

KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)

Location: COLORADO Slot: SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
 Field: WELD COUNTY (KERR MCGEE) Well: KERR 28N-12HZ
 Facility: SEC.13-T2N-R67W Wellbore: KERR 28N-12HZX PWB
Plot reference wellpath is KERR 28N-12HZX (REV-A.0) PWP

True vertical depths are referenced to XTREME 24 (16KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 24 (16KB) (RKB)	North Reference: True north
XTREME 24 (16KB) (RKB) to Mean Sea Level: 4899 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robale01 on 1/8/2015

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.13-T2N-R67W			3185773.912	1292122.735	40°08'00.096"N	104°50'08.088"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)	-375.58	-1613.42	3184163.422	1291735.097	40°07'56.384"N	104°50'28.860"W
XTREME 24 (16KB) (RKB) to Mud line (At Slot: SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13))					4899ft	
Mean Sea Level to Mud line (At Slot: SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13))					0ft	
XTREME 24 (16KB) (RKB) to Mean Sea Level					4899ft	

Survey Program

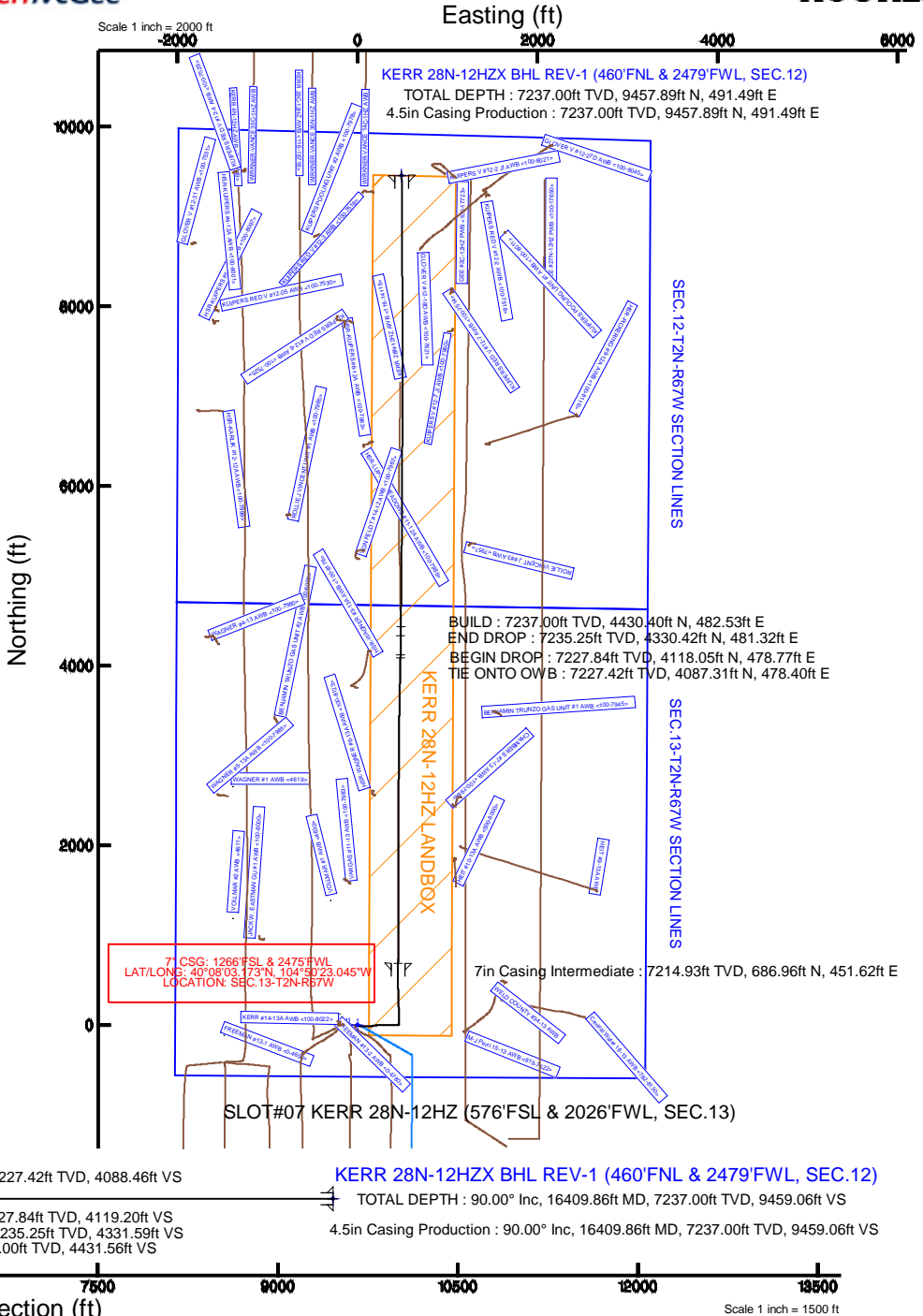
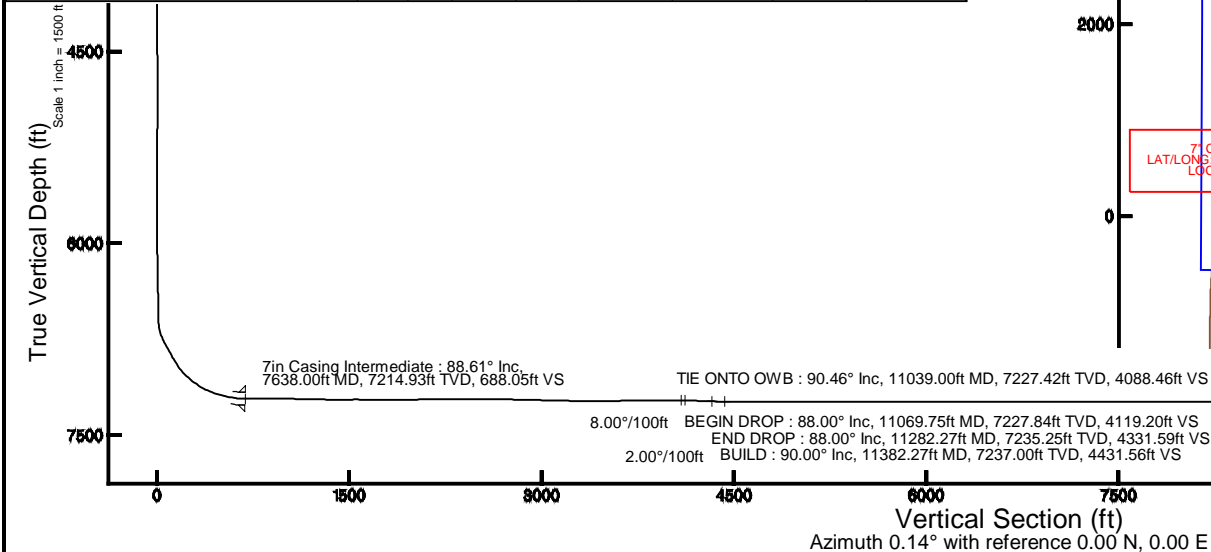
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
16.00	1001.00	Generic gyro - northseeking	Generic gyro - northseeking (Standard)		KERR 28N-12HZ AWB <116-14115>
1001.00	7594.00	NaviTrak	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZ AWB <116-14115>
7594.00	11039.00	NaviTrak	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZ AWB <116-14115>
11039.00	16409.86	NaviTrak	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZX PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE ONTO OWB	11039.00	90.460	0.690	7227.42	4087.31	478.40	0.00	4088.46
BEGIN DROP	11069.75	88.000	0.690	7227.84	4118.05	478.77	8.00	4119.20
END DROP	11282.27	88.000	0.690	7235.25	4330.42	481.32	0.00	4331.59
BUILD	11382.27	90.000	0.690	7237.00	4430.40	482.53	2.00	4431.56
TOTAL DEPTH	16409.86	90.000	359.514	7237.00	9457.89	491.49	0.02	9459.06

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.12-T2N-R67W SECTION LINES		0.00	0.40	-90.02	3184073.40	1291734.83	40°07'56.388"N	104°50'30.019"W
SEC.13-T2N-R67W SECTION LINES		0.00	0.81	-120.24	3184043.19	1291735.01	40°07'56.392"N	104°50'30.408"W
KERR 28N-12HZ LANDBOX		7169.00	0.00	0.00	3184163.42	1291735.10	40°07'56.384"N	104°50'28.860"W
KERR 28N-12HZX BHL REV-1 (460'FNL & 2479'FWL, SEC.12)	16409.86	7237.00	9457.89	491.49	3184584.63	1301195.97	40°09'29.848"N	104°50'22.530"W



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

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	0.999959	Report Generated	1/8/2015 at 10:28:41 AM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/KERR_28N-12HZX_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-375.58	-1613.42	3184163.42	1291735.10	40°07'56.384"N	104°50'28.860"W
Facility Reference Pt			3185773.91	1292122.74	40°08'00.096"N	104°50'08.088"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 24 (16'KB) (RKB) to Facility Vertical Datum	4899.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16'KB) (RKB) to Mean Sea Level	4899.00ft
Vertical Reference Pt	XTREME 24 (16'KB) (RKB)	XTREME 24 (16'KB) (RKB) to Mud Line at Slot (SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13))	4899.00ft
MD Reference Pt	XTREME 24 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.14°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

WELLPATH DATA (150 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	249.460	0.00	0.00	0.00	0.00	40°07'56.384"N	104°50'28.860"W	0.00	
16.00	0.000	249.460	16.00	0.00	0.00	0.00	40°07'56.384"N	104°50'28.860"W	0.00	
116.00	0.344	249.460	116.00	-0.11	-0.11	-0.28	40°07'56.383"N	104°50'28.864"W	0.34	
216.00	0.211	302.110	216.00	-0.11	-0.11	-0.72	40°07'56.383"N	104°50'28.869"W	0.27	
316.00	0.243	260.490	316.00	-0.05	-0.05	-1.08	40°07'56.384"N	104°50'28.874"W	0.16	
416.00	0.158	320.454	416.00	0.02	0.02	-1.38	40°07'56.384"N	104°50'28.878"W	0.21	
516.00	0.319	269.320	516.00	0.12	0.12	-1.75	40°07'56.385"N	104°50'28.882"W	0.25	
616.00	0.479	265.124	615.99	0.08	0.09	-2.44	40°07'56.385"N	104°50'28.891"W	0.16	
716.00	0.674	246.209	715.99	-0.20	-0.19	-3.40	40°07'56.382"N	104°50'28.904"W	0.27	
816.00	0.662	240.907	815.98	-0.72	-0.71	-4.44	40°07'56.377"N	104°50'28.917"W	0.06	
916.00	0.671	251.136	915.98	-1.19	-1.18	-5.50	40°07'56.372"N	104°50'28.931"W	0.12	
1001.00	0.495	233.641	1000.97	-1.57	-1.55	-6.26	40°07'56.369"N	104°50'28.941"W	0.29	
1184.00	1.050	265.390	1183.95	-2.18	-2.16	-8.57	40°07'56.363"N	104°50'28.970"W	0.37	
1278.00	0.550	121.990	1277.95	-2.49	-2.47	-9.05	40°07'56.360"N	104°50'28.976"W	1.62	
1372.00	2.660	97.810	1371.91	-3.02	-3.00	-6.50	40°07'56.354"N	104°50'28.944"W	2.31	
1466.00	5.270	96.110	1465.68	-3.76	-3.76	-0.05	40°07'56.347"N	104°50'28.861"W	2.78	
1560.00	6.880	107.360	1559.15	-5.87	-5.90	9.62	40°07'56.326"N	104°50'28.736"W	2.12	
1749.00	8.040	107.260	1746.54	-13.12	-13.20	33.04	40°07'56.254"N	104°50'28.435"W	0.61	
1843.00	9.750	97.270	1839.42	-16.04	-16.15	47.22	40°07'56.224"N	104°50'28.252"W	2.45	
2032.00	10.570	88.990	2025.46	-17.68	-17.87	80.43	40°07'56.207"N	104°50'27.825"W	0.89	
2216.00	11.190	86.740	2206.15	-16.28	-16.56	115.13	40°07'56.220"N	104°50'27.378"W	0.41	
2398.00	10.450	84.130	2384.92	-13.51	-13.87	149.18	40°07'56.247"N	104°50'26.939"W	0.49	
2581.00	9.620	81.840	2565.12	-9.56	-10.00	180.82	40°07'56.285"N	104°50'26.532"W	0.50	
2765.00	10.980	81.470	2746.15	-4.70	-5.22	213.37	40°07'56.332"N	104°50'26.113"W	0.74	
2949.00	10.600	90.550	2926.91	-2.18	-2.78	247.63	40°07'56.356"N	104°50'25.672"W	0.95	
3132.00	9.490	88.670	3107.10	-1.91	-2.59	279.54	40°07'56.358"N	104°50'25.261"W	0.63	
3316.00	8.670	92.470	3288.79	-2.09	-2.84	308.56	40°07'56.356"N	104°50'24.887"W	0.55	
3499.00	8.620	88.180	3469.72	-2.18	-3.00	336.05	40°07'56.354"N	104°50'24.534"W	0.35	
3683.00	9.260	88.310	3651.48	-1.24	-2.12	364.63	40°07'56.363"N	104°50'24.166"W	0.35	
3869.00	7.740	89.790	3835.43	-0.68	-1.64	392.12	40°07'56.368"N	104°50'23.812"W	0.83	
3963.00	7.520	87.400	3928.60	-0.35	-1.33	404.59	40°07'56.371"N	104°50'23.651"W	0.41	
4056.00	6.660	90.920	4020.89	-0.13	-1.15	416.06	40°07'56.373"N	104°50'23.503"W	1.04	
4149.00	6.350	91.540	4113.29	-0.33	-1.37	426.60	40°07'56.370"N	104°50'23.368"W	0.34	
4242.00	5.990	90.290	4205.75	-0.47	-1.53	436.59	40°07'56.369"N	104°50'23.239"W	0.41	
4335.00	5.860	87.470	4298.25	-0.26	-1.35	446.18	40°07'56.371"N	104°50'23.116"W	0.34	
4428.00	4.160	75.190	4390.90	0.83	-0.28	454.19	40°07'56.381"N	104°50'23.013"W	2.15	
4521.00	3.010	63.130	4483.72	2.81	1.69	459.63	40°07'56.401"N	104°50'22.943"W	1.47	
4614.00	1.080	63.670	4576.65	4.31	3.18	462.59	40°07'56.415"N	104°50'22.904"W	2.08	
4708.00	1.060	73.450	4670.64	4.95	3.82	464.22	40°07'56.422"N	104°50'22.883"W	0.20	
4795.00	0.970	81.110	4757.62	5.30	4.17	465.72	40°07'56.425"N	104°50'22.864"W	0.19	
4884.00	0.660	73.400	4846.61	5.57	4.43	466.95	40°07'56.428"N	104°50'22.848"W	0.37	
4973.00	0.970	235.060	4935.61	5.28	4.14	466.83	40°07'56.425"N	104°50'22.850"W	1.81	
5151.00	1.020	242.470	5113.58	3.68	2.55	464.19	40°07'56.409"N	104°50'22.884"W	0.08	
5329.00	0.520	235.100	5291.57	2.48	1.35	462.12	40°07'56.397"N	104°50'22.910"W	0.29	
5506.00	0.440	232.020	5468.56	1.60	0.48	460.93	40°07'56.389"N	104°50'22.926"W	0.05	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5684.00	0.140	311.570	5646.56	1.32	0.20	460.22	40°07'56.386"N	104°50'22.935"W	0.25	
5862.00	0.070	327.210	5824.56	1.56	0.44	460.00	40°07'56.388"N	104°50'22.938"W	0.04	
6033.00	0.700	355.380	5995.55	2.69	1.56	459.86	40°07'56.399"N	104°50'22.939"W	0.37	
6203.00	0.860	22.310	6165.54	4.90	3.78	460.26	40°07'56.421"N	104°50'22.934"W	0.23	
6373.00	1.250	4.600	6335.51	7.93	6.81	460.90	40°07'56.451"N	104°50'22.926"W	0.30	
6543.00	0.520	28.240	6505.49	10.46	9.34	461.41	40°07'56.476"N	104°50'22.920"W	0.47	
6629.00	1.470	352.770	6591.48	11.90	10.77	461.46	40°07'56.490"N	104°50'22.919"W	1.27	
6714.00	10.770	3.410	6675.90	20.93	19.80	461.79	40°07'56.580"N	104°50'22.915"W	10.98	
6799.00	27.770	0.670	6755.54	48.87	47.74	462.50	40°07'56.856"N	104°50'22.906"W	20.02	
6884.00	28.160	1.750	6830.92	88.72	87.59	463.34	40°07'57.249"N	104°50'22.895"W	0.75	
6969.00	30.190	356.020	6905.15	130.09	128.97	462.47	40°07'57.658"N	104°50'22.906"W	4.06	
7054.00	36.660	356.430	6976.05	176.78	175.66	459.41	40°07'58.120"N	104°50'22.945"W	7.62	
7139.00	47.110	357.490	7039.25	233.37	232.26	456.46	40°07'58.679"N	104°50'22.983"W	12.32	
7224.00	53.830	358.070	7093.32	298.83	297.73	453.93	40°07'59.326"N	104°50'23.016"W	7.92	
7308.00	61.960	359.250	7137.92	369.90	368.80	452.30	40°08'00.029"N	104°50'23.037"W	9.75	
7394.00	71.780	359.080	7171.66	448.88	447.78	451.15	40°08'00.809"N	104°50'23.052"W	11.42	
7479.00	77.410	359.860	7194.24	530.79	529.69	450.40	40°08'01.618"N	104°50'23.061"W	6.68	
7564.00	80.960	0.480	7210.18	614.27	613.17	450.65	40°08'02.443"N	104°50'23.058"W	4.24	
7594.00	87.130	0.840	7213.29	644.09	642.99	450.99	40°08'02.738"N	104°50'23.054"W	20.60	
7638.00†	88.610	0.802	7214.93	688.05	686.96	451.62	40°08'03.173"N	104°50'23.045"W	3.37	7" CASING POINT
7723.00	91.470	0.730	7214.87	773.04	771.94	452.76	40°08'04.012"N	104°50'23.031"W	3.37	
7809.00	90.670	1.040	7213.26	859.02	857.91	454.09	40°08'04.862"N	104°50'23.014"W	1.00	
7893.00	89.260	0.400	7213.31	943.01	941.90	455.14	40°08'05.692"N	104°50'23.000"W	1.84	
7978.00	88.890	0.140	7214.69	1028.00	1026.89	455.54	40°08'06.532"N	104°50'22.995"W	0.53	
8063.00	88.340	0.160	7216.74	1112.97	1111.87	455.77	40°08'07.372"N	104°50'22.992"W	0.65	
8148.00	88.580	0.600	7219.02	1197.94	1196.83	456.33	40°08'08.211"N	104°50'22.985"W	0.59	
8234.00	89.380	0.010	7220.56	1283.93	1282.82	456.79	40°08'09.061"N	104°50'22.979"W	1.16	
8319.00	89.570	0.420	7221.33	1368.92	1367.81	457.11	40°08'09.901"N	104°50'22.975"W	0.53	
8404.00	90.400	0.220	7221.36	1453.92	1452.81	457.58	40°08'10.741"N	104°50'22.969"W	1.00	
8489.00	90.280	359.690	7220.85	1538.92	1537.81	457.51	40°08'11.581"N	104°50'22.969"W	0.64	
8574.00	88.580	359.530	7221.70	1623.91	1622.80	456.93	40°08'12.421"N	104°50'22.977"W	2.01	
8659.00	88.950	359.190	7223.53	1708.88	1707.77	455.99	40°08'13.260"N	104°50'22.989"W	0.59	
8744.00	89.940	359.610	7224.35	1793.87	1792.76	455.10	40°08'14.100"N	104°50'23.000"W	1.27	
8829.00	90.890	359.320	7223.74	1878.86	1877.76	454.30	40°08'14.940"N	104°50'23.011"W	1.17	
9013.00	91.110	0.130	7220.53	2062.82	2061.73	453.42	40°08'16.758"N	104°50'23.022"W	0.46	
9103.00	90.430	0.730	7219.32	2152.81	2151.71	454.09	40°08'17.647"N	104°50'23.013"W	1.01	
9287.00	89.720	0.510	7219.08	2336.81	2335.70	456.09	40°08'19.466"N	104°50'22.988"W	0.40	
9470.00	90.920	0.190	7218.05	2519.80	2518.69	457.20	40°08'21.274"N	104°50'22.973"W	0.68	
9562.00	89.630	0.180	7217.61	2611.80	2610.69	457.50	40°08'22.183"N	104°50'22.969"W	1.40	
9654.00	88.420	0.650	7219.18	2703.78	2702.67	458.17	40°08'23.092"N	104°50'22.961"W	1.41	
9838.00	88.890	0.400	7223.50	2887.72	2886.61	459.85	40°08'24.910"N	104°50'22.939"W	0.29	
10021.00	88.490	0.720	7227.68	3070.67	3069.55	461.64	40°08'26.718"N	104°50'22.916"W	0.28	
10204.00	88.950	0.570	7231.77	3253.62	3252.50	463.70	40°08'28.525"N	104°50'22.889"W	0.26	
10388.00	90.400	0.340	7232.81	3437.61	3436.48	465.16	40°08'30.344"N	104°50'22.870"W	0.80	
10481.00	90.800	0.580	7231.84	3530.60	3529.47	465.91	40°08'31.263"N	104°50'22.861"W	0.50	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10666.00	90.090	1.720	7230.40	3715.56	3714.43	469.62	40°08'33.090"N	104°50'22.813"W	0.73	
10853.00	90.640	1.490	7229.21	3902.49	3901.35	474.86	40°08'34.937"N	104°50'22.745"W	0.32	
11039.00	90.460	0.690	7227.42	4088.46	4087.31	478.40	40°08'36.775"N	104°50'22.700"W	0.00	TIE ONTO OWB
11069.75	88.000	0.690	7227.84	4119.20	4118.05	478.77	40°08'37.079"N	104°50'22.695"W	8.00	BEGIN DROP
11139.00†	88.000	0.690	7230.25	4188.41	4187.25	479.60	40°08'37.763"N	104°50'22.684"W	0.00	
11239.00†	88.000	0.690	7233.74	4288.34	4287.18	480.80	40°08'38.750"N	104°50'22.669"W	0.00	
11282.27	88.000	0.690	7235.25	4331.59	4330.42	481.32	40°08'39.178"N	104°50'22.662"W	0.00	END DROP
11339.00†	89.135	0.690	7236.67	4388.29	4387.13	482.01	40°08'39.738"N	104°50'22.653"W	2.00	
11382.27	90.000	0.690	7237.00	4431.56	4430.40	482.53	40°08'40.166"N	104°50'22.647"W	2.00	BUILD
11439.00†	90.000	0.677	7237.00	4488.29	4487.12	483.20	40°08'40.726"N	104°50'22.638"W	0.02	
11539.00†	90.000	0.653	7237.00	4588.28	4587.11	484.36	40°08'41.714"N	104°50'22.623"W	0.02	
11639.00†	90.000	0.630	7237.00	4688.28	4687.11	485.48	40°08'42.702"N	104°50'22.608"W	0.02	
11739.00†	90.000	0.607	7237.00	4788.27	4787.10	486.56	40°08'43.691"N	104°50'22.595"W	0.02	
11839.00†	90.000	0.583	7237.00	4888.27	4887.10	487.60	40°08'44.679"N	104°50'22.581"W	0.02	
11939.00†	90.000	0.560	7237.00	4988.27	4987.09	488.60	40°08'45.667"N	104°50'22.568"W	0.02	
12039.00†	90.000	0.536	7237.00	5088.27	5087.09	489.56	40°08'46.655"N	104°50'22.556"W	0.02	
12139.00†	90.000	0.513	7237.00	5188.26	5187.08	490.47	40°08'47.643"N	104°50'22.544"W	0.02	
12239.00†	90.000	0.490	7237.00	5288.26	5287.08	491.35	40°08'48.631"N	104°50'22.533"W	0.02	
12339.00†	90.000	0.466	7237.00	5388.26	5387.08	492.18	40°08'49.619"N	104°50'22.522"W	0.02	
12439.00†	90.000	0.443	7237.00	5488.26	5487.07	492.97	40°08'50.608"N	104°50'22.512"W	0.02	
12539.00†	90.000	0.419	7237.00	5588.26	5587.07	493.73	40°08'51.596"N	104°50'22.502"W	0.02	
12639.00†	90.000	0.396	7237.00	5688.26	5687.07	494.44	40°08'52.584"N	104°50'22.493"W	0.02	
12739.00†	90.000	0.373	7237.00	5788.26	5787.07	495.11	40°08'53.572"N	104°50'22.484"W	0.02	
12839.00†	90.000	0.349	7237.00	5888.25	5887.06	495.74	40°08'54.560"N	104°50'22.476"W	0.02	
12939.00†	90.000	0.326	7237.00	5988.25	5987.06	496.33	40°08'55.549"N	104°50'22.468"W	0.02	
13039.00†	90.000	0.303	7237.00	6088.25	6087.06	496.88	40°08'56.537"N	104°50'22.461"W	0.02	
13139.00†	90.000	0.279	7237.00	6188.25	6187.06	497.39	40°08'57.525"N	104°50'22.455"W	0.02	
13239.00†	90.000	0.256	7237.00	6288.25	6287.06	497.85	40°08'58.513"N	104°50'22.449"W	0.02	
13339.00†	90.000	0.232	7237.00	6388.25	6387.06	498.28	40°08'59.501"N	104°50'22.443"W	0.02	
13439.00†	90.000	0.209	7237.00	6488.25	6487.06	498.66	40°09'00.490"N	104°50'22.438"W	0.02	
13539.00†	90.000	0.186	7237.00	6588.25	6587.06	499.01	40°09'01.478"N	104°50'22.434"W	0.02	
13639.00†	90.000	0.162	7237.00	6688.25	6687.06	499.31	40°09'02.466"N	104°50'22.430"W	0.02	
13739.00†	90.000	0.139	7237.00	6788.25	6787.05	499.57	40°09'03.454"N	104°50'22.426"W	0.02	
13839.00†	90.000	0.115	7237.00	6888.25	6887.05	499.80	40°09'04.442"N	104°50'22.424"W	0.02	
13939.00†	90.000	0.092	7237.00	6988.25	6987.05	499.98	40°09'05.431"N	104°50'22.421"W	0.02	
14039.00†	90.000	0.069	7237.00	7088.25	7087.05	500.12	40°09'06.419"N	104°50'22.419"W	0.02	
14139.00†	90.000	0.045	7237.00	7188.25	7187.05	500.22	40°09'07.407"N	104°50'22.418"W	0.02	
14239.00†	90.000	0.022	7237.00	7288.25	7287.05	500.28	40°09'08.395"N	104°50'22.417"W	0.02	
14339.00†	90.000	359.999	7237.00	7388.25	7387.05	500.29	40°09'09.383"N	104°50'22.417"W	0.02	
14439.00†	90.000	359.975	7237.00	7488.25	7487.05	500.27	40°09'10.372"N	104°50'22.417"W	0.02	
14539.00†	90.000	359.952	7237.00	7588.25	7587.05	500.21	40°09'11.360"N	104°50'22.418"W	0.02	
14639.00†	90.000	359.928	7237.00	7688.25	7687.05	500.10	40°09'12.348"N	104°50'22.419"W	0.02	
14739.00†	90.000	359.905	7237.00	7788.25	7787.05	499.96	40°09'13.336"N	104°50'22.421"W	0.02	
14839.00†	90.000	359.882	7237.00	7888.25	7887.05	499.77	40°09'14.324"N	104°50'22.424"W	0.02	
14939.00†	90.000	359.858	7237.00	7988.25	7987.05	499.54	40°09'15.313"N	104°50'22.427"W	0.02	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15039.00†	90.000	359.835	7237.00	8088.25	8087.05	499.28	40°09'16.301"N	104°50'22.430"W	0.02	
15139.00†	90.000	359.811	7237.00	8188.24	8187.05	498.97	40°09'17.289"N	104°50'22.434"W	0.02	
15239.00†	90.000	359.788	7237.00	8288.24	8287.05	498.62	40°09'18.277"N	104°50'22.438"W	0.02	
15339.00†	90.000	359.765	7237.00	8388.24	8387.05	498.23	40°09'19.265"N	104°50'22.443"W	0.02	
15439.00†	90.000	359.741	7237.00	8488.24	8487.05	497.80	40°09'20.254"N	104°50'22.449"W	0.02	
15539.00†	90.000	359.718	7237.00	8588.24	8587.05	497.32	40°09'21.242"N	104°50'22.455"W	0.02	
15639.00†	90.000	359.695	7237.00	8688.23	8687.05	496.81	40°09'22.230"N	104°50'22.462"W	0.02	
15739.00†	90.000	359.671	7237.00	8788.23	8787.05	496.26	40°09'23.218"N	104°50'22.469"W	0.02	
15839.00†	90.000	359.648	7237.00	8888.23	8887.04	495.66	40°09'24.206"N	104°50'22.476"W	0.02	
15939.00†	90.000	359.624	7237.00	8988.22	8987.04	495.03	40°09'25.195"N	104°50'22.484"W	0.02	
16039.00†	90.000	359.601	7237.00	9088.22	9087.04	494.35	40°09'26.183"N	104°50'22.493"W	0.02	
16139.00†	90.000	359.578	7237.00	9188.21	9187.04	493.64	40°09'27.171"N	104°50'22.502"W	0.02	
16239.00†	90.000	359.554	7237.00	9288.21	9287.04	492.88	40°09'28.159"N	104°50'22.512"W	0.02	
16339.00†	90.000	359.531	7237.00	9388.20	9387.03	492.08	40°09'29.147"N	104°50'22.522"W	0.02	
16409.86	90.000	359.514	7237.00 ¹	9459.06	9457.89	491.49	40°09'29.848"N	104°50'22.530"W	0.02	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: KERR 28N-12HZX PWB Ref Wellpath: KERR 28N-12HZX (REV-A.0) 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]
7in Casing Intermediate	16.00	7638.00	7622.00	16.00	7214.93	0.00	0.00	686.96	451.62
6.125in Open Hole	11039.00	16409.86	5370.86	7227.42	7237.00	4087.31	478.40	9457.89	491.49
4.5in Casing Production	16.00	16409.86	16393.86	16.00	7237.00	0.00	0.00	9457.89	491.49

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.12-T2N-R67W SECTION LINES		0.00	0.40	-90.02	3184073.40	1291734.83	40°07'56.388"N	104°50'30.019"W	polygon
SEC.13-T2N-R67W SECTION LINES		0.00	0.81	-120.24	3184043.19	1291735.01	40°07'56.392"N	104°50'30.408"W	polygon
KERR 28N-12HZ LANDBOX		7169.00	0.00	0.00	3184163.42	1291735.10	40°07'56.384"N	104°50'28.860"W	polygon
1) KERR 28N-12HZX BHL REV-1 (460'FNL & 2479'FWL, SEC.12)	16409.86	7237.00	9457.89	491.49	3184584.63	1301195.97	40°09'29.848"N	104°50'22.530"W	point

SURVEY PROGRAM - Ref Wellbore: KERR 28N-12HZX PWB Ref Wellpath: KERR 28N-12HZX (REV-A.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1001.00	Generic gyro - northseeking (Standard)		KERR 28N-12HZ AWB <116-14115>
1001.00	7594.00	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZ AWB <116-14115>
7594.00	11039.00	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZ AWB <116-14115>
11039.00	16409.86	NaviTrak (MAGCORR,IFR)		KERR 28N-12HZX PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)	Slot	SLOT#07 KERR 28N-12HZ (576'FSL & 2026'FWL, SEC.13)
Area	COLORADO	Well	KERR 28N-12HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	KERR 28N-12HZX PWB
Facility	SEC.13-T2N-R67W	Sidetrack from	KERR 28N-12HZ AWB <116-14115> at 11039.00 MD

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7638.00	88.610	0.802	7214.93	7" CASING POINT

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
11039.00	90.460	0.690	7227.42	TIE ONTO OWB
11069.75	88.000	0.690	7227.84	BEGIN DROP
11282.27	88.000	0.690	7235.25	END DROP
11382.27	90.000	0.690	7237.00	BUILD
16409.86	90.000	359.514	7237.00	TOTAL DEPTH