

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Field: WELD COUNTY (KERR MCGEE) Well: TROUDT 34C-33HZ
Facility: SEC.33-T2N-R67W Wellbore: TROUDT 34C-33HZ PWB

Plot reference wellpath is TROUDT 34C-33HZ (PERMIT REV-1) PWP

True vertical depths are referenced to PERMIT (17 KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMIT (17 KB) (RKB)	North Reference: True north
PERMIT (17 KB) (RKB) to Mean Sea Level: 5054 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robiale01 on 18/Sep/2013

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.33-T2N-R67W			3170116.037	1275626.243	40°05'18.183"N	104°53'31.139"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)	6.58	-2233.67	3167882.462	1275617.505	40°05'18.247"N	104°53'59.878"W
PERMIT (17 KB) (RKB) to Mud line (At Slot: SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33))					5054ft	
Mean Sea Level to Mud line (At Slot: SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33))					0ft	
PERMIT (17 KB) (RKB) to Mean Sea Level					5054ft	

Survey Program

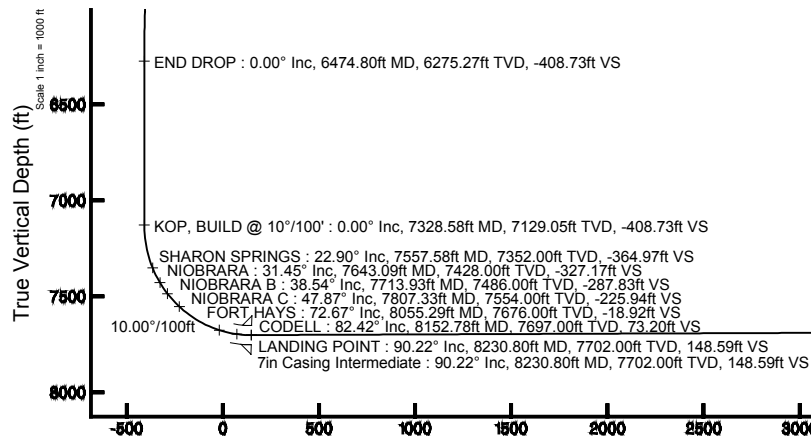
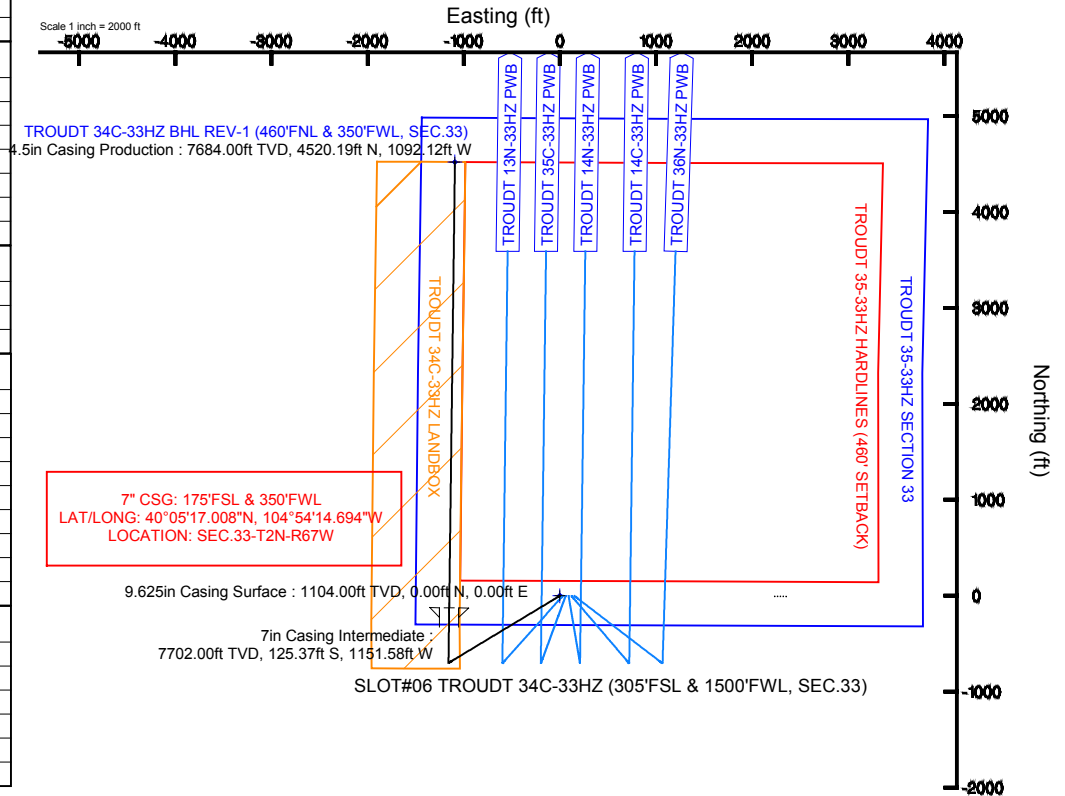
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	8230.80	NaviTrak	NaviTrak (Standard)		TROUDT 34C-33HZ PWB
8230.80	12876.77	OnTrak	OnTrak (Standard)		TROUDT 34C-33HZ PWB

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	238.850	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1200.00	0.000	238.850	1200.00	0.00	0.00	0.00	0.00
END NUDGE	2100.00	18.000	238.850	2085.27	-72.53	-120.00	2.00	-42.32
BEGIN DROP	5574.80	18.000	238.850	5390.00	-627.97	-1038.95	0.00	-366.41
END DROP	6474.80	0.000	0.733	6275.27	-700.50	-1158.94	2.00	-408.73
KOP, BUILD @ 10°/100'	7328.58	0.000	0.733	7129.05	-700.50	-1158.94	0.00	-408.73
LANDING POINT	8230.80	90.222	0.733	7702.00	-125.37	-1151.58	10.00	148.59
TOTAL DEPTH	12876.77	90.222	0.733	7684.00	4520.19	-1092.12	0.00	4650.25

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
ICK BACK POINT		5054.00	-697.46	-1160.77	3166726.49	1274912.24	40°05'11.354"N	104°54'14.812"W
TROUDT 34C-33HZ BHL REV-1 (460'FNL & 350'FWL, SEC.33)	12876.77	7684.00	4520.19	-1092.12	3166759.83	1280130.01	40°06'02.916"N	104°54'13.932"W
TROUDT 34C-33HZ LANDBOX		7684.00	0.00	0.00	3167882.46	1275617.50	40°05'18.247"N	104°53'59.878"W
TROUDT 35-33HZ HARDLINES (460' SETBACK)		7684.00	-6.38	2233.68	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W
TROUDT 35-33HZ SECTION 33		7684.00	-6.38	2233.68	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W



Vertical Section (ft)

Amplitude 346.42° with reference 0.00 N, 0.00 E

TROUDT 34C-33HZ BHL REV-1 (460'FNL & 350'FWL, SEC.33)
4.5in Casing Production : 90.22° Inc, 12876.77ft MD, 7684.00ft TVD, 4650.25ft VS
TOTAL DEPTH : 90.22° Inc, 12876.77ft MD, 7684.00ft TVD, 4650.25ft VS

Scale 1 inch = 1000 ft



Planned Wellpath Report

TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999961	Report Generated	18/Sep/2013 at 12:56
Convergence at slot	n/a	Database/Source file	WellArchitectDB/TROUDT_34C-33HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	6.58	-2233.67	3167882.46	1275617.51	40°05'18.247"N	104°53'59.878"W
Facility Reference Pt			3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	PERMIT (17' KB) (RKB) to Facility Vertical Datum	5054.00ft
Horizontal Reference Pt	Slot	PERMIT (17' KB) (RKB) to Mean Sea Level	5054.00ft
Vertical Reference Pt	PERMIT (17' KB) (RKB)	PERMIT (17' KB) (RKB) to Mud Line at Slot (SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33))	5054.00ft
MD Reference Pt	PERMIT (17' KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	346.42°



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TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (147 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	238.850	0.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
17.00	0.000	238.850	17.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	TIE ON
117.00†	0.000	238.850	117.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
217.00†	0.000	238.850	217.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
317.00†	0.000	238.850	317.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
417.00†	0.000	238.850	417.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
517.00†	0.000	238.850	517.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
617.00†	0.000	238.850	617.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
717.00†	0.000	238.850	717.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
817.00†	0.000	238.850	817.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
917.00†	0.000	238.850	917.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
1017.00†	0.000	238.850	1017.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
1054.00†	0.000	238.850	1054.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	FOX HILLS BASE
1117.00†	0.000	238.850	1117.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	
1200.00	0.000	238.850	1200.00	0.00	0.00	0.00	40°05'18.247"N	104°53'59.878"W	0.00	BEGIN NUDGE
1217.00†	0.340	238.850	1217.00	-0.02	-0.03	-0.04	40°05'18.247"N	104°53'59.879"W	2.00	
1317.00†	2.340	238.850	1316.97	-0.72	-1.24	-2.04	40°05'18.235"N	104°53'59.904"W	2.00	
1417.00†	4.340	238.850	1416.79	-2.48	-4.25	-7.03	40°05'18.205"N	104°53'59.968"W	2.00	
1517.00†	6.340	238.850	1516.35	-5.29	-9.06	-14.99	40°05'18.157"N	104°54'00.071"W	2.00	
1617.00†	8.340	238.850	1615.53	-9.14	-15.67	-25.93	40°05'18.092"N	104°54'00.212"W	2.00	
1717.00†	10.340	238.850	1714.20	-14.04	-24.07	-39.82	40°05'18.009"N	104°54'00.390"W	2.00	
1817.00†	12.340	238.850	1812.24	-19.98	-34.24	-56.64	40°05'17.909"N	104°54'00.607"W	2.00	
1917.00†	14.340	238.850	1909.54	-26.94	-46.17	-76.39	40°05'17.791"N	104°54'00.861"W	2.00	
2017.00†	16.340	238.850	2005.97	-34.92	-59.86	-99.03	40°05'17.655"N	104°54'01.152"W	2.00	
2100.00	18.000	238.850	2085.27	-42.32	-72.53	-120.00	40°05'17.530"N	104°54'01.422"W	2.00	END NUDGE
2117.00†	18.000	238.850	2101.44	-43.91	-75.25	-124.49	40°05'17.503"N	104°54'01.480"W	0.00	
2217.00†	18.000	238.850	2196.54	-53.23	-91.23	-150.94	40°05'17.345"N	104°54'01.820"W	0.00	
2317.00†	18.000	238.850	2291.65	-62.56	-107.22	-177.38	40°05'17.187"N	104°54'02.160"W	0.00	
2417.00†	18.000	238.850	2386.75	-71.89	-123.20	-203.83	40°05'17.029"N	104°54'02.501"W	0.00	
2517.00†	18.000	238.850	2481.86	-81.21	-139.19	-230.28	40°05'16.872"N	104°54'02.841"W	0.00	
2617.00†	18.000	238.850	2576.96	-90.54	-155.17	-256.72	40°05'16.714"N	104°54'03.181"W	0.00	
2717.00†	18.000	238.850	2672.07	-99.87	-171.16	-283.17	40°05'16.556"N	104°54'03.521"W	0.00	
2817.00†	18.000	238.850	2767.18	-109.19	-187.14	-309.62	40°05'16.398"N	104°54'03.862"W	0.00	
2917.00†	18.000	238.850	2862.28	-118.52	-203.13	-336.06	40°05'16.240"N	104°54'04.202"W	0.00	
3017.00†	18.000	238.850	2957.39	-127.85	-219.11	-362.51	40°05'16.082"N	104°54'04.542"W	0.00	
3117.00†	18.000	238.850	3052.49	-137.17	-235.10	-388.95	40°05'15.924"N	104°54'04.882"W	0.00	
3217.00†	18.000	238.850	3147.60	-146.50	-251.08	-415.40	40°05'15.766"N	104°54'05.223"W	0.00	
3317.00†	18.000	238.850	3242.70	-155.83	-267.06	-441.85	40°05'15.608"N	104°54'05.563"W	0.00	
3417.00†	18.000	238.850	3337.81	-165.15	-283.05	-468.29	40°05'15.450"N	104°54'05.903"W	0.00	
3517.00†	18.000	238.850	3432.92	-174.48	-299.03	-494.74	40°05'15.292"N	104°54'06.243"W	0.00	
3617.00†	18.000	238.850	3528.02	-183.81	-315.02	-521.18	40°05'15.134"N	104°54'06.584"W	0.00	
3717.00†	18.000	238.850	3623.13	-193.13	-331.00	-547.63	40°05'14.976"N	104°54'06.924"W	0.00	
3817.00†	18.000	238.850	3718.23	-202.46	-346.99	-574.08	40°05'14.818"N	104°54'07.264"W	0.00	
3917.00†	18.000	238.850	3813.34	-211.79	-362.97	-600.52	40°05'14.660"N	104°54'07.604"W	0.00	
4017.00†	18.000	238.850	3908.44	-221.12	-378.96	-626.97	40°05'14.502"N	104°54'07.945"W	0.00	



Planned Wellpath Report

TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	18.000	238.850	4003.55	-230.44	-394.94	-653.42	40°05'14.344"N	104°54'08.285"W	0.00	
4217.00†	18.000	238.850	4098.66	-239.77	-410.93	-679.86	40°05'14.186"N	104°54'08.625"W	0.00	
4317.00†	18.000	238.850	4193.76	-249.10	-426.91	-706.31	40°05'14.028"N	104°54'08.965"W	0.00	
4417.00†	18.000	238.850	4288.87	-258.42	-442.90	-732.75	40°05'13.870"N	104°54'09.306"W	0.00	
4517.00†	18.000	238.850	4383.97	-267.75	-458.88	-759.20	40°05'13.712"N	104°54'09.646"W	0.00	
4617.00†	18.000	238.850	4479.08	-277.08	-474.87	-785.65	40°05'13.554"N	104°54'09.986"W	0.00	
4717.00†	18.000	238.850	4574.18	-286.40	-490.85	-812.09	40°05'13.396"N	104°54'10.326"W	0.00	
4817.00†	18.000	238.850	4669.29	-295.73	-506.84	-838.54	40°05'13.238"N	104°54'10.667"W	0.00	
4849.29†	18.000	238.850	4700.00	-298.74	-512.00	-847.08	40°05'13.187"N	104°54'10.776"W	0.00	SUSSEX
4917.00†	18.000	238.850	4764.39	-305.06	-522.82	-864.98	40°05'13.080"N	104°54'11.007"W	0.00	
5017.00†	18.000	238.850	4859.50	-314.38	-538.81	-891.43	40°05'12.922"N	104°54'11.347"W	0.00	
5117.00†	18.000	238.850	4954.61	-323.71	-554.79	-917.88	40°05'12.764"N	104°54'11.687"W	0.00	
5217.00†	18.000	238.850	5049.71	-333.04	-570.78	-944.32	40°05'12.606"N	104°54'12.028"W	0.00	
5289.85†	18.000	238.850	5119.00	-339.83	-582.42	-963.59	40°05'12.491"N	104°54'12.275"W	0.00	SHANNON
5317.00†	18.000	238.850	5144.82	-342.36	-586.76	-970.77	40°05'12.448"N	104°54'12.368"W	0.00	
5417.00†	18.000	238.850	5239.92	-351.69	-602.75	-997.22	40°05'12.290"N	104°54'12.708"W	0.00	
5517.00†	18.000	238.850	5335.03	-361.02	-618.73	-1023.66	40°05'12.132"N	104°54'13.048"W	0.00	
5574.80	18.000	238.850	5390.00	-366.41	-627.97	-1038.95	40°05'12.041"N	104°54'13.245"W	0.00	BEGIN DROP
5617.00†	17.156	238.850	5430.23	-370.26	-634.56	-1049.85	40°05'11.976"N	104°54'13.385"W	2.00	
5717.00†	15.156	238.850	5526.27	-378.65	-648.96	-1073.67	40°05'11.834"N	104°54'13.692"W	2.00	
5817.00†	13.156	238.850	5623.23	-386.03	-661.61	-1094.60	40°05'11.709"N	104°54'13.961"W	2.00	
5917.00†	11.156	238.850	5720.99	-392.39	-672.50	-1112.62	40°05'11.601"N	104°54'14.193"W	2.00	
6017.00†	9.156	238.850	5819.41	-397.71	-681.62	-1127.71	40°05'11.511"N	104°54'14.387"W	2.00	
6117.00†	7.156	238.850	5918.40	-401.99	-688.96	-1139.85	40°05'11.438"N	104°54'14.543"W	2.00	
6217.00†	5.156	238.850	6017.82	-405.23	-694.50	-1149.02	40°05'11.384"N	104°54'14.661"W	2.00	
6317.00†	3.156	238.850	6117.55	-407.42	-698.25	-1155.23	40°05'11.346"N	104°54'14.741"W	2.00	
6417.00†	1.156	238.850	6217.47	-408.55	-700.20	-1158.45	40°05'11.327"N	104°54'14.782"W	2.00	
6474.80	0.000	0.733	6275.27	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	2.00	END DROP
6517.00†	0.000	0.733	6317.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
6617.00†	0.000	0.733	6417.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
6717.00†	0.000	0.733	6517.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
6817.00†	0.000	0.733	6617.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
6917.00†	0.000	0.733	6717.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
7017.00†	0.000	0.733	6817.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
7117.00†	0.000	0.733	6917.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
7217.00†	0.000	0.733	7017.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
7317.00†	0.000	0.733	7117.47	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	
7328.58	0.000	0.733	7129.05	-408.73	-700.50	-1158.94	40°05'11.324"N	104°54'14.789"W	0.00	KOP, BUILD @ 10°/100'
7417.00†	8.842	0.733	7217.12	-402.13	-693.69	-1158.86	40°05'11.392"N	104°54'14.788"W	10.00	
7517.00†	18.842	0.733	7314.09	-378.98	-669.80	-1158.55	40°05'11.628"N	104°54'14.784"W	10.00	
7557.58†	22.900	0.733	7352.00	-364.97	-655.35	-1158.37	40°05'11.770"N	104°54'14.781"W	10.00	SHARON SPRINGS
7617.00†	28.842	0.733	7405.44	-339.86	-629.43	-1158.03	40°05'12.027"N	104°54'14.777"W	10.00	
7643.09†	31.451	0.733	7428.00	-327.17	-616.33	-1157.87	40°05'12.156"N	104°54'14.775"W	10.00	NIOBRARA
7713.93†	38.535	0.733	7486.00	-287.83	-575.73	-1157.35	40°05'12.557"N	104°54'14.768"W	10.00	NIOBRARA B
7717.00†	38.842	0.733	7488.39	-285.97	-573.82	-1157.32	40°05'12.576"N	104°54'14.768"W	10.00	



Planned Wellpath Report

TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7807.33†	47.875	0.733	7554.00	-225.94	-511.87	-1156.53	40°05'13.188"N	104°54'14.758"W	10.00	NIOBRARA C
7817.00†	48.842	0.733	7560.43	-218.94	-504.64	-1156.44	40°05'13.260"N	104°54'14.757"W	10.00	
7917.00†	58.842	0.733	7619.35	-140.81	-424.01	-1155.41	40°05'14.057"N	104°54'14.743"W	10.00	
8017.00†	68.842	0.733	7663.38	-53.95	-334.38	-1154.26	40°05'14.942"N	104°54'14.729"W	10.00	
8055.29†	72.671	0.733	7676.00	-18.92	-298.23	-1153.79	40°05'15.300"N	104°54'14.723"W	10.00	FORT HAYS
8117.00†	78.842	0.733	7691.18	39.00	-238.46	-1153.03	40°05'15.890"N	104°54'14.713"W	10.00	
8152.78†	82.420	0.733	7697.00	73.21	-203.16	-1152.58	40°05'16.239"N	104°54'14.707"W	10.00	CODELL
8217.00†	88.842	0.733	7701.89	135.22	-139.17	-1151.76	40°05'16.871"N	104°54'14.697"W	10.00	
8230.80	90.222	0.733	7702.00	148.59	-125.37	-1151.58	40°05'17.008"N	104°54'14.694"W	10.00	LANDING POINT
8317.00†	90.222	0.733	7701.67	232.11	-39.18	-1150.48	40°05'17.860"N	104°54'14.680"W	0.00	
8417.00†	90.222	0.733	7701.28	329.00	60.81	-1149.20	40°05'18.848"N	104°54'14.664"W	0.00	
8517.00†	90.222	0.733	7700.89	425.90	160.80	-1147.92	40°05'19.836"N	104°54'14.648"W	0.00	
8617.00†	90.222	0.733	7700.51	522.79	260.80	-1146.64	40°05'20.824"N	104°54'14.631"W	0.00	
8717.00†	90.222	0.733	7700.12	619.69	360.79	-1145.36	40°05'21.812"N	104°54'14.615"W	0.00	
8817.00†	90.222	0.733	7699.73	716.58	460.78	-1144.08	40°05'22.800"N	104°54'14.598"W	0.00	
8917.00†	90.222	0.733	7699.34	813.47	560.77	-1142.80	40°05'23.788"N	104°54'14.582"W	0.00	
9017.00†	90.222	0.733	7698.96	910.37	660.76	-1141.52	40°05'24.776"N	104°54'14.565"W	0.00	
9117.00†	90.222	0.733	7698.57	1007.26	760.75	-1140.24	40°05'25.765"N	104°54'14.549"W	0.00	
9217.00†	90.222	0.733	7698.18	1104.15	860.74	-1138.96	40°05'26.753"N	104°54'14.533"W	0.00	
9317.00†	90.222	0.733	7697.79	1201.05	960.73	-1137.68	40°05'27.741"N	104°54'14.516"W	0.00	
9417.00†	90.222	0.733	7697.41	1297.94	1060.72	-1136.40	40°05'28.729"N	104°54'14.500"W	0.00	
9517.00†	90.222	0.733	7697.02	1394.84	1160.72	-1135.12	40°05'29.717"N	104°54'14.483"W	0.00	
9521.72†	90.222	0.733	7697.00	1399.41	1165.43	-1135.06	40°05'29.764"N	104°54'14.483"W	0.00	CODELL
9617.00†	90.222	0.733	7696.63	1491.73	1260.71	-1133.84	40°05'30.705"N	104°54'14.467"W	0.00	
9717.00†	90.222	0.733	7696.24	1588.62	1360.70	-1132.56	40°05'31.693"N	104°54'14.451"W	0.00	
9817.00†	90.222	0.733	7695.86	1685.52	1460.69	-1131.28	40°05'32.682"N	104°54'14.434"W	0.00	
9917.00†	90.222	0.733	7695.47	1782.41	1560.68	-1130.00	40°05'33.670"N	104°54'14.418"W	0.00	
10017.00†	90.222	0.733	7695.08	1879.31	1660.67	-1128.72	40°05'34.658"N	104°54'14.401"W	0.00	
10117.00†	90.222	0.733	7694.69	1976.20	1760.66	-1127.44	40°05'35.646"N	104°54'14.385"W	0.00	
10217.00†	90.222	0.733	7694.31	2073.09	1860.65	-1126.16	40°05'36.634"N	104°54'14.369"W	0.00	
10317.00†	90.222	0.733	7693.92	2169.99	1960.64	-1124.88	40°05'37.622"N	104°54'14.352"W	0.00	
10417.00†	90.222	0.733	7693.53	2266.88	2060.63	-1123.60	40°05'38.610"N	104°54'14.336"W	0.00	
10517.00†	90.222	0.733	7693.14	2363.77	2160.63	-1122.32	40°05'39.598"N	104°54'14.319"W	0.00	
10617.00†	90.222	0.733	7692.76	2460.67	2260.62	-1121.04	40°05'40.587"N	104°54'14.303"W	0.00	
10717.00†	90.222	0.733	7692.37	2557.56	2360.61	-1119.76	40°05'41.575"N	104°54'14.286"W	0.00	
10817.00†	90.222	0.733	7691.98	2654.46	2460.60	-1118.48	40°05'42.563"N	104°54'14.270"W	0.00	
10917.00†	90.222	0.733	7691.59	2751.35	2560.59	-1117.20	40°05'43.551"N	104°54'14.254"W	0.00	
11017.00†	90.222	0.733	7691.21	2848.24	2660.58	-1115.92	40°05'44.539"N	104°54'14.237"W	0.00	
11117.00†	90.222	0.733	7690.82	2945.14	2760.57	-1114.64	40°05'45.527"N	104°54'14.221"W	0.00	
11217.00†	90.222	0.733	7690.43	3042.03	2860.56	-1113.36	40°05'46.515"N	104°54'14.204"W	0.00	
11317.00†	90.222	0.733	7690.04	3138.93	2960.55	-1112.08	40°05'47.503"N	104°54'14.188"W	0.00	
11417.00†	90.222	0.733	7689.66	3235.82	3060.55	-1110.80	40°05'48.492"N	104°54'14.172"W	0.00	
11517.00†	90.222	0.733	7689.27	3332.71	3160.54	-1109.52	40°05'49.480"N	104°54'14.155"W	0.00	
11617.00†	90.222	0.733	7688.88	3429.61	3260.53	-1108.24	40°05'50.468"N	104°54'14.139"W	0.00	
11717.00†	90.222	0.733	7688.49	3526.50	3360.52	-1106.96	40°05'51.456"N	104°54'14.122"W	0.00	



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TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11817.00†	90.222	0.733	7688.11	3623.39	3460.51	-1105.68	40°05'52.444"N	104°54'14.106"W	0.00	
11917.00†	90.222	0.733	7687.72	3720.29	3560.50	-1104.40	40°05'53.432"N	104°54'14.090"W	0.00	
12017.00†	90.222	0.733	7687.33	3817.18	3660.49	-1103.12	40°05'54.420"N	104°54'14.073"W	0.00	
12117.00†	90.222	0.733	7686.94	3914.08	3760.48	-1101.84	40°05'55.408"N	104°54'14.057"W	0.00	
12217.00†	90.222	0.733	7686.56	4010.97	3860.47	-1100.56	40°05'56.397"N	104°54'14.040"W	0.00	
12317.00†	90.222	0.733	7686.17	4107.86	3960.46	-1099.28	40°05'57.385"N	104°54'14.024"W	0.00	
12417.00†	90.222	0.733	7685.78	4204.76	4060.46	-1098.00	40°05'58.373"N	104°54'14.007"W	0.00	
12517.00†	90.222	0.733	7685.39	4301.65	4160.45	-1096.72	40°05'59.361"N	104°54'13.991"W	0.00	
12617.00†	90.222	0.733	7685.01	4398.55	4260.44	-1095.44	40°06'00.349"N	104°54'13.975"W	0.00	
12717.00†	90.222	0.733	7684.62	4495.44	4360.43	-1094.16	40°06'01.337"N	104°54'13.958"W	0.00	
12817.00†	90.222	0.733	7684.23	4592.33	4460.42	-1092.88	40°06'02.325"N	104°54'13.942"W	0.00	
12876.77	90.222	0.733	7684.00 ¹	4650.25	4520.19	-1092.12	40°06'02.916"N	104°54'13.932"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: TROUDT 34C-33HZ PWB Ref Wellpath: TROUDT 34C-33HZ (PERMIT REV-1) 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	1104.00	1087.00	17.00	1104.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1104.00	1087.00	17.00	1104.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1104.00	8230.80	7126.80	1104.00	7702.00	0.00	0.00	-125.37	-1151.58
7in Casing Intermediate	17.00	8230.80	8213.80	17.00	7702.00	0.00	0.00	-125.37	-1151.58
6.125in Open Hole	8230.80	12876.77	4645.97	7702.00	7684.00	-125.37	-1151.58	4520.19	-1092.12
4.5in Casing Production	17.00	12876.77	12859.77	17.00	7684.00	0.00	0.00	4520.19	-1092.12



Planned Wellpath Report

TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ICK BACK POINT		5054.00	-697.46	-1160.77	3166726.49	1274912.24	40°05'11.354"N	104°54'14.812"W	point
1) TROUDT 34C-33HZ BHL REV-1 (460'FNL & 350'FWL, SEC.33)	12876.77	7684.00	4520.19	-1092.12	3166759.83	1280130.01	40°06'02.916"N	104°54'13.932"W	point
TROUDT 34C-33HZ LANDBOX		7684.00	0.00	0.00	3167882.46	1275617.50	40°05'18.247"N	104°53'59.878"W	polygon
TROUDT 35-33HZ HARDLINES (460' SETBACK)		7684.00	-6.38	2233.68	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W	polygon
TROUDT 35-33HZ SECTION 33		7684.00	-6.38	2233.68	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W	polygon

SURVEY PROGRAM - Ref Wellbore: TROUDT 34C-33HZ PWB Ref Wellpath: TROUDT 34C-33HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	8230.80	NaviTrak (Standard)		TROUDT 34C-33HZ PWB
8230.80	12876.77	OnTrak (Standard)		TROUDT 34C-33HZ PWB



Planned Wellpath Report

TROUDT 34C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 TROUDT 34C-33HZ (305'FSL & 1500'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 34C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 34C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1054.00	0.000	238.850	1054.00	FOX HILLS BASE
4849.29	18.000	238.850	4700.00	SUSSEX
5289.85	18.000	238.850	5119.00	SHANNON
7557.58	22.900	0.733	7352.00	SHARON SPRINGS
7643.09	31.451	0.733	7428.00	NIOBRARA
7713.93	38.535	0.733	7486.00	NIOBRARA B
7807.33	47.875	0.733	7554.00	NIOBRARA C
8055.29	72.671	0.733	7676.00	FORT HAYS
8152.78	82.420	0.733	7697.00	CODELL
9521.72	90.222	0.733	7697.00	CODELL

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	238.850	17.00	TIE ON
1200.00	0.000	238.850	1200.00	BEGIN NUDGE
2100.00	18.000	238.850	2085.27	END NUDGE
5574.80	18.000	238.850	5390.00	BEGIN DROP
6474.80	0.000	0.733	6275.27	END DROP
7328.58	0.000	0.733	7129.05	KOP, BUILD @ 10°/100'
8230.80	90.222	0.733	7702.00	LANDING POINT
12876.77	90.222	0.733	7684.00	TOTAL DEPTH