

Vertical Section (ft) Azim = 189.72°, Scale = 1(in):1500(ft) Origin = 0 N/-S, 0 E/-

FRU 197-31B7 R1 Geodetic Proposal

Report Date:	October 7, 2009	Survey / DLS Computation Method:	Minimum Curvature / Lubinski
Client:	ExxonMobil	Vertical Section Azimuth:	189.720°
Field:	CO, Rio Blanco County (NAD 27 NZ) ExxonMobil 2008	Vertical Section Origin:	N 0.000 ft, E 0.000 ft
Structure / Slot:	ExxonMobil 31-1S-97W (FRU 197-31B Pad) / FRU 197-31B07	TVD Reference Datum:	
Well:	FRU 197-31B07	TVD Reference Elevation:	6500.0 ft relative to MSL
Borehole:	Original Hole (Est RKB)	Sea Bed / Ground Level Elevation:	6500.000 ft relative to MSL
UWI/API#:		Magnetic Declination:	10.771°
Survey Name / Date:	FRU 197-31B7 R1 ivs 7-Oct-09 / October 7, 2009	Total Field Strength:	52618.731 nT
Tort / AHD / DDI / ERD ratio:	27.998° / 408.88 ft / 4.060 / 0.033	Magnetic Dip:	66.102°
Grid Coordinate System:	NAD27 Colorado State Planes, Northern Zone, US Feet	Declination Date:	October 07, 2009
Location Lat/Long:	N 39 55 6.431, W 108 19 31.336	Magnetic Declination Model:	BGGM 2008
Location Grid N/E Y/X:	N 225762.000 ftUS, E 1207629.000 ftUS	North Reference:	Grid North
Grid Convergence Angle:	-1.82556674°	Total Corr Mag North -> Grid North:	+12.597°
Grid Scale Factor:	0.99997357	Local Coordinates Referenced To:	Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Sub-Sea TVD (ft)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	DLS (deg/100 ft)	Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Tie-In / Surface	0.00	0.00	189.72	-6500.00	0.00	0.00	0.00	0.00	0.00	225762.00	1207629.00	N 39 55 6.431	W 108 19 31.336
KOP Build 2° DLS	300.00	0.00	189.72	-6200.00	300.00	0.00	0.00	0.00	0.00	225762.00	1207629.00	N 39 55 6.431	W 108 19 31.336
	500.00	4.00	189.72	-6000.16	499.84	6.98	-6.88	-1.18	2.00	225755.12	1207627.82	N 39 55 6.363	W 108 19 31.348
Begin Tanget 14°	999.94	14.00	189.72	-5507.00	993.00	85.08	-83.86	-14.36	2.00	225678.14	1207614.64	N 39 55 5.598	W 108 19 31.486
	1000.00	14.00	189.72	-5506.94	993.06	85.10	-83.88	-14.36	0.00	225678.13	1207614.64	N 39 55 5.598	W 108 19 31.486
A-groove	1172.05	14.00	189.72	-5340.00	1160.00	126.72	-124.90	-21.38	0.00	225637.10	1207607.62	N 39 55 5.191	W 108 19 31.559
B-groove	1357.56	14.00	189.72	-5160.00	1340.00	171.59	-169.13	-28.96	0.00	225592.87	1207600.04	N 39 55 4.752	W 108 19 31.638
	1500.00	14.00	189.72	-5021.79	1478.21	206.05	-203.09	-34.77	0.00	225558.91	1207594.23	N 39 55 4.414	W 108 19 31.699
KOP Drop 2° DLS	1986.75	14.00	189.72	-4549.50	1950.50	323.79	-319.15	-54.64	0.00	225442.86	1207574.36	N 39 55 3.262	W 108 19 31.906
	2000.00	13.73	189.72	-4536.64	1963.36	326.97	-322.28	-55.18	2.00	225439.73	1207573.82	N 39 55 3.231	W 108 19 31.912
	2500.00	3.73	189.72	-4043.06	2456.94	402.79	-397.02	-67.98	2.00	225364.99	1207561.03	N 39 55 2.488	W 108 19 32.045
Vertical Point	2686.69	0.00	189.72	-3856.50	2643.50	408.88	-403.01	-69.00	2.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Wasatch A	2893.19	0.00	189.72	-3650.00	2850.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	3000.00	0.00	189.72	-3543.19	2956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	3500.00	0.00	189.72	-3043.19	3456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Wasatch C	3893.19	0.00	189.72	-2650.00	3850.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
10 3/4" Casing Point	3943.19	0.00	189.72	-2600.00	3900.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	4000.00	0.00	189.72	-2543.19	3956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	4500.00	0.00	189.72	-2043.19	4456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	5000.00	0.00	189.72	-1543.19	4956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	5500.00	0.00	189.72	-1043.19	5456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Wasatch G	5518.19	0.00	189.72	-1025.00	5475.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	6000.00	0.00	189.72	-543.19	5956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	6500.00	0.00	189.72	-43.19	6456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	7000.00	0.00	189.72	456.81	6956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Ohio Creek (WF900)	7293.19	0.00	189.72	750.00	7250.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	7500.00	0.00	189.72	956.81	7456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
WF 700	7993.19	0.00	189.72	1450.00	7950.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	8000.00	0.00	189.72	1456.81	7956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
WF 500	8353.19	0.00	189.72	1810.00	8310.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	8500.00	0.00	189.72	1956.81	8456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
7" Casing Point	8503.19	0.00	189.72	1960.00	8460.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
WF 400	8923.19	0.00	189.72	2380.00	8880.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	9000.00	0.00	189.72	2456.81	8956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	9500.00	0.00	189.72	2956.81	9456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	10000.00	0.00	189.72	3456.81	9956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	10500.00	0.00	189.72	3956.81	10456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
WF 200	10723.19	0.00	189.72	4180.00	10680.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	11000.00	0.00	189.72	4456.81	10956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Cameo	11013.19	0.00	189.72	4470.00	10970.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	11263.19	0.00	189.72	4720.00	11220.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Rollins	11443.19	0.00	189.72	4900.00	11400.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Cozzette Coastal	11500.00	0.00	189.72	4956.81	11456.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
	11743.19	0.00	189.72	5200.00	11700.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056
Corcorran Coastal	12000.00	0.00	189.72	5456.81	11956.81	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429	W 108 19 32.056

Corcorran Marine	12293.19	0.00	189.72	5750.00	12250.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429 W 108 19 32.056
PBHL / TD	12493.19	0.00	189.72	5950.00	12450.00	408.88	-403.01	-69.00	0.00	225359.00	1207560.00	N 39 55 2.429 W 108 19 32.056

**Survey Type:** Non-Def Proposal

**Survey Error Model:** SLB ISCWSA version 24 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

MD From ( ft )	MD To ( ft )	EOU Freq	Survey Tool Type
0.00	300.00	1/100.00	SLB_NSG+SSHOT
300.00	3943.19	1/100.00	SLB_MWD-STD
3943.19	12493.19	1/100.00	SLB_INC-ONLY

Borehole -> Survey
Original Hole (Est RKB) -> FRU 197-31B7 R1 ivs 7-Oct-09
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