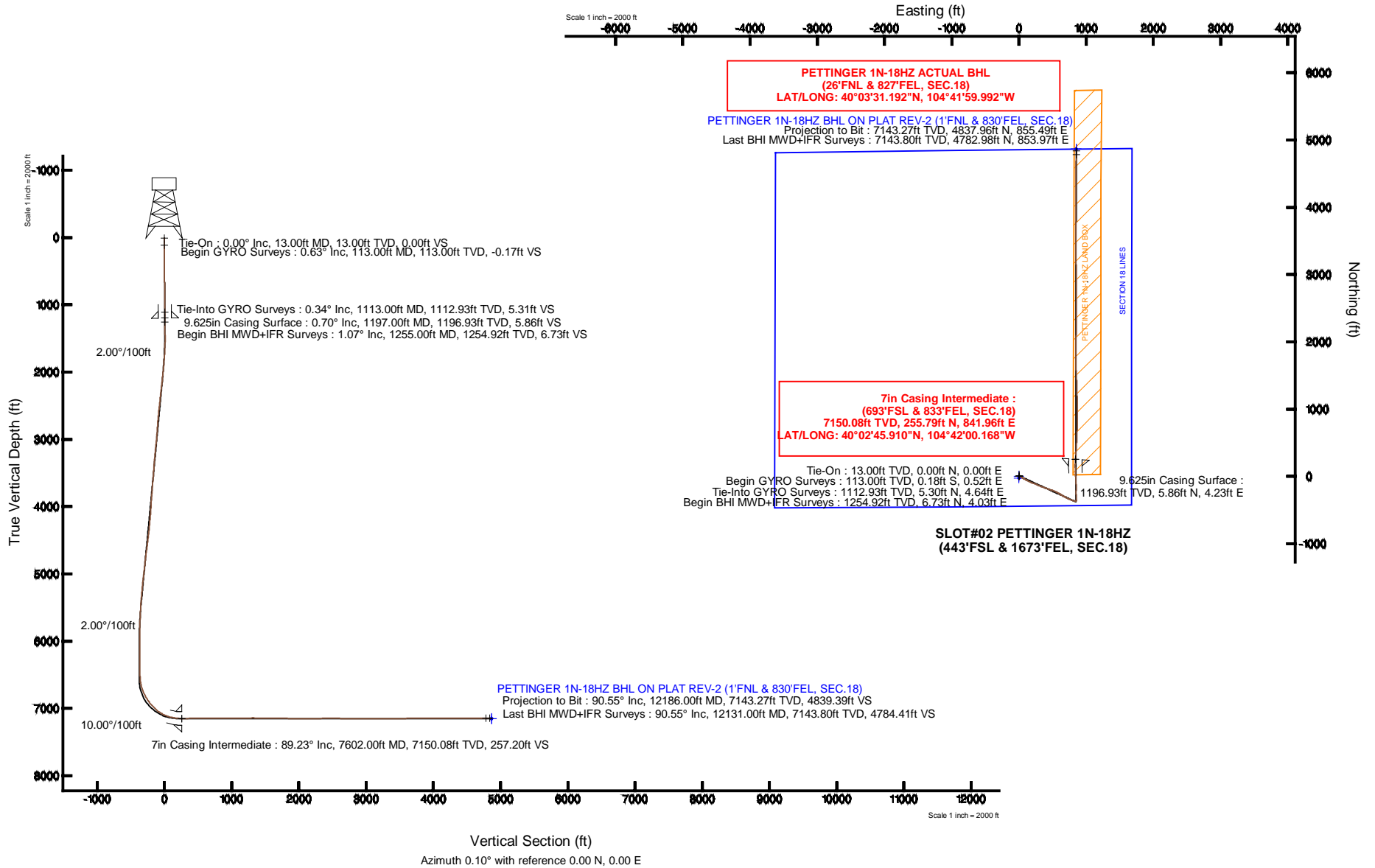


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
 Field: WELD COUNTY (KERR MCGEE) Well: PETTINGER 1N-18HZ
 Facility: SEC.18-T1N-R65W Wellbore: PETTINGER 1N-18HZ PWB

Plot reference wellpath is PETTINGER 1N-18HZ (REV-B.0) PWP

True vertical depths are referenced to ENSIGN 145 (13KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to ENSIGN 145 (13KB) (RKB)	North Reference: True north
ENSGN 145 (13KB) (RKB) to Mean Sea Level: 5010 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 06/Mar/2014



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precaín
Scale	0.999963	Report Generated	06/Mar/2014 at 08:35
Convergence at slot	n/a	Database/Source file	WellArchitectDB/PETTINGER_1N-18HZ_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	26.11	-0.00	3223115.73	1260381.64	40°02'43.382"N	104°42'10.994"W
Facility Reference Pt			3223115.97	1260355.54	40°02'43.124"N	104°42'10.994"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	ENSIGN 145 (13'KB) (RKB) to Facility Vertical Datum	5010.00ft
Horizontal Reference Pt	Slot	ENSIGN 145 (13'KB) (RKB) to Mean Sea Level	5010.00ft
Vertical Reference Pt	ENSIGN 145 (13'KB) (RKB)	ENSIGN 145 (13'KB) (RKB) to Mud Line at Slot (SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18))	5010.00ft
MD Reference Pt	ENSIGN 145 (13'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.10°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (140 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	108.610	0.00	0.00	0.00	0.00	40°02'43.382"N	104°42'10.994"W	0.00	
13.00	0.000	108.610	13.00	0.00	0.00	0.00	40°02'43.382"N	104°42'10.994"W	0.00	Tie-On
113.00	0.630	108.610	113.00	-0.17	-0.18	0.52	40°02'43.380"N	104°42'10.987"W	0.63	Begin GYRO Surveys
213.00	1.070	100.320	212.99	-0.51	-0.52	1.96	40°02'43.377"N	104°42'10.969"W	0.46	
313.00	0.880	78.660	312.97	-0.53	-0.53	3.63	40°02'43.377"N	104°42'10.947"W	0.41	
413.00	0.640	54.510	412.96	-0.05	-0.06	4.84	40°02'43.381"N	104°42'10.932"W	0.40	
513.00	0.600	26.650	512.96	0.74	0.73	5.53	40°02'43.389"N	104°42'10.923"W	0.30	
613.00	0.550	23.540	612.95	1.65	1.64	5.96	40°02'43.398"N	104°42'10.917"W	0.06	
713.00	0.450	7.370	712.95	2.48	2.47	6.20	40°02'43.406"N	104°42'10.914"W	0.17	
813.00	0.510	4.450	812.95	3.31	3.30	6.28	40°02'43.415"N	104°42'10.913"W	0.06	
913.00	0.530	324.220	912.94	4.13	4.12	6.05	40°02'43.423"N	104°42'10.916"W	0.36	
1013.00	0.640	310.620	1012.94	4.87	4.86	5.35	40°02'43.430"N	104°42'10.925"W	0.18	
1113.00	0.340	285.480	1112.93	5.31	5.30	4.64	40°02'43.434"N	104°42'10.934"W	0.36	Tie-Into GYRO Surveys
1255.00	1.070	351.150	1254.92	6.73	6.73	4.03	40°02'43.448"N	104°42'10.942"W	0.69	Begin BHI MWD+IFR Surveys
1349.00	0.790	31.700	1348.91	8.15	8.15	4.24	40°02'43.462"N	104°42'10.940"W	0.74	
1442.00	1.790	78.000	1441.89	9.00	8.99	6.00	40°02'43.471"N	104°42'10.917"W	1.47	
1536.00	3.480	93.580	1535.79	9.14	9.12	10.28	40°02'43.472"N	104°42'10.862"W	1.94	
1629.00	4.020	113.510	1628.59	7.67	7.64	16.09	40°02'43.458"N	104°42'10.787"W	1.51	
1723.00	5.800	130.400	1722.25	3.29	3.25	22.73	40°02'43.414"N	104°42'10.702"W	2.42	
1817.00	7.400	131.500	1815.62	-3.79	-3.84	30.88	40°02'43.344"N	104°42'10.597"W	1.71	
1910.00	8.100	126.400	1907.77	-11.63	-11.70	40.64	40°02'43.266"N	104°42'10.471"W	1.05	
2004.00	9.300	124.800	2000.69	-19.87	-19.96	52.20	40°02'43.185"N	104°42'10.323"W	1.30	
2097.00	10.900	121.700	2092.25	-28.76	-28.87	65.86	40°02'43.097"N	104°42'10.147"W	1.82	
2191.00	12.300	121.400	2184.32	-38.62	-38.76	81.97	40°02'42.999"N	104°42'09.940"W	1.49	
2284.00	14.000	119.300	2274.88	-49.26	-49.43	100.23	40°02'42.894"N	104°42'09.705"W	1.90	
2378.00	13.600	118.500	2366.17	-60.06	-60.26	119.86	40°02'42.786"N	104°42'09.453"W	0.47	
2471.00	12.900	117.000	2456.69	-69.96	-70.19	138.72	40°02'42.688"N	104°42'09.210"W	0.84	
2565.00	13.800	115.700	2548.15	-79.55	-79.82	158.17	40°02'42.593"N	104°42'08.960"W	1.01	
2658.00	13.300	114.470	2638.56	-88.76	-89.06	177.90	40°02'42.502"N	104°42'08.707"W	0.62	
2751.00	13.770	109.470	2728.98	-96.85	-97.18	198.07	40°02'42.422"N	104°42'08.447"W	1.36	
2844.00	12.290	108.080	2819.59	-103.58	-103.94	217.92	40°02'42.355"N	104°42'08.192"W	1.63	
2934.00	12.530	107.300	2907.48	-109.42	-109.82	236.35	40°02'42.297"N	104°42'07.955"W	0.33	
3025.00	12.860	114.040	2996.26	-116.45	-116.88	255.02	40°02'42.227"N	104°42'07.715"W	1.67	
3115.00	14.510	116.020	3083.71	-125.45	-125.91	274.30	40°02'42.138"N	104°42'07.467"W	1.91	
3205.00	13.460	115.040	3171.04	-134.79	-135.29	293.92	40°02'42.045"N	104°42'07.215"W	1.20	
3295.00	13.860	111.850	3258.49	-143.21	-143.73	313.42	40°02'41.962"N	104°42'06.964"W	0.95	
3385.00	12.760	109.670	3346.07	-150.53	-151.09	332.79	40°02'41.889"N	104°42'06.715"W	1.34	
3475.00	12.950	111.270	3433.82	-157.50	-158.09	351.54	40°02'41.820"N	104°42'06.474"W	0.45	
3565.00	13.070	108.300	3521.51	-164.33	-164.95	370.60	40°02'41.752"N	104°42'06.229"W	0.75	
3655.00	13.590	109.060	3609.09	-170.94	-171.60	390.26	40°02'41.686"N	104°42'05.976"W	0.61	
3745.00	14.580	109.340	3696.38	-178.11	-178.80	410.94	40°02'41.615"N	104°42'05.710"W	1.10	
3835.00	13.590	108.520	3783.67	-185.19	-185.91	431.66	40°02'41.545"N	104°42'05.444"W	1.12	
3925.00	11.970	108.000	3871.44	-191.40	-192.15	450.56	40°02'41.483"N	104°42'05.201"W	1.80	
4015.00	11.520	110.000	3959.55	-197.33	-198.11	467.88	40°02'41.424"N	104°42'04.978"W	0.67	
4105.00	12.560	107.110	4047.57	-203.25	-204.06	485.68	40°02'41.365"N	104°42'04.749"W	1.34	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (140 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4195.00	13.360	110.060	4135.28	-209.66	-210.51	504.80	40°02'41.302"N	104°42'04.503"W	1.15	
4285.00	13.010	110.770	4222.91	-216.79	-217.67	524.04	40°02'41.231"N	104°42'04.256"W	0.43	
4375.00	14.610	115.400	4310.31	-225.22	-226.13	543.77	40°02'41.147"N	104°42'04.002"W	2.16	
4465.00	13.550	114.840	4397.60	-234.48	-235.43	563.59	40°02'41.055"N	104°42'03.747"W	1.19	
4555.00	13.270	121.610	4485.15	-244.30	-245.27	581.95	40°02'40.958"N	104°42'03.511"W	1.77	
4645.00	14.260	122.380	4572.57	-255.62	-256.62	600.11	40°02'40.846"N	104°42'03.278"W	1.12	
4735.00	14.000	121.710	4659.85	-267.24	-268.28	618.74	40°02'40.731"N	104°42'03.038"W	0.34	
4825.00	12.840	120.630	4747.39	-278.03	-279.10	636.60	40°02'40.624"N	104°42'02.809"W	1.32	
4915.00	12.700	120.890	4835.16	-288.18	-289.27	653.70	40°02'40.523"N	104°42'02.589"W	0.17	
5005.00	13.270	117.950	4922.86	-298.07	-299.19	671.31	40°02'40.425"N	104°42'02.362"W	0.97	
5095.00	14.280	118.080	5010.27	-308.10	-309.26	690.23	40°02'40.326"N	104°42'02.119"W	1.12	
5185.00	13.710	118.270	5097.60	-318.35	-319.54	709.42	40°02'40.224"N	104°42'01.872"W	0.64	
5275.00	12.800	114.700	5185.20	-327.53	-328.75	727.87	40°02'40.133"N	104°42'01.635"W	1.36	
5365.00	12.370	113.190	5273.04	-335.47	-336.72	745.79	40°02'40.054"N	104°42'01.405"W	0.60	
5455.00	12.190	113.400	5360.98	-343.01	-344.29	763.37	40°02'39.980"N	104°42'01.179"W	0.21	
5545.00	11.360	111.460	5449.09	-349.99	-351.30	780.34	40°02'39.910"N	104°42'00.960"W	1.02	
5635.00	9.780	109.160	5537.56	-355.72	-357.05	795.81	40°02'39.853"N	104°42'00.762"W	1.82	
5725.00	9.050	109.130	5626.34	-360.53	-361.88	809.72	40°02'39.806"N	104°42'00.583"W	0.81	
5815.00	7.830	101.420	5715.37	-364.04	-365.42	822.41	40°02'39.771"N	104°42'00.419"W	1.85	
5905.00	6.830	91.840	5804.64	-365.40	-366.80	833.77	40°02'39.757"N	104°42'00.273"W	1.75	
5995.00	4.980	83.990	5894.16	-365.15	-366.57	843.01	40°02'39.759"N	104°42'00.155"W	2.24	
6085.00	2.540	81.860	5983.96	-364.45	-365.87	848.87	40°02'39.766"N	104°42'00.079"W	2.72	
6175.00	0.540	128.780	6073.92	-364.43	-365.86	851.17	40°02'39.766"N	104°42'00.050"W	2.45	
6265.00	0.600	86.320	6163.92	-364.66	-366.09	851.97	40°02'39.764"N	104°42'00.039"W	0.46	
6591.00	0.580	34.860	6489.90	-363.20	-364.63	854.62	40°02'39.779"N	104°42'00.005"W	0.16	
6670.00	3.500	351.600	6568.84	-360.48	-361.91	854.50	40°02'39.805"N	104°42'00.007"W	3.93	
6715.00	9.020	351.810	6613.56	-355.63	-357.06	853.79	40°02'39.853"N	104°42'00.016"W	12.27	
6760.00	14.640	355.190	6657.59	-346.47	-347.89	852.81	40°02'39.944"N	104°42'00.029"W	12.58	
6805.00	18.350	358.640	6700.73	-333.71	-335.14	852.17	40°02'40.070"N	104°42'00.037"W	8.52	
6850.00	22.160	358.460	6742.94	-318.14	-319.57	851.77	40°02'40.224"N	104°42'00.042"W	8.47	
6895.00	25.350	358.870	6784.12	-300.02	-301.45	851.35	40°02'40.403"N	104°42'00.047"W	7.10	
6940.00	29.240	358.800	6824.10	-279.40	-280.82	850.93	40°02'40.607"N	104°42'00.053"W	8.64	
6985.00	32.830	359.180	6862.65	-256.21	-257.63	850.53	40°02'40.836"N	104°42'00.058"W	7.99	
7030.00	36.470	0.630	6899.67	-230.63	-232.05	850.50	40°02'41.089"N	104°42'00.058"W	8.29	
7075.00	40.430	1.020	6934.90	-202.65	-204.08	850.91	40°02'41.365"N	104°42'00.053"W	8.82	
7120.00	42.010	0.740	6968.75	-173.00	-174.43	851.36	40°02'41.658"N	104°42'00.047"W	3.53	
7165.00	46.350	0.040	7001.01	-141.65	-143.08	851.57	40°02'41.968"N	104°42'00.044"W	9.71	
7210.00	51.230	356.970	7030.66	-107.83	-109.25	850.65	40°02'42.302"N	104°42'00.056"W	12.00	
7255.00	56.140	356.130	7057.30	-71.65	-73.07	848.46	40°02'42.660"N	104°42'00.084"W	11.01	
7300.00	60.790	355.850	7080.83	-33.40	-34.82	845.78	40°02'43.038"N	104°42'00.119"W	10.35	
7345.00	66.530	356.990	7100.79	6.82	5.41	843.27	40°02'43.435"N	104°42'00.151"W	12.96	
7390.00	72.850	357.060	7116.40	48.94	47.53	841.08	40°02'43.852"N	104°42'00.179"W	14.05	
7435.00	76.440	356.830	7128.31	92.26	90.86	838.77	40°02'44.280"N	104°42'00.209"W	7.99	
7480.00	79.010	357.840	7137.88	136.18	134.78	836.73	40°02'44.714"N	104°42'00.235"W	6.12	
7525.00	82.500	2.170	7145.11	180.58	179.18	836.74	40°02'45.153"N	104°42'00.235"W	12.26	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7555.00	85.990	4.080	7148.12	210.38	208.97	838.37	40°02'45.447"N	104°42'00.214"W	13.25	
7602.00†	89.234	4.689	7150.08	257.20	255.79	841.96	40°02'45.910"N	104°42'00.168"W	7.02	7" Casing Point
7626.00	90.890	5.000	7150.05	281.12	279.70	843.98	40°02'46.146"N	104°42'00.142"W	7.02	
7716.00	91.430	3.310	7148.23	370.87	369.45	850.50	40°02'47.033"N	104°42'00.058"W	1.97	
7806.00	91.370	3.480	7146.03	460.69	459.26	855.83	40°02'47.920"N	104°41'59.989"W	0.20	
7896.00	90.500	2.740	7144.56	550.56	549.11	860.71	40°02'48.808"N	104°41'59.927"W	1.27	
7986.00	90.460	1.500	7143.81	640.49	639.05	864.04	40°02'49.697"N	104°41'59.884"W	1.38	
8076.00	89.880	0.800	7143.54	730.48	729.03	865.85	40°02'50.586"N	104°41'59.860"W	1.01	
8167.00	90.190	0.240	7143.48	821.47	820.02	866.67	40°02'51.486"N	104°41'59.850"W	0.70	
8257.00	90.620	0.370	7142.85	911.47	910.02	867.15	40°02'52.375"N	104°41'59.844"W	0.50	
8347.00	89.850	359.960	7142.48	1001.47	1000.02	867.41	40°02'53.264"N	104°41'59.840"W	0.97	
8437.00	90.400	359.460	7142.28	1091.47	1090.02	866.96	40°02'54.154"N	104°41'59.846"W	0.83	
8527.00	89.910	358.390	7142.04	1181.45	1180.00	865.27	40°02'55.043"N	104°41'59.868"W	1.31	
8617.00	90.400	358.540	7141.79	1271.41	1269.97	862.86	40°02'55.932"N	104°41'59.899"W	0.57	
8707.00	89.540	358.210	7141.84	1361.37	1359.93	860.31	40°02'56.821"N	104°41'59.931"W	1.02	
8797.00	89.730	357.500	7142.42	1451.30	1449.86	856.94	40°02'57.710"N	104°41'59.975"W	0.82	
8887.00	89.970	356.780	7142.65	1541.18	1539.75	852.45	40°02'58.598"N	104°42'00.032"W	0.84	
8976.00	88.820	357.150	7143.59	1630.04	1628.62	847.73	40°02'59.476"N	104°42'00.093"W	1.36	
9067.00	88.420	359.490	7145.78	1720.96	1719.55	845.07	40°03'00.375"N	104°42'00.127"W	2.61	
9157.00	88.480	0.880	7148.22	1810.92	1809.51	845.36	40°03'01.264"N	104°42'00.123"W	1.55	
9247.00	88.410	0.940	7150.66	1900.88	1899.47	846.79	40°03'02.153"N	104°42'00.105"W	0.10	
9337.00	90.000	1.240	7151.91	1990.86	1989.44	848.50	40°03'03.042"N	104°42'00.083"W	1.80	
9427.00	90.370	1.340	7151.62	2080.84	2079.41	850.53	40°03'03.931"N	104°42'00.057"W	0.43	
9517.00	90.830	1.650	7150.68	2170.80	2169.38	852.87	40°03'04.820"N	104°42'00.027"W	0.62	
9607.00	90.580	1.050	7149.57	2260.78	2259.35	854.99	40°03'05.709"N	104°42'00.000"W	0.72	
9697.00	90.580	0.830	7148.66	2350.76	2349.33	856.47	40°03'06.598"N	104°41'59.980"W	0.24	
9787.00	90.270	0.210	7147.99	2440.76	2439.32	857.29	40°03'07.488"N	104°41'59.970"W	0.77	
9877.00	89.630	359.920	7148.07	2530.76	2529.32	857.39	40°03'08.377"N	104°41'59.968"W	0.78	
9967.00	89.470	359.780	7148.77	2620.75	2619.32	857.15	40°03'09.267"N	104°41'59.971"W	0.24	
10057.00	89.660	359.440	7149.46	2710.75	2709.31	856.54	40°03'10.156"N	104°41'59.979"W	0.43	
10147.00	89.840	359.390	7149.85	2800.74	2799.31	855.62	40°03'11.045"N	104°41'59.991"W	0.21	
10237.00	89.930	359.230	7150.03	2890.73	2889.30	854.54	40°03'11.935"N	104°42'00.005"W	0.20	
10327.00	89.960	359.130	7150.12	2980.72	2979.29	853.25	40°03'12.824"N	104°42'00.021"W	0.12	
10417.00	90.060	359.260	7150.10	3070.71	3069.28	851.99	40°03'13.713"N	104°42'00.038"W	0.18	
10507.00	90.370	359.200	7149.76	3160.70	3159.28	850.78	40°03'14.603"N	104°42'00.053"W	0.35	
10687.00	89.750	359.640	7149.58	3340.68	3339.26	848.95	40°03'16.381"N	104°42'00.077"W	0.42	
10867.00	90.280	359.270	7149.53	3520.67	3519.26	847.24	40°03'18.160"N	104°42'00.098"W	0.36	
11047.00	91.990	0.330	7145.96	3700.62	3699.21	846.61	40°03'19.938"N	104°42'00.106"W	1.12	
11137.00	90.680	359.290	7143.87	3790.59	3789.18	846.31	40°03'20.827"N	104°42'00.110"W	1.86	
11227.00	90.120	358.600	7143.24	3880.57	3879.16	844.66	40°03'21.717"N	104°42'00.132"W	0.99	
11317.00	89.710	0.770	7143.37	3970.57	3969.16	844.16	40°03'22.606"N	104°42'00.138"W	2.45	
11497.00	90.210	0.080	7143.50	4150.56	4149.15	845.50	40°03'24.385"N	104°42'00.121"W	0.47	
11587.00	90.180	359.560	7143.19	4240.56	4239.15	845.21	40°03'25.274"N	104°42'00.124"W	0.58	
11677.00	90.270	359.090	7142.84	4330.55	4329.14	844.15	40°03'26.163"N	104°42'00.138"W	0.53	
11767.00	88.730	1.170	7143.62	4420.54	4419.13	844.36	40°03'27.053"N	104°42'00.135"W	2.88	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (140 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11858.00	90.520	0.830	7144.22	4511.52	4510.11	845.95	40°03'27.952"N	104°42'00.115"W	2.00	
11948.00	89.690	1.640	7144.05	4601.50	4600.09	847.89	40°03'28.841"N	104°42'00.090"W	1.29	
12038.00	90.030	2.200	7144.27	4691.46	4690.04	850.90	40°03'29.730"N	104°42'00.051"W	0.73	
12131.00	90.550	1.580	7143.80	4784.41	4782.98	853.97	40°03'30.648"N	104°42'00.011"W	0.87	Last BHI MWD+IFR Surveys
12186.00	90.550	1.580	7143.27	4839.39	4837.96	855.49	40°03'31.192"N	104°41'59.992"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: PETTINGER 1N-18HZ AWB Ref Wellpath: PETTINGER 1N-18HZ AWP

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	13.00	1199.00	1186.00	13.00	1198.93	0.00	0.00	5.88	4.23
9.625in Casing Surface	13.00	1197.00	1184.00	13.00	1196.93	0.00	0.00	5.86	4.23
8.75in Open Hole	1199.00	7615.00	6416.00	1198.93	7150.15	5.88	4.23	268.74	843.04
7in Casing Intermediate	13.00	7602.00	7589.00	13.00	7150.08	0.00	0.00	255.79	841.96
6.125in Open Hole	7615.00	12816.00	5201.00	7150.15	NA	268.74	843.04	NA	NA

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SECTION 18 LINES		2.00	-26.21	0.00	3223115.97	1260355.44	40°02'43.123"N	104°42'10.994"W	polygon
PETTINGER 1N-18HZ BHL ON PLAT REV-2 (1'FNL & 830'FEL, SEC.18)		7150.00	4863.33	852.61	3223924.57	1265252.25	40°03'31.442"N	104°42'00.029"W	point
PETTINGER 1N-18HZ BHL ON PLAT REV-1 (1'FNL & 830'FEL, SEC.18)		7155.00	4863.33	852.61	3223924.57	1265252.25	40°03'31.442"N	104°42'00.029"W	point
PETTINGER 1N-18HZ LAND BOX		7197.00	0.00	0.00	3223115.73	1260381.64	40°02'43.382"N	104°42'10.994"W	polygon
STEWARD 44-7 (150' RADIUS)		7387.00	5386.68	1217.02	3224284.25	1265778.83	40°03'36.614"N	104°41'55.342"W	circle
STEWARD USX XX 07-15 (150' RADIUS)		7387.00	5524.06	-355.63	3222710.49	1265902.07	40°03'37.972"N	104°42'15.568"W	circle

Actual Wellpath Report

PETTINGER 1N-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH COMPOSITION - Ref Wellbore: PETTINGER 1N-18HZ AWB Ref Wellpath: PETTINGER 1N-18HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	1113.00	Generic gyro - continuous (Standard)	MS GYRODATA SURVEYS <113-1113>	PETTINGER 1N-18HZ AWB
1113.00	7555.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1255-7555>	PETTINGER 1N-18HZ AWB
7555.00	12131.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7626-7986>	PETTINGER 1N-18HZ AWB
12131.00	12186.00	Blind Drilling (std)	Projection to bit	PETTINGER 1N-18HZ AWB

Actual Wellpath Report

PETTINGER 1N-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 PETTINGER 1N-18HZ (443'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 1N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 1N-18HZ AWB
Facility	SEC.18-T1N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	108.610	13.00	Tie-On
113.00	0.630	108.610	113.00	Begin GYRO Surveys
1113.00	0.340	285.480	1112.93	Tie-Into GYRO Surveys
1255.00	1.070	351.150	1254.92	Begin BHI MWD+IFR Surveys
7602.00	89.234	4.689	7150.08	7" Casing Point
12131.00	90.550	1.580	7143.80	Last BHI MWD+IFR Surveys
12186.00	90.550	1.580	7143.27	Projection to Bit