

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24)
 Field: WELD COUNTY (KERR MCGEE) Well: WISHBONE 3N-E24HZ
 Facility: SEC.24-T2N-R66W Wellbore: WISHBONE 3N-E24HZ PWB

Plot reference wellpath is WISHBONE 3N-E24HZ (PERMIT) PWB

True vertical depths are referenced to Rig on SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (50'), US feet
Measured depths are referenced to Rig on SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24) (RKB)	North Reference: True north
Rig on SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24) (RKB) to Mean Sea Level: 5101 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wjse02 on 2/25/2013

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.24-T2N-R66W		3214370.720	1286534.230	40°07'02.589"N	104°44'00.532"W		
Slot		Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24)		9.58	1612.68	3215583.191	1286557.731	40°07'02.683"N	104°43'59.774"W
Rig on SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24) (RKB) to Mud line (At Slot: SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24))						5101 ft	
Mean Sea Level to Mud line (At Slot: SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24))						0 ft	
Rig on SLOT#19 WISHBONE 3N-E24HZ (320°FSL & 2030°FWL, SEC.24) (RKB) to Mean Sea Level						5101 ft	

Survey Program

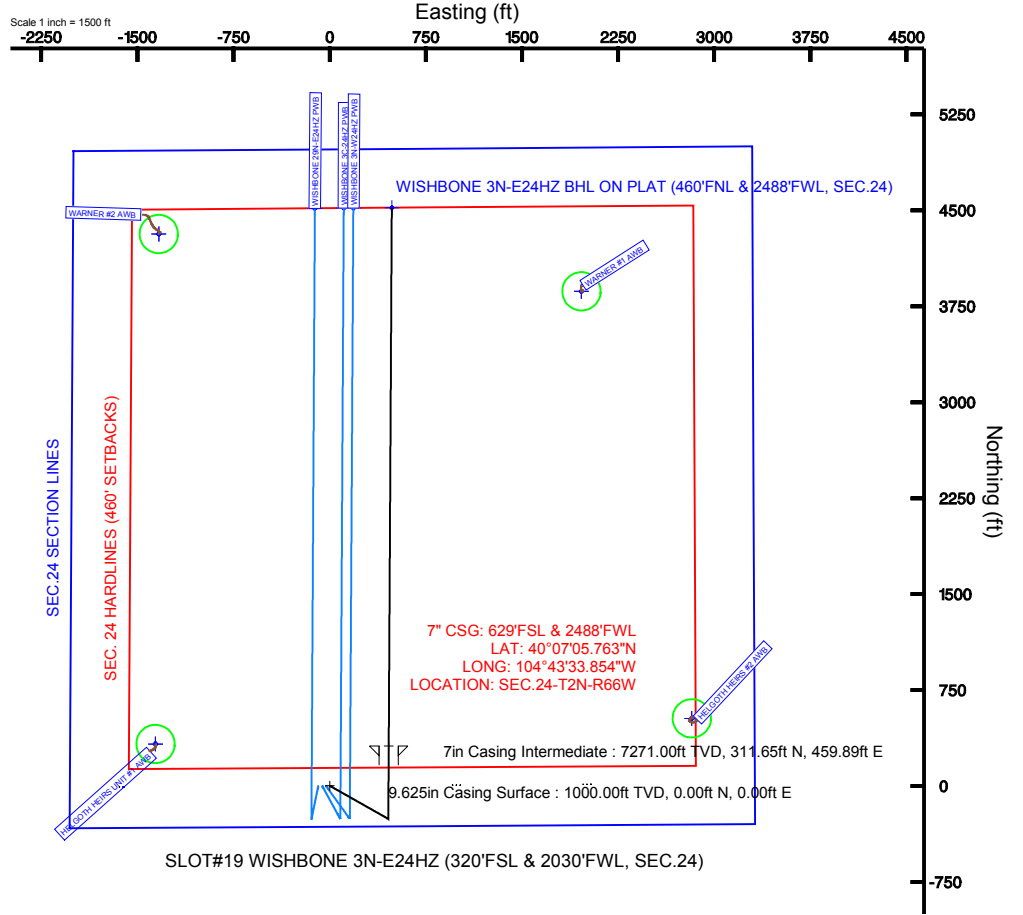
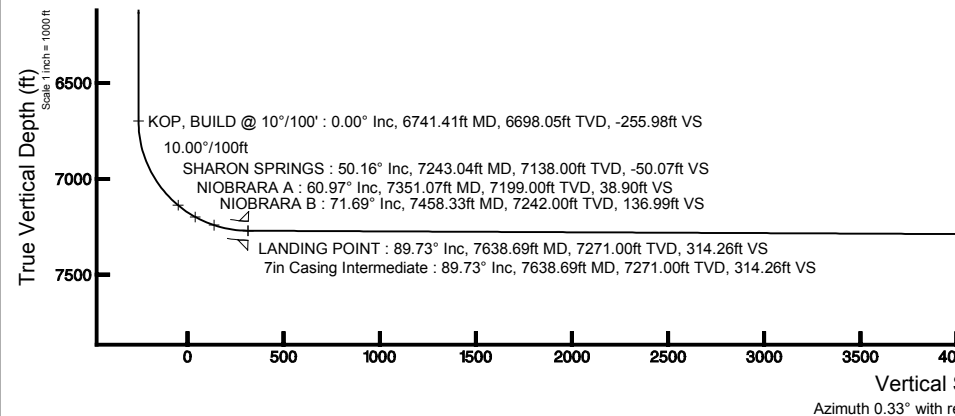
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7638.69	NaviTrak	NaviTrak (MagCorr)		WISHBONE 3N-E24HZ PWB
7638.69	11849.17	OnTrak	OnTrak (MagCorr)		WISHBONE 3N-E24HZ PWB

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	119.520	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1200.00	0.000	119.520	1200.00	0.00	0.00	0.00	0.00
END NUDGE	1700.00	10.000	119.520	1697.47	-21.44	37.87	2.00	-21.23
BEGIN DROP	4220.83	10.000	119.520	4180.00	-237.13	418.78	0.00	-234.75
END DROP	4720.83	0.000	0.325	4677.47	-258.57	456.66	2.00	-255.98
KOP, BUILD @ 10°/100'	6741.41	0.000	0.325	6698.05	-258.57	456.66	0.00	-255.98
LANDING POINT	7638.69	89.728	0.325	7271.00	311.65	459.89	10.00	314.26
TOTAL DEPTH	11849.17	89.728	0.325	7291.00	4522.01	483.76	0.00	4524.68

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		34.00	-9.36	-1612.68	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W
HELGOOTH HERS #2 150' RADIUS	41.00	527.68	2826.14	3218804.51	1287109.98	40°07'07.890"N	104°43'03.396"W	
HELGOOTH HERS UNIT #1 150' RADIUS	41.00	327.19	-1360.64	3214819.81	1286873.05	40°07'05.916"N	104°43'57.288"W	
WARNER #1 150' RADIUS	41.00	3868.18	1964.47	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	
WARNER #2 150' RADIUS	41.00	4316.22	-1335.25	3214810.45	1290861.97	40°07'47.370"N	104°43'56.964"W	
WISHBONE 3N-E24HZ BHL ON PLAT (460°FNL & 2488°FWL, SEC.24)	11849.17	7291.00	4522.01	483.76	3216427.53	1291083.59	40°07'47.370"N	104°43'33.546"W
SEC. 24 HARDLINES (460' SETBACKS)		7624.00	-9.36	-1612.68	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W



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



Planned Wellpath Report
 WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ 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	2/25/2013 at 10:47:41
Convergence at slot	0.50° East	Database/Source file	WellArchitectDB/WISHBONE_3N-E24HZ_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	9.56	1612.68	3215983.19	1286557.73	40°07'02.683"N	104°43'39.774"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#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot Rig on SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24) (RKB) Rig on SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24) (RKB) to Mud Line at Slot (SLOT#19 WISHB)
MD Reference Pt	Rig on SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24) (RKB) Section Origin
Field Vertical Reference	Mean Sea Level Section Azimuth



Planned Wellpath Report
 WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ 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	119.520	0.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
17.00	0.000	119.520	17.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	TIE-ON
117.00†	0.000	119.520	117.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
217.00†	0.000	119.520	217.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
317.00†	0.000	119.520	317.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
417.00†	0.000	119.520	417.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
517.00†	0.000	119.520	517.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
617.00†	0.000	119.520	617.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
717.00†	0.000	119.520	717.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
817.00†	0.000	119.520	817.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
917.00†	0.000	119.520	917.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
921.00†	0.000	119.520	921.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	FOX HILLS
1017.00†	0.000	119.520	1017.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
1117.00†	0.000	119.520	1117.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	
1200.00	0.000	119.520	1200.00	0.00	0.00	0.00	40°07'02.683"N	104°43'39.774"W	0.00	BEGIN NUDGE
1217.00†	0.340	119.520	1217.00	-0.02	-0.02	0.04	40°07'02.683"N	104°43'39.773"W	2.00	
1317.00†	2.340	119.520	1316.97	-1.17	-1.18	2.08	40°07'02.671"N	104°43'39.747"W	2.00	
1417.00†	4.340	119.520	1416.79	-4.01	-4.05	7.15	40°07'02.643"N	104°43'39.682"W	2.00	
1517.00†	6.340	119.520	1516.35	-8.55	-8.63	15.25	40°07'02.598"N	104°43'39.578"W	2.00	
1617.00†	8.340	119.520	1615.53	-14.78	-14.93	26.36	40°07'02.535"N	104°43'39.435"W	2.00	
1700.00	10.000	119.520	1697.47	-21.23	-21.44	37.87	40°07'02.471"N	104°43'39.287"W	2.00	END NUDGE
1717.00†	10.000	119.520	1714.21	-22.67	-22.90	40.44	40°07'02.457"N	104°43'39.253"W	0.00	
1817.00†	10.000	119.520	1812.69	-31.14	-31.46	55.55	40°07'02.372"N	104°43'39.059"W	0.00	
1917.00†	10.000	119.520	1911.17	-39.61	-40.01	70.66	40°07'02.288"N	104°43'38.864"W	0.00	
2017.00†	10.000	119.520	2009.65	-48.08	-48.57	85.77	40°07'02.203"N	104°43'38.670"W	0.00	
2117.00†	10.000	119.520	2108.13	-56.55	-57.12	100.88	40°07'02.118"N	104°43'38.475"W	0.00	
2217.00†	10.000	119.520	2206.61	-65.02	-65.68	115.99	40°07'02.034"N	104°43'38.281"W	0.00	
2317.00†	10.000	119.520	2305.09	-73.49	-74.24	131.10	40°07'01.949"N	104°43'38.086"W	0.00	
2417.00†	10.000	119.520	2403.57	-81.96	-82.79	146.22	40°07'01.865"N	104°43'37.892"W	0.00	
2517.00†	10.000	119.520	2502.05	-90.43	-91.35	161.33	40°07'01.780"N	104°43'37.697"W	0.00	
2617.00†	10.000	119.520	2600.53	-98.90	-99.90	176.44	40°07'01.696"N	104°43'37.503"W	0.00	
2717.00†	10.000	119.520	2699.01	-107.37	-108.46	191.55	40°07'01.611"N	104°43'37.308"W	0.00	
2817.00†	10.000	119.520	2797.50	-115.84	-117.02	206.66	40°07'01.527"N	104°43'37.114"W	0.00	
2917.00†	10.000	119.520	2895.98	-124.31	-125.57	221.77	40°07'01.442"N	104°43'36.919"W	0.00	
3017.00†	10.000	119.520	2994.46	-132.78	-134.13	236.88	40°07'01.358"N	104°43'36.725"W	0.00	
3117.00†	10.000	119.520	3092.94	-141.25	-142.68	251.99	40°07'01.273"N	104°43'36.530"W	0.00	
3217.00†	10.000	119.520	3191.42	-149.72	-151.24	267.10	40°07'01.188"N	104°43'36.336"W	0.00	
3317.00†	10.000	119.520	3289.90	-158.19	-159.80	282.21	40°07'01.104"N	104°43'36.141"W	0.00	
3417.00†	10.000	119.520	3388.38	-166.66	-168.35	297.32	40°07'01.019"N	104°43'35.947"W	0.00	
3517.00†	10.000	119.520	3486.86	-175.13	-176.91	312.43	40°07'00.935"N	104°43'35.752"W	0.00	
3617.00†	10.000	119.520	3585.34	-183.60	-185.47	327.54	40°07'00.850"N	104°43'35.558"W	0.00	
3717.00†	10.000	119.520	3683.82	-192.07	-194.02	342.65	40°07'00.766"N	104°43'35.364"W	0.00	
3817.00†	10.000	119.520	3782.30	-200.55	-202.58	357.76	40°07'00.681"N	104°43'35.169"W	0.00	
3917.00†	10.000	119.520	3880.78	-209.02	-211.13	372.87	40°07'00.597"N	104°43'34.975"W	0.00	
4017.00†	10.000	119.520	3979.26	-217.49	-219.69	387.98	40°07'00.512"N	104°43'34.780"W	0.00	



Planned Wellpath Report
WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ 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	119.520	4077.75	-225.96	-228.25	403.10	40°07'00.427"N	104°43'34.586"W	0.00	
4180.21†	10.000	119.520	4140.00	-231.31	-233.65	412.65	40°07'00.374"N	104°43'34.463"W	0.00	PARKMAN
4217.00†	10.000	119.520	4176.23	-234.43	-236.80	418.21	40°07'00.343"N	104°43'34.391"W	0.00	
4220.83	10.000	119.520	4180.00	-234.75	-237.13	418.78	40°07'00.340"N	104°43'34.384"W	0.00	BEGIN DROP
4317.00†	8.077	119.520	4274.97	-242.12	-244.57	431.93	40°07'00.266"N	104°43'34.214"W	2.00	
4417.00†	6.077	119.520	4374.20	-248.13	-250.64	442.65	40°07'00.206"N	104°43'34.076"W	2.00	
4517.00†	4.077	119.520	4473.81	-252.44	-255.00	450.35	40°07'00.163"N	104°43'33.977"W	2.00	
4577.31†	2.871	119.520	4534.00	-254.23	-256.80	453.53	40°07'00.145"N	104°43'33.936"W	2.00	SUSSEX
4617.00†	2.077	119.520	4573.66	-255.06	-257.65	455.02	40°07'00.137"N	104°43'33.917"W	2.00	
4717.00†	0.077	119.520	4673.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	2.00	
4720.83	0.000	0.325	4677.47	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	2.00	END DROP
4817.00†	0.000	0.325	4773.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
4917.00†	0.000	0.325	4873.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5017.00†	0.000	0.325	4973.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5117.00†	0.000	0.325	5073.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5217.00†	0.000	0.325	5173.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5317.00†	0.000	0.325	5273.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5417.00†	0.000	0.325	5373.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5517.00†	0.000	0.325	5473.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5617.00†	0.000	0.325	5573.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5717.00†	0.000	0.325	5673.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5817.00†	0.000	0.325	5773.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
5917.00†	0.000	0.325	5873.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6017.00†	0.000	0.325	5973.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6117.00†	0.000	0.325	6073.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6217.00†	0.000	0.325	6173.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6317.00†	0.000	0.325	6273.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6417.00†	0.000	0.325	6373.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6517.00†	0.000	0.325	6473.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6617.00†	0.000	0.325	6573.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6717.00†	0.000	0.325	6673.63	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	
6741.41	0.000	0.325	6698.05	-255.98	-258.57	456.66	40°07'00.128"N	104°43'33.896"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	7.559	0.325	6773.41	-251.00	-253.60	456.69	40°07'00.177"N	104°43'33.896"W	10.00	
6917.00†	17.559	0.325	6870.90	-229.29	-231.88	456.81	40°07'00.391"N	104°43'33.894"W	10.00	
7017.00†	27.559	0.325	6963.13	-190.97	-193.57	457.03	40°07'00.770"N	104°43'33.891"W	10.00	
7117.00†	37.559	0.325	7047.31	-137.22	-139.82	457.33	40°07'01.301"N	104°43'33.887"W	10.00	
7217.00†	47.559	0.325	7120.87	-69.67	-72.27	457.71	40°07'01.969"N	104°43'33.882"W	10.00	
7243.04†	50.163	0.325	7138.00	-50.07	-52.66	457.83	40°07'02.163"N	104°43'33.881"W	10.00	SHARON SPRINGS
7317.00†	57.559	0.325	7181.59	9.62	7.02	458.16	40°07'02.752"N	104°43'33.877"W	10.00	
7351.07†	60.966	0.325	7199.00	38.90	36.30	458.33	40°07'03.042"N	104°43'33.875"W	10.00	NIOBRARA A
7417.00†	67.559	0.325	7227.61	98.26	95.66	458.67	40°07'03.628"N	104°43'33.870"W	10.00	
7458.33†	71.692	0.325	7242.00	136.99	134.39	458.89	40°07'04.011"N	104°43'33.867"W	10.00	NIOBRARA B
7517.00†	77.559	0.325	7257.55	193.54	190.94	459.21	40°07'04.570"N	104°43'33.863"W	10.00	
7617.00†	87.559	0.325	7270.48	292.57	289.97	459.77	40°07'05.548"N	104°43'33.856"W	10.00	
7638.69	89.728	0.325	7271.00	314.26	311.65	459.89	40°07'05.763"N	104°43'33.854"W	10.00	LANDING POINT



Planned Wellpath Report
WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ 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†	89.728	0.325	7271.37	392.56	389.96	460.33	40°07'06.537"N	104°43'33.849"W	0.00	
7817.00†	89.728	0.325	7271.84	492.56	489.96	460.90	40°07'07.525"N	104°43'33.841"W	0.00	
7917.00†	89.728	0.325	7272.32	592.56	589.95	461.47	40°07'08.513"N	104°43'33.834"W	0.00	
8017.00†	89.728	0.325	7272.79	692.56	689.95	462.04	40°07'09.501"N	104°43'33.827"W	0.00	
8117.00†	89.728	0.325	7273.27	792.56	789.95	462.60	40°07'10.489"N	104°43'33.819"W	0.00	
8217.00†	89.728	0.325	7273.74	892.56	889.95	463.17	40°07'11.478"N	104°43'33.812"W	0.00	
8317.00†	89.728	0.325	7274.22	992.56	989.94	463.74	40°07'12.466"N	104°43'33.805"W	0.00	
8417.00†	89.728	0.325	7274.69	1092.56	1089.94	464.30	40°07'13.454"N	104°43'33.797"W	0.00	
8517.00†	89.728	0.325	7275.17	1192.56	1189.94	464.87	40°07'14.442"N	104°43'33.790"W	0.00	
8617.00†	89.728	0.325	7275.64	1292.55	1289.94	465.44	40°07'15.430"N	104°43'33.783"W	0.00	
8717.00†	89.728	0.325	7276.12	1392.55	1389.93	466.00	40°07'16.418"N	104°43'33.775"W	0.00	
8817.00†	89.728	0.325	7276.59	1492.55	1489.93	466.57	40°07'17.407"N	104°43'33.768"W	0.00	
8917.00†	89.728	0.325	7277.07	1592.55	1589.93	467.14	40°07'18.395"N	104°43'33.761"W	0.00	
9017.00†	89.728	0.325	7277.54	1692.55	1689.92	467.71	40°07'19.383"N	104°43'33.753"W	0.00	
9117.00†	89.728	0.325	7278.02	1792.55	1789.92	468.27	40°07'20.371"N	104°43'33.746"W	0.00	
9217.00†	89.728	0.325	7278.50	1892.55	1889.92	468.84	40°07'21.359"N	104°43'33.739"W	0.00	
9317.00†	89.728	0.325	7278.97	1992.55	1989.92	469.41	40°07'22.348"N	104°43'33.731"W	0.00	
9417.00†	89.728	0.325	7279.45	2092.55	2089.91	469.97	40°07'23.336"N	104°43'33.724"W	0.00	
9517.00†	89.728	0.325	7279.92	2192.54	2189.91	470.54	40°07'24.324"N	104°43'33.717"W	0.00	
9617.00†	89.728	0.325	7280.40	2292.54	2289.91	471.11	40°07'25.312"N	104°43'33.709"W	0.00	
9717.00†	89.728	0.325	7280.87	2392.54	2389.91	471.67	40°07'26.300"N	104°43'33.702"W	0.00	
9817.00†	89.728	0.325	7281.35	2492.54	2489.90	472.24	40°07'27.288"N	104°43'33.695"W	0.00	
9917.00†	89.728	0.325	7281.82	2592.54	2589.90	472.81	40°07'28.277"N	104°43'33.688"W	0.00	
10017.00†	89.728	0.325	7282.30	2692.54	2689.90	473.38	40°07'29.265"N	104°43'33.680"W	0.00	
10117.00†	89.728	0.325	7282.77	2792.54	2789.89	473.94	40°07'30.253"N	104°43'33.673"W	0.00	
10217.00†	89.728	0.325	7283.25	2892.54	2889.89	474.51	40°07'31.241"N	104°43'33.666"W	0.00	
10317.00†	89.728	0.325	7283.72	2992.54	2989.89	475.08	40°07'32.229"N	104°43'33.658"W	0.00	
10417.00†	89.728	0.325	7284.20	3092.53	3089.89	475.64	40°07'33.218"N	104°43'33.651"W	0.00	
10517.00†	89.728	0.325	7284.67	3192.53	3189.88	476.21	40°07'34.206"N	104°43'33.644"W	0.00	
10617.00†	89.728	0.325	7285.15	3292.53	3289.88	476.78	40°07'35.194"N	104°43'33.636"W	0.00	
10717.00†	89.728	0.325	7285.62	3392.53	3389.88	477.34	40°07'36.182"N	104°43'33.629"W	0.00	
10817.00†	89.728	0.325	7286.10	3492.53	3489.88	477.91	40°07'37.170"N	104°43'33.622"W	0.00	
10917.00†	89.728	0.325	7286.57	3592.53	3589.87	478.48	40°07'38.158"N	104°43'33.614"W	0.00	
11017.00†	89.728	0.325	7287.05	3692.53	3689.87	479.05	40°07'39.147"N	104°43'33.607"W	0.00	
11117.00†	89.728	0.325	7287.52	3792.53	3789.87	479.61	40°07'40.135"N	104°43'33.600"W	0.00	
11217.00†	89.728	0.325	7288.00	3892.53	3889.86	480.18	40°07'41.123"N	104°43'33.592"W	0.00	
11317.00†	89.728	0.325	7288.47	3992.52	3989.86	480.75	40°07'42.111"N	104°43'33.585"W	0.00	
11417.00†	89.728	0.325	7288.95	4092.52	4089.86	481.31	40°07'43.099"N	104°43'33.578"W	0.00	
11517.00†	89.728	0.325	7289.42	4192.52	4189.86	481.88	40°07'44.088"N	104°43'33.570"W	0.00	
11617.00†	89.728	0.325	7289.90	4292.52	4289.85	482.45	40°07'45.076"N	104°43'33.563"W	0.00	
11717.00†	89.728	0.325	7290.37	4392.52	4389.85	483.01	40°07'46.064"N	104°43'33.556"W	0.00	
11817.00†	89.728	0.325	7290.85	4492.52	4489.85	483.58	40°07'47.052"N	104°43'33.548"W	0.00	
11849.17	89.728	0.325	7291.00†	4524.68	4522.01	483.76	40°07'47.370"N	104°43'33.546"W	0.00	TOTAL DEPTH



Planned Wellpath Report
WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ PWB
Facility	SEC.24-T2N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: WISHBONE 3N-E24HZ PWB Ref Wellpath: WISHBONE 3N-E24HZ (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	7638.69	6638.69	1000.00	7271.00	0.00	0.00	311.65	459.89
7in Casing Intermediate	17.00	7638.69	7621.69	17.00	7271.00	0.00	0.00	311.65	459.89
6.125in Open Hole	7638.69	11849.17	4210.48	7271.00	7291.00	311.65	459.89	4522.01	483.76
4.5in Casing Production	17.00	11849.17	11832.17	17.00	7291.00	0.00	0.00	4522.01	483.76

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		24.00	-9.36	-1612.68	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon
HELGOOTH HEIRS #2 150' RADIUS		41.00	527.68	2826.14	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W	circle
HELGOOTH HEIRS UNIT #1 150' RADIUS		41.00	327.19	-1360.64	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W	circle
WARNER #1 150' RADIUS		41.00	3868.18	1964.47	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	circle
WARNER #2 150' RADIUS		41.00	4316.22	-1335.25	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W	circle
1) WISHBONE 3N-E24HZ BHL ON PLAT (460'FNL & 2488'FWL, SEC.24)	11849.17	7291.00	4522.01	483.76	3216427.53	1291083.59	40°07'47.370"N	104°43'33.546"W	point
SEC. 24 HARDLINES (460' SETBACKS)		7624.00	-9.36	-1612.68	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon

SURVEY PROGRAM - Ref Wellbore: WISHBONE 3N-E24HZ PWB Ref Wellpath: WISHBONE 3N-E24HZ (PERMIT) PWP					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
17.00	7638.69	NaviTrak (MagCorr)		WISHBONE 3N-E24HZ PWB	
7638.69	11849.17	OnTrak (MagCorr)		WISHBONE 3N-E24HZ PWB	



Planned Wellpath Report
 WISHBONE 3N-E24HZ (PERMIT) PWP
 Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#19 WISHBONE 3N-E24HZ (320'FSL & 2030'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 3N-E24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 3N-E24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
921.00	0.000	119.520	921.00	FOX HILLS
4180.21	10.000	119.520	4140.00	PARKMAN
4577.31	2.871	119.520	4534.00	SUSSEX
7243.04	50.163	0.325	7138.00	SHARON SPRINGS
7351.07	60.966	0.325	7199.00	NIOBRARA A
7458.33	71.692	0.325	7242.00	NIOBRARA B