

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24)
 Field: WELD COUNTY (KERR MCGEE) Well: WISHBONE 29N-W24HZ
 Facility: SEC.24-T2N-R66W Wellbore: WISHBONE 29N-W24HZ PWB

Plot reference wellpath is WISHBONE 29N-W24HZ (PERMIT) PWP

True vertical depths are referenced to Rig on SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24) (RKB)	North Reference: True north
Rig on SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24) (RKB) to Mean Sea Level: 5099 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wiljef02 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°43'00.532"W

Slot	Local N (ft)	Local E (ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24)	3.34	592.60	3214363.337	1286542.697	40°07'02.622"N	104°43'52.903"W

Rig on SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24) (RKB) to Mud line (At Slot: SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24))	5099ft
Mean Sea Level to Mud line (At Slot: SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24))	0ft
Rig on SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24) (RKB) to Mean Sea Level	5099ft

Survey Program

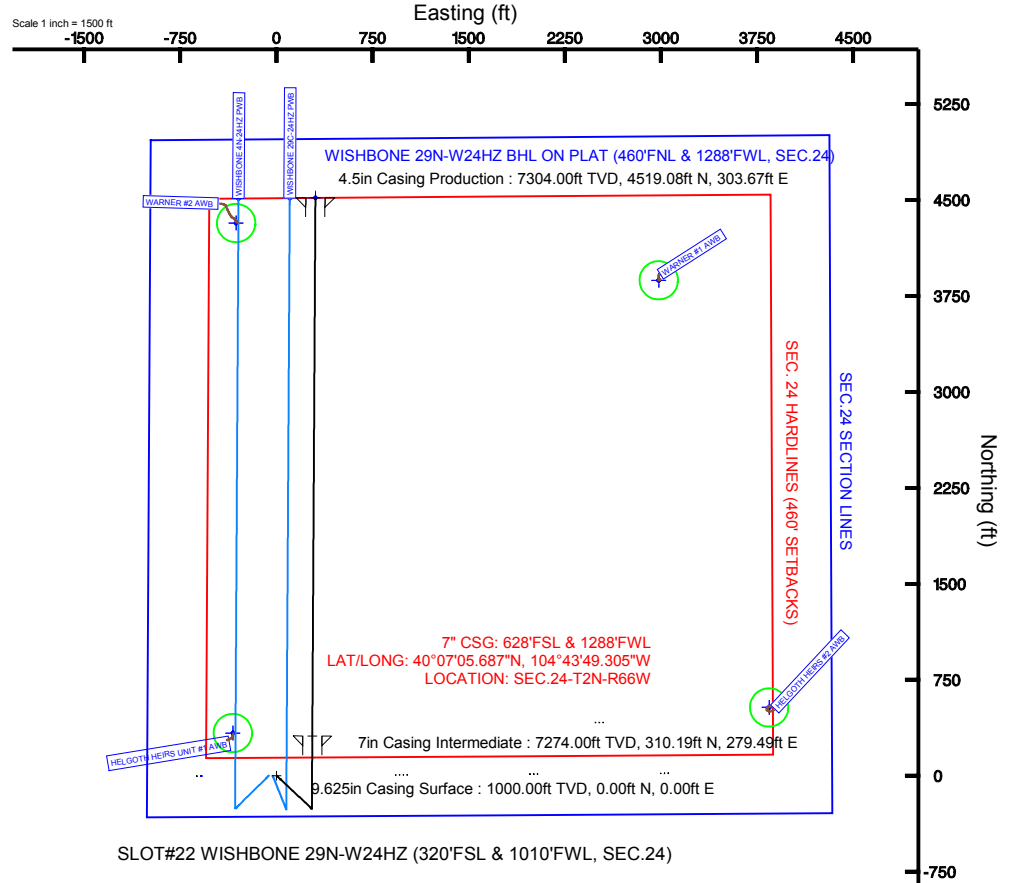
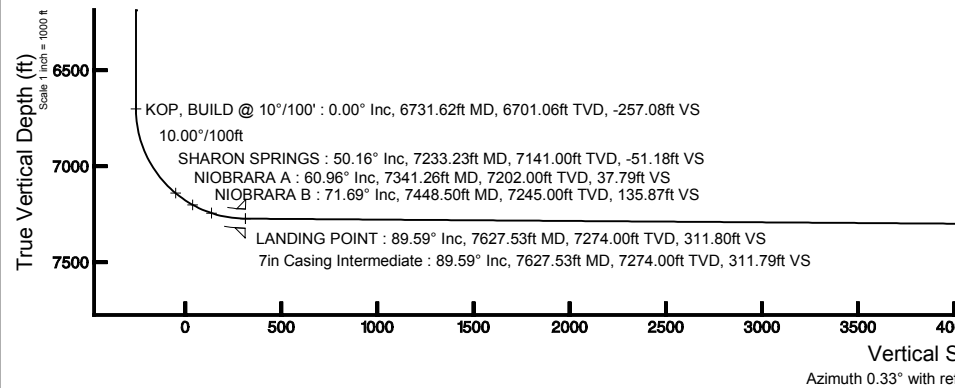
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7627.53	Navitrak	Navitrak (MagCorr)		WISHBONE 29N-W24HZ PWB
7627.53	11836.59	OnTrak	OnTrak (MagCorr)		WISHBONE 29N-W24HZ PWB

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	133.120	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	133.120	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1600.00	10.000	133.120	1597.47	-29.75	31.77	2.00	-29.57
BEGIN DROP	3278.03	10.000	133.120	3250.00	-228.92	244.46	0.00	-227.51
END DROP	3778.03	0.000	0.329	3747.47	-258.67	276.23	2.00	-257.08
KOP, BUILD @ 10°/100'	6731.62	0.000	0.329	6701.06	-258.67	276.23	0.00	-257.08
LANDING POINT	7627.53	89.592	0.329	7274.00	310.20	279.49	10.00	311.80
TOTAL DEPTH	11836.59	89.592	0.329	7304.00	4519.08	303.67	0.00	4520.75

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	22.00	-3.23	-592.70	3214370.72	1286534.33	40°07'02.590"N	104°43'00.532"W	
HELGO TH HEIRS #2 150' RADIUS	39.00	533.99	3846.11	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W	
HELGO TH HEIRS UNIT #1 150' RADIUS	39.00	333.33	-340.67	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W	
WARNER #1 150' RADIUS	39.00	3874.45	2984.30	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	
WARNER #2 150' RADIUS	39.00	4322.36	-315.44	3214610.45	1290861.97	40°07'45.330"N	104°43'56.964"W	
WISHBONE 29N-W24HZ BHL ON PLAT (460°FNL & 1288°FWL, SEC.24)	11836.59	7304.00	4519.08	303.67	3215227.81	1291064.04	40°07'47.280"N	104°43'48.994"W
SEC.24 HARDLINES (460' SETBACKS)	7622.00	-3.23	-592.70	3214370.72	1286534.33	40°07'02.590"N	104°43'00.532"W	



SLOT#22 WISHBONE 29N-W24HZ (320°FSL & 1010°FWL, SEC.24)



BGM (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

4.5in Casing Production : 89.59° Inc, 11836.59ft MD, 7304.00ft TVD, 4520.75ft VS
 TOTAL DEPTH : 89.59° Inc, 11836.59ft MD, 7304.00ft TVD, 4520.75ft VS
 WISHBONE 29N-W24HZ BHL ON PLAT (460°FNL & 1288°FWL, SEC.24)

Scale 1 inch = 1000 ft



Planned Wellpath Report
 WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ 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 12:14:42
Convergence at slot	0.50° East	Database/Source file	WellArchitectDB/_WISHBONE_29N-W24HZ_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3.34	592.69	3214963.34	1286542.70	40°07'02.622"N	104°43'52.903"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#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot Rig on SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24) (RKB) Rig on SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24) (RKB) to Mud Line at Slot (SLOT#22 WIS
MD Reference Pt	Rig on SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24) (RKB) Section Origin
Field Vertical Reference	Mean Sea Level Section Azimuth



Planned Wellpath Report
WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ 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	133.120	0.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
17.00	0.000	133.120	17.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	TIE-ON
117.00†	0.000	133.120	117.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
217.00†	0.000	133.120	217.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
317.00†	0.000	133.120	317.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
417.00†	0.000	133.120	417.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
517.00†	0.000	133.120	517.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
617.00†	0.000	133.120	617.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
717.00†	0.000	133.120	717.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
817.00†	0.000	133.120	817.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
917.00†	0.000	133.120	917.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
919.00†	0.000	133.120	919.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	FOX HILLS
1017.00†	0.000	133.120	1017.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	
1100.00	0.000	133.120	1100.00	0.00	0.00	0.00	40°07'02.622"N	104°43'52.903"W	0.00	BEGIN NUDDGE
1117.00†	0.340	133.120	1117.00	-0.03	-0.03	0.04	40°07'02.622"N	104°43'52.903"W	2.00	
1217.00†	2.340	133.120	1216.97	-1.62	-1.63	1.74	40°07'02.606"N	104°43'52.881"W	2.00	
1317.00†	4.340	133.120	1316.79	-5.58	-5.61	6.00	40°07'02.567"N	104°43'52.826"W	2.00	
1417.00†	6.340	133.120	1416.35	-11.90	-11.98	12.79	40°07'02.504"N	104°43'52.738"W	2.00	
1517.00†	8.340	133.120	1515.53	-20.58	-20.71	22.11	40°07'02.417"N	104°43'52.618"W	2.00	
1600.00	10.000	133.120	1597.47	-29.57	-29.75	31.77	40°07'02.328"N	104°43'52.494"W	2.00	END NUDDGE
1617.00†	10.000	133.120	1614.21	-31.57	-31.77	33.92	40°07'02.308"N	104°43'52.466"W	0.00	
1717.00†	10.000	133.120	1712.69	-43.37	-43.64	46.60	40°07'02.191"N	104°43'52.303"W	0.00	
1817.00†	10.000	133.120	1811.17	-55.16	-55.51	59.27	40°07'02.073"N	104°43'52.140"W	0.00	
1917.00†	10.000	133.120	1909.65	-66.96	-67.37	71.95	40°07'01.956"N	104°43'51.977"W	0.00	
2017.00†	10.000	133.120	2008.13	-78.76	-79.24	84.62	40°07'01.839"N	104°43'51.814"W	0.00	
2117.00†	10.000	133.120	2106.61	-90.55	-91.11	97.30	40°07'01.722"N	104°43'51.651"W	0.00	
2217.00†	10.000	133.120	2205.09	-102.35	-102.98	109.97	40°07'01.604"N	104°43'51.487"W	0.00	
2317.00†	10.000	133.120	2303.57	-114.15	-114.85	122.65	40°07'01.487"N	104°43'51.324"W	0.00	
2417.00†	10.000	133.120	2402.05	-125.94	-126.72	135.32	40°07'01.370"N	104°43'51.161"W	0.00	
2517.00†	10.000	133.120	2500.53	-137.74	-138.59	148.00	40°07'01.252"N	104°43'50.998"W	0.00	
2617.00†	10.000	133.120	2599.01	-149.54	-150.46	160.67	40°07'01.135"N	104°43'50.835"W	0.00	
2717.00†	10.000	133.120	2697.50	-161.33	-162.33	173.35	40°07'01.018"N	104°43'50.672"W	0.00	
2817.00†	10.000	133.120	2795.98	-173.13	-174.20	186.02	40°07'00.901"N	104°43'50.509"W	0.00	
2917.00†	10.000	133.120	2894.46	-184.92	-186.07	198.70	40°07'00.783"N	104°43'50.345"W	0.00	
3017.00†	10.000	133.120	2992.94	-196.72	-197.94	211.37	40°07'00.666"N	104°43'50.182"W	0.00	
3117.00†	10.000	133.120	3091.42	-208.52	-209.81	224.05	40°07'00.549"N	104°43'50.019"W	0.00	
3217.00†	10.000	133.120	3189.90	-220.31	-221.68	236.72	40°07'00.431"N	104°43'49.856"W	0.00	
3278.03	10.000	133.120	3250.00	-227.51	-228.92	244.46	40°07'00.360"N	104°43'49.756"W	0.00	BEGIN DROP
3317.00†	9.221	133.120	3288.43	-231.93	-233.37	249.21	40°07'00.316"N	104°43'49.695"W	2.00	
3417.00†	7.221	133.120	3387.39	-241.65	-243.14	259.64	40°07'00.219"N	104°43'49.561"W	2.00	
3517.00†	5.221	133.120	3486.80	-249.01	-250.55	267.55	40°07'00.146"N	104°43'49.459"W	2.00	
3617.00†	3.221	133.120	3586.52	-254.00	-255.58	272.92	40°07'00.096"N	104°43'49.390"W	2.00	
3717.00†	1.221	133.120	3686.44	-256.64	-258.22	275.75	40°07'00.070"N	104°43'49.354"W	2.00	
3778.03	0.000	0.329	3747.47	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	2.00	END DROP
3817.00†	0.000	0.329	3786.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	



Planned Wellpath Report
WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ 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
3917.00†	0.000	0.329	3886.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4017.00†	0.000	0.329	3986.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4117.00†	0.000	0.329	4086.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4173.56†	0.000	0.329	4143.00	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	PARKMAN
4217.00†	0.000	0.329	4186.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4317.00†	0.000	0.329	4286.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4417.00†	0.000	0.329	4386.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4517.00†	0.000	0.329	4486.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4567.56†	0.000	0.329	4537.00	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	SUSSEX
4617.00†	0.000	0.329	4586.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4717.00†	0.000	0.329	4686.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4817.00†	0.000	0.329	4786.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
4917.00†	0.000	0.329	4886.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5017.00†	0.000	0.329	4986.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5117.00†	0.000	0.329	5086.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5217.00†	0.000	0.329	5186.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5317.00†	0.000	0.329	5286.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5417.00†	0.000	0.329	5386.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5517.00†	0.000	0.329	5486.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5617.00†	0.000	0.329	5586.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5717.00†	0.000	0.329	5686.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5817.00†	0.000	0.329	5786.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
5917.00†	0.000	0.329	5886.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6017.00†	0.000	0.329	5986.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6117.00†	0.000	0.329	6086.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6217.00†	0.000	0.329	6186.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6317.00†	0.000	0.329	6286.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6417.00†	0.000	0.329	6386.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6517.00†	0.000	0.329	6486.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6617.00†	0.000	0.329	6586.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6717.00†	0.000	0.329	6686.44	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	
6731.62	0.000	0.329	6701.06	-257.08	-258.67	276.23	40°07'00.066"N	104°43'49.348"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	8.538	0.329	6786.12	-250.73	-252.32	276.26	40°07'00.129"N	104°43'49.347"W	10.00	
6917.00†	18.538	0.329	6883.22	-227.35	-228.94	276.40	40°07'00.360"N	104°43'49.345"W	10.00	
7017.00†	28.538	0.329	6974.78	-187.46	-189.05	276.63	40°07'00.754"N	104°43'49.342"W	10.00	
7117.00†	38.538	0.329	7058.03	-132.28	-133.88	276.94	40°07'01.299"N	104°43'49.338"W	10.00	
7217.00†	48.538	0.329	7130.43	-63.49	-65.08	277.34	40°07'01.979"N	104°43'49.333"W	10.00	
7233.23†	50.161	0.329	7141.00	-51.18	-52.77	277.41	40°07'02.101"N	104°43'49.332"W	10.00	SHARON SPRINGS
7317.00†	58.538	0.329	7189.78	16.84	15.24	277.80	40°07'02.773"N	104°43'49.327"W	10.00	
7341.26†	60.964	0.329	7202.00	37.79	36.19	277.92	40°07'02.980"N	104°43'49.326"W	10.00	NIOBRARA A
7417.00†	68.538	0.329	7234.29	106.25	104.65	278.31	40°07'03.656"N	104°43'49.321"W	10.00	
7448.50†	71.689	0.329	7245.00	135.87	134.27	278.48	40°07'03.949"N	104°43'49.318"W	10.00	NIOBRARA B
7517.00†	78.538	0.329	7262.59	202.02	200.43	278.86	40°07'04.603"N	104°43'49.314"W	10.00	
7617.00†	88.538	0.329	7273.83	301.26	299.66	279.43	40°07'05.583"N	104°43'49.306"W	10.00	
7627.53	89.592	0.329	7274.00	311.80	310.20	279.49	40°07'05.687"N	104°43'49.305"W	10.00	LANDING POINT



Planned Wellpath Report
WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ 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†	89.592	0.329	7274.64	401.26	399.66	280.01	40°07'06.571"N	104°43'49.299"W	0.00	
7817.00†	89.592	0.329	7275.35	501.26	499.65	280.58	40°07'07.560"N	104°43'49.291"W	0.00	
7917.00†	89.592	0.329	7276.06	601.25	599.65	281.16	40°07'08.548"N	104°43'49.284"W	0.00	
8017.00†	89.592	0.329	7276.77	701.25	699.65	281.73	40°07'09.536"N	104°43'49.277"W	0.00	
8117.00†	89.592	0.329	7277.49	801.25	799.64	282.30	40°07'10.524"N	104°43'49.269"W	0.00	
8217.00†	89.592	0.329	7278.20	901.25	899.64	282.88	40°07'11.512"N	104°43'49.262"W	0.00	
8317.00†	89.592	0.329	7278.91	1001.24	999.63	283.45	40°07'12.500"N	104°43'49.254"W	0.00	
8417.00†	89.592	0.329	7279.63	1101.24	1099.63	284.03	40°07'13.489"N	104°43'49.247"W	0.00	
8517.00†	89.592	0.329	7280.34	1201.24	1199.62	284.60	40°07'14.477"N	104°43'49.240"W	0.00	
8617.00†	89.592	0.329	7281.05	1301.24	1299.62	285.18	40°07'15.465"N	104°43'49.232"W	0.00	
8717.00†	89.592	0.329	7281.76	1401.23	1399.62	285.75	40°07'16.453"N	104°43'49.225"W	0.00	
8817.00†	89.592	0.329	7282.48	1501.23	1499.61	286.32	40°07'17.441"N	104°43'49.217"W	0.00	
8917.00†	89.592	0.329	7283.19	1601.23	1599.61	286.90	40°07'18.429"N	104°43'49.210"W	0.00	
9017.00†	89.592	0.329	7283.90	1701.23	1699.60	287.47	40°07'19.418"N	104°43'49.202"W	0.00	
9117.00†	89.592	0.329	7284.62	1801.22	1799.60	288.05	40°07'20.406"N	104°43'49.195"W	0.00	
9217.00†	89.592	0.329	7285.33	1901.22	1899.60	288.62	40°07'21.394"N	104°43'49.188"W	0.00	
9317.00†	89.592	0.329	7286.04	2001.22	1999.59	289.20	40°07'22.382"N	104°43'49.180"W	0.00	
9417.00†	89.592	0.329	7286.75	2101.22	2099.59	289.77	40°07'23.370"N	104°43'49.173"W	0.00	
9517.00†	89.592	0.329	7287.47	2201.21	2199.58	290.34	40°07'24.359"N	104°43'49.165"W	0.00	
9617.00†	89.592	0.329	7288.18	2301.21	2299.58	290.92	40°07'25.347"N	104°43'49.158"W	0.00	
9717.00†	89.592	0.329	7288.89	2401.21	2399.57	291.49	40°07'26.335"N	104°43'49.151"W	0.00	
9817.00†	89.592	0.329	7289.60	2501.21	2499.57	292.07	40°07'27.323"N	104°43'49.143"W	0.00	
9917.00†	89.592	0.329	7290.32	2601.20	2599.57	292.64	40°07'28.311"N	104°43'49.136"W	0.00	
10017.00†	89.592	0.329	7291.03	2701.20	2699.56	293.22	40°07'29.299"N	104°43'49.128"W	0.00	
10117.00†	89.592	0.329	7291.74	2801.20	2799.56	293.79	40°07'30.288"N	104°43'49.121"W	0.00	
10217.00†	89.592	0.329	7292.46	2901.20	2899.55	294.36	40°07'31.276"N	104°43'49.114"W	0.00	
10317.00†	89.592	0.329	7293.17	3001.19	2999.55	294.94	40°07'32.264"N	104°43'49.106"W	0.00	
10417.00†	89.592	0.329	7293.88	3101.19	3099.55	295.51	40°07'33.252"N	104°43'49.099"W	0.00	
10517.00†	89.592	0.329	7294.59	3201.19	3199.54	296.09	40°07'34.240"N	104°43'49.091"W	0.00	
10617.00†	89.592	0.329	7295.31	3301.19	3299.54	296.66	40°07'35.228"N	104°43'49.084"W	0.00	
10717.00†	89.592	0.329	7296.02	3401.18	3399.53	297.24	40°07'36.217"N	104°43'49.077"W	0.00	
10817.00†	89.592	0.329	7296.73	3501.18	3499.53	297.81	40°07'37.205"N	104°43'49.069"W	0.00	
10917.00†	89.592	0.329	7297.45	3601.18	3599.52	298.38	40°07'38.193"N	104°43'49.062"W	0.00	
11017.00†	89.592	0.329	7298.16	3701.18	3699.52	298.96	40°07'39.181"N	104°43'49.054"W	0.00	
11117.00†	89.592	0.329	7298.87	3801.17	3799.52	299.53	40°07'40.169"N	104°43'49.047"W	0.00	
11217.00†	89.592	0.329	7299.58	3901.17	3899.51	300.11	40°07'41.157"N	104°43'49.040"W	0.00	
11317.00†	89.592	0.329	7300.30	4001.17	3999.51	300.68	40°07'42.146"N	104°43'49.032"W	0.00	
11417.00†	89.592	0.329	7301.01	4101.17	4099.50	301.26	40°07'43.134"N	104°43'49.025"W	0.00	
11517.00†	89.592	0.329	7301.72	4201.16	4199.50	301.83	40°07'44.122"N	104°43'49.017"W	0.00	
11617.00†	89.592	0.329	7302.43	4301.16	4299.49	302.40	40°07'45.110"N	104°43'49.010"W	0.00	
11717.00†	89.592	0.329	7303.15	4401.16	4399.49	302.98	40°07'46.098"N	104°43'49.002"W	0.00	
11817.00†	89.592	0.329	7303.86	4501.16	4499.49	303.55	40°07'47.086"N	104°43'48.995"W	0.00	
11836.59	89.592	0.329	7304.00†	4520.75	4519.08	303.67	40°07'47.280"N	104°43'48.994"W	0.00	TOTAL DEPTH



Planned Wellpath Report
WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: WISHBONE 29N-W24HZ PWB Ref Wellpath: WISHBONE 29N-W24HZ (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	7627.53	6627.53	1000.00	7274.00	0.00	0.00	310.19	279.49
7in Casing Intermediate	17.00	7627.53	7610.53	17.00	7274.00	0.00	0.00	310.19	279.49
6.125in Open Hole	7627.53	11836.59	4209.06	7274.00	7304.00	310.19	279.49	4519.08	303.67
4.5in Casing Production	17.00	11836.59	11819.59	17.00	7304.00	0.00	0.00	4519.08	303.67

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		22.00	-3.23	-592.70	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon
HELGOOTH HEIRS #2 150' RADIUS		39.00	533.99	3846.11	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W	circle
HELGOOTH HEIRS UNIT #1 150' RADIUS		39.00	333.33	-340.67	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W	circle
WARNER #1 150' RADIUS		39.00	3874.45	2984.30	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	circle
WARNER #2 150' RADIUS		39.00	4322.36	-315.44	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W	circle
1) WISHBONE 29N-W24HZ BHL ON PLAT (460'FNL & 1288'FWL, SEC.24)	11836.59	7304.00	4519.08	303.67	3215227.81	1291064.04	40°07'47.280"N	104°43'48.994"W	point
SEC. 24 HARDLINES (460' SETBACKS)		7622.00	-3.23	-592.70	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon

SURVEY PROGRAM - Ref Wellbore: WISHBONE 29N-W24HZ PWB Ref Wellpath: WISHBONE 29N-W24HZ (PERMIT) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7627.53	NaviTrak (MagCorr)		WISHBONE 29N-W24HZ PWB
7627.53	11836.59	OnTrak (MagCorr)		WISHBONE 29N-W24HZ PWB



Planned Wellpath Report
 WISHBONE 29N-W24HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#22 WISHBONE 29N-W24HZ (320'FSL & 1010'FWL, SEC.24)
Area	COLORADO	Well	WISHBONE 29N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 29N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
919.00	0.000	133.120	919.00	FOX HILLS
4173.56	0.000	0.329	4143.00	PARKMAN
4567.56	0.000	0.329	4537.00	SUSSEX
7233.23	50.161	0.329	7141.00	SHARON SPRINGS
7341.26	60.964	0.329	7202.00	NIOBRARA A
7448.50	71.689	0.329	7245.00	NIOBRARA B