

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 COMO 34N-14HZ (1663'FNL & 1204'FWL, SEC.11)
Area	COLORADO	Well	COMO 34N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COMO 34N-14HZ PWB
Facility	SEC.11-T1N-R68W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999962	Report Generated	19/Jun/2014 at 08:02
Convergence at slot	n/a	Database/Source file	WellArchitectDB/COMO_34N-14HZ_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1148.93	416.25	3146746.29	1268226.25	40°04'06.528"N	104°58'32.390"W
Facility Reference Pt			3146323.29	1269372.66	40°04'17.882"N	104°58'37.744"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PERMIT (17'KB) (RKB) to Facility Vertical Datum	5047.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	5047.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#21 COMO 34N-14HZ (1663'FNL & 1204'FWL, SEC.11))	5047.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.16°

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WELLPATH DATA (175 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	250.150	0.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
17.00	0.000	250.150	17.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	TIE ON
117.00†	0.000	250.150	117.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
217.00†	0.000	250.150	217.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
317.00†	0.000	250.150	317.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
417.00†	0.000	250.150	417.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
517.00†	0.000	250.150	517.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
617.00†	0.000	250.150	617.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
717.00†	0.000	250.150	717.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
817.00†	0.000	250.150	817.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
917.00†	0.000	250.150	917.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
967.00†	0.000	250.150	967.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	BASE FOX HILLS
1017.00†	0.000	250.150	1017.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
1117.00†	0.000	250.150	1117.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
1118.00†	0.000	250.150	1118.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	SURFACE CASING SETTING DEPTH
1217.00†	0.000	250.150	1217.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	
1218.00	0.000	250.150	1218.00	0.00	0.00	0.00	40°04'06.528"N	104°58'32.390"W	0.00	BEGIN NUDGE
1317.00†	1.980	250.150	1316.98	0.59	-0.58	-1.61	40°04'06.522"N	104°58'32.411"W	2.00	
1417.00†	3.980	250.150	1416.84	2.36	-2.35	-6.50	40°04'06.505"N	104°58'32.474"W	2.00	
1517.00†	5.980	250.150	1516.46	5.33	-5.29	-14.66	40°04'06.476"N	104°58'32.579"W	2.00	
1617.00†	7.980	250.150	1615.71	9.49	-9.42	-26.09	40°04'06.435"N	104°58'32.726"W	2.00	
1717.00†	9.980	250.150	1714.48	14.83	-14.72	-40.77	40°04'06.383"N	104°58'32.914"W	2.00	
1817.00†	11.980	250.150	1812.64	21.35	-21.19	-58.69	40°04'06.319"N	104°58'33.145"W	2.00	
1917.00†	13.980	250.150	1910.08	29.04	-28.81	-79.81	40°04'06.243"N	104°58'33.417"W	2.00	
2017.00†	15.980	250.150	2006.68	37.88	-37.59	-104.12	40°04'06.157"N	104°58'33.729"W	2.00	
2117.00†	17.980	250.150	2102.32	47.88	-47.51	-131.59	40°04'06.059"N	104°58'34.083"W	2.00	
2118.00	18.000	250.150	2103.27	47.98	-47.61	-131.88	40°04'06.057"N	104°58'34.086"W	2.00	END NUDGE
2217.00†	18.000	250.150	2197.42	58.45	-58.00	-160.66	40°04'05.955"N	104°58'34.456"W	0.00	
2317.00†	18.000	250.150	2292.53	69.02	-68.49	-189.72	40°04'05.851"N	104°58'34.830"W	0.00	
2417.00†	18.000	250.150	2387.63	79.60	-78.98	-218.79	40°04'05.747"N	104°58'35.204"W	0.00	
2517.00†	18.000	250.150	2482.74	90.17	-89.48	-247.85	40°04'05.644"N	104°58'35.578"W	0.00	
2617.00†	18.000	250.150	2577.85	100.75	-99.97	-276.92	40°04'05.540"N	104°58'35.952"W	0.00	
2717.00†	18.000	250.150	2672.95	111.32	-110.46	-305.99	40°04'05.436"N	104°58'36.326"W	0.00	
2817.00†	18.000	250.150	2768.06	121.90	-120.96	-335.05	40°04'05.333"N	104°58'36.700"W	0.00	
2917.00†	18.000	250.150	2863.16	132.47	-131.45	-364.12	40°04'05.229"N	104°58'37.073"W	0.00	
3017.00†	18.000	250.150	2958.27	143.05	-141.94	-393.18	40°04'05.125"N	104°58'37.447"W	0.00	
3117.00†	18.000	250.150	3053.37	153.62	-152.44	-422.25	40°04'05.022"N	104°58'37.821"W	0.00	
3217.00†	18.000	250.150	3148.48	164.20	-162.93	-451.31	40°04'04.918"N	104°58'38.195"W	0.00	
3317.00†	18.000	250.150	3243.59	174.77	-173.42	-480.38	40°04'04.814"N	104°58'38.569"W	0.00	
3417.00†	18.000	250.150	3338.69	185.34	-183.91	-509.45	40°04'04.710"N	104°58'38.943"W	0.00	
3517.00†	18.000	250.150	3433.80	195.92	-194.41	-538.51	40°04'04.607"N	104°58'39.317"W	0.00	
3617.00†	18.000	250.150	3528.90	206.49	-204.90	-567.58	40°04'04.503"N	104°58'39.690"W	0.00	
3717.00†	18.000	250.150	3624.01	217.07	-215.39	-596.64	40°04'04.399"N	104°58'40.064"W	0.00	
3817.00†	18.000	250.150	3719.11	227.64	-225.89	-625.71	40°04'04.296"N	104°58'40.438"W	0.00	
3917.00†	18.000	250.150	3814.22	238.22	-236.38	-654.77	40°04'04.192"N	104°58'40.812"W	0.00	

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4017.00†	18.000	250.150	3909.32	248.79	-246.87	-683.84	40°04'04.088"N	104°58'41.186"W	0.00	
4117.00†	18.000	250.150	4004.43	259.37	-257.36	-712.90	40°04'03.985"N	104°58'41.560"W	0.00	
4217.00†	18.000	250.150	4099.54	269.94	-267.86	-741.97	40°04'03.881"N	104°58'41.933"W	0.00	
4317.00†	18.000	250.150	4194.64	280.52	-278.35	-771.04	40°04'03.777"N	104°58'42.307"W	0.00	
4354.18†	18.000	250.150	4230.00	284.45	-282.25	-781.84	40°04'03.739"N	104°58'42.446"W	0.00	PARKMAN
4417.00†	18.000	250.150	4289.75	291.09	-288.84	-800.10	40°04'03.673"N	104°58'42.681"W	0.00	
4517.00†	18.000	250.150	4384.85	301.67	-299.34	-829.17	40°04'03.570"N	104°58'43.055"W	0.00	
4617.00†	18.000	250.150	4479.96	312.24	-309.83	-858.23	40°04'03.466"N	104°58'43.429"W	0.00	
4653.84	18.000	250.150	4515.00	316.14	-313.70	-868.94	40°04'03.428"N	104°58'43.567"W	0.00	BEGIN DROP
4717.00†	16.737	250.150	4575.27	322.59	-320.10	-886.67	40°04'03.365"N	104°58'43.795"W	2.00	
4779.17†	15.494	250.150	4635.00	328.49	-325.96	-902.91	40°04'03.307"N	104°58'44.003"W	2.00	SUSSEX
4817.00†	14.737	250.150	4671.52	331.87	-329.31	-912.18	40°04'03.274"N	104°58'44.123"W	2.00	
4917.00†	12.737	250.150	4768.66	339.99	-337.37	-934.52	40°04'03.194"N	104°58'44.410"W	2.00	
5017.00†	10.737	250.150	4866.56	346.95	-344.28	-953.65	40°04'03.126"N	104°58'44.656"W	2.00	
5117.00†	8.737	250.150	4965.11	352.74	-350.02	-969.56	40°04'03.069"N	104°58'44.861"W	2.00	
5217.00†	6.737	250.150	5064.20	357.35	-354.59	-982.22	40°04'03.024"N	104°58'45.024"W	2.00	
5317.00†	4.737	250.150	5163.69	360.77	-357.98	-991.62	40°04'02.990"N	104°58'45.145"W	2.00	
5417.00†	2.737	250.150	5263.48	363.00	-360.20	-997.75	40°04'02.968"N	104°58'45.223"W	2.00	
5517.00†	0.737	250.150	5363.42	364.04	-361.23	-1000.60	40°04'02.958"N	104°58'45.260"W	2.00	
5553.84	0.000	180.161	5400.27	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	2.00	END DROP
5617.00†	0.000	180.161	5463.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
5717.00†	0.000	180.161	5563.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
5817.00†	0.000	180.161	5663.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
5917.00†	0.000	180.161	5763.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6017.00†	0.000	180.161	5863.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6117.00†	0.000	180.161	5963.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6217.00†	0.000	180.161	6063.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6317.00†	0.000	180.161	6163.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6417.00†	0.000	180.161	6263.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6517.00†	0.000	180.161	6363.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6617.00†	0.000	180.161	6463.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6717.00†	0.000	180.161	6563.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6817.00†	0.000	180.161	6663.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
6917.00†	0.000	180.161	6763.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
7017.00†	0.000	180.161	6863.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
7117.00†	0.000	180.161	6963.42	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	
7117.00	0.000	180.161	6963.43	364.12	-361.31	-1000.82	40°04'02.957"N	104°58'45.263"W	0.00	KOP, BUILD @ 9°/100
7217.00†	9.000	180.161	7063.01	371.95	-369.14	-1000.85	40°04'02.880"N	104°58'45.263"W	9.00	
7317.00†	18.000	180.161	7160.15	395.27	-392.46	-1000.91	40°04'02.649"N	104°58'45.264"W	9.00	
7417.00†	27.000	180.161	7252.44	433.50	-430.69	-1001.02	40°04'02.272"N	104°58'45.265"W	9.00	
7517.00†	36.000	180.161	7337.62	485.70	-482.89	-1001.17	40°04'01.756"N	104°58'45.267"W	9.00	
7617.00†	45.000	180.161	7413.58	550.58	-547.76	-1001.35	40°04'01.115"N	104°58'45.270"W	9.00	
7630.46†	46.211	180.161	7423.00	560.19	-557.38	-1001.38	40°04'01.020"N	104°58'45.270"W	9.00	SHARON SPRINGS
7696.26†	52.133	180.161	7466.00	609.96	-607.15	-1001.51	40°04'00.528"N	104°58'45.272"W	9.00	NIOBRARA A
7717.00†	54.000	180.161	7478.46	626.54	-623.73	-1001.56	40°04'00.364"N	104°58'45.272"W	9.00	

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7817.00†	63.000	180.161	7530.66	711.71	-708.90	-1001.80	40°03'59.522"N	104°58'45.275"W	9.00	
7917.00†	72.000	180.161	7568.89	804.01	-801.19	-1002.06	40°03'58.610"N	104°58'45.279"W	9.00	
7992.95†	78.835	180.161	7588.00	877.47	-874.65	-1002.27	40°03'57.884"N	104°58'45.281"W	9.00	NIOBRARA B
8017.00†	81.000	180.161	7592.21	901.14	-898.33	-1002.33	40°03'57.650"N	104°58'45.282"W	9.00	
8117.00†	90.000	180.161	7600.05	1000.73	-997.92	-1002.61	40°03'56.666"N	104°58'45.286"W	9.00	
8124.68	90.691	180.161	7600.00	1008.41	-1005.60	-1002.63	40°03'56.590"N	104°58'45.286"W	9.00	LANDING POINT
8217.00†	90.691	180.161	7598.89	1100.72	-1097.91	-1002.89	40°03'55.678"N	104°58'45.289"W	0.00	
8317.00†	90.691	180.161	7597.68	1200.72	-1197.90	-1003.17	40°03'54.690"N	104°58'45.293"W	0.00	
8417.00†	90.691	180.161	7596.48	1300.71	-1297.90	-1003.46	40°03'53.702"N	104°58'45.296"W	0.00	
8517.00†	90.691	180.161	7595.27	1400.70	-1397.89	-1003.74	40°03'52.714"N	104°58'45.300"W	0.00	
8617.00†	90.691	180.161	7594.07	1500.70	-1497.88	-1004.02	40°03'51.725"N	104°58'45.303"W	0.00	
8717.00†	90.691	180.161	7592.86	1600.69	-1597.87	-1004.30	40°03'50.737"N	104°58'45.307"W	0.00	
8817.00†	90.691	180.161	7591.65	1700.68	-1697.87	-1004.58	40°03'49.749"N	104°58'45.311"W	0.00	
8917.00†	90.691	180.161	7590.45	1800.67	-1797.86	-1004.86	40°03'48.761"N	104°58'45.314"W	0.00	
9017.00†	90.691	180.161	7589.24	1900.67	-1897.85	-1005.14	40°03'47.773"N	104°58'45.318"W	0.00	
9117.00†	90.691	180.161	7588.04	2000.66	-1997.84	-1005.42	40°03'46.785"N	104°58'45.321"W	0.00	
9217.00†	90.691	180.161	7586.83	2100.65	-2097.83	-1005.70	40°03'45.797"N	104°58'45.325"W	0.00	
9317.00†	90.691	180.161	7585.62	2200.64	-2197.83	-1005.98	40°03'44.808"N	104°58'45.328"W	0.00	
9417.00†	90.691	180.161	7584.42	2300.64	-2297.82	-1006.27	40°03'43.820"N	104°58'45.332"W	0.00	
9517.00†	90.691	180.161	7583.21	2400.63	-2397.81	-1006.55	40°03'42.832"N	104°58'45.335"W	0.00	
9617.00†	90.691	180.161	7582.01	2500.62	-2497.80	-1006.83	40°03'41.844"N	104°58'45.339"W	0.00	
9717.00†	90.691	180.161	7580.80	2600.62	-2597.80	-1007.11	40°03'40.856"N	104°58'45.343"W	0.00	
9817.00†	90.691	180.161	7579.60	2700.61	-2697.79	-1007.39	40°03'39.868"N	104°58'45.346"W	0.00	
9917.00†	90.691	180.161	7578.39	2800.60	-2797.78	-1007.67	40°03'38.880"N	104°58'45.350"W	0.00	
10017.00†	90.691	180.161	7577.18	2900.59	-2897.77	-1007.95	40°03'37.891"N	104°58'45.353"W	0.00	
10117.00†	90.691	180.161	7575.98	3000.59	-2997.77	-1008.23	40°03'36.903"N	104°58'45.357"W	0.00	
10217.00†	90.691	180.161	7574.77	3100.58	-3097.76	-1008.51	40°03'35.915"N	104°58'45.360"W	0.00	
10317.00†	90.691	180.161	7573.57	3200.57	-3197.75	-1008.79	40°03'34.927"N	104°58'45.364"W	0.00	
10417.00†	90.691	180.161	7572.36	3300.56	-3297.74	-1009.08	40°03'33.939"N	104°58'45.368"W	0.00	
10517.00†	90.691	180.161	7571.15	3400.56	-3397.73	-1009.36	40°03'32.951"N	104°58'45.371"W	0.00	
10617.00†	90.691	180.161	7569.95	3500.55	-3497.73	-1009.64	40°03'31.963"N	104°58'45.375"W	0.00	
10717.00†	90.691	180.161	7568.74	3600.54	-3597.72	-1009.92	40°03'30.974"N	104°58'45.378"W	0.00	
10817.00†	90.691	180.161	7567.54	3700.54	-3697.71	-1010.20	40°03'29.986"N	104°58'45.382"W	0.00	
10917.00†	90.691	180.161	7566.33	3800.53	-3797.70	-1010.48	40°03'28.998"N	104°58'45.385"W	0.00	
11017.00†	90.691	180.161	7565.13	3900.52	-3897.70	-1010.76	40°03'28.010"N	104°58'45.389"W	0.00	
11117.00†	90.691	180.161	7563.92	4000.51	-3997.69	-1011.04	40°03'27.022"N	104°58'45.392"W	0.00	
11217.00†	90.691	180.161	7562.71	4100.51	-4097.68	-1011.32	40°03'26.034"N	104°58'45.396"W	0.00	
11317.00†	90.691	180.161	7561.51	4200.50	-4197.67	-1011.60	40°03'25.045"N	104°58'45.400"W	0.00	
11417.00†	90.691	180.161	7560.30	4300.49	-4297.67	-1011.89	40°03'24.057"N	104°58'45.403"W	0.00	
11517.00†	90.691	180.161	7559.10	4400.48	-4397.66	-1012.17	40°03'23.069"N	104°58'45.407"W	0.00	
11617.00†	90.691	180.161	7557.89	4500.48	-4497.65	-1012.45	40°03'22.081"N	104°58'45.410"W	0.00	
11717.00†	90.691	180.161	7556.68	4600.47	-4597.64	-1012.73	40°03'21.093"N	104°58'45.414"W	0.00	
11817.00†	90.691	180.161	7555.48	4700.46	-4697.64	-1013.01	40°03'20.105"N	104°58'45.417"W	0.00	
11917.00†	90.691	180.161	7554.27	4800.46	-4797.63	-1013.29	40°03'19.117"N	104°58'45.421"W	0.00	
12017.00†	90.691	180.161	7553.07	4900.45	-4897.62	-1013.57	40°03'18.128"N	104°58'45.424"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 COMO 34N-14HZ (1663'FNL & 1204'FWL, SEC.11)
Area	COLORADO	Well	COMO 34N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COMO 34N-14HZ PWB
Facility	SEC.11-T1N-R68W		

WELLPATH DATA (175 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.691	180.161	7551.86	5000.44	-4997.61	-1013.85	40°03'17.140"N	104°58'45.428"W	0.00	
12217.00†	90.691	180.161	7550.66	5100.43	-5097.60	-1014.13	40°03'16.152"N	104°58'45.432"W	0.00	
12317.00†	90.691	180.161	7549.45	5200.43	-5197.60	-1014.41	40°03'15.164"N	104°58'45.435"W	0.00	
12417.00†	90.691	180.161	7548.24	5300.42	-5297.59	-1014.69	40°03'14.176"N	104°58'45.439"W	0.00	
12517.00†	90.691	180.161	7547.04	5400.41	-5397.58	-1014.98	40°03'13.188"N	104°58'45.442"W	0.00	
12617.00†	90.691	180.161	7545.83	5500.41	-5497.57	-1015.26	40°03'12.200"N	104°58'45.446"W	0.00	
12717.00†	90.691	180.161	7544.63	5600.40	-5597.57	-1015.54	40°03'11.211"N	104°58'45.449"W	0.00	
12817.00†	90.691	180.161	7543.42	5700.39	-5697.56	-1015.82	40°03'10.223"N	104°58'45.453"W	0.00	
12917.00†	90.691	180.161	7542.21	5800.38	-5797.55	-1016.10	40°03'09.235"N	104°58'45.457"W	0.00	
13017.00†	90.691	180.161	7541.01	5900.38	-5897.54	-1016.38	40°03'08.247"N	104°58'45.460"W	0.00	
13117.00†	90.691	180.161	7539.80	6000.37	-5997.54	-1016.66	40°03'07.259"N	104°58'45.464"W	0.00	
13217.00†	90.691	180.161	7538.60	6100.36	-6097.53	-1016.94	40°03'06.271"N	104°58'45.467"W	0.00	
13317.00†	90.691	180.161	7537.39	6200.35	-6197.52	-1017.22	40°03'05.283"N	104°58'45.471"W	0.00	
13417.00†	90.691	180.161	7536.19	6300.35	-6297.51	-1017.50	40°03'04.294"N	104°58'45.474"W	0.00	
13517.00†	90.691	180.161	7534.98	6400.34	-6397.50	-1017.79	40°03'03.306"N	104°58'45.478"W	0.00	
13617.00†	90.691	180.161	7533.77	6500.33	-6497.50	-1018.07	40°03'02.318"N	104°58'45.481"W	0.00	
13717.00†	90.691	180.161	7532.57	6600.33	-6597.49	-1018.35	40°03'01.330"N	104°58'45.485"W	0.00	
13817.00†	90.691	180.161	7531.36	6700.32	-6697.48	-1018.63	40°03'00.342"N	104°58'45.489"W	0.00	
13917.00†	90.691	180.161	7530.16	6800.31	-6797.47	-1018.91	40°02'59.354"N	104°58'45.492"W	0.00	
14017.00†	90.691	180.161	7528.95	6900.30	-6897.47	-1019.19	40°02'58.366"N	104°58'45.496"W	0.00	
14117.00†	90.691	180.161	7527.74	7000.30	-6997.46	-1019.47	40°02'57.377"N	104°58'45.499"W	0.00	
14217.00†	90.691	180.161	7526.54	7100.29	-7097.45	-1019.75	40°02'56.389"N	104°58'45.503"W	0.00	
14317.00†	90.691	180.161	7525.33	7200.28	-7197.44	-1020.03	40°02'55.401"N	104°58'45.506"W	0.00	
14417.00†	90.691	180.161	7524.13	7300.27	-7297.44	-1020.31	40°02'54.413"N	104°58'45.510"W	0.00	
14517.00†	90.691	180.161	7522.92	7400.27	-7397.43	-1020.60	40°02'53.425"N	104°58'45.513"W	0.00	
14617.00†	90.691	180.161	7521.72	7500.26	-7497.42	-1020.88	40°02'52.437"N	104°58'45.517"W	0.00	
14717.00†	90.691	180.161	7520.51	7600.25	-7597.41	-1021.16	40°02'51.449"N	104°58'45.521"W	0.00	
14817.00†	90.691	180.161	7519.30	7700.25	-7697.41	-1021.44	40°02'50.460"N	104°58'45.524"W	0.00	
14917.00†	90.691	180.161	7518.10	7800.24	-7797.40	-1021.72	40°02'49.472"N	104°58'45.528"W	0.00	
15017.00†	90.691	180.161	7516.89	7900.23	-7897.39	-1022.00	40°02'48.484"N	104°58'45.531"W	0.00	
15117.00†	90.691	180.161	7515.69	8000.22	-7997.38	-1022.28	40°02'47.496"N	104°58'45.535"W	0.00	
15217.00†	90.691	180.161	7514.48	8100.22	-8097.37	-1022.56	40°02'46.508"N	104°58'45.538"W	0.00	
15317.00†	90.691	180.161	7513.28	8200.21	-8197.37	-1022.84	40°02'45.520"N	104°58'45.542"W	0.00	
15417.00†	90.691	180.161	7512.07	8300.20	-8297.36	-1023.12	40°02'44.531"N	104°58'45.546"W	0.00	
15517.00†	90.691	180.161	7510.86	8400.19	-8397.35	-1023.41	40°02'43.543"N	104°58'45.549"W	0.00	
15617.00†	90.691	180.161	7509.66	8500.19	-8497.34	-1023.69	40°02'42.555"N	104°58'45.553"W	0.00	
15717.00†	90.691	180.161	7508.45	8600.18	-8597.34	-1023.97	40°02'41.567"N	104°58'45.556"W	0.00	
15817.00†	90.691	180.161	7507.25	8700.17	-8697.33	-1024.25	40°02'40.579"N	104°58'45.560"W	0.00	
15917.00†	90.691	180.161	7506.04	8800.17	-8797.32	-1024.53	40°02'39.591"N	104°58'45.563"W	0.00	
16003.26	90.691	180.161	7505.00 ¹	8886.42	-8883.57	-1024.77	40°02'38.738"N	104°58'45.566"W	0.00	TOTAL DEPTH

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 COMO 34N-14HZ (1663'FNL & 1204'FWL, SEC.11)
Area	COLORADO	Well	COMO 34N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COMO 34N-14HZ PWB
Facility	SEC.11-T1N-R68W		

HOLE & CASING SECTIONS - Ref Wellbore: COMO 34N-14HZ PWB Ref Wellpath: COMO 34N-14HZ (PERMIT REV-4) PWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	17.00	1118.00	1101.00	17.00	1118.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1118.00	1101.00	17.00	1118.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1118.00	8124.68	7006.68	1118.00	7600.00	0.00	0.00	-1005.60	-1002.63
7in Casing Intermediate	17.00	8124.68	8107.68	17.00	7600.00	0.00	0.00	-1005.60	-1002.63
6.125in Open Hole	8124.68	16003.26	7878.58	7600.00	7505.00	-1005.60	-1002.63	-8883.57	-1024.77
4.5in Casing Production	17.00	16003.26	15986.26	17.00	7505.00	0.00	0.00	-8883.57	-1024.77

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T1N-R68W SECTION LINES		-114.00	-8543.00	1015.70	3147812.44	1259689.75	40°02'42.104"N	104°58'19.330"W	polygon
SEC.14-T1N-R68W SECTION LINES		-114.00	-8543.00	1015.70	3147812.44	1259689.75	40°02'42.104"N	104°58'19.330"W	polygon
1) COMO 34N-14HZ BHL ON PLAT REV-1 (50'FSL & 200'FWL, SEC.14)	16003.26	7505.00	-8883.57	-1024.77	3145774.10	1259337.13	40°02'38.738"N	104°58'45.566"W	point
COMO 34N-14HZ BHL REV-2 (50'FSL & 225'FWL, SEC.14)		7505.00	-8883.61	-999.77	3145799.10	1259337.24	40°02'38.738"N	104°58'45.245"W	point
COMO 34N-14HZ LANDBOX		7505.00	0.00	0.00	3146746.29	1268226.25	40°04'06.528"N	104°58'32.390"W	polygon

SURVEY PROGRAM - Ref Wellbore: COMO 34N-14HZ PWB Ref Wellpath: COMO 34N-14HZ (PERMIT REV-4) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	8124.68	NaviTrak (MAGCORR,IFR)		COMO 34N-14HZ PWB
8124.68	16003.26	NaviTrak (MAGCORR,IFR)		COMO 34N-14HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 COMO 34N-14HZ (1663'FNL & 1204'FWL, SEC.11)
Area	COLORADO	Well	COMO 34N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COMO 34N-14HZ PWB
Facility	SEC.11-T1N-R68W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
967.00	0.000	250.150	967.00	BASE FOX HILLS
1118.00	0.000	250.150	1118.00	SURFACE CASING SETTING DEPTH
4354.18	18.000	250.150	4230.00	PARKMAN
4779.17	15.494	250.150	4635.00	SUSSEX
7630.46	46.211	180.161	7423.00	SHARON SPRINGS
7696.26	52.133	180.161	7466.00	NIOBRARA A
7992.95	78.835	180.161	7588.00	NIOBRARA B

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	250.150	17.00	TIE ON
1218.00	0.000	250.150	1218.00	BEGIN NUDGE
2118.00	18.000	250.150	2103.27	END NUDGE
4653.84	18.000	250.150	4515.00	BEGIN DROP
5553.84	0.000	180.161	5400.27	END DROP
7117.00	0.000	180.161	6963.43	KOP, BUILD @ 9°/100
8124.68	90.691	180.161	7600.00	LANDING POINT
16003.26	90.691	180.161	7505.00	TOTAL DEPTH