

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
 Field: WELD COUNTY (KERR MCGEE) Well: WISHBONE 1N-24HZ
 Facility: SEC.24-T2N-R66W Wellbore: WISHBONE 1N-24HZ PWB

Plot reference wellpath is WISHBONE 1N-24HZ (PERMIT) PWP

True vertical depths are referenced to Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB)	North Reference: True north
Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) to Mean Sea Level: 5069 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wiljer02 on 2/21/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.24-T2N-R66W	3214370.720	1286534.230	40°07'02.590"N	104°44'00.532"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)	22.23	3650.48	3218020.719	1286588.007	40°07'02.806"N	104°43'13.544"W
Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) to Mud line (At Slot: SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24))						5069ft
Mean Sea Level to Mud line (At Slot: SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24))						0ft
Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) to Mean Sea Level						5069ft

Survey Program

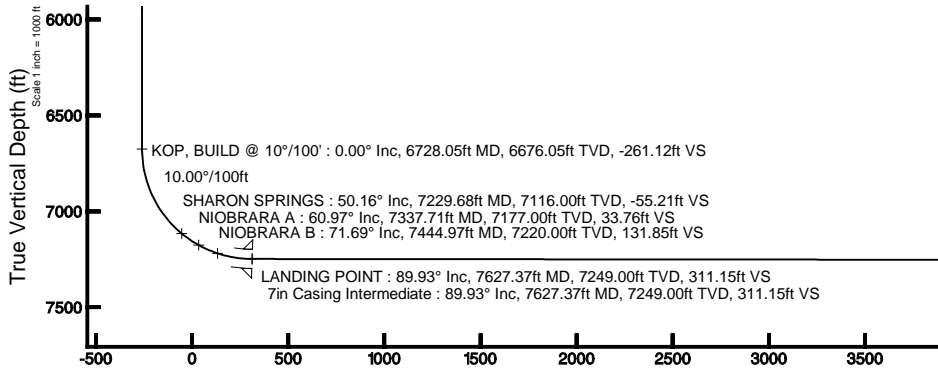
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7627.37	Navitrak	Navitrak (MagCorr)		WISHBONE 1N-24HZ PWB
7627.37	11838.26	OnTrak	OnTrak (MagCorr)		WISHBONE 1N-24HZ PWB

Well Profile Data

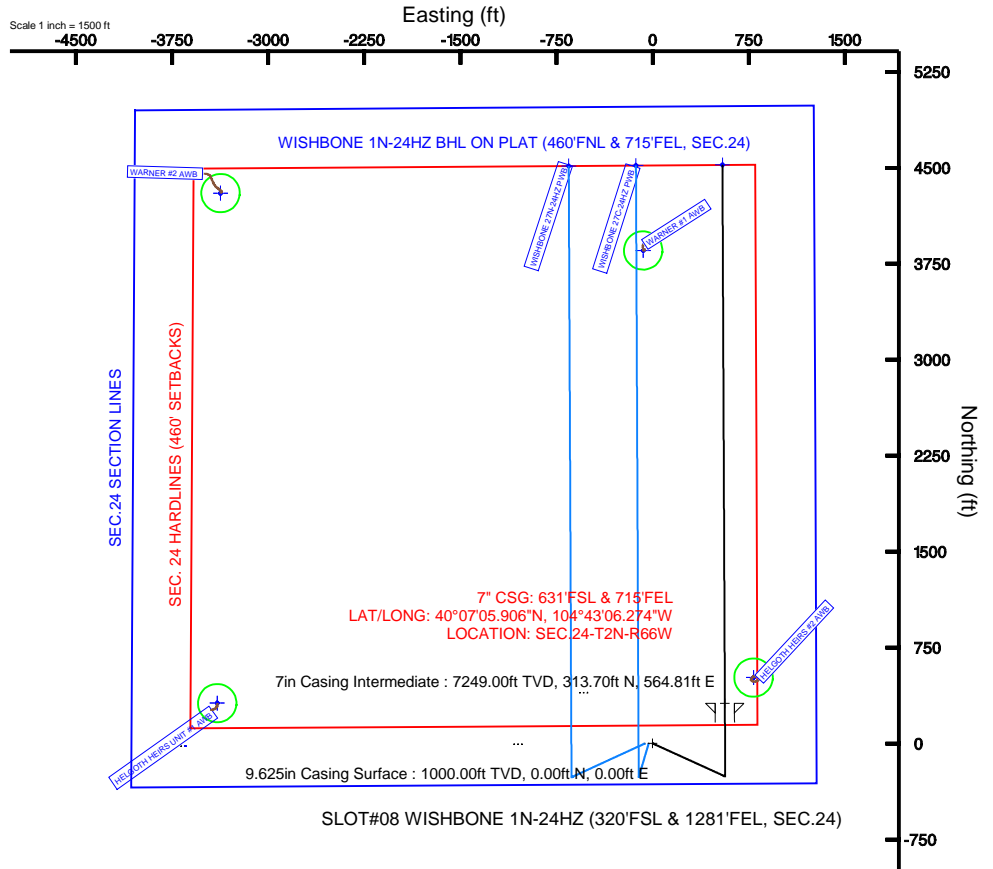
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-ON	17.00	0.000	114.500	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	114.500	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1600.00	10.000	114.500	1597.47	-18.05	39.60	2.00	-18.23
BEGIN DROP	4689.47	10.000	114.500	4640.00	-240.52	527.78	0.00	-242.90
END DROP	5189.47	0.000	359.742	5137.47	-258.57	567.38	2.00	-261.12
KOP, BUILD @ 10°/100'	6728.05	0.000	359.742	6676.05	-258.57	567.38	0.00	-261.12
LANDING POINT	7627.37	89.932	359.742	7249.00	313.70	564.81	10.00	311.15
TOTAL DEPTH	11838.26	89.932	359.742	7254.00	4524.54	545.83	0.00	4522.04

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.24 SECTION LINES		-8.00	-21.59	-3650.49	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W
HELGOETH HERS #2 150' RADIUS		9.00	515.08	798.38	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W
HELGOETH HERS UNIT #1 150' RADIUS		9.00	314.94	-3398.42	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W
WARNER #1 150' RADIUS		9.00	3895.65	-73.02	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W
WARNER #2 150' RADIUS		9.00	4303.96	-3372.70	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W
WISHBONE 1N-24HZ BHL ON PLAT (460'FNL & 715'FEL, SEC.24)	11838.26	7254.00	4524.54	545.83	3218526.73	1291116.98	40°07'47.511"N	104°43'06.517"W
SEC. 24 HARDLINES (460' SETBACKS)		7592.00	-21.59	-3650.49	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W



Azimuth 359.74° with reference 0.00 N, 0.00 E



BGGM (1945.0 to 2014.0) Dip: 66.75° Field: 52758.5 nT
 Magnetic North is 8.65 degrees East of True North (at 2/14/2013)

To correct azimuth from Magnetic to True add 8.65 degrees
 For example: if the Magnetic North Azimuth = 90 degs, then the True North Azimuth = 90 + 8.65 = 98.65

TOTAL DEPTH : 89.93° Inc, 11838.26ft MD, 7254.00ft TVD, 4522.04ft VS
 WISHBONE 1N-24HZ BHL ON PLAT (460'FNL & 715'FEL, SEC.24)

Scale 1 inch = 1000 ft



Planned Wellpath Report
 WISHBONE 1N-24HZ (PERMIT) PWP
 Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.99996	Report Generated	2/21/2013 at 14:30:22
Convergence at slot	0.50° East	Database/Source file	WellArchitectDB/WISHBONE_1N-24HZ_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	22.23	3650.48	3218020.72	1286588.01	40°07'02.806"N	104°43'13.544"W
Facility Reference Pt			3214370.72	1286534.23	40°07'02.589"N	104°44'00.532"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM	
Calculation method	Minimum curvature Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) to Mud Line at Slot (SLOT#08 WISHBONE
MD Reference Pt	Rig on SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24) (RKB) Section Origin
Field Vertical Reference	Mean Sea Level Section Azimuth



Planned Wellpath Report
 WISHBONE 1N-24HZ (PERMIT) PWP
 Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH DATA (133 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	114.500	0.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
17.00	0.000	114.500	17.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	TIE-ON
117.00†	0.000	114.500	117.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
217.00†	0.000	114.500	217.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
317.00†	0.000	114.500	317.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
417.00†	0.000	114.500	417.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
517.00†	0.000	114.500	517.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
617.00†	0.000	114.500	617.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
717.00†	0.000	114.500	717.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
817.00†	0.000	114.500	817.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
889.00†	0.000	114.500	889.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	FOX HILLS
917.00†	0.000	114.500	917.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
1017.00†	0.000	114.500	1017.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	
1100.00	0.000	114.500	1100.00	0.00	0.00	0.00	40°07'02.806"N	104°43'13.544"W	0.00	BEGIN NUDDGE
1117.00†	0.340	114.500	1117.00	-0.02	-0.02	0.05	40°07'02.806"N	104°43'13.543"W	2.00	
1217.00†	2.340	114.500	1216.97	-1.00	-0.99	2.17	40°07'02.796"N	104°43'13.516"W	2.00	
1317.00†	4.340	114.500	1316.79	-3.44	-3.41	7.48	40°07'02.772"N	104°43'13.448"W	2.00	
1417.00†	6.340	114.500	1416.35	-7.34	-7.27	15.94	40°07'02.734"N	104°43'13.339"W	2.00	
1517.00†	8.340	114.500	1515.53	-12.69	-12.56	27.57	40°07'02.682"N	104°43'13.189"W	2.00	
1600.00	10.000	114.500	1597.47	-18.23	-18.05	39.60	40°07'02.628"N	104°43'13.034"W	2.00	END NUDDGE
1617.00†	10.000	114.500	1614.21	-19.46	-19.27	42.29	40°07'02.616"N	104°43'13.000"W	0.00	
1717.00†	10.000	114.500	1712.69	-26.74	-26.47	58.09	40°07'02.544"N	104°43'12.796"W	0.00	
1817.00†	10.000	114.500	1811.17	-34.01	-33.67	73.89	40°07'02.473"N	104°43'12.593"W	0.00	
1917.00†	10.000	114.500	1909.65	-41.28	-40.88	89.69	40°07'02.402"N	104°43'12.389"W	0.00	
2017.00†	10.000	114.500	2008.13	-48.55	-48.08	105.50	40°07'02.331"N	104°43'12.186"W	0.00	
2117.00†	10.000	114.500	2106.61	-55.82	-55.28	121.30	40°07'02.260"N	104°43'11.983"W	0.00	
2217.00†	10.000	114.500	2205.09	-63.10	-62.48	137.10	40°07'02.189"N	104°43'11.779"W	0.00	
2317.00†	10.000	114.500	2303.57	-70.37	-69.68	152.90	40°07'02.117"N	104°43'11.576"W	0.00	
2417.00†	10.000	114.500	2402.05	-77.64	-76.88	168.70	40°07'02.046"N	104°43'11.373"W	0.00	
2517.00†	10.000	114.500	2500.53	-84.91	-84.08	184.50	40°07'01.975"N	104°43'11.169"W	0.00	
2617.00†	10.000	114.500	2599.01	-92.18	-91.28	200.30	40°07'01.904"N	104°43'10.966"W	0.00	
2717.00†	10.000	114.500	2697.50	-99.46	-98.48	216.10	40°07'01.833"N	104°43'10.762"W	0.00	
2817.00†	10.000	114.500	2795.98	-106.73	-105.69	231.91	40°07'01.762"N	104°43'10.559"W	0.00	
2917.00†	10.000	114.500	2894.46	-114.00	-112.89	247.71	40°07'01.690"N	104°43'10.356"W	0.00	
3017.00†	10.000	114.500	2992.94	-121.27	-120.09	263.51	40°07'01.619"N	104°43'10.152"W	0.00	
3117.00†	10.000	114.500	3091.42	-128.55	-127.29	279.31	40°07'01.548"N	104°43'09.949"W	0.00	
3217.00†	10.000	114.500	3189.90	-135.82	-134.49	295.11	40°07'01.477"N	104°43'09.745"W	0.00	
3317.00†	10.000	114.500	3288.38	-143.09	-141.69	310.91	40°07'01.406"N	104°43'09.542"W	0.00	
3417.00†	10.000	114.500	3386.86	-150.36	-148.89	326.71	40°07'01.335"N	104°43'09.339"W	0.00	
3517.00†	10.000	114.500	3485.34	-157.63	-156.09	342.52	40°07'01.263"N	104°43'09.135"W	0.00	
3617.00†	10.000	114.500	3583.82	-164.91	-163.29	358.32	40°07'01.192"N	104°43'08.932"W	0.00	
3717.00†	10.000	114.500	3682.30	-172.18	-170.50	374.12	40°07'01.121"N	104°43'08.728"W	0.00	
3817.00†	10.000	114.500	3780.78	-179.45	-177.70	389.92	40°07'01.050"N	104°43'08.525"W	0.00	
3917.00†	10.000	114.500	3879.26	-186.72	-184.90	405.72	40°07'00.979"N	104°43'08.322"W	0.00	
4017.00†	10.000	114.500	3977.75	-193.99	-192.10	421.52	40°07'00.908"N	104°43'08.118"W	0.00	



Planned Wellpath Report
 WISHBONE 1N-24HZ (PERMIT) PWP
 Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH DATA (133 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	10.000	114.500	4076.23	-201.27	-199.30	437.32	40°07'00.836"N	104°43'07.915"W	0.00	
4159.42†	10.000	114.500	4118.00	-204.35	-202.35	444.03	40°07'00.806"N	104°43'07.829"W	0.00	PARKMAN
4217.00†	10.000	114.500	4174.71	-208.54	-206.50	453.12	40°07'00.765"N	104°43'07.712"W	0.00	
4317.00†	10.000	114.500	4273.19	-215.81	-213.70	468.93	40°07'00.694"N	104°43'07.508"W	0.00	
4417.00†	10.000	114.500	4371.67	-223.08	-220.90	484.73	40°07'00.623"N	104°43'07.305"W	0.00	
4517.00†	10.000	114.500	4470.15	-230.36	-228.10	500.53	40°07'00.552"N	104°43'07.101"W	0.00	
4559.50†	10.000	114.500	4512.00	-233.45	-231.16	507.24	40°07'00.522"N	104°43'07.015"W	0.00	SUSSEX
4617.00†	10.000	114.500	4568.63	-237.63	-235.30	516.33	40°07'00.481"N	104°43'06.898"W	0.00	
4689.47	10.000	114.500	4640.00	-242.90	-240.52	527.78	40°07'00.429"N	104°43'06.751"W	0.00	BEGIN DROP
4717.00†	9.449	114.500	4667.13	-244.85	-242.45	532.01	40°07'00.410"N	104°43'06.696"W	2.00	
4817.00†	7.449	114.500	4766.04	-251.00	-248.54	545.38	40°07'00.350"N	104°43'06.524"W	2.00	
4917.00†	5.449	114.500	4865.41	-255.70	-253.20	555.60	40°07'00.304"N	104°43'06.393"W	2.00	
5017.00†	3.449	114.500	4965.10	-258.95	-256.42	562.66	40°07'00.272"N	104°43'06.302"W	2.00	
5117.00†	1.449	114.500	5065.00	-260.74	-258.19	566.55	40°07'00.254"N	104°43'06.252"W	2.00	
5189.47	0.000	359.742	5137.47	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	2.00	END DROP
5217.00†	0.000	359.742	5164.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5317.00†	0.000	359.742	5264.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5417.00†	0.000	359.742	5364.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5517.00†	0.000	359.742	5464.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5617.00†	0.000	359.742	5564.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5717.00†	0.000	359.742	5664.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5817.00†	0.000	359.742	5764.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
5917.00†	0.000	359.742	5864.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6017.00†	0.000	359.742	5964.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6117.00†	0.000	359.742	6064.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6217.00†	0.000	359.742	6164.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6317.00†	0.000	359.742	6264.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6417.00†	0.000	359.742	6364.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6517.00†	0.000	359.742	6464.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6617.00†	0.000	359.742	6564.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6717.00†	0.000	359.742	6664.99	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	
6728.05	0.000	359.742	6676.05	-261.12	-258.57	567.38	40°07'00.251"N	104°43'06.241"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	8.895	359.742	6764.64	-254.23	-251.68	567.35	40°07'00.319"N	104°43'06.241"W	10.00	
6917.00†	18.895	359.742	6861.59	-230.25	-227.70	567.25	40°07'00.556"N	104°43'06.243"W	10.00	
7017.00†	28.895	359.742	6952.90	-189.80	-187.24	567.06	40°07'00.956"N	104°43'06.245"W	10.00	
7117.00†	38.895	359.742	7035.80	-134.10	-131.55	566.81	40°07'01.506"N	104°43'06.248"W	10.00	
7217.00†	48.895	359.742	7107.77	-64.85	-62.30	566.50	40°07'02.190"N	104°43'06.252"W	10.00	
7229.68†	50.163	359.742	7116.00	-55.21	-52.66	566.46	40°07'02.286"N	104°43'06.253"W	10.00	SHARON SPRINGS
7317.00†	58.895	359.742	7166.62	15.84	18.39	566.14	40°07'02.988"N	104°43'06.257"W	10.00	
7337.71†	60.966	359.742	7177.00	33.76	36.31	566.06	40°07'03.165"N	104°43'06.258"W	10.00	NIOBRARA A
7417.00†	68.895	359.742	7210.57	105.52	108.07	565.73	40°07'03.874"N	104°43'06.262"W	10.00	
7444.97†	71.692	359.742	7220.00	131.85	134.40	565.61	40°07'04.134"N	104°43'06.264"W	10.00	NIOBRARA B
7517.00†	78.895	359.742	7238.27	201.48	204.02	565.30	40°07'04.822"N	104°43'06.268"W	10.00	
7617.00†	88.895	359.742	7248.90	300.78	303.33	564.85	40°07'05.803"N	104°43'06.273"W	10.00	
7627.37	89.932	359.742	7249.00	311.15	313.70	564.81	40°07'05.906"N	104°43'06.274"W	10.00	LANDING POINT



Planned Wellpath Report
WISHBONE 1N-24HZ (PERMIT) PWP
 Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH DATA (133 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	89.932	359.742	7249.11	400.78	403.33	564.40	40°07'06.792"N	104°43'06.279"W	0.00	
7817.00†	89.932	359.742	7249.23	500.78	503.33	563.95	40°07'07.780"N	104°43'06.285"W	0.00	
7917.00†	89.932	359.742	7249.35	600.78	603.33	563.50	40°07'08.768"N	104°43'06.291"W	0.00	
8017.00†	89.932	359.742	7249.47	700.78	703.33	563.05	40°07'09.756"N	104°43'06.296"W	0.00	
8117.00†	89.932	359.742	7249.58	800.78	803.32	562.60	40°07'10.744"N	104°43'06.302"W	0.00	
8217.00†	89.932	359.742	7249.70	900.78	903.32	562.15	40°07'11.733"N	104°43'06.308"W	0.00	
8317.00†	89.932	359.742	7249.82	1000.78	1003.32	561.70	40°07'12.721"N	104°43'06.314"W	0.00	
8417.00†	89.932	359.742	7249.94	1100.78	1103.32	561.25	40°07'13.709"N	104°43'06.319"W	0.00	
8517.00†	89.932	359.742	7250.06	1200.78	1203.32	560.80	40°07'14.697"N	104°43'06.325"W	0.00	
8617.00†	89.932	359.742	7250.18	1300.78	1303.32	560.34	40°07'15.685"N	104°43'06.331"W	0.00	
8717.00†	89.932	359.742	7250.30	1400.78	1403.32	559.89	40°07'16.674"N	104°43'06.337"W	0.00	
8817.00†	89.932	359.742	7250.41	1500.78	1503.32	559.44	40°07'17.662"N	104°43'06.343"W	0.00	
8917.00†	89.932	359.742	7250.53	1600.78	1603.32	558.99	40°07'18.650"N	104°43'06.348"W	0.00	
9017.00†	89.932	359.742	7250.65	1700.78	1703.31	558.54	40°07'19.638"N	104°43'06.354"W	0.00	
9117.00†	89.932	359.742	7250.77	1800.78	1803.31	558.09	40°07'20.626"N	104°43'06.360"W	0.00	
9217.00†	89.932	359.742	7250.89	1900.78	1903.31	557.64	40°07'21.615"N	104°43'06.366"W	0.00	
9317.00†	89.932	359.742	7251.01	2000.78	2003.31	557.19	40°07'22.603"N	104°43'06.371"W	0.00	
9417.00†	89.932	359.742	7251.13	2100.78	2103.31	556.74	40°07'23.591"N	104°43'06.377"W	0.00	
9517.00†	89.932	359.742	7251.25	2200.78	2203.31	556.29	40°07'24.579"N	104°43'06.383"W	0.00	
9617.00†	89.932	359.742	7251.36	2300.78	2303.31	555.84	40°07'25.567"N	104°43'06.389"W	0.00	
9717.00†	89.932	359.742	7251.48	2400.78	2403.31	555.39	40°07'26.556"N	104°43'06.395"W	0.00	
9817.00†	89.932	359.742	7251.60	2500.78	2503.31	554.94	40°07'27.544"N	104°43'06.400"W	0.00	
9917.00†	89.932	359.742	7251.72	2600.78	2603.30	554.49	40°07'28.532"N	104°43'06.406"W	0.00	
10017.00†	89.932	359.742	7251.84	2700.78	2703.30	554.03	40°07'29.520"N	104°43'06.412"W	0.00	
10117.00†	89.932	359.742	7251.96	2800.78	2803.30	553.58	40°07'30.508"N	104°43'06.418"W	0.00	
10217.00†	89.932	359.742	7252.08	2900.78	2903.30	553.13	40°07'31.497"N	104°43'06.423"W	0.00	
10317.00†	89.932	359.742	7252.19	3000.78	3003.30	552.68	40°07'32.485"N	104°43'06.429"W	0.00	
10417.00†	89.932	359.742	7252.31	3100.78	3103.30	552.23	40°07'33.473"N	104°43'06.435"W	0.00	
10517.00†	89.932	359.742	7252.43	3200.78	3203.30	551.78	40°07'34.461"N	104°43'06.441"W	0.00	
10617.00†	89.932	359.742	7252.55	3300.78	3303.30	551.33	40°07'35.449"N	104°43'06.446"W	0.00	
10717.00†	89.932	359.742	7252.67	3400.78	3403.30	550.88	40°07'36.438"N	104°43'06.452"W	0.00	
10817.00†	89.932	359.742	7252.79	3500.78	3503.29	550.43	40°07'37.426"N	104°43'06.458"W	0.00	
10917.00†	89.932	359.742	7252.91	3600.78	3603.29	549.98	40°07'38.414"N	104°43'06.464"W	0.00	
11017.00†	89.932	359.742	7253.03	3700.78	3703.29	549.53	40°07'39.402"N	104°43'06.470"W	0.00	
11117.00†	89.932	359.742	7253.14	3800.78	3803.29	549.08	40°07'40.391"N	104°43'06.475"W	0.00	
11217.00†	89.932	359.742	7253.26	3900.78	3903.29	548.63	40°07'41.379"N	104°43'06.481"W	0.00	
11317.00†	89.932	359.742	7253.38	4000.78	4003.29	548.18	40°07'42.367"N	104°43'06.487"W	0.00	
11417.00†	89.932	359.742	7253.50	4100.78	4103.29	547.72	40°07'43.355"N	104°43'06.493"W	0.00	
11517.00†	89.932	359.742	7253.62	4200.78	4203.29	547.27	40°07'44.343"N	104°43'06.498"W	0.00	
11617.00†	89.932	359.742	7253.74	4300.78	4303.29	546.82	40°07'45.332"N	104°43'06.504"W	0.00	
11717.00†	89.932	359.742	7253.86	4400.78	4403.28	546.37	40°07'46.320"N	104°43'06.510"W	0.00	
11817.00†	89.932	359.742	7253.97	4500.78	4503.28	545.92	40°07'47.308"N	104°43'06.516"W	0.00	
11838.26	89.932	359.742	7254.00†	4522.04	4524.54	545.83	40°07'47.518"N	104°43'06.517"W	0.00	TOTAL DEPTH



Planned Wellpath Report
WISHBONE 1N-24HZ (PERMIT) PWP
 Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: WISHBONE 1N-24HZ PWB Ref Wellpath: WISHBONE 1N-24HZ (PERMIT) 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	1000.00	983.00	17.00	1000.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1000.00	983.00	17.00	1000.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1000.00	7627.37	6627.37	1000.00	7249.00	0.00	0.00	313.70	564.81
7in Casing Intermediate	17.00	7627.37	7610.37	17.00	7249.00	0.00	0.00	313.70	564.81
6.125in Open Hole	7627.37	11838.26	4210.89	7249.00	7254.00	313.70	564.81	4524.54	545.83
4.5in Casing Production	17.00	11838.26	11821.26	17.00	7254.00	0.00	0.00	4524.54	545.83

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.24 SECTION LINES		-8.00	-21.59	-3650.49	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon
HELGOOTH HEIRS #2 150' RADIUS		9.00	515.08	788.38	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W	circle
HELGOOTH HEIRS UNIT #1 150' RADIUS		9.00	314.94	-3398.42	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W	circle
WARNER #1 150' RADIUS		9.00	3855.65	-73.02	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	circle
WARNER #2 150' RADIUS		9.00	4303.96	-3372.70	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W	circle
1) WISHBONE 1N-24HZ BHL ON PLAT (460'FNL & 715'FEL, SEC.24)	11838.26	7254.00	4524.54	545.83	3218526.73	1291116.98	40°07'47.518"N	104°43'06.517"W	point
SEC. 24 HARDLINES (460' SETBACKS)		7592.00	-21.59	-3650.49	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon

SURVEY PROGRAM - Ref Wellbore: WISHBONE 1N-24HZ PWB Ref Wellpath: WISHBONE 1N-24HZ (PERMIT) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7627.37	NaviTrak (MagCorr)		WISHBONE 1N-24HZ PWB
7627.37	11838.26	OnTrak (MagCorr)		WISHBONE 1N-24HZ PWB



Planned Wellpath Report
 WISHBONE 1N-24HZ (PERMIT) PWP
 Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 WISHBONE 1N-24HZ (320'FSL & 1281'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 1N-24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 1N-24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
889.00	0.000	114.500	889.00	FOX HILLS	
4159.42	10.000	114.500	4118.00	PARKMAN	
4559.50	10.000	114.500	4512.00	SUSSEX	
7229.68	50.163	359.742	7116.00	SHARON SPRINGS	
7337.71	60.966	359.742	7177.00	NIOBRARA A	
7444.97	71.692	359.742	7220.00	NIOBRARA B	