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 922-29M2DS
2. TYPE OF WORK: DRILL NEW WELL (●) REENTER P&A WELL ( ) DEEPEN WELL ( )	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 23608	11. MINERAL OWNERSHIP: FEDERAL ( ) INDIAN ( ) STATE (●) FEE ( )
	12. SURFACE OWNERSHIP: FEDERAL ( ) INDIAN ( ) STATE (●) FEE ( )
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 (●) (Submit Commingling Application) NO ( )
	19. SLANT: VERTICAL ( ) DIRECTIONAL (●) HORIZONTAL ( )

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	611 FSL 511 FWL	SWSW	29	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	689 FSL 515 FWL	SWSW	29	9.0 S	22.0 E	S
At Total Depth	689 FSL 515 FWL	SWSW	29	9.0 S	22.0 E	S

21. COUNTY: UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet): 515	23. NUMBER OF ACRES IN DRILLING UNIT: 203
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed): 80	26. PROPOSED DEPTH: MD: 9403 TVD: 9400
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

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME Kathy Schneebeck-Dulnoan	TITLE Staff Regulatory Analyst	PHONE 720 929-6007
SIGNATURE	DATE 04/13/2009	EMAIL Kathy.SchneebeckDulnoan@anadarko.com

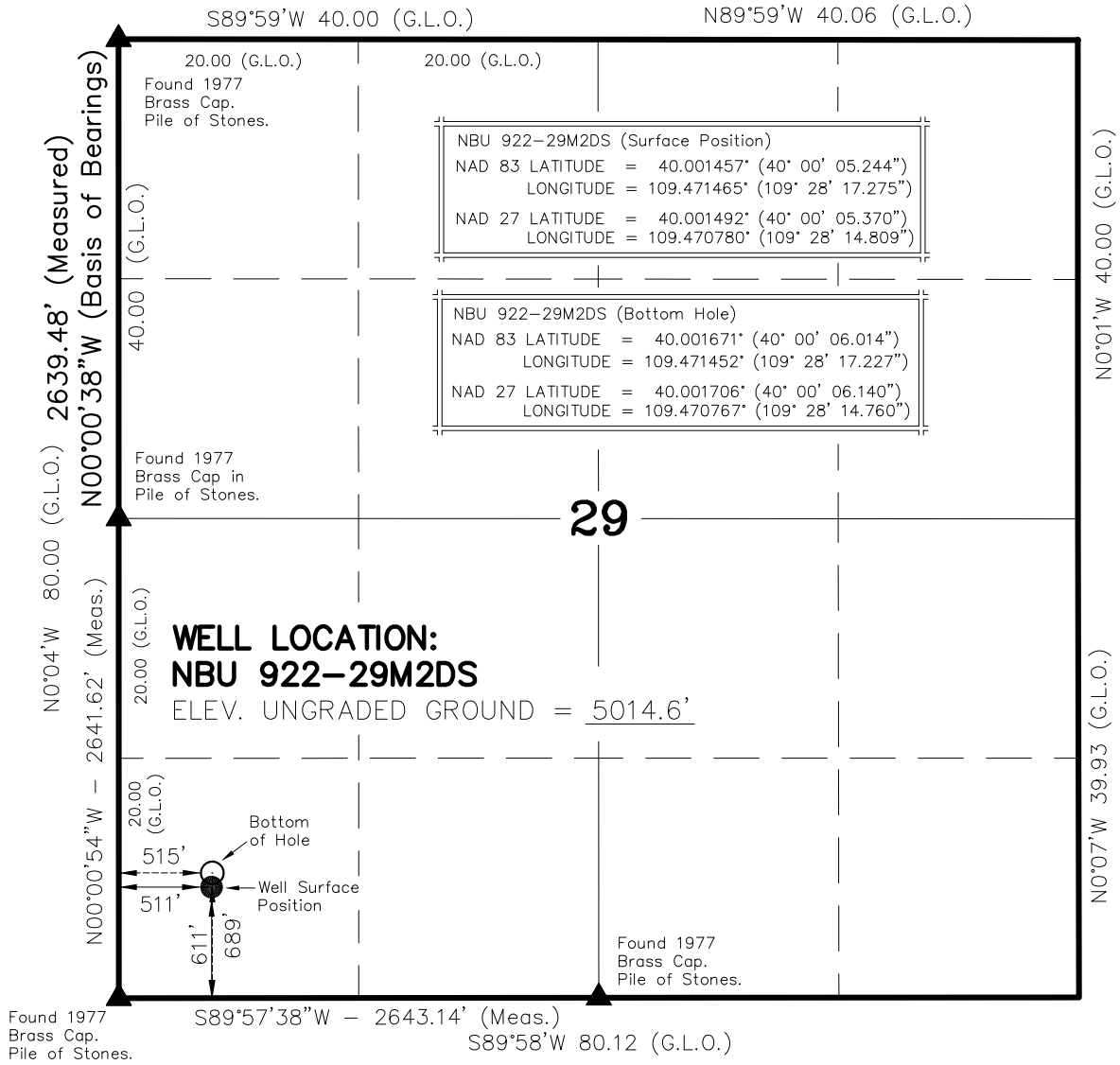
API NUMBER ASSIGNED	APPROVAL
43047503430000	Permit Manager

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Prod	7.875	4.5	0	9403		
Pipe	**Grade**	**Length**	**Weight**			
	Grade I-80 LT&C	9403	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			

'APIWellNo:43047503430000'

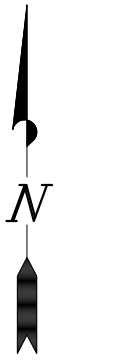
T9S, R22E, S.L.B.&M.

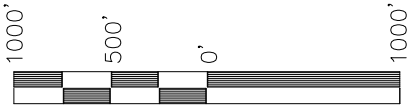


NOTES:

▲ = 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 N02°47'43"E 78.05' 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'.

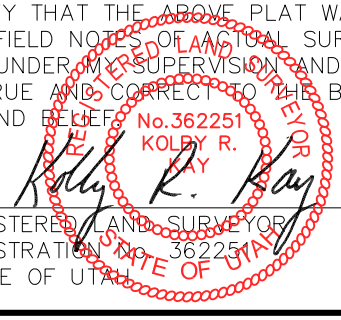




SCALE

SURVEYOR'S CERTIFICATE

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



REGISTERED LAND SURVEYOR
REGISTRATION No. 362251
STATE OF UTAH

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

NBU 922-29M2DS
WELL PLAT
689' FSL, 515' FWL (Bottom Hole)
SW ¼ SW ¼ OF 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

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
DATE DRAWN: 01-29-09	DRAWN BY: M.W.W.	1
SCALE: 1" = 1000'	Date Last Revised: 02-24-09	OF 12

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-29M PAD
NBU 922-29M2DS

NBU 922-29M2DS

Plan: Design #1

Standard Planning Report

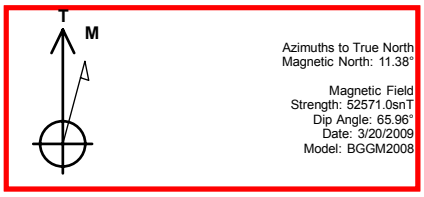
25 March, 2009

'APIWellNo:43047503430000'

Anadarko E&P Company LP

NBU 922-29M2DS
UINTAH COUNTY, UTAH (nad 27)
SECTION 29 T9S R22E
611' FSL, 511' FWL
40° 0' 5.371 N
109° 28' 14.808 W

Weatherford



WELL DETAILS: NBU 922-29M2DS

Ground Level: 5012.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	14530261.95	2068687.05	40° 0' 5.371 N	109° 28' 14.808 W	

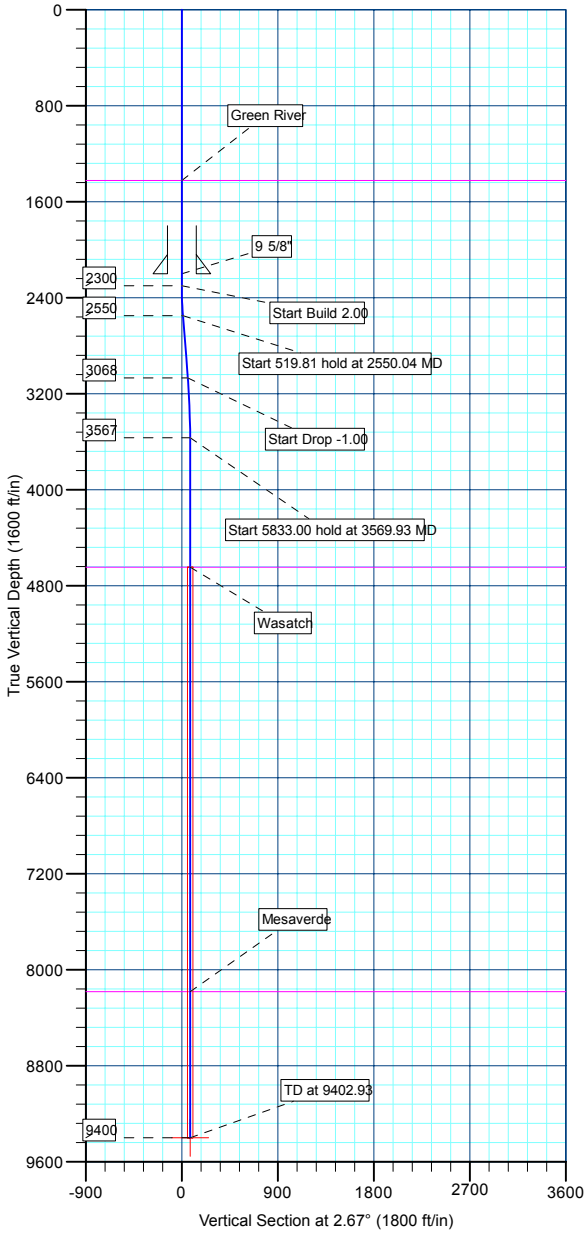
WELLBORE TARGET DETAILS (LAT/LONG)

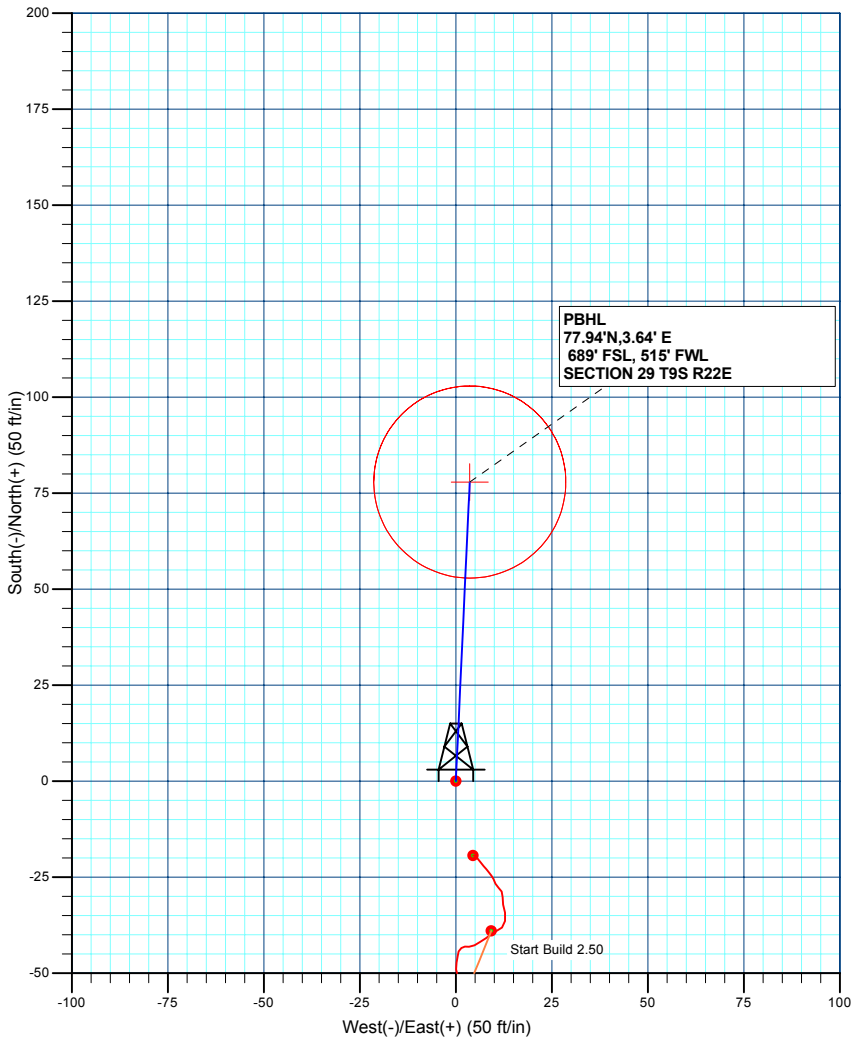
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9400.00	77.94	3.64	40° 0' 6.142 N	109° 28' 14.761 W	Circle (Radius: 25.00)

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	
2550.04	5.00	2.67	2549.72	10.89	0.51	2.00	2.67	10.90	
3069.85	5.00	2.67	3067.56	56.16	2.62	0.00	0.00	56.22	
3569.93	0.00	0.00	3567.00	77.94	3.64	1.00	180.00	78.03	
9402.93	0.00	0.00	9400.00	77.94	3.64	0.00	0.00	78.03	PBHL_NBU 922-29M2DS

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





FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1423.00	1423.00	Green River
4645.00	4647.93	Wasatch
8183.00	8185.93	Mesaverde

CASING DETAILS

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

Plan: Design #1 (NBU 922-29M2DS/NBU 922-29M2DS)

Created By: Robert H. Scott

Weatherford International Ltd.

Planning Report

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-29M2DS		
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 922-29M2DS

Well Position	**+N/-S**	58.64 ft	**Northing:**	14,530,261.95 ft	**Latitude:**	40° 0' 5.371 N
	+E/-W	-13.73 ft	**Easting:**	2,068,687.05 ft	**Longitude:**	109° 28' 14.808 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,012.00 ft

Wellbore NBU 922-29M2DS

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	2.67

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	
2,550.04	5.00	2.67	2,549.72	10.89	0.51	2.00	2.00	0.00	2.67	
3,069.85	5.00	2.67	3,067.56	56.16	2.62	0.00	0.00	0.00	0.00	
3,569.93	0.00	0.00	3,567.00	77.94	3.64	1.00	-1.00	0.00	180.00	
9,402.93	0.00	0.00	9,400.00	77.94	3.64	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 922-29M2DS
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Site:	NBU 922-29M PAD	**North Reference:**	True
Well:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-29M2DS		
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 2.00									
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	2.00	2.67	2,399.98	1.74	0.08	1.75	2.00	2.00	0.00
2,500.00	4.00	2.67	2,499.84	6.97	0.33	6.98	2.00	2.00	0.00
Start 519.81 hold at 2550.04 MD									
2,550.04	5.00	2.67	2,549.72	10.89	0.51	10.90	2.00	2.00	0.00
2,600.00	5.00	2.67	2,599.49	15.24	0.71	15.26	0.00	0.00	0.00
2,700.00	5.00	2.67	2,699.11	23.95	1.12	23.98	0.00	0.00	0.00
2,800.00	5.00	2.67	2,798.73	32.66	1.53	32.69	0.00	0.00	0.00
2,900.00	5.00	2.67	2,898.35	41.37	1.93	41.41	0.00	0.00	0.00
3,000.00	5.00	2.67	2,997.97	50.07	2.34	50.13	0.00	0.00	0.00
Start Drop -1.00									
3,069.85	5.00	2.67	3,067.56	56.16	2.62	56.22	0.00	0.00	0.00
3,100.00	4.70	2.67	3,097.60	58.70	2.74	58.77	1.00	-1.00	0.00
3,200.00	3.70	2.67	3,197.33	66.02	3.08	66.09	1.00	-1.00	0.00
3,300.00	2.70	2.67	3,297.17	71.59	3.34	71.67	1.00	-1.00	0.00
3,400.00	1.70	2.67	3,397.09	75.42	3.52	75.51	1.00	-1.00	0.00
3,500.00	0.70	2.67	3,497.07	77.51	3.62	77.60	1.00	-1.00	0.00
Start 5833.00 hold at 3569.93 MD									
3,569.93	0.00	0.00	3,567.00	77.94	3.64	78.03	1.00	-1.00	0.00
3,600.00	0.00	0.00	3,597.07	77.94	3.64	78.03	0.00	0.00	0.00
3,700.00	0.00	0.00	3,697.07	77.94	3.64	78.03	0.00	0.00	0.00
3,800.00	0.00	0.00	3,797.07	77.94	3.64	78.03	0.00	0.00	0.00
3,900.00	0.00	0.00	3,897.07	77.94	3.64	78.03	0.00	0.00	0.00
4,000.00	0.00	0.00	3,997.07	77.94	3.64	78.03	0.00	0.00	0.00
4,100.00	0.00	0.00	4,097.07	77.94	3.64	78.03	0.00	0.00	0.00
4,200.00	0.00	0.00	4,197.07	77.94	3.64	78.03	0.00	0.00	0.00
4,300.00	0.00	0.00	4,297.07	77.94	3.64	78.03	0.00	0.00	0.00
4,400.00	0.00	0.00	4,397.07	77.94	3.64	78.03	0.00	0.00	0.00
4,500.00	0.00	0.00	4,497.07	77.94	3.64	78.03	0.00	0.00	0.00
4,600.00	0.00	0.00	4,597.07	77.94	3.64	78.03	0.00	0.00	0.00
Wasatch									
4,647.93	0.00	0.00	4,645.00	77.94	3.64	78.03	0.00	0.00	0.00
4,700.00	0.00	0.00	4,697.07	77.94	3.64	78.03	0.00	0.00	0.00
4,800.00	0.00	0.00	4,797.07	77.94	3.64	78.03	0.00	0.00	0.00
4,900.00	0.00	0.00	4,897.07	77.94	3.64	78.03	0.00	0.00	0.00
5,000.00	0.00	0.00	4,997.07	77.94	3.64	78.03	0.00	0.00	0.00
5,100.00	0.00	0.00	5,097.07	77.94	3.64	78.03	0.00	0.00	0.00
5,200.00	0.00	0.00	5,197.07	77.94	3.64	78.03	0.00	0.00	0.00
5,300.00	0.00	0.00	5,297.07	77.94	3.64	78.03	0.00	0.00	0.00
5,400.00	0.00	0.00	5,397.07	77.94	3.64	78.03	0.00	0.00	0.00
5,500.00	0.00	0.00	5,497.07	77.94	3.64	78.03	0.00	0.00	0.00
5,600.00	0.00	0.00	5,597.07	77.94	3.64	78.03	0.00	0.00	0.00
5,700.00	0.00	0.00	5,697.07	77.94	3.64	78.03	0.00	0.00	0.00
5,800.00	0.00	0.00	5,797.07	77.94	3.64	78.03	0.00	0.00	0.00
5,900.00	0.00	0.00	5,897.07	77.94	3.64	78.03	0.00	0.00	0.00
6,000.00	0.00	0.00	5,997.07	77.94	3.64	78.03	0.00	0.00	0.00
6,100.00	0.00	0.00	6,097.07	77.94	3.64	78.03	0.00	0.00	0.00
6,200.00	0.00	0.00	6,197.07	77.94	3.64	78.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,297.07	77.94	3.64	78.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,397.07	77.94	3.64	78.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,497.07	77.94	3.64	78.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,597.07	77.94	3.64	78.03	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-29M2DS		
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	6,697.07	77.94	3.64	78.03	0.00	0.00	0.00
6,800.00	0.00	0.00	6,797.07	77.94	3.64	78.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,897.07	77.94	3.64	78.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,997.07	77.94	3.64	78.03	0.00	0.00	0.00
7,100.00	0.00	0.00	7,097.07	77.94	3.64	78.03	0.00	0.00	0.00
7,200.00	0.00	0.00	7,197.07	77.94	3.64	78.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,297.07	77.94	3.64	78.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,397.07	77.94	3.64	78.03	0.00	0.00	0.00
7,500.00	0.00	0.00	7,497.07	77.94	3.64	78.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,597.07	77.94	3.64	78.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,697.07	77.94	3.64	78.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,797.07	77.94	3.64	78.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,897.07	77.94	3.64	78.03	0.00	0.00	0.00
8,000.00	0.00	0.00	7,997.07	77.94	3.64	78.03	0.00	0.00	0.00
8,100.00	0.00	0.00	8,097.07	77.94	3.64	78.03	0.00	0.00	0.00
Mesaverde									
8,185.93	0.00	0.00	8,183.00	77.94	3.64	78.03	0.00	0.00	0.00
8,200.00	0.00	0.00	8,197.07	77.94	3.64	78.03	0.00	0.00	0.00
8,300.00	0.00	0.00	8,297.07	77.94	3.64	78.03	0.00	0.00	0.00
8,400.00	0.00	0.00	8,397.07	77.94	3.64	78.03	0.00	0.00	0.00
8,500.00	0.00	0.00	8,497.07	77.94	3.64	78.03	0.00	0.00	0.00
8,600.00	0.00	0.00	8,597.07	77.94	3.64	78.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,697.07	77.94	3.64	78.03	0.00	0.00	0.00
8,800.00	0.00	0.00	8,797.07	77.94	3.64	78.03	0.00	0.00	0.00
8,900.00	0.00	0.00	8,897.07	77.94	3.64	78.03	0.00	0.00	0.00
9,000.00	0.00	0.00	8,997.07	77.94	3.64	78.03	0.00	0.00	0.00
9,100.00	0.00	0.00	9,097.07	77.94	3.64	78.03	0.00	0.00	0.00
9,200.00	0.00	0.00	9,197.07	77.94	3.64	78.03	0.00	0.00	0.00
9,300.00	0.00	0.00	9,297.07	77.94	3.64	78.03	0.00	0.00	0.00
9,400.00	0.00	0.00	9,397.07	77.94	3.64	78.03	0.00	0.00	0.00
PBHL_NBU 922-29M2DS									
9,402.93	0.00	0.00	9,400.00	77.94	3.64	78.03	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NBU 922-29M2	0.00	0.00	9,400.00	77.94	3.64	14,530,339.94	2,068,689.35	40° 0' 6.142 N	109° 28' 14.761 W
- plan hits target center									
- Circle (radius 25.00)									

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 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 922-29M2DS		
Design:	Design #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,423.00	1,423.00	Green River			
4,647.93	4,645.00	Wasatch			
8,185.93	8,183.00	Mesaverde			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,300.00	2,300.00	0.00	0.00	Start Build 2.00
2,550.04	2,549.72	10.89	0.51	Start 519.81 hold at 2550.04 MD
3,069.85	3,067.56	56.16	2.62	Start Drop -1.00
3,569.93	3,567.00	77.94	3.64	Start 5833.00 hold at 3569.93 MD
9,402.93	9,400.00	77.94	3.64	TD at 9402.93

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-29M PAD
NBU 922-29M2DS

NBU 922-29M2DS
Design #1

Anticollision Report

25 March, 2009

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**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	9,402.93	Design #1 (NBU 922-29M2DS)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
NBU 922-29M PAD						
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	0.00	0.00	19.82			
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	100.00	99.93	19.99	19.79	99.403	ES
NBU 922-29M EXISTING - NBU 922-29M EXISTING - N	2,301.03	2,301.30	43.11	33.11	4.311	SF
NBU 922-29M3CS - NBU 922-29M3CS - Design #1	2,300.00	2,300.00	40.05	29.98	3.976	CC, ES, SF
NBU 922-29M4DS - NBU 922-29M4DS - Design #1	2,300.00	2,300.00	60.22	50.15	5.978	CC, 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	166.93	-19.30	4.48	19.82				
100.00	100.00	99.93	99.93	0.09	0.11	165.77	-19.37	4.91	19.99	19.79	0.20	99.403	ES
200.00	200.00	199.74	199.73	0.32	0.35	164.26	-20.02	5.64	20.80	20.13	0.67	31.014	
300.00	300.00	299.76	299.75	0.54	0.61	163.08	-21.06	6.41	22.02	20.87	1.15	19.134	
400.00	400.00	399.73	399.71	0.77	0.87	161.87	-22.07	7.23	23.23	21.59	1.64	14.185	
500.00	500.00	499.85	499.82	0.99	1.13	160.89	-22.89	7.93	24.23	22.10	2.13	11.398	
600.00	600.00	599.71	599.67	1.22	1.40	160.07	-23.72	8.60	25.24	22.62	2.61	9.663	
700.00	700.00	699.84	699.80	1.44	1.66	159.38	-24.58	9.25	26.27	23.17	3.10	8.475	
800.00	800.00	799.69	799.64	1.67	1.92	158.96	-25.48	9.80	27.30	23.72	3.58	7.621	
900.00	900.00	899.68	899.63	1.89	2.18	158.82	-26.67	10.33	28.61	24.54	4.07	7.037	
1,000.00	1,000.00	999.71	999.64	2.12	2.44	158.15	-27.71	11.11	29.86	25.30	4.55	6.557	
1,100.00	1,100.00	1,099.67	1,099.60	2.34	2.70	157.50	-28.74	11.90	31.11	26.06	5.04	6.169	
1,200.00	1,200.00	1,199.57	1,199.49	2.56	2.95	158.04	-30.17	12.16	32.53	27.02	5.51	5.903	
1,300.00	1,300.00	1,299.36	1,299.26	2.79	3.19	158.99	-32.10	12.33	34.39	28.42	5.98	5.754	
1,400.00	1,400.00	1,399.33	1,399.21	3.01	3.45	159.45	-34.22	12.83	36.56	30.10	6.46	5.661	
1,500.00	1,500.00	1,499.44	1,499.29	3.24	3.69	160.54	-36.34	12.84	38.55	31.63	6.92	5.569	
1,600.00	1,600.00	1,599.78	1,599.61	3.46	3.89	162.47	-38.09	12.03	39.95	32.60	7.35	5.437	
1,700.00	1,700.00	1,700.20	1,700.02	3.69	4.03	164.74	-38.98	10.63	40.41	32.69	7.71	5.240	
1,704.28	1,704.28	1,704.46	1,704.28	3.70	4.03	164.85	-39.00	10.56	40.40	32.68	7.73	5.229	
1,800.00	1,800.00	1,799.81	1,799.62	3.91	4.17	167.01	-39.81	9.18	40.86	32.78	8.08	5.057	
1,900.00	1,900.00	1,899.97	1,899.76	4.14	4.34	169.18	-40.87	7.81	41.61	33.14	8.48	4.909	
2,000.00	2,000.00	1,999.90	1,999.67	4.36	4.51	171.37	-41.81	6.34	42.29	33.42	8.87	4.766	

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

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,100.00	2,100.00	2,099.96	2,099.72	4.59	4.69	173.51	-42.73	4.86	43.01	33.73	9.28	4.636	
2,200.00	2,200.00	2,200.34	2,200.09	4.81	4.84	175.44	-43.10	3.44	43.23	33.59	9.65	4.482	
2,300.00	2,300.00	2,300.28	2,300.02	5.04	4.96	176.87	-43.04	2.35	43.11	33.11	10.00	4.313	
2,301.03	2,301.03	2,301.30	2,301.04	5.04	4.96	174.21	-43.04	2.34	43.11	33.11	10.00	4.311	SF
2,400.00	2,399.98	2,400.00	2,399.74	5.26	5.14	175.65	-43.45	1.40	45.21	34.82	10.39	4.352	
2,500.00	2,499.84	2,499.69	2,499.42	5.49	5.37	176.87	-44.25	0.73	51.23	40.40	10.83	4.732	
2,550.04	2,549.72	2,549.29	2,549.02	5.60	5.50	177.24	-44.77	0.58	55.66	44.61	11.05	5.037	
2,600.00	2,599.49	2,598.73	2,598.45	5.71	5.63	177.55	-45.50	0.47	60.76	49.47	11.29	5.381	
2,700.00	2,699.11	2,698.19	2,697.89	5.94	5.89	178.07	-47.22	0.18	71.18	59.41	11.77	6.046	
2,800.00	2,798.73	2,797.63	2,797.32	6.17	6.14	178.32	-48.93	0.09	81.61	69.35	12.26	6.659	
2,900.00	2,898.35	2,896.01	2,895.67	6.40	6.40	178.17	-51.19	0.56	92.61	79.87	12.73	7.273	
3,000.00	2,997.97	2,994.75	2,994.36	6.64	6.65	178.13	-54.35	0.84	104.49	91.28	13.21	7.907	
3,069.85	3,067.56	3,064.05	3,063.62	6.81	6.84	178.30	-56.76	0.68	113.00	99.44	13.55	8.337	
3,100.00	3,097.60	3,093.98	3,093.53	6.87	6.92	178.35	-57.80	0.63	116.59	102.89	13.70	8.512	
3,200.00	3,197.33	3,193.39	3,192.88	7.06	7.18	178.45	-61.27	0.56	127.38	113.24	14.14	9.007	
3,300.00	3,297.17	3,292.70	3,292.13	7.25	7.44	178.48	-64.83	0.59	136.54	121.95	14.59	9.359	
3,400.00	3,397.09	3,392.11	3,391.46	7.43	7.70	178.47	-68.60	0.64	144.17	129.13	15.03	9.590	
3,500.00	3,497.07	3,491.30	3,490.57	7.62	7.96	178.45	-72.68	0.66	150.36	134.89	15.48	9.716	
3,569.93	3,567.00	3,560.68	3,559.88	7.74	8.15	-178.87	-75.78	0.60	153.92	138.13	15.78	9.751	
3,600.00	3,597.07	3,590.51	3,589.68	7.80	8.23	-178.86	-77.18	0.55	155.33	139.40	15.92	9.755	
3,700.00	3,697.07	3,690.02	3,689.07	8.02	8.49	-178.85	-82.04	0.44	160.21	143.80	16.41	9.764	
3,800.00	3,797.07	3,789.54	3,788.46	8.24	8.75	-178.91	-87.11	0.49	165.31	148.41	16.89	9.786	
3,900.00	3,897.07	3,889.37	3,888.15	8.46	9.02	-178.96	-92.33	0.55	170.53	153.15	17.38	9.813	
4,000.00	3,997.07	3,989.23	3,987.88	8.68	9.28	-178.93	-97.55	0.37	175.76	157.90	17.87	9.838	
4,100.00	4,097.07	4,089.09	4,087.60	8.90	9.55	-178.88	-102.77	0.12	180.99	162.64	18.35	9.862	
4,200.00	4,197.07	4,188.95	4,187.33	9.12	9.81	-178.89	-107.99	0.04	186.22	167.38	18.84	9.885	
4,300.00	4,297.07	4,288.82	4,287.06	9.35	10.08	-178.90	-113.21	-0.03	191.45	172.13	19.33	9.907	
4,400.00	4,397.07	4,388.70	4,386.80	9.57	10.35	-178.84	-118.43	-0.33	196.68	176.86	19.81	9.927	
4,500.00	4,497.07	4,488.55	4,486.52	9.79	10.61	-178.75	-123.64	-0.74	201.90	181.60	20.30	9.946	
4,600.00	4,597.07	4,588.41	4,586.24	10.01	10.88	-178.69	-128.85	-1.07	207.13	186.34	20.79	9.964	
4,700.00	4,697.07	4,689.10	4,686.80	10.23	11.15	-178.64	-133.94	-1.38	212.19	190.91	21.28	9.973	
4,800.00	4,797.07	4,789.95	4,787.54	10.45	11.42	-178.57	-138.59	-1.75	216.81	195.04	21.77	9.960	
4,900.00	4,897.07	4,889.97	4,887.47	10.68	11.68	-178.49	-142.93	-2.20	221.16	198.90	22.26	9.937	
5,000.00	4,997.07	4,989.90	4,987.30	10.90	11.95	-178.37	-147.25	-2.76	225.49	202.75	22.74	9.915	
5,100.00	5,097.07	5,089.42	5,086.72	11.12	12.21	-178.22	-151.62	-3.48	229.90	206.67	23.23	9.897	
5,200.00	5,197.07	5,188.87	5,186.06	11.34	12.48	-178.03	-156.16	-4.40	234.50	210.79	23.71	9.888	
5,300.00	5,297.07	5,288.22	5,285.29	11.57	12.74	-177.83	-160.90	-5.42	239.31	215.11	24.20	9.889	
5,400.00	5,397.07	5,387.54	5,384.49	11.79	13.00	-177.64	-165.87	-6.41	244.34	219.66	24.69	9.898	
5,500.00	5,497.07	5,487.35	5,484.16	12.01	13.27	-177.46	-171.00	-7.40	249.52	224.34	25.17	9.912	
5,600.00	5,597.07	5,587.24	5,583.91	12.23	13.54	-177.27	-176.12	-8.45	254.69	229.03	25.66	9.926	
5,700.00	5,697.07	5,687.63	5,684.17	12.46	13.80	-177.08	-181.17	-9.55	259.77	233.62	26.15	9.935	
5,800.00	5,797.07	5,788.12	5,784.53	12.68	14.07	-176.89	-185.99	-10.70	264.62	237.98	26.64	9.935	
5,900.00	5,897.07	5,887.46	5,883.76	12.90	14.33	-176.72	-190.72	-11.73	269.43	242.31	27.12	9.934	
6,000.00	5,997.07	5,986.64	5,982.81	13.13	14.60	-176.64	-195.71	-12.43	274.50	246.89	27.61	9.943	
6,100.00	6,097.07	6,086.40	6,082.43	13.35	14.87	-176.61	-200.91	-12.86	279.73	251.63	28.10	9.956	
6,200.00	6,197.07	6,186.26	6,182.16	13.57	15.13	-176.61	-206.13	-13.17	284.96	256.37	28.58	9.969	
6,300.00	6,297.07	6,286.18	6,281.94	13.80	15.40	-176.65	-211.35	-13.28	290.18	261.11	29.07	9.981	
6,400.00	6,397.07	6,386.11	6,381.74	14.02	15.67	-176.75	-216.57	-13.08	295.39	265.82	29.56	9.992	
6,500.00	6,497.07	6,485.93	6,481.42	14.24	15.93	-176.85	-221.78	-12.84	300.58	270.53	30.05	10.003	
6,600.00	6,597.07	6,585.73	6,581.08	14.46	16.20	-176.87	-226.99	-13.02	305.80	275.26	30.54	10.014	
6,700.00	6,697.07	6,686.19	6,681.41	14.69	16.47	-176.84	-232.14	-13.50	310.95	279.92	31.03	10.022	
6,800.00	6,797.07	6,786.78	6,781.87	14.91	16.74	-176.78	-237.07	-14.10	315.87	284.35	31.52	10.022	

’APIWellNo:43047503430000’

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,900.00	6,897.07	6,887.37	6,882.35	15.14	17.01	-176.71	-241.76	-14.76	320.57	288.56	32.01	10.015	
7,000.00	6,997.07	6,987.98	6,982.86	15.36	17.28	-176.64	-246.24	-15.40	325.05	292.55	32.50	10.002	
7,100.00	7,097.07	7,086.73	7,081.50	15.58	17.54	-176.57	-250.67	-16.05	329.57	296.58	32.99	9.991	
7,200.00	7,197.07	7,185.18	7,179.84	15.81	17.80	-176.50	-255.50	-16.75	334.50	301.03	33.47	9.994	
7,300.00	7,297.07	7,284.83	7,279.36	16.03	18.07	-176.45	-260.66	-17.35	339.71	305.76	33.96	10.004	
7,400.00	7,397.07	7,384.70	7,379.08	16.25	18.34	-176.48	-265.87	-17.52	344.93	310.48	34.45	10.013	
7,500.00	7,497.07	7,485.31	7,479.56	16.48	18.60	-176.57	-271.04	-17.30	350.05	315.12	34.94	10.020	
7,600.00	7,597.07	7,586.08	7,580.21	16.70	18.87	-176.69	-275.99	-16.85	354.93	319.50	35.43	10.019	
7,700.00	7,697.07	7,684.83	7,678.84	16.92	19.13	-176.83	-280.85	-16.20	359.80	323.89	35.91	10.020	
7,800.00	7,797.07	7,783.21	7,777.08	17.15	19.39	-177.00	-286.08	-15.41	365.07	328.68	36.39	10.032	
7,900.00	7,897.07	7,884.75	7,878.46	17.37	19.66	-177.22	-291.55	-14.28	370.39	333.51	36.88	10.043	
8,000.00	7,997.07	7,900.00	7,893.69	17.60	19.70	-177.26	-292.32	-14.06	384.83	347.69	37.14	10.361	
8,100.00	8,097.07	7,900.00	7,893.69	17.82	19.70	-177.26	-292.32	-14.06	422.81	385.44	37.37	11.315	
8,200.00	8,197.07	7,900.00	7,893.69	18.04	19.70	-177.26	-292.32	-14.06	479.00	441.41	37.59	12.742	
8,300.00	8,297.07	7,900.00	7,893.69	18.27	19.70	-177.26	-292.32	-14.06	547.83	510.02	37.82	14.487	
8,400.00	8,397.07	7,900.00	7,893.69	18.49	19.70	-177.26	-292.32	-14.06	625.14	587.10	38.04	16.433	
8,500.00	8,497.07	7,900.00	7,893.69	18.72	19.70	-177.26	-292.32	-14.06	708.15	669.88	38.27	18.506	
8,600.00	8,597.07	7,900.00	7,893.69	18.94	19.70	-177.26	-292.32	-14.06	795.08	756.59	38.49	20.657	
8,700.00	8,697.07	7,900.00	7,893.69	19.16	19.70	-177.26	-292.32	-14.06	884.77	846.06	38.71	22.854	
8,800.00	8,797.07	7,900.00	7,893.69	19.39	19.70	-177.26	-292.32	-14.06	976.47	937.53	38.94	25.077	
8,900.00	8,897.07	7,900.00	7,893.69	19.61	19.70	-177.26	-292.32	-14.06	1,069.66	1,030.50	39.16	27.313	
9,000.00	8,997.07	7,900.00	7,893.69	19.83	19.70	-177.26	-292.32	-14.06	1,163.98	1,124.59	39.39	29.552	
9,100.00	9,097.07	7,900.00	7,893.69	20.06	19.70	-177.26	-292.32	-14.06	1,259.18	1,219.56	39.61	31.787	
9,200.00	9,197.07	7,900.00	7,893.69	20.28	19.70	-177.26	-292.32	-14.06	1,355.07	1,315.23	39.84	34.015	
9,300.00	9,297.07	7,900.00	7,893.69	20.51	19.70	-177.26	-292.32	-14.06	1,451.51	1,411.45	40.06	36.232	
9,402.93	9,400.00	7,900.00	7,893.69	20.74	19.70	-177.26	-292.32	-14.06	1,551.25	1,510.96	40.29	38.500	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-29M PAD - NBU 922-29M3CS - NBU 922-29M3CS - Design #1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	166.66	-38.97	9.24	40.05				
100.00	100.00	100.00	100.00	0.09	0.09	166.66	-38.97	9.24	40.05	39.87	0.18	217.309	
200.00	200.00	200.00	200.00	0.32	0.32	166.66	-38.97	9.24	40.05	39.42	0.63	63.189	
300.00	300.00	300.00	300.00	0.54	0.54	166.66	-38.97	9.24	40.05	38.97	1.08	36.970	
400.00	400.00	400.00	400.00	0.77	0.77	166.66	-38.97	9.24	40.05	38.52	1.53	26.128	
500.00	500.00	500.00	500.00	0.99	0.99	166.66	-38.97	9.24	40.05	38.07	1.98	20.203	
600.00	600.00	600.00	600.00	1.22	1.22	166.66	-38.97	9.24	40.05	37.62	2.43	16.469	
700.00	700.00	700.00	700.00	1.44	1.44	166.66	-38.97	9.24	40.05	37.17	2.88	13.900	
800.00	800.00	800.00	800.00	1.67	1.67	166.66	-38.97	9.24	40.05	36.72	3.33	12.024	
900.00	900.00	900.00	900.00	1.89	1.89	166.66	-38.97	9.24	40.05	36.27	3.78	10.594	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	166.66	-38.97	9.24	40.05	35.82	4.23	9.468	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	166.66	-38.97	9.24	40.05	35.37	4.68	8.559	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	166.66	-38.97	9.24	40.05	34.92	5.13	7.809	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	166.66	-38.97	9.24	40.05	34.47	5.58	7.179	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	166.66	-38.97	9.24	40.05	34.02	6.03	6.644	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	166.66	-38.97	9.24	40.05	33.57	6.48	6.183	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	166.66	-38.97	9.24	40.05	33.12	6.93	5.782	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	166.66	-38.97	9.24	40.05	32.68	7.38	5.429	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	166.66	-38.97	9.24	40.05	32.23	7.83	5.118	
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	166.66	-38.97	9.24	40.05	31.78	8.28	4.840	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	166.66	-38.97	9.24	40.05	31.33	8.73	4.590	
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	166.66	-38.97	9.24	40.05	30.88	9.17	4.365	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	166.66	-38.97	9.24	40.05	30.43	9.62	4.161	
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	166.66	-38.97	9.24	40.05	29.98	10.07	3.976	CC, ES, SF
2,400.00	2,399.98	2,398.44	2,398.41	5.26	5.23	166.20	-40.93	8.45	43.51	33.03	10.49	4.149	
2,500.00	2,499.84	2,495.99	2,495.76	5.49	5.40	171.12	-46.73	6.10	54.17	43.30	10.87	4.983	
2,550.04	2,549.72	2,544.20	2,543.74	5.60	5.49	173.68	-51.02	4.36	62.32	51.26	11.06	5.635	
2,600.00	2,599.49	2,591.88	2,591.09	5.71	5.57	176.01	-56.17	2.28	71.93	60.67	11.26	6.389	
2,700.00	2,699.11	2,686.02	2,684.20	5.94	5.75	179.82	-69.03	-2.93	94.26	82.60	11.66	8.085	
2,800.00	2,798.73	2,778.22	2,774.76	6.17	5.95	-177.31	-85.05	-9.42	120.62	108.56	12.06	10.000	
2,900.00	2,898.35	2,868.26	2,862.45	6.40	6.18	-175.10	-103.93	-17.07	150.87	138.40	12.47	12.103	
3,000.00	2,997.97	2,959.82	2,950.91	6.64	6.44	-173.36	-125.85	-25.94	184.29	171.41	12.87	14.315	
3,069.85	3,067.56	3,025.48	3,014.29	6.81	6.65	-172.44	-141.76	-32.39	207.93	194.77	13.16	15.797	
3,100.00	3,097.60	3,053.85	3,041.67	6.87	6.74	-172.12	-148.64	-35.17	218.07	204.79	13.28	16.416	
3,200.00	3,197.33	3,148.30	3,132.83	7.06	7.06	-171.19	-171.53	-44.44	250.70	237.04	13.66	18.355	
3,300.00	3,297.17	3,243.29	3,224.52	7.25	7.41	-170.43	-194.56	-53.77	281.74	267.70	14.04	20.068	
3,400.00	3,397.09	3,338.79	3,316.69	7.43	7.78	-169.78	-217.71	-63.15	311.19	296.76	14.43	21.571	
3,500.00	3,497.07	3,434.77	3,409.33	7.62	8.17	-169.19	-240.98	-72.57	339.03	324.21	14.82	22.878	
3,569.93	3,567.00	3,502.16	3,474.38	7.74	8.45	-166.12	-257.31	-79.18	357.54	342.44	15.10	23.686	
3,600.00	3,597.07	3,531.19	3,502.39	7.80	8.57	-165.95	-264.35	-82.03	365.33	350.11	15.22	24.001	
3,700.00	3,697.07	3,627.71	3,595.55	8.02	8.99	-165.42	-287.74	-91.51	391.26	375.60	15.66	24.980	
3,800.00	3,797.07	3,724.23	3,688.71	8.24	9.41	-164.95	-311.14	-100.99	417.22	401.11	16.11	25.902	
3,900.00	3,897.07	3,820.75	3,781.87	8.46	9.85	-164.54	-334.54	-110.46	443.20	426.65	16.56	26.770	
4,000.00	3,997.07	3,917.27	3,875.03	8.68	10.29	-164.17	-357.93	-119.94	469.20	452.20	17.01	27.590	
4,100.00	4,097.07	4,013.78	3,968.19	8.90	10.75	-163.84	-381.33	-129.41	495.22	477.76	17.46	28.364	
4,200.00	4,197.07	4,110.30	4,061.35	9.12	11.21	-163.55	-404.73	-138.89	521.25	503.34	17.92	29.095	
4,300.00	4,297.07	4,210.53	4,158.11	9.35	11.67	-163.27	-428.94	-148.70	547.22	528.84	18.38	29.768	
4,400.00	4,397.07	4,324.17	4,268.41	9.57	12.10	-163.01	-454.28	-158.96	571.18	552.30	18.88	30.248	
4,500.00	4,497.07	4,439.40	4,381.03	9.79	12.51	-162.80	-476.85	-168.10	592.25	572.86	19.38	30.553	
4,600.00	4,597.07	4,556.04	4,495.73	10.01	12.91	-162.63	-496.49	-176.05	610.35	590.47	19.88	30.695	
4,700.00	4,697.07	4,673.90	4,612.22	10.23	13.27	-162.49	-513.02	-182.75	625.44	605.06	20.38	30.685	
4,800.00	4,797.07	4,792.76	4,730.21	10.45	13.61	-162.39	-526.31	-188.13	637.47	616.59	20.88	30.534	

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

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-29M PAD - NBU 922-29M3CS - NBU 922-29M3CS - Design #1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,897.07	4,912.41	4,849.38	10.68	13.91	-162.32	-536.25	-192.15	646.40	625.04	21.37	30.255	
5,000.00	4,997.07	5,032.62	4,969.38	10.90	14.17	-162.27	-542.74	-194.78	652.22	630.37	21.85	29.854	
5,100.00	5,097.07	5,153.16	5,089.87	11.12	14.39	-162.25	-545.74	-196.00	654.89	632.57	22.32	29.345	
5,200.00	5,197.07	5,260.36	5,197.07	11.34	14.56	-162.25	-545.95	-196.08	655.08	632.33	22.76	28.788	
5,300.00	5,297.07	5,360.36	5,297.07	11.57	14.72	-162.25	-545.95	-196.08	655.08	631.90	23.18	28.257	
5,400.00	5,397.07	5,460.36	5,397.07	11.79	14.88	-162.25	-545.95	-196.08	655.08	631.47	23.61	27.744	
5,500.00	5,497.07	5,560.36	5,497.07	12.01	15.05	-162.25	-545.95	-196.08	655.08	631.04	24.04	27.249	
5,600.00	5,597.07	5,660.36	5,597.07	12.23	15.21	-162.25	-545.95	-196.08	655.08	630.61	24.47	26.770	
5,700.00	5,697.07	5,760.36	5,697.07	12.46	15.38	-162.25	-545.95	-196.08	655.08	630.18	24.90	26.307	
5,800.00	5,797.07	5,860.36	5,797.07	12.68	15.55	-162.25	-545.95	-196.08	655.08	629.75	25.33	25.859	
5,900.00	5,897.07	5,960.36	5,897.07	12.90	15.71	-162.25	-545.95	-196.08	655.08	629.32	25.76	25.426	
6,000.00	5,997.07	6,060.36	5,997.07	13.13	15.89	-162.25	-545.95	-196.08	655.08	628.88	26.20	25.006	
6,100.00	6,097.07	6,160.36	6,097.07	13.35	16.06	-162.25	-545.95	-196.08	655.08	628.45	26.63	24.600	
6,200.00	6,197.07	6,260.36	6,197.07	13.57	16.23	-162.25	-545.95	-196.08	655.08	628.02	27.06	24.205	
6,300.00	6,297.07	6,360.36	6,297.07	13.80	16.41	-162.25	-545.95	-196.08	655.08	627.58	27.50	23.823	
6,400.00	6,397.07	6,460.36	6,397.07	14.02	16.58	-162.25	-545.95	-196.08	655.08	627.15	27.93	23.453	
6,500.00	6,497.07	6,560.36	6,497.07	14.24	16.76	-162.25	-545.95	-196.08	655.08	626.71	28.37	23.093	
6,600.00	6,597.07	6,660.36	6,597.07	14.46	16.94	-162.25	-545.95	-196.08	655.08	626.28	28.80	22.744	
6,700.00	6,697.07	6,760.36	6,697.07	14.69	17.12	-162.25	-545.95	-196.08	655.08	625.84	29.24	22.405	
6,800.00	6,797.07	6,860.36	6,797.07	14.91	17.30	-162.25	-545.95	-196.08	655.08	625.41	29.67	22.076	
6,900.00	6,897.07	6,960.36	6,897.07	15.14	17.48	-162.25	-545.95	-196.08	655.08	624.97	30.11	21.755	
7,000.00	6,997.07	7,060.36	6,997.07	15.36	17.66	-162.25	-545.95	-196.08	655.08	624.53	30.55	21.444	
7,100.00	7,097.07	7,160.36	7,097.07	15.58	17.84	-162.25	-545.95	-196.08	655.08	624.10	30.99	21.142	
7,200.00	7,197.07	7,260.36	7,197.07	15.81	18.03	-162.25	-545.95	-196.08	655.08	623.66	31.42	20.847	
7,300.00	7,297.07	7,360.36	7,297.07	16.03	18.21	-162.25	-545.95	-196.08	655.08	623.22	31.86	20.560	
7,400.00	7,397.07	7,460.36	7,397.07	16.25	18.40	-162.25	-545.95	-196.08	655.08	622.78	32.30	20.281	
7,500.00	7,497.07	7,560.36	7,497.07	16.48	18.59	-162.25	-545.95	-196.08	655.08	622.34	32.74	20.010	
7,600.00	7,597.07	7,660.36	7,597.07	16.70	18.77	-162.25	-545.95	-196.08	655.08	621.90	33.18	19.745	
7,700.00	7,697.07	7,760.36	7,697.07	16.92	18.96	-162.25	-545.95	-196.08	655.08	621.47	33.62	19.487	
7,800.00	7,797.07	7,860.36	7,797.07	17.15	19.15	-162.25	-545.95	-196.08	655.08	621.03	34.06	19.235	
7,900.00	7,897.07	7,960.36	7,897.07	17.37	19.34	-162.25	-545.95	-196.08	655.08	620.59	34.50	18.990	
8,000.00	7,997.07	8,060.36	7,997.07	17.60	19.53	-162.25	-545.95	-196.08	655.08	620.15	34.94	18.751	
8,100.00	8,097.07	8,160.36	8,097.07	17.82	19.72	-162.25	-545.95	-196.08	655.08	619.71	35.38	18.518	
8,200.00	8,197.07	8,260.36	8,197.07	18.04	19.92	-162.25	-545.95	-196.08	655.08	619.27	35.82	18.290	
8,300.00	8,297.07	8,360.36	8,297.07	18.27	20.11	-162.25	-545.95	-196.08	655.08	618.82	36.26	18.068	
8,400.00	8,397.07	8,460.36	8,397.07	18.49	20.30	-162.25	-545.95	-196.08	655.08	618.38	36.70	17.851	
8,500.00	8,497.07	8,560.36	8,497.07	18.72	20.50	-162.25	-545.95	-196.08	655.08	617.94	37.14	17.639	
8,600.00	8,597.07	8,660.36	8,597.07	18.94	20.69	-162.25	-545.95	-196.08	655.08	617.50	37.58	17.432	
8,700.00	8,697.07	8,760.36	8,697.07	19.16	20.89	-162.25	-545.95	-196.08	655.08	617.06	38.02	17.229	
8,800.00	8,797.07	8,860.36	8,797.07	19.39	21.08	-162.25	-545.95	-196.08	655.08	616.62	38.46	17.031	
8,900.00	8,897.07	8,960.36	8,897.07	19.61	21.28	-162.25	-545.95	-196.08	655.08	616.18	38.91	16.838	
9,000.00	8,997.07	9,060.36	8,997.07	19.83	21.48	-162.25	-545.95	-196.08	655.08	615.73	39.35	16.649	
9,100.00	9,097.07	9,160.36	9,097.07	20.06	21.67	-162.25	-545.95	-196.08	655.08	615.29	39.79	16.464	
9,200.00	9,197.07	9,260.36	9,197.07	20.28	21.87	-162.25	-545.95	-196.08	655.08	614.85	40.23	16.283	
9,300.00	9,297.07	9,360.36	9,297.07	20.51	22.07	-162.25	-545.95	-196.08	655.08	614.41	40.67	16.105	
9,402.93	9,400.00	9,463.29	9,400.00	20.74	22.28	-162.25	-545.95	-196.08	655.08	613.95	41.13	15.927	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-29M PAD - NBU 922-29M4DS - NBU 922-29M4DS - Design #1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	166.83	-58.64	13.73	60.22				
100.00	100.00	100.00	100.00	0.09	0.09	166.83	-58.64	13.73	60.22	60.04	0.18	326.751	
200.00	200.00	200.00	200.00	0.32	0.32	166.83	-58.64	13.73	60.22	59.59	0.63	95.013	
300.00	300.00	300.00	300.00	0.54	0.54	166.83	-58.64	13.73	60.22	59.14	1.08	55.588	
400.00	400.00	400.00	400.00	0.77	0.77	166.83	-58.64	13.73	60.22	58.69	1.53	39.287	
500.00	500.00	500.00	500.00	0.99	0.99	166.83	-58.64	13.73	60.22	58.24	1.98	30.378	
600.00	600.00	600.00	600.00	1.22	1.22	166.83	-58.64	13.73	60.22	57.79	2.43	24.763	
700.00	700.00	700.00	700.00	1.44	1.44	166.83	-58.64	13.73	60.22	57.34	2.88	20.900	
800.00	800.00	800.00	800.00	1.67	1.67	166.83	-58.64	13.73	60.22	56.89	3.33	18.079	
900.00	900.00	900.00	900.00	1.89	1.89	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-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	166.83	-58.64	13.73	60.22	50.15	10.07	5.978	CC, ES, SF
2,400.00	2,399.98	2,397.84	2,397.81	5.26	5.23	163.40	-59.96	15.34	63.60	53.11	10.49	6.062	
2,500.00	2,499.84	2,494.94	2,494.71	5.49	5.41	161.57	-63.88	20.14	73.75	62.87	10.88	6.776	
2,550.04	2,549.72	2,543.03	2,542.58	5.60	5.51	160.49	-66.79	23.69	81.38	70.30	11.08	7.346	
2,600.00	2,599.49	2,590.68	2,589.90	5.71	5.60	159.39	-70.29	27.98	90.29	79.00	11.28	8.002	
2,700.00	2,699.11	2,684.93	2,683.12	5.94	5.80	156.92	-79.05	38.69	110.80	99.11	11.70	9.473	
2,800.00	2,798.73	2,777.49	2,774.04	6.17	6.02	154.44	-90.01	52.09	134.96	122.85	12.11	11.141	
2,900.00	2,898.35	2,868.09	2,862.29	6.40	6.27	152.13	-102.98	67.95	162.77	150.24	12.54	12.984	
3,000.00	2,997.97	2,956.53	2,947.59	6.64	6.54	150.06	-117.76	86.02	194.19	181.23	12.96	14.983	
3,069.85	3,067.56	3,016.93	3,005.30	6.81	6.76	148.77	-129.05	99.82	218.23	204.98	13.26	16.462	
3,100.00	3,097.60	3,042.65	3,029.73	6.87	6.86	148.29	-134.15	106.06	229.07	215.68	13.38	17.117	
3,200.00	3,197.33	3,126.64	3,108.83	7.06	7.22	146.77	-152.00	127.88	266.34	252.57	13.76	19.349	
3,300.00	3,297.17	3,208.51	3,184.90	7.25	7.62	145.33	-171.15	151.30	305.65	291.50	14.15	21.606	
3,400.00	3,397.09	3,288.24	3,257.90	7.43	8.08	143.98	-191.45	176.12	346.96	332.43	14.53	23.880	
3,500.00	3,497.07	3,366.10	3,328.07	7.62	8.57	142.74	-212.81	202.23	390.25	375.34	14.91	26.173	
3,569.93	3,567.00	3,428.12	3,383.50	7.74	9.01	144.48	-230.42	223.77	420.97	405.77	15.20	27.698	
3,600.00	3,597.07	3,454.99	3,407.51	7.80	9.21	144.01	-238.05	233.10	434.09	418.76	15.33	28.325	
3,700.00	3,697.07	3,544.37	3,487.39	8.02	9.87	142.65	-263.43	264.13	477.87	462.10	15.77	30.306	
3,800.00	3,797.07	3,633.74	3,567.27	8.24	10.57	141.52	-288.81	295.17	521.83	505.61	16.21	32.183	
3,900.00	3,897.07	3,723.12	3,647.15	8.46	11.29	140.56	-314.19	326.20	565.93	549.26	16.66	33.959	
4,000.00	3,997.07	3,812.49	3,727.02	8.68	12.02	139.74	-339.57	357.24	610.14	593.02	17.12	35.640	
4,100.00	4,097.07	3,901.87	3,806.90	8.90	12.78	139.03	-364.95	388.27	654.44	636.86	17.58	37.229	
4,200.00	4,197.07	4,010.76	3,904.73	9.12	13.62	138.30	-395.23	425.29	697.96	679.87	18.09	38.584	
4,300.00	4,297.07	4,132.45	4,016.05	9.35	14.43	137.65	-426.34	463.33	737.96	719.33	18.63	39.610	
4,400.00	4,397.07	4,258.61	4,133.55	9.57	15.20	137.12	-455.40	498.86	774.04	754.86	19.18	40.348	
4,500.00	4,497.07	4,388.96	4,256.95	9.79	15.94	136.70	-481.95	531.33	805.98	786.23	19.75	40.814	
4,600.00	4,597.07	4,523.14	4,385.84	10.01	16.62	136.35	-505.55	560.18	833.56	813.24	20.31	41.033	
4,700.00	4,697.07	4,660.73	4,519.67	10.23	17.22	136.09	-525.75	584.88	856.60	835.72	20.88	41.027	
4,800.00	4,797.07	4,801.19	4,657.70	10.45	17.75	135.88	-542.15	604.94	874.93	853.49	21.44	40.812	

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

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 922-29M PAD - NBU 922-29M4DS - NBU 922-29M4DS - Design #1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

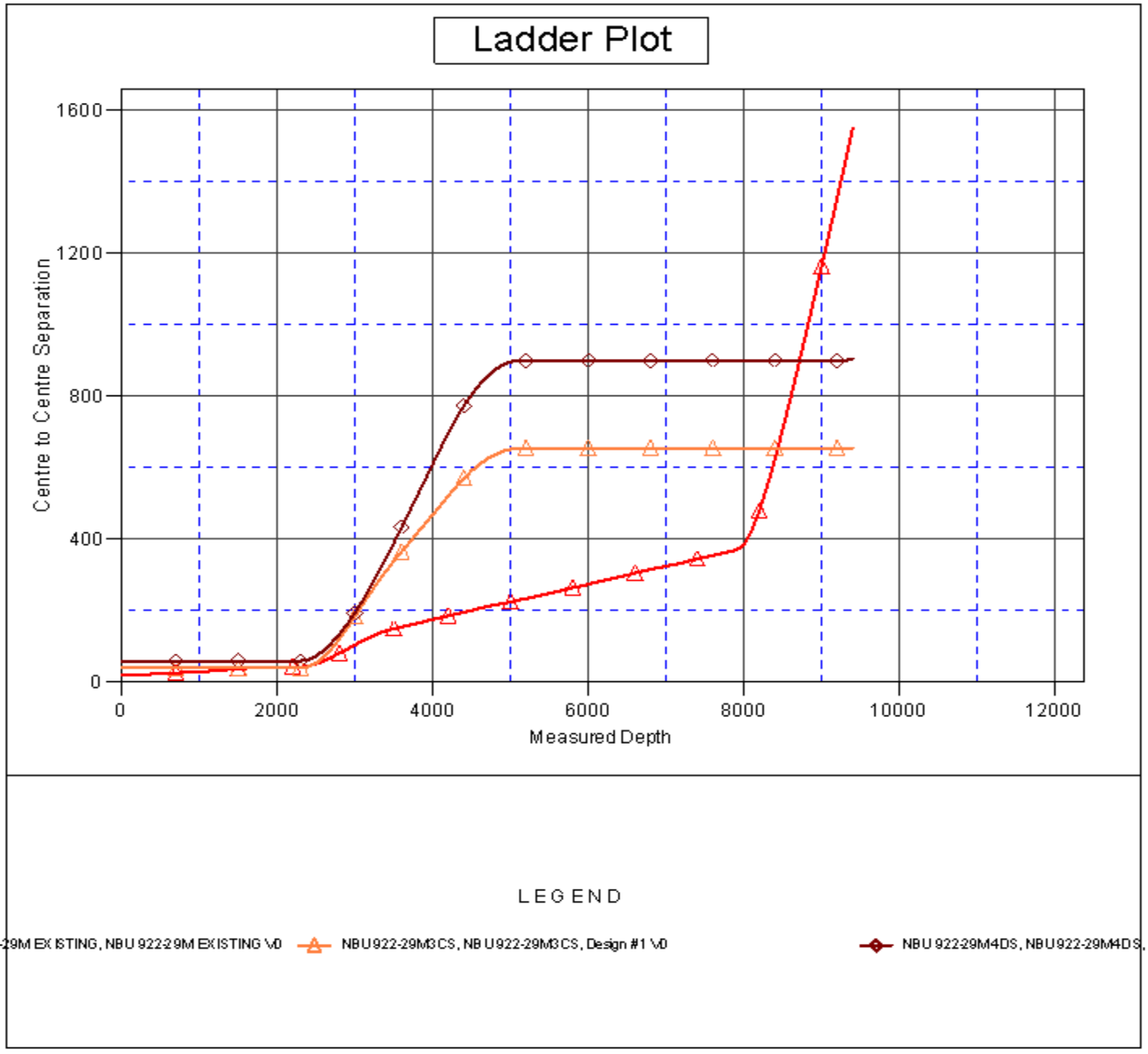
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,897.07	4,943.93	4,799.10	10.68	18.17	135.74	-554.41	619.93	888.41	866.43	21.98	40.414	
5,000.00	4,997.07	5,088.27	4,942.89	10.90	18.51	135.65	-562.26	629.53	896.95	874.44	22.51	39.840	
5,100.00	5,097.07	5,233.49	5,088.01	11.12	18.75	135.61	-565.52	633.51	900.48	877.46	23.02	39.116	
5,200.00	5,197.07	5,342.55	5,197.07	11.34	18.89	135.61	-565.61	633.63	900.58	877.13	23.45	38.410	
5,300.00	5,297.07	5,442.55	5,297.07	11.57	19.01	135.61	-565.61	633.63	900.58	876.72	23.86	37.739	
5,400.00	5,397.07	5,542.55	5,397.07	11.79	19.14	135.61	-565.61	633.63	900.58	876.30	24.28	37.089	
5,500.00	5,497.07	5,642.55	5,497.07	12.01	19.28	135.61	-565.61	633.63	900.58	875.88	24.70	36.460	
5,600.00	5,597.07	5,742.55	5,597.07	12.23	19.41	135.61	-565.61	633.63	900.58	875.46	25.12	35.851	
5,700.00	5,697.07	5,842.55	5,697.07	12.46	19.54	135.61	-565.61	633.63	900.58	875.04	25.54	35.260	
5,800.00	5,797.07	5,942.55	5,797.07	12.68	19.68	135.61	-565.61	633.63	900.58	874.62	25.96	34.687	
5,900.00	5,897.07	6,042.55	5,897.07	12.90	19.82	135.61	-565.61	633.63	900.58	874.19	26.39	34.131	
6,000.00	5,997.07	6,142.55	5,997.07	13.13	19.96	135.61	-565.61	633.63	900.58	873.77	26.81	33.592	
6,100.00	6,097.07	6,242.55	6,097.07	13.35	20.10	135.61	-565.61	633.63	900.58	873.35	27.23	33.069	
6,200.00	6,197.07	6,342.55	6,197.07	13.57	20.24	135.61	-565.61	633.63	900.58	872.92	27.66	32.560	
6,300.00	6,297.07	6,442.55	6,297.07	13.80	20.39	135.61	-565.61	633.63	900.58	872.49	28.08	32.067	
6,400.00	6,397.07	6,542.55	6,397.07	14.02	20.53	135.61	-565.61	633.63	900.58	872.07	28.51	31.587	
6,500.00	6,497.07	6,642.55	6,497.07	14.24	20.68	135.61	-565.61	633.63	900.58	871.64	28.94	31.121	
6,600.00	6,597.07	6,742.55	6,597.07	14.46	20.83	135.61	-565.61	633.63	900.58	871.21	29.37	30.667	
6,700.00	6,697.07	6,842.55	6,697.07	14.69	20.98	135.61	-565.61	633.63	900.58	870.78	29.79	30.226	
6,800.00	6,797.07	6,942.55	6,797.07	14.91	21.13	135.61	-565.61	633.63	900.58	870.36	30.22	29.797	
6,900.00	6,897.07	7,042.55	6,897.07	15.14	21.29	135.61	-565.61	633.63	900.58	869.93	30.65	29.380	
7,000.00	6,997.07	7,142.55	6,997.07	15.36	21.44	135.61	-565.61	633.63	900.58	869.50	31.08	28.973	
7,100.00	7,097.07	7,242.55	7,097.07	15.58	21.59	135.61	-565.61	633.63	900.58	869.06	31.51	28.577	
7,200.00	7,197.07	7,342.55	7,197.07	15.81	21.75	135.61	-565.61	633.63	900.58	868.63	31.95	28.191	
7,300.00	7,297.07	7,442.55	7,297.07	16.03	21.91	135.61	-565.61	633.63	900.58	868.20	32.38	27.815	
7,400.00	7,397.07	7,542.55	7,397.07	16.25	22.07	135.61	-565.61	633.63	900.58	867.77	32.81	27.449	
7,500.00	7,497.07	7,642.55	7,497.07	16.48	22.23	135.61	-565.61	633.63	900.58	867.34	33.24	27.092	
7,600.00	7,597.07	7,742.55	7,597.07	16.70	22.39	135.61	-565.61	633.63	900.58	866.90	33.67	26.743	
7,700.00	7,697.07	7,842.55	7,697.07	16.92	22.55	135.61	-565.61	633.63	900.58	866.47	34.11	26.403	
7,800.00	7,797.07	7,942.55	7,797.07	17.15	22.71	135.61	-565.61	633.63	900.58	866.04	34.54	26.072	
7,900.00	7,897.07	8,042.55	7,897.07	17.37	22.88	135.61	-565.61	633.63	900.58	865.60	34.98	25.748	
8,000.00	7,997.07	8,142.55	7,997.07	17.60	23.04	135.61	-565.61	633.63	900.58	865.17	35.41	25.432	
8,100.00	8,097.07	8,242.55	8,097.07	17.82	23.21	135.61	-565.61	633.63	900.58	864.73	35.85	25.124	
8,200.00	8,197.07	8,342.55	8,197.07	18.04	23.38	135.61	-565.61	633.63	900.58	864.30	36.28	24.822	
8,300.00	8,297.07	8,442.55	8,297.07	18.27	23.54	135.61	-565.61	633.63	900.58	863.86	36.72	24.528	
8,400.00	8,397.07	8,542.55	8,397.07	18.49	23.71	135.61	-565.61	633.63	900.58	863.43	37.15	24.240	
8,500.00	8,497.07	8,642.55	8,497.07	18.72	23.88	135.61	-565.61	633.63	900.58	862.99	37.59	23.958	
8,600.00	8,597.07	8,742.55	8,597.07	18.94	24.05	135.61	-565.61	633.63	900.58	862.55	38.03	23.683	
8,700.00	8,697.07	8,842.55	8,697.07	19.16	24.23	135.61	-565.61	633.63	900.58	862.12	38.46	23.414	
8,800.00	8,797.07	8,942.55	8,797.07	19.39	24.40	135.61	-565.61	633.63	900.58	861.68	38.90	23.151	
8,900.00	8,897.07	9,042.55	8,897.07	19.61	24.57	135.61	-565.61	633.63	900.58	861.24	39.34	22.894	
9,000.00	8,997.07	9,142.55	8,997.07	19.83	24.75	135.61	-565.61	633.63	900.58	860.80	39.78	22.642	
9,100.00	9,097.07	9,242.55	9,097.07	20.06	24.92	135.61	-565.61	633.63	900.58	860.37	40.21	22.395	
9,200.00	9,197.07	9,342.55	9,197.07	20.28	25.10	135.61	-565.61	633.63	900.58	859.93	40.65	22.154	
9,300.00	9,297.07	9,442.55	9,297.07	20.51	25.27	135.61	-565.61	633.63	900.58	859.49	41.09	21.917	
9,402.93	9,400.00	9,445.48	9,300.00	20.74	25.28	135.61	-565.61	633.63	906.11	864.79	41.33	21.926	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**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 Ele\	Coordinates are relative to: NBU 922-29M2DS
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°

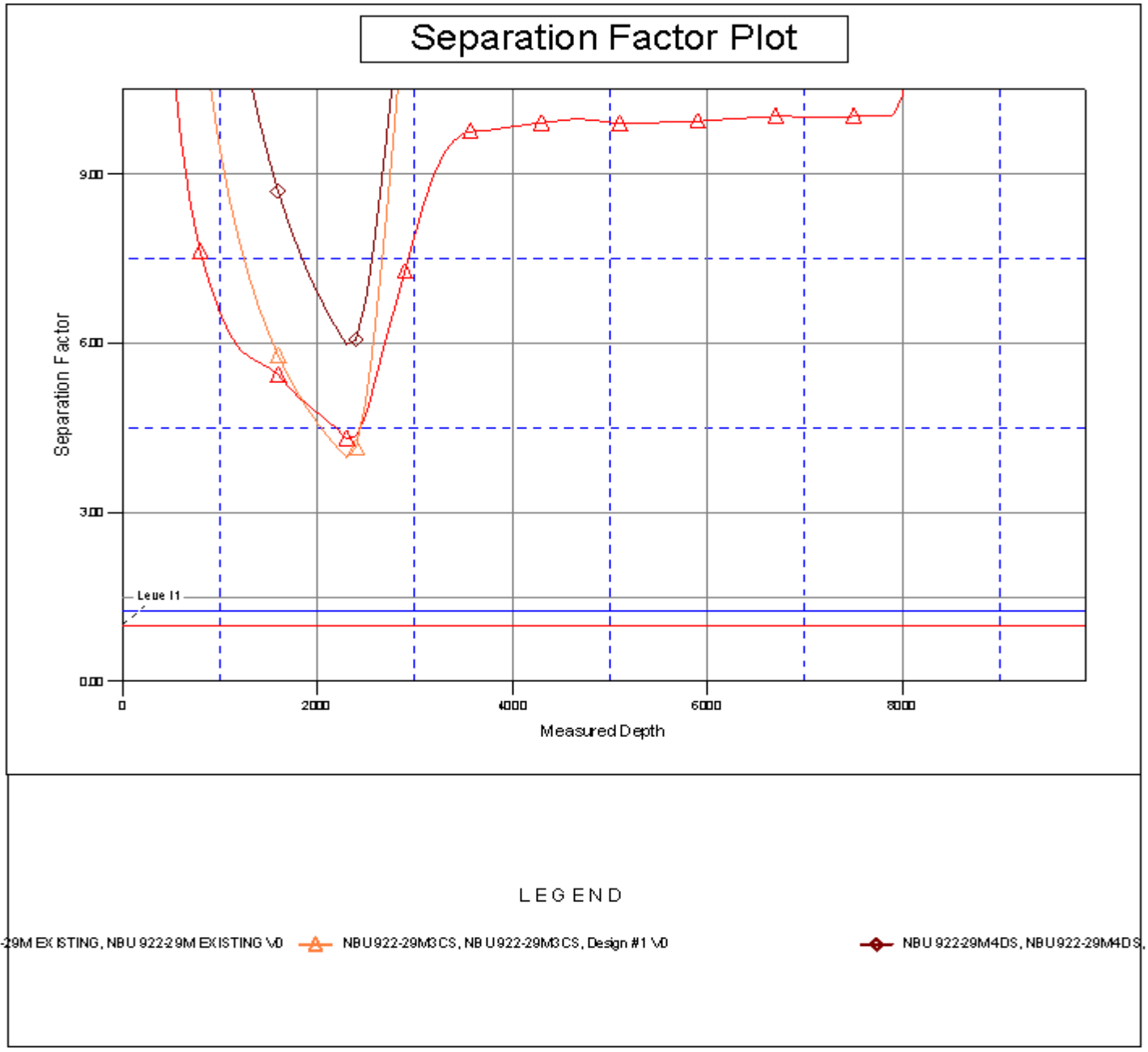


Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
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 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 922-29M2DS	**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 Ele\Coordinates are relative to: NBU 922-29M2DS
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°



’APIWellNo:43047503430000’

Weatherford International, Ltd
2000 Oil Field Drive
Casper, Wyoming 82604 USA
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+1.307.235.3958 Fax
www.weatherford.com

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Robert Scott
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NBU 922-29M2DS

Pad: NBU 922-29M
Surface: 611' FSL, 511' FWL (SW/4SW/4)
BHL: 689' FSL 515' 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:

Formation	Depth	Resource
Uinta	0 – Surface	
Green River	1,417'	
Birds Nest	1,717'	Water
Mahogany	2,197'	Water
Wasatch	4,640'	Gas
Mesaverde	7,214'	Gas
MVU2	8,178'	Gas
MVL1	8,735'	Gas
TVD	9,400'	
TD	9,403'	

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 9,403' TD, approximately equals 5,565 psi (calculated at 0.57 psi/foot).

Maximum anticipated surface pressure equals approximately 3,496 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:

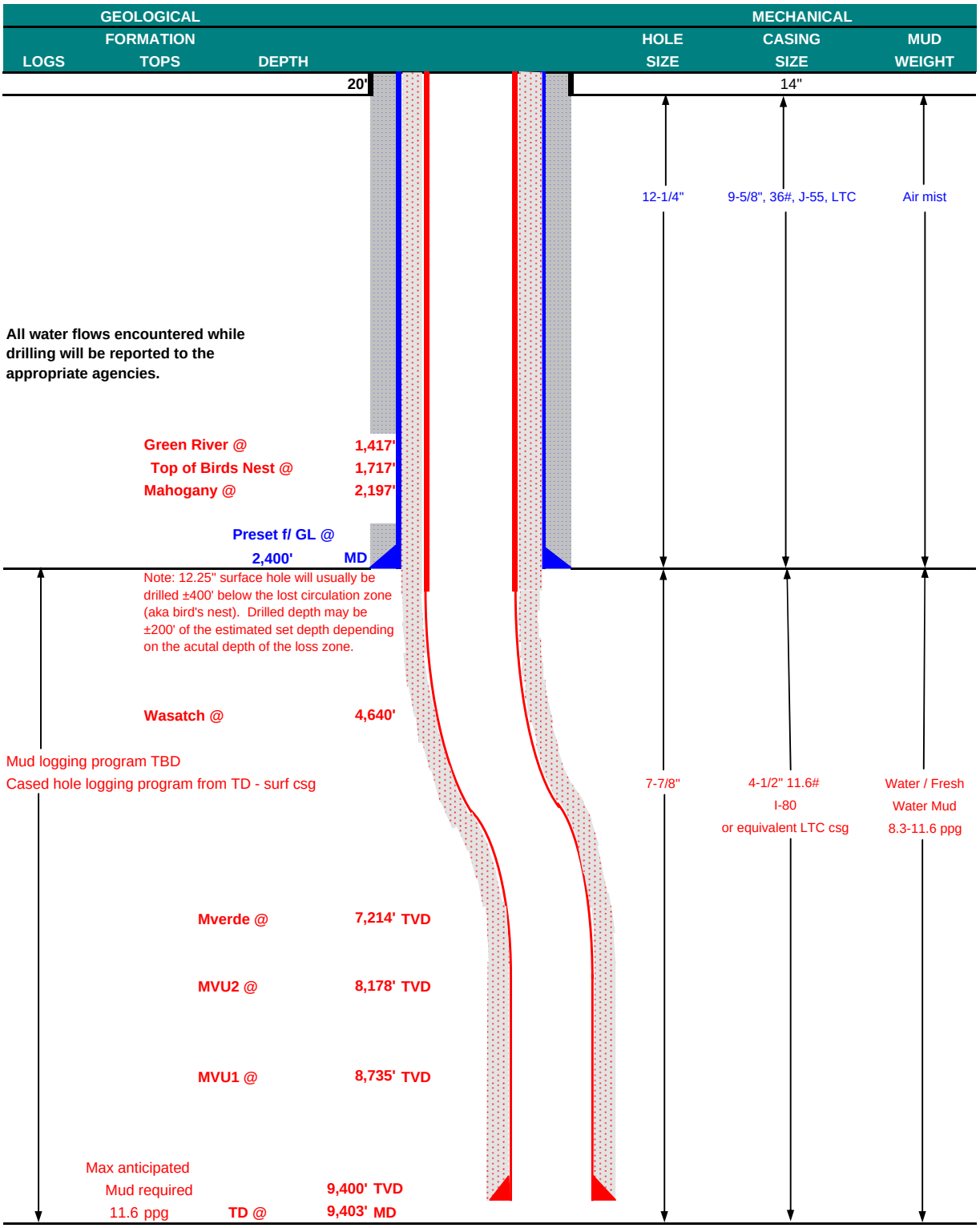
Please refer to the attached Drilling Program.

’APIWellNo:43047503430000’

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	June 8, 2009		
WELL NAME	**NBU 922-29M2DS**			TD	9,400'	TVD	9,403' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	5,015' GL KB 5,030'
SURFACE LOCATION	SW/4 SW/4 611' FSL	511' FWL	Sec 29	T 9S	R 22E		
	Latitude: 40.001492	Longitude:	-109.470780			NAD 27	
BTM HOLE LOCATION	SW/4 SW/4 689' FSL	515' FWL	Sec 29	T 9S	R 22E		
	Latitude: 40.001706	Longitude:	-109.470767			NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.						



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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	0.98	1.80	6.67
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9,403	11.60	I-80	LTC	2.16	1.12	2.11

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*Buoy.Fact. of water)
MASP 3,496 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*Buoy.Fact. of water)
MABHP 5,565 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
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	450	35%	12.60	1.81
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,133'	Premium Lite II + 3% KCl + 0.25 pps	390	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,270'	50/50 Poz/G + 10% salt + 2% gel	1,290	40%	14.30	1.31
			+ 0.1% R-3				

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

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

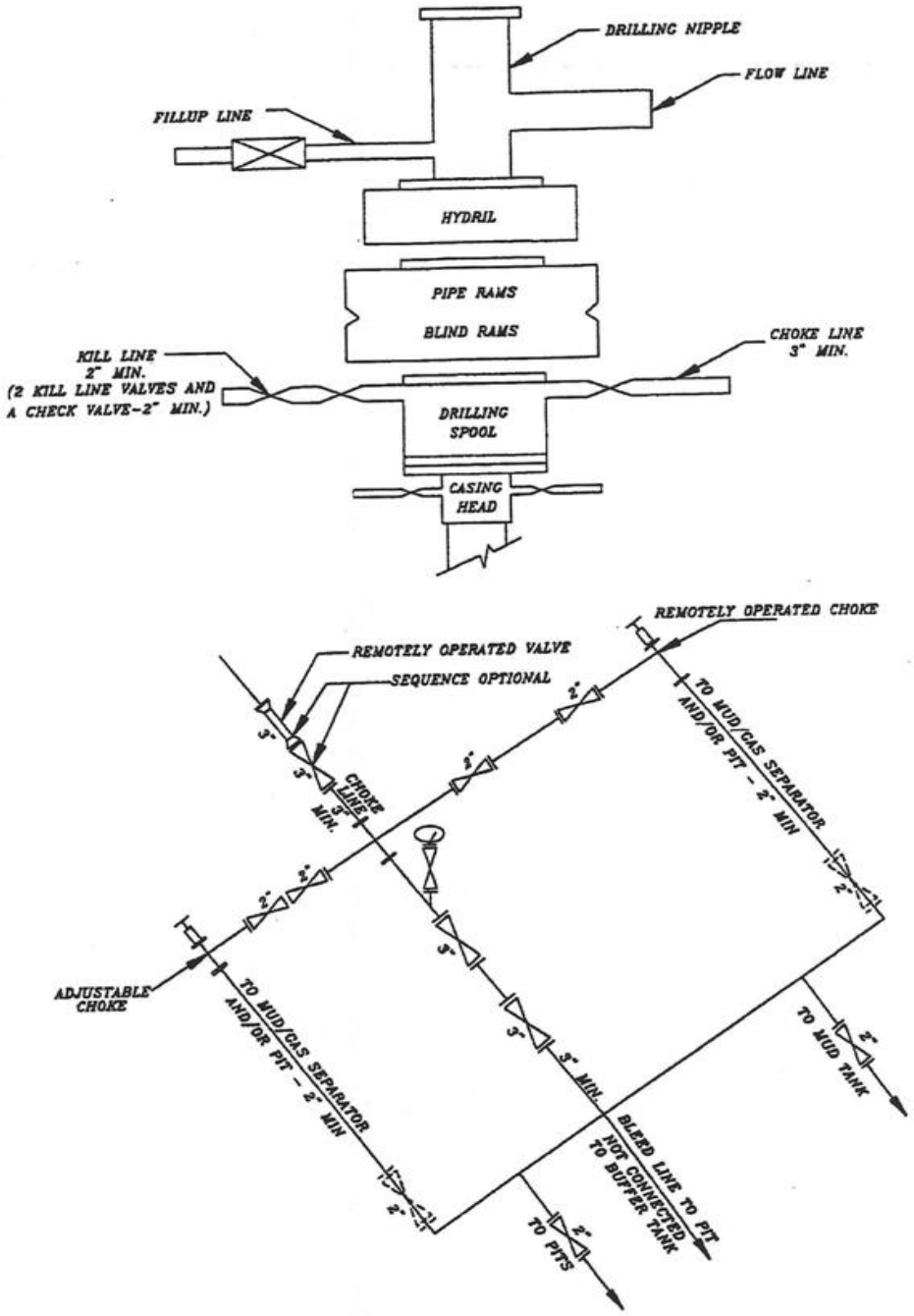
Surveys will be taken at 1,000' minimum intervals.

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

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

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

EXHIBIT A
NBU 922-29M2DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

'APIWellNo:43047503430000'

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.

N

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°

N13°21'23"W
Az=346.64361°

Bottom of Hole

Az.=02.79528°
(To Bottom Hole)
N02°47'43"E
78.05'

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

EXISTING WELL : NBU 922-29M

20'

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

20'

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

20'

Az=202.02917°
S22°01'45"W – 547.21'
(To Bottom Hole)

Az=129.28333°
S50°43'00"E – 801.15'
(To Bottom Hole)

BOTTOM HOLE FOOTAGES

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

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

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

.09 .03 .0 .09

SCALE

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.

609 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

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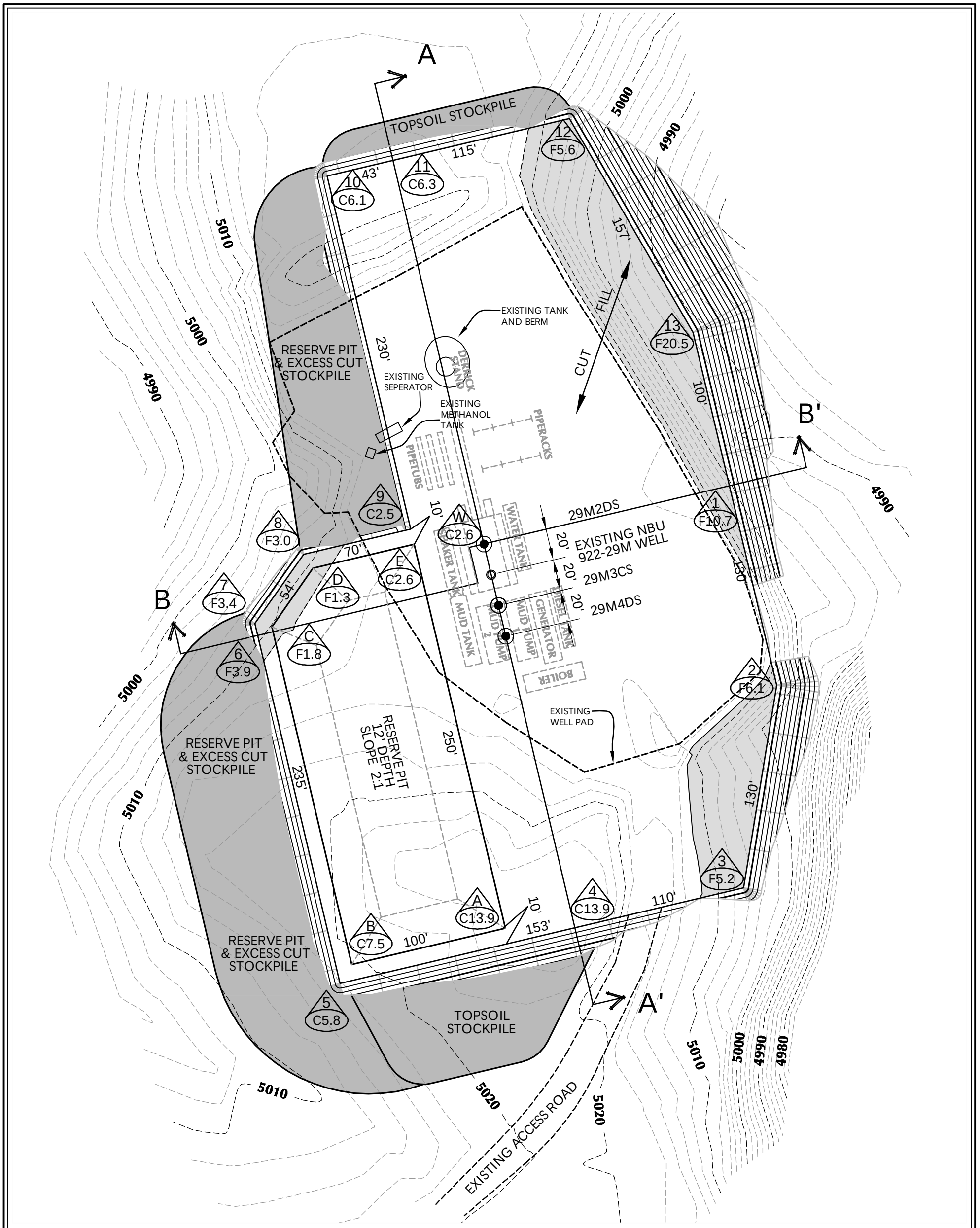


WELL PAD NBU 922-29M QUANTITIES

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

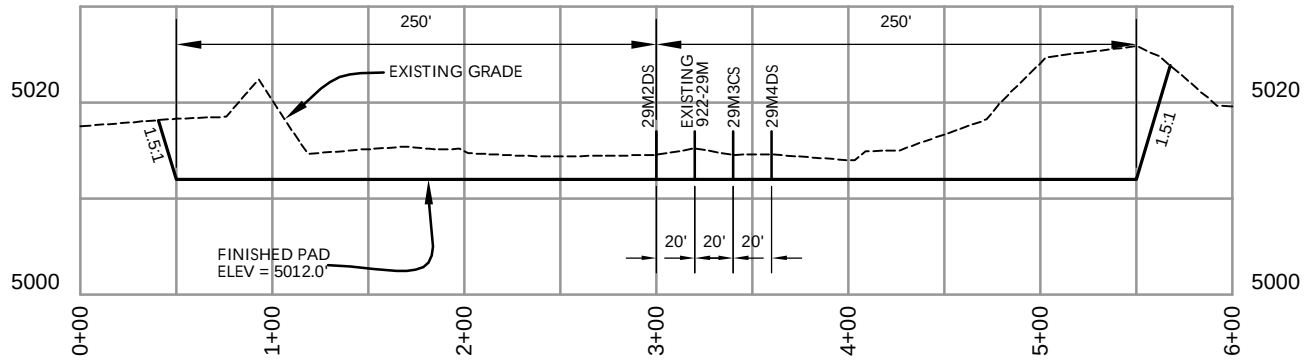
KERR-MCGEE OIL & GAS ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

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

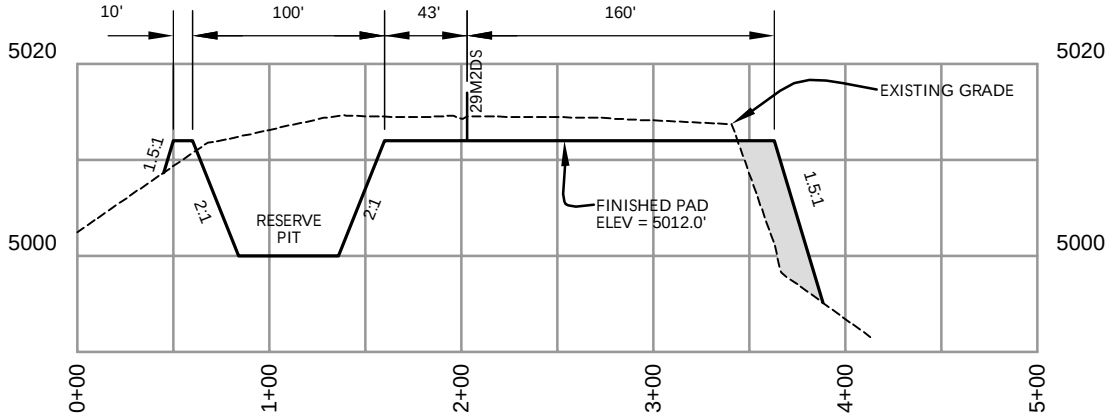
609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

Timberline (435) 789-1365
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

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

HORIZONTAL 0 50 100 1" = 100'
VERTICAL 0 10 20 1" = 20'

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

Timberline Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078 (435) 789-1365

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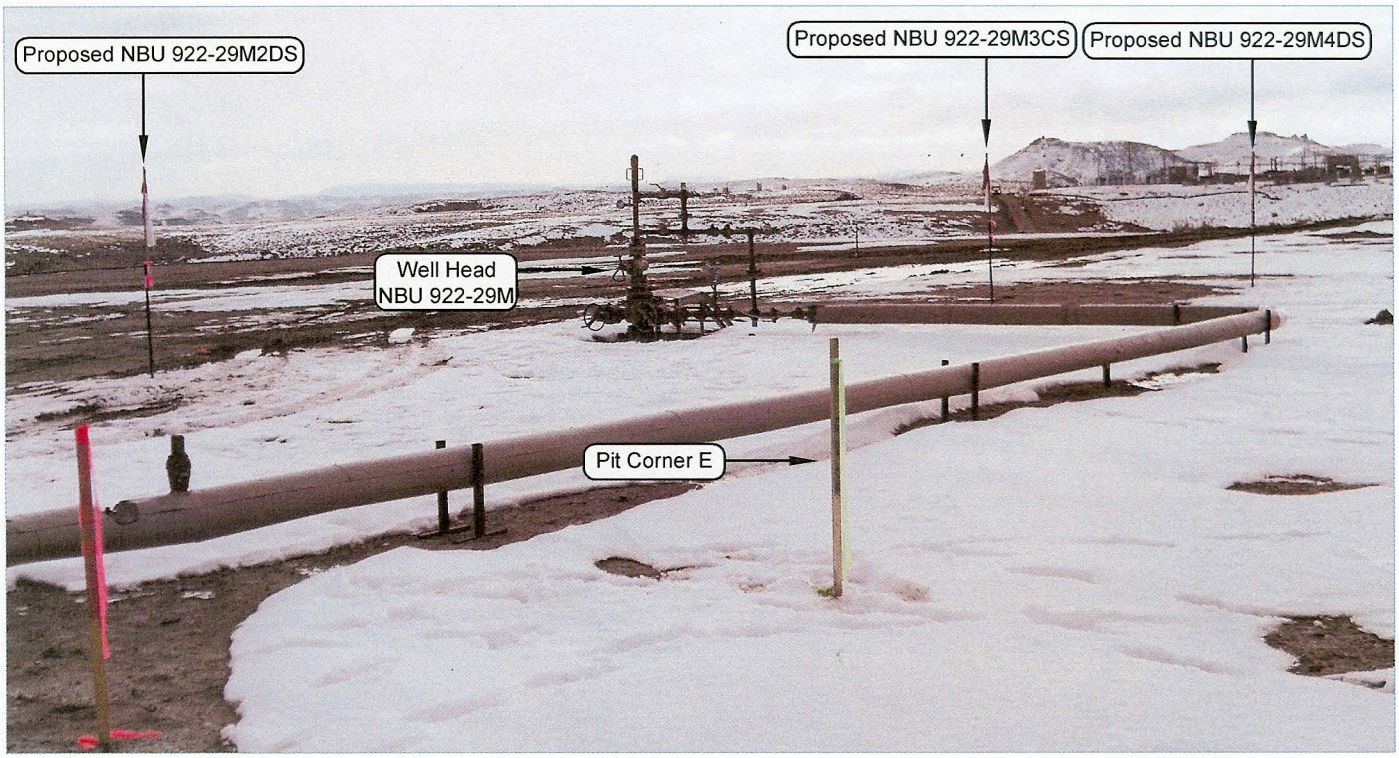

PHOTO VIEW: FROM CORNER E TO LOCATION STAKES

CAMERA ANGLE: SOUTHEASTERLY

PHOTO VIEW: FROM EXISTING ROAD

CAMERA ANGLE: NORTHWESTERLY

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

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

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

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

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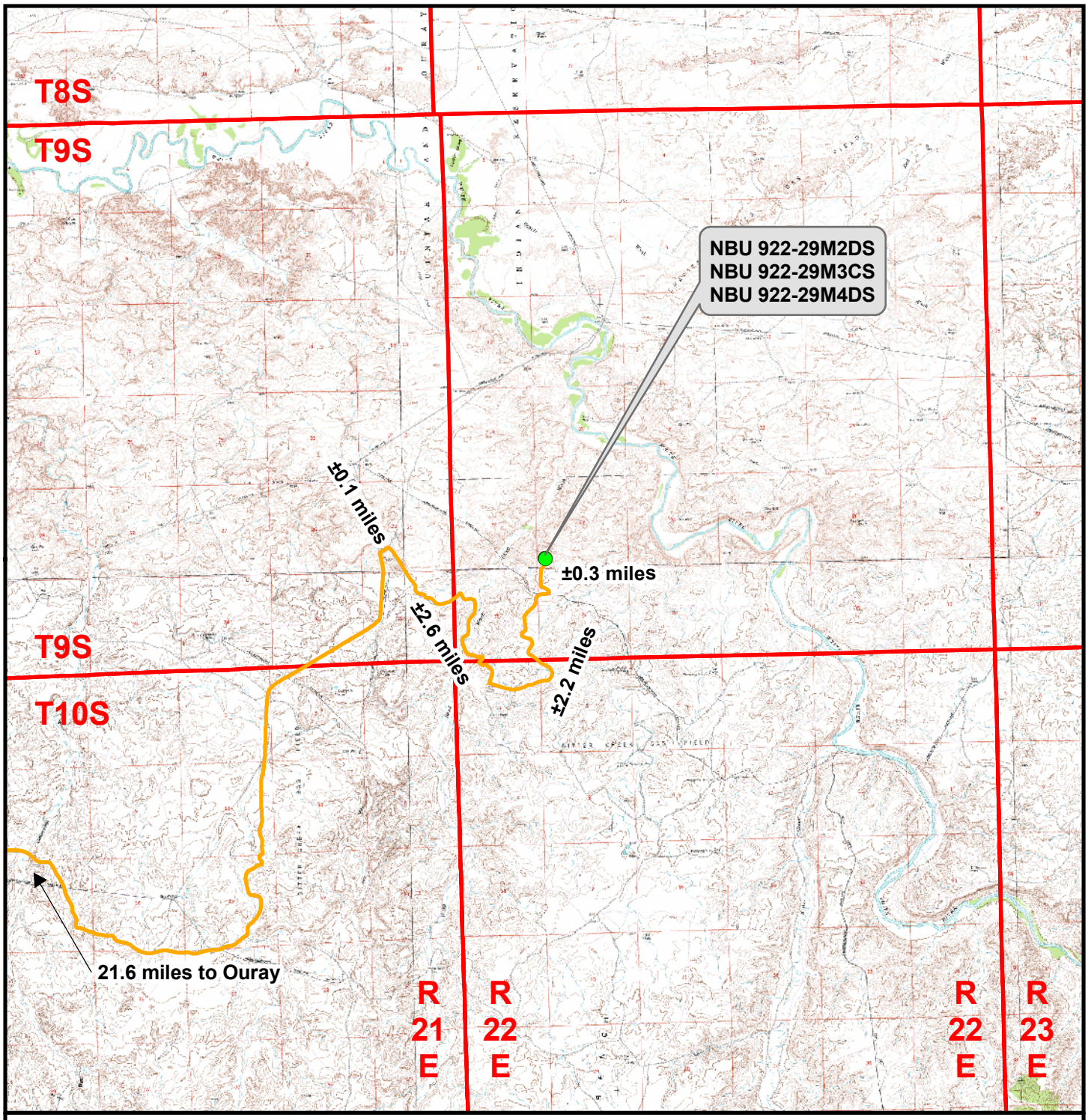


Legend

- Proposed Well Location
- Access Route - Proposed

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

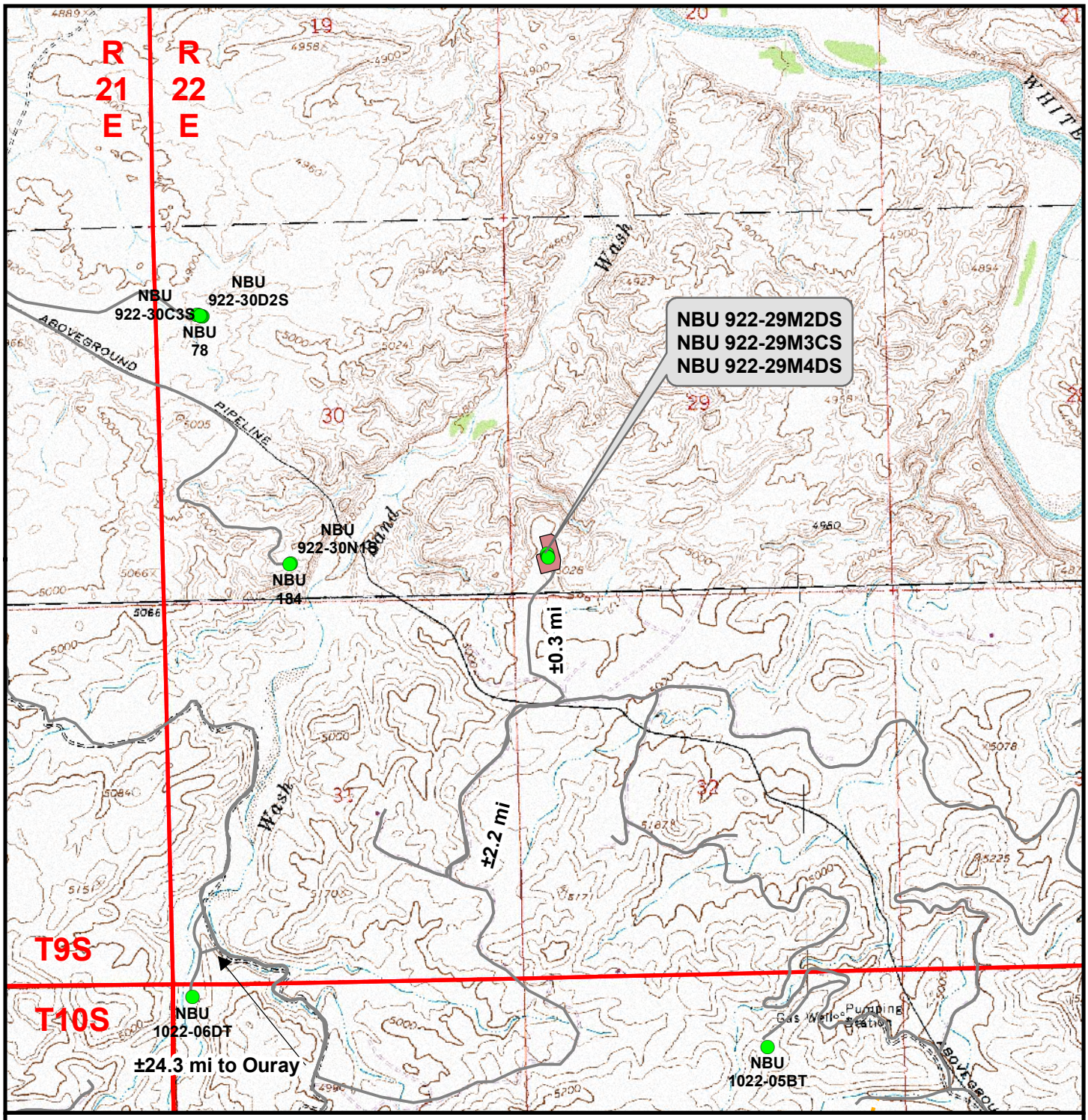
NBU 922-29M2DS,
NBU 922-29M3CS & NBU 922-29M4DS
Topo A
Located In Section 29, T9S, R22E
S.L.B.&M., Uintah County, Utah

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

N

Scale: 1:100,000	NAD83 USP Central	Sheet No: 8 of 12	
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047503430000’



Legend

Well - Proposed | Well Pad | Road - Proposed | Road - Existing

Total Proposed Road Length: ±0ft

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

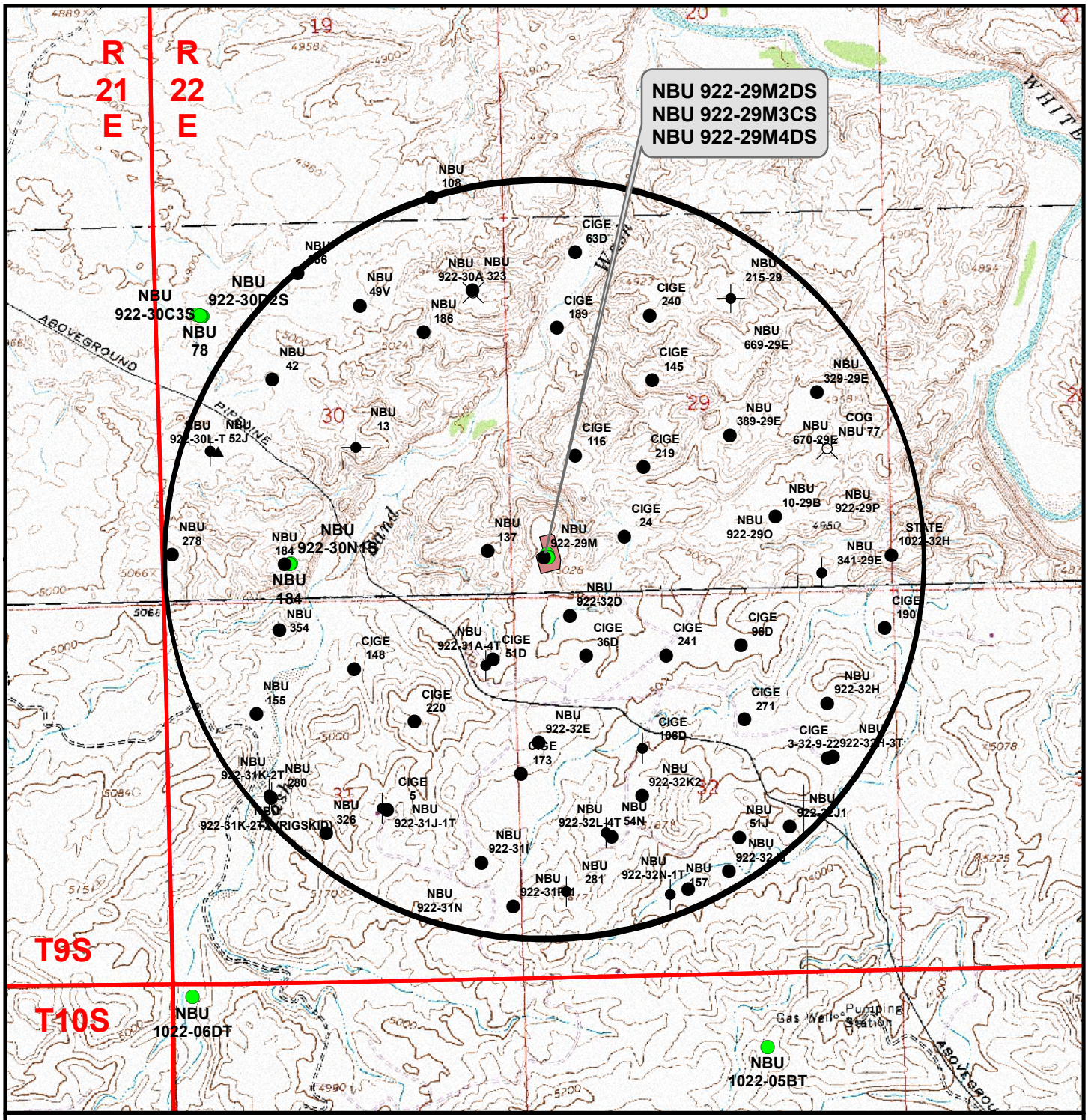
NBU 922-29M2DS,
NBU 922-29M3CS & NBU 922-29M4DS
Topo B
Located In Section 29, T9S, R22E
S.L.B.&M., Uintah County, Utah

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

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 9	9 of 12
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047503430000’



Legend

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

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

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

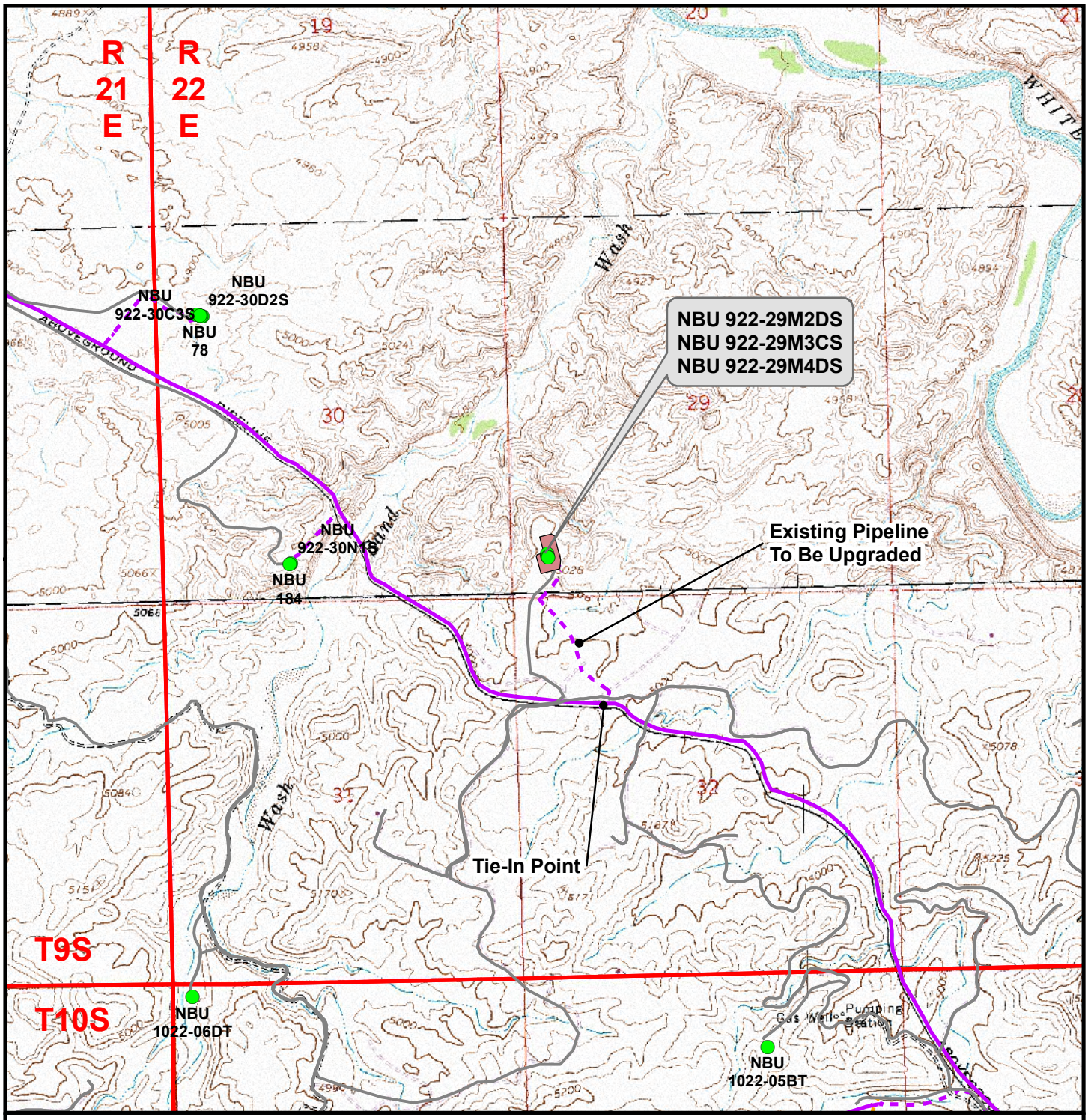
NBU 922-29M2DS,
NBU 922-29M3CS & NBU 922-29M4DS
Topo C
Located In Section 29, T9S, R22E
S.L.B.&M., Uintah County, Utah

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

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 10 of 12	
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047503430000’



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

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 11	11 of 12
Drawn: JELo	Date: 24 Feb 2009		
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. (±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.

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
Kathy Schneebeck Dulnoan

April 8, 2009
Date

'APIWellNo:43047503430000'

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 922-29M2DS
T9S-R22E
Section 29: SWSW
Surface: 611' FSL, 511' FWL
Bottom Hole: 689' FSL, 515' 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 922-29M2DS 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 WellNo:43047503430000'

IPC #09-28

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-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.

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 #1022-9O1S, 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-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. 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
"NBU #922-29M2DS, M4DS & M3CS" (Sec. 29 & 32, T 9 S, R 22 E)	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.	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. **Class 3a**

"NBU #1022-9O1S, L4S, M1S & M4S" (Sec. 9, T 10 S, R 22 E)	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."** **Class 5a**

"NBU #1022-10C1BS, B2AS, B4BS & A4BS" (Sec. 10, T 10 S, R 22 E)	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.	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. **Class 3b**
"NBU #1022-18O1AS, I4BS, P1DS & P4AS" (Sec. 18 & 19, T 10 S, R22 E)	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. **Class 3a**

"NBU #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19 & 20, T 10 S, R22 E)	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. **Class 3a**

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.

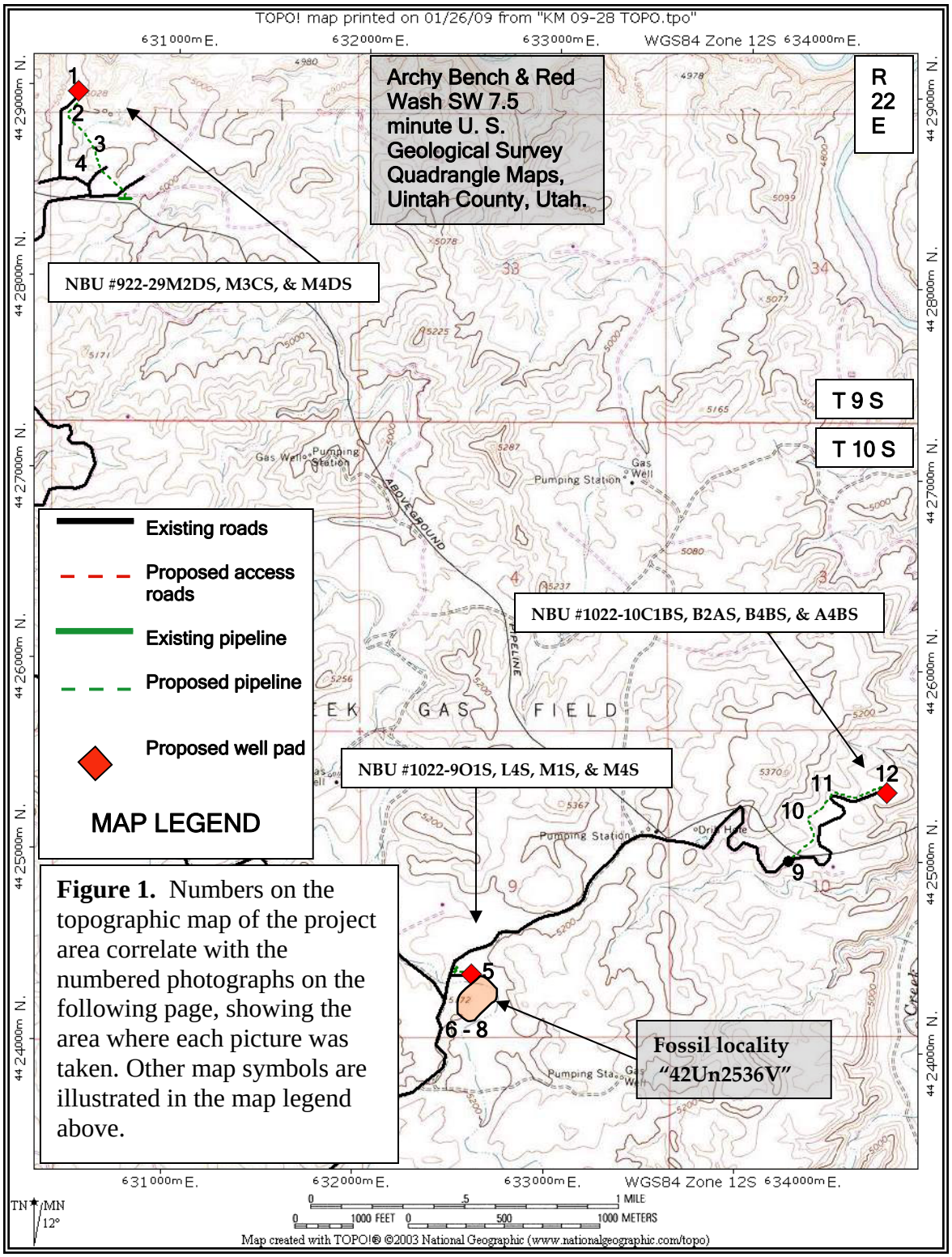


Figure 1. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend above.

Figure 1. *continued…*

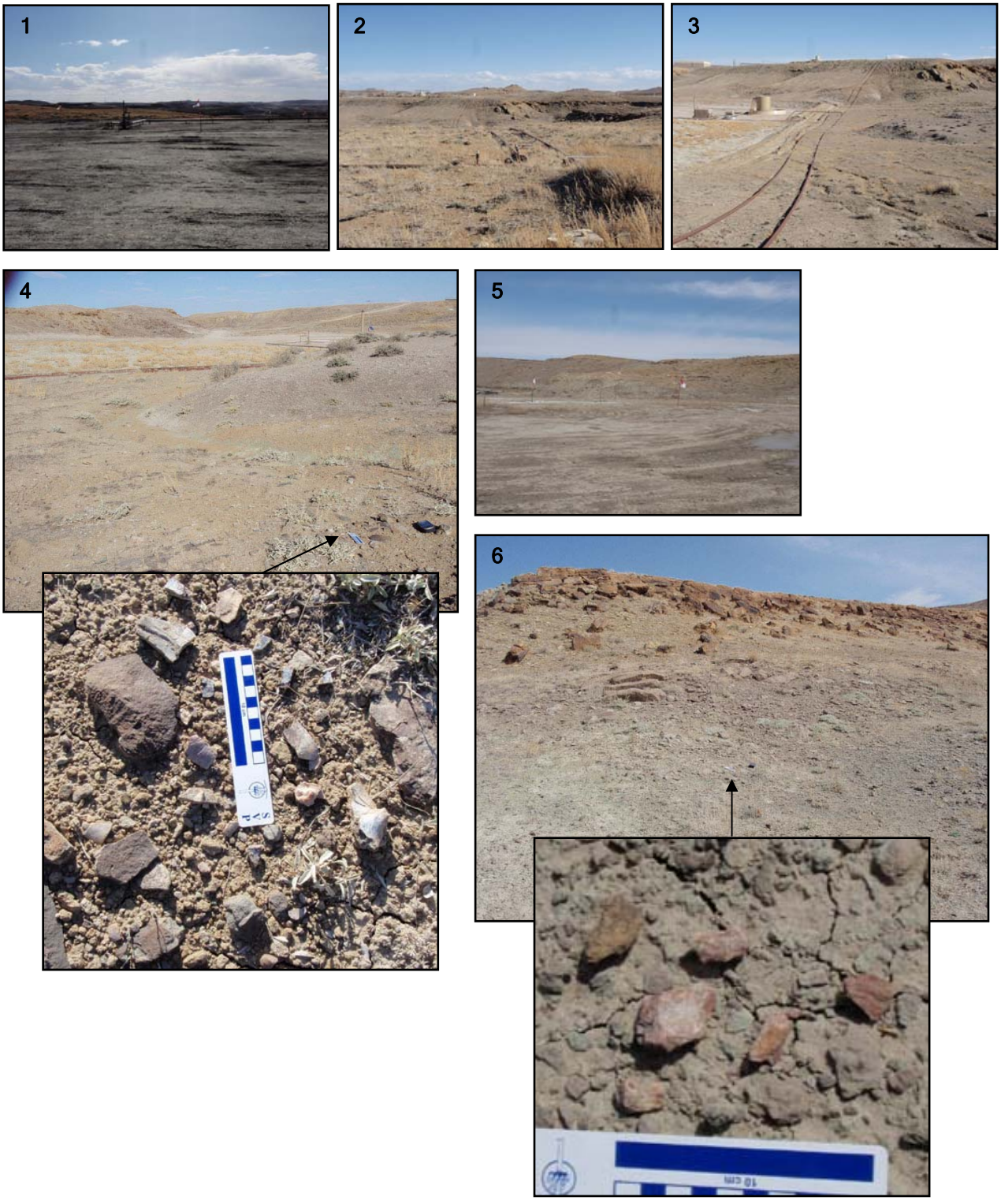


Figure 1. *continued…*

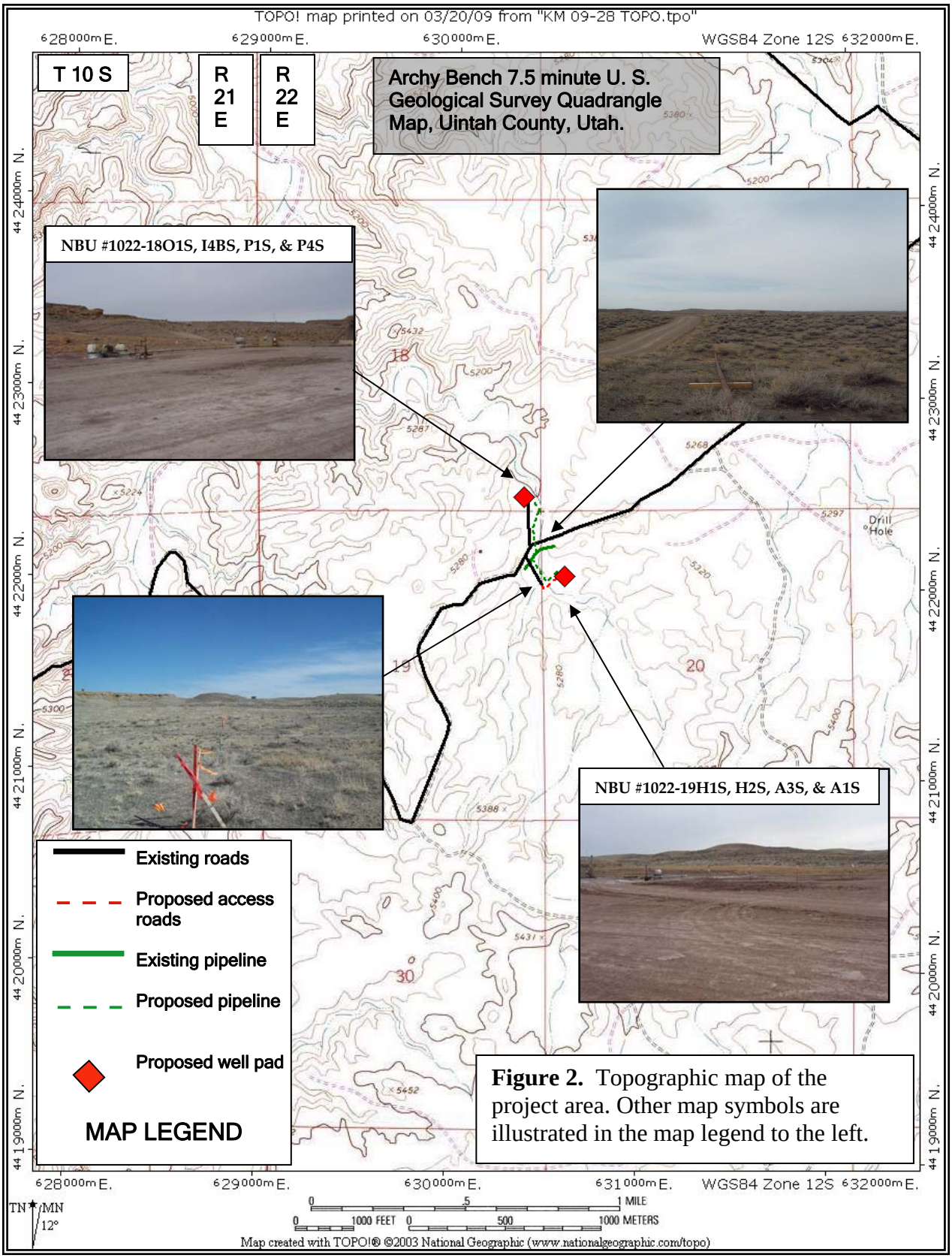


Figure 2. Topographic map of the project area. Other map symbols are illustrated in the map legend to the left.

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API Number: 4304750343

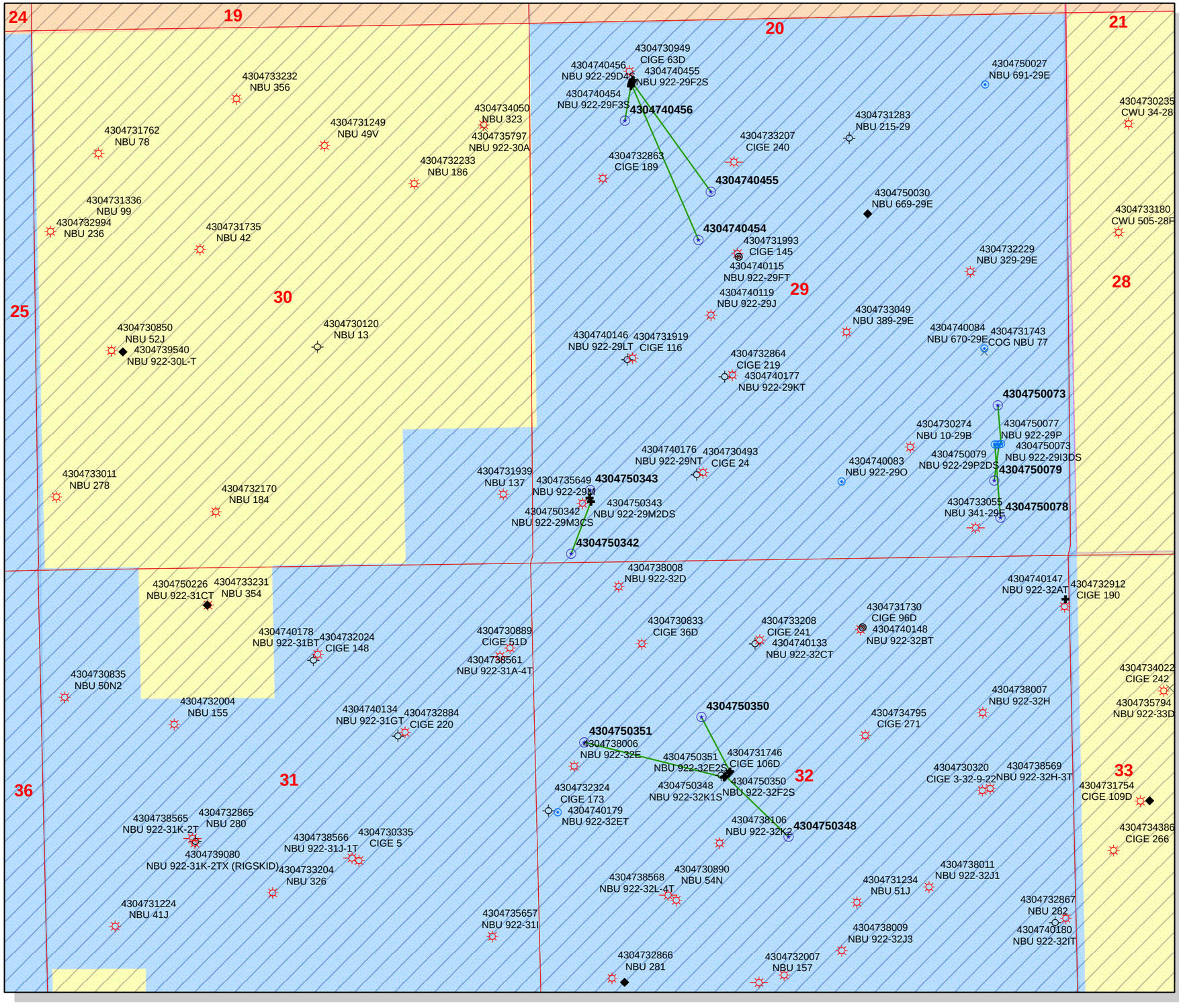
Well Name: NBU 922-29M2DS

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

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

Fields

STATUS
- ACTIVE
- COMBINED
- Sections

Wells Query Events
- <all other values>

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- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,200 600 0 1,200 Feet

1:12,000

'APIWellNo:43047503430000'

API Well No: 43047503450000

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 17, 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
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50342	NBU 922-29M3CS	Sec 29 T09S R22E 0572 FSL 0520 FWL
	BHL	Sec 29 T09S R22E 0065 FSL 0315 FWL
43-047-50343	NBU 922-29M2DS	Sec 29 T09S R22E 0611 FSL 0511 FWL
	BHL	Sec 29 T09S R22E 0689 FSL 0515 FWL
43-047-50348	NBU 922-32K1S	Sec 32 T09S R22E 2137 FNL 1793 FWL
	BHL	Sec 32 T09S R22E 2558 FSL 2399 FWL
43-047-50349	NBU 922-32F3T	Sec 32 T09S R22E 2111 FNL 1824 FWL
43-047-50350	NBU 922-32F2S	Sec 32 T09S R22E 2098 FNL 1839 FWL
	BHL	Sec 32 T09S R22E 1558 FNL 1565 FWL
43-047-50351	NBU 922-32E2S	Sec 32 T09S R22E 2150 FNL 1778 FWL
	BHL	Sec 32 T09S R22E 1786 FNL 0412 FWL
43-047-38921	NBU 1022-8B-4T	Sec 08 T10S R22E 0909 FNL 1793 FEL

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

/s/ Michael L. Coulthard

API Well No: 43047503450000

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

MCoulthard:mc:4-17-09

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

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-29M2DS 43047503430000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-29M2DS 430475034			
String	Surf	Prod		
Casing Size(")	9.625	4.500		
Setting Depth (TVD)	2400	9403		
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)	5565	11.4		

Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	1036	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	748	NO OK
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	508	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	517	NO Reasonable depth in area
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*Setting Depth*MW=	5672	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4544	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3603	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4131	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2400	psi *Assumes 1psi/ft frac gradient

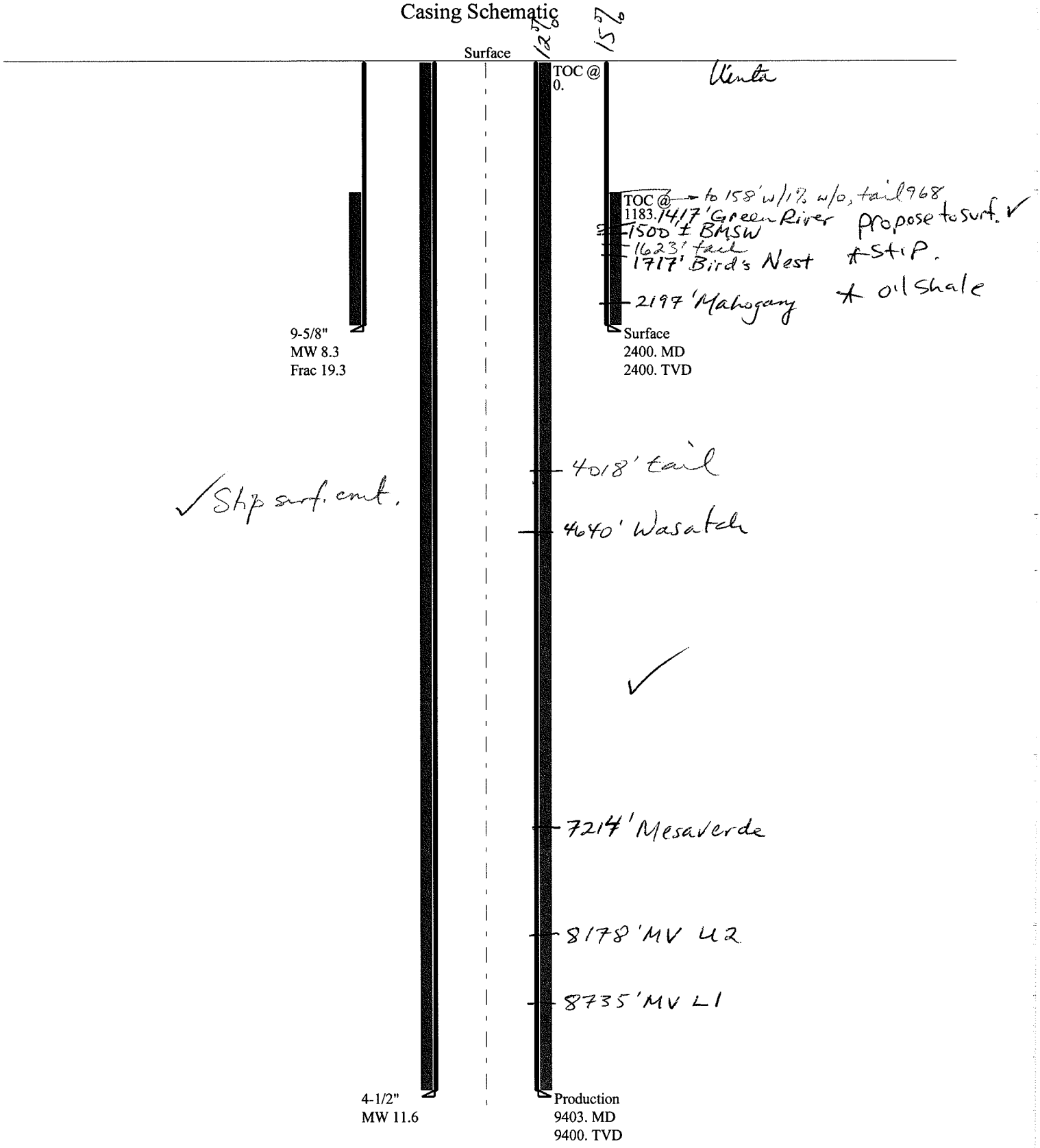
Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous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

'APIWellNo:43047503430000'

43047503430000 NBU 922-29M2DS

Casing Schematic



'APIWellNo:43047503430000'

Well name:	**43047503430000 NBU 922-29M2DS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-50343
Location:	UINTAH COUNTY

Design parameters:

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

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

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (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

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

Directional Info - Build & Drop
Kick-off point 2300 ft
Departure at shoe: 2 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 2 °

Re subsequent strings:
Next setting depth: 9,400 ft
Next mud weight: 11.600 ppg
Next setting BHP: 5,664 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	19624

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	1974	1.901	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

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

'APIWellNo:43047503430000'

Well name:	**43047503430000 NBU 922-29M2DS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-50343
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight:	11.600 ppg
Internal fluid density:	1.000 ppg

Burst

Max anticipated surface pressure:	3,596 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	5,664 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

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

Tension is based on air weight.
Neutral point: 7,773 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	206 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	Surface

Directional Info - Build & Drop

Kick-off point	2300 ft
Departure at shoe:	78 ft
Maximum dogleg:	2 °/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	9403	4.5	11.60	I-80	LT&C	9400	9403	3.875	124118

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	5176	6360	1.229	5664	7780	1.37	109	212	1.94 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 9400 ft, a mud weight of 11.6 ppg An internal gradient of .052 psi/ft was used for collapse from TD
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 922-29M2DS				
API Number	43047503430000	**APD No**	1407	**Field/Unit**	NATURAL BUTTES
Location: 1/4,1/4	SWSW **Sec** 29 **Tw** 9.0S **Rng** 22.0E 611 FSL 511 FWL				
GPS Coord (UTM)	630534 4428838	**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 rimed 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.

Surface Use Plan

Current Surface Use
Grazing
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 Potental 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 tick 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 4/28/2009

Evaluator	Date / Time

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1407	43047503430000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 922-29M2DS		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	SWSW 29 9S 22E S 611 FSL 511 FWL		GPS Coord (UTM)	630544E 4428835N	

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 rimed 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.

Floyd Bartlett — **Onsite Evaluator**

4/28/2009 — **Date / Time**

Application for Permit to Drill
Statement of Basis

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: 4/13/2009 **API NO. ASSIGNED:** 43047503430000

WELL NAME: NBU 922-29M2DS

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: 0611 FSL 0511 FWL **Engineering Review:** ☑

BOTTOM: 0689 FSL 0515 FWL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 40.00151 **LONGITUDE:** -109.47069

UTM SURF EASTINGS: 630544.00 **NORTHINGS:** 4428835.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 23608 **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**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-14

Effective Date: 12/2/1999

Siting: 460' fr u bdry & uncomm. tract

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
5 - Statement of Basis - bhill
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 922-29M2DS
API Well Number: 43047503430000
Lease Number: ML 23608
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

Commingle:
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:

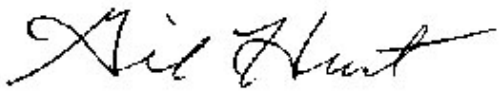
- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

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

API Well No: 43047503430000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

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 922-29M2DS

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

9. API NUMBER: 43047503430000

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: 0611 FSL 0511 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 9/3/2009	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ 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 9:15 HRS.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

September 03, 2009

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

RECEIVED September 03, 2009

API Well No: 43047503430000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

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 922-29M2DS

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

9. API NUMBER: 43047503430000

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: 0611 FSL 0511 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 9/9/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

MIRU PROPETRO AIR RIG ON 09/08/2009. 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. DISPLACE W/179 BBL WATER BUMPED PLUG FLOAT HELD. TOP OUT W/350 SX PREM CLASS G @15.8 PPG 1.15 YIELD. WILL TOP OUT W/READY MIX. WORT.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

September 14, 2009

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

RECEIVED September 10, 2009

API Well No: 43047503430000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

SUNDRY NOTICES AND REPORTS ON WELLS

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FOOTAGES AT SURFACE: 0611 FSL 0511 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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☐ SPUD REPORT Date of Spud:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
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Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

September 14, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/14/2009

RECEIVED September 14, 2009

API Well No: 43047503430000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

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COUNTY: UINTAH

STATE: UTAH

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✓ DRILLING REPORT Report Date: 11/3/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
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	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

FINISHED DRILLING FROM 2400' TO 9450' ON 11/01/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER AHEAD. LEAD CMT W/465 SX ECONOCEM @ 12.0 PPG, 2.25 YIELD. TAILED CMT W/1350 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.26 YIELD. DISPLACED W/145.6 BBLS W/CLAYFIX II, .1 GAL/BBL & ALDACIDE, .01 GAL/BBL. BUMPED PLUG W/2220 PSI, FLOATS HELD. FINAL LIFT PSI 2720, 1 BBL BACK. PARTIAL RETURNS THROUGHOUT JOB. NIPPLE DOWN BOP. CLEAN MUD TANKS. RELEASE ENSIGN 146 RIG ON 11/3/2009 AT 23:59 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
November 04, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 11/4/2009

RECEIVED November 04, 2009

API Well No: 43047503430000

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

FORM 9

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7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 922-29M2DS

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

9. API NUMBER: 43047503430000

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FOOTAGES AT SURFACE: 0611 FSL 0511 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 29 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 12/30/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 12/30/2009 AT 11:00 A.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)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 1/4/2010

RECEIVED January 04, 2010

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 11/3/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/8/2009	0:00 - 1:00	1.00	MIRU	01	A	P		MIRU
	1:00 - 2:00	1.00	DRLSUR	02	A	P		SPUD 12.25 HOLE,HAMMER DRILL F/44 TO 120
	2:00 - 4:00	2.00	DRLSUR	06	A	P		POOH,P/U DIR TOOL,TIH
	4:00 - 6:00	2.00	DRLSUR	02	D	P		DIR DRILL F/120' TO240,W/WATER,SURVEY EVERY 90'
	6:00 - 10:00	4.00	DRLSUR	08	B	Z		REPAIR WASH PIPE PACKING RETAINER
	10:00 - 0:00	14.00	DRLSUR	02	D	P		DIR DRILL F/240 TO 1550
9/9/2009	0:00 - 12:00	12.00	DRLSUR	02	D	P		DIR DRILL F/1550' TO TD 2400',FINAL SURVEY @2340'=1.25 350.27
	12:00 - 13:00	1.00	DRLSUR	05	C	P		CIRC F/CSG RUN
	13:00 - 17:00	4.00	DRLSUR	06	A	P		LDDP & BHA, RELEASE WEATHERFORD DIRECTIONAL SERVICE
	17:00 - 21:00	4.00	CSG	12	C	P		RUN 54 JTS #36 J55 9.625 CSG TO 2366',W/BAFFLE@2322',,
	21:00 - 23:00	2.00	RDMO	01	E	P		,RIG RELEASE 23:00 9/9/09,,RDRT,,LOAD OUT ALL TRUCKS,,LEAVE LOCATION F/ VERNAL WORT
	23:00 - 0:00	1.00	RDMO	21	D	P		RDRT - SKID, RURT
10/26/2009	0:00 - 1:30	1.50	RDMO	01	C	P		N/UP BOPE
	1:30 - 3:00	1.50	DRLPRO	14	A	P		TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, HCR, FLOOR VALVES, MANUAL IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500
	3:00 - 7:30	4.50	DRLPRO	15	A	P		INSTALL WEARBUSHING
	7:30 - 8:00	0.50	DRLPRO	14	B	P		P/UP MM
	8:00 - 8:30	0.50	DRLPRO	06	A	P		IRON DERRICK HAND POWER SHOE WOULD NOT CLOSE - TECH ON LOCATION - RESET TIMING ON POWER SHOE
	8:30 - 10:30	2.00	DRLPRO	08	B	Z		CONTINUE P/UP MM, BIT - SCRIBE & ORIENT - P/UP DIRECTIONAL BHA - LOAD MWD & SURFACE CHECK
	10:30 - 13:30	3.00	DRLPRO	06	A	P		RE-CALIBRATE BLOCK POSITION - RIG SMARTUNABLE MAINTAIN CALIBRATIONS
	13:30 - 15:30	2.00	DRLPRO	08	B	Z		SERVICE TOP DRIVE - RE-PLACE SAVER SUB
	15:30 - 16:30	1.00	DRLPRO	07	A	P		RIH DRILL PIPE TO 2218' - TAGGED CMT
	16:30 - 18:00	1.50	DRLPRO	06	A	P		INSTALL ROTATING HEAD, CENTER & LEVEL DERRICK
	18:00 - 18:30	0.50	DRLPRO	07	B	P		DRILL CEMENT, FE & RATHOLE F/2218' TO 2410'
	18:30 - 20:00	1.50	DRLPRO	02	F	P		DRILL/SLIDE F/2410' TO 2830' (420' @ 105fph) MW 8.4, VIS 27, WOB 18, RPM 45, MM RPM 102, GPM 486,
	20:00 - 0:00	4.00	DRLPRO	02	B	P		DRILL/SLIDE F/2830' TO 4730' (1900' @ 122.6fph) MW 8.4, VIS 27, WOB 18. RPM 45, MM RPM 102, TQ 7, GPM 486, SLIDE 2830 2841, 3190 3200, 3461 3473, 3643 3655, 3733 3753, 4005 4025, 4186 4216, 4277 4285, 4639 4667, WOB 20, MM RPM 102, GPM 486, DIFF 250
10/27/2009	0:00 - 15:30	15.50	DRLPRO	02	B	P		RIG SER
	15:30 - 16:00	0.50	DRLPRO	07	A	P		DRILL/SLIDE F/4730' TO 5092' (362' @ 90.5fph) MW 8.4, VIS 27, WOB 18, RPM 45, MM RPM 102, TQ 7, GPM 486, SLIDE 4911 4923, WOB 20, MM RPM 102, GPM 486, DIFF 200
	16:00 - 20:00	4.00	DRLPRO	02	B	P		

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 11/3/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	20:00 - 20:30	0.50	DRLPRO	08	A	Z		IRON DERRICKHAND - REPLACE ELEVATOR PROXIMITY SWITCH ON IRON DERRICKHAND - SWITCH TELLS DERRICKHAND HOW HIGH STAND IS OFF RIG FLOOR
	20:30 - 0:00	3.50	DRLPRO	02	B	P		DRILL/SLIDE F/5092' TO 5455' (363' @ 103.7fph) MW 8.4, VIS 27, WOB 18, RPM 45, MM RPM 102, TQ 7, GPM 486
10/28/2009	0:00 - 3:00	3.00	DRLPRO	02	B	P		DRILL/SLIDE F/5455' TO 5703' (248' @ 82.7fph) MW 8.4, VIS 27, WOB 18, RPM 45, MM RPM 102, TQ 7, GPM 486 - SLIDES 5455-5467,5545-5557
	3:00 - 3:30	0.50	DRLPRO	05	A	P		LOST RETURNS - WORK PIPE REGAIN RETURNS - MUD UP SYSTEM - MW 9.9, VIS 38, LCM 10%
	3:30 - 11:30	8.00	DRLPRO	02	B	P		DRILL/SLIDE F/5703' TO 6180' (477' @ 59.6 FPH) MW 10, VIS 40, WOB 18, RPM 45, MM RPM 102, TQ 7, GPM 486 - SLIDES 5817-5827, 6089-6099
	11:30 - 12:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	12:00 - 0:00	12.00	DRLPRO	02	B	P		DRILL/SLIDE F/ 6180' TO 6686' (506' @ 42' FPH) MW 10.1, VIS 41, WOB 19, RPM 45, MM RPM 102, TQ 7.9, GPM 486 - SLIDES 6451-6461,6542-6557,6723-6733
10/29/2009	0:00 - 0:00	24.00	DRLPRO	02	B	P		DRILL/SLIDE F/ 6686 TO 7503 (817 FT. @ 34 FPH) MW 10.4, VIS 27, WOB 21, RPM 45, MM RPM 102, TQ 11,GPM 486, SLIDES - 6723-6733,6904-6916,7086-7101,7144-7162,7177-7189
10/30/2009	0:00 - 18:30	18.50	DRLPRO	02	B	P		DRILL/SLIDE F/ 7503 TO 8355 - 852 FT. 46 FPH, MW 10.6, VIS 44, WOB 20, RPM 45, MM PRM 102, TQ8.5, GPM 486, SLIDES 7539-7551,7902-7922,7992-8012
	18:30 - 19:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	19:00 - 0:00	5.00	DRLPRO	02	B	P		DRILL/SLIDE F/ 8355 TO 8550 - 195 FT. 39 FPH, MW. 11.2, VIS 43, WOB 20, RPM 45, MM RPM 102, TQ 8.5, GPM 486,
10/31/2009	0:00 - 18:30	18.50	DRLPRO	02	B	P		DRILL F/ 8550 TO 9313 - 763 FT. 41FPH, MW 11.8, VIS 42, WOB 21, RPM 45, MMRPM 102, TQ 8.3, GPM 486, MUD MOTOR FAILED
	18:30 - 19:30	1.00	DRLPRO	05	C	P		BUILD SLUG & CIRC. BTMS UP
	19:30 - 0:00	4.50	DRLPRO	06	A	P		T.O.H TO CHANGE OUT MOTOR & BIT - STRAIGHT PULLED OFF BTM. W/ 40K OVER STRING WT. 2728 FT. @ MIDNIGHT
11/1/2009	0:00 - 1:00	2.00	DRLPRO	06	H	P		FINISH TRIPPING OUT FOR MOTOR
	1:00 - 3:00	2.00	DRLPRO	06	H	P		L/D DIRECTIONAL TOOLS,MOTOR & BIT
	3:00 - 10:00	7.00	DRLPRO	06	A	P		P/U NEW BIT, MOTOR, MONEL & R.I.H BREAK CIRC. @ SHOE, 4000 FT, & 7100 FT.
	10:00 - 11:00	1.00	DRLPRO	08	B	X		HIT BRIDGE @ 9025 FT. STRING DROPPPED INTO ELEVATORS THREE FT. - INSPECT TOPDRIVE & CROWN
	11:00 - 11:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	11:30 - 13:00	1.50	DRLPRO	06	A	P		FINISH TRIPPING IN HOLE, WASH & REAM 100 FT. FAN NEW BIT TO BTM.
	13:00 - 14:30	1.50	DRLPRO	02	B	P		DRILL F/ 9313 TO 9450 - 137 FT. 91 FPH. MW 12#, VIS 44, WOB 18, RPM 45, MM RPM 67, TQ 11.5, GPM 420 TD WELL @ 14:30 HRS.
	14:30 - 16:30	2.00	DRLPRO	05	C	P		CIRC. 2 BTMS. UP
	16:30 - 23:00	6.50	DRLPRO	06	B	P		STRAIGHT PULL 5 STDS., PUMP PILL & T.O.H FOR WIRELINE LOGS
	23:00 - 0:00	1.00	DRLPRO	11	D	P		HELD SAFETY MEETING WITH WEATHERFORD, RIGGED UP & BEGAN RUNNING IN HOLE WITH TOOLS

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: ENSIGN 146/146, PROPETRO/
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
11/2/2009	0:00 - 6:00	6.00	EVALPR	11	D	P		RUN WIRELINE LOGS W/ WEATHERFORD, LOGGERS TD 9453 FT.
	6:00 - 14:30	8.50	EVALPR	06	D	P		P/U BIT, BIT SUB T.I.H BREAK CIRC. @ SHOE, 4000, & 7000 FT.
	14:30 - 16:30	2.00	EVALPR	05	A	P		CIRC. & COND. 2 BTMS. UP, 10 FT. FLARE, MW 12 VIS 41
	16:30 - 0:00	7.50	EVALPR	06	D	P		L.D.D.P - 2000 FT. LEFT @ MIDNIGHT
11/3/2009	0:00 - 3:00	3.00	DRLPRO	06	D	P		L.D.D.P, BHA - PULL WEAR BUSHING
	3:00 - 4:00	1.00	DRLPRO	12	A	P		HELD SAFETY MEETING & RIGGED UP FRANKS CASING TOOLS
	4:00 - 13:00	9.00	DRLPRO	12	C	P		RUN 224 JTS. 4 1/2 11.6# I-80 BTC CASING, LAND 9435 FT. PB 9392.85 FT.
	13:00 - 15:00	2.00	DRLPRO	05	D	P		CIRC. THROUGH CASING, LOST RETURNS 45 MIN INTO CIRCULATION
	15:00 - 18:00	3.00	DRLPRO	12	E	P		HELD SAFETY MEETING W/ HALLIBURTON, RIGGED UP & PUMPED 40 BBL. SPACER AHEAD, 465 SKS. 186.3 BBLS. 2.25 YEILD @ 12.73 GAL/SK, FOLLOWED W/ TAIL 1350 SKS. 302.9 BBLS. 1.26 YEILD @ 5.41 GAL/SK & DISPLACED 145.6 BBLS. W/ CLAYFIX II .1 GAL/BBL & ALDACIDE .01 GAL/BBL, BUMPED PLUG W/ 3220 PSI , FLOATS HELD FINAL LIFT PSI 2720, 1 BBL BACK, PARTIAL RETURNS THROUGH OUT JOB
	18:00 - 23:59	5.98	DRLPRO	14	A	P		NIPPLE DOWN BOP, CLEAN MUD TANKS, RELEASE RIG @ 23:59 HRS. 11/3/2009

US ROCKIES REGION
Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 698/698, LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/28/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/7/2009	7:00 - 7:15	0.25	COMP	48		P		JSA FALLIN OBJECTS EXP ICE IN DERRICK
	7:15 - 17:00	9.75	COMP	30		P		RIG DOWN RIG MOVE RIG & EQUIP FROM BON 1023-8I TO NBU 922-29M2DS TO C/O SPOT RIG & EQUIP, RU RIG ND WELLHEAD NU BOPS RU FLOOR & TUB EQUIP TALLEY & PU 77 JNTS OF 2-3/8 L-80 TUBING EOT=1270' SDFN (MOVED ON FRESH SNOW, SNOWED ALL DAY)
12/8/2009	7:00 - 7:15	0.25		48				JSA PICKING UP PIPE
	7:15 - 17:00	9.75	COMP	30		P		0 PSI ON WELL PU PIPE TAG FILL @ 9383' C/O & DRILL TO 9403' W/ 296 JNTS IN HOLE CIRC CLEAN RD PWR SWVL, RD & DRAIN RIG PUMP POOH LAYING DOWN TUBING LD 200 JNTS EOT @ 3496' SDFN.
12/9/2009	7:00 - 7:15	0.25		48				JSA COLD WEATHER
	7:15 - 17:00	9.75	COMP	30		P		SPENT 2 HRS STARTING RIG TEMP ON LOC -17 DEG W/O WIND CHILL, POOH W/ REMAINING TUB RD FLOOR & TUB EQUIP ND BOPS , NU WELLHEAD FILL HOLE W/ TMAC RD RIG MOVE RIG & EQUIP TO NBU 1022-10C-1
12/14/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, FRACING / DEFITS
	7:15 -		COMP	36	E	P		MIRU SCHLUMBERGER FRAC EQUIP & SCHLUMBERGER WIRELINE, P/T SURFACE LINES TO 8500#, FRAC MESAVERDE 9155'-9278' 40 HOLES. STG #1] WHP=1700# BRK DN PERFS @4707#, INJ RT=51.5, INJ PSI=5450#, ISIP=2950#, FG=.75, PUMP'D BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2735# FG=.73, AR=48.2, AP=4940#, MR=51.8, MP=7078#, NPI= -215#. 35/40 CALC PERFS OPEN 86% STG #2 DEFIT] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN. SET CBP @9080' PERF MESA VERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, 9046'-9050' 4 SPF, 90* PH, 16 HOLES, PUT IN HALIBURTON SURFACE GAUGES, WHP=2540#, BRK DN PERFS @ 4315#, INJT RT=5.5, PUMP'D 24 BBLS, ISIP=2572#, FG=.72 WAIT 6 HRS [TIME 12:30] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE PERF MESAVERDE 9000'-9002' 4 SPF, 90* PH, 8 HOLES. 8970'-8972' 4 SPF, 90* PH, 8 HOLES. 8912'-8914' 4 SPF, 90* PH, 8 HOLES. [40 HOLES] SWIFN.
12/15/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, FRACING / DEFITS

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 698/698, LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/28/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 -		COMP	36	B	P		FRAC MESAVERDE STG #2 8877'-9050' 40 HOLES STG #2] WHP=2192#, BRK DN PERFS @2830#, INJ RT=50.8, INJ PSI=5100#, ISIP=2507#, FG=.71, PUMP'D 954.2 BBLS SLK WTR W/ 36833# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2790#, FG=.74, AR=45.3, AP=4538#, MR=50.9, MP=5619#, NPI=283#, 40/40 CALC PERFS OPEN. DEFIT STG #3] 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. 8780'-8782' 4 SPF, 90* PH, 8 HOLES. WHP=2250#, BRK DN PERFS @ 6900#, RT=5.4, ISIP=2450#, FG=.71 [TIME 11:13] STG 3)PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF F/ 8652'-56', 4 SPF, 16 HOLES. 8721'-23', 4 SPF, 8 HOLES. 8762'-64', 4 SPF, 8 HOLES. POOH. 20:30 OPEN WELL 1615 PSI. BEG PUMPING, SPEAR HEAD 125 GAL 28% ACID. PUMP 100 BBLS S/W CALC PERF'S OPEN @ 50.7 BPM @ 4910PSI =100% OPEN. PUMP'D 1297 BBLS SLK WTR W/ 73,072# 30/50 MESH & TAIL IN W/ 5,000# 20/40 TLC. ISIP=2575#, FG=.73, AR=47.5, AP=4456#, MR=50.8, MP=6186#, NPI=125#. 21:18 SWI. X-OVER FOR WL. D-FIT STG 4) PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8594' P/U PERF F/ 8560'-64', 4 SPF, 16 HOLES. POOH. X-OVER FOR FRAC CREW. 22:46 OPEN WELL 2356 PSI. BRK DN PERF'S @ 5.1 BPM @ 2901 PSI. CONT PUMPING @ 5.1 BPM FOR 1000 GAL. SD, ISIP 2429 PSI, FG .71. (TIME 22:50) 22:55 SDFN.
12/16/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, ICE PLUGS, WIRE LINE, FRACING

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 698/698, LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/28/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 -		COMP	36	D	P		STG# 4] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, PERF MESAVERDE. 8542'-8544' 4 SPF, 90* PH, 8 HOLES. 8523'-8528' 4 SPF, 90* PH, 20 HOLES. [44 HOLES] FRAC STG #4] WHP=1964#, BRK DN PERFS @ 2630#, INJ RT=51.8, INJ PSI=5400#, ISP=2300#, FG=.70, PUMP'D 842.1 BBLS SLK WTR W/ 31813# 30/50 MESH W/ 5000# RESIN COAT IN TAIL. ISIP=2628#, FG=.74, AR=44.9, AP4462=#, MR=52, MP=5346#, NPI=328#, 29/44 CALC PERFS OPEN 69%. STG #5 DEFIT] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 8448', PERF MESAVERDE USING 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 8414'-8418' 4 SPF, 90* PH, 16 HOLES. WHP=2196' BRK DN PERFS=2528#, RT=5.3, ISIP=2290#, FG=.70 [TIME 10:34] TIME 16:30] PERF STG #5] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE, PERF MESAVERDE 8344'-8348' 4 SPF, 90* PH, 16 HOLES. 8274'-8276' 4 SPF, 90* PH, 8 HOLES. [40 HOLES] FRAC #5] WHP=#, BRK DN PERFS @ 2477#, INJ RT=50.6, INJ PSI=5386#, ISIP=2250#, FG=.70, PUMP'D 903 BBLS SLK WTR W/ 28,837# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2350#, FG=.71, AR=32.8, AP=3726#, MR=51, MP=5420#, NPI=100#, 27/40 CALC PERFS OPEN 68%. STG #6 DEFIT] P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE. 8090'-8094' 4 SPF, 90* PH, 16 HOLES. WHP=1465#, BRK DN PERFS @ 5102#, RT=4.8, ISIP=2208#, FG=.70, [TIME 19:37] SDFN.

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 698/698, LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/28/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

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) RD HAL SURFACE GAUGES, OPEN WELL. PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF F/ 8024'-26', 4 SPF, 8 HOLES. 8055'-57', 4 SPF, 8 HOLES. 8140'-42', 4 SPF, 8 HOLES. POOH. OPEN WELL T/ FRAC. WHP=1410#, BRK DN PERFS @ 2885# @ 5.3 BPM, ISIP=2127#, FG=.69, PERFS OPEN CALC= INJ RT=51.5, INJ PSI=4900# = 85% , PUMP'D 990 BBLS SLK WTR W/ 34,143# 30/50 MESH & TAIL IN W/ 5000# 20/40 TLC. ISIP=2510#, FG=.74, AR=45.7, AP=4192#, MR=51.9, MP=6664#, NPI=383#. FRAC STG 7) NO D-FIT ON 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 @ 7970' P/U PERF F/ 7834'-40', 4 SPF, 24 HOLES. 7936'-40', 4 SPF, 16 HOLES. POOH. WHP=1400#, BRK DN PERFS @ 4133# @ 5.3 BPM, ISIP=2512#, FG=.72, PERFS OPEN CALC= INJ RT=51.5, INJ PSI=4900# = 85% , PUMP'D 879 BBLS SLK WTR W/ 29,622# 30/50 MESH & TAIL IN W/ 5000# 20/40 TLC. ISIP=2485#, FG=.75, AR=44.5, AP=4212#, MR=51.8, MP=6949#, NPI= -15#. D-FIT STG 8)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE, 90 DEG PHASING. RIH SET CBP @ 7611' P/U PERF F/ 7579'-81', 4 SPF, 8 HOLES. POOH W/ WL. RU HAL DOWN HOLE GAUGES ON DELSCO SLICK LINE. RIH T/ 7569'. WHP=1552 PSI, BRK @ 3898 PSI @ 5,7 BPM. SD ISIP 2562 PSI, FG .75. (TIME 14:35) SDFN.
12/18/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, CHECKING VALVES.
	7:15 -		COMP	36	E	P		STG #8] SLICK LINE POOH W/ HALIBURTON DN HOLE GAUGES, P/U RIH W/ 3-3/8 EXPEND [SLICK] 23 GRM, 0.36" HOLE PERF MESAVERDE. 7496'-7498' 4 SPF, 90* PH, 8 HOLES. 7323'-7328' 4 SPF, 90* PH, 20 HOLES. [36 HOLES] WHP=520#, DRK DN PERFS @ 3149#, INJ RT=51.5, INJ PSI=5000#, ISIP=1520#, FG=.65, PUMP'D 622 BBLS SLK WTR W/ 22828# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2060#, FG=.71, AR=43.6, AP=3790#, MR=51.8, MP=5715#, NPI=540#, 24/36 CALC PERFS OPEN 67%. P/U RIH W/ HLIBURTON 8K CBP FOR KILL PLUG SET @ 7273' POOH R/D SCHLUMBERGER WIRE LINE & FRAC EQUIP, SWI.
12/23/2009	6:45 - 7:00	0.25	COMP	48		P		JSA- RUSU. PU TBG.

Operation Summary Report

Well: NBU 922-29M2DS [YELLOW]	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: LEED 698/698, LEED 733/733
Event: COMPLETION	Start Date: 12/11/2009	End Date: 12/28/2009
Active Datum: RKB @5,029.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:00 - 10:30	3.50	COMP	30	A	P		RDSU FROM 29M4DS. MOVE OVER AND RUSU. ND WH. NU BOP. RU FLOOR AND TBG. LAY LINE TO PIT.
	10:30 - 17:00	6.50	COMP	31	I	P		MU 3-7/8" HURR. MILL, POBS, 1.87" XN AND RIH AS MEAS AND PU 229-JTS 2-3/8" L-80 TBG TO TAG AT 7248'. LD 3-JTS. HAVE 226-JTS IN W. EOT AT 7179'. RU PWR SWIVEL. SDF-WE.
12/28/2009	6:45 - 7:00	0.25	COMP	48		P		JSA- D/O PLUGS.
	7:00 - 17:30	10.50	COMP	44	C	P		SIP-0. RIH W/ 3 JTS ON PWR SWIVEL TO TAG AT 7248' W/ 229-JTS IN. FILL TBG AND P-TEST TO 30003, GOOD. EST CIRC AND D/O PLUGS #1- C/O 20' SAND TO CBP AT 7273'. D/O IN 6 MIN. 25# INC. RIH. #2-C/O 60' SAND TO CBP AT 7611'. D/O IN 10 MIN. 100# INC. RIH. #3- C/O 30' SAND TO CBP AT 7970'. D/O IN 5 MIN. 75# INC. RIH. #4- C/O 32' SAND TO CBP AT 8172'. D/O IN 10 MIN. 100# INC. RIH. #5- C/O 31' SAND TO CBP AT 8448'. D/O IN 9 MIN. 100# INC. RIH. #6- C/O 32' SAND TO CBP AT 8594'. D/O IN 8 MIN. 50# INC. RIH. #7- C/O 34' SAND TO CBP AT 8812'. D/O IN 8 MIN. 50# INC. RIH. #8- C/O 30' SAND TO CBP AT 9080'. D/O IN MIN. 50# INC. RIH. PBTD- C/O 20' SAND TO PBTD AT 9403' (25' RATHOLE) W/ 296-JTS IN. CIRC CLEAN. RD PWR SWIVEL. POOH AS LD 18-JTS TBG. PU 7" 5K CAMERON HNGR. LUB IN AND FLUSH BOWL. LAND 278-JTS 2-3/8" L-80 TBG W/ EOT AT 8842.10'. RD FLOOR. ND BOP. NU WH. PMP OFF BIT SUB AT 1700#. TURN WELL OVER TO FLOW BACK CREW. TBG DETAIL KB 13.00 7" 5K CAMERON HNGR 1.00 278-JTS 2-3/8" L-80 8825.90 1.87" XN (FE) 2.20 EOT 8842.10 314 JTS OUT PMP 7117 BBL 36 JTS IN RCVR 3150 BBL LTR 3967 BBL
12/29/2009	8:00 -			33	A			7 AM FLBK REPORT: CP 2750#, TP 2100#, 20/64" CK, 45 BWPH, 1/2 CUP SAND, - GAS TTL BBLS RECOVERED: 3910 BBLS LEFT TO RECOVER: 3207
12/30/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 3100#, TP 2050#, 20/64" CK, 35 BWPH, 1/4 CUP SAND, - GAS TTL BBLS RECOVERED: 5120 BBLS LEFT TO RECOVER: 7089
	11:00 -		PROD	50				WELL TURNED TO SALE @ 1100 HR ON 12/30/09 - FTP 2100#, CP 3000, 2900 MCFD, 35 BWPD, 20/64 CK
12/31/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2800#, TP 1950#, 20/64" CK, 25 BWPH, TBSP SAND, 2541 GAS TTL BBLS RECOVERED: 5635 BBLS LEFT TO RECOVER: 1482

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

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

7. UNIT or CA AGREEMENT NAME:

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

8. WELL NAME and NUMBER: NBU 922-29M2DS

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

9. API NUMBER: 4304750343

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217

PHONE NUMBER: (720) 929-6100

10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SWSW 611 FSL & 511 FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSW 706 FSL & 497 FWL SEC.29-9S-22E
AT TOTAL DEPTH: SWSW 677 FSL 519 FWL 678 FSL & 518 FWL SEC.29-9S-22E

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

12. COUNTY: UINTAH

13. STATE: UTAH

14. DATE SPUDDED: 9/3/2009

15. DATE T.D. REACHED: 11/1/2009

16. DATE COMPLETED: 12/30/2009 ABANDONED ☐ READY TO PRODUCE ☑

17. ELEVATIONS (DF, RKB, RT, GL): 5015' GL

18. TOTAL DEPTH: MD 9,450 TVD 9,447

19. PLUG BACK T.D.: MD 9,391 TVD 9,388

20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL/GR-TRIPLE COMBO, 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#		2,375		700			
7 7/8"	4 1/2 I-80	11.6#		9,436		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"	8,842							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	7,323	9,378		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
7,323 9,378	0.36	320	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7,323-9,378	PMP 9,374 BBLS SLICK H20 & 356,356 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:

30. WELL STATUS: PROD

RECEIVED
FEB 01 2010
DIV. OF OIL, GAS & MINING

(5/2000) (CONTINUED ON BACK)

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
12/30/2009	1/6/2010	24		0	2,205	320	FLOWING

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:
20/64	600	2,200					0	2,205	320	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:

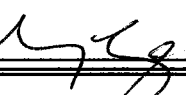
Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,372				
MAHOGANY	2,097				
WASATCH	4,692	7,226			
MESAVERDE	7,226	9,428			

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 1/27/2010

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

(5/2000)

Anadarko
Petroleum Corporation

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-29M PAD
NBU 922-29M2DS

NBU 922-29M2DS

Survey: Survey #1

Standard Survey Report

02 November, 2009

Weatherford®

Anadarko E&P Company LP

NBU 922-29M2DS
UINTAH COUNTY, UTAH (nad 27)
SECTION 29 T9S R22E
611' FSL, 511' FWL
40° 0' 5.371 N
109° 28' 14.808 W

Weatherford®

Azimuths to True North
Magnetic North: 11.31°

Magnetic Field
Strength: 52549.6snT
Dip Angle: 65.94°
Date: 10/19/2009
Model: BGGM2009

WELL DETAILS: NBU 922-29M2DS

Ground Level: 5012.00

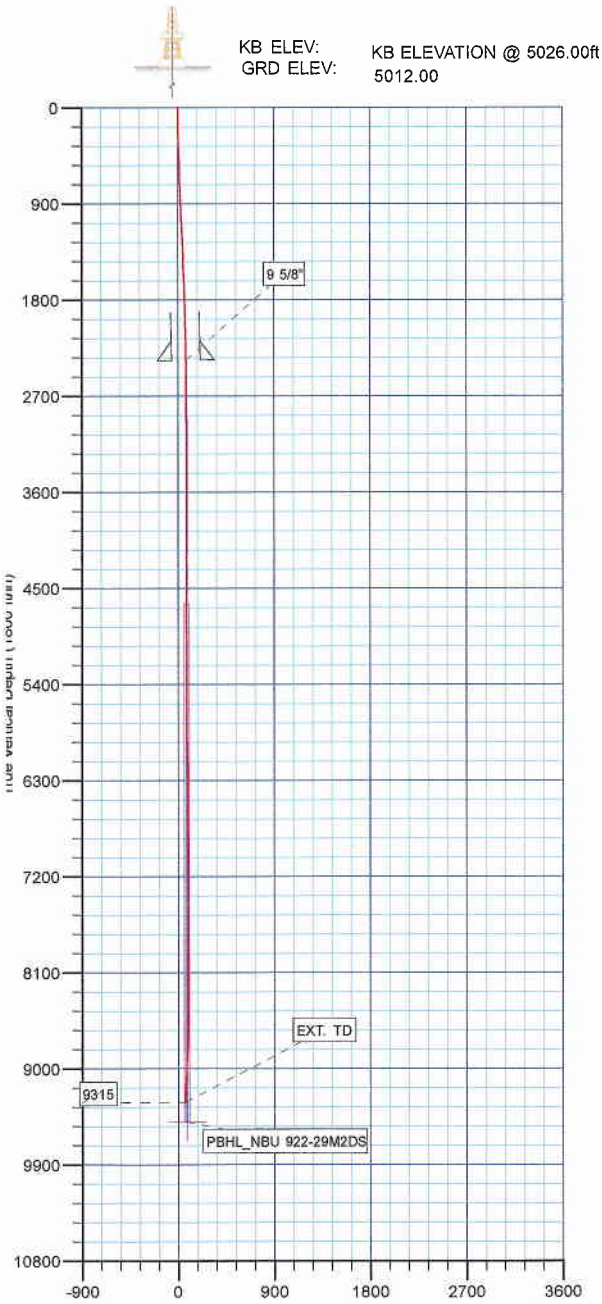
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	14530261.95	2068687.05	40° 0' 5.371 N	109° 28' 14.808 W	

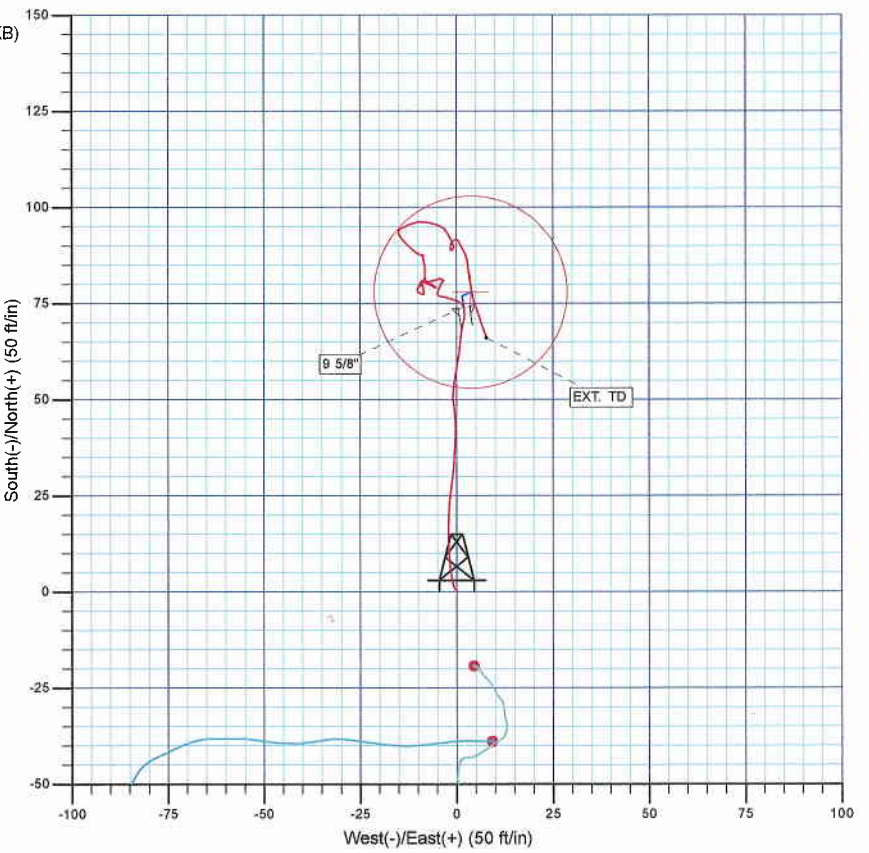
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	9500.00	77.94	3.64	40° 0' 6.142 N	109° 28' 14.761 W	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
2350.00	1.25	350.57	2348.66	73.78	1.91	0.00	0.00	73.79	
2466.00	1.25	350.57	2464.63	76.28	1.50	0.00	0.00	76.27	
2527.17	0.13	65.96	2525.79	76.97	1.46	2.00	173.98	76.95	
3555.12	0.13	65.96	3553.74	77.93	3.63	0.00	0.00	78.02	
3568.38	0.00	0.00	3567.00	77.94	3.64	1.00	180.00	78.03	
9501.38	0.00	0.00	9500.00	77.94	3.64	0.00	0.00	78.03	PBHL_NBU 922-29M2DS





FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4645.00	4646.38	Wasatch
7224.00	7225.38	DKCYN
8183.00	8184.38	Mesaverde

CASING DETAILS

TVD	MD	Name	Size
2364.65	2366.00	9 5/8"	9.62

Survey: Survey #1 (NBU 922-29M2DS/NBU 922-29M2DS)

Created By: Robert H. Scott

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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 (NADCON CONUS)		
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 922-29M2DS

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,530,261.95 ft	**Latitude:**	40° 0' 5.371 N
	+E/-W	0.00 ft	**Easting:**	2,068,687.05 ft	**Longitude:**	109° 28' 14.808 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,012.00 ft

Wellbore NBU 922-29M2DS

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2009	10/19/2009	11.31	65.94	52,550

Design NBU 922-29M2DS

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	2.67

Survey Program **Date** 11/2/2009

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
150.00	9,317.00	Survey #1 (NBU 922-29M2DS)	MWD	MWD - Standard

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	0.52	328.25	150.00	0.58	-0.36	0.56	0.35	0.35	0.00
240.00	1.07	336.39	239.99	1.70	-0.91	1.65	0.62	0.61	9.04
330.00	1.77	354.49	329.96	3.85	-1.38	3.78	0.91	0.78	20.11
420.00	2.14	352.03	419.91	6.90	-1.75	6.81	0.42	0.41	-2.73
510.00	1.92	358.36	509.85	10.07	-2.02	9.96	0.35	-0.24	7.03
600.00	1.75	355.20	599.81	12.94	-2.18	12.83	0.22	-0.19	-3.51
690.00	2.06	4.20	689.76	15.93	-2.18	15.81	0.48	0.34	10.00
780.00	2.63	357.95	779.68	19.60	-2.13	19.48	0.69	0.63	-6.94
870.00	2.56	8.95	869.59	23.65	-1.89	23.54	0.56	-0.08	12.22
960.00	2.63	6.82	959.50	27.69	-1.34	27.60	0.13	0.08	-2.37
1,050.00	2.63	5.32	1,049.40	31.80	-0.90	31.72	0.08	0.00	-1.67
1,140.00	2.69	3.20	1,139.31	35.96	-0.59	35.89	0.13	0.07	-2.36

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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)
1,230.00	2.50	2.20	1,229.21	40.03	-0.40	39.97	0.22	-0.21	-1.11
1,320.00	2.31	359.32	1,319.13	43.81	-0.34	43.74	0.25	-0.21	-3.20
1,410.00	2.00	349.95	1,409.07	47.17	-0.64	47.08	0.52	-0.34	-10.41
1,500.00	2.06	358.20	1,499.01	50.33	-0.96	50.23	0.33	0.07	9.17
1,590.00	2.31	8.45	1,588.95	53.74	-0.75	53.65	0.51	0.28	11.39
1,680.00	2.25	10.45	1,678.88	57.27	-0.16	57.20	0.11	-0.07	2.22
1,770.00	1.81	7.45	1,768.82	60.42	0.34	60.37	0.50	-0.49	-3.33
1,860.00	1.75	7.20	1,858.78	63.19	0.70	63.15	0.07	-0.07	-0.28
1,950.00	1.56	5.82	1,948.74	65.77	1.00	65.75	0.22	-0.21	-1.53
2,040.00	1.06	8.45	2,038.72	67.81	1.24	67.80	0.56	-0.56	2.92
2,130.00	1.06	15.95	2,128.70	69.44	1.60	69.44	0.15	0.00	8.33
2,220.00	1.13	8.57	2,218.68	71.12	1.96	71.13	0.17	0.08	-8.20
2,350.00	1.25	350.57	2,348.66	73.78	1.91	73.79	0.30	0.09	-13.85
2,415.00	1.04	321.84	2,413.64	74.95	1.43	74.93	0.93	-0.32	-44.20
2,505.00	0.87	270.40	2,503.63	75.59	0.25	75.52	0.94	-0.19	-57.16
2,596.00	1.25	304.05	2,594.62	76.15	-1.27	76.01	0.78	0.42	36.98
2,687.00	1.44	270.93	2,685.59	76.73	-3.23	76.49	0.87	0.21	-36.40
2,777.00	0.63	308.00	2,775.58	77.05	-4.75	76.75	1.12	-0.90	41.19
2,868.00	1.25	22.30	2,866.57	78.28	-4.77	77.97	1.36	0.68	81.65
2,958.00	0.77	23.96	2,956.56	79.74	-4.15	79.46	0.53	-0.53	1.84
3,049.00	0.44	36.68	3,047.55	80.58	-3.70	80.32	0.39	-0.36	13.98
3,140.00	0.19	85.93	3,138.55	80.87	-3.34	80.62	0.38	-0.27	54.12
3,230.00	0.63	306.18	3,228.55	81.17	-3.59	80.92	0.87	0.49	-155.28
3,321.00	0.50	271.05	3,319.54	81.47	-4.39	81.18	0.40	-0.14	-38.60
3,411.00	0.82	236.15	3,409.54	81.12	-5.32	80.79	0.56	0.36	-38.78
3,502.00	0.25	307.55	3,500.53	80.88	-6.01	80.51	0.85	-0.63	78.46
3,593.00	0.50	245.18	3,591.53	80.83	-6.53	80.44	0.49	0.27	-68.54
3,683.00	0.44	248.30	3,681.53	80.54	-7.21	80.12	0.07	-0.07	3.47
3,774.00	0.63	321.30	3,772.53	80.80	-7.85	80.35	0.72	0.21	80.22
3,864.00	0.48	261.23	3,862.52	81.13	-8.53	80.65	0.63	-0.17	-66.74
3,955.00	0.69	211.93	3,953.52	80.61	-9.19	80.09	0.58	0.23	-54.18
4,045.00	0.13	355.68	4,043.52	80.25	-9.49	79.72	0.89	-0.62	159.72
4,136.00	0.63	172.93	4,134.51	79.86	-9.44	79.33	0.84	0.55	194.78
4,227.00	0.06	56.05	4,225.51	79.39	-9.33	78.87	0.72	-0.63	-128.44
4,317.00	0.50	26.47	4,315.51	79.77	-9.12	79.25	0.50	0.49	-32.87
4,408.00	0.06	116.68	4,406.51	80.10	-8.90	79.60	0.55	-0.48	99.13
4,498.00	0.50	167.05	4,496.51	79.70	-8.77	79.20	0.52	0.49	55.97
4,589.00	1.06	171.55	4,587.50	78.48	-8.56	77.99	0.62	0.62	4.95
4,680.00	0.31	201.93	4,678.49	77.41	-8.53	76.93	0.89	-0.82	33.38
4,770.00	0.66	305.52	4,768.49	77.49	-9.04	76.98	0.88	0.39	115.10
4,861.00	0.56	286.05	4,859.49	77.92	-9.89	77.37	0.25	-0.11	-21.40
4,952.00	0.94	15.55	4,950.48	78.76	-10.12	78.20	1.20	0.42	98.35
5,042.00	0.63	40.30	5,040.47	79.85	-9.60	79.31	0.50	-0.34	27.50
5,133.00	0.63	75.93	5,131.47	80.35	-8.79	79.85	0.42	0.00	39.15
5,223.00	0.62	97.74	5,221.46	80.41	-7.83	79.95	0.26	-0.01	24.23
5,314.00	0.63	112.43	5,312.46	80.15	-6.88	79.74	0.18	0.01	16.14
5,405.00	0.75	126.18	5,403.45	79.61	-5.94	79.24	0.22	0.13	15.11
5,495.00	0.31	158.30	5,493.45	79.03	-5.37	78.70	0.57	-0.49	35.69
5,586.00	0.81	308.93	5,584.44	79.21	-5.78	78.85	1.20	0.55	165.53
5,676.00	0.69	295.93	5,674.44	79.84	-6.76	79.44	0.23	-0.13	-14.44
5,767.00	0.62	286.20	5,765.43	80.22	-7.73	79.77	0.14	-0.08	-10.69
5,857.00	1.31	356.93	5,855.42	81.38	-8.25	80.91	1.39	0.77	78.59
5,948.00	0.88	2.30	5,946.40	83.12	-8.28	82.65	0.49	-0.47	5.90
6,039.00	0.56	3.80	6,037.40	84.26	-8.22	83.79	0.35	-0.35	1.65

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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)
6,130.00	1.12	345.34	6,128.39	85.57	-8.42	85.08	0.68	0.62	-20.29
6,220.00	0.63	351.55	6,218.37	86.91	-8.71	86.41	0.55	-0.54	6.90
6,310.00	0.25	351.05	6,308.37	87.59	-8.82	87.09	0.42	-0.42	-0.56
6,401.00	0.13	150.30	6,399.37	87.70	-8.80	87.19	0.41	-0.13	175.00
6,492.00	0.31	146.18	6,490.37	87.40	-8.61	86.91	0.20	0.20	-4.53
6,582.00	0.74	298.19	6,580.37	87.48	-8.98	86.96	1.14	0.48	168.90
6,673.00	0.56	287.55	6,671.36	87.89	-9.93	87.33	0.24	-0.20	-11.69
6,764.00	0.94	310.05	6,762.35	88.50	-10.92	87.90	0.52	0.42	24.73
6,854.00	0.69	311.43	6,852.35	89.34	-11.89	88.68	0.28	-0.28	1.53
6,945.00	1.19	317.93	6,943.33	90.40	-12.94	89.70	0.56	0.55	7.14
7,036.00	1.21	317.18	7,034.31	91.81	-14.22	91.04	0.03	0.02	-0.82
7,127.00	1.00	341.80	7,125.30	93.27	-15.12	92.46	0.56	-0.23	27.05
7,217.00	1.56	63.55	7,215.28	94.56	-14.27	93.79	1.92	0.62	90.83
7,308.00	1.63	66.80	7,306.24	95.62	-11.97	94.96	0.13	0.08	3.57
7,398.00	1.44	86.05	7,396.21	96.20	-9.67	95.65	0.61	-0.21	21.39
7,489.00	1.50	101.30	7,487.18	96.05	-7.36	95.60	0.43	0.07	16.76
7,580.00	1.45	105.95	7,578.15	95.50	-5.09	95.16	0.14	-0.05	5.11
7,670.00	1.06	129.55	7,668.13	94.65	-3.35	94.39	0.71	-0.43	26.22
7,761.00	1.38	153.43	7,759.11	93.14	-2.21	92.93	0.65	0.35	26.24
7,852.00	1.81	155.43	7,850.08	90.85	-1.12	90.70	0.48	0.47	2.20
7,942.00	0.88	217.80	7,940.05	89.01	-0.95	88.87	1.78	-1.03	69.30
8,033.00	0.75	340.80	8,031.05	89.02	-1.58	88.85	1.58	-0.14	135.16
8,123.00	1.00	21.55	8,121.04	90.31	-1.48	90.14	0.73	0.28	45.28
8,214.00	0.50	50.68	8,212.03	91.30	-0.89	91.16	0.67	-0.55	32.01
8,305.00	0.31	83.43	8,303.03	91.58	-0.33	91.46	0.32	-0.21	35.99
8,395.00	0.25	106.30	8,393.03	91.55	0.10	91.46	0.14	-0.07	25.41
8,486.00	0.49	149.94	8,484.03	91.16	0.48	91.08	0.39	0.26	47.96
8,577.00	0.94	154.55	8,575.02	90.15	1.00	90.10	0.50	0.49	5.07
8,667.00	1.38	148.55	8,665.00	88.56	1.88	88.55	0.51	0.49	-6.67
8,758.00	1.69	167.80	8,755.97	86.31	2.74	86.34	0.66	0.34	21.15
8,848.00	2.19	177.68	8,845.92	83.29	3.09	83.35	0.67	0.56	10.98
9,030.00	2.13	164.43	9,027.79	76.56	4.13	76.67	0.28	-0.03	-7.28
9,263.00	2.25	158.55	9,260.62	68.13	6.97	68.38	0.11	0.05	-2.52
EXT. TD - PBHL_NBU 922-29M2DS									
9,317.00	2.25	158.55	9,314.58	66.16	7.74	66.45	0.00	0.00	0.00

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,317.00	9,314.58	66.16	7.74	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

Anadarko
Petroleum Corporation

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 922-29M PAD
NBU 922-29M2DS

NBU 922-29M2DS

Survey: Survey #1

Survey Report - Geographic

02 November, 2009

Weatherford®

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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 (NADCON CONUS)		
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 922-29M2DS

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,530,261.95 ft	**Latitude:**	40° 0' 5.371 N
	+E/-W	0.00 ft	**Easting:**	2,068,687.05 ft	**Longitude:**	109° 28' 14.808 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,012.00 ft

Wellbore NBU 922-29M2DS

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2009	10/19/2009	11.31	65.94	52,550

Design NBU 922-29M2DS

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	2.67

Survey Program **Date** 11/2/2009

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
150.00	9,317.00	Survey #1 (NBU 922-29M2DS)	MWD	MWD - Standard

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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	14,530,261.95	2,068,687.05	40° 0' 5.371 N	109° 28' 14.808 W
150.00	0.52	328.25	150.00	0.58	-0.36	14,530,262.52	2,068,686.68	40° 0' 5.377 N	109° 28' 14.813 W
240.00	1.07	336.39	239.99	1.70	-0.91	14,530,263.63	2,068,686.11	40° 0' 5.388 N	109° 28' 14.820 W
330.00	1.77	354.49	329.96	3.85	-1.38	14,530,265.77	2,068,685.60	40° 0' 5.409 N	109° 28' 14.826 W
420.00	2.14	352.03	419.91	6.90	-1.75	14,530,268.81	2,068,685.18	40° 0' 5.439 N	109° 28' 14.830 W
510.00	1.92	358.36	509.85	10.07	-2.02	14,530,271.98	2,068,684.85	40° 0' 5.471 N	109° 28' 14.834 W
600.00	1.75	355.20	599.81	12.94	-2.18	14,530,274.85	2,068,684.64	40° 0' 5.499 N	109° 28' 14.836 W
690.00	2.06	4.20	689.76	15.93	-2.18	14,530,277.83	2,068,684.60	40° 0' 5.529 N	109° 28' 14.836 W
780.00	2.63	357.95	779.68	19.60	-2.13	14,530,281.51	2,068,684.58	40° 0' 5.565 N	109° 28' 14.835 W
870.00	2.56	8.95	869.59	23.65	-1.89	14,530,285.56	2,068,684.75	40° 0' 5.605 N	109° 28' 14.832 W
960.00	2.63	6.82	959.50	27.69	-1.34	14,530,289.61	2,068,685.24	40° 0' 5.645 N	109° 28' 14.825 W
1,050.00	2.63	5.32	1,049.40	31.80	-0.90	14,530,293.72	2,068,685.60	40° 0' 5.685 N	109° 28' 14.820 W
1,140.00	2.69	3.20	1,139.31	35.96	-0.59	14,530,297.89	2,068,685.84	40° 0' 5.727 N	109° 28' 14.816 W
1,230.00	2.50	2.20	1,229.21	40.03	-0.40	14,530,301.96	2,068,685.96	40° 0' 5.767 N	109° 28' 14.813 W
1,320.00	2.31	359.32	1,319.13	43.81	-0.34	14,530,305.74	2,068,685.95	40° 0' 5.804 N	109° 28' 14.812 W
1,410.00	2.00	349.95	1,409.07	47.17	-0.64	14,530,309.09	2,068,685.60	40° 0' 5.837 N	109° 28' 14.816 W
1,500.00	2.06	358.20	1,499.01	50.33	-0.96	14,530,312.25	2,068,685.22	40° 0' 5.869 N	109° 28' 14.820 W
1,590.00	2.31	8.45	1,588.95	53.74	-0.75	14,530,315.67	2,068,685.38	40° 0' 5.902 N	109° 28' 14.818 W
1,680.00	2.25	10.45	1,678.88	57.27	-0.16	14,530,319.21	2,068,685.90	40° 0' 5.937 N	109° 28' 14.810 W
1,770.00	1.81	7.45	1,768.82	60.42	0.34	14,530,322.36	2,068,686.35	40° 0' 5.968 N	109° 28' 14.804 W
1,860.00	1.75	7.20	1,858.78	63.19	0.70	14,530,325.14	2,068,686.66	40° 0' 5.996 N	109° 28' 14.799 W
1,950.00	1.56	5.82	1,948.74	65.77	1.00	14,530,327.73	2,068,686.92	40° 0' 6.021 N	109° 28' 14.795 W
2,040.00	1.06	8.45	2,038.72	67.81	1.24	14,530,329.77	2,068,687.13	40° 0' 6.042 N	109° 28' 14.792 W
2,130.00	1.06	15.95	2,128.70	69.44	1.60	14,530,331.40	2,068,687.45	40° 0' 6.058 N	109° 28' 14.787 W
2,220.00	1.13	8.57	2,218.68	71.12	1.96	14,530,333.09	2,068,687.78	40° 0' 6.074 N	109° 28' 14.783 W
2,350.00	1.25	350.57	2,348.66	73.78	1.91	14,530,335.75	2,068,687.70	40° 0' 6.100 N	109° 28' 14.783 W
2,415.00	1.04	321.84	2,413.64	74.95	1.43	14,530,336.91	2,068,687.19	40° 0' 6.112 N	109° 28' 14.790 W
2,505.00	0.87	270.40	2,503.63	75.59	0.25	14,530,337.53	2,068,686.00	40° 0' 6.118 N	109° 28' 14.805 W
2,596.00	1.25	304.05	2,594.62	76.15	-1.27	14,530,338.07	2,068,684.47	40° 0' 6.124 N	109° 28' 14.824 W
2,687.00	1.44	270.93	2,685.59	76.73	-3.23	14,530,338.61	2,068,682.50	40° 0' 6.130 N	109° 28' 14.850 W
2,777.00	0.63	308.00	2,775.58	77.05	-4.75	14,530,338.90	2,068,680.97	40° 0' 6.133 N	109° 28' 14.869 W
2,868.00	1.25	22.30	2,866.57	78.28	-4.77	14,530,340.13	2,068,680.93	40° 0' 6.145 N	109° 28' 14.869 W
2,958.00	0.77	23.96	2,956.56	79.74	-4.15	14,530,341.60	2,068,681.53	40° 0' 6.159 N	109° 28' 14.861 W
3,049.00	0.44	36.68	3,047.55	80.58	-3.70	14,530,342.45	2,068,681.97	40° 0' 6.168 N	109° 28' 14.855 W
3,140.00	0.19	85.93	3,138.55	80.87	-3.34	14,530,342.75	2,068,682.32	40° 0' 6.171 N	109° 28' 14.851 W
3,230.00	0.63	306.18	3,228.55	81.17	-3.59	14,530,343.04	2,068,682.07	40° 0' 6.174 N	109° 28' 14.854 W
3,321.00	0.50	271.05	3,319.54	81.47	-4.39	14,530,343.33	2,068,681.26	40° 0' 6.177 N	109° 28' 14.864 W
3,411.00	0.82	236.15	3,409.54	81.12	-5.32	14,530,342.97	2,068,680.34	40° 0' 6.173 N	109° 28' 14.876 W
3,502.00	0.25	307.55	3,500.53	80.88	-6.01	14,530,342.71	2,068,679.65	40° 0' 6.171 N	109° 28' 14.885 W
3,593.00	0.50	245.18	3,591.53	80.83	-6.53	14,530,342.66	2,068,679.13	40° 0' 6.170 N	109° 28' 14.892 W
3,683.00	0.44	248.30	3,681.53	80.54	-7.21	14,530,342.35	2,068,678.46	40° 0' 6.167 N	109° 28' 14.901 W
3,774.00	0.63	321.30	3,772.53	80.80	-7.85	14,530,342.60	2,068,677.81	40° 0' 6.170 N	109° 28' 14.909 W
3,864.00	0.48	261.23	3,862.52	81.13	-8.53	14,530,342.92	2,068,677.13	40° 0' 6.173 N	109° 28' 14.918 W
3,955.00	0.69	211.93	3,953.52	80.61	-9.19	14,530,342.39	2,068,676.47	40° 0' 6.168 N	109° 28' 14.926 W
4,045.00	0.13	355.68	4,043.52	80.25	-9.49	14,530,342.02	2,068,676.18	40° 0' 6.164 N	109° 28' 14.930 W
4,136.00	0.63	172.93	4,134.51	79.86	-9.44	14,530,341.63	2,068,676.24	40° 0' 6.161 N	109° 28' 14.929 W
4,227.00	0.06	56.05	4,225.51	79.39	-9.33	14,530,341.16	2,068,676.35	40° 0' 6.156 N	109° 28' 14.928 W
4,317.00	0.50	26.47	4,315.51	79.77	-9.12	14,530,341.54	2,068,676.56	40° 0' 6.160 N	109° 28' 14.925 W
4,408.00	0.06	116.68	4,406.51	80.10	-8.90	14,530,341.88	2,068,676.77	40° 0' 6.163 N	109° 28' 14.922 W
4,498.00	0.50	167.05	4,496.51	79.70	-8.77	14,530,341.48	2,068,676.91	40° 0' 6.159 N	109° 28' 14.921 W
4,589.00	1.06	171.55	4,587.50	78.48	-8.56	14,530,340.26	2,068,677.14	40° 0' 6.147 N	109° 28' 14.918 W
4,680.00	0.31	201.93	4,678.49	77.41	-8.53	14,530,339.20	2,068,677.19	40° 0' 6.136 N	109° 28' 14.918 W
4,770.00	0.66	305.52	4,768.49	77.49	-9.04	14,530,339.27	2,068,676.68	40° 0' 6.137 N	109° 28' 14.924 W
4,861.00	0.56	286.05	4,859.49	77.92	-9.89	14,530,339.68	2,068,675.82	40° 0' 6.141 N	109° 28' 14.935 W
4,952.00	0.94	15.55	4,950.48	78.76	-10.12	14,530,340.52	2,068,675.58	40° 0' 6.150 N	109° 28' 14.938 W

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**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
5,042.00	0.63	40.30	5,040.47	79.85	-9.60	14,530,341.62	2,068,676.08	40° 0' 6.160 N	109° 28' 14.931 W
5,133.00	0.63	75.93	5,131.47	80.35	-8.79	14,530,342.14	2,068,676.88	40° 0' 6.165 N	109° 28' 14.921 W
5,223.00	0.62	97.74	5,221.46	80.41	-7.83	14,530,342.21	2,068,677.84	40° 0' 6.166 N	109° 28' 14.909 W
5,314.00	0.63	112.43	5,312.46	80.15	-6.88	14,530,341.97	2,068,678.79	40° 0' 6.163 N	109° 28' 14.896 W
5,405.00	0.75	126.18	5,403.45	79.61	-5.94	14,530,341.44	2,068,679.74	40° 0' 6.158 N	109° 28' 14.884 W
5,495.00	0.31	158.30	5,493.45	79.03	-5.37	14,530,340.88	2,068,680.32	40° 0' 6.152 N	109° 28' 14.877 W
5,586.00	0.81	308.93	5,584.44	79.21	-5.78	14,530,341.04	2,068,679.91	40° 0' 6.154 N	109° 28' 14.882 W
5,676.00	0.69	295.93	5,674.44	79.84	-6.76	14,530,341.66	2,068,678.91	40° 0' 6.160 N	109° 28' 14.895 W
5,767.00	0.62	286.20	5,765.43	80.22	-7.73	14,530,342.02	2,068,677.94	40° 0' 6.164 N	109° 28' 14.907 W
5,857.00	1.31	356.93	5,855.42	81.38	-8.25	14,530,343.18	2,068,677.40	40° 0' 6.176 N	109° 28' 14.914 W
5,948.00	0.88	2.30	5,946.40	83.12	-8.28	14,530,344.91	2,068,677.34	40° 0' 6.193 N	109° 28' 14.914 W
6,039.00	0.56	3.80	6,037.40	84.26	-8.22	14,530,346.06	2,068,677.38	40° 0' 6.204 N	109° 28' 14.914 W
6,130.00	1.12	345.34	6,128.39	85.57	-8.42	14,530,347.36	2,068,677.16	40° 0' 6.217 N	109° 28' 14.916 W
6,220.00	0.63	351.55	6,218.37	86.91	-8.71	14,530,348.69	2,068,676.84	40° 0' 6.230 N	109° 28' 14.920 W
6,310.00	0.25	351.05	6,308.37	87.59	-8.82	14,530,349.37	2,068,676.73	40° 0' 6.237 N	109° 28' 14.921 W
6,401.00	0.13	150.30	6,399.37	87.70	-8.80	14,530,349.48	2,068,676.75	40° 0' 6.238 N	109° 28' 14.921 W
6,492.00	0.31	146.18	6,490.37	87.40	-8.61	14,530,349.19	2,068,676.94	40° 0' 6.235 N	109° 28' 14.919 W
6,582.00	0.74	298.19	6,580.37	87.48	-8.98	14,530,349.26	2,068,676.56	40° 0' 6.236 N	109° 28' 14.923 W
6,673.00	0.56	287.55	6,671.36	87.89	-9.93	14,530,349.65	2,068,675.61	40° 0' 6.240 N	109° 28' 14.936 W
6,764.00	0.94	310.05	6,762.35	88.50	-10.92	14,530,350.25	2,068,674.61	40° 0' 6.246 N	109° 28' 14.948 W
6,854.00	0.69	311.43	6,852.35	89.34	-11.89	14,530,351.07	2,068,673.62	40° 0' 6.254 N	109° 28' 14.961 W
6,945.00	1.19	317.93	6,943.33	90.40	-12.94	14,530,352.11	2,068,672.56	40° 0' 6.265 N	109° 28' 14.974 W
7,036.00	1.21	317.18	7,034.31	91.81	-14.22	14,530,353.50	2,068,671.25	40° 0' 6.279 N	109° 28' 14.991 W
7,127.00	1.00	341.80	7,125.30	93.27	-15.12	14,530,354.94	2,068,670.32	40° 0' 6.293 N	109° 28' 15.002 W
7,217.00	1.56	63.55	7,215.28	94.56	-14.27	14,530,356.24	2,068,671.15	40° 0' 6.306 N	109° 28' 14.991 W
7,308.00	1.63	66.80	7,306.24	95.62	-11.97	14,530,357.35	2,068,673.43	40° 0' 6.316 N	109° 28' 14.962 W
7,398.00	1.44	86.05	7,396.21	96.20	-9.67	14,530,357.97	2,068,675.73	40° 0' 6.322 N	109° 28' 14.932 W
7,489.00	1.50	101.30	7,487.18	96.05	-7.36	14,530,357.85	2,068,678.04	40° 0' 6.321 N	109° 28' 14.903 W
7,580.00	1.45	105.95	7,578.15	95.50	-5.09	14,530,357.34	2,068,680.32	40° 0' 6.315 N	109° 28' 14.873 W
7,670.00	1.06	129.55	7,668.13	94.65	-3.35	14,530,356.53	2,068,682.07	40° 0' 6.307 N	109° 28' 14.851 W
7,761.00	1.38	153.43	7,759.11	93.14	-2.21	14,530,355.03	2,068,683.24	40° 0' 6.292 N	109° 28' 14.836 W
7,852.00	1.81	155.43	7,850.08	90.85	-1.12	14,530,352.76	2,068,684.37	40° 0' 6.269 N	109° 28' 14.822 W
7,942.00	0.88	217.80	7,940.05	89.01	-0.95	14,530,350.93	2,068,684.56	40° 0' 6.251 N	109° 28' 14.820 W
8,033.00	0.75	340.80	8,031.05	89.02	-1.58	14,530,350.93	2,068,683.94	40° 0' 6.251 N	109° 28' 14.828 W
8,123.00	1.00	21.55	8,121.04	90.31	-1.48	14,530,352.22	2,068,684.01	40° 0' 6.264 N	109° 28' 14.827 W
8,214.00	0.50	50.68	8,212.03	91.30	-0.89	14,530,353.22	2,068,684.59	40° 0' 6.274 N	109° 28' 14.819 W
8,305.00	0.31	83.43	8,303.03	91.58	-0.33	14,530,353.51	2,068,685.14	40° 0' 6.276 N	109° 28' 14.812 W
8,395.00	0.25	106.30	8,393.03	91.55	0.10	14,530,353.49	2,068,685.57	40° 0' 6.276 N	109° 28' 14.807 W
8,486.00	0.49	149.94	8,484.03	91.16	0.48	14,530,353.10	2,068,685.96	40° 0' 6.272 N	109° 28' 14.802 W
8,577.00	0.94	154.55	8,575.02	90.15	1.00	14,530,352.10	2,068,686.50	40° 0' 6.262 N	109° 28' 14.795 W
8,667.00	1.38	148.55	8,665.00	88.56	1.88	14,530,350.52	2,068,687.41	40° 0' 6.247 N	109° 28' 14.784 W
8,758.00	1.69	167.80	8,755.97	86.31	2.74	14,530,348.29	2,068,688.30	40° 0' 6.224 N	109° 28' 14.773 W
8,848.00	2.19	177.68	8,845.92	83.29	3.09	14,530,345.28	2,068,688.70	40° 0' 6.195 N	109° 28' 14.768 W
9,030.00	2.13	164.43	9,027.79	76.56	4.13	14,530,338.57	2,068,689.87	40° 0' 6.128 N	109° 28' 14.755 W
9,263.00	2.25	158.55	9,260.62	68.13	6.97	14,530,330.19	2,068,692.85	40° 0' 6.045 N	109° 28' 14.718 W
EXT. TD									
9,317.00	2.25	158.55	9,314.58	66.16	7.74	14,530,328.23	2,068,693.65	40° 0' 6.025 N	109° 28' 14.708 W

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 922-29M2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Site:	NBU 922-29M PAD	**MD Reference:**	KB ELEVATION @ 5026.00ft (KB)
Well:	NBU 922-29M2DS	**North Reference:**	True
Wellbore:	NBU 922-29M2DS	**Survey Calculation Method:**	Minimum Curvature
Design:	NBU 922-29M2DS	**Database:**	EDM 2003.21 Single User Db

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,317.00	9,314.58	66.16	7.74	EXT. TD

Checked By: _____ Approved By: _____ Date: _____

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

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 922-29M2DS

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

9. API NUMBER: 43047503430000

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: 0611 FSL 0511 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		
✓ NOTICE OF INTENT Approximate date work will start: 6/28/2011	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Wellhead Repair

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

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.

Approved by the Utah Division of Oil, Gas and Mining

Date: 07/11/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Gina Becker	720 929-6086	Regulatory Analyst II
SIGNATURE N/A		**DATE** 6/28/2011

RECEIVED Jun. 28, 2011

WORKORDER #:

Name: NBU 922-29M2DS – [922-29M PAD] 6/16/2011
Surface Location: SWSW Sec. 29, T9S, R22E
Uintah County, UT

API: 4304750343 LEASE#: ML-23608

ELEVATIONS: 5015' GL 5029' KB

TOTAL DEPTH: 9450' PBTD: 9391'

SURFACE CASING: 9 5/8", 36# J-55 @ 2375'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 9436'
TOC @ 600' per CBL

PERFORATIONS: Mesaverde 7323' – 9378'

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 ½" 11.6# csg				0.4227	0.0565	0.01

GEOLOGICAL TOPS:

1372' Green River
2097' Mahogany
4692' Wasatch
7226' Mesaverde

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NBU 922-29M2DS– 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 @ ~7273'. 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.

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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 ½" right hand standard wicker grapple, 1 - 4 ¾" drill collar with 3 ½" 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 ½ hour. TOOH.

5. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" 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 ½" casing stub.

9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7223'. Clean out to PBTD (9391').

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 ½" 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.

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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 ½" casing stub.

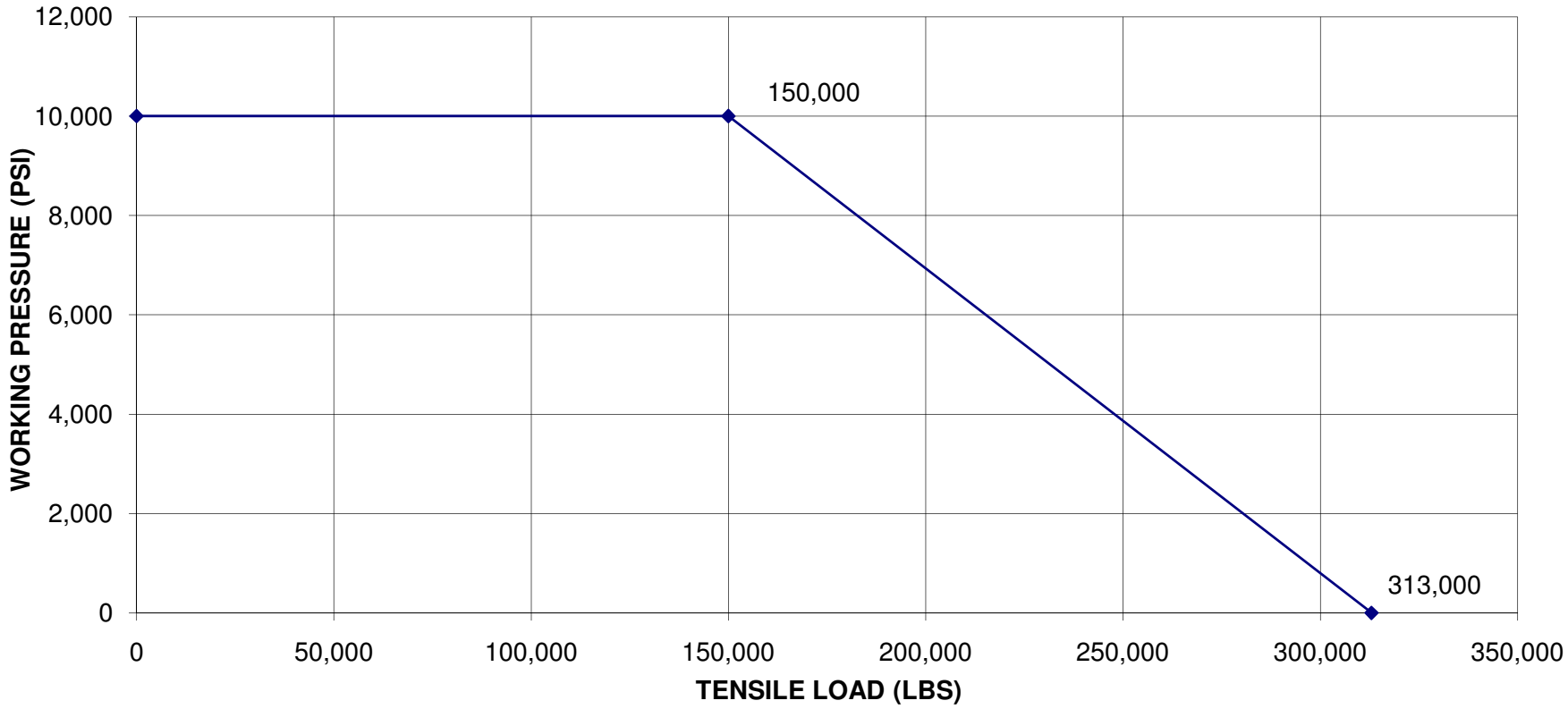
10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7223'. Clean out to PBTD (9391').

11. POOH, land tbg and pump off POBS.

12. NUWH, RDMO. Turn well over to production ops.

RECEIVED Jun. 28, 2011

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

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.

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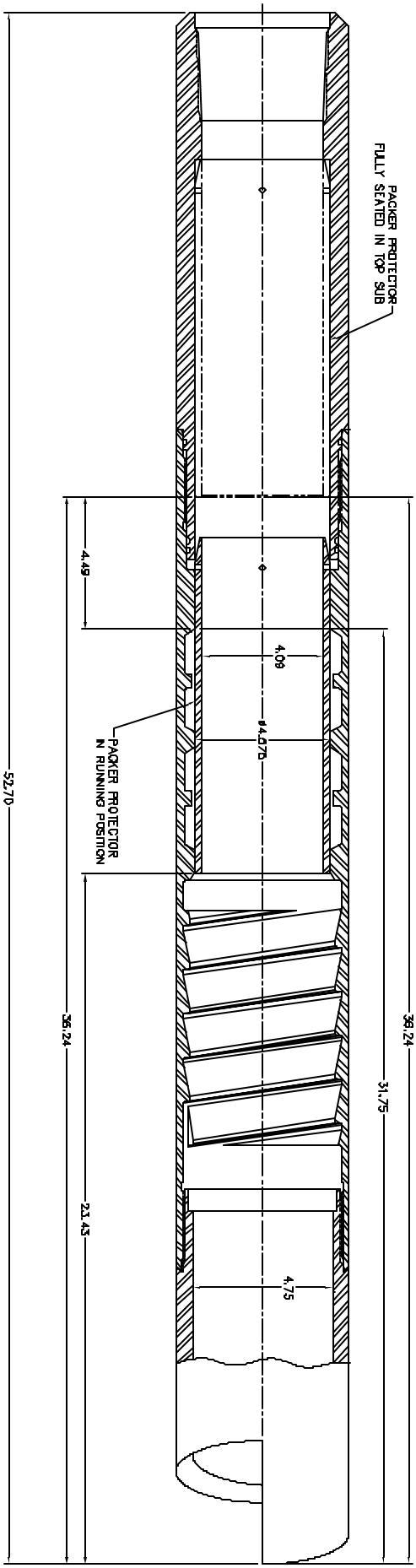

510L-005-001 4-1/2" LOGAN HP CASING PATCH

RECEIVED Jun. 28, 2011

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 23608

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 922-29M2DS

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

9. API NUMBER: 43047503430000

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: 0611 FSL 0511 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		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 9/1/2011	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: 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)	PHONE NUMBER	TITLE
Gina Becker	720 929-6086	Regulatory Analyst II
SIGNATURE N/A		**DATE** 9/1/2011

RECEIVED Sep. 01, 2011

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-29M2DS	Spud Conductor: 9/3/2009	Spud Date: 9/8/2009
Project: UTAH-UINTAH	Site: NBU 922-29M PAD	Rig Name No: SWABBCO 6/6
Event: WELL WORK EXPENSE	Start Date: 7/29/2011	End Date: 8/3/2011
Active Datum: RKB @5,029.00ft (above Mean Sea Leve	UWI: SE/SE/0/9/S/22/E/30/0/0/26/PM/S/611.00/W/0/511.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/29/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= WELL CONTROL
	7:15 - 14:56	7.68	WO/REP	30		P		MIRU 200# FWP CONTROL WELL W/ TMAC ND WELLHEAD NU BOP UNLAND TUBING LD HNGR POOH W/ 278 JNTS LD 45 JNTS DUE TO INT SCALE LD BHA RU W/L RIH W/ GAUGE RING TO 7300' POOH PU 10K CBP RIH TO 7270' SET CBP POOH PU DUMP BAILER DUMP 4 SKS CEM IN 2 RUNS RD W/L FILL HOLE W/ TMAC PRESS TEST TO 500# SIW SDFW
8/1/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= PRESS TESTING
	7:15 - 17:00	9.75	WO/REP	30		P		SIWP=0 PSI ND BOPS ND WELLHEAD PU INT CUTTER CUT CSG BELOW 4' PUP PU OVERSHOT RIH ONTO CSG RU TONGS & W/L B/O CSG @ 1ST JNT LAY ALL DOWN PU 10' PUP & JNT 4-1/2 I-80 BTC RIH THREAD ONTO CSG TORQUE TO 7000 FT/# NU TESTER & TEST TO 3500 PSI LOST 43# 30 MIN SET SLIPS @ 90000# NU WELLHEAD & BOPS RU FLOOR & TUBING EQUIP PU BIT RIH TAG CEM @ 7230' SIW SDFN
8/2/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= FOAMING
	7:15 - 18:00	10.75	WO/REP	30		P		SIWP=0 PSI NU EST CIRC W/ FOAMER DRILL THRU CEM @ CBP @ 7270' W/ 200# INCREASE CONTINUE TO RIH TAG FILL @ 9370' C/O TO 9400' CIRC CLEAN POOH LD 18 JNTS CONTINUE TO POOH LD BHA PU NOTCHED 1.87 XN RIH W/ 278 JNTS LAND TUBING ON HNGR EOT @ 8842.10' PU RIH W/ BROACH TAG @ 2200' SIW SDFN
8/3/2011	7:00 - 7:15	0.25	WO/REP	48		P		JSA= WELLCONTROL
	7:15 - 12:00	4.75	WO/REP	30		P		SIWP= 700# TUB, 800# CSG, CONTROL WELL W/ TMAC UNLAND TUB POOH FIND BAD JNT, @ 2100' FOUND 8 JNTS W/ INT SCALE & 800' DEEPER FOUND 3 MORE JNTS W/ INT SCALE ONLY WAY OF DETECTING WAS BROACH ON SANDLINE LAY ALL BAD JNTS DOWN REPLACE W/ YB TUBING RIH LAND TUBING ON HANGER W/ 278 JNTS OF 2-3/8" L-80 YB RIH W/ BROACH TO XN NPL RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD SIW RD

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

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

Well Name: **NBU 922-29M2DS**

Api No: **43-047-50343** Lease Type: **STATE**

Section **29** Township **09S** Range **22E** County **UINTAH**

Drilling Contractor **PETE MARTIN DRLG** RIG # **BUCKET**

SPUDDED:

Date **09/03/2009**

Time **9:15 AM**

How **DRY**

Drilling will Commence:

Reported by **KENNY MORRIS**

Telephone # **(435) 828-1691**

Date **09/03/2009** **Signed** **CHD**

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

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: 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
B	99999	2900	9/3/2009	9/21/09

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 09/03/2009 AT 13:00 HRS. BHL = SWSW

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
B	99999	2900	9/3/2009	9/21/09

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 09/03/2009 AT 11:15 HRS. BHL = SWSW

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
B	99999	2900	9/3/2009	9/21/09

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 09/03/2009 AT 9:15 HRS. BHL = SWSW

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
DIV. OF OIL, GAS & MINING

ANDY LYTLE
Name (Please Print)

Signature

REGULATORY ANALYST
Title

9/3/2009
Date

(5/2000)

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

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

Well Name: **NBU 922-29M2DS**

Api No: **43-047-50343** Lease Type: **STATE**

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Time **9:15 AM**

How **DRY**

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Reported by **KENNY MORRIS**

Telephone # **(435) 828-1691**

Date **09/03/2009** **Signed** **CHD**

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

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Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
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Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 09/03/2009 AT 13:00 HRS. BHL = SWSW

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
B	99999	2900	9/3/2009	9/21/09

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 09/03/2009 AT 11:15 HRS. BHL = SWSW

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
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RECEIVED
SEP 03 2009
DIV. OF OIL, GAS & MINING

ANDY LYTLE
Name (Please Print)

Signature

REGULATORY ANALYST
Title

9/3/2009
Date

(5/2000)