

Location:	COLORADO	Slot:	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Field:	WELD COUNTY (KERR MCGEE)	Well:	RALPH 34N-19HZ
Facility:	SEC.19-T1N-R67W	Wellbore:	RALPH 34N-19HZ PWB

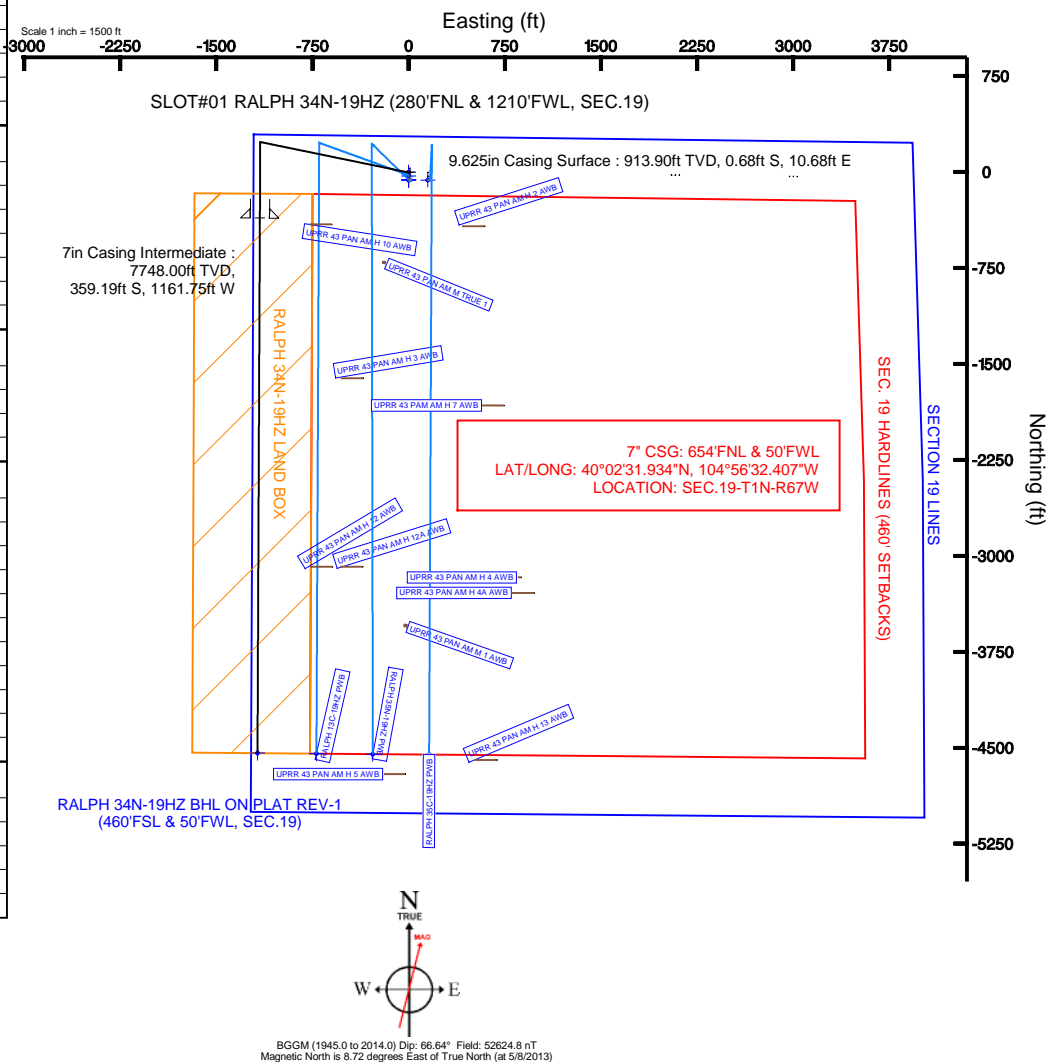
True vertical depths are referenced to XTREME 6 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB)	North Reference: True north
XTREME 6 (RKB) to Mean Sea Level: 5133 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 RALPH 34N-19HZ (280FNL & 1210FWL, SEC.19): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wslief02 on 5/8/2013

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.19-T1N-R67W	3157293.749	1259018.130	40°02'34.891"N	104°56'17.471"W
<div>Slot</div> <div>Local N (ft)</div> <div>Local E (ft)</div>	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
<div>SLOT#01 RALPH 34N-19HZ (280FNL &amp; 1210FWL, SEC.19)</div> <div>60.01</div> <div>0.08</div>	3157293.447	1259078.133	40°02'35.484"N	104°56'17.470"W
XTREME 6 (RKB) to Mud line (At Slot: SLOT#01 RALPH 34N-19HZ (280FNL & 1210FWL, SEC.19))			5133ft	
Mean Sea Level to Mud line (At Slot: SLOT#01 RALPH 34N-19HZ (280FNL & 1210FWL, SEC.19))			0ft	
XTREME 6 (RKB) to Mean Sea Level			5133ft	

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
16.00	846.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		RALPH 34N-19HZ AWB
846.00	8223.68	NavTrak	NavTrak (MagCorr)		RALPH 34N-19HZ PWB
8223.68	12408.41	OnTrak	OnTrak (MagCorr)		RALPH 34N-19HZ PWB

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-INTO GYRO	846.00	0.440	188.350	845.91	-0.17	10.75	0.00	0.12
BEGIN NUDGE	1100.10	0.440	188.350	1100.00	-2.10	10.47	0.00	2.05
END NUDGE	1801.70	14.000	281.638	1794.64	12.43	-73.46	2.00	-12.10
BEGIN DROP	6031.70	14.000	281.638	5899.00	218.86	-1075.75	0.00	-214.07
END DROP	6731.70	0.000	180.255	6592.06	236.03	-1159.10	2.00	-230.87
KOP, BUILD @ 10°/100'	7283.11	0.000	180.255	7143.46	236.03	-1159.10	0.00	-230.87
BUILD @ 6°/100'	7554.71	27.160	180.255	7405.00	172.85	-1159.38	10.00	-167.69
BUILD @ 10°/100'	7645.87	32.629	180.255	7484.00	127.44	-1159.59	6.00	-122.28
LANDING POINT	8223.68	90.411	180.255	7748.00	-359.20	-1161.75	10.00	364.36
TOTAL DEPTH	12408.41	90.411	180.255	7718.00	-4543.77	-1180.36	0.00	4548.98

Name	MD (R)	TVD (R)	Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)	Latitude	Longitude
SECTION 19 LINES		0.00	-60.11	0.00	3157293.83	1259018.03	40°02'34.890"N	104°56'17.470"W
RALPH 34N-19H2 8H4L ON PLAT REV-1 (480'FSL & 50'FWL, SEC. 19)	12408.41	7718.00	-454.77	-1180.36	316614.94	1254527.15	40°01'30.581"N	104°56'32.644"W
RALPH 34N-19H2 LAND BOX		8000.00	0.00	0.00	3157293.45	1259078.13	40°02'35.484"N	104°56'17.470"W
SEC. 19 HARDLINES (480' SETBACKS)		8000.00	-60.11	0.00	3157293.83	1259018.03	40°02'34.890"N	104°56'17.470"W



To correct azimuth from Magnetic to True add 8.72 degrees  
For example: If the Magnetic North Azimuth = 90 degs, then the True North Azimuth =  $90 + 8.72 = 98.72$



# Planned Wellpath Report

RALPH 34N-19HZ (REV-A.0) PWP

Page 1 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-T1N-R67W		

## 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	0.999963	Report Generated	5/8/2013 at 09:40:49
Convergence at slot	0.36° East	Database/Source file	WellArchitectDB/RALPH_34N-19HZ_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	60.01	0.08	3157293.45	1259078.13	40°02'35.484"N	104°56'17.470"W
Facility Reference Pt			3157293.75	1259018.13	40°02'34.891"N	104°56'17.471"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 (RKB) to Facility Vertical Datum	5133.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RKB) to Mean Sea Level	5133.00ft
Vertical Reference Pt	XTREME 6 (RKB)	XTREME 6 (RKB) to Mud Line at Slot (SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19))	5133.00ft
MD Reference Pt	XTREME 6 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.25°



# Planned Wellpath Report

RALPH 34N-19HZ (REV-A.0) PWP

Page 2 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-T1N-R67W		

## WELLPATH DATA (137 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	108.140	0.00	0.00	0.00	0.00	40°02'35.484"N	104°56'17.470"W	0.00	
16.00	0.000	108.140	16.00	0.00	0.00	0.00	40°02'35.484"N	104°56'17.470"W	0.00	TIE-ON
116.00	0.540	108.140	116.00	0.14	-0.15	0.45	40°02'35.483"N	104°56'17.464"W	0.54	BEGIN GYRO SURVEYS
216.00	0.600	61.880	215.99	0.04	-0.05	1.36	40°02'35.484"N	104°56'17.453"W	0.45	
316.00	0.990	67.470	315.98	-0.54	0.53	2.62	40°02'35.489"N	104°56'17.436"W	0.40	
416.00	1.160	87.850	415.97	-0.92	0.90	4.43	40°02'35.493"N	104°56'17.413"W	0.42	
516.00	1.270	90.700	515.94	-0.95	0.92	6.55	40°02'35.493"N	104°56'17.386"W	0.13	
616.00	1.030	87.450	615.92	-0.99	0.95	8.55	40°02'35.493"N	104°56'17.360"W	0.25	
716.00	0.590	106.830	715.91	-0.89	0.84	9.94	40°02'35.492"N	104°56'17.342"W	0.51	
816.00	0.720	155.790	815.91	-0.17	0.12	10.69	40°02'35.485"N	104°56'17.333"W	0.56	
846.00	0.440	188.350	845.91	0.12	-0.17	10.75	40°02'35.482"N	104°56'17.332"W	0.00	TIE-INTO GYRO
946.00†	0.440	188.350	945.90	0.88	-0.93	10.64	40°02'35.475"N	104°56'17.333"W	0.00	
1046.00†	0.440	188.350	1045.90	1.64	-1.69	10.53	40°02'35.467"N	104°56'17.335"W	0.00	
1100.10	0.440	188.350	1100.00	2.05	-2.10	10.47	40°02'35.463"N	104°56'17.335"W	0.00	BEGIN NUDGE
1146.00†	0.982	256.904	1145.90	2.32	-2.36	10.06	40°02'35.461"N	104°56'17.341"W	2.00	
1246.00†	2.912	274.748	1245.83	2.31	-2.34	6.69	40°02'35.461"N	104°56'17.384"W	2.00	
1346.00†	4.899	278.276	1345.60	1.52	-1.52	-0.06	40°02'35.469"N	104°56'17.471"W	2.00	
1446.00†	6.893	279.768	1445.06	-0.07	0.11	-10.20	40°02'35.485"N	104°56'17.601"W	2.00	
1546.00†	8.890	280.593	1544.11	-2.45	2.55	-23.71	40°02'35.509"N	104°56'17.775"W	2.00	
1646.00†	10.888	281.117	1642.62	-5.61	5.79	-40.58	40°02'35.541"N	104°56'17.992"W	2.00	
1746.00†	12.887	281.480	1740.47	-9.56	9.84	-60.78	40°02'35.581"N	104°56'18.251"W	2.00	
1801.70	14.000	281.638	1794.64	-12.10	12.43	-73.46	40°02'35.607"N	104°56'18.415"W	2.00	END NUDGE
1846.00†	14.000	281.638	1837.63	-14.22	14.59	-83.96	40°02'35.628"N	104°56'18.550"W	0.00	
1946.00†	14.000	281.638	1934.66	-18.99	19.47	-107.65	40°02'35.676"N	104°56'18.854"W	0.00	
2046.00†	14.000	281.638	2031.69	-23.77	24.35	-131.35	40°02'35.725"N	104°56'19.159"W	0.00	
2146.00†	14.000	281.638	2128.72	-28.54	29.23	-155.04	40°02'35.773"N	104°56'19.464"W	0.00	
2246.00†	14.000	281.638	2225.75	-33.32	34.11	-178.74	40°02'35.821"N	104°56'19.768"W	0.00	
2346.00†	14.000	281.638	2322.78	-38.09	38.99	-202.43	40°02'35.869"N	104°56'20.073"W	0.00	
2446.00†	14.000	281.638	2419.81	-42.87	43.87	-226.13	40°02'35.918"N	104°56'20.377"W	0.00	
2546.00†	14.000	281.638	2516.84	-47.64	48.75	-249.82	40°02'35.966"N	104°56'20.682"W	0.00	
2646.00†	14.000	281.638	2613.86	-52.42	53.63	-273.52	40°02'36.014"N	104°56'20.987"W	0.00	
2746.00†	14.000	281.638	2710.89	-57.19	58.51	-297.21	40°02'36.062"N	104°56'21.291"W	0.00	
2846.00†	14.000	281.638	2807.92	-61.97	63.39	-320.91	40°02'36.110"N	104°56'21.596"W	0.00	
2946.00†	14.000	281.638	2904.95	-66.74	68.27	-344.60	40°02'36.159"N	104°56'21.901"W	0.00	
3046.00†	14.000	281.638	3001.98	-71.52	73.16	-368.30	40°02'36.207"N	104°56'22.205"W	0.00	
3146.00†	14.000	281.638	3099.01	-76.29	78.04	-391.99	40°02'36.255"N	104°56'22.510"W	0.00	
3246.00†	14.000	281.638	3196.04	-81.06	82.92	-415.69	40°02'36.303"N	104°56'22.815"W	0.00	
3346.00†	14.000	281.638	3293.07	-85.84	87.80	-439.38	40°02'36.352"N	104°56'23.119"W	0.00	
3446.00†	14.000	281.638	3390.10	-90.61	92.68	-463.08	40°02'36.400"N	104°56'23.424"W	0.00	
3546.00†	14.000	281.638	3487.13	-95.39	97.56	-486.77	40°02'36.448"N	104°56'23.729"W	0.00	
3646.00†	14.000	281.638	3584.16	-100.16	102.44	-510.47	40°02'36.496"N	104°56'24.033"W	0.00	
3746.00†	14.000	281.638	3681.19	-104.94	107.32	-534.16	40°02'36.544"N	104°56'24.338"W	0.00	
3846.00†	14.000	281.638	3778.22	-109.71	112.20	-557.86	40°02'36.593"N	104°56'24.643"W	0.00	
3946.00†	14.000	281.638	3875.25	-114.49	117.08	-581.55	40°02'36.641"N	104°56'24.947"W	0.00	
4046.00†	14.000	281.638	3972.28	-119.26	121.96	-605.25	40°02'36.689"N	104°56'25.252"W	0.00	



# Planned Wellpath Report

RALPH 34N-19HZ (REV-A.0) PWP

Page 3 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-T1N-R67W		

## WELLPATH DATA (137 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4146.00†	14.000	281.638	4069.31	-124.04	126.84	-628.94	40°02'36.737"N	104°56'25.557"W	0.00	
4246.00†	14.000	281.638	4166.34	-128.81	131.72	-652.63	40°02'36.786"N	104°56'25.861"W	0.00	
4346.00†	14.000	281.638	4263.37	-133.59	136.60	-676.33	40°02'36.834"N	104°56'26.166"W	0.00	
4446.00†	14.000	281.638	4360.40	-138.36	141.48	-700.02	40°02'36.882"N	104°56'26.471"W	0.00	
4546.00†	14.000	281.638	4457.43	-143.14	146.36	-723.72	40°02'36.930"N	104°56'26.775"W	0.00	
4646.00†	14.000	281.638	4554.46	-147.91	151.24	-747.41	40°02'36.978"N	104°56'27.080"W	0.00	
4746.00†	14.000	281.638	4651.49	-152.69	156.12	-771.11	40°02'37.027"N	104°56'27.385"W	0.00	
4846.00†	14.000	281.638	4748.52	-157.46	161.00	-794.80	40°02'37.075"N	104°56'27.689"W	0.00	
4946.00†	14.000	281.638	4845.55	-162.24	165.88	-818.50	40°02'37.123"N	104°56'27.994"W	0.00	
4984.60†	14.000	281.638	4883.00	-164.08	167.76	-827.65	40°02'37.142"N	104°56'28.112"W	0.00	SUSSEX
5046.00†	14.000	281.638	4942.57	-167.01	170.76	-842.19	40°02'37.171"N	104°56'28.299"W	0.00	
5146.00†	14.000	281.638	5039.60	-171.78	175.64	-865.89	40°02'37.220"N	104°56'28.603"W	0.00	
5246.00†	14.000	281.638	5136.63	-176.56	180.52	-889.58	40°02'37.268"N	104°56'28.908"W	0.00	
5346.00†	14.000	281.638	5233.66	-181.33	185.40	-913.28	40°02'37.316"N	104°56'29.213"W	0.00	
5446.00†	14.000	281.638	5330.69	-186.11	190.28	-936.97	40°02'37.364"N	104°56'29.517"W	0.00	
5546.00†	14.000	281.638	5427.72	-190.88	195.16	-960.67	40°02'37.412"N	104°56'29.822"W	0.00	
5646.00†	14.000	281.638	5524.75	-195.66	200.04	-984.36	40°02'37.461"N	104°56'30.127"W	0.00	
5746.00†	14.000	281.638	5621.78	-200.43	204.92	-1008.06	40°02'37.509"N	104°56'30.431"W	0.00	
5846.00†	14.000	281.638	5718.81	-205.21	209.80	-1031.75	40°02'37.557"N	104°56'30.736"W	0.00	
5946.00†	14.000	281.638	5815.84	-209.98	214.68	-1055.45	40°02'37.605"N	104°56'31.041"W	0.00	
6031.70	14.000	281.638	5899.00	-214.07	218.86	-1075.75	40°02'37.647"N	104°56'31.302"W	0.00	BEGIN DROP
6046.00†	13.714	281.638	5912.88	-214.75	219.56	-1079.11	40°02'37.653"N	104°56'31.345"W	2.00	
6146.00†	11.714	281.638	6010.42	-219.09	223.99	-1100.66	40°02'37.697"N	104°56'31.622"W	2.00	
6246.00†	9.714	281.638	6108.67	-222.76	227.74	-1118.87	40°02'37.734"N	104°56'31.856"W	2.00	
6346.00†	7.714	281.638	6207.51	-225.75	230.80	-1133.71	40°02'37.765"N	104°56'32.047"W	2.00	
6446.00†	5.714	281.638	6306.82	-228.06	233.16	-1145.16	40°02'37.788"N	104°56'32.194"W	2.00	
6546.00†	3.714	281.638	6406.48	-229.68	234.82	-1153.21	40°02'37.804"N	104°56'32.298"W	2.00	
6646.00†	1.714	281.638	6506.36	-230.62	235.77	-1157.85	40°02'37.814"N	104°56'32.357"W	2.00	
6731.70	0.000	180.255	6592.06	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	2.00	END DROP
6746.00†	0.000	180.255	6606.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
6846.00†	0.000	180.255	6706.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
6946.00†	0.000	180.255	6806.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
7046.00†	0.000	180.255	6906.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
7146.00†	0.000	180.255	7006.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
7246.00†	0.000	180.255	7106.35	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	
7283.11	0.000	180.255	7143.46	-230.87	236.03	-1159.10	40°02'37.816"N	104°56'32.374"W	0.00	KOP, BUILD @ 10°/100'
7346.00†	6.289	180.255	7206.22	-227.42	232.58	-1159.12	40°02'37.782"N	104°56'32.374"W	10.00	
7446.00†	16.289	180.255	7304.16	-207.87	213.03	-1159.20	40°02'37.589"N	104°56'32.375"W	10.00	
7546.00†	26.289	180.255	7397.22	-171.61	176.77	-1159.37	40°02'37.231"N	104°56'32.377"W	10.00	
7554.71	27.160	180.255	7405.00	-167.69	172.85	-1159.38	40°02'37.192"N	104°56'32.377"W	10.00	BUILD @ 6°/100'
7611.81†	30.586	180.255	7455.00	-140.12	145.28	-1159.51	40°02'36.919"N	104°56'32.379"W	6.00	SHARON SPRINGS
7645.87	32.629	180.255	7484.00	-122.28	127.44	-1159.59	40°02'36.743"N	104°56'32.380"W	6.00	BUILD @ 10°/100'; NIOBRARA A
7646.00†	32.643	180.255	7484.11	-122.20	127.37	-1159.59	40°02'36.742"N	104°56'32.380"W	10.00	
7746.00†	42.643	180.255	7563.20	-61.21	66.37	-1159.86	40°02'36.140"N	104°56'32.383"W	10.00	
7846.00†	52.643	180.255	7630.48	12.59	-7.43	-1160.19	40°02'35.410"N	104°56'32.387"W	10.00	



# Planned Wellpath Report

RALPH 34N-19HZ (REV-A.0) PWP

Page 4 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-TIN-R67W		

## WELLPATH DATA (137 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7946.00†	62.643	180.255	7683.94	96.96	-91.79	-1160.56	40°02'34.577"N	104°56'32.392"W	10.00	
8046.00†	72.643	180.255	7721.93	189.32	-184.16	-1160.97	40°02'33.664"N	104°56'32.397"W	10.00	
8146.00†	82.643	180.255	7743.30	286.88	-281.72	-1161.41	40°02'32.700"N	104°56'32.403"W	10.00	
8223.68	90.411	180.255	7748.00	364.36	-359.20	-1161.75	40°02'31.934"N	104°56'32.407"W	10.00	LANDING POINT
8246.00†	90.411	180.255	7747.84	386.68	-381.51	-1161.85	40°02'31.714"N	104°56'32.409"W	0.00	
8346.00†	90.411	180.255	7747.12	486.68	-481.51	-1162.30	40°02'30.725"N	104°56'32.414"W	0.00	
8446.00†	90.411	180.255	7746.41	586.68	-581.51	-1162.74	40°02'29.737"N	104°56'32.420"W	0.00	
8546.00†	90.411	180.255	7745.69	686.67	-681.50	-1163.19	40°02'28.749"N	104°56'32.426"W	0.00	
8646.00†	90.411	180.255	7744.97	786.67	-781.50	-1163.63	40°02'27.761"N	104°56'32.431"W	0.00	
8746.00†	90.411	180.255	7744.26	886.67	-881.50	-1164.08	40°02'26.773"N	104°56'32.437"W	0.00	
8846.00†	90.411	180.255	7743.54	986.67	-981.49	-1164.52	40°02'25.784"N	104°56'32.443"W	0.00	
8946.00†	90.411	180.255	7742.82	1086.66	-1081.49	-1164.97	40°02'24.796"N	104°56'32.448"W	0.00	
9046.00†	90.411	180.255	7742.10	1186.66	-1181.49	-1165.41	40°02'23.808"N	104°56'32.454"W	0.00	
9146.00†	90.411	180.255	7741.39	1286.66	-1281.48	-1165.86	40°02'22.820"N	104°56'32.459"W	0.00	
9246.00†	90.411	180.255	7740.67	1386.66	-1381.48	-1166.30	40°02'21.832"N	104°56'32.465"W	0.00	
9346.00†	90.411	180.255	7739.95	1486.65	-1481.47	-1166.74	40°02'20.843"N	104°56'32.471"W	0.00	
9446.00†	90.411	180.255	7739.24	1586.65	-1581.47	-1167.19	40°02'19.855"N	104°56'32.476"W	0.00	
9546.00†	90.411	180.255	7738.52	1686.65	-1681.47	-1167.63	40°02'18.867"N	104°56'32.482"W	0.00	
9646.00†	90.411	180.255	7737.80	1786.65	-1781.46	-1168.08	40°02'17.879"N	104°56'32.488"W	0.00	
9746.00†	90.411	180.255	7737.08	1886.64	-1881.46	-1168.52	40°02'16.891"N	104°56'32.493"W	0.00	
9846.00†	90.411	180.255	7736.37	1986.64	-1981.46	-1168.97	40°02'15.902"N	104°56'32.499"W	0.00	
9946.00†	90.411	180.255	7735.65	2086.64	-2081.45	-1169.41	40°02'14.914"N	104°56'32.505"W	0.00	
10046.00†	90.411	180.255	7734.93	2186.63	-2181.45	-1169.86	40°02'13.926"N	104°56'32.510"W	0.00	
10146.00†	90.411	180.255	7734.22	2286.63	-2281.45	-1170.30	40°02'12.938"N	104°56'32.516"W	0.00	
10246.00†	90.411	180.255	7733.50	2386.63	-2381.44	-1170.75	40°02'11.950"N	104°56'32.522"W	0.00	
10346.00†	90.411	180.255	7732.78	2486.63	-2481.44	-1171.19	40°02'10.962"N	104°56'32.527"W	0.00	
10446.00†	90.411	180.255	7732.07	2586.62	-2581.44	-1171.64	40°02'09.973"N	104°56'32.533"W	0.00	
10546.00†	90.411	180.255	7731.35	2686.62	-2681.43	-1172.08	40°02'08.985"N	104°56'32.539"W	0.00	
10646.00†	90.411	180.255	7730.63	2786.62	-2781.43	-1172.53	40°02'07.997"N	104°56'32.544"W	0.00	
10746.00†	90.411	180.255	7729.91	2886.62	-2881.43	-1172.97	40°02'07.009"N	104°56'32.550"W	0.00	
10846.00†	90.411	180.255	7729.20	2986.61	-2981.42	-1173.42	40°02'06.021"N	104°56'32.556"W	0.00	
10946.00†	90.411	180.255	7728.48	3086.61	-3081.42	-1173.86	40°02'05.032"N	104°56'32.561"W	0.00	
11046.00†	90.411	180.255	7727.76	3186.61	-3181.41	-1174.31	40°02'04.044"N	104°56'32.567"W	0.00	
11146.00†	90.411	180.255	7727.05	3286.61	-3281.41	-1174.75	40°02'03.056"N	104°56'32.573"W	0.00	
11246.00†	90.411	180.255	7726.33	3386.60	-3381.41	-1175.19	40°02'02.068"N	104°56'32.578"W	0.00	
11346.00†	90.411	180.255	7725.61	3486.60	-3481.40	-1175.64	40°02'01.080"N	104°56'32.584"W	0.00	
11446.00†	90.411	180.255	7724.90	3586.60	-3581.40	-1176.08	40°02'00.091"N	104°56'32.590"W	0.00	
11546.00†	90.411	180.255	7724.18	3686.60	-3681.40	-1176.53	40°01'59.103"N	104°56'32.595"W	0.00	
11646.00†	90.411	180.255	7723.46	3786.59	-3781.39	-1176.97	40°01'58.115"N	104°56'32.601"W	0.00	
11746.00†	90.411	180.255	7722.75	3886.59	-3881.39	-1177.42	40°01'57.127"N	104°56'32.607"W	0.00	
11846.00†	90.411	180.255	7722.03	3986.59	-3981.39	-1177.86	40°01'56.139"N	104°56'32.612"W	0.00	
11946.00†	90.411	180.255	7721.31	4086.59	-4081.38	-1178.31	40°01'55.150"N	104°56'32.618"W	0.00	
12046.00†	90.411	180.255	7720.60	4186.58	-4181.38	-1178.75	40°01'54.162"N	104°56'32.624"W	0.00	
12146.00†	90.411	180.255	7719.88	4286.58	-4281.38	-1179.19	40°01'53.174"N	104°56'32.629"W	0.00	
12246.00†	90.411	180.255	7719.16	4386.58	-4381.37	-1179.64	40°01'52.186"N	104°56'32.635"W	0.00	



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RALPH 34N-19HZ (REV-A.0) PWP

Page 5 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-T1N-R67W		

## WELLPATH DATA (137 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12346.00†	90.411	180.255	7718.45	4486.58	-4481.37	-1180.08	40°01'51.198"N	104°56'32.640"W	0.00	
12408.41	90.411	180.255	7718.00 <sup>1</sup>	4548.98	-4543.77	-1180.36	40°01'50.581"N	104°56'32.644"W	0.00	TOTAL DEPTH

## HOLE & CASING SECTIONS - Ref Wellbore: RALPH 34N-19HZ PWB Ref Wellpath: RALPH 34N-19HZ (REV-A.0) 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	846.00	830.00	16.00	845.91	0.00	0.00	-0.17	10.75
9.625in Casing Surface	16.00	914.00	898.00	16.00	913.90	0.00	0.00	-0.68	10.68
8.75in Open Hole	846.00	8223.68	7377.68	845.91	7748.00	-0.17	10.75	-359.19	-1161.75
7in Casing Intermediate	16.00	8223.68	8207.68	16.00	7748.00	0.00	0.00	-359.19	-1161.75
6.125in Open Hole	8223.68	12408.41	4184.73	7748.00	NA	-359.19	-1161.75	NA	NA
4.5in Casing Production	16.00	12408.41	12392.41	16.00	NA	0.00	0.00	NA	NA

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SECTION 19 LINES		0.00	-60.11	0.00	3157293.83	1259018.03	40°02'34.890"N	104°56'17.470"W	polygon
1) RALPH 34N-19HZ BHL ON PLAT REV-1 (460'FSL & 50'FWL, SEC.19)	12408.41	7718.00	-4543.77	-1180.36	3156141.94	1254527.15	40°01'50.581"N	104°56'32.644"W	point
RALPH 34N-19HZ LAND BOX		8000.00	0.00	0.00	3157293.45	1259078.13	40°02'35.484"N	104°56'17.470"W	polygon
SEC. 19 HARDLINES (460' SETBACKS)		8000.00	-60.11	0.00	3157293.83	1259018.03	40°02'34.890"N	104°56'17.470"W	polygon

## SURVEY PROGRAM - Ref Wellbore: RALPH 34N-19HZ PWB Ref Wellpath: RALPH 34N-19HZ (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	846.00	Generic gyro - continuous (Standard)		RALPH 34N-19HZ AWB
846.00	8223.68	NaviTrak (MagCorr)		RALPH 34N-19HZ PWB
8223.68	12408.41	OnTrak (MagCorr)		RALPH 34N-19HZ PWB



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Page 6 of 6



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Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 RALPH 34N-19HZ (280'FNL & 1210'FWL, SEC.19)
Area	COLORADO	Well	RALPH 34N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RALPH 34N-19HZ PWB
Facility	SEC.19-T1N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	108.140	16.00	TIE-ON
116.00	0.540	108.140	116.00	BEGIN GYRO SURVEYS
4984.60	14.000	281.638	4883.00	SUSSEX
7611.81	30.586	180.255	7455.00	SHARON SPRINGS
7645.87	32.629	180.255	7484.00	NIOBRARA A