

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)  
Field: WELD COUNTY (KERR MCGEE) Well: WISHBONE 28N-W24HZ  
Facility: SEC.24-T2N-R66W Wellbore: WISHBONE 28N-W24HZ PWB

Plot reference wellpath is WISHBONE 28N-W24HZ (PERMIT) PWP

True vertical depths are referenced to Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB)  
Measured depths are referenced to Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB)  
Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Mean Sea Level: 5075 feet  
Mean Sea Level to Mud line (At Slot: SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)): 0 feet  
Coordinates are in feet referenced to Slot  
Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet  
North Reference: True north  
Scale: True distance  
Depths are in feet  
Created by: precan 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°07'02.569"N	104°44'00.532"W
Site	Local N (ft)	Local E (ft)			Latitude	Longitude
SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)	15.52	2600.51	3214370.885	1286573.322	40°07'02.741"N	104°43'27.086"W
Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Mud line (At Site: SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24))						5075ft
Mean Sea Level to Mud line (At Site: SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24))						0ft
Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Mean Sea Level						5075ft

## Survey Program

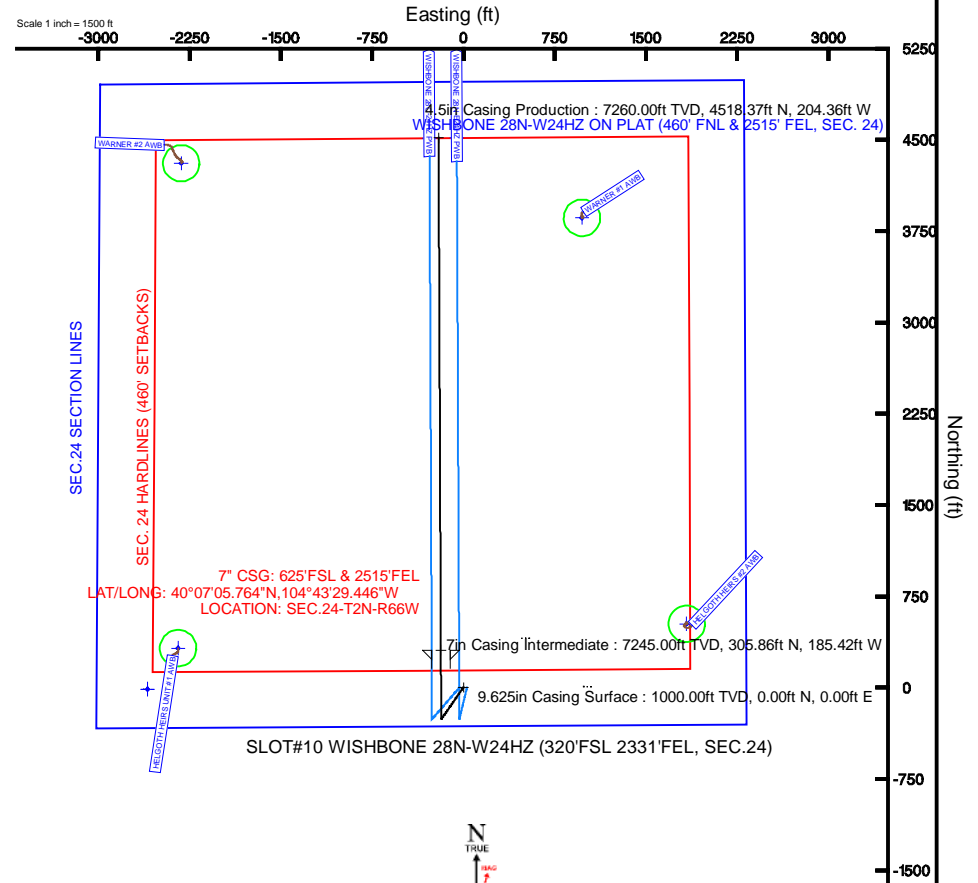
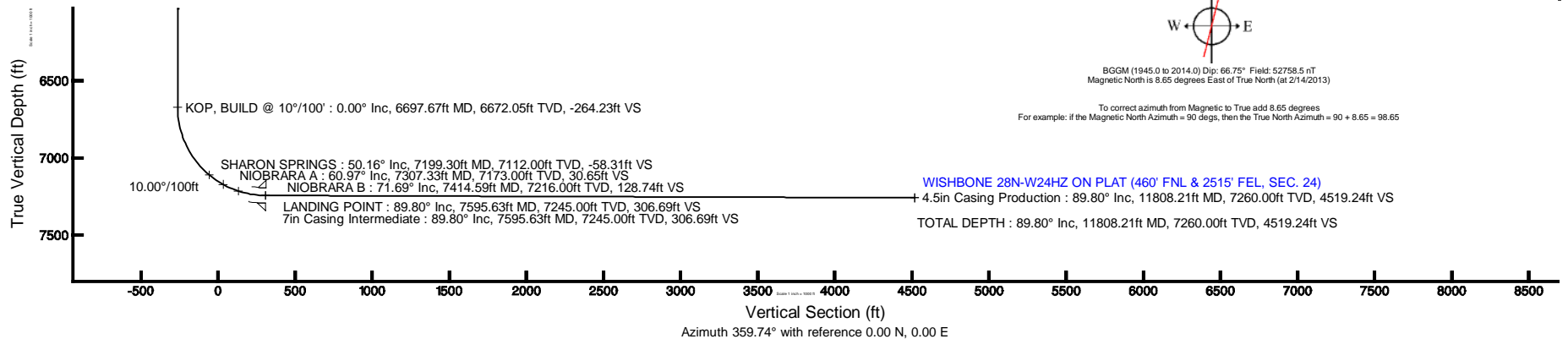
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7595.63	NaviTrak	NaviTrak (MagCorr)		WISHBONE 28N-W24HZ PWB
7595.63	11808.17	OnTrak	OnTrak (MagCorr)		WISHBONE 28N-W24HZ PWB

## 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	214.600	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1300.00	0.000	214.600	1300.00	0.00	0.00	0.00	0.00
END NUDGE	1800.00	10.000	214.600	1797.47	-35.83	-24.71	2.00	-35.71
BEGIN DROP	3153.09	10.000	214.600	3130.00	-229.23	-158.14	0.00	-228.52
END DROP	3653.09	0.000	359.742	3627.47	-265.06	-182.85	2.00	-264.23
KOP, BUILD @ 10°/100'	6697.67	0.000	359.742	6672.05	-265.06	-182.85	0.00	-264.23
LANDING POINT	7595.63	89.796	359.742	7245.00	305.86	-185.42	10.00	306.69
TOTAL DEPTH	11808.21	89.796	359.742	7260.00	4518.37	-204.36	0.00	4519.24

## 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		-2.00	-15.14	-2600.51	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W
HELGOETH HEIRS #2 150' RADIUS		15.00	521.72	1838.33	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W
HELGOETH HEIRS UNIT #1 150' RADIUS		15.00	321.40	-2348.45	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W
WARNER #1 150' RADIUS		15.00	3862.25	976.80	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W
WARNER #2 150' RADIUS		15.00	4310.42	-2322.91	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W
WISHBONE 28N-W24HZ BHL ON PLAT (460' FNL & 2515' FEL, SEC.24)	11808.21	7260.00	4518.37	-204.36	3216727.01	1291088.44	40°07'47.392"N	104°43'29.690"W
SEC.24 HARDLINES (460' SETBACKS)		7598.00	-15.14	-2600.51	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W





# Planned Wellpath Report

WISHBONE 28N-W24HZ (PERMIT) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-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	Precain
Scale	0.99996	Report Generated	2/21/2013 at 2:31:06 PM
Convergence at slot	0.50° East	Database/Source file	WellArchitectDB/WISHBONE_28N-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	15.52	2600.51	3216970.89	1286572.22	40°07'02.741"N	104°43'27.059"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#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB)	Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB) to Mud Line at Slot (SLOT#10 WISHBONE 28N-W24HZ)
MD Reference Pt	Rig on SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

## WELLPATH DATA (132 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	214.600	0.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
17.00	0.000	214.600	17.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	TIE-ON
117.00†	0.000	214.600	117.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
217.00†	0.000	214.600	217.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
317.00†	0.000	214.600	317.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
417.00†	0.000	214.600	417.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
517.00†	0.000	214.600	517.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
617.00†	0.000	214.600	617.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
717.00†	0.000	214.600	717.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
817.00†	0.000	214.600	817.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
895.00†	0.000	214.600	895.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	FOX HILLS
917.00†	0.000	214.600	917.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
1017.00†	0.000	214.600	1017.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
1117.00†	0.000	214.600	1117.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
1217.00†	0.000	214.600	1217.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	
1300.00	0.000	214.600	1300.00	0.00	0.00	0.00	40°07'02.741"N	104°43'27.059"W	0.00	BEGIN NUDGE
1317.00†	0.340	214.600	1317.00	-0.04	-0.04	-0.03	40°07'02.741"N	104°43'27.059"W	2.00	
1417.00†	2.340	214.600	1416.97	-1.96	-1.97	-1.36	40°07'02.722"N	104°43'27.076"W	2.00	
1517.00†	4.340	214.600	1516.79	-6.74	-6.76	-4.66	40°07'02.674"N	104°43'27.119"W	2.00	
1617.00†	6.340	214.600	1616.35	-14.38	-14.42	-9.95	40°07'02.598"N	104°43'27.187"W	2.00	
1717.00†	8.340	214.600	1715.53	-24.86	-24.94	-17.20	40°07'02.495"N	104°43'27.280"W	2.00	
1800.00	10.000	214.600	1797.47	-35.71	-35.83	-24.71	40°07'02.387"N	104°43'27.377"W	2.00	END NUDGE
1817.00†	10.000	214.600	1814.21	-38.14	-38.25	-26.39	40°07'02.363"N	104°43'27.399"W	0.00	
1917.00†	10.000	214.600	1912.69	-52.38	-52.55	-36.25	40°07'02.222"N	104°43'27.526"W	0.00	
2017.00†	10.000	214.600	2011.17	-66.63	-66.84	-46.11	40°07'02.080"N	104°43'27.653"W	0.00	
2117.00†	10.000	214.600	2109.65	-80.88	-81.14	-55.97	40°07'01.939"N	104°43'27.779"W	0.00	
2217.00†	10.000	214.600	2208.13	-95.13	-95.43	-65.83	40°07'01.798"N	104°43'27.906"W	0.00	
2317.00†	10.000	214.600	2306.61	-109.38	-109.72	-75.69	40°07'01.657"N	104°43'28.033"W	0.00	
2417.00†	10.000	214.600	2405.09	-123.63	-124.02	-85.55	40°07'01.515"N	104°43'28.160"W	0.00	
2517.00†	10.000	214.600	2503.57	-137.88	-138.31	-95.41	40°07'01.374"N	104°43'28.287"W	0.00	
2617.00†	10.000	214.600	2602.05	-152.13	-152.60	-105.27	40°07'01.233"N	104°43'28.414"W	0.00	
2717.00†	10.000	214.600	2700.53	-166.38	-166.90	-115.13	40°07'01.092"N	104°43'28.541"W	0.00	
2817.00†	10.000	214.600	2799.01	-180.63	-181.19	-125.00	40°07'00.950"N	104°43'28.668"W	0.00	
2917.00†	10.000	214.600	2897.50	-194.88	-195.48	-134.86	40°07'00.809"N	104°43'28.795"W	0.00	
3017.00†	10.000	214.600	2995.98	-209.12	-209.78	-144.72	40°07'00.668"N	104°43'28.922"W	0.00	
3117.00†	10.000	214.600	3094.46	-223.37	-224.07	-154.58	40°07'00.527"N	104°43'29.049"W	0.00	
3153.09	10.000	214.600	3130.00	-228.52	-229.23	-158.14	40°07'00.476"N	104°43'29.094"W	0.00	BEGIN DROP
3217.00†	8.722	214.600	3193.06	-237.05	-237.79	-164.04	40°07'00.391"N	104°43'29.170"W	2.00	
3317.00†	6.722	214.600	3292.14	-248.07	-248.85	-171.67	40°07'00.282"N	104°43'29.269"W	2.00	
3417.00†	4.722	214.600	3391.64	-256.25	-257.05	-177.33	40°07'00.201"N	104°43'29.341"W	2.00	
3517.00†	2.722	214.600	3491.43	-261.58	-262.40	-181.01	40°07'00.148"N	104°43'29.389"W	2.00	
3617.00†	0.722	214.600	3591.38	-264.04	-264.87	-182.72	40°07'00.124"N	104°43'29.411"W	2.00	
3653.09	0.000	359.742	3627.47	-264.23	-265.06	-182.85	40°07'00.122"N	104°43'29.413"W	2.00	END DROP
3717.00†	0.000	359.742	3691.37	-264.23	-265.06	-182.85	40°07'00.122"N	104°43'29.413"W	0.00	
3817.00†	0.000	359.742	3791.37	-264.23	-265.06	-182.85	40°07'00.122"N	104°43'29.413"W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

## WELLPATH DATA (132 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	359.742	3891.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4017.00†	0.000	359.742	3991.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4117.00†	0.000	359.742	4091.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4139.63†	0.000	359.742	4114.00	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	PARKMAN
4217.00†	0.000	359.742	4191.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4317.00†	0.000	359.742	4291.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4417.00†	0.000	359.742	4391.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4517.00†	0.000	359.742	4491.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4533.63†	0.000	359.742	4508.00	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	SUSSEX
4617.00†	0.000	359.742	4591.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4717.00†	0.000	359.742	4691.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4817.00†	0.000	359.742	4791.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
4917.00†	0.000	359.742	4891.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5017.00†	0.000	359.742	4991.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5117.00†	0.000	359.742	5091.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5217.00†	0.000	359.742	5191.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5317.00†	0.000	359.742	5291.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5417.00†	0.000	359.742	5391.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5517.00†	0.000	359.742	5491.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5617.00†	0.000	359.742	5591.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5717.00†	0.000	359.742	5691.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5817.00†	0.000	359.742	5791.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
5917.00†	0.000	359.742	5891.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6017.00†	0.000	359.742	5991.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6117.00†	0.000	359.742	6091.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6217.00†	0.000	359.742	6191.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6317.00†	0.000	359.742	6291.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6417.00†	0.000	359.742	6391.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6517.00†	0.000	359.742	6491.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6617.00†	0.000	359.742	6591.37	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	
6697.67	0.000	359.742	6672.05	-264.23	-265.06	-182.85	40°0700.122°N	104°43'29.413°W	0.00	KOP, BUILD @ 10°/100'
6717.00†	1.933	359.742	6691.37	-263.90	-264.73	-182.85	40°0700.125°N	104°43'29.413°W	10.00	
6817.00†	11.933	359.742	6790.51	-251.85	-252.67	-182.91	40°0700.244°N	104°43'29.413°W	10.00	
6917.00†	21.933	359.742	6886.06	-222.76	-223.59	-183.04	40°0700.531°N	104°43'29.415°W	10.00	
7017.00†	31.933	359.742	6975.10	-177.52	-178.35	-183.24	40°0700.979°N	104°43'29.418°W	10.00	
7117.00†	41.933	359.742	7054.93	-117.51	-118.34	-183.51	40°0701.572°N	104°43'29.421°W	10.00	
7199.30†	50.163	359.742	7112.00	-58.31	-59.14	-183.78	40°0702.157°N	104°43'29.425°W	10.00	SHARON SPRINGS
7217.00†	51.933	359.742	7123.13	-44.55	-45.38	-183.84	40°0702.293°N	104°43'29.425°W	10.00	
7307.33†	60.966	359.742	7173.00	30.65	29.83	-184.18	40°0703.036°N	104°43'29.430°W	10.00	NIOBRARA A
7317.00†	61.933	359.742	7177.62	39.15	38.32	-184.21	40°0703.120°N	104°43'29.430°W	10.00	
7414.59†	71.692	359.742	7216.00	128.74	127.91	-184.62	40°0704.005°N	104°43'29.435°W	10.00	NIOBRARA B
7417.00†	71.933	359.742	7216.75	131.04	130.21	-184.63	40°0704.028°N	104°43'29.435°W	10.00	
7517.00†	81.933	359.742	7239.33	228.32	227.49	-185.07	40°0704.989°N	104°43'29.441°W	10.00	
7595.63	89.796	359.742	7245.00	306.69	305.86	-185.42	40°0705.764°N	104°43'29.446°W	10.00	LANDING POINT
7617.00†	89.796	359.742	7245.08	328.06	327.22	-185.51	40°0705.975°N	104°43'29.447°W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

## WELLPATH DATA (132 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	89.796	359.742	7245.43	428.06	427.22	-185.96	40°07'06.963"N	104°43'29.453"W	0.00	
7817.00†	89.796	359.742	7245.79	528.06	527.22	-186.41	40°07'07.951"N	104°43'29.459"W	0.00	
7917.00†	89.796	359.742	7246.14	628.06	627.22	-186.86	40°07'08.939"N	104°43'29.464"W	0.00	
8017.00†	89.796	359.742	7246.50	728.05	727.22	-187.31	40°07'09.927"N	104°43'29.470"W	0.00	
8117.00†	89.796	359.742	7246.86	828.05	827.22	-187.76	40°07'10.916"N	104°43'29.476"W	0.00	
8217.00†	89.796	359.742	7247.21	928.05	927.22	-188.21	40°07'11.904"N	104°43'29.482"W	0.00	
8317.00†	89.796	359.742	7247.57	1028.05	1027.21	-188.66	40°07'12.892"N	104°43'29.488"W	0.00	
8417.00†	89.796	359.742	7247.92	1128.05	1127.21	-189.11	40°07'13.880"N	104°43'29.493"W	0.00	
8517.00†	89.796	359.742	7248.28	1228.05	1227.21	-189.56	40°07'14.868"N	104°43'29.499"W	0.00	
8617.00†	89.796	359.742	7248.64	1328.05	1327.21	-190.01	40°07'15.857"N	104°43'29.505"W	0.00	
8717.00†	89.796	359.742	7248.99	1428.05	1427.21	-190.46	40°07'16.845"N	104°43'29.511"W	0.00	
8817.00†	89.796	359.742	7249.35	1528.05	1527.21	-190.91	40°07'17.833"N	104°43'29.517"W	0.00	
8917.00†	89.796	359.742	7249.70	1628.05	1627.20	-191.36	40°07'18.821"N	104°43'29.522"W	0.00	
9017.00†	89.796	359.742	7250.06	1728.05	1727.20	-191.81	40°07'19.809"N	104°43'29.528"W	0.00	
9117.00†	89.796	359.742	7250.42	1828.05	1827.20	-192.26	40°07'20.798"N	104°43'29.534"W	0.00	
9217.00†	89.796	359.742	7250.77	1928.05	1927.20	-192.71	40°07'21.786"N	104°43'29.540"W	0.00	
9317.00†	89.796	359.742	7251.13	2028.05	2027.20	-193.16	40°07'22.774"N	104°43'29.545"W	0.00	
9417.00†	89.796	359.742	7251.49	2128.05	2127.20	-193.61	40°07'23.762"N	104°43'29.551"W	0.00	
9517.00†	89.796	359.742	7251.84	2228.04	2227.19	-194.06	40°07'24.750"N	104°43'29.557"W	0.00	
9617.00†	89.796	359.742	7252.20	2328.04	2327.19	-194.51	40°07'25.739"N	104°43'29.563"W	0.00	
9717.00†	89.796	359.742	7252.55	2428.04	2427.19	-194.96	40°07'26.727"N	104°43'29.569"W	0.00	
9817.00†	89.796	359.742	7252.91	2528.04	2527.19	-195.41	40°07'27.715"N	104°43'29.574"W	0.00	
9917.00†	89.796	359.742	7253.27	2628.04	2627.19	-195.86	40°07'28.703"N	104°43'29.580"W	0.00	
10017.00†	89.796	359.742	7253.62	2728.04	2727.19	-196.31	40°07'29.691"N	104°43'29.586"W	0.00	
10117.00†	89.796	359.742	7253.98	2828.04	2827.18	-196.76	40°07'30.680"N	104°43'29.592"W	0.00	
10217.00†	89.796	359.742	7254.33	2928.04	2927.18	-197.21	40°07'31.668"N	104°43'29.598"W	0.00	
10317.00†	89.796	359.742	7254.69	3028.04	3027.18	-197.66	40°07'32.656"N	104°43'29.604"W	0.00	
10417.00†	89.796	359.742	7255.05	3128.04	3127.18	-198.11	40°07'33.644"N	104°43'29.609"W	0.00	
10517.00†	89.796	359.742	7255.40	3228.04	3227.18	-198.56	40°07'34.632"N	104°43'29.615"W	0.00	
10617.00†	89.796	359.742	7255.76	3328.04	3327.18	-199.01	40°07'35.621"N	104°43'29.621"W	0.00	
10717.00†	89.796	359.742	7256.11	3428.04	3427.17	-199.46	40°07'36.609"N	104°43'29.627"W	0.00	
10817.00†	89.796	359.742	7256.47	3528.04	3527.17	-199.91	40°07'37.597"N	104°43'29.633"W	0.00	
10917.00†	89.796	359.742	7256.83	3628.04	3627.17	-200.36	40°07'38.585"N	104°43'29.638"W	0.00	
11017.00†	89.796	359.742	7257.18	3728.04	3727.17	-200.81	40°07'39.573"N	104°43'29.644"W	0.00	
11117.00†	89.796	359.742	7257.54	3828.03	3827.17	-201.26	40°07'40.561"N	104°43'29.650"W	0.00	
11217.00†	89.796	359.742	7257.89	3928.03	3927.17	-201.71	40°07'41.550"N	104°43'29.656"W	0.00	
11317.00†	89.796	359.742	7258.25	4028.03	4027.16	-202.16	40°07'42.538"N	104°43'29.662"W	0.00	
11417.00†	89.796	359.742	7258.61	4128.03	4127.16	-202.60	40°07'43.526"N	104°43'29.667"W	0.00	
11517.00†	89.796	359.742	7258.96	4228.03	4227.16	-203.05	40°07'44.514"N	104°43'29.673"W	0.00	
11617.00†	89.796	359.742	7259.32	4328.03	4327.16	-203.50	40°07'45.502"N	104°43'29.679"W	0.00	
11717.00†	89.796	359.742	7259.68	4428.03	4427.16	-203.95	40°07'46.491"N	104°43'29.685"W	0.00	
11808.21	89.796	359.742	7260.00 <sup>†</sup>	4519.24	4518.37	-204.36	40°07'47.392"N	104°43'29.690"W	0.00	TOTAL DEPTH



# Planned Wellpath Report

WISHBONE 28N-W24HZ (PERMIT) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

## HOLE & CASING SECTIONS - Ref Wellbore: WISHBONE 28N-W24HZ PWB Ref Wellpath: WISHBONE 28N-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	7595.63	6595.63	1000.00	7245.00	0.00	0.00	305.86	-185.42
7in Casing Intermediate	17.00	7595.63	7578.63	17.00	7245.00	0.00	0.00	305.86	-185.42
6.125in Open Hole	7595.63	11808.21	4212.58	7245.00	7260.00	305.86	-185.42	4518.37	-204.36
4.5in Casing Production	17.00	11808.21	11791.21	17.00	7260.00	0.00	0.00	4518.37	-204.36

## 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		-2.00	-15.14	-2600.51	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon
HELGOth HEIRS #2 150' RADIUS		15.00	521.72	1838.33	3218804.51	1287109.98	40°07'07.896"N	104°43'03.396"W	circle
HELGOth HEIRS UNIT #1 150' RADIUS		15.00	321.40	-2348.45	3214619.81	1286873.05	40°07'05.916"N	104°43'57.288"W	circle
WARNER #1 150' RADIUS		15.00	3862.25	976.80	3217913.81	1290442.71	40°07'40.908"N	104°43'14.484"W	circle
WARNER #2 150' RADIUS		15.00	4310.42	-2322.91	3214610.45	1290861.97	40°07'45.336"N	104°43'56.964"W	circle
1) WISHBONE 28N-W24HZ BHL ON PLAT (460'FNL & 2515'FEL, SEC.24)	11808.21	7260.00	4518.37	-204.36	3216727.01	1291088.44	40°07'47.392"N	104°43'29.690"W	point
SEC. 24 HARDLINES (460' SETBACKS)		7598.00	-15.14	-2600.51	3214370.72	1286534.33	40°07'02.590"N	104°44'00.532"W	polygon

## SURVEY PROGRAM - Ref Wellbore: WISHBONE 28N-W24HZ PWB Ref Wellpath: WISHBONE 28N-W24HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7595.63	NaviTrak (MagCorr)		WISHBONE 28N-W24HZ PWB
7595.63	11808.17	OnTrak (MagCorr)		WISHBONE 28N-W24HZ PWB



# Planned Wellpath Report

WISHBONE 28N-W24HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#10 WISHBONE 28N-W24HZ (320'FSL 2331'FEL, SEC.24)
Area	COLORADO	Well	WISHBONE 28N-W24HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WISHBONE 28N-W24HZ PWB
Facility	SEC.24-T2N-R66W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
895.00	0.000	214.600	895.00	FOX HILLS	
4139.63	0.000	359.742	4114.00	PARKMAN	
4533.63	0.000	359.742	4508.00	SUSSEX	
7199.30	50.163	359.742	7112.00	SHARON SPRINGS	
7307.33	60.966	359.742	7173.00	NIOBRARA A	
7414.59	71.692	359.742	7216.00	NIOBRARA B	