

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
 Field: WELD COUNTY (KERR MCGEE) Well: WHIPSSNAKE 27N-22HZ
 Facility: SEC.22-T2N-R67W Wellbore: WHIPSSNAKE 27N-22HZ PWB

Plot reference wellpath is WHIPSSNAKE 27N-22HZ (REV-A.1) PWP

True vertical depths are referenced to XTREME 6 (16KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (16KB) (RKB)	North Reference: True north
XTREME 6 (16KB) (RKB) to Mean Sea Level: 5003 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robale01 on 24/Jun/2014

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.22-T2N-R67W	3173770.270	1290629.950	40°07'46.204"N	104°52'42.769"W

Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)	-4455.31	785.92	3174587.356	1286180.447	40°07'02.176"N	104°52'32.653"W

XTREME 6 (16KB) (RKB) to Mud line (At Slot: SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22))	5003ft
Mean Sea Level to Mud line (At Slot: SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22))	0ft
XTREME 6 (16KB) (RKB) to Mean Sea Level	5003ft

Survey Program

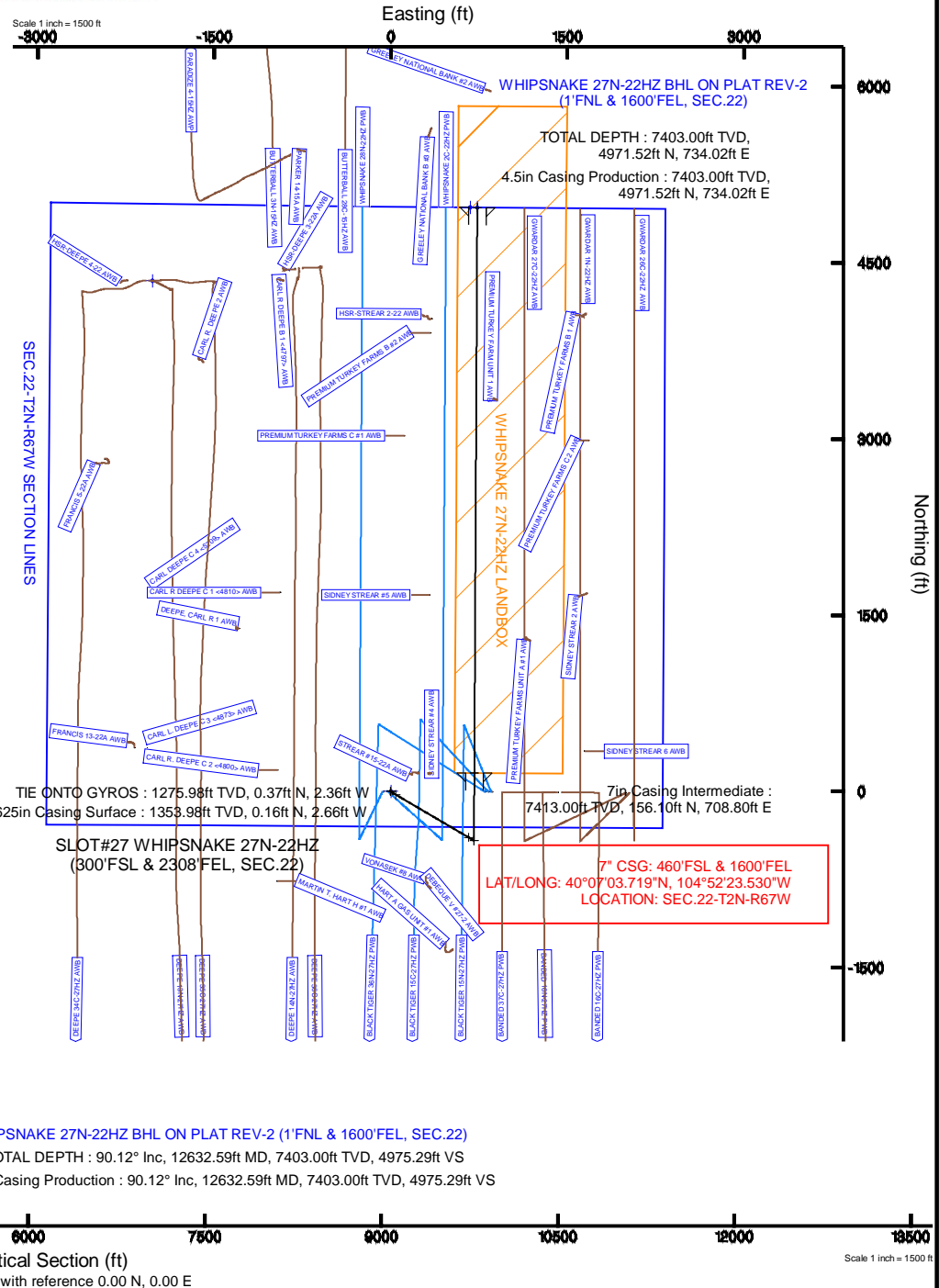
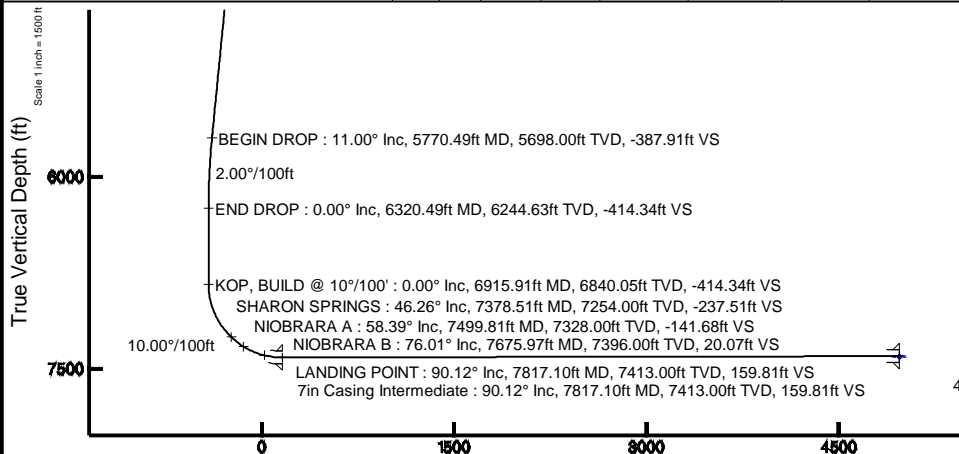
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
16.00	1276.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		WHIPSSNAKE 27N-22HZ AWB
1276.00	7817.10	NavTrak	NavTrak (MAGCORR,IFR)		WHIPSSNAKE 27N-22HZ PWB
7817.10	12632.94	NavTrak	NavTrak (MAGCORR,IFR)		WHIPSSNAKE 27N-22HZ PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE ONTO GYROS	1276.00	0.270	234.800	1275.98	0.37	-2.36	0.18	0.36
BEGIN NUDGE	1454.02	0.270	234.800	1454.00	-0.11	-3.04	0.00	-0.13
END NUDGE	2009.72	11.000	120.440	2006.33	-27.81	41.74	2.00	-27.60
BEGIN DROP	5770.49	11.000	120.440	5698.00	-391.37	660.41	0.00	-387.91
END DROP	6320.49	0.000	0.300	6244.63	-418.04	705.79	2.00	-414.34
KOP, BUILD @ 10°/100'	6915.91	0.000	0.300	6840.05	-418.04	705.79	0.00	-414.34
LANDING POINT	7817.10	90.119	0.300	7413.00	156.10	708.80	10.00	159.81
TOTAL DEPTH	12632.59	90.119	0.300	7403.00	4971.52	734.02	0.00	4975.29

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.22-T2N-R67W SECTION LINES		-29.00	4347.13	-2026.26	3172530.63	1290513.02	40°07'45.134"N	104°52'58.739"W
WHIPSSNAKE 27N-22HZ BHL ON PLAT REV-2 (1'FNL & 1600'FEL, SEC.22)	12632.59	7403.00	4971.52	734.02	3175286.33	1291156.80	40°07'51.305"N	104°52'23.203"W
WHIPSSNAKE 27N-22HZ BHL ON PLAT REV-1 (1'FNL & 1600'FEL, SEC.22)	7410.00	4971.86	673.89	3175226.20	1291156.72	40°07'51.308"N	104°52'23.977"W	
WHIPSSNAKE 27N-22HZ LANDBOX	7410.00	0.00	0.00	3174587.36	1286180.45	40°07'02.176"N	104°52'32.653"W	



Vertical Section (ft)
 Azimuth 0.30° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500 ft

Planned Wellpath Report

WHIPSSNAKE 27N-22HZ (REV-A.1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSSNAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSSNAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

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	0.99996	Report Generated	24/Jul/2014 at 15:35
Convergence at slot	n/a	Database/Source file	WellArchitectDB/WHIPSSNAKE_27N-22HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4455.31	785.92	3174587.36	1286180.45	40°07'02.176"N	104°52'32.653"W
Facility Reference Pt			3173770.27	1290629.95	40°07'46.204"N	104°52'42.769"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 6 (16'KB) (RKB) to Facility Vertical Datum	5003.00ft
Horizontal Reference Pt	Slot	XTREME 6 (16'KB) (RKB) to Mean Sea Level	5003.00ft
Vertical Reference Pt	XTREME 6 (16'KB) (RKB)	XTREME 6 (16'KB) (RKB) to Mud Line at Slot (SLOT#27 WHIPSSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22))	5003.00ft
MD Reference Pt	XTREME 6 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.30°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

WELLPATH DATA (141 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	161.220	0.00	0.00	0.00	0.00	40°07'02.176"N	104°52'32.653"W	0.00	
16.00	0.000	161.220	16.00	0.00	0.00	0.00	40°07'02.176"N	104°52'32.653"W	0.00	
116.00	0.530	161.220	116.00	-0.44	-0.44	0.15	40°07'02.172"N	104°52'32.651"W	0.53	
216.00	0.290	141.930	216.00	-1.07	-1.08	0.45	40°07'02.165"N	104°52'32.647"W	0.27	
316.00	0.210	178.520	316.00	-1.45	-1.46	0.61	40°07'02.162"N	104°52'32.645"W	0.17	
416.00	0.070	205.520	415.99	-1.69	-1.70	0.59	40°07'02.159"N	104°52'32.645"W	0.15	
516.00	0.040	172.290	515.99	-1.78	-1.79	0.57	40°07'02.158"N	104°52'32.646"W	0.04	
616.00	0.140	345.510	615.99	-1.70	-1.70	0.55	40°07'02.159"N	104°52'32.646"W	0.18	
716.00	0.230	347.090	715.99	-1.39	-1.39	0.47	40°07'02.162"N	104°52'32.647"W	0.09	
816.00	0.380	337.090	815.99	-0.89	-0.89	0.30	40°07'02.167"N	104°52'32.649"W	0.16	
916.00	0.570	313.780	915.99	-0.24	-0.24	-0.19	40°07'02.174"N	104°52'32.655"W	0.27	
1016.00	0.470	298.990	1015.99	0.30	0.31	-0.91	40°07'02.179"N	104°52'32.665"W	0.17	
1116.00	0.320	276.190	1115.98	0.53	0.53	-1.55	40°07'02.181"N	104°52'32.673"W	0.21	
1216.00	0.310	254.870	1215.98	0.48	0.49	-2.09	40°07'02.181"N	104°52'32.680"W	0.12	
1221.02†	0.305	253.416	1221.00	0.48	0.49	-2.11	40°07'02.181"N	104°52'32.680"W	0.18	FOX HILLS MARKER
1276.00	0.270	234.800	1275.98	0.36	0.37	-2.36	40°07'02.180"N	104°52'32.683"W	0.18	TIE ONTO GYROS
1376.00†	0.270	234.800	1375.98	0.08	0.10	-2.74	40°07'02.177"N	104°52'32.688"W	0.00	
1454.02	0.270	234.800	1454.00	-0.13	-0.11	-3.04	40°07'02.175"N	104°52'32.692"W	0.00	BEGIN NUDGE
1476.00†	0.404	156.207	1475.98	-0.23	-0.21	-3.05	40°07'02.174"N	104°52'32.692"W	2.00	
1576.00†	2.336	125.168	1575.95	-1.72	-1.71	-1.25	40°07'02.159"N	104°52'32.669"W	2.00	
1676.00†	4.330	122.405	1675.77	-4.89	-4.91	3.61	40°07'02.128"N	104°52'32.607"W	2.00	
1776.00†	6.328	121.384	1775.33	-9.74	-9.80	11.50	40°07'02.079"N	104°52'32.505"W	2.00	
1876.00†	8.326	120.851	1874.51	-16.27	-16.38	22.42	40°07'02.014"N	104°52'32.364"W	2.00	
1976.00†	10.326	120.524	1973.19	-24.46	-24.65	36.36	40°07'01.932"N	104°52'32.185"W	2.00	
2009.72	11.000	120.440	2006.33	-27.60	-27.81	41.74	40°07'01.901"N	104°52'32.116"W	2.00	END NUDGE
2076.00†	11.000	120.440	2071.39	-33.95	-34.22	52.64	40°07'01.838"N	104°52'31.975"W	0.00	
2176.00†	11.000	120.440	2169.55	-43.53	-43.89	69.09	40°07'01.742"N	104°52'31.764"W	0.00	
2276.00†	11.000	120.440	2267.71	-53.11	-53.56	85.54	40°07'01.647"N	104°52'31.552"W	0.00	
2376.00†	11.000	120.440	2365.87	-62.69	-63.22	101.99	40°07'01.551"N	104°52'31.340"W	0.00	
2476.00†	11.000	120.440	2464.04	-72.27	-72.89	118.44	40°07'01.456"N	104°52'31.128"W	0.00	
2576.00†	11.000	120.440	2562.20	-81.85	-82.56	134.89	40°07'01.360"N	104°52'30.917"W	0.00	
2676.00†	11.000	120.440	2660.36	-91.43	-92.22	151.34	40°07'01.265"N	104°52'30.705"W	0.00	
2776.00†	11.000	120.440	2758.52	-101.01	-101.89	167.79	40°07'01.169"N	104°52'30.493"W	0.00	
2876.00†	11.000	120.440	2856.69	-110.59	-111.56	184.25	40°07'01.074"N	104°52'30.281"W	0.00	
2976.00†	11.000	120.440	2954.85	-120.17	-121.23	200.70	40°07'00.978"N	104°52'30.070"W	0.00	
3076.00†	11.000	120.440	3053.01	-129.75	-130.89	217.15	40°07'00.882"N	104°52'29.858"W	0.00	
3176.00†	11.000	120.440	3151.18	-139.33	-140.56	233.60	40°07'00.787"N	104°52'29.646"W	0.00	
3276.00†	11.000	120.440	3249.34	-148.92	-150.23	250.05	40°07'00.691"N	104°52'29.434"W	0.00	
3376.00†	11.000	120.440	3347.50	-158.50	-159.89	266.50	40°07'00.596"N	104°52'29.223"W	0.00	
3476.00†	11.000	120.440	3445.66	-168.08	-169.56	282.95	40°07'00.500"N	104°52'29.011"W	0.00	
3576.00†	11.000	120.440	3543.83	-177.66	-179.23	299.40	40°07'00.405"N	104°52'28.799"W	0.00	
3676.00†	11.000	120.440	3641.99	-187.24	-188.89	315.85	40°07'00.309"N	104°52'28.587"W	0.00	
3776.00†	11.000	120.440	3740.15	-196.82	-198.56	332.30	40°07'00.214"N	104°52'28.376"W	0.00	
3876.00†	11.000	120.440	3838.31	-206.40	-208.23	348.75	40°07'00.118"N	104°52'28.164"W	0.00	
3976.00†	11.000	120.440	3936.48	-215.98	-217.90	365.20	40°07'00.023"N	104°52'27.952"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4076.00†	11.000	120.440	4034.64	-225.56	-227.56	381.66	40°06'59.927"N	104°52'27.740"W	0.00	
4171.11†	11.000	120.440	4128.00	-234.67	-236.76	397.30	40°06'59.836"N	104°52'27.539"W	0.00	PARKMAN
4176.00†	11.000	120.440	4132.80	-235.14	-237.23	398.11	40°06'59.832"N	104°52'27.529"W	0.00	
4276.00†	11.000	120.440	4230.97	-244.72	-246.90	414.56	40°06'59.736"N	104°52'27.317"W	0.00	
4376.00†	11.000	120.440	4329.13	-254.30	-256.56	431.01	40°06'59.641"N	104°52'27.105"W	0.00	
4476.00†	11.000	120.440	4427.29	-263.89	-266.23	447.46	40°06'59.545"N	104°52'26.894"W	0.00	
4550.07†	11.000	120.440	4500.00	-270.98	-273.39	459.64	40°06'59.474"N	104°52'26.737"W	0.00	SUSSEX
4576.00†	11.000	120.440	4525.45	-273.47	-275.90	463.91	40°06'59.449"N	104°52'26.682"W	0.00	
4676.00†	11.000	120.440	4623.62	-283.05	-285.57	480.36	40°06'59.354"N	104°52'26.470"W	0.00	
4776.00†	11.000	120.440	4721.78	-292.63	-295.23	496.81	40°06'59.258"N	104°52'26.258"W	0.00	
4876.00†	11.000	120.440	4819.94	-302.21	-304.90	513.26	40°06'59.163"N	104°52'26.047"W	0.00	
4976.00†	11.000	120.440	4918.10	-311.79	-314.57	529.71	40°06'59.067"N	104°52'25.835"W	0.00	
5076.00†	11.000	120.440	5016.27	-321.37	-324.23	546.16	40°06'58.972"N	104°52'25.623"W	0.00	
5176.00†	11.000	120.440	5114.43	-330.95	-333.90	562.61	40°06'58.876"N	104°52'25.411"W	0.00	
5276.00†	11.000	120.440	5212.59	-340.53	-343.57	579.06	40°06'58.781"N	104°52'25.200"W	0.00	
5376.00†	11.000	120.440	5310.76	-350.11	-353.24	595.52	40°06'58.685"N	104°52'24.988"W	0.00	
5476.00†	11.000	120.440	5408.92	-359.69	-362.90	611.97	40°06'58.590"N	104°52'24.776"W	0.00	
5576.00†	11.000	120.440	5507.08	-369.27	-372.57	628.42	40°06'58.494"N	104°52'24.564"W	0.00	
5676.00†	11.000	120.440	5605.24	-378.85	-382.24	644.87	40°06'58.399"N	104°52'24.353"W	0.00	
5770.49	11.000	120.440	5698.00	-387.91	-391.37	660.41	40°06'58.308"N	104°52'24.153"W	0.00	BEGIN DROP
5776.00†	10.890	120.440	5703.41	-388.43	-391.90	661.31	40°06'58.303"N	104°52'24.141"W	2.00	
5876.00†	8.890	120.440	5801.92	-397.06	-400.60	676.12	40°06'58.217"N	104°52'23.950"W	2.00	
5976.00†	6.890	120.440	5900.96	-403.95	-407.56	687.96	40°06'58.148"N	104°52'23.798"W	2.00	
6076.00†	4.890	120.440	6000.43	-409.10	-412.75	696.80	40°06'58.097"N	104°52'23.684"W	2.00	
6176.00†	2.890	120.440	6100.20	-412.51	-416.19	702.65	40°06'58.063"N	104°52'23.609"W	2.00	
6276.00†	0.890	120.440	6200.14	-414.16	-417.86	705.49	40°06'58.047"N	104°52'23.572"W	2.00	
6320.49	0.000	0.300	6244.63	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	2.00	END DROP
6376.00†	0.000	0.300	6300.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6476.00†	0.000	0.300	6400.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6576.00†	0.000	0.300	6500.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6676.00†	0.000	0.300	6600.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6776.00†	0.000	0.300	6700.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6876.00†	0.000	0.300	6800.14	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	
6915.91	0.000	0.300	6840.05	-414.34	-418.04	705.79	40°06'58.045"N	104°52'23.568"W	0.00	KOP, BUILD @ 10°/100'
6976.00†	6.009	0.300	6900.03	-411.19	-414.89	705.81	40°06'58.076"N	104°52'23.568"W	10.00	
7076.00†	16.009	0.300	6998.06	-392.12	-395.82	705.91	40°06'58.264"N	104°52'23.567"W	10.00	
7176.00†	26.009	0.300	7091.29	-356.31	-360.01	706.10	40°06'58.618"N	104°52'23.564"W	10.00	
7276.00†	36.009	0.300	7176.89	-304.86	-308.56	706.37	40°06'59.127"N	104°52'23.561"W	10.00	
7376.00†	46.009	0.300	7252.26	-239.33	-243.03	706.71	40°06'59.774"N	104°52'23.557"W	10.00	
7378.51†	46.260	0.300	7254.00	-237.51	-241.22	706.72	40°06'59.792"N	104°52'23.556"W	10.00	SHARON SPRINGS
7476.00†	56.009	0.300	7315.10	-161.70	-165.40	707.12	40°07'00.541"N	104°52'23.551"W	10.00	
7499.81†	58.390	0.300	7328.00	-141.68	-145.39	707.22	40°07'00.739"N	104°52'23.550"W	10.00	NIOBRARA A
7576.00†	66.009	0.300	7363.51	-74.34	-78.05	707.57	40°07'01.405"N	104°52'23.545"W	10.00	
7675.97†	76.006	0.300	7396.00	20.07	16.36	708.07	40°07'02.338"N	104°52'23.539"W	10.00	NIOBRARA B
7676.00†	76.009	0.300	7396.01	20.10	16.39	708.07	40°07'02.338"N	104°52'23.539"W	10.00	

Planned Wellpath Report

WHIPSAKE 27N-22HZ (REV-A.1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7776.00†	86.009	0.300	7411.62	118.74	115.03	708.58	40°07'03.313"N	104°52'23.532"W	10.00	
7817.10	90.119	0.300	7413.00	159.81	156.10	708.80	40°07'03.719"N	104°52'23.530"W	10.00	LANDING POINT
7876.00†	90.119	0.300	7412.88	218.71	215.00	709.11	40°07'04.301"N	104°52'23.526"W	0.00	
7976.00†	90.119	0.300	7412.67	318.71	315.00	709.63	40°07'05.289"N	104°52'23.519"W	0.00	
8076.00†	90.119	0.300	7412.47	418.71	415.00	710.16	40°07'06.277"N	104°52'23.512"W	0.00	
8176.00†	90.119	0.300	7412.26	518.71	514.99	710.68	40°07'07.265"N	104°52'23.505"W	0.00	
8276.00†	90.119	0.300	7412.05	618.71	614.99	711.20	40°07'08.253"N	104°52'23.498"W	0.00	
8376.00†	90.119	0.300	7411.84	718.71	714.99	711.73	40°07'09.242"N	104°52'23.492"W	0.00	
8476.00†	90.119	0.300	7411.64	818.71	814.99	712.25	40°07'10.230"N	104°52'23.485"W	0.00	
8576.00†	90.119	0.300	7411.43	918.71	914.99	712.77	40°07'11.218"N	104°52'23.478"W	0.00	
8676.00†	90.119	0.300	7411.22	1018.71	1014.99	713.30	40°07'12.206"N	104°52'23.471"W	0.00	
8776.00†	90.119	0.300	7411.01	1118.71	1114.99	713.82	40°07'13.194"N	104°52'23.464"W	0.00	
8876.00†	90.119	0.300	7410.80	1218.71	1214.98	714.35	40°07'14.183"N	104°52'23.458"W	0.00	
8976.00†	90.119	0.300	7410.60	1318.71	1314.98	714.87	40°07'15.171"N	104°52'23.451"W	0.00	
9076.00†	90.119	0.300	7410.39	1418.71	1414.98	715.39	40°07'16.159"N	104°52'23.444"W	0.00	
9176.00†	90.119	0.300	7410.18	1518.71	1514.98	715.92	40°07'17.147"N	104°52'23.437"W	0.00	
9276.00†	90.119	0.300	7409.97	1618.71	1614.98	716.44	40°07'18.135"N	104°52'23.431"W	0.00	
9376.00†	90.119	0.300	7409.77	1718.71	1714.98	716.96	40°07'19.123"N	104°52'23.424"W	0.00	
9476.00†	90.119	0.300	7409.56	1818.71	1814.97	717.49	40°07'20.112"N	104°52'23.417"W	0.00	
9576.00†	90.119	0.300	7409.35	1918.71	1914.97	718.01	40°07'21.100"N	104°52'23.410"W	0.00	
9676.00†	90.119	0.300	7409.14	2018.71	2014.97	718.54	40°07'22.088"N	104°52'23.403"W	0.00	
9776.00†	90.119	0.300	7408.93	2118.71	2114.97	719.06	40°07'23.076"N	104°52'23.397"W	0.00	
9876.00†	90.119	0.300	7408.73	2218.70	2214.97	719.58	40°07'24.064"N	104°52'23.390"W	0.00	
9976.00†	90.119	0.300	7408.52	2318.70	2314.97	720.11	40°07'25.053"N	104°52'23.383"W	0.00	
10076.00†	90.119	0.300	7408.31	2418.70	2414.96	720.63	40°07'26.041"N	104°52'23.376"W	0.00	
10176.00†	90.119	0.300	7408.10	2518.70	2514.96	721.16	40°07'27.029"N	104°52'23.370"W	0.00	
10276.00†	90.119	0.300	7407.90	2618.70	2614.96	721.68	40°07'28.017"N	104°52'23.363"W	0.00	
10376.00†	90.119	0.300	7407.69	2718.70	2714.96	722.20	40°07'29.005"N	104°52'23.356"W	0.00	
10476.00†	90.119	0.300	7407.48	2818.70	2814.96	722.73	40°07'29.994"N	104°52'23.349"W	0.00	
10576.00†	90.119	0.300	7407.27	2918.70	2914.96	723.25	40°07'30.982"N	104°52'23.342"W	0.00	
10676.00†	90.119	0.300	7407.06	3018.70	3014.95	723.77	40°07'31.970"N	104°52'23.336"W	0.00	
10776.00†	90.119	0.300	7406.86	3118.70	3114.95	724.30	40°07'32.958"N	104°52'23.329"W	0.00	
10876.00†	90.119	0.300	7406.65	3218.70	3214.95	724.82	40°07'33.946"N	104°52'23.322"W	0.00	
10976.00†	90.119	0.300	7406.44	3318.70	3314.95	725.35	40°07'34.935"N	104°52'23.315"W	0.00	
11076.00†	90.119	0.300	7406.23	3418.70	3414.95	725.87	40°07'35.923"N	104°52'23.309"W	0.00	
11176.00†	90.119	0.300	7406.03	3518.70	3514.95	726.39	40°07'36.911"N	104°52'23.302"W	0.00	
11276.00†	90.119	0.300	7405.82	3618.70	3614.95	726.92	40°07'37.899"N	104°52'23.295"W	0.00	
11376.00†	90.119	0.300	7405.61	3718.70	3714.94	727.44	40°07'38.887"N	104°52'23.288"W	0.00	
11476.00†	90.119	0.300	7405.40	3818.70	3814.94	727.96	40°07'39.876"N	104°52'23.281"W	0.00	
11576.00†	90.119	0.300	7405.20	3918.70	3914.94	728.49	40°07'40.864"N	104°52'23.275"W	0.00	
11676.00†	90.119	0.300	7404.99	4018.70	4014.94	729.01	40°07'41.852"N	104°52'23.268"W	0.00	
11776.00†	90.119	0.300	7404.78	4118.70	4114.94	729.54	40°07'42.840"N	104°52'23.261"W	0.00	
11876.00†	90.119	0.300	7404.57	4218.70	4214.94	730.06	40°07'43.828"N	104°52'23.254"W	0.00	
11976.00†	90.119	0.300	7404.36	4318.70	4314.93	730.58	40°07'44.817"N	104°52'23.248"W	0.00	
12076.00†	90.119	0.300	7404.16	4418.70	4414.93	731.11	40°07'45.805"N	104°52'23.241"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12176.00†	90.119	0.300	7403.95	4518.70	4514.93	731.63	40°07'46.793"N	104°52'23.234"W	0.00	
12276.00†	90.119	0.300	7403.74	4618.70	4614.93	732.15	40°07'47.781"N	104°52'23.227"W	0.00	
12376.00†	90.119	0.300	7403.53	4718.70	4714.93	732.68	40°07'48.769"N	104°52'23.220"W	0.00	
12476.00†	90.119	0.300	7403.33	4818.70	4814.93	733.20	40°07'49.758"N	104°52'23.214"W	0.00	
12576.00†	90.119	0.300	7403.12	4918.70	4914.92	733.73	40°07'50.746"N	104°52'23.207"W	0.00	
12632.59	90.119	0.300	7403.00 ¹	4975.29	4971.52	734.02	40°07'51.305"N	104°52'23.203"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: WHIPSAKE 27N-22HZ PWB Ref Wellpath: WHIPSAKE 27N-22HZ (REV-A.1) 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	16.00	1374.00	1358.00	16.00	1373.98	0.00	0.00	0.10	-2.73
9.625in Casing Surface	16.00	1354.00	1338.00	16.00	1353.98	0.00	0.00	0.16	-2.66
8.75in Open Hole	1374.00	7817.10	6443.10	1373.98	7413.00	0.10	-2.73	156.10	708.80
7in Casing Intermediate	16.00	7817.10	7801.10	16.00	7413.00	0.00	0.00	156.10	708.80
6.125in Open Hole	7817.10	12632.59	4815.49	7413.00	7403.00	156.10	708.80	4971.52	734.02
4.5in Casing Production	16.00	12632.59	12616.59	16.00	7403.00	0.00	0.00	4971.52	734.02

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.22-T2N-R67W SECTION LINES		-29.00	4347.13	-2026.26	3172530.63	1290513.02	40°07'45.134"N	104°52'58.739"W	polygon
1) WHIPSAKE 27N-22HZ BHL ON PLAT REV-2 (1'FNL & 1600'FEL, SEC.22)	12632.59	7403.00	4971.52	734.02	3175286.33	1291156.80	40°07'51.305"N	104°52'23.203"W	point
WHIPSAKE 27N-22HZ BHL ON PLAT REV-1 (1'FNL & 1660'FEL, SEC.22)		7410.00	4971.86	673.89	3175226.20	1291156.72	40°07'51.308"N	104°52'23.977"W	point
WHIPSAKE 27N-22HZ LANDBOX		7410.00	0.00	0.00	3174587.36	1286180.45	40°07'02.176"N	104°52'32.653"W	polygon

SURVEY PROGRAM - Ref Wellbore: WHIPSAKE 27N-22HZ PWB Ref Wellpath: WHIPSAKE 27N-22HZ (REV-A.1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1276.00	Generic gyro - continuous (Standard)		WHIPSAKE 27N-22HZ AWB
1276.00	7817.10	NaviTrak (MAGCORR,IFR)		WHIPSAKE 27N-22HZ PWB
7817.10	12632.94	NaviTrak (MAGCORR,IFR)		WHIPSAKE 27N-22HZ PWB

Planned Wellpath Report

WHIPSNAKE 27N-22HZ (REV-A.1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 WHIPSNAKE 27N-22HZ (300'FSL & 2308'FEL, SEC.22)
Area	COLORADO	Well	WHIPSNAKE 27N-22HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WHIPSNAKE 27N-22HZ PWB
Facility	SEC.22-T2N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1221.02	0.305	253.416	1221.00	FOX HILLS MARKER
4171.11	11.000	120.440	4128.00	PARKMAN
4550.07	11.000	120.440	4500.00	SUSSEX
7378.51	46.260	0.300	7254.00	SHARON SPRINGS
7499.81	58.390	0.300	7328.00	NIOBRARA A
7675.97	76.006	0.300	7396.00	NIOBRARA B

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1276.00	0.270	234.800	1275.98	TIE ONTO GYROS
1454.02	0.270	234.800	1454.00	BEGIN NUDGE
2009.72	11.000	120.440	2006.33	END NUDGE
5770.49	11.000	120.440	5698.00	BEGIN DROP
6320.49	0.000	0.300	6244.63	END DROP
6915.91	0.000	0.300	6840.05	KOP, BUILD @ 10°/100'
7817.10	90.119	0.300	7413.00	LANDING POINT
12632.59	90.119	0.300	7403.00	TOTAL DEPTH