42	22.51
650.00	2.56	153.82	649.66	-10.74	13.71	17.41	0.54	0.28	10.97
740.00	2.38	146.82	739.58	-14.11	15.62	21.02	0.39	-0.20	-7.78
830.00	2.25	124.20	829.50	-16.66	18.10	24.56	1.02	-0.14	-25.13
920.00	1.00	129.45	919.47	-18.16	20.17	27.11	1.40	-1.39	5.83
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	29.75	1.66	1.60	-16.81
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	33.79	0.63	0.41	10.42

Company: ANADARKO PETROLEUM CORP.
Project: Uintah County, Utah (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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)
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	38.29	0.24	0.14	3.89
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	42.47	0.68	-0.62	6.11
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	46.20	0.35	0.00	-8.33
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	49.83	0.21	-0.14	3.61
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	53.30	0.30	-0.07	7.63
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	57.26	0.99	0.77	-14.30
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	61.81	0.27	0.13	-4.59
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	66.63	0.65	0.21	11.39
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	71.04	0.90	-0.83	6.81
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	74.79	0.25	-0.07	5.69
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	78.32	0.22	-0.21	-1.94
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	81.49	0.71	-0.34	-17.50
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	84.46	0.07	0.07	-0.28
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	87.16	0.30	0.00	8.91
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	90.64	0.47	-0.18	13.41
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	94.91	2.41	2.40	-4.65
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	103.12	3.39	2.85	-21.05
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	115.13	2.83	2.47	10.44
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	130.64	2.35	2.34	1.23
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	147.93	1.64	0.51	-8.08
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	165.92	0.27	0.24	0.57
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	186.17	3.16	2.89	5.77
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	210.12	2.83	2.78	1.94
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	237.45	1.81	1.78	1.10
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	266.17	1.62	0.70	-4.58
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	296.05	1.49	0.58	-4.18
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	327.17	2.26	1.77	4.08
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	361.39	2.36	2.27	1.65
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	395.85	2.02	-1.92	-1.65
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	428.10	1.12	-0.83	2.09
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	459.72	0.86	-0.66	-1.60
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	488.81	2.61	-2.60	0.51
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	516.03	0.63	-0.62	-0.42
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	542.69	0.42	-0.21	1.24
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	568.79	2.14	-0.07	-7.37
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	596.37	3.10	1.78	8.38
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	626.38	2.79	2.30	4.76
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	658.12	1.37	-0.21	-3.88
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	689.98	0.37	0.27	-0.69
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	705.83	0.29	0.00	-0.82
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	720.69	6.10	-5.98	-3.62
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	748.53	0.30	-0.27	0.42
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	776.79	1.03	0.89	-1.65
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	803.00	3.47	-3.47	-0.28
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	825.01	3.02	-3.02	0.55
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	841.67	4.45	-4.33	5.66
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	851.91	5.09	-4.92	-12.33
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	857.00	2.48	-2.20	21.43
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	857.78	3.79	-1.11	170.70
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	854.19	2.36	2.26	19.23
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	849.60	1.00	-0.76	12.78
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	844.80	1.78	1.02	-27.62
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	839.64	0.52	-0.41	-5.56
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	834.34	2.16	0.62	34.75

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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)
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	829.22	0.90	-0.89	-1.64
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	823.46	1.78	1.78	-0.42
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	817.45	1.40	-1.39	-2.22
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	812.52	1.15	0.14	19.51
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	808.31	0.95	-0.90	-5.69
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	804.46	0.66	0.41	10.57
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	800.73	0.66	-0.50	-8.80
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	797.23	1.25	-0.46	-28.93
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	794.34	0.69	-0.69	0.27
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	792.71	1.11	-0.90	-36.67
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	792.10	0.44	-0.34	-31.32
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	791.98	0.35	0.20	-35.71
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	792.06	0.21	0.21	-1.94
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	792.44	0.40	0.00	-30.90
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	793.22	0.22	0.21	-3.57
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	794.05	1.55	-0.14	-117.37
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	795.32	0.67	0.48	26.92
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	797.23	0.52	0.07	23.11
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	797.99	1.14	-0.92	-34.45
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	798.76	0.00	0.00	0.00
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	800.61	0.76	0.64	19.83
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	802.61	0.87	-0.35	-34.67
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	803.52	1.61	-0.69	118.55
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	804.06	0.41	0.21	-31.53
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	804.44	0.69	0.00	54.67
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	804.36	0.13	-0.13	-1.51
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	804.73	0.59	0.27	-41.08
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	805.47	0.08	-0.08	0.14
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	806.11	0.12	-0.07	7.55
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	806.94	0.44	0.34	-17.22
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	807.73	0.68	-0.68	3.44
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	808.70	1.16	1.16	1.26
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	810.07	0.73	0.56	15.80
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	811.48	0.21	-0.07	-5.77
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	813.12	0.20	0.13	-4.30
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	813.31	0.55	-0.32	12.52
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	814.52	0.55	-0.27	14.34
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	816.30	0.35	-0.34	-2.14
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	818.68	0.00	0.00	0.00

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 922-29M4DS

Api No: 43-047-50357 Lease Type: STATE

Section 29 Township 09S Range 22E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

SPUDDED:

Date 09/03/2009

Time 1:00 PM

How DRY

Drilling will Commence: _____

Reported by KENNY MORRIS

Telephone # (435) 828-1691

Date 09/03/2009 Signed CHD

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750357	NBU 922-29M4DS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 13:00 HRS. <u>BHL = SWSW</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750342	NBU 922-29M3CS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 11:15 HRS. <u>BHL = SWSW</u>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750343	NBU 922-29M2DS		SWSW	29	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	9/3/2009			<u>9/21/09</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 09/03/2009 AT 9:15 HRS. <u>BHL = SWSW</u>							

ACTION CODES:

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

RECEIVED

SEP 03 2009

ANDY LYTLE

Name (Please Print)

[Signature]
Signature

REGULATORY ANALYST

Title

9/3/2009

Date

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22935
1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE LP		8. WELL NAME and NUMBER: NBU 922-29M4DS
3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217		9. API NUMBER: 4304750357
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: SWSW 553 FSL & 525 FWL AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSW 060 FSL & 1147 FWL SEC.29-9S-22E AT TOTAL DEPTH: SWSW 023 FSL & 1149 FWL SEC.29-9S-22E		10. FIELD AND POOL, OR WILDCAT NATURAL BUTTES
		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 9S 22E
		12. COUNTY UINTAH
		13. STATE UTAH

14. DATE SPURRED: 9/3/2009	15. DATE T.D. REACHED: 10/9/2009	16. DATE COMPLETED: 12/26/2009	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5015
18. TOTAL DEPTH: MD 9,535 TVD 9,413	19. PLUG BACK T.D.: MD 9,473 TVD 9,351	20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

*GR/CBL Triple Combo Assembly
Hole Volume Log*

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
12 1/4"	9 5/8 J-55	36#		2,386		700			
7 7/8"	4 1/2 I-80	11.6#		9,517		1815			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,912							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) MESAVERDE	7,330	9,293			7,330 9,293	0.36	312	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7,330-9,293	PMP 9,475 BBLs SLICK H2O & 357,376 LBS 30/50 SD.

29. ENCLOSED ATTACHMENTS:	30. WELL STATUS:
<input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION <input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS <input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER:	<input checked="" type="checkbox"/> DIRECTIONAL SURVEY <input checked="" type="checkbox"/> RECEIVED <div style="text-align: right; font-size: 1.5em;">PROD</div>

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 12/26/2009		TEST DATE: 1/6/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 1,992	WATER - BBL: 280	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,250	CSG. PRESS. 1,800	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 1,992	WATER - BBL: 280	INTERVAL STATUS: PROD

INTERVAL B (As shown in Item #26)

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

INTERVAL C (As shown in Item #26)

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

INTERVAL D (As shown in Item #26)

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

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

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,370				
MAHOGANY	1,704				
WASATCH	4,714	7,301			
MESAVERDE	7,301	9,525			

34. FORMATION (Log) MARKERS:

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE END OF WELL REPORT.

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

NAME (PLEASE PRINT) ANDY LYTLE TITLE REGULATORY ANALYST
 SIGNATURE  DATE 1/25/2010

This report must be submitted within 30 days of

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

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

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

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

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



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Standard Survey Report

12 October, 2009



Weatherford®

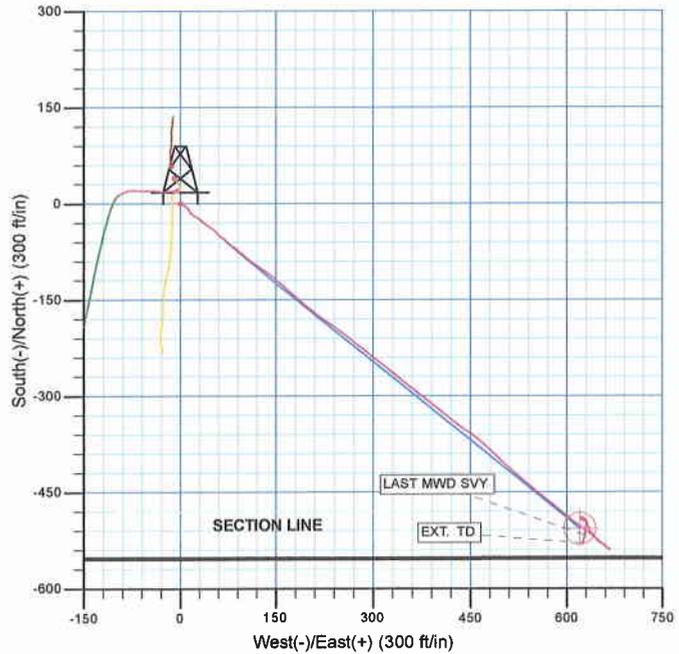
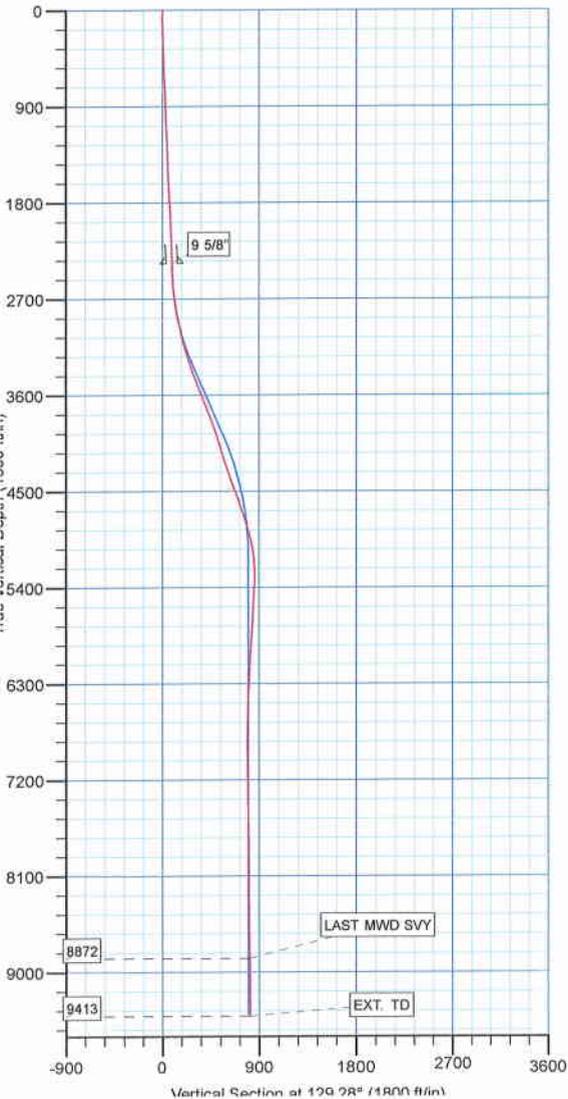
WELL DETAILS: NBU 922-29M4DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	5012.00 Latitude	Longitude	Slot
0.00	0.00	14530203.55	2068701.78	40° 0' 4.792 N	109° 28' 14.632 W	

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9394.00	-506.98	619.9039° 59'	59.780 N	109° 28' 6.665 W	Circle (Radius: 25.00)

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
	2410.00	1.82	136.85	2408.12	-55.99	69.34	0.00	0.00	89.12	
	2476.00	1.82	136.85	2474.09	-57.52	70.77	0.00	0.00	91.19	
	3334.44	23.26	129.15	3307.19	-175.84	213.18	2.50	-8.31	276.34	
	4073.00	23.26	129.15	3985.72	-359.98	439.35	0.00	0.00	567.99	
	5235.95	0.00	0.00	5117.00	-506.98	619.90	2.00	180.00	800.81	
	9512.95	0.00	0.00	9394.00	-506.98	619.90	0.00	0.00	800.81	PBHL_NBU 922-29M4DS



KB ELEV: KB @ 5026.00ft (KB ELEVATION)
 GRD ELEV: 5012.00



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4617.00	4733.38	Wasatch
8115.00	8233.95	Mesaverde



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 922-29M PAD

NBU 922-29M4DS

NBU 922-29M4DS

Survey: Survey #1

Survey Report - Geographic

12 October, 2009



Weatherford®

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date	10/12/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,203.55	2,068,701.78	40° 0' 4.792 N	109° 28' 14.632 W
110.00	0.09	18.21	110.00	0.08	0.03	14,530,203.64	2,068,701.80	40° 0' 4.792 N	109° 28' 14.631 W
200.00	1.15	111.74	199.99	-0.19	0.89	14,530,203.38	2,068,702.67	40° 0' 4.790 N	109° 28' 14.620 W
290.00	1.86	110.54	289.96	-1.03	3.09	14,530,202.57	2,068,704.89	40° 0' 4.781 N	109° 28' 14.592 W
380.00	2.19	127.95	379.91	-2.60	5.82	14,530,201.05	2,068,707.64	40° 0' 4.766 N	109° 28' 14.557 W
470.00	2.69	123.69	469.82	-4.83	8.93	14,530,198.88	2,068,710.79	40° 0' 4.744 N	109° 28' 14.517 W
560.00	2.31	143.95	559.74	-7.47	11.76	14,530,196.29	2,068,713.66	40° 0' 4.718 N	109° 28' 14.481 W
650.00	2.56	153.82	649.66	-10.74	13.71	14,530,193.05	2,068,715.67	40° 0' 4.685 N	109° 28' 14.455 W
740.00	2.38	146.82	739.58	-14.11	15.62	14,530,189.72	2,068,717.64	40° 0' 4.652 N	109° 28' 14.431 W
830.00	2.25	124.20	829.50	-16.66	18.10	14,530,187.20	2,068,720.16	40° 0' 4.627 N	109° 28' 14.399 W
920.00	1.00	129.45	919.47	-18.16	20.17	14,530,185.75	2,068,722.26	40° 0' 4.612 N	109° 28' 14.372 W
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	14,530,184.50	2,068,724.63	40° 0' 4.599 N	109° 28' 14.342 W
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	14,530,182.55	2,068,728.25	40° 0' 4.580 N	109° 28' 14.296 W
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	14,530,179.99	2,068,731.96	40° 0' 4.554 N	109° 28' 14.249 W
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	14,530,177.38	2,068,735.22	40° 0' 4.527 N	109° 28' 14.208 W
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	14,530,175.09	2,068,738.16	40° 0' 4.504 N	109° 28' 14.170 W
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	14,530,172.96	2,068,741.11	40° 0' 4.483 N	109° 28' 14.133 W
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	14,530,170.69	2,068,743.74	40° 0' 4.460 N	109° 28' 14.100 W
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	14,530,168.31	2,068,746.90	40° 0' 4.436 N	109° 28' 14.060 W
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	14,530,166.04	2,068,750.92	40° 0' 4.413 N	109° 28' 14.008 W
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	14,530,163.43	2,068,755.00	40° 0' 4.386 N	109° 28' 13.957 W
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	14,530,160.58	2,068,758.37	40° 0' 4.357 N	109° 28' 13.914 W
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	14,530,157.85	2,068,760.98	40° 0' 4.330 N	109° 28' 13.881 W
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	14,530,155.19	2,068,763.38	40° 0' 4.303 N	109° 28' 13.851 W
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	14,530,153.16	2,068,765.81	40° 0' 4.283 N	109° 28' 13.820 W
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	14,530,151.60	2,068,768.38	40° 0' 4.267 N	109° 28' 13.787 W
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	14,530,150.07	2,068,770.60	40° 0' 4.251 N	109° 28' 13.759 W
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	14,530,147.58	2,068,773.07	40° 0' 4.226 N	109° 28' 13.728 W
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	14,530,144.24	2,068,775.87	40° 0' 4.193 N	109° 28' 13.693 W
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	14,530,139.33	2,068,782.45	40° 0' 4.143 N	109° 28' 13.609 W
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	14,530,132.45	2,068,792.32	40° 0' 4.073 N	109° 28' 13.484 W
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	14,530,122.56	2,068,804.28	40° 0' 3.974 N	109° 28' 13.332 W
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	14,530,112.30	2,068,818.21	40° 0' 3.870 N	109° 28' 13.155 W
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	14,530,102.44	2,068,833.35	40° 0' 3.770 N	109° 28' 12.963 W
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	14,530,090.48	2,068,849.69	40° 0' 3.649 N	109° 28' 12.756 W
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	14,530,075.23	2,068,868.17	40° 0' 3.495 N	109° 28' 12.522 W
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	14,530,057.33	2,068,888.87	40° 0' 3.315 N	109° 28' 12.260 W
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	14,530,039.17	2,068,911.12	40° 0' 3.131 N	109° 28' 11.978 W
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	14,530,021.89	2,068,935.54	40° 0' 2.957 N	109° 28' 11.668 W
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	14,530,003.88	2,068,960.97	40° 0' 2.774 N	109° 28' 11.345 W
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	14,529,982.87	2,068,987.99	40° 0' 2.562 N	109° 28' 11.002 W
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	14,529,961.72	2,069,015.20	40° 0' 2.348 N	109° 28' 10.657 W
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	14,529,941.87	2,069,040.62	40° 0' 2.148 N	109° 28' 10.335 W
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	14,529,922.30	2,069,065.45	40° 0' 1.950 N	109° 28' 10.020 W
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	14,529,904.50	2,069,088.46	40° 0' 1.771 N	109° 28' 9.729 W
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	14,529,887.83	2,069,109.98	40° 0' 1.602 N	109° 28' 9.456 W
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	14,529,871.36	2,069,130.95	40° 0' 1.436 N	109° 28' 9.190 W
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	14,529,856.23	2,069,152.26	40° 0' 1.283 N	109° 28' 8.920 W
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	14,529,839.98	2,069,174.56	40° 0' 1.118 N	109° 28' 8.637 W
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	14,529,819.88	2,069,196.93	40° 0' 0.916 N	109° 28' 8.354 W
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	14,529,798.49	2,069,220.49	40° 0' 0.700 N	109° 28' 8.056 W
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	14,529,777.94	2,069,244.85	40° 0' 0.493 N	109° 28' 7.747 W
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	14,529,767.83	2,069,257.06	40° 0' 0.391 N	109° 28' 7.592 W
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	14,529,758.54	2,069,268.66	40° 0' 0.297 N	109° 28' 7.445 W
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	14,529,741.39	2,069,290.59	40° 0' 0.124 N	109° 28' 7.167 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	14,529,724.21	2,069,313.03	39° 59' 59.951 N	109° 28' 6.883 W
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	14,529,708.58	2,069,334.09	39° 59' 59.792 N	109° 28' 6.616 W
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	14,529,695.43	2,069,351.74	39° 59' 59.659 N	109° 28' 6.392 W
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	14,529,684.93	2,069,364.68	39° 59' 59.554 N	109° 28' 6.228 W
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	14,529,678.57	2,069,372.71	39° 59' 59.489 N	109° 28' 6.126 W
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	14,529,675.47	2,069,376.75	39° 59' 59.458 N	109° 28' 6.075 W
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	14,529,674.51	2,069,376.98	39° 59' 59.448 N	109° 28' 6.072 W
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	14,529,676.65	2,069,374.10	39° 59' 59.470 N	109° 28' 6.108 W
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	14,529,680.02	2,069,370.91	39° 59' 59.504 N	109° 28' 6.149 W
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	14,529,683.01	2,069,367.16	39° 59' 59.534 N	109° 28' 6.196 W
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	14,529,685.28	2,069,362.38	39° 59' 59.557 N	109° 28' 6.257 W
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	14,529,688.69	2,069,358.31	39° 59' 59.592 N	109° 28' 6.309 W
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	14,529,692.97	2,069,355.18	39° 59' 59.635 N	109° 28' 6.348 W
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	14,529,697.71	2,069,351.57	39° 59' 59.682 N	109° 28' 6.393 W
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	14,529,702.55	2,069,347.75	39° 59' 59.731 N	109° 28' 6.441 W
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	14,529,707.12	2,069,345.07	39° 59' 59.776 N	109° 28' 6.475 W
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	14,529,711.47	2,069,343.14	39° 59' 59.820 N	109° 28' 6.499 W
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	14,529,715.61	2,069,341.50	39° 59' 59.861 N	109° 28' 6.519 W
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	14,529,719.68	2,069,339.95	39° 59' 59.901 N	109° 28' 6.538 W
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	14,529,722.56	2,069,337.77	39° 59' 59.930 N	109° 28' 6.565 W
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	14,529,724.36	2,069,335.52	39° 59' 59.948 N	109° 28' 6.594 W
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	14,529,725.16	2,069,334.07	39° 59' 59.956 N	109° 28' 6.612 W
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	14,529,725.10	2,069,333.24	39° 59' 59.956 N	109° 28' 6.623 W
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	14,529,724.62	2,069,332.71	39° 59' 59.951 N	109° 28' 6.630 W
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	14,529,723.76	2,069,332.14	39° 59' 59.943 N	109° 28' 6.637 W
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	14,529,722.67	2,069,331.76	39° 59' 59.932 N	109° 28' 6.642 W
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	14,529,721.33	2,069,331.69	39° 59' 59.919 N	109° 28' 6.644 W
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	14,529,720.74	2,069,332.28	39° 59' 59.913 N	109° 28' 6.636 W
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	14,529,720.72	2,069,333.88	39° 59' 59.912 N	109° 28' 6.616 W
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	14,529,719.99	2,069,335.75	39° 59' 59.905 N	109° 28' 6.592 W
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	14,529,719.65	2,069,336.45	39° 59' 59.901 N	109° 28' 6.583 W
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	14,529,719.40	2,069,337.23	39° 59' 59.899 N	109° 28' 6.573 W
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	14,529,718.49	2,069,338.88	39° 59' 59.890 N	109° 28' 6.552 W
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	14,529,717.73	2,069,340.82	39° 59' 59.882 N	109° 28' 6.527 W
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	14,529,717.26	2,069,341.60	39° 59' 59.877 N	109° 28' 6.517 W
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	14,529,716.26	2,069,341.51	39° 59' 59.867 N	109° 28' 6.519 W
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	14,529,715.24	2,069,341.18	39° 59' 59.857 N	109° 28' 6.523 W
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	14,529,714.42	2,069,340.44	39° 59' 59.849 N	109° 28' 6.533 W
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	14,529,713.35	2,069,340.06	39° 59' 59.839 N	109° 28' 6.538 W
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	14,529,712.03	2,069,339.96	39° 59' 59.826 N	109° 28' 6.539 W
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	14,529,710.80	2,069,339.80	39° 59' 59.813 N	109° 28' 6.542 W
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	14,529,709.39	2,069,339.75	39° 59' 59.800 N	109° 28' 6.543 W
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	14,529,708.21	2,069,339.83	39° 59' 59.788 N	109° 28' 6.542 W
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	14,529,706.67	2,069,339.84	39° 59' 59.773 N	109° 28' 6.542 W
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	14,529,703.96	2,069,339.46	39° 59' 59.746 N	109° 28' 6.548 W
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	14,529,700.90	2,069,338.83	39° 59' 59.716 N	109° 28' 6.556 W
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	14,529,697.79	2,069,338.46	39° 59' 59.685 N	109° 28' 6.562 W
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	14,529,697.43	2,069,338.43	39° 59' 59.682 N	109° 28' 6.562 W
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	14,529,694.79	2,069,337.88	39° 59' 59.656 N	109° 28' 6.570 W
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	14,529,690.24	2,069,336.55	39° 59' 59.611 N	109° 28' 6.588 W
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	14,529,684.62	2,069,335.15	39° 59' 59.556 N	109° 28' 6.607 W

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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

Site	NBU 922-29M PAD, SECTION 29 T9S R22E				
Site Position:		Northing:	14,530,203.55ft	Latitude:	40° 0' 4.792 N
From:	Lat/Long	Easting:	2,068,701.78ft	Longitude:	109° 28' 14.632 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.98 °

Well	NBU 922-29M4DS					
Well Position	+N/-S	0.00 ft	Northing:	14,530,203.55 ft	Latitude:	40° 0' 4.792 N
	+E/-W	0.00 ft	Easting:	2,068,701.78 ft	Longitude:	109° 28' 14.632 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,012.00 ft

Wellbore	NBU 922-29M4DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	9/21/2009	11.31	65.94	52,516

Design	NBU 922-29M4DS				
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	129.28	

Survey Program	Date	10/12/2009			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.00	9,535.00	Survey #1 (NBU 922-29M4DS)	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00	0.09	18.21	110.00	0.08	0.03	-0.03	0.08	0.08	0.00
200.00	1.15	111.74	199.99	-0.19	0.89	0.80	1.29	1.18	103.92
290.00	1.86	110.54	289.96	-1.03	3.09	3.05	0.79	0.79	-1.33
380.00	2.19	127.95	379.91	-2.60	5.82	6.15	0.77	0.37	19.34
470.00	2.69	123.69	469.82	-4.83	8.93	9.97	0.59	0.56	-4.73
560.00	2.31	143.95	559.74	-7.47	11.76	13.83	1.06	-0.42	22.51
650.00	2.56	153.82	649.66	-10.74	13.71	17.41	0.54	0.28	10.97
740.00	2.38	146.82	739.58	-14.11	15.62	21.02	0.39	-0.20	-7.78
830.00	2.25	124.20	829.50	-16.66	18.10	24.56	1.02	-0.14	-25.13
920.00	1.00	129.45	919.47	-18.16	20.17	27.11	1.40	-1.39	5.83
1,010.00	2.44	114.32	1,009.42	-19.44	22.52	29.75	1.66	1.60	-16.81
1,100.00	2.81	123.70	1,099.33	-21.46	26.11	33.79	0.63	0.41	10.42

Company: ANADARKO PETROLEUM CORP.
Project: Uintah County, Utah (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
Wellbore: NBU 922-29M4DS
Design: NBU 922-29M4DS

Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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)
1,190.00	2.94	127.20	1,189.22	-24.08	29.78	38.29	0.24	0.14	3.89
1,280.00	2.38	132.70	1,279.12	-26.74	32.99	42.47	0.68	-0.62	6.11
1,370.00	2.38	125.20	1,369.04	-29.08	35.89	46.20	0.35	0.00	-8.33
1,460.00	2.25	128.45	1,458.97	-31.26	38.80	49.83	0.21	-0.14	3.61
1,550.00	2.19	135.32	1,548.90	-33.58	41.39	53.30	0.30	-0.07	7.63
1,640.00	2.88	122.45	1,638.81	-36.02	44.51	57.26	0.99	0.77	-14.30
1,730.00	3.00	118.32	1,728.70	-38.35	48.49	61.81	0.27	0.13	-4.59
1,820.00	3.19	128.57	1,818.56	-41.03	52.52	66.63	0.65	0.21	11.39
1,910.00	2.44	134.70	1,908.46	-43.94	55.84	71.04	0.90	-0.83	6.81
2,000.00	2.38	139.82	1,998.38	-46.71	58.41	74.79	0.25	-0.07	5.69
2,090.00	2.19	138.07	2,088.30	-49.42	60.77	78.32	0.22	-0.21	-1.94
2,180.00	1.88	122.32	2,178.25	-51.49	63.16	81.49	0.71	-0.34	-17.50
2,270.00	1.94	122.07	2,268.20	-53.08	65.70	84.46	0.07	0.07	-0.28
2,350.00	1.94	129.20	2,348.15	-54.66	67.90	87.16	0.30	0.00	8.91
2,460.00	1.74	143.95	2,458.10	-57.19	70.32	90.64	0.47	-0.18	13.41
2,549.00	3.88	139.81	2,546.98	-60.58	73.06	94.91	2.41	2.40	-4.65
2,641.00	6.50	120.44	2,638.61	-65.60	79.56	103.12	3.39	2.85	-21.05
2,732.00	8.75	129.94	2,728.80	-72.65	89.31	115.13	2.83	2.47	10.44
2,823.00	10.88	131.06	2,818.46	-82.74	101.10	130.64	2.35	2.34	1.23
2,913.00	11.34	123.79	2,906.78	-93.24	114.85	147.93	1.64	0.51	-8.08
3,004.00	11.56	124.31	2,995.97	-103.35	129.82	165.92	0.27	0.24	0.57
3,095.00	14.19	129.56	3,084.68	-115.60	145.96	186.17	3.16	2.89	5.77
3,185.00	16.69	131.31	3,171.42	-131.16	164.17	210.12	2.83	2.78	1.94
3,276.00	18.31	132.31	3,258.21	-149.41	184.56	237.45	1.81	1.78	1.10
3,366.00	18.94	128.19	3,343.50	-167.96	206.49	266.17	1.62	0.70	-4.58
3,457.00	19.47	124.39	3,429.44	-185.65	230.62	296.05	1.49	0.58	-4.18
3,547.00	21.06	128.06	3,513.87	-204.10	255.73	327.17	2.26	1.77	4.08
3,638.00	23.13	129.56	3,598.18	-225.56	282.39	361.39	2.36	2.27	1.65
3,729.00	21.38	128.06	3,682.40	-247.17	309.23	395.85	2.02	-1.92	-1.65
3,819.00	20.63	129.94	3,766.42	-267.46	334.30	428.10	1.12	-0.83	2.09
3,910.00	20.03	128.48	3,851.75	-287.45	358.79	459.72	0.86	-0.66	-1.60
4,000.00	17.69	128.94	3,936.91	-305.64	381.50	488.81	2.61	-2.60	0.51
4,091.00	17.13	128.56	4,023.74	-322.68	402.73	516.03	0.63	-0.62	-0.42
4,182.00	16.94	129.69	4,110.75	-339.50	423.41	542.69	0.42	-0.21	1.24
4,272.00	16.88	123.06	4,196.87	-355.01	444.45	568.79	2.14	-0.07	-7.37
4,363.00	18.50	130.69	4,283.57	-371.63	466.48	596.37	3.10	1.78	8.38
4,453.00	20.57	134.97	4,368.39	-392.12	488.49	626.38	2.79	2.30	4.76
4,544.00	20.38	131.44	4,453.65	-413.90	511.68	658.12	1.37	-0.21	-3.88
4,635.00	20.63	130.81	4,538.88	-434.87	535.70	689.98	0.37	0.27	-0.69
4,680.00	20.63	130.44	4,580.99	-445.19	547.73	705.83	0.29	0.00	-0.82
4,725.00	17.94	128.81	4,623.47	-454.68	559.17	720.69	6.10	-5.98	-3.62
4,816.00	17.69	129.19	4,710.10	-472.20	580.80	748.53	0.30	-0.27	0.42
4,907.00	18.50	127.69	4,796.60	-489.76	602.94	776.79	1.03	0.89	-1.65
4,997.00	15.38	127.44	4,882.69	-505.75	623.72	803.00	3.47	-3.47	-0.28
5,088.00	12.63	127.94	4,970.97	-519.21	641.16	825.01	3.02	-3.02	0.55
5,178.00	8.73	133.03	5,059.40	-529.92	653.91	841.67	4.45	-4.33	5.66
5,269.00	4.25	121.81	5,149.79	-536.42	661.83	851.91	5.09	-4.92	-12.33
5,360.00	2.25	141.31	5,240.65	-539.59	665.81	857.00	2.48	-2.20	21.43
5,450.00	1.25	294.94	5,330.63	-540.55	666.03	857.78	3.79	-1.11	170.70
5,541.00	3.31	312.44	5,421.55	-538.36	663.19	854.19	2.36	2.26	19.23
5,631.00	2.63	323.94	5,511.43	-534.94	660.06	849.60	1.00	-0.76	12.78
5,722.00	3.56	298.81	5,602.30	-531.89	656.35	844.80	1.78	1.02	-27.62
5,812.00	3.19	293.81	5,692.15	-529.53	651.61	839.64	0.52	-0.41	-5.56
5,903.00	3.75	325.43	5,782.99	-526.06	647.61	834.34	2.16	0.62	34.75

Company: ANADARKO PETROLEUM CORP.
Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 922-29M PAD
Well: NBU 922-29M4DS
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Local Co-ordinate Reference: Well NBU 922-29M4DS
TVD Reference: KB @ 5026.00ft (KB ELEVATION)
MD Reference: KB @ 5026.00ft (KB ELEVATION)
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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)
5,994.00	2.94	323.94	5,873.83	-521.72	644.54	829.22	0.90	-0.89	-1.64
6,085.00	4.56	323.56	5,964.63	-516.92	641.02	823.46	1.78	1.78	-0.42
6,175.00	3.31	321.56	6,054.42	-512.01	637.28	817.45	1.40	-1.39	-2.22
6,266.00	3.44	339.31	6,145.26	-507.40	634.68	812.52	1.15	0.14	19.51
6,356.00	2.63	334.19	6,235.14	-503.01	632.83	808.31	0.95	-0.90	-5.69
6,447.00	3.00	343.81	6,326.03	-498.85	631.26	804.46	0.66	0.41	10.57
6,537.00	2.55	335.89	6,415.92	-494.76	629.78	800.73	0.66	-0.50	-8.80
6,628.00	2.13	309.56	6,506.85	-491.83	627.65	797.23	1.25	-0.46	-28.93
6,719.00	1.50	309.81	6,597.80	-489.99	625.43	794.34	0.69	-0.69	0.27
6,809.00	0.69	276.81	6,687.79	-489.18	623.99	792.71	1.11	-0.90	-36.67
6,900.00	0.38	248.31	6,778.78	-489.22	623.17	792.10	0.44	-0.34	-31.32
6,991.00	0.56	215.81	6,869.78	-489.69	622.63	791.98	0.35	0.20	-35.71
7,081.00	0.75	214.06	6,959.77	-490.54	622.04	792.06	0.21	0.21	-1.94
7,172.00	0.75	185.94	7,050.77	-491.63	621.64	792.44	0.40	0.00	-30.90
7,263.00	0.94	182.69	7,141.76	-492.96	621.55	793.22	0.22	0.21	-3.57
7,353.00	0.81	77.06	7,231.75	-493.56	622.13	794.05	1.55	-0.14	-117.37
7,444.00	1.25	101.56	7,322.73	-493.61	623.73	795.32	0.67	0.48	26.92
7,535.00	1.31	122.59	7,413.71	-494.37	625.58	797.23	0.52	0.07	23.11
7,575.00	0.94	108.81	7,453.70	-494.72	626.28	797.99	1.14	-0.92	-34.45
7,625.00	0.94	108.81	7,503.70	-494.99	627.05	798.76	0.00	0.00	0.00
7,714.00	1.51	126.46	7,592.68	-495.92	628.69	800.61	0.76	0.64	19.83
7,806.00	1.19	94.56	7,684.65	-496.72	630.61	802.61	0.87	-0.35	-34.67
7,897.00	0.56	202.44	7,775.65	-497.20	631.39	803.52	1.61	-0.69	118.55
7,987.00	0.75	174.06	7,865.64	-498.20	631.28	804.06	0.41	0.21	-31.53
8,078.00	0.75	223.81	7,956.63	-499.22	630.93	804.44	0.69	0.00	54.67
8,169.00	0.63	222.44	8,047.63	-500.02	630.18	804.36	0.13	-0.13	-1.51
8,260.00	0.88	185.06	8,138.62	-501.08	629.78	804.73	0.59	0.27	-41.08
8,350.00	0.81	185.19	8,228.61	-502.40	629.66	805.47	0.08	-0.08	0.14
8,441.00	0.75	192.06	8,319.60	-503.63	629.48	806.11	0.12	-0.07	7.55
8,531.00	1.06	176.56	8,409.59	-505.03	629.40	806.94	0.44	0.34	-17.22
8,622.00	0.44	179.69	8,500.58	-506.22	629.46	807.73	0.68	-0.68	3.44
8,713.00	1.50	180.84	8,591.57	-507.76	629.44	808.70	1.16	1.16	1.26
8,803.00	2.00	195.06	8,681.53	-510.46	629.02	810.07	0.73	0.56	15.80
8,894.00	1.94	189.81	8,772.47	-513.51	628.34	811.48	0.21	-0.07	-5.77
8,984.00	2.06	185.94	8,862.42	-516.62	627.91	813.12	0.20	0.13	-4.30
LAST MWD SVY									
8,994.00	2.03	187.19	8,872.41	-516.97	627.87	813.31	0.55	-0.32	12.52
9,075.00	1.81	198.81	8,953.37	-519.61	627.28	814.52	0.55	-0.27	14.34
9,256.00	1.19	194.94	9,134.30	-524.13	625.88	816.30	0.35	-0.34	-2.14
EXT. TD									
9,535.00	1.19	194.94	9,413.24	-529.73	624.38	818.68	0.00	0.00	0.00

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,994.00	8,872.41	-516.97	627.87	LAST MWD SVY
9,535.00	9,413.24	-529.73	624.38	EXT. TD

Checked By: _____ Approved By: _____ Date: _____