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 920-23L2DS
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** 307-752-1169
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217	**9. OPERATOR E-MAIL** Laura.Gianakos@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0577A / **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') Ute Tribe / **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	1491 FSL 517 FWL	NWSW	23	9.0 S	20.0 E	S
Top of Uppermost Producing Zone	2155 FSL 335 FWL	NWSW	23	9.0 S	20.0 E	S
At Total Depth	2155 FSL 335 FWL	NWSW	23	9.0 S	20.0 E	S

21. COUNTY UINTAH	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 335	**23. NUMBER OF ACRES IN DRILLING UNIT** 2091
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1682	**26. PROPOSED DEPTH** MD: 10694 TVD: 10606
27. ELEVATION - GROUND LEVEL 4860	**28. BOND NUMBER** WYB000291	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** Permit #43-8496

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ **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**

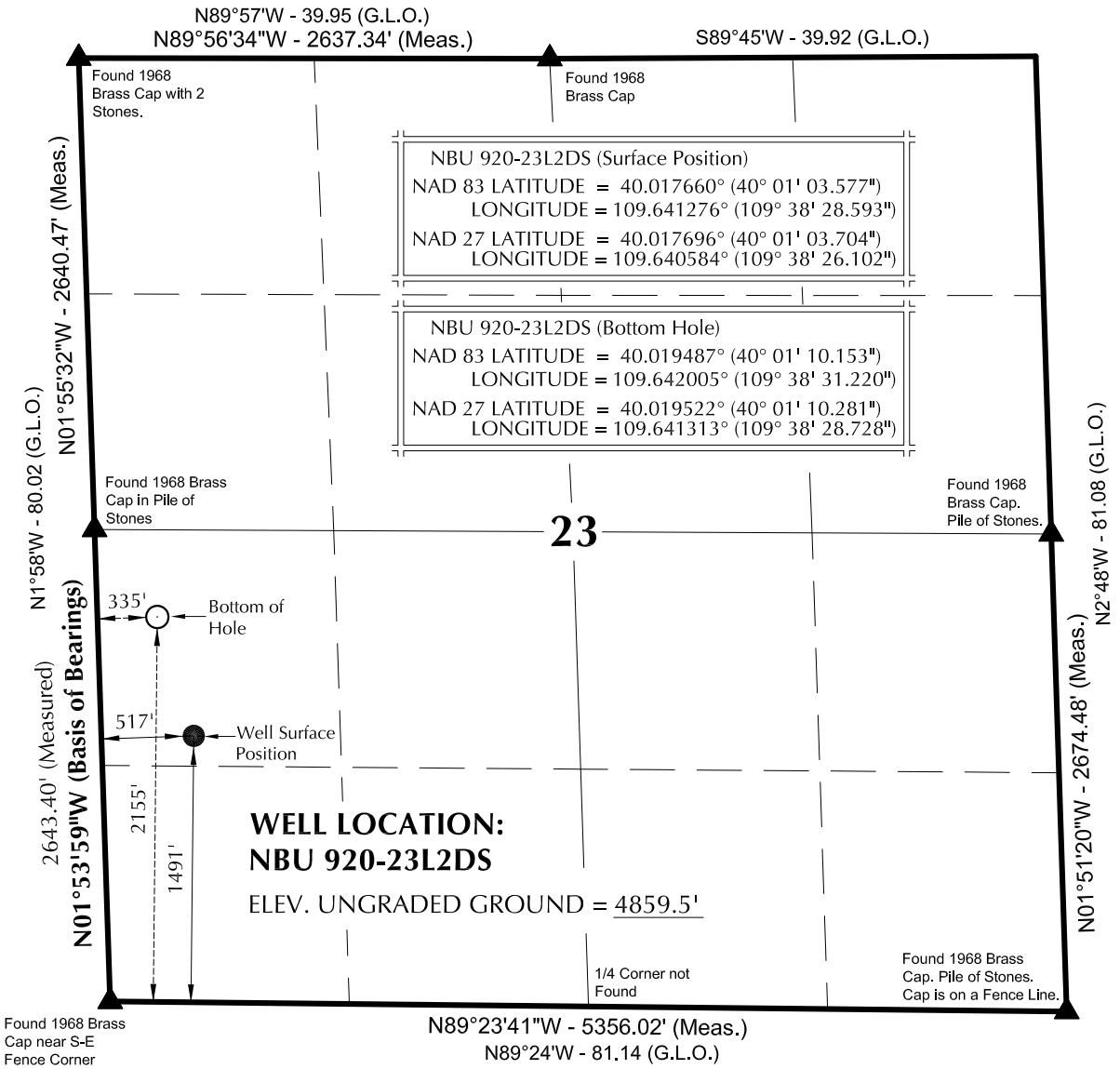
NAME Danielle Piernot	**TITLE** Regulatory Analyst	**PHONE** 720 929-6156
SIGNATURE	**DATE** 04/07/2010	**EMAIL** gnbregulatory@anadarko.com
API NUMBER ASSIGNED 43047510510000	**APPROVAL**	Permit Manager

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Prod	7.875	4.5	0	10694		
Pipe	**Grade**	**Length**	**Weight**			
	Grade HCP-110 LT&C	956	11.6			
	Grade I-80 Buttress	9738	11.6			

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Surf	11	8.625	0	2490		
Pipe	**Grade**	**Length**	**Weight**			
	Grade I-80 LT&C	2490	28.0			

’APIWellNo:43047510510000’

T9S, R20E, 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 N17°03'42"W 696.34' 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 $\frac{1}{4}$ 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'.

N

1000' 500' 0' 1000'

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 No.362251 KOLBY R. KAY STATE OF UTAH

REGISTERED LAND SURVEYOR
REGISTRATION No. 362251
STATE OF UTAH

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

WELL PAD - NBU 920-23L

NBU 920-23L2DS
WELL PLAT
2155' FSL, 335' FWL (Bottom Hole)
NW $\frac{1}{4}$ SW $\frac{1}{4}$ OF SECTION 23, T9S, R20E, 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: 12-03-09	SURVEYED BY: M.S.B.	SHEET NO:
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	3
SCALE: 1" = 1000'	Date Last Revised:	3 OF 13

'APIWellNo:43047510510000'

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 920-23L PAD
NBU 920-23L2DS

NBU 920-23L2DS

Plan: PLAN #1 2-3-10 RHS

Standard Planning Report

03 February, 2010

'APIWellNo:43047510510000'

Anadarko Petroleum Corporation

Project: UINTAH COUNTY, UTAH (nad 27)
Site: NBU 920-23L PAD
Well: NBU 920-23L2DS
Wellbore: NBU 920-23L2DS
Section: SECTION 23 T9S R20E
SHL: 1491 FSL 517 FWL
Design: PLAN #1 2-3-10 RHS
Latitude: 40° 1' 3.706 N
Longitude: 109° 38' 26.102 W
GL: 4859.00
KB: WELL @ 4873.00ft (Original Well Elev)

Weatherford®

T M

Azimuths to True North
Magnetic North: 11.34°

Magnetic Field
Strength: 52466.6snT
Dip Angle: 65.91°
Date: 2/3/2010
Model: BGGM2009

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1713.00	1714.80	GREEN RIVER
5091.00	5179.48	WASATCH
9393.00	9481.48	MESAVERDE

CASING DETAILS

TVD	MD	Name	Size
2490.00	2492.87	8 5/8"	8.62

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
450.00	3.00	342.94	449.93	3.75	-1.15	2.00	342.94	3.93	Start 2143.01 hold at 450.00 MD
2593.01	3.00	342.94	2590.00	110.97	-34.06	0.00	0.00	116.08	Start DLS 3.00 TFO -0.01
3159.66	20.00	342.93	3143.24	218.58	-67.09	3.00	-0.01	228.64	Start 860.34 hold at 3159.66 MD
4020.00	20.00	342.93	3951.70	499.87	-153.44	0.00	0.00	522.89	Start Drop -2.00
5019.98	0.00	0.00	4931.50	665.02	-204.14	2.00	180.00	695.65	Start 5674.50 hold at 5019.98 MD
10694.48	0.00	0.00	10606.00	665.02	-204.14	0.00	0.00	695.65	TD at 10694.48

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	10606.00	665.02	-204.14	40° 1' 10.279 N	109° 38' 28.727 W	Circle (Radius: 25.00)

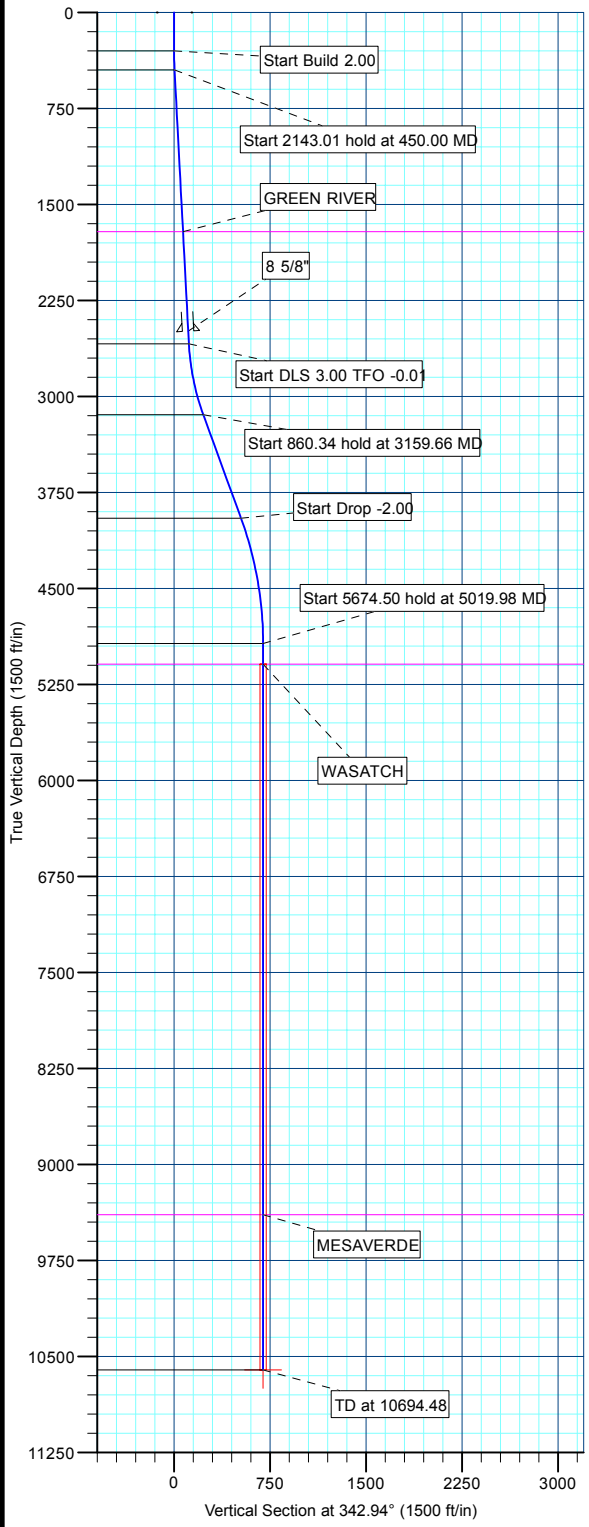
WELL DETAILS: NBU 920-23L2DS

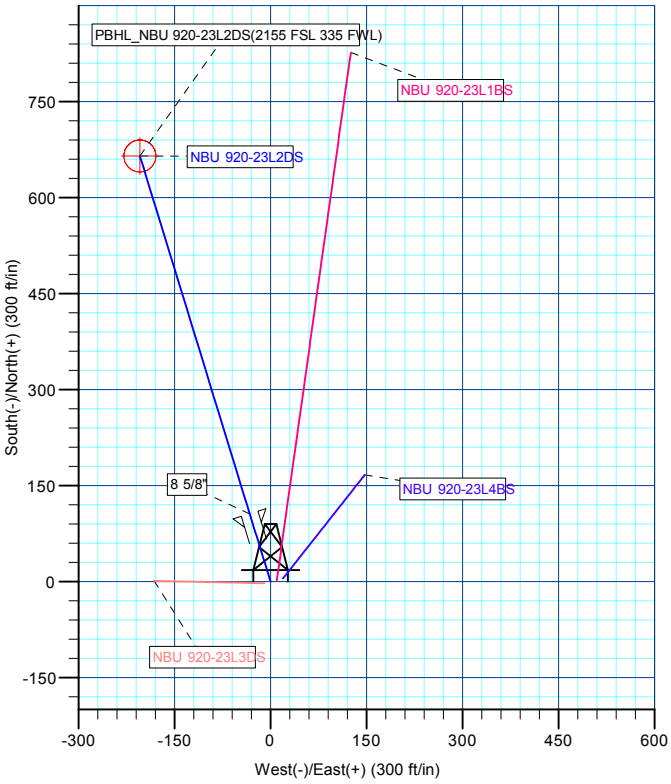
Ground Level: 4859.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	14535391.90	2021040.38	40° 1' 3.706 N	109° 38' 26.102 W	

LEGEND

- NBU 920-23L1BS, NBU 920-23L1BS, PLAN #1 2-3-10 RHS V0
- NBU 920-23L3DS, NBU 920-23L3DS, PLAN #1 2-3-10 RHS V0
- NBU 920-23L4BS, NBU 920-23L4BS, PLAN #1 2-3-10 RHS V0
- PLAN #1 2-3-10 RHS





Plan: PLAN #1 2-3-10 RHS (NBU 920-23L2DS/NBU 920-23L2DS)

Created By: Robert H. Scott Date: 15:02, February 03 2010

Weatherford International Ltd.

Planning Report

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site:	NBU 920-23L PAD	**North Reference:**	True
Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 920-23L2DS		
Design:	PLAN #1 2-3-10 RHS		

Project UINTAH COUNTY, UTAH (nad 27),

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 920-23L PAD, SECTION 23 T9S R20E

Site Position:		**Northing:**	14,535,389.21 ft	**Latitude:**	40° 1' 3.680 N
From:	Lat/Long	**Easting:**	2,021,030.89 ft	**Longitude:**	109° 38' 26.225 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	0.87 °

Well NBU 920-23L2DS

Well Position	**+N/-S**	2.55 ft	**Northing:**	14,535,391.90 ft	**Latitude:**	40° 1' 3.706 N
	+E/-W	9.52 ft	**Easting:**	2,021,040.38 ft	**Longitude:**	109° 38' 26.102 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,859.00 ft

Wellbore NBU 920-23L2DS

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	2/3/2010	11.34	65.91	52,467

Design PLAN #1 2-3-10 RHS

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	342.94

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	3.00	342.94	449.93	3.75	-1.15	2.00	2.00	0.00	342.94	
2,593.01	3.00	342.94	2,590.00	110.97	-34.06	0.00	0.00	0.00	0.00	
3,159.66	20.00	342.93	3,143.24	218.58	-67.09	3.00	3.00	0.00	-0.01	
4,020.00	20.00	342.93	3,951.70	499.87	-153.44	0.00	0.00	0.00	0.00	
5,019.98	0.00	0.00	4,931.50	665.02	-204.14	2.00	-2.00	0.00	180.00	
10,694.48	0.00	0.00	10,606.00	665.02	-204.14	0.00	0.00	0.00	0.00	PBHL_NBU 920-23

Weatherford International Ltd.

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Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site:	NBU 920-23L PAD	**North Reference:**	True
Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 920-23L2DS		
Design:	PLAN #1 2-3-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	342.94	399.98	1.67	-0.51	1.75	2.00	2.00	0.00
Start 2143.01 hold at 450.00 MD									
450.00	3.00	342.94	449.93	3.75	-1.15	3.93	2.00	2.00	0.00
500.00	3.00	342.94	499.86	6.25	-1.92	6.54	0.00	0.00	0.00
600.00	3.00	342.94	599.73	11.26	-3.45	11.78	0.00	0.00	0.00
700.00	3.00	342.94	699.59	16.26	-4.99	17.01	0.00	0.00	0.00
800.00	3.00	342.94	799.45	21.26	-6.53	22.24	0.00	0.00	0.00
900.00	3.00	342.94	899.31	26.27	-8.06	27.48	0.00	0.00	0.00
1,000.00	3.00	342.94	999.18	31.27	-9.60	32.71	0.00	0.00	0.00
1,100.00	3.00	342.94	1,099.04	36.27	-11.13	37.94	0.00	0.00	0.00
1,200.00	3.00	342.94	1,198.90	41.28	-12.67	43.18	0.00	0.00	0.00
1,300.00	3.00	342.94	1,298.77	46.28	-14.20	48.41	0.00	0.00	0.00
1,400.00	3.00	342.94	1,398.63	51.28	-15.74	53.65	0.00	0.00	0.00
1,500.00	3.00	342.94	1,498.49	56.29	-17.27	58.88	0.00	0.00	0.00
1,600.00	3.00	342.94	1,598.36	61.29	-18.81	64.11	0.00	0.00	0.00
1,700.00	3.00	342.94	1,698.22	66.29	-20.34	69.35	0.00	0.00	0.00
GREEN RIVER									
1,714.80	3.00	342.94	1,713.00	67.04	-20.57	70.12	0.00	0.00	0.00
1,800.00	3.00	342.94	1,798.08	71.30	-21.88	74.58	0.00	0.00	0.00
1,900.00	3.00	342.94	1,897.94	76.30	-23.42	79.81	0.00	0.00	0.00
2,000.00	3.00	342.94	1,997.81	81.30	-24.95	85.05	0.00	0.00	0.00
2,100.00	3.00	342.94	2,097.67	86.31	-26.49	90.28	0.00	0.00	0.00
2,200.00	3.00	342.94	2,197.53	91.31	-28.02	95.51	0.00	0.00	0.00
2,300.00	3.00	342.94	2,297.40	96.31	-29.56	100.75	0.00	0.00	0.00
2,400.00	3.00	342.94	2,397.26	101.32	-31.09	105.98	0.00	0.00	0.00
8 5/8"									
2,492.87	3.00	342.94	2,490.00	105.96	-32.52	110.84	0.00	0.00	0.00
2,500.00	3.00	342.94	2,497.12	106.32	-32.63	111.21	0.00	0.00	0.00
Start DLS 3.00 TFO -0.01									
2,593.01	3.00	342.94	2,590.00	110.97	-34.06	116.08	0.00	0.00	0.00
2,600.00	3.21	342.94	2,596.98	111.34	-34.17	116.46	3.00	3.00	-0.01
2,700.00	6.21	342.94	2,696.64	119.19	-36.58	124.67	3.00	3.00	0.00
2,800.00	9.21	342.94	2,795.72	132.01	-40.51	138.09	3.00	3.00	0.00
2,900.00	12.21	342.93	2,893.97	149.77	-45.96	156.67	3.00	3.00	0.00
3,000.00	15.21	342.93	2,991.11	172.43	-52.92	180.36	3.00	3.00	0.00
3,100.00	18.21	342.93	3,086.87	199.91	-61.36	209.11	3.00	3.00	0.00
Start 860.34 hold at 3159.66 MD									
3,159.66	20.00	342.93	3,143.24	218.58	-67.09	228.64	3.00	3.00	0.00
3,200.00	20.00	342.93	3,181.15	231.77	-71.13	242.44	0.00	0.00	0.00
3,300.00	20.00	342.93	3,275.12	264.46	-81.17	276.64	0.00	0.00	0.00
3,400.00	20.00	342.93	3,369.09	297.16	-91.21	310.84	0.00	0.00	0.00
3,500.00	20.00	342.93	3,463.06	329.85	-101.25	345.04	0.00	0.00	0.00
3,600.00	20.00	342.93	3,557.03	362.55	-111.28	379.24	0.00	0.00	0.00
3,700.00	20.00	342.93	3,651.00	395.24	-121.32	413.44	0.00	0.00	0.00
3,800.00	20.00	342.93	3,744.97	427.94	-131.36	447.64	0.00	0.00	0.00
3,900.00	20.00	342.93	3,838.94	460.63	-141.39	481.85	0.00	0.00	0.00
4,000.00	20.00	342.93	3,932.91	493.33	-151.43	516.05	0.00	0.00	0.00
Start Drop -2.00									
4,020.00	20.00	342.93	3,951.70	499.87	-153.44	522.89	0.00	0.00	0.00
4,100.00	18.40	342.93	4,027.25	525.02	-161.16	549.20	2.00	-2.00	0.00
4,200.00	16.40	342.93	4,122.67	553.60	-169.93	579.10	2.00	-2.00	0.00

Weatherford International Ltd.

Planning Report

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Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site:	NBU 920-23L PAD	**North Reference:**	True
Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 920-23L2DS		
Design:	PLAN #1 2-3-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	14.40	342.93	4,219.07	578.99	-177.73	605.65	2.00	-2.00	0.00
4,400.00	12.40	342.93	4,316.35	601.14	-184.53	628.82	2.00	-2.00	0.00
4,500.00	10.40	342.93	4,414.37	620.03	-190.33	648.59	2.00	-2.00	0.00
4,600.00	8.40	342.93	4,513.02	635.65	-195.12	664.92	2.00	-2.00	0.00
4,700.00	6.40	342.93	4,612.18	647.96	-198.90	677.80	2.00	-2.00	0.00
4,800.00	4.40	342.93	4,711.73	656.95	-201.66	687.21	2.00	-2.00	0.00
4,900.00	2.40	342.93	4,811.55	662.62	-203.40	693.14	2.00	-2.00	0.00
5,000.00	0.40	342.93	4,911.52	664.96	-204.12	695.58	2.00	-2.00	0.00
Start 5674.50 hold at 5019.98 MD									
5,019.98	0.00	0.00	4,931.50	665.02	-204.14	695.65	2.00	-2.00	0.00
5,100.00	0.00	0.00	5,011.52	665.02	-204.14	695.65	0.00	0.00	0.00
WASATCH									
5,179.48	0.00	0.00	5,091.00	665.02	-204.14	695.65	0.00	0.00	0.00
5,200.00	0.00	0.00	5,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,300.00	0.00	0.00	5,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,400.00	0.00	0.00	5,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,500.00	0.00	0.00	5,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,600.00	0.00	0.00	5,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,700.00	0.00	0.00	5,611.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,800.00	0.00	0.00	5,711.52	665.02	-204.14	695.65	0.00	0.00	0.00
5,900.00	0.00	0.00	5,811.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,000.00	0.00	0.00	5,911.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,100.00	0.00	0.00	6,011.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,200.00	0.00	0.00	6,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,300.00	0.00	0.00	6,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,400.00	0.00	0.00	6,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,500.00	0.00	0.00	6,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,600.00	0.00	0.00	6,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,700.00	0.00	0.00	6,611.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,800.00	0.00	0.00	6,711.52	665.02	-204.14	695.65	0.00	0.00	0.00
6,900.00	0.00	0.00	6,811.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,000.00	0.00	0.00	6,911.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,100.00	0.00	0.00	7,011.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,200.00	0.00	0.00	7,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,300.00	0.00	0.00	7,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,400.00	0.00	0.00	7,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,500.00	0.00	0.00	7,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,600.00	0.00	0.00	7,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,700.00	0.00	0.00	7,611.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,800.00	0.00	0.00	7,711.52	665.02	-204.14	695.65	0.00	0.00	0.00
7,900.00	0.00	0.00	7,811.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,000.00	0.00	0.00	7,911.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,100.00	0.00	0.00	8,011.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,200.00	0.00	0.00	8,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,300.00	0.00	0.00	8,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,400.00	0.00	0.00	8,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,500.00	0.00	0.00	8,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,600.00	0.00	0.00	8,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,700.00	0.00	0.00	8,611.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,800.00	0.00	0.00	8,711.52	665.02	-204.14	695.65	0.00	0.00	0.00
8,900.00	0.00	0.00	8,811.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,000.00	0.00	0.00	8,911.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,100.00	0.00	0.00	9,011.52	665.02	-204.14	695.65	0.00	0.00	0.00

Weatherford International Ltd.

Planning Report

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site:	NBU 920-23L PAD	**North Reference:**	True
Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 920-23L2DS		
Design:	PLAN #1 2-3-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,200.00	0.00	0.00	9,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,300.00	0.00	0.00	9,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,400.00	0.00	0.00	9,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
MESAVERDE									
9,481.48	0.00	0.00	9,393.00	665.02	-204.14	695.65	0.00	0.00	0.00
9,500.00	0.00	0.00	9,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,600.00	0.00	0.00	9,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,700.00	0.00	0.00	9,611.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,800.00	0.00	0.00	9,711.52	665.02	-204.14	695.65	0.00	0.00	0.00
9,900.00	0.00	0.00	9,811.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,000.00	0.00	0.00	9,911.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,100.00	0.00	0.00	10,011.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,200.00	0.00	0.00	10,111.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,300.00	0.00	0.00	10,211.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,400.00	0.00	0.00	10,311.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,500.00	0.00	0.00	10,411.52	665.02	-204.14	695.65	0.00	0.00	0.00
10,600.00	0.00	0.00	10,511.52	665.02	-204.14	695.65	0.00	0.00	0.00
TD at 10694.48 - PBHL_NBU 920-23L2DS(2155 FSL 335 FWL)									
10,694.48	0.00	0.00	10,606.00	665.02	-204.14	695.65	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 920-23L2 - plan hits target center - Circle (radius 25.00)	0.00	0.00	10,606.00	665.02	-204.14	14,536,053.73	2,020,826.11	40° 1' 10.279 N	109° 38' 28.727 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,492.87	2,490.00	8 5/8"	8.62	12.25

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,714.80	1,713.00	GREEN RIVER			
5,179.48	5,091.00	WASATCH			
9,481.48	9,393.00	MESAVERDE			

Weatherford International Ltd.

Planning Report

Database:	EDM 2003.21 Single User Db	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Company:	ANADARKO PETROLEUM CORP.	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site:	NBU 920-23L PAD	**North Reference:**	True
Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	NBU 920-23L2DS		
Design:	PLAN #1 2-3-10 RHS		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
450.00	449.93	3.75	-1.15	Start 2143.01 hold at 450.00 MD
2,593.01	2,590.00	110.97	-34.06	Start DLS 3.00 TFO -0.01
3,159.66	3,143.24	218.58	-67.09	Start 860.34 hold at 3159.66 MD
4,020.00	3,951.70	499.87	-153.44	Start Drop -2.00
5,019.98	4,931.50	665.02	-204.14	Start 5674.50 hold at 5019.98 MD
10,694.48	10,606.00	665.02	-204.14	TD at 10694.48

’APIWellNo:43047510510000’

ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)
NBU 920-23L PAD
NBU 920-23L2DS

NBU 920-23L2DS
PLAN #1 2-3-10 RHS

Anticollision Report

04 February, 2010

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Reference PLAN #1 2-3-10 RHS

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

Survey Tool Program **Date** 2/3/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	10,694.48	PLAN #1 2-3-10 RHS (NBU 920-23L2DS)	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 920-23L PAD						
NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10	300.00	300.00	10.04	8.95	9.193	CC, ES
NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10	2,600.00	2,599.17	60.45	48.40	5.015	SF
NBU 920-23L3DS - NBU 920-23L3DS - PLAN #1 2-3-10	300.00	300.00	9.86	8.76	9.023	CC, ES
NBU 920-23L3DS - NBU 920-23L3DS - PLAN #1 2-3-10	400.00	399.43	12.34	10.80	8.051	SF
NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10	300.00	300.00	19.89	18.80	18.212	CC, ES
NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10	10,694.48	10,591.75	610.13	562.69	12.860	SF

Offset Design NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS

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	77.43	2.19	9.80	10.04				
100.00	100.00	100.00	100.00	0.10	0.10	77.43	2.19	9.80	10.04	9.85	0.19	51.950	
200.00	200.00	200.00	200.00	0.32	0.32	77.43	2.19	9.80	10.04	9.40	0.64	15.621	
300.00	300.00	300.00	300.00	0.55	0.55	77.43	2.19	9.80	10.04	8.95	1.09	9.193	CC, ES
400.00	399.98	399.87	399.85	0.77	0.77	95.05	3.91	10.04	10.79	9.25	1.54	7.004	
450.00	449.93	449.80	449.73	0.89	0.89	95.64	6.06	10.34	11.73	9.96	1.77	6.635	
500.00	499.86	499.78	499.65	1.01	1.01	96.25	8.65	10.71	12.86	10.86	2.00	6.436	
600.00	599.73	599.76	599.48	1.23	1.23	97.18	13.84	11.43	15.11	12.65	2.46	6.137	
700.00	699.59	699.73	699.32	1.47	1.47	97.88	19.02	12.16	17.37	14.44	2.93	5.922	
800.00	799.45	799.71	799.16	1.71	1.70	98.41	24.20	12.89	19.64	16.23	3.41	5.762	
900.00	899.31	899.68	899.00	1.95	1.94	98.84	29.38	13.61	21.90	18.02	3.88	5.639	
1,000.00	999.18	999.65	998.83	2.19	2.18	99.18	34.56	14.34	24.16	19.80	4.36	5.540	
1,100.00	1,099.04	1,099.63	1,098.67	2.43	2.42	99.46	39.74	15.07	26.43	21.59	4.84	5.461	
1,200.00	1,198.90	1,199.60	1,198.51	2.67	2.66	99.70	44.92	15.79	28.70	23.38	5.32	5.395	
1,300.00	1,298.77	1,299.58	1,298.34	2.91	2.90	99.91	50.11	16.52	30.96	25.16	5.80	5.339	
1,400.00	1,398.63	1,399.55	1,398.18	3.15	3.14	100.09	55.29	17.25	33.23	26.95	6.28	5.292	
1,500.00	1,498.49	1,499.53	1,498.02	3.39	3.38	100.24	60.47	17.97	35.50	28.74	6.76	5.251	
1,600.00	1,598.36	1,599.50	1,597.86	3.63	3.62	100.38	65.65	18.70	37.76	30.52	7.24	5.216	
1,700.00	1,698.22	1,699.47	1,697.69	3.87	3.87	100.50	70.83	19.42	40.03	32.31	7.72	5.185	
1,800.00	1,798.08	1,799.45	1,797.53	4.12	4.11	100.61	76.01	20.15	42.30	34.10	8.20	5.157	
1,900.00	1,897.94	1,899.42	1,897.37	4.36	4.35	100.70	81.20	20.88	44.57	35.88	8.68	5.132	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
2,000.00	1,997.81	1,999.40	1,997.21	4.60	4.59	100.79	86.38	21.60	46.83	37.67	9.16	5.110	
2,100.00	2,097.67	2,099.37	2,097.04	4.84	4.83	100.87	91.56	22.33	49.10	39.46	9.65	5.090	
2,200.00	2,197.53	2,199.35	2,196.88	5.08	5.07	100.94	96.74	23.06	51.37	41.24	10.13	5.072	
2,300.00	2,297.40	2,299.32	2,296.72	5.33	5.31	101.01	101.92	23.78	53.64	43.03	10.61	5.056	
2,400.00	2,397.26	2,399.29	2,396.55	5.57	5.55	101.07	107.10	24.51	55.91	44.81	11.09	5.041	
2,500.00	2,497.12	2,499.27	2,496.39	5.81	5.80	101.12	112.29	25.24	58.17	46.60	11.57	5.027	
2,593.01	2,590.00	2,592.23	2,589.23	6.03	6.02	101.17	117.10	25.91	60.28	48.26	12.02	5.015	
2,600.00	2,596.98	2,599.17	2,596.16	6.05	6.04	101.16	117.48	25.96	60.45	48.40	12.05	5.015	SF
2,700.00	2,696.64	2,698.34	2,694.97	6.31	6.30	101.06	125.64	27.11	64.03	51.46	12.57	5.095	
2,800.00	2,795.72	2,797.34	2,793.06	6.61	6.59	100.97	138.83	28.96	69.85	56.71	13.15	5.314	
2,900.00	2,893.97	2,896.11	2,890.10	6.94	6.91	100.89	156.99	31.51	77.90	64.11	13.80	5.646	
3,000.00	2,991.11	2,994.58	2,985.78	7.32	7.29	100.81	180.02	34.74	88.14	73.61	14.53	6.065	
3,100.00	3,086.87	3,092.70	3,079.79	7.76	7.71	100.70	207.79	38.63	100.55	85.18	15.37	6.542	
3,159.66	3,143.24	3,151.04	3,134.97	8.05	7.99	100.63	226.56	41.26	108.96	93.04	15.92	6.844	
3,200.00	3,181.15	3,190.86	3,172.39	8.26	8.19	100.69	240.04	43.15	114.92	98.61	16.32	7.043	
3,300.00	3,275.12	3,289.76	3,265.32	8.79	8.70	100.81	273.55	47.85	129.72	112.38	17.34	7.483	
3,400.00	3,369.09	3,388.66	3,358.25	9.34	9.24	100.91	307.05	52.55	144.51	126.12	18.39	7.858	
3,500.00	3,463.06	3,487.56	3,451.19	9.91	9.78	100.99	340.55	57.25	159.30	139.83	19.48	8.179	
3,600.00	3,557.03	3,586.46	3,544.12	10.49	10.35	101.06	374.05	61.95	174.10	153.51	20.59	8.456	
3,700.00	3,651.00	3,685.36	3,637.05	11.08	10.92	101.11	407.56	66.65	188.89	167.17	21.72	8.695	
3,800.00	3,744.97	3,784.26	3,729.99	11.68	11.50	101.16	441.06	71.35	203.69	180.81	22.88	8.903	
3,900.00	3,838.94	3,883.16	3,822.92	12.29	12.09	101.20	474.56	76.05	218.48	194.43	24.05	9.085	
4,000.00	3,932.91	3,982.06	3,915.85	12.91	12.69	101.24	508.07	80.75	233.27	208.04	25.23	9.245	
4,020.00	3,951.70	4,001.84	3,934.44	13.03	12.81	101.24	514.77	81.69	236.23	210.76	25.47	9.275	
4,100.00	4,027.25	4,080.98	4,008.81	13.47	13.29	101.24	541.58	85.45	247.85	221.47	26.38	9.396	
4,200.00	4,122.67	4,179.91	4,101.77	13.93	13.90	100.58	575.09	90.15	261.81	234.37	27.43	9.543	
4,300.00	4,219.07	4,278.73	4,194.63	14.36	14.51	99.28	608.57	94.85	275.26	246.81	28.45	9.674	
4,400.00	4,316.35	4,377.32	4,287.26	14.75	15.13	97.45	641.96	99.53	288.45	259.03	29.42	9.805	
4,500.00	4,414.37	4,477.68	4,381.78	15.11	15.71	95.20	675.37	104.22	301.47	271.19	30.28	9.957	
4,600.00	4,513.02	4,580.04	4,479.26	15.43	16.20	93.02	706.32	108.56	313.62	282.64	30.98	10.124	
4,700.00	4,612.18	4,683.16	4,578.51	15.70	16.64	90.94	733.99	112.44	324.76	293.19	31.57	10.288	
4,800.00	4,711.73	4,787.00	4,679.42	15.94	17.05	88.95	758.26	115.85	334.84	302.78	32.06	10.444	
4,900.00	4,811.55	4,891.55	4,781.83	16.13	17.43	87.00	779.02	118.76	343.83	311.38	32.45	10.594	
5,000.00	4,911.52	4,996.76	4,885.60	16.28	17.76	85.07	796.16	121.16	351.70	318.95	32.75	10.740	
5,019.98	4,931.50	5,017.86	4,906.49	16.31	17.82	67.62	799.14	121.58	353.14	320.35	32.79	10.769	
5,100.00	5,011.52	5,102.73	4,990.70	16.41	18.05	66.16	809.60	123.05	358.31	325.34	32.97	10.868	
5,200.00	5,111.52	5,209.57	5,097.08	16.55	18.29	64.85	819.24	124.40	363.22	330.02	33.21	10.938	
5,300.00	5,211.52	5,316.99	5,204.34	16.70	18.48	64.10	824.97	125.21	366.20	332.74	33.46	10.944	
5,400.00	5,311.52	5,424.19	5,311.52	16.84	18.63	63.87	826.73	125.45	367.12	333.38	33.74	10.882	
5,500.00	5,411.52	5,524.19	5,411.52	16.99	18.76	63.87	826.73	125.45	367.12	333.10	34.02	10.790	
5,600.00	5,511.52	5,624.19	5,511.52	17.14	18.89	63.87	826.73	125.45	367.12	332.80	34.32	10.697	
5,700.00	5,611.52	5,724.19	5,611.52	17.29	19.03	63.87	826.73	125.45	367.12	332.50	34.62	10.604	
5,800.00	5,711.52	5,824.19	5,711.52	17.45	19.17	63.87	826.73	125.45	367.12	332.19	34.93	10.511	
5,900.00	5,811.52	5,924.19	5,811.52	17.60	19.30	63.87	826.73	125.45	367.12	331.89	35.23	10.420	
6,000.00	5,911.52	6,024.19	5,911.52	17.76	19.44	63.87	826.73	125.45	367.12	331.58	35.54	10.329	
6,100.00	6,011.52	6,124.19	6,011.52	17.91	19.59	63.87	826.73	125.45	367.12	331.26	35.86	10.239	
6,200.00	6,111.52	6,224.19	6,111.52	18.07	19.73	63.87	826.73	125.45	367.12	330.95	36.17	10.149	
6,300.00	6,211.52	6,324.19	6,211.52	18.23	19.88	63.87	826.73	125.45	367.12	330.63	36.49	10.061	
6,400.00	6,311.52	6,424.19	6,311.52	18.39	20.02	63.87	826.73	125.45	367.12	330.31	36.81	9.973	
6,500.00	6,411.52	6,524.19	6,411.52	18.56	20.17	63.87	826.73	125.45	367.12	329.98	37.14	9.886	
6,600.00	6,511.52	6,624.19	6,511.52	18.72	20.32	63.87	826.73	125.45	367.12	329.66	37.46	9.799	
6,700.00	6,611.52	6,724.19	6,611.52	18.89	20.47	63.87	826.73	125.45	367.12	329.33	37.79	9.714	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
6,800.00	6,711.52	6,824.19	6,711.52	19.05	20.62	63.87	826.73	125.45	367.12	329.00	38.12	9.629	
6,900.00	6,811.52	6,924.19	6,811.52	19.22	20.78	63.87	826.73	125.45	367.12	328.66	38.46	9.546	
7,000.00	6,911.52	7,024.19	6,911.52	19.39	20.93	63.87	826.73	125.45	367.12	328.32	38.80	9.463	
7,100.00	7,011.52	7,124.19	7,011.52	19.56	21.09	63.87	826.73	125.45	367.12	327.99	39.13	9.381	
7,200.00	7,111.52	7,224.19	7,111.52	19.73	21.24	63.87	826.73	125.45	367.12	327.64	39.48	9.300	
7,300.00	7,211.52	7,324.19	7,211.52	19.90	21.40	63.87	826.73	125.45	367.12	327.30	39.82	9.220	
7,400.00	7,311.52	7,424.19	7,311.52	20.07	21.56	63.87	826.73	125.45	367.12	326.96	40.16	9.141	
7,500.00	7,411.52	7,524.19	7,411.52	20.25	21.72	63.87	826.73	125.45	367.12	326.61	40.51	9.062	
7,600.00	7,511.52	7,624.19	7,511.52	20.42	21.89	63.87	826.73	125.45	367.12	326.26	40.86	8.985	
7,700.00	7,611.52	7,724.19	7,611.52	20.60	22.05	63.87	826.73	125.45	367.12	325.91	41.21	8.908	
7,800.00	7,711.52	7,824.19	7,711.52	20.78	22.21	63.87	826.73	125.45	367.12	325.56	41.56	8.833	
7,900.00	7,811.52	7,924.19	7,811.52	20.96	22.38	63.87	826.73	125.45	367.12	325.20	41.92	8.758	
8,000.00	7,911.52	8,024.19	7,911.52	21.13	22.54	63.87	826.73	125.45	367.12	324.84	42.28	8.684	
8,100.00	8,011.52	8,124.19	8,011.52	21.31	22.71	63.87	826.73	125.45	367.12	324.49	42.63	8.611	
8,200.00	8,111.52	8,224.19	8,111.52	21.49	22.88	63.87	826.73	125.45	367.12	324.13	42.99	8.539	
8,300.00	8,211.52	8,324.19	8,211.52	21.68	23.05	63.87	826.73	125.45	367.12	323.76	43.36	8.467	
8,400.00	8,311.52	8,424.19	8,311.52	21.86	23.22	63.87	826.73	125.45	367.12	323.40	43.72	8.397	
8,500.00	8,411.52	8,524.19	8,411.52	22.04	23.39	63.87	826.73	125.45	367.12	323.03	44.09	8.328	
8,600.00	8,511.52	8,624.19	8,511.52	22.23	23.56	63.87	826.73	125.45	367.12	322.67	44.45	8.259	
8,700.00	8,611.52	8,724.19	8,611.52	22.41	23.73	63.87	826.73	125.45	367.12	322.30	44.82	8.191	
8,800.00	8,711.52	8,824.19	8,711.52	22.60	23.91	63.87	826.73	125.45	367.12	321.93	45.19	8.124	
8,900.00	8,811.52	8,924.19	8,811.52	22.78	24.08	63.87	826.73	125.45	367.12	321.56	45.56	8.058	
9,000.00	8,911.52	9,024.19	8,911.52	22.97	24.26	63.87	826.73	125.45	367.12	321.19	45.93	7.993	
9,100.00	9,011.52	9,124.19	9,011.52	23.16	24.43	63.87	826.73	125.45	367.12	320.81	46.31	7.928	
9,200.00	9,111.52	9,224.19	9,111.52	23.34	24.61	63.87	826.73	125.45	367.12	320.44	46.68	7.864	
9,300.00	9,211.52	9,324.19	9,211.52	23.53	24.79	63.87	826.73	125.45	367.12	320.06	47.06	7.801	
9,400.00	9,311.52	9,424.19	9,311.52	23.72	24.97	63.87	826.73	125.45	367.12	319.68	47.44	7.739	
9,500.00	9,411.52	9,524.19	9,411.52	23.91	25.15	63.87	826.73	125.45	367.12	319.30	47.82	7.678	
9,600.00	9,511.52	9,624.19	9,511.52	24.10	25.33	63.87	826.73	125.45	367.12	318.92	48.20	7.617	
9,700.00	9,611.52	9,724.19	9,611.52	24.29	25.51	63.87	826.73	125.45	367.12	318.54	48.58	7.558	
9,800.00	9,711.52	9,824.19	9,711.52	24.48	25.69	63.87	826.73	125.45	367.12	318.16	48.96	7.498	
9,900.00	9,811.52	9,924.19	9,811.52	24.68	25.87	63.87	826.73	125.45	367.12	317.78	49.34	7.440	
10,000.00	9,911.52	10,024.19	9,911.52	24.87	26.05	63.87	826.73	125.45	367.12	317.39	49.73	7.383	
10,100.00	10,011.52	10,124.19	10,011.52	25.06	26.24	63.87	826.73	125.45	367.12	317.01	50.11	7.326	
10,200.00	10,111.52	10,224.19	10,111.52	25.26	26.42	63.87	826.73	125.45	367.12	316.62	50.50	7.270	
10,300.00	10,211.52	10,324.19	10,211.52	25.45	26.61	63.87	826.73	125.45	367.12	316.23	50.89	7.214	
10,400.00	10,311.52	10,424.19	10,311.52	25.65	26.79	63.87	826.73	125.45	367.12	315.84	51.28	7.160	
10,500.00	10,411.52	10,524.19	10,411.52	25.84	26.98	63.87	826.73	125.45	367.12	315.45	51.67	7.105	
10,600.00	10,511.52	10,624.19	10,511.52	26.04	27.16	63.87	826.73	125.45	367.12	315.06	52.06	7.052	
10,694.48	10,606.00	10,718.67	10,606.00	26.22	27.34	63.87	826.73	125.45	367.12	314.69	52.43	7.002	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L3DS - NBU 920-23L3DS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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	-104.99	-2.55	-9.52	9.86				
100.00	100.00	100.00	100.00	0.10	0.10	-104.99	-2.55	-9.52	9.86	9.66	0.19	50.991	
200.00	200.00	200.00	200.00	0.32	0.32	-104.99	-2.55	-9.52	9.86	9.21	0.64	15.333	
300.00	300.00	300.00	300.00	0.55	0.55	-104.99	-2.55	-9.52	9.86	8.76	1.09	9.023	CC, ES
400.00	399.98	399.43	399.38	0.77	0.76	-92.59	-2.49	-12.11	12.34	10.80	1.53	8.051	SF
450.00	449.93	449.04	448.89	0.89	0.88	-96.30	-2.43	-15.32	15.49	13.73	1.76	8.788	
500.00	499.86	498.89	498.61	1.01	0.99	-99.45	-2.35	-19.01	19.18	17.19	1.99	9.651	
600.00	599.73	598.60	598.04	1.23	1.23	-103.12	-2.19	-26.40	26.65	24.21	2.44	10.921	
700.00	699.59	698.31	697.48	1.47	1.47	-105.17	-2.04	-33.79	34.18	31.28	2.90	11.776	
800.00	799.45	798.02	796.91	1.71	1.73	-106.49	-1.88	-41.17	41.75	38.37	3.37	12.383	
900.00	899.31	897.73	896.35	1.95	1.98	-107.40	-1.72	-48.56	49.32	45.48	3.84	12.834	
1,000.00	999.18	997.44	995.79	2.19	2.24	-108.06	-1.57	-55.95	56.91	52.59	4.32	13.180	
1,100.00	1,099.04	1,097.15	1,095.22	2.43	2.50	-108.57	-1.41	-63.34	64.50	59.71	4.79	13.455	
1,200.00	1,198.90	1,196.86	1,194.66	2.67	2.76	-108.98	-1.26	-70.73	72.10	66.83	5.27	13.677	
1,300.00	1,298.77	1,296.57	1,294.09	2.91	3.02	-109.30	-1.10	-78.11	79.70	73.95	5.75	13.860	
1,400.00	1,398.63	1,396.28	1,393.53	3.15	3.28	-109.57	-0.94	-85.50	87.30	81.07	6.23	14.014	
1,500.00	1,498.49	1,495.99	1,492.96	3.39	3.55	-109.80	-0.79	-92.89	94.90	88.19	6.71	14.145	
1,600.00	1,598.36	1,595.70	1,592.40	3.63	3.81	-109.99	-0.63	-100.28	102.50	95.31	7.19	14.258	
1,700.00	1,698.22	1,695.41	1,691.84	3.87	4.07	-110.16	-0.48	-107.66	110.11	102.44	7.67	14.356	
1,800.00	1,798.08	1,795.12	1,791.27	4.12	4.33	-110.30	-0.32	-115.05	117.71	109.56	8.15	14.442	
1,900.00	1,897.94	1,894.83	1,890.71	4.36	4.60	-110.43	-0.16	-122.44	125.32	116.69	8.63	14.519	
2,000.00	1,997.81	1,994.54	1,990.14	4.60	4.86	-110.54	-0.01	-129.83	132.93	123.81	9.11	14.586	
2,100.00	2,097.67	2,094.25	2,089.58	4.84	5.12	-110.64	0.15	-137.22	140.54	130.94	9.59	14.647	
2,200.00	2,197.53	2,193.96	2,189.01	5.08	5.39	-110.73	0.30	-144.60	148.14	138.07	10.08	14.702	
2,300.00	2,297.40	2,293.67	2,288.45	5.33	5.65	-110.81	0.46	-151.99	155.75	145.19	10.56	14.752	
2,400.00	2,397.26	2,393.38	2,387.89	5.57	5.91	-110.88	0.62	-159.38	163.36	152.32	11.04	14.797	
2,500.00	2,497.12	2,493.09	2,487.32	5.81	6.18	-110.95	0.77	-166.77	170.97	159.45	11.52	14.838	
2,593.01	2,590.00	2,585.83	2,579.80	6.03	6.42	-111.01	0.92	-173.64	178.04	166.07	11.97	14.873	
2,600.00	2,596.98	2,592.81	2,586.76	6.05	6.44	-111.00	0.93	-174.15	178.58	166.58	12.00	14.877	
2,700.00	2,696.64	2,697.55	2,691.34	6.31	6.64	-112.13	1.05	-180.00	185.89	173.43	12.46	14.922	
2,800.00	2,795.72	2,801.79	2,795.56	6.61	6.82	-115.41	1.09	-182.02	192.78	179.84	12.94	14.899	
2,900.00	2,893.97	2,900.21	2,893.97	6.94	6.99	-119.90	1.09	-182.02	201.54	188.11	13.43	15.005	
3,000.00	2,991.11	2,997.35	2,991.11	7.32	7.17	-124.97	1.09	-182.02	214.53	200.61	13.92	15.413	
3,100.00	3,086.87	3,093.11	3,086.87	7.76	7.35	-130.22	1.09	-182.02	232.57	218.19	14.38	16.178	
3,159.66	3,143.24	3,149.48	3,143.24	8.05	7.46	-133.30	1.09	-182.02	245.99	231.36	14.63	16.818	
3,200.00	3,181.15	3,187.39	3,181.15	8.26	7.53	-135.48	1.09	-182.02	255.94	241.12	14.82	17.265	
3,300.00	3,275.12	3,281.36	3,275.12	8.79	7.71	-140.24	1.09	-182.02	282.02	266.71	15.30	18.429	
3,400.00	3,369.09	3,375.33	3,369.09	9.34	7.89	-144.21	1.09	-182.02	309.68	293.91	15.77	19.639	
3,500.00	3,463.06	3,469.30	3,463.06	9.91	8.07	-147.54	1.09	-182.02	338.54	322.31	16.23	20.862	
3,600.00	3,557.03	3,563.27	3,557.03	10.49	8.26	-150.35	1.09	-182.02	368.31	351.63	16.68	22.078	
3,700.00	3,651.00	3,657.24	3,651.00	11.08	8.44	-152.76	1.09	-182.02	398.80	381.66	17.14	23.271	
3,800.00	3,744.97	3,751.21	3,744.97	11.68	8.63	-154.82	1.09	-182.02	429.84	412.25	17.59	24.434	
3,900.00	3,838.94	3,845.18	3,838.94	12.29	8.82	-156.61	1.09	-182.02	461.33	443.28	18.05	25.560	
4,000.00	3,932.91	3,939.15	3,932.91	12.91	9.00	-158.18	1.09	-182.02	493.19	474.68	18.51	26.646	
4,020.00	3,951.70	3,957.94	3,951.70	13.03	9.04	-158.47	1.09	-182.02	499.59	480.99	18.60	26.859	
4,100.00	4,027.25	4,033.49	4,027.25	13.47	9.19	-159.69	1.09	-182.02	524.34	505.31	19.03	27.552	
4,200.00	4,122.67	4,128.91	4,122.67	13.93	9.39	-160.96	1.09	-182.02	552.64	533.11	19.53	28.299	
4,300.00	4,219.07	4,225.31	4,219.07	14.36	9.58	-161.98	1.09	-182.02	577.91	557.89	20.02	28.870	
4,400.00	4,316.35	4,322.59	4,316.35	14.75	9.78	-162.80	1.09	-182.02	600.05	579.56	20.49	29.281	
4,500.00	4,414.37	4,420.61	4,414.37	15.11	9.98	-163.45	1.09	-182.02	619.00	598.05	20.95	29.546	
4,600.00	4,513.02	4,519.26	4,513.02	15.43	10.19	-163.95	1.09	-182.02	634.69	613.30	21.39	29.676	
4,700.00	4,612.18	4,618.42	4,612.18	15.70	10.39	-164.34	1.09	-182.02	647.08	625.28	21.80	29.681	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L3DS - NBU 920-23L3DS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
4,800.00	4,711.73	4,717.97	4,711.73	15.94	10.60	-164.61	1.09	-182.02	656.15	633.96	22.19	29.568	
4,900.00	4,811.55	4,817.79	4,811.55	16.13	10.81	-164.77	1.09	-182.02	661.87	639.32	22.56	29.345	
5,000.00	4,911.52	4,917.76	4,911.52	16.28	11.02	-164.84	1.09	-182.02	664.23	641.34	22.89	29.016	
5,019.98	4,931.50	4,937.74	4,931.50	16.31	11.06	178.09	1.09	-182.02	664.30	641.34	22.96	28.938	
5,100.00	5,011.52	5,017.76	5,011.52	16.41	11.23	178.09	1.09	-182.02	664.30	641.03	23.27	28.553	
5,200.00	5,111.52	5,117.76	5,111.52	16.55	11.44	178.09	1.09	-182.02	664.30	640.63	23.67	28.065	
5,300.00	5,211.52	5,217.76	5,211.52	16.70	11.65	178.09	1.09	-182.02	664.30	640.22	24.08	27.591	
5,400.00	5,311.52	5,317.76	5,311.52	16.84	11.86	178.09	1.09	-182.02	664.30	639.81	24.48	27.132	
5,500.00	5,411.52	5,417.76	5,411.52	16.99	12.07	178.09	1.09	-182.02	664.30	639.41	24.89	26.686	
5,600.00	5,511.52	5,517.76	5,511.52	17.14	12.28	178.09	1.09	-182.02	664.30	638.99	25.30	26.254	
5,700.00	5,611.52	5,617.76	5,611.52	17.29	12.49	178.09	1.09	-182.02	664.30	638.58	25.71	25.833	
5,800.00	5,711.52	5,717.76	5,711.52	17.45	12.71	178.09	1.09	-182.02	664.30	638.17	26.13	25.425	
5,900.00	5,811.52	5,817.76	5,811.52	17.60	12.92	178.09	1.09	-182.02	664.30	637.76	26.54	25.028	
6,000.00	5,911.52	5,917.76	5,911.52	17.76	13.13	178.09	1.09	-182.02	664.30	637.34	26.96	24.643	
6,100.00	6,011.52	6,017.76	6,011.52	17.91	13.35	178.09	1.09	-182.02	664.30	636.93	27.37	24.268	
6,200.00	6,111.52	6,117.76	6,111.52	18.07	13.56	178.09	1.09	-182.02	664.30	636.51	27.79	23.904	
6,300.00	6,211.52	6,217.76	6,211.52	18.23	13.78	178.09	1.09	-182.02	664.30	636.09	28.21	23.549	
6,400.00	6,311.52	6,317.76	6,311.52	18.39	13.99	178.09	1.09	-182.02	664.30	635.67	28.63	23.205	
6,500.00	6,411.52	6,417.76	6,411.52	18.56	14.21	178.09	1.09	-182.02	664.30	635.25	29.05	22.869	
6,600.00	6,511.52	6,517.76	6,511.52	18.72	14.42	178.09	1.09	-182.02	664.30	634.83	29.47	22.542	
6,700.00	6,611.52	6,617.76	6,611.52	18.89	14.64	178.09	1.09	-182.02	664.30	634.41	29.89	22.224	
6,800.00	6,711.52	6,717.76	6,711.52	19.05	14.86	178.09	1.09	-182.02	664.30	633.99	30.31	21.915	
6,900.00	6,811.52	6,817.76	6,811.52	19.22	15.07	178.09	1.09	-182.02	664.30	633.56	30.74	21.613	
7,000.00	6,911.52	6,917.76	6,911.52	19.39	15.29	178.09	1.09	-182.02	664.30	633.14	31.16	21.319	
7,100.00	7,011.52	7,017.76	7,011.52	19.56	15.51	178.09	1.09	-182.02	664.30	632.71	31.59	21.032	
7,200.00	7,111.52	7,117.76	7,111.52	19.73	15.72	178.09	1.09	-182.02	664.30	632.29	32.01	20.752	
7,300.00	7,211.52	7,217.76	7,211.52	19.90	15.94	178.09	1.09	-182.02	664.30	631.86	32.44	20.480	
7,400.00	7,311.52	7,317.76	7,311.52	20.07	16.16	178.09	1.09	-182.02	664.30	631.43	32.86	20.214	
7,500.00	7,411.52	7,417.76	7,411.52	20.25	16.38	178.09	1.09	-182.02	664.30	631.01	33.29	19.955	
7,600.00	7,511.52	7,517.76	7,511.52	20.42	16.59	178.09	1.09	-182.02	664.30	630.58	33.72	19.701	
7,700.00	7,611.52	7,617.76	7,611.52	20.60	16.81	178.09	1.09	-182.02	664.30	630.15	34.15	19.454	
7,800.00	7,711.52	7,717.76	7,711.52	20.78	17.03	178.09	1.09	-182.02	664.30	629.72	34.58	19.213	
7,900.00	7,811.52	7,817.76	7,811.52	20.96	17.25	178.09	1.09	-182.02	664.30	629.29	35.01	18.977	
8,000.00	7,911.52	7,917.76	7,911.52	21.13	17.47	178.09	1.09	-182.02	664.30	628.86	35.44	18.747	
8,100.00	8,011.52	8,017.76	8,011.52	21.31	17.69	178.09	1.09	-182.02	664.30	628.43	35.87	18.522	
8,200.00	8,111.52	8,117.76	8,111.52	21.49	17.91	178.09	1.09	-182.02	664.30	628.00	36.30	18.302	
8,300.00	8,211.52	8,217.76	8,211.52	21.68	18.13	178.09	1.09	-182.02	664.30	627.57	36.73	18.087	
8,400.00	8,311.52	8,317.76	8,311.52	21.86	18.34	178.09	1.09	-182.02	664.30	627.14	37.16	17.877	
8,500.00	8,411.52	8,417.76	8,411.52	22.04	18.56	178.09	1.09	-182.02	664.30	626.71	37.59	17.671	
8,600.00	8,511.52	8,517.76	8,511.52	22.23	18.78	178.09	1.09	-182.02	664.30	626.27	38.02	17.470	
8,700.00	8,611.52	8,617.76	8,611.52	22.41	19.00	178.09	1.09	-182.02	664.30	625.84	38.46	17.274	
8,800.00	8,711.52	8,717.76	8,711.52	22.60	19.22	178.09	1.09	-182.02	664.30	625.41	38.89	17.081	
8,900.00	8,811.52	8,817.76	8,811.52	22.78	19.44	178.09	1.09	-182.02	664.30	624.97	39.32	16.893	
9,000.00	8,911.52	8,917.76	8,911.52	22.97	19.66	178.09	1.09	-182.02	664.30	624.54	39.76	16.709	
9,100.00	9,011.52	9,017.76	9,011.52	23.16	19.88	178.09	1.09	-182.02	664.30	624.11	40.19	16.528	
9,200.00	9,111.52	9,117.76	9,111.52	23.34	20.10	178.09	1.09	-182.02	664.30	623.67	40.63	16.351	
9,300.00	9,211.52	9,217.76	9,211.52	23.53	20.32	178.09	1.09	-182.02	664.30	623.24	41.06	16.178	
9,400.00	9,311.52	9,317.76	9,311.52	23.72	20.54	178.09	1.09	-182.02	664.30	622.80	41.50	16.008	
9,500.00	9,411.52	9,417.76	9,411.52	23.91	20.76	178.09	1.09	-182.02	664.30	622.37	41.93	15.842	
9,600.00	9,511.52	9,517.76	9,511.52	24.10	20.98	178.09	1.09	-182.02	664.30	621.93	42.37	15.679	
9,700.00	9,611.52	9,617.76	9,611.52	24.29	21.21	178.09	1.09	-182.02	664.30	621.49	42.81	15.519	
9,800.00	9,711.52	9,717.76	9,711.52	24.48	21.43	178.09	1.09	-182.02	664.30	621.06	43.24	15.362	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L3DS - NBU 920-23L3DS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
9,900.00	9,811.52	9,817.76	9,811.52	24.68	21.65	178.09	1.09	-182.02	664.30	620.62	43.68	15.209	
10,000.00	9,911.52	9,917.76	9,911.52	24.87	21.87	178.09	1.09	-182.02	664.30	620.18	44.12	15.058	
10,100.00	10,011.52	10,017.76	10,011.52	25.06	22.09	178.09	1.09	-182.02	664.30	619.75	44.55	14.910	
10,200.00	10,111.52	10,117.76	10,111.52	25.26	22.31	178.09	1.09	-182.02	664.30	619.31	44.99	14.765	
10,300.00	10,211.52	10,217.76	10,211.52	25.45	22.53	178.09	1.09	-182.02	664.30	618.87	45.43	14.623	
10,400.00	10,311.52	10,317.76	10,311.52	25.65	22.75	178.09	1.09	-182.02	664.30	618.43	45.87	14.484	
10,500.00	10,411.52	10,417.76	10,411.52	25.84	22.97	178.09	1.09	-182.02	664.30	617.99	46.30	14.347	
10,600.00	10,511.52	10,517.76	10,511.52	26.04	23.19	178.09	1.09	-182.02	664.30	617.56	46.74	14.212	
10,656.08	10,567.60	10,573.84	10,567.60	26.15	23.32	178.09	1.09	-182.02	664.30	617.31	46.99	14.138	
10,694.48	10,606.00	10,595.24	10,589.00	26.22	23.37	178.09	1.09	-182.02	664.52	617.40	47.12	14.103	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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	76.23	4.73	19.32	19.89				
100.00	100.00	100.00	100.00	0.10	0.10	76.23	4.73	19.32	19.89	19.70	0.19	102.918	
200.00	200.00	200.00	200.00	0.32	0.32	76.23	4.73	19.32	19.89	19.25	0.64	30.947	
300.00	300.00	300.00	300.00	0.55	0.55	76.23	4.73	19.32	19.89	18.80	1.09	18.212	CC, ES
400.00	399.98	399.13	399.08	0.77	0.77	93.63	6.75	20.92	22.04	20.50	1.54	14.321	
450.00	449.93	448.58	448.43	0.89	0.89	93.96	9.27	22.90	24.72	22.95	1.77	13.964	
500.00	499.86	498.27	497.94	1.01	1.01	93.84	12.60	25.53	28.24	26.24	2.01	14.084	
600.00	599.73	598.01	597.30	1.23	1.25	93.49	19.42	30.92	35.41	32.95	2.47	14.346	
700.00	699.59	697.76	696.66	1.47	1.51	93.26	26.25	36.31	42.59	39.65	2.94	14.486	
800.00	799.45	797.50	796.03	1.71	1.77	93.10	33.07	41.70	49.76	46.35	3.42	14.567	
900.00	899.31	897.24	895.39	1.95	2.03	92.97	39.89	47.08	56.94	53.04	3.90	14.617	
1,000.00	999.18	996.98	994.75	2.19	2.30	92.88	46.71	52.47	64.11	59.73	4.38	14.649	
1,100.00	1,099.04	1,096.72	1,094.12	2.43	2.57	92.80	53.54	57.86	71.29	66.43	4.86	14.671	
1,200.00	1,198.90	1,196.47	1,193.48	2.67	2.84	92.74	60.36	63.24	78.46	73.12	5.34	14.686	
1,300.00	1,298.77	1,296.21	1,292.84	2.91	3.11	92.69	67.18	68.63	85.64	79.81	5.83	14.696	
1,400.00	1,398.63	1,395.95	1,392.20	3.15	3.38	92.64	74.00	74.02	92.81	86.50	6.31	14.704	
1,500.00	1,498.49	1,495.69	1,491.57	3.39	3.65	92.61	80.83	79.41	99.99	93.19	6.80	14.709	
1,600.00	1,598.36	1,595.44	1,590.93	3.63	3.92	92.57	87.65	84.79	107.16	99.88	7.28	14.713	
1,700.00	1,698.22	1,695.18	1,690.29	3.87	4.19	92.55	94.47	90.18	114.34	106.57	7.77	14.716	
1,800.00	1,798.08	1,794.92	1,789.65	4.12	4.46	92.52	101.29	95.57	121.51	113.25	8.26	14.718	
1,900.00	1,897.94	1,894.66	1,889.02	4.36	4.73	92.50	108.12	100.96	128.69	119.94	8.74	14.719	
2,000.00	1,997.81	1,994.40	1,988.38	4.60	5.00	92.48	114.94	106.34	135.86	126.63	9.23	14.720	
2,100.00	2,097.67	2,094.15	2,087.74	4.84	5.28	92.46	121.76	111.73	143.04	133.32	9.72	14.721	
2,200.00	2,197.53	2,193.89	2,187.10	5.08	5.55	92.45	128.58	117.12	150.21	140.01	10.20	14.722	
2,300.00	2,297.40	2,293.63	2,286.47	5.33	5.82	92.43	135.41	122.50	157.39	146.70	10.69	14.722	
2,400.00	2,397.26	2,393.37	2,385.83	5.57	6.09	92.42	142.23	127.89	164.56	153.38	11.18	14.722	
2,500.00	2,497.12	2,493.12	2,485.19	5.81	6.36	92.41	149.05	133.28	171.74	160.07	11.67	14.722	
2,593.01	2,590.00	2,585.88	2,577.61	6.03	6.62	92.39	155.40	138.29	178.41	166.29	12.12	14.722	
2,600.00	2,596.98	2,592.86	2,584.56	6.05	6.64	92.38	155.87	138.67	178.91	166.76	12.15	14.722	
2,700.00	2,696.64	2,696.03	2,687.40	6.31	6.89	93.29	162.29	143.73	185.62	172.96	12.66	14.667	
2,800.00	2,795.72	2,800.63	2,791.89	6.61	7.09	96.50	165.99	146.66	190.27	177.09	13.18	14.441	
2,900.00	2,893.97	2,902.72	2,893.97	6.94	7.26	101.76	166.80	147.30	194.01	180.28	13.73	14.131	
3,000.00	2,991.11	2,999.86	2,991.11	7.32	7.44	108.06	166.80	147.30	200.29	185.98	14.32	13.992	
3,100.00	3,086.87	3,095.62	3,086.87	7.76	7.62	114.94	166.80	147.30	211.26	196.38	14.88	14.199	
3,159.66	3,143.24	3,152.00	3,143.24	8.05	7.73	119.10	166.80	147.30	220.55	205.36	15.19	14.520	
3,200.00	3,181.15	3,189.90	3,181.15	8.26	7.80	122.01	166.80	147.30	227.89	212.48	15.41	14.792	
3,300.00	3,275.12	3,283.87	3,275.12	8.79	7.98	128.46	166.80	147.30	248.47	232.56	15.91	15.617	
3,400.00	3,369.09	3,377.84	3,369.09	9.34	8.17	133.94	166.80	147.30	271.80	255.43	16.38	16.595	
3,500.00	3,463.06	3,471.81	3,463.06	9.91	8.35	138.57	166.80	147.30	297.25	280.43	16.82	17.668	
3,600.00	3,557.03	3,565.78	3,557.03	10.49	8.54	142.48	166.80	147.30	324.31	307.05	17.26	18.791	
3,700.00	3,651.00	3,659.75	3,651.00	11.08	8.73	145.81	166.80	147.30	352.62	334.93	17.69	19.934	
3,800.00	3,744.97	3,753.72	3,744.97	11.68	8.91	148.65	166.80	147.30	381.89	363.77	18.12	21.077	
3,900.00	3,838.94	3,847.69	3,838.94	12.29	9.10	151.09	166.80	147.30	411.92	393.37	18.55	22.204	
4,000.00	3,932.91	3,941.66	3,932.91	12.91	9.29	153.20	166.80	147.30	442.56	423.57	18.99	23.308	
4,020.00	3,951.70	3,960.45	3,951.70	13.03	9.33	153.59	166.80	147.30	448.75	429.67	19.08	23.525	
4,100.00	4,027.25	4,036.00	4,027.25	13.47	9.49	155.21	166.80	147.30	472.72	453.24	19.48	24.264	
4,200.00	4,122.67	4,131.42	4,122.67	13.93	9.68	156.86	166.80	147.30	500.25	480.29	19.96	25.059	
4,300.00	4,219.07	4,227.83	4,219.07	14.36	9.88	158.18	166.80	147.30	524.92	504.48	20.44	25.682	
4,400.00	4,316.35	4,325.10	4,316.35	14.75	10.08	159.24	166.80	147.30	546.59	525.68	20.90	26.147	
4,500.00	4,414.37	4,423.12	4,414.37	15.11	10.28	160.08	166.80	147.30	565.16	543.81	21.35	26.466	
4,600.00	4,513.02	4,521.77	4,513.02	15.43	10.49	160.73	166.80	147.30	580.57	558.79	21.79	26.648	
4,700.00	4,612.18	4,620.93	4,612.18	15.70	10.69	161.22	166.80	147.30	592.76	570.56	22.20	26.704	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
4,800.00	4,711.73	4,720.49	4,711.73	15.94	10.90	161.57	166.80	147.30	601.68	579.10	22.58	26.641	
4,900.00	4,811.55	4,820.30	4,811.55	16.13	11.11	161.78	166.80	147.30	607.31	584.36	22.95	26.465	
5,000.00	4,911.52	4,920.27	4,911.52	16.28	11.32	161.86	166.80	147.30	609.63	586.35	23.28	26.181	
5,019.98	4,931.50	4,940.25	4,931.50	16.31	11.36	144.80	166.80	147.30	609.70	586.35	23.35	26.112	
5,100.00	5,011.52	5,020.27	5,011.52	16.41	11.53	144.80	166.80	147.30	609.70	586.04	23.66	25.770	
5,200.00	5,111.52	5,120.27	5,111.52	16.55	11.74	144.80	166.80	147.30	609.70	585.64	24.06	25.338	
5,300.00	5,211.52	5,220.27	5,211.52	16.70	11.95	144.80	166.80	147.30	609.70	585.23	24.47	24.919	
5,400.00	5,311.52	5,320.27	5,311.52	16.84	12.17	144.80	166.80	147.30	609.70	584.82	24.87	24.513	
5,500.00	5,411.52	5,420.27	5,411.52	16.99	12.38	144.80	166.80	147.30	609.70	584.42	25.28	24.117	
5,600.00	5,511.52	5,520.27	5,511.52	17.14	12.59	144.80	166.80	147.30	609.70	584.01	25.69	23.733	
5,700.00	5,611.52	5,620.27	5,611.52	17.29	12.81	144.80	166.80	147.30	609.70	583.60	26.10	23.360	
5,800.00	5,711.52	5,720.27	5,711.52	17.45	13.02	144.80	166.80	147.30	609.70	583.19	26.51	22.998	
5,900.00	5,811.52	5,820.27	5,811.52	17.60	13.23	144.80	166.80	147.30	609.70	582.77	26.92	22.645	
6,000.00	5,911.52	5,920.27	5,911.52	17.76	13.45	144.80	166.80	147.30	609.70	582.36	27.34	22.302	
6,100.00	6,011.52	6,020.27	6,011.52	17.91	13.66	144.80	166.80	147.30	609.70	581.94	27.75	21.969	
6,200.00	6,111.52	6,120.27	6,111.52	18.07	13.88	144.80	166.80	147.30	609.70	581.53	28.17	21.645	
6,300.00	6,211.52	6,220.27	6,211.52	18.23	14.09	144.80	166.80	147.30	609.70	581.11	28.59	21.329	
6,400.00	6,311.52	6,320.27	6,311.52	18.39	14.31	144.80	166.80	147.30	609.70	580.69	29.00	21.022	
6,500.00	6,411.52	6,420.27	6,411.52	18.56	14.53	144.80	166.80	147.30	609.70	580.27	29.42	20.722	
6,600.00	6,511.52	6,520.27	6,511.52	18.72	14.74	144.80	166.80	147.30	609.70	579.86	29.84	20.431	
6,700.00	6,611.52	6,620.27	6,611.52	18.89	14.96	144.80	166.80	147.30	609.70	579.43	30.26	20.147	
6,800.00	6,711.52	6,720.27	6,711.52	19.05	15.18	144.80	166.80	147.30	609.70	579.01	30.68	19.870	
6,900.00	6,811.52	6,820.27	6,811.52	19.22	15.39	144.80	166.80	147.30	609.70	578.59	31.11	19.600	
7,000.00	6,911.52	6,920.27	6,911.52	19.39	15.61	144.80	166.80	147.30	609.70	578.17	31.53	19.338	
7,100.00	7,011.52	7,020.27	7,011.52	19.56	15.83	144.80	166.80	147.30	609.70	577.74	31.95	19.081	
7,200.00	7,111.52	7,120.27	7,111.52	19.73	16.05	144.80	166.80	147.30	609.70	577.32	32.38	18.831	
7,300.00	7,211.52	7,220.27	7,211.52	19.90	16.26	144.80	166.80	147.30	609.70	576.90	32.80	18.587	
7,400.00	7,311.52	7,320.27	7,311.52	20.07	16.48	144.80	166.80	147.30	609.70	576.47	33.23	18.349	
7,500.00	7,411.52	7,420.27	7,411.52	20.25	16.70	144.80	166.80	147.30	609.70	576.04	33.65	18.117	
7,600.00	7,511.52	7,520.27	7,511.52	20.42	16.92	144.80	166.80	147.30	609.70	575.62	34.08	17.890	
7,700.00	7,611.52	7,620.27	7,611.52	20.60	17.14	144.80	166.80	147.30	609.70	575.19	34.51	17.668	
7,800.00	7,711.52	7,720.27	7,711.52	20.78	17.36	144.80	166.80	147.30	609.70	574.76	34.94	17.452	
7,900.00	7,811.52	7,820.27	7,811.52	20.96	17.57	144.80	166.80	147.30	609.70	574.33	35.36	17.240	
8,000.00	7,911.52	7,920.27	7,911.52	21.13	17.79	144.80	166.80	147.30	609.70	573.90	35.79	17.034	
8,100.00	8,011.52	8,020.27	8,011.52	21.31	18.01	144.80	166.80	147.30	609.70	573.47	36.22	16.832	
8,200.00	8,111.52	8,120.27	8,111.52	21.49	18.23	144.80	166.80	147.30	609.70	573.04	36.65	16.634	
8,300.00	8,211.52	8,220.27	8,211.52	21.68	18.45	144.80	166.80	147.30	609.70	572.61	37.08	16.441	
8,400.00	8,311.52	8,320.27	8,311.52	21.86	18.67	144.80	166.80	147.30	609.70	572.18	37.51	16.252	
8,500.00	8,411.52	8,420.27	8,411.52	22.04	18.89	144.80	166.80	147.30	609.70	571.75	37.95	16.068	
8,600.00	8,511.52	8,520.27	8,511.52	22.23	19.11	144.80	166.80	147.30	609.70	571.32	38.38	15.887	
8,700.00	8,611.52	8,620.27	8,611.52	22.41	19.33	144.80	166.80	147.30	609.70	570.89	38.81	15.710	
8,800.00	8,711.52	8,720.27	8,711.52	22.60	19.55	144.80	166.80	147.30	609.70	570.46	39.24	15.537	
8,900.00	8,811.52	8,820.27	8,811.52	22.78	19.77	144.80	166.80	147.30	609.70	570.02	39.68	15.367	
9,000.00	8,911.52	8,920.27	8,911.52	22.97	19.99	144.80	166.80	147.30	609.70	569.59	40.11	15.201	
9,100.00	9,011.52	9,020.27	9,011.52	23.16	20.21	144.80	166.80	147.30	609.70	569.16	40.54	15.039	
9,200.00	9,111.52	9,120.27	9,111.52	23.34	20.43	144.80	166.80	147.30	609.70	568.72	40.98	14.879	
9,300.00	9,211.52	9,220.27	9,211.52	23.53	20.65	144.80	166.80	147.30	609.70	568.29	41.41	14.723	
9,400.00	9,311.52	9,320.27	9,311.52	23.72	20.87	144.80	166.80	147.30	609.70	567.85	41.84	14.570	
9,500.00	9,411.52	9,420.27	9,411.52	23.91	21.09	144.80	166.80	147.30	609.70	567.42	42.28	14.421	
9,600.00	9,511.52	9,520.27	9,511.52	24.10	21.32	144.80	166.80	147.30	609.70	566.98	42.71	14.274	
9,700.00	9,611.52	9,620.27	9,611.52	24.29	21.54	144.80	166.80	147.30	609.70	566.55	43.15	14.130	
9,800.00	9,711.52	9,720.27	9,711.52	24.48	21.76	144.80	166.80	147.30	609.70	566.11	43.59	13.988	

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 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS

Offset Site Error: 0.00 ft

Offset Well Error: 0.00 ft

Survey Program: 0-MWD

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
9,900.00	9,811.52	9,820.27	9,811.52	24.68	21.98	144.80	166.80	147.30	609.70	565.67	44.02	13.850	
10,000.00	9,911.52	9,920.27	9,911.52	24.87	22.20	144.80	166.80	147.30	609.70	565.24	44.46	13.714	
10,100.00	10,011.52	10,020.27	10,011.52	25.06	22.42	144.80	166.80	147.30	609.70	564.80	44.90	13.580	
10,200.00	10,111.52	10,120.27	10,111.52	25.26	22.64	144.80	166.80	147.30	609.70	564.37	45.33	13.450	
10,300.00	10,211.52	10,220.27	10,211.52	25.45	22.86	144.80	166.80	147.30	609.70	563.93	45.77	13.321	
10,400.00	10,311.52	10,320.27	10,311.52	25.65	23.09	144.80	166.80	147.30	609.70	563.49	46.21	13.195	
10,500.00	10,411.52	10,420.27	10,411.52	25.84	23.31	144.80	166.80	147.30	609.70	563.05	46.64	13.071	
10,600.00	10,511.52	10,520.27	10,511.52	26.04	23.53	144.80	166.80	147.30	609.70	562.62	47.08	12.950	
10,652.85	10,564.37	10,573.12	10,564.37	26.14	23.65	144.80	166.80	147.30	609.70	562.38	47.31	12.886	
10,694.48	10,606.00	10,591.75	10,583.00	26.22	23.69	144.80	166.80	147.30	610.13	562.69	47.44	12.860 SF	

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

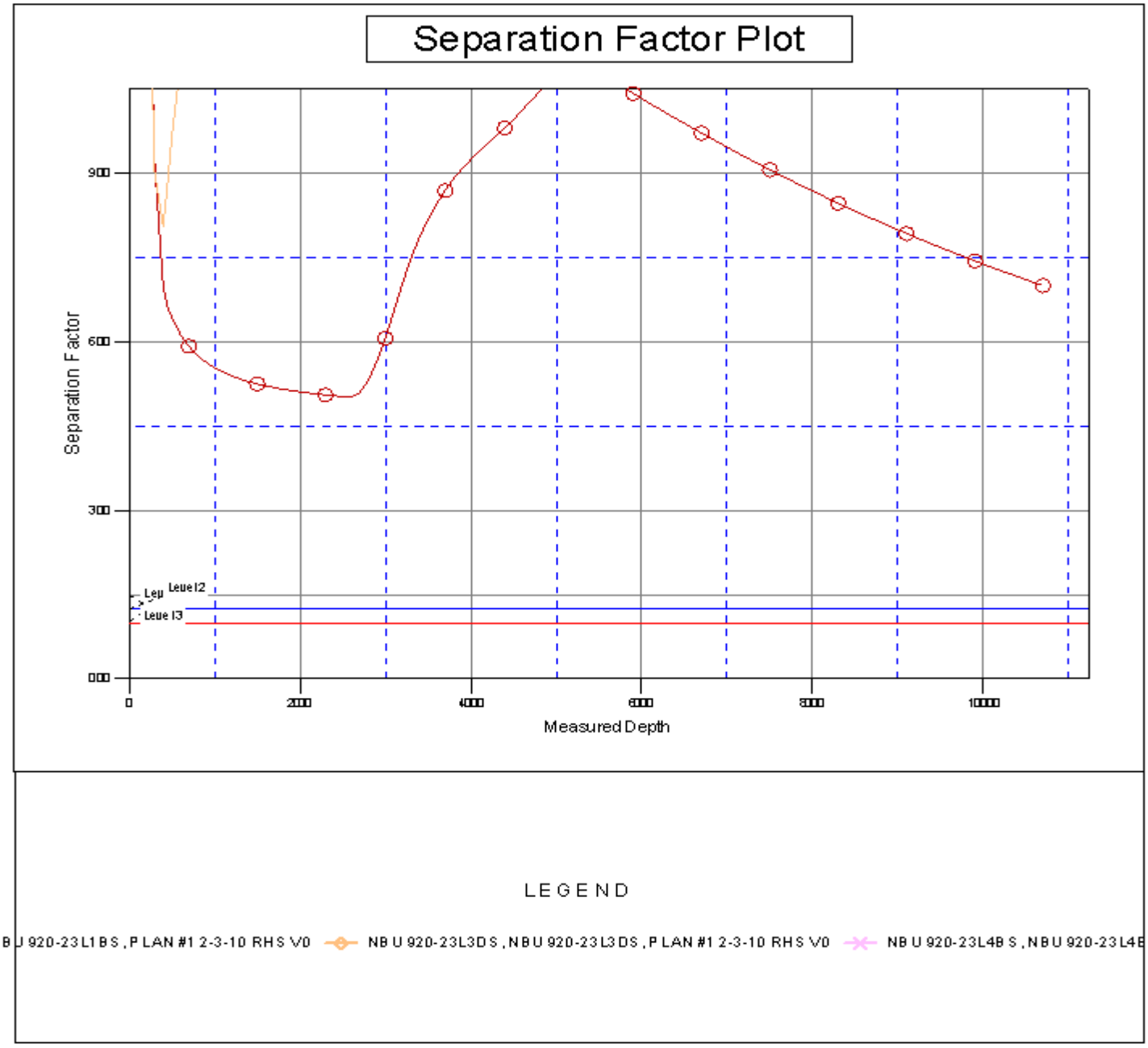
Reference Depths are relative to WELL @ 4873.00ft (Original Well Ele\Coordinates are relative to: NBU 920-23L2DS
Offset Depths are relative to Offset Datum
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N
Central Meridian is 111° 0' 0.000 W °
Grid Convergence at Surface is: 0.87°

Weatherford International Ltd.

Anticollision Report

Company:	ANADARKO PETROLEUM CORP.	**Local Co-ordinate Reference:**	Well NBU 920-23L2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	**TVD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Reference Site:	NBU 920-23L PAD	**MD Reference:**	WELL @ 4873.00ft (Original Well Elev)
Site Error:	0.00ft	**North Reference:**	True
Reference Well:	NBU 920-23L2DS	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00ft	**Output errors are at**	2.00 sigma
Reference Wellbore	NBU 920-23L2DS	**Database:**	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 2-3-10 RHS	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4873.00ft (Original Well Ele\Coordinates are relative to: NBU 920-23L2DS
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: 0.87°



NBU 920-23L2DS

Pad: NBU 920-23L
Surface: 1,491’ FSL 517’ FWL (NW/4SW/4)
BHL: 2,155’ FSL 335’ FWL (NW/4SW/4)
Sec. 23 T9S R20E

Uintah, Utah
Mineral Lease: UTU 0577A

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	1,713’	
Birds Nest	1,948’	Water
Mahogany	2,336’	Water
Wasatch	5,091’	Gas
Mesaverde	8,348’	Gas
MVU2	9,393’	Gas
MVL1	9,860’	Gas
TVD	10,606’	
TD	10,694’	

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,606' TVD, approximately equals 6,718 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 4,385 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

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

9. Variances:

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

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

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

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

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

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

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

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found

competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

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

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

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

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

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see

attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

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

10. Other Information:

Please refer to the attached Drilling Program.

’APIWellNo:43047510510000’

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	April 7, 2010
WELL NAME	**NBU 920-23L2DS**	TD	10,606' TVD 10,694' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah FINISHED ELEVATION 4,859'
SURFACE LOCATION	NW/4 SW/4 1,491' FSL 517' FWL Sec 23 T 9S R 20E		
	Latitude: 40.017660 Longitude: -109.641276 NAD 83		
BTM HOLE LOCATION	NW/4 SW/4 2,155' FSL 335' FWL Sec 23 T 9S R 20E		
	Latitude: 40.019487 Longitude: -109.642005 NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Tribe (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			11"	8-5/8", 28#, IJ-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	**1,713'**			
	Top of Birds Nest @	**1,948**			
	Mahogany @	**2,336**			
	Preset f/ GL @ 2,490' MD				
	Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	**5,091'**			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 & HCP-110 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-12.4 ppg
	Mverde @	**8,348' TVD**			
	MVU2 @	**9,393' TVD**			
	MVU1 @	**9,860' TVD**			
Max anticipated Mud required 12.4 ppg	**TD @**	**10,606' TVD** **10,694' MD**			

’APIWellNo:43047510510000’

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,490'	28.00	IJ-55	LTC	0.75	1.61	4.94
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9,738'	11.60	I-80	BTC	1.73	1.08	2.76
								10,690	8,650	279,000
	4-1/2"	9,738'	to	10,694'	11.60	HCP-110	LTC	50.83	1.26	31.04
		956'	of HCP-110 pipe							

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.16

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.4 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,385 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.4 ppg) 0.63 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,718 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	TAIL	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1,990'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,584'	Premium Lite II + 3% KCl + 0.25 pps	370	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,110'	50/50 Poz/G + 10% salt + 2% gel	1,500	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.

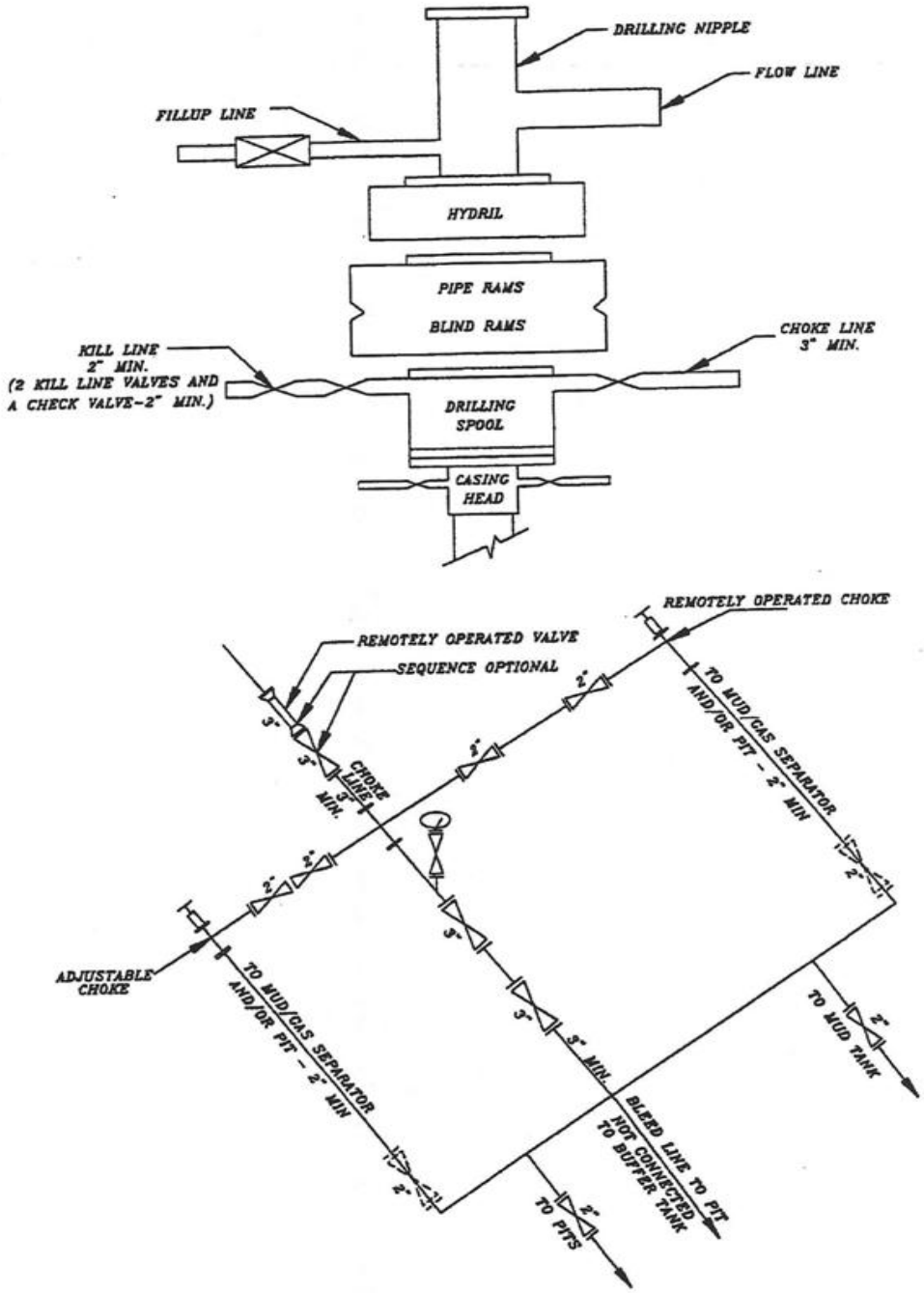
Surveys will be taken at 1,000' minimum intervals.

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 920-23L2DS



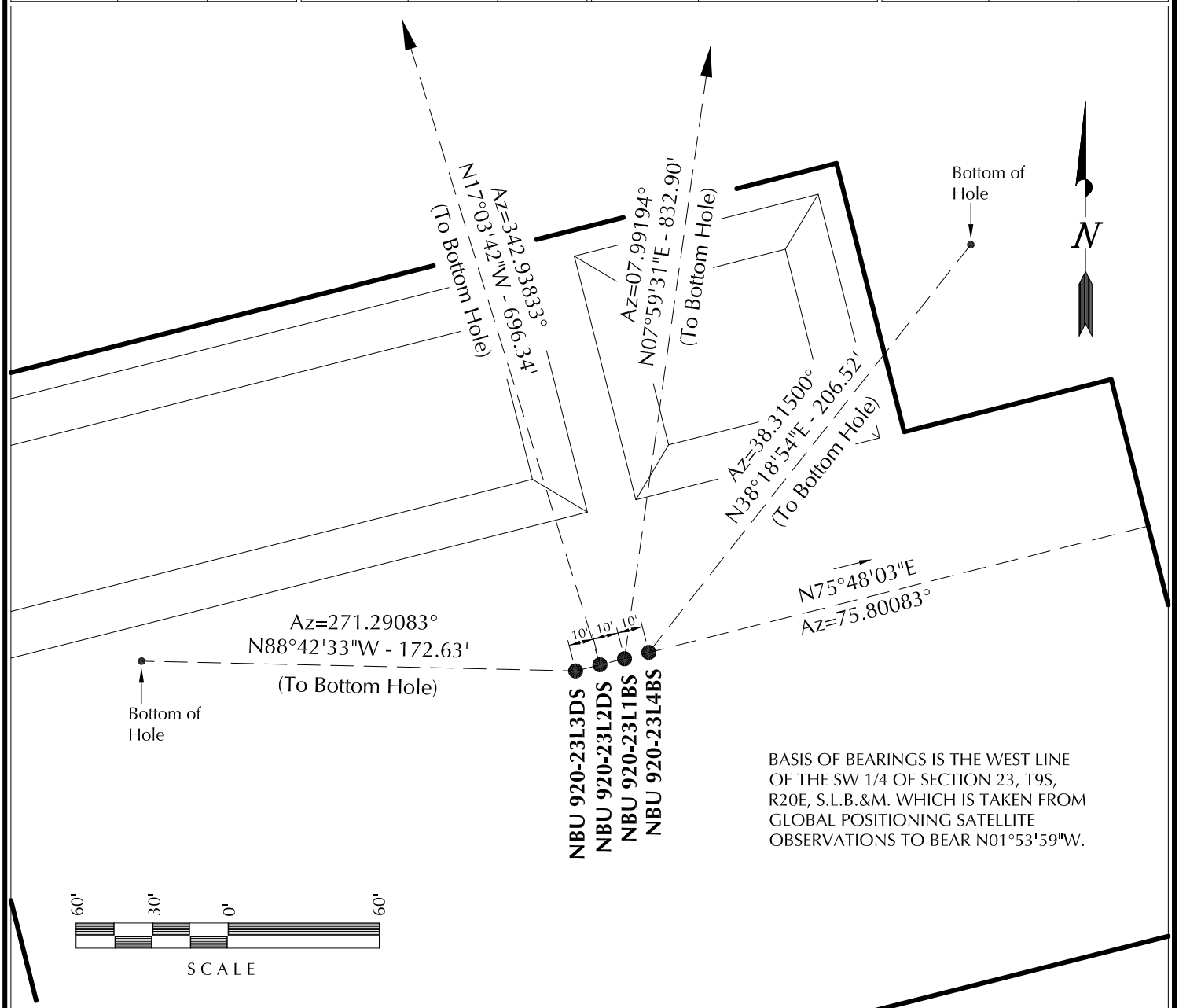
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

’APIWellNo:43047510510000’

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 920-23L4BS	40°01'03.625" 40.017674°	109°38'28.343" 109.641207°	40°01'03.753" 40.017709°	109°38'25.852" 109.640515°	1497' FSL 537' FWL	40°01'05.226" 40.018118°	109°38'26.699" 109.640750°	40°01'05.354" 40.018154°	109°38'24.207" 109.640058°	1660' FSL 670' FWL
NBU 920-23L1BS	40°01'03.600" 40.017667°	109°38'28.468" 109.641241°	40°01'03.728" 40.017702°	109°38'25.976" 109.640549°	1494' FSL 527' FWL	40°01'11.750" 40.019930°	109°38'26.982" 109.640828°	40°01'11.877" 40.019966°	109°38'24.490" 109.640136°	2320' FSL 670' FWL
NBU 920-23L2DS	40°01'03.577" 40.017660°	109°38'28.593" 109.641276°	40°01'03.704" 40.017696°	109°38'26.102" 109.640584°	1491' FSL 517' FWL	40°01'10.153" 40.019487°	109°38'31.220" 109.642005°	40°01'10.281" 40.019522°	109°38'28.728" 109.641313°	2155' FSL 335' FWL
NBU 920-23L3DS	40°01'03.552" 40.017653°	109°38'28.717" 109.641310°	40°01'03.680" 40.017689°	109°38'26.226" 109.640618°	1489' FSL 507' FWL	40°01'03.590" 40.017664°	109°38'30.935" 109.641926°	40°01'03.718" 40.017699°	109°38'28.443" 109.641234°	1491' FSL 335' FWL

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 920-23L4BS	162.0'	128.0'	**NBU 920-23L1BS**	824.8'	115.8'	**NBU 920-23L2DS**	665.7'	-204.3'	**NBU 920-23L3DS**	3.9'	-172.6'



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1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 920-23L

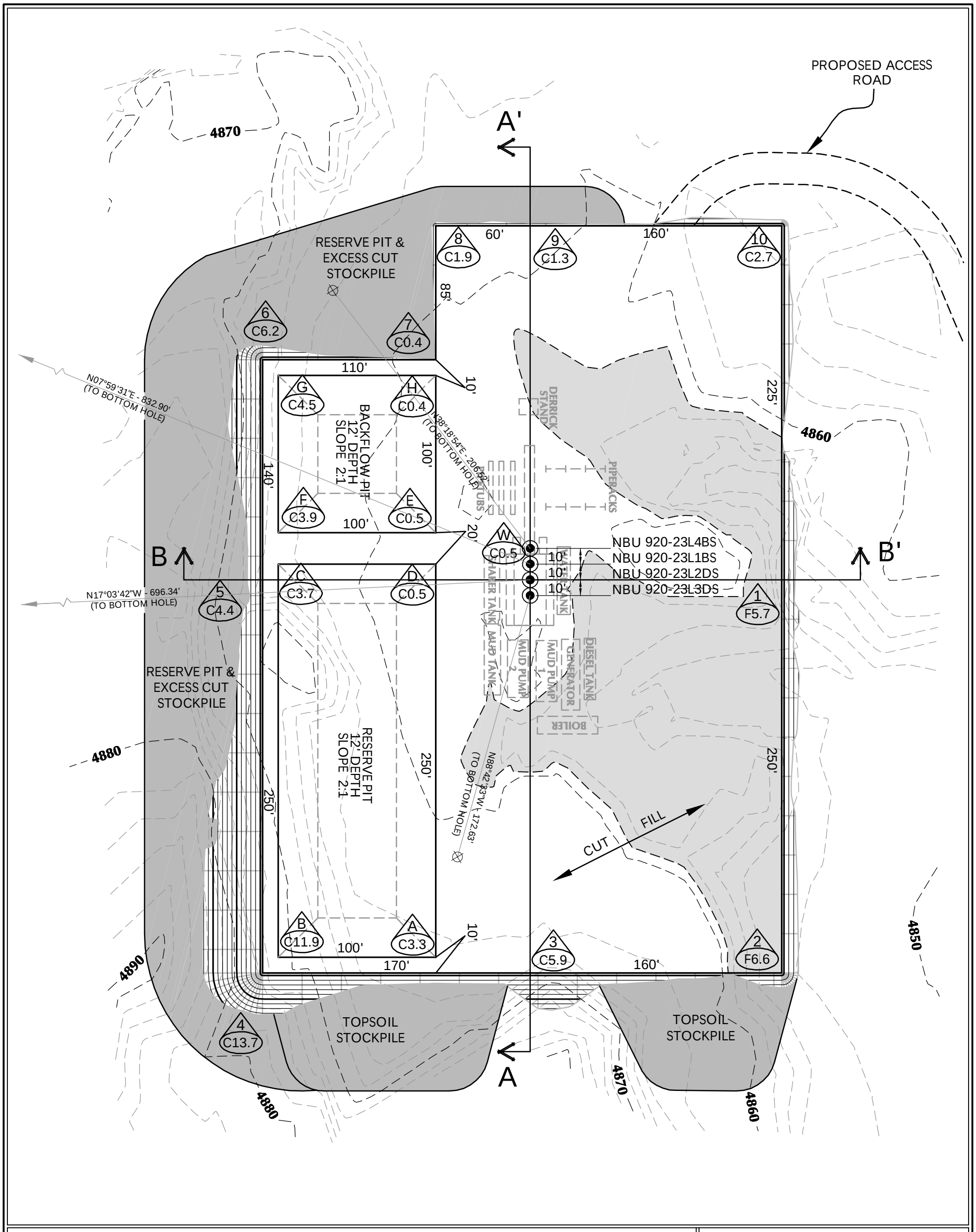
WELL PAD INTERFERENCE PLAT
WELLS - NBU 920-23L4BS, NBU 920-23L1BS, NBU 920-23L2DS & NBU 920-23L3DS LOCATED IN SECTION 23, T9S, R20E, S.L.B.&M., UINTAH COUNTY, UTAH.

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: 12-03-09	SURVEYED BY: M.S.B.	SHEET NO:
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	5
SCALE: 1" = 60'	Date Last Revised:	5 OF 13

’APIWellNo:43047510510000’



WELL PAD - NBU 920-23L DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4859.5'
FINISHED GRADE ELEVATION = 4859.0'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.79 ACRES
TOTAL DAMAGE AREA = 5.68 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 9,315 C.Y.
TOTAL FILL FOR WELL PAD = 5,025 C.Y.
TOPSOIL @ 6" DEPTH = 3,060 C.Y.
EXCESS MATERIAL = 4,290 C.Y.

PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 7,720 CY
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 28,730 BARRELS
TOTAL CUT FOR BACKFLOW PIT
+/- 2,660 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 9,490 BARRELS

WELL PAD LEGEND

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

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

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

WELL PAD - NBU 920-23L

WELL PAD - LOCATION LAYOUT
NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
LOCATED IN SECTION 23, T9S, R20E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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

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209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=60'	Date: 2/18/09	SHEET NO:
REVISED:	SEA 1/05/10	6

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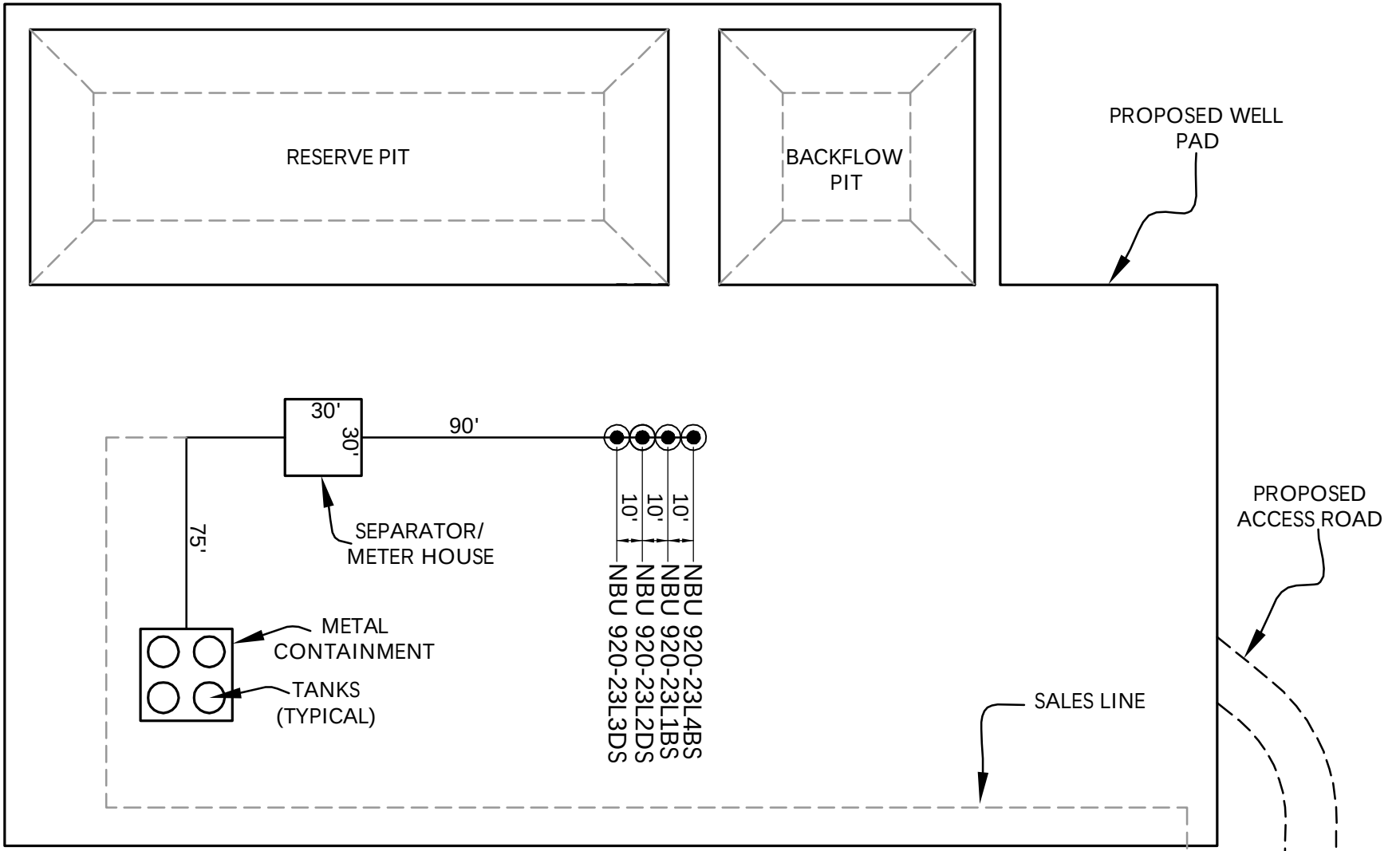

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 920-23L

WELL PAD - FACILITIES DIAGRAM
NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
LOCATED IN SECTION 23, T9S, R20E,
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 30' 60'
1" = 60'

WELL PAD LEGEND
EXISTING WELL LOCATION
PROPOSED WELL LOCATION
PROPOSED SALES LINE

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

Scale: 1"=60'	Date: 2/18/09	SHEET NO:
REVISED:	SEA 1/05/10	6B 6B OF 13

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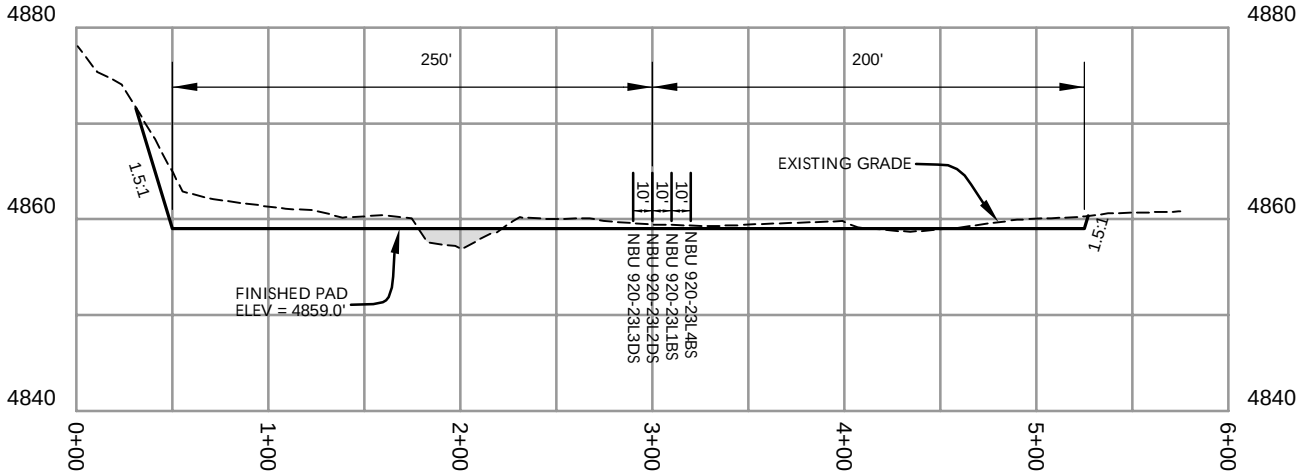
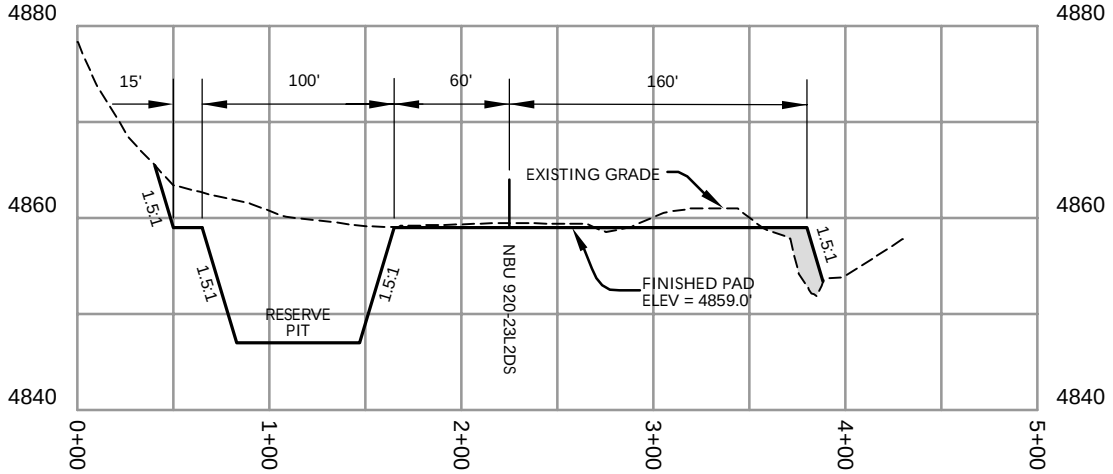


CROSS SECTION A-A'



CROSS SECTION B-B'

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

HORIZONTAL 0 50 100 1" = 100'

VERTICAL 0 10 20 1" = 20'

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

WELL PAD - NBU 920-23L

WELL PAD - CROSS SECTIONS
NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
LOCATED IN SECTION 23, T9S, R20E,
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

Scale: 1"=100'	Date: 2/18/09	SHEET NO:
REVISED:	SEA 1/05/10	7

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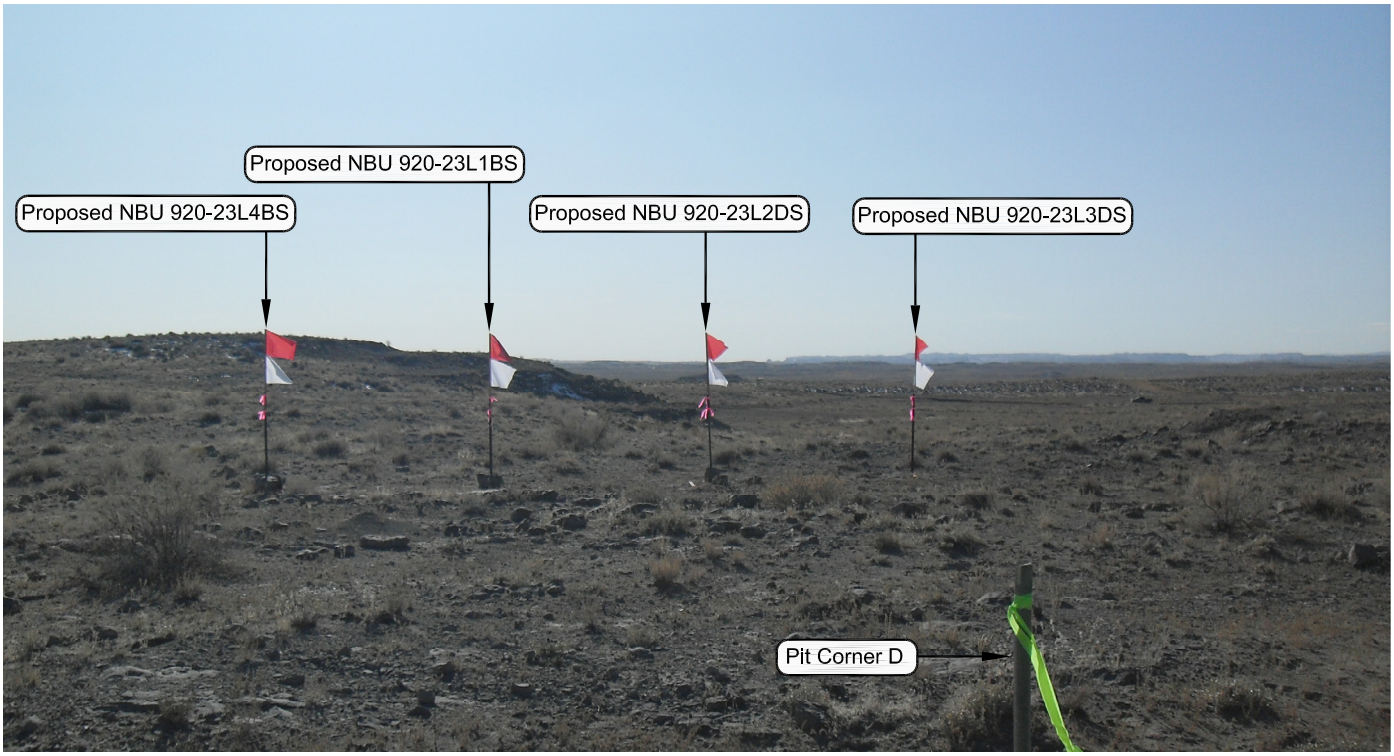


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE **CAMERA ANGLE: SOUTHERLY**

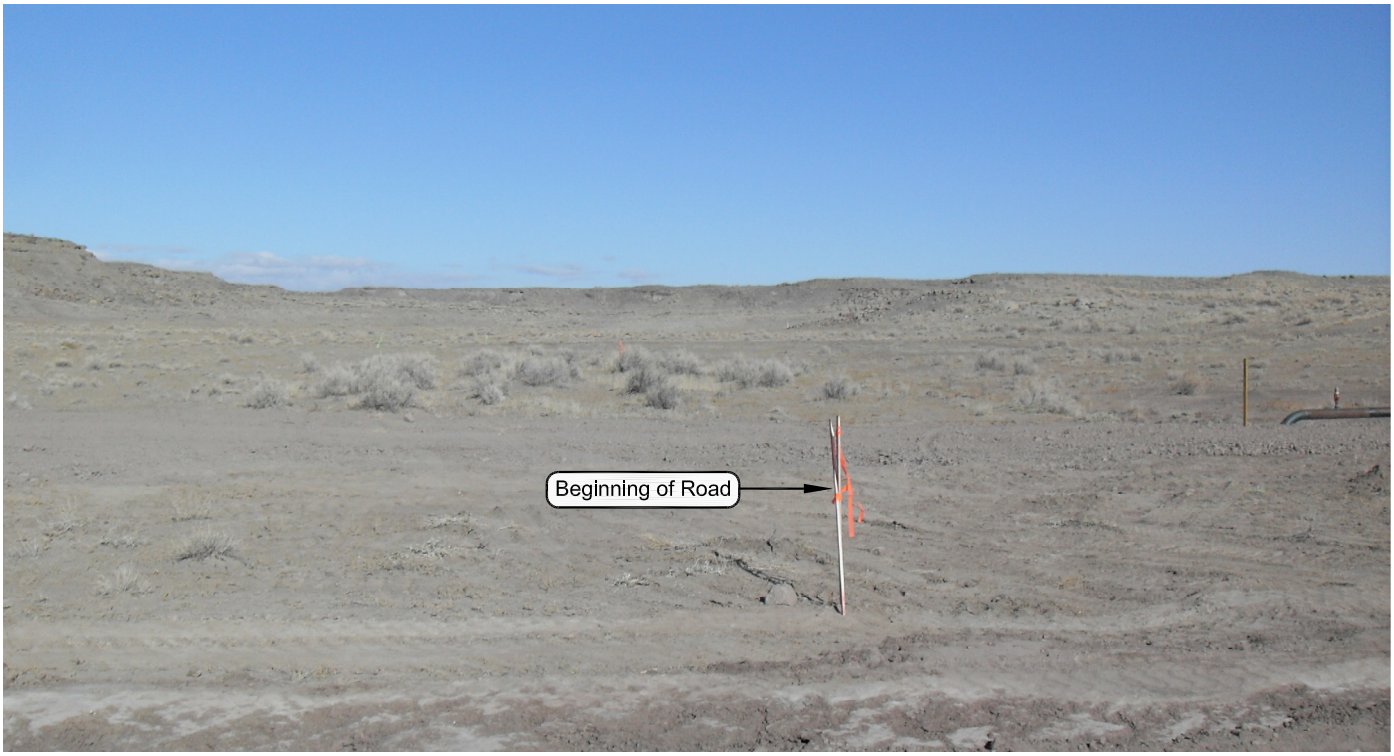


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD **CAMERA ANGLE: NORTHERLY**

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

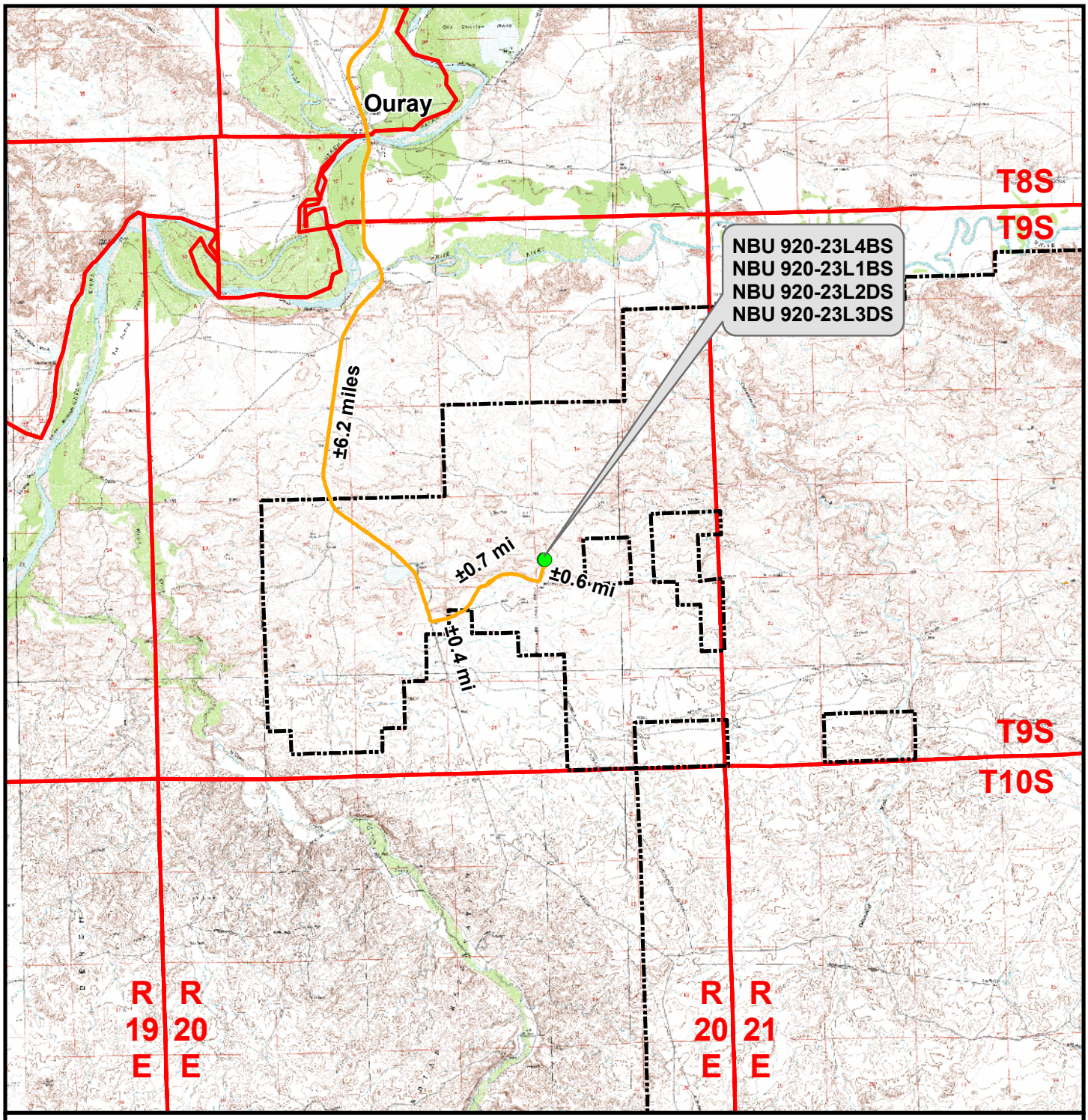
Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS, NBU 920-23L2DS & NBU 920-23L3DS LOCATION PHOTOS LOCATED IN SECTION 23, T9S, R21E, 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 PHOTOS TAKEN: 12-03-09	PHOTOS TAKEN BY: M.S.B.	SHEET NO:
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	8
Date Last Revised:		8 OF 13



Legend

Distance From Well Pad - NBU 920-23L To Unit Boundary: ±2,100ft

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

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

Well Pad - NBU 920-23L

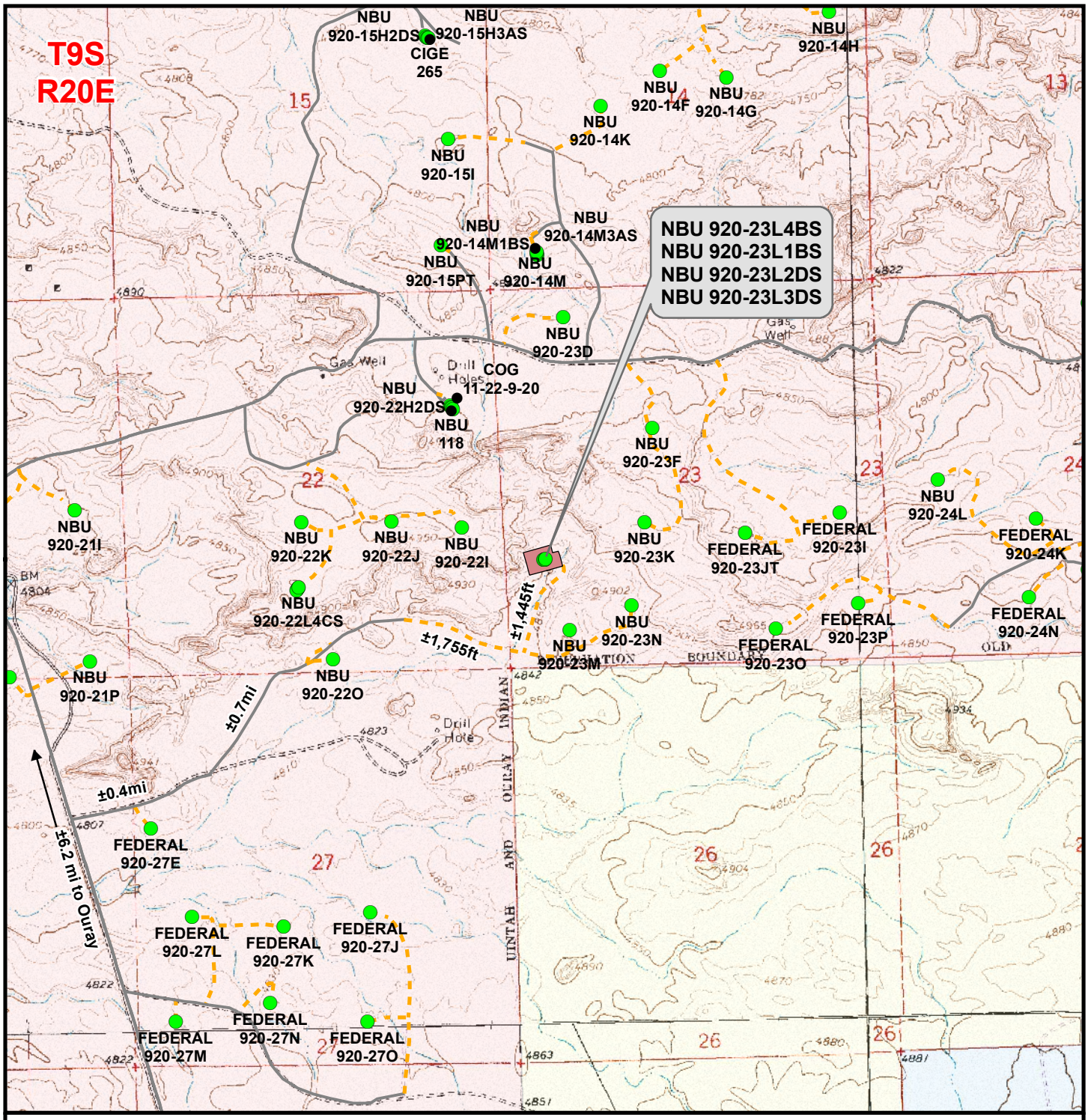
NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
Topo A
Located in Section 23, T9S, R20E
S.L.B.&M., Uintah County, Utah

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: 9	
Drawn: JELo	Date: 16 Nov 2009		
Revised: JELo	Date: 8 Jan 2010		9 of 13

’APIWellNo:43047510510000’



Legend

Total Proposed Road Length: ±1,445ft

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

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

Well Pad - NBU 920-23L

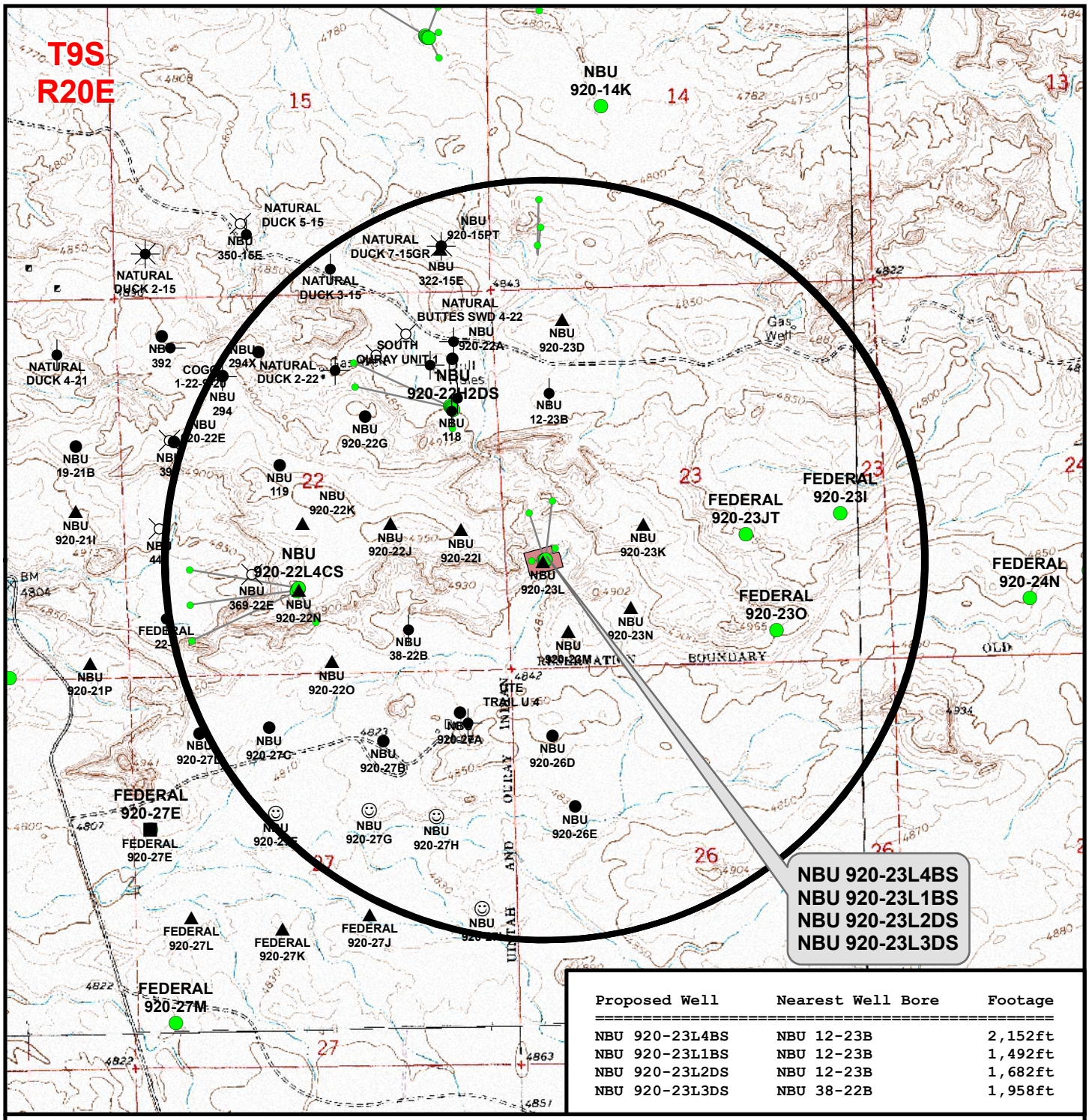
NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
Topo B
Located in Section 23, T9S, R20E
S.L.B.&M., Uintah County, Utah

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

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 10
Drawn: JELo	Date: 16 Nov 2009	
Revised: JELo	Date: 8 Jan 2010	

’APIWellNo:43047510510000’



Proposed Well	Nearest Well Bore	Footage
NBU 920-23L4BS	NBU 12-23B	2,152ft
NBU 920-23L1BS	NBU 12-23B	1,492ft
NBU 920-23L2DS	NBU 12-23B	1,682ft
NBU 920-23L3DS	NBU 38-22B	1,958ft

Legend

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

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

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

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

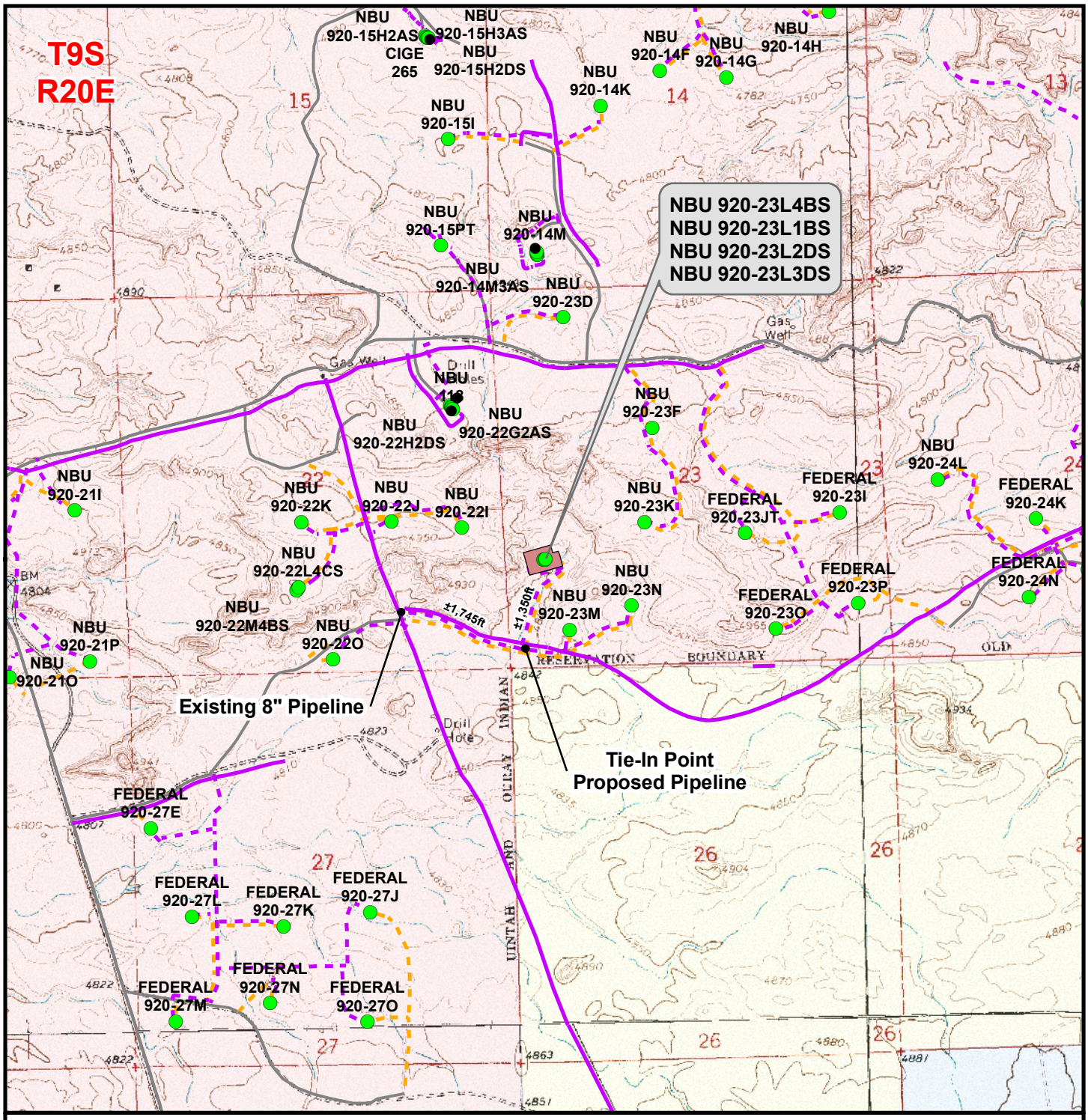
Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
Topo C
Located in Section 23, T9S, R20E
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" = 2,000ft	NAD83 USP Central	Sheet No: 11	
Drawn: JELo	Date: 16 Nov 2009		
Revised: JELo	Date: 8 Jan 2010		11 of 13



Legend

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±1,350ft
Proposed Pipeline Length From Edge Of Pad To Meter House: ±650ft

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

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

Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
Topo D
Located in Section 23, T9S, R20E
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" = 2,000ft	NAD83 USP Central	Sheet No: 12
Drawn: JELo	Date: 16 Nov 2009	12 of 13
Revised: JELo	Date: 8 Jan 2010	

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD: NBU 920-23L
WELLS: NBU 920-23L4BS, NBU 920-23L1BS,
NBU 920-23L2DS & NBU 920-23L3DS
Section 23, T9S, R20E, 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 6.2 MILES TO THE INTERSECTION OF A CLASS D COUNTY ROAD TO THE EAST. EXIT LEFT AND PROCEED IN AN EAST BY NORTHEAST DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 0.4 MILES TO A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN AN EASTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 3,200 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.6 MILES IN A SOUTHERLY DIRECTION.

NBU 920-23L1BS
Surface: 1,494’ FSL 527’ FWL (NW/4SW/4)
BHL: 2,320’ FSL 670’ FWL (NW/4SW/4)

NBU 920-23L2DS
Surface: 1,491’ FSL 517’ FWL (NW/4SW/4)
BHL: 2,155’ FSL 335’ FWL (NW/4SW/4)

NBU 920-23L3DS (FKA NBU 920-23L)
API Number: 43-047-50573
S Surface: 1,489’ FSL 507’ FWL (NW/4SW/4)
BHL: 1,491’ FSL 335’ FWL (NW/4SW/4)

NBU 920-23L4BS
Surface: 1,497’ FSL 537’ FWL (NW/4SW/4)
BHL: 1,660’ FSL 670’ FWL (NW/4SW/4)

Pad: NBU 920-23L
Sec. 23 T9S R20E

Uintah, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP
Mineral Lease: UTU 0577A
Surface Owner: Ute Indian Tribe

ONSHORE ORDER NO. 1

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

An Application for Permit to Drill (APD) for the NBU 920-23L3DS well was approved by the BLM on October 16, 2009 and by UDOGM on August 12, 2009. At the time the APD was submitted and approved, the well was known as the NBU 920-23L. Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) is requesting to change this vertical well to a directional well and add three additional wells to the well pad. Kerr-McGee will file for this request through a Sundry Notice and a Modification Application.

This APD is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in NW/4 SW/4 of Section 23 T9S R20E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

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

1. Existing Roads:

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

2. Planned Access Roads:

See MDP for additional details on road construction.
Approximately ±1,445' (±0.27 miles) of new access road is proposed with concurrent access with the NBU 920-23N well pad. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

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

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

Please refer to Topo Map C.

4. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.
Approximately 660' (±0.1 miles) of buried pipeline is proposed around the well pad**.** Another approximately ±1,350' (±0.3 miles) of buried pipeline is proposed from the tie in point to the edge of the pad with concurrent pipeline with the NBU 920-23N well pad. Please refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

At the onsite, Kerr-McGee agreed to the following:

- Paint equipment Shadow Grey.
- Archeological monitoring during construction.

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

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

49-2243	Target Trucking Inc.	Green River- Various points
49-2300	R.N. Industries	White River- Various points
49-2298	RNI Trucking	White River- Various points
49-2231	Nile Chapman	Green River- Various points
49-2299	R.N. Industries	Green River- Various points
49-2306	R.N. Industries	White River- Various points

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:
See MDP for additional details on Source of Construction Materials.

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

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

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

8. Ancillary Facilities:
See MDP for additional details on Ancillary Facilities.

None are anticipated.

9. Well Site Layout: (See Location Layout Diagram)
See MDP for additional details on Well Site Layout.

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

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

10. Plans for Reclamation of the Surface:

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

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe
PO Box 70
Fort Duchesne, Utah 84026
435-722-5141

The mineral ownership is listed below:

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

12. Other Information:

See MDP for additional details on Other Information.

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

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

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

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

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

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

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

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

Danielle Piernot
Danielle Piernot

March 30, 2010
Date

'APIWellNo:43047510510000'

KerrMcGee

Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779

March 1, 2010

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

Re: Directional Drilling R649-3-11
NBU 920-23L2DS
T9S-R20E
Section 23: NWSW (Surf & BH)
Surface: 1491' FSL, 517' FWL
Bottom Hole: 2155' FSL, 335' FWL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 920-23L2DS 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

Lynn Padgett
Staff Landman

enclosures

’APIWellNo:43047510510000’

CLASS I REVIEW OF KERR-MCGEE OIL & GAS ONSHORE LP’S PROPOSED NBU 920-23L1BS, NBU 920-23L2DS, NBU 920-23L3DS, AND NBU 920-23L4BS WELL LOCATIONS (T9S, R20E, SECTION 23) UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

Ute Indian Tribe
Uintah and Ouray Agency

Prepared Under Contract With:

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

Prepared By:

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

MOAC Report No. 09-180

March 11, 2010

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

Ute Tribal Permit No. A09-363

'APIWellNo:43047510510000'

IPC #09-78

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Well Pads, Access Roads and Pipelines for "NBU #920-23L, 23L4BS, 23L1BS, 23L2DS & 23L3DS" and "NBU #920-29P" (Sec. 23, 28 & 29, T 9 S, R 20 E)

Big Pack Mtn NW & Ouray
Topographic Quadrangle
Uintah County, Utah

May 12, 2009

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

Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237
(303) 759-5377 Office (303) 759-5324 Fax

SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Report #: GCI #43-revised March 9, 2010

Operator: Kerr-McGee Oil & Gas Onshore LP

Wells: Vertical wells: NBU 920-23D, NBU 920-23F, NBU 920-23K, NBU 920-23M, NBU 920-23N, Federal 920-23I, Federal 920-23JT, and Federal 920-23-P

Directional well: NBU 920-23L (bores: NBU 920-23L4BS, NBU 920-23L1BS, NBU 920-23L2DS, and NBU 920-23L3DS)

Pipelines: Proposed pipelines leading to all proposed wells

Access Roads: Access roads lead to all proposed wells

Location: Section 23, Township 9 South, Range 20 East; Uintah County, Utah

Survey-Species: Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

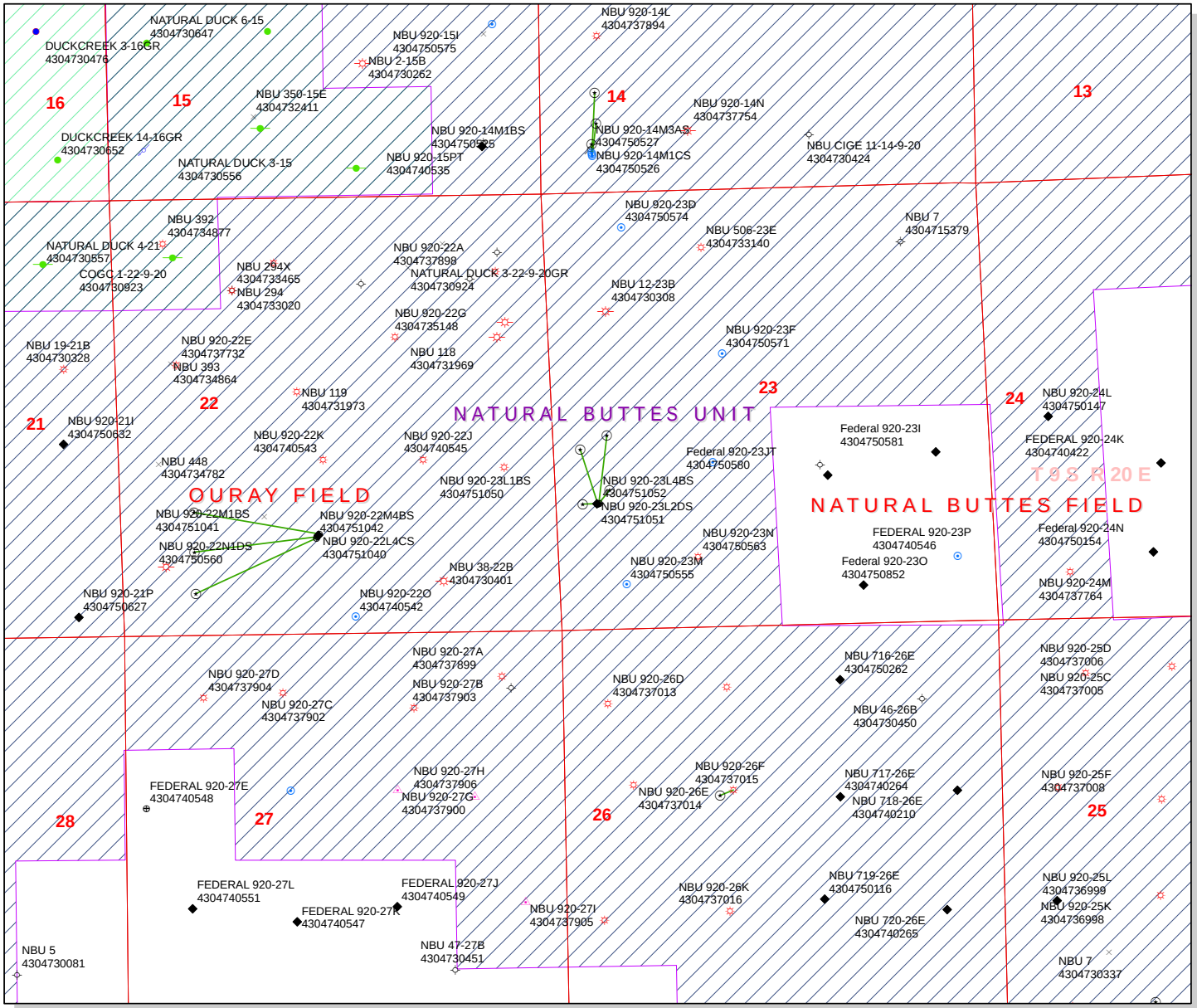
Date: 06/15/2009, 06/16/2009, and 06/18/2009

Observers: Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, BJ Lukins, Jay Slocum, Dan Hamilton, Matt Kelahan, and Jonathan Sexauer

Technicians: Chad Johnson

Weather: Partly cloudy, 80-85ºF, 0-5 mph winds with no precipitation

’APIWellNo:4304751051000’



API Number: 4304751051

Well Name: NBU 920-23L2DS

Township 09.0 S Range 20.0 E Section 23

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
- Sections
- Township

Wells Query
- <all other values>

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

1,600 800 0 1,600 Feet

1:15,013

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 12, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

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

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

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51040	NBU 920-22L4CS	Sec 22 T09S R20E 1222 FSL 2422 FWL
		BHL Sec 22 T09S R20E 1534 FSL 0908 FWL
43-047-51041	NBU 920-22M1BS	Sec 22 T09S R20E 1189 FSL 2399 FWL
		BHL Sec 22 T09S R20E 1050 FSL 0900 FWL
43-047-51043	NBU 922-31J3DS	Sec 31 T09S R22E 0500 FSL 0956 FEL
		BHL Sec 31 T09S R22E 1635 FSL 2236 FEL
43-047-51044	NBU 922-31O3AS	Sec 31 T09S R22E 0496 FSL 0965 FEL
		BHL Sec 31 T09S R22E 0502 FSL 2098 FEL
43-047-51045	NBU 922-31P4BS	Sec 31 T09S R22E 0504 FSL 0946 FEL
		BHL Sec 31 T09S R22E 0602 FSL 0497 FEL
43-047-51050	NBU 920-23L1BS	Sec 23 T09S R20E 1494 FSL 0527 FWL
		BHL Sec 23 T09S R20E 2320 FSL 0670 FWL
43-047-51051	NBU 920-23L2DS	Sec 23 T09S R20E 1491 FSL 0517 FWL
		BHL Sec 23 T09S R20E 2155 FSL 0335 FWL
43-047-51052	NBU 920-23L4BS	Sec 23 T09S R20E 1497 FSL 0537 FWL
		BHL Sec 23 T09S R20E 1660 FSL 0670 FWL

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

/s/ Michael L. Coulthard

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

MCoulthard:mc:4-12-10

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 4/7/2010 **API NO. ASSIGNED:** 43047510510000

WELL NAME: NBU 920-23L2DS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NWSW 23 090S 200E **Permit Tech Review:** ✔

SURFACE: 1491 FSL 0517 FWL **Engineering Review:** ✔

BOTTOM: 2155 FSL 0335 FWL **Geology Review:** ✔

COUNTY: UINTAH

LATITUDE: 40.01765 **LONGITUDE:** -109.64067

UTM SURF EASTINGS: 616007.00 **NORTHINGS:** 4430392.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0577A **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

SURFACE OWNER: 2 - Indian **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ✔ **PLAT**
- ✔ **Bond:** FEDERAL - WYB000291
- ☐ **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 & Uncommitted Tracts

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 920-23L2DS
API Well Number: 43047510510000
Lease Number: UTU 0577A
Surface Owner: INDIAN
Approval Date: 4/19/2010

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Board Cause No. 173-14,commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

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

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

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

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

API Well No: 43047510510000

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

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

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

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

Approved By:

Gil Hunt
Associate Director, Oil & Gas

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A

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: Ute Tr

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-23L2DS

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

9. API NUMBER: 43047510510000

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: 1491 FSL 0517 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E 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: 4/19/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ 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.

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

Approved by the Utah Division of Oil, Gas and Mining

Date: 04/14/2011

By: [signature]

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst

SIGNATURE	DATE
N/A	4/7/2011

RECEIVED Apr. 07, 2011

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047510510000

API: 43047510510000
Well Name: NBU 920-23L2DS
Location: 1491 FSL 0517 FWL QTR NWSW SEC 23 TWNP 090S RNG 200E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 4/19/2010

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

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

Signature: Andy Lytle **Date:** 4/7/2011
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Apr. 07, 2011

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 13, 2012

Jenn Hawkins
Kerr McGee Oil & Gas Onshore, L.P.
1099 18th Street, Suite 1800
Denver, CO 80202

Re: APDs Rescinded for Kerr McGee Oil & Gas Onshore, L.P.
Uintah County

Dear Ms. Hawkins:

Enclosed find the list of APDs that you requested to be rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded, effective March 7, 2012.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Vernal
SITLA, Ed Bonner

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

APINumber	Well Name
4304750274	NBU 727-35E
4304737762	FEDERAL 920-24G
4304750439	FEDERAL 1022-15L
4304750440	FEDERAL 1022-15K
4304750441	FEDERAL 1021-25I
4304750442	FEDERAL 1021-25M
4304750443	FEDERAL 1021-25N
4304738796	FEDERAL 1022-27K
4304738980	BITTER CREEK 1122-3N
4304737763	FEDERAL 920-24H
4304739156	NBU 1022-24O
4304736573	NBU 1022-23C
4304751040	NBU 920-22L4CS
4304751041	NBU 920-22M1BS
4304751042	NBU 920-22M4BS
4304751051	NBU 920-23L2DS
4304751052	NBU 920-23L4BS
4304738921	NBU 1022-8B-4T
4304739253	NBU 921-15L
4304738159	NBU 1022-20B
4304738169	NBU 1022-28I
4304750464	NBU 922-33N4S
4304750465	NBU 922-33O4S
4304750466	NBU 922-33P2S
4304750467	NBU 922-33P3S
4304738820	LOVE 1121-18B
4304740189	NBU 922-35IT
4304738491	NBU 1022-5H-4
4304750093	NBU 1022-34F
4304750094	NBU 1022-35M
4304750095	NBU 1022-34E
4304750097	FEDERAL 1022-27M
4304750067	NBU 921-16F3S
4304750068	NBU 921-16E4S
4304737103	FEDERAL 1022-29C
4304750127	NBU 420-29E
4304739527	NBU 1021-20F
4304739528	NBU 1021-20E
4304739530	NBU 1021-20B
4304738741	LOVE 1121-7P
4304738742	LOVE 1121-7L
4304738744	LOVE 1121-7F
4304738745	LOVE 1121-7D
4304738747	LOVE 1121-8P
4304738750	LOVE 1121-8F
4304738754	LOVE 1121-15L
4304738755	LOVE 1121-15N
4304739525	NBU 1021-20H
4304738795	NBU 1022-27O
4304738807	NBU 1022-34D
4304738920	NBU 1022-4E-3
4304737547	NBU 1022-17P
4304751050	NBU 920-23L1BS
4304737907	NBU 1021-3L
4304737908	NBU 1021-3D

4304737909	NBU 1021-3H
4304737917	NBU 1021-25E
4304737911	NBU 1021-24C
4304750029	NBU 375-13E
4304750033	NBU 515-25E
4304750034	NBU 673-25E
4304750035	NBU 674-25E
4304737963	NBU 1021-3G
4304737965	NBU 1021-5D
4304737684	NBU 498-13E

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Green River District-Vernal Field Office
170 South 500 East
Vernal, UT 84078
(435) 781-4400 Fax: (435) 781-4410
http://www.blm.gov/ut/st/en/fo/vernal.html

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IN REPLY REFER TO:
3160 (UTG011)

Julie Jacobson
Anadarko Petroleum Corporation
Kerr McGee Oil & Gas Onshore LP
1099 18th Street, Suite 600
Denver, CO 80202

43 047 51051

Re: Request to Return APD
Well No. NBU 920-23L2DS
NWSW, Sec. 23, T9S, R20E
Uintah County, Utah
Lease No. UTU-0577A
Natural Buttes Unit

Dear Ms. Jacobson:

The Application for Permit to Drill (APD) for the above referenced well received in this office on April 7, 2010, is being returned unapproved per a request to this office in an email message from you received on April 23, 2012. If you intend to drill at this location at a future date, a new Application for Permit to Drill must be submitted.

If you have any questions regarding APD processing, please contact Cindy Severson at (435) 781-4455.

Sincerely,

Jerry Kenczka
Assistant Field Manager
Lands & Mineral Resources

Enclosures

cc: UDOGM

RECEIVED
MAY 2 2 2012
DIV. OF OIL, GAS & MINING