

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Field: WELD COUNTY (KERR MCGEE) Well: TROUDT 35C-33HZ
Facility: SEC.33-T2N-R67W Wellbore: TROUDT 35C-33HZ PWB

Plot reference wellpath is TROUDT 35C-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#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robale01 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#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)	5.86	-2173.52	3167942.621	1275617.203	40°05'18.240"N	104°53'59.104"W	
PERMIT (17 KB) (RKB) to Mud line (At Slot: SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33))						5054ft	
Mean Sea Level to Mud line (At Slot: SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33))						0ft	
PERMIT (17 KB) (RKB) to Mean Sea Level						5054ft	

Survey Program

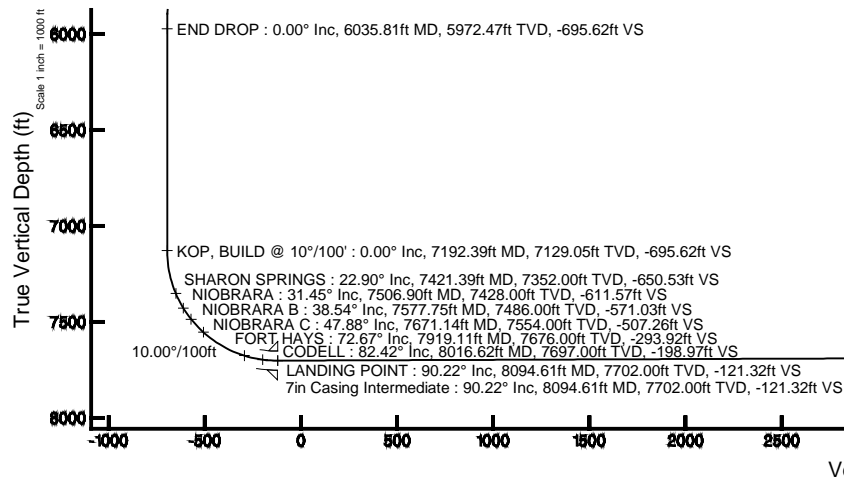
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	8094.61	NaviTrak	NaviTrak (Standard)		TROUDT 35C-33HZ PWB
8094.61	12744.01	OnTrak	OnTrak (Standard)		TROUDT 35C-33HZ PWB

Well Profile Data

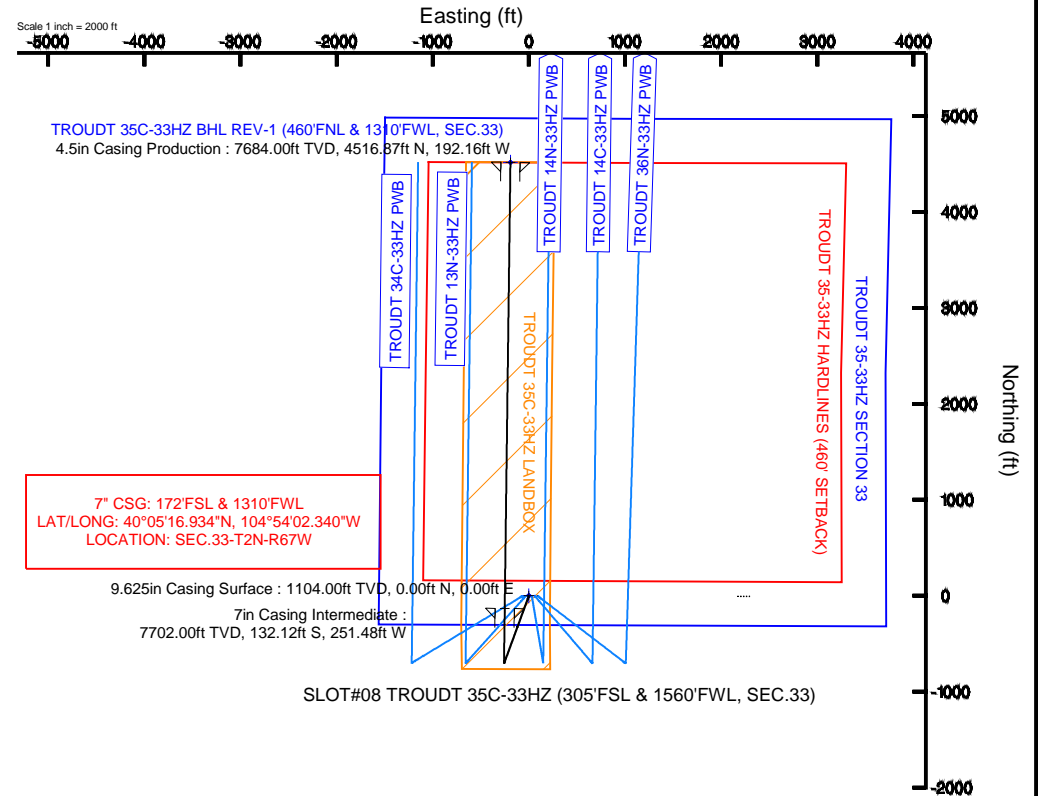
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE ON	17.00	0.000	200.100	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1200.00	0.000	200.100	1200.00	0.00	0.00	0.00	0.00
END NUDGE	1700.00	10.000	200.100	1697.47	-40.87	-14.96	2.00	-40.20
BEGIN DROP	5535.81	10.000	200.100	5475.00	-666.38	-243.86	0.00	-655.42
END DROP	6035.81	0.000	0.731	5972.47	-707.26	-258.82	2.00	-695.62
KOP, BUILD @ 10°/100'	7192.39	0.000	0.731	7129.05	-707.26	-258.82	0.00	-695.62
LANDING POINT	8094.61	90.222	0.731	7702.00	-132.13	-251.48	10.00	-121.32
TARGET DEPTH	12744.01	90.222	0.731	7684.00	4516.87	-192.16	0.00	4520.95

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
TROUDT 35-33HZ HARDLINES (460' SETBACK)		7684.00	-5.67	2173.52	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W
TROUDT 35-33HZ SECTION 33		7684.00	-5.67	2173.52	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W
TROUDT 35C-33HZ BHL REV-1 (460'FNL & 1310'FWL, SEC.33)	12744.01	7684.00	4516.87	-192.16	3167719.90	1280132.48	40°06'02.876"N	104°54'01.577"W
TROUDT 35C-33HZ LANDBOX		7684.00	0.00	0.00	3167942.62	1275617.20	40°05'18.240"N	104°53'59.104"W



Azimuth 357.56° with reference 0.00 N, 0.00 E





Planned Wellpath Report

TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-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 12:58
Convergence at slot	n/a	Database/Source file	WellArchitectDB/TROUDT_35C-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	5.86	-2173.52	3167942.62	1275617.20	40°05'18.240"N	104°53'59.104"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#08 TROUDT 35C-33HZ (305'FSL & 1560'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	357.56°



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TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (146 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	200.100	0.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
17.00	0.000	200.100	17.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	TIE ON
117.00†	0.000	200.100	117.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
217.00†	0.000	200.100	217.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
317.00†	0.000	200.100	317.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
417.00†	0.000	200.100	417.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
517.00†	0.000	200.100	517.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
617.00†	0.000	200.100	617.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
717.00†	0.000	200.100	717.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
817.00†	0.000	200.100	817.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
917.00†	0.000	200.100	917.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
1017.00†	0.000	200.100	1017.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
1054.00†	0.000	200.100	1054.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	FOX HILLS BASE
1117.00†	0.000	200.100	1117.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	
1200.00	0.000	200.100	1200.00	0.00	0.00	0.00	40°05'18.240"N	104°53'59.104"W	0.00	BEGIN NUDGE
1217.00†	0.340	200.100	1217.00	-0.05	-0.05	-0.02	40°05'18.240"N	104°53'59.104"W	2.00	
1317.00†	2.340	200.100	1316.97	-2.21	-2.24	-0.82	40°05'18.218"N	104°53'59.115"W	2.00	
1417.00†	4.340	200.100	1416.79	-7.59	-7.71	-2.82	40°05'18.164"N	104°53'59.140"W	2.00	
1517.00†	6.340	200.100	1516.35	-16.18	-16.45	-6.02	40°05'18.077"N	104°53'59.181"W	2.00	
1617.00†	8.340	200.100	1615.53	-27.98	-28.45	-10.41	40°05'17.959"N	104°53'59.238"W	2.00	
1700.00	10.000	200.100	1697.47	-40.20	-40.87	-14.96	40°05'17.836"N	104°53'59.296"W	2.00	END NUDGE
1717.00†	10.000	200.100	1714.21	-42.93	-43.64	-15.97	40°05'17.809"N	104°53'59.309"W	0.00	
1817.00†	10.000	200.100	1812.69	-58.96	-59.95	-21.94	40°05'17.648"N	104°53'59.386"W	0.00	
1917.00†	10.000	200.100	1911.17	-75.00	-76.26	-27.91	40°05'17.486"N	104°53'59.463"W	0.00	
2017.00†	10.000	200.100	2009.65	-91.04	-92.57	-33.87	40°05'17.325"N	104°53'59.540"W	0.00	
2117.00†	10.000	200.100	2108.13	-107.08	-108.87	-39.84	40°05'17.164"N	104°53'59.617"W	0.00	
2217.00†	10.000	200.100	2206.61	-123.12	-125.18	-45.81	40°05'17.003"N	104°53'59.693"W	0.00	
2317.00†	10.000	200.100	2305.09	-139.16	-141.49	-51.78	40°05'16.842"N	104°53'59.770"W	0.00	
2417.00†	10.000	200.100	2403.57	-155.20	-157.79	-57.74	40°05'16.681"N	104°53'59.847"W	0.00	
2517.00†	10.000	200.100	2502.05	-171.24	-174.10	-63.71	40°05'16.519"N	104°53'59.924"W	0.00	
2617.00†	10.000	200.100	2600.53	-187.28	-190.41	-69.68	40°05'16.358"N	104°54'00.001"W	0.00	
2717.00†	10.000	200.100	2699.01	-203.31	-206.72	-75.65	40°05'16.197"N	104°54'00.077"W	0.00	
2817.00†	10.000	200.100	2797.50	-219.35	-223.02	-81.61	40°05'16.036"N	104°54'00.154"W	0.00	
2917.00†	10.000	200.100	2895.98	-235.39	-239.33	-87.58	40°05'15.875"N	104°54'00.231"W	0.00	
3017.00†	10.000	200.100	2994.46	-251.43	-255.64	-93.55	40°05'15.714"N	104°54'00.308"W	0.00	
3117.00†	10.000	200.100	3092.94	-267.47	-271.94	-99.52	40°05'15.553"N	104°54'00.384"W	0.00	
3217.00†	10.000	200.100	3191.42	-283.51	-288.25	-105.49	40°05'15.391"N	104°54'00.461"W	0.00	
3317.00†	10.000	200.100	3289.90	-299.55	-304.56	-111.45	40°05'15.230"N	104°54'00.538"W	0.00	
3417.00†	10.000	200.100	3388.38	-315.59	-320.87	-117.42	40°05'15.069"N	104°54'00.615"W	0.00	
3517.00†	10.000	200.100	3486.86	-331.62	-337.17	-123.39	40°05'14.908"N	104°54'00.692"W	0.00	
3617.00†	10.000	200.100	3585.34	-347.66	-353.48	-129.36	40°05'14.747"N	104°54'00.768"W	0.00	
3717.00†	10.000	200.100	3683.82	-363.70	-369.79	-135.32	40°05'14.586"N	104°54'00.845"W	0.00	
3817.00†	10.000	200.100	3782.30	-379.74	-386.10	-141.29	40°05'14.425"N	104°54'00.922"W	0.00	
3917.00†	10.000	200.100	3880.78	-395.78	-402.40	-147.26	40°05'14.263"N	104°54'00.999"W	0.00	
4017.00†	10.000	200.100	3979.26	-411.82	-418.71	-153.23	40°05'14.102"N	104°54'01.075"W	0.00	



Planned Wellpath Report

TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (146 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	200.100	4077.75	-427.86	-435.02	-159.19	40°05'13.941"N	104°54'01.152"W	0.00	
4217.00†	10.000	200.100	4176.23	-443.90	-451.32	-165.16	40°05'13.780"N	104°54'01.229"W	0.00	
4317.00†	10.000	200.100	4274.71	-459.94	-467.63	-171.13	40°05'13.619"N	104°54'01.306"W	0.00	
4417.00†	10.000	200.100	4373.19	-475.97	-483.94	-177.10	40°05'13.458"N	104°54'01.383"W	0.00	
4517.00†	10.000	200.100	4471.67	-492.01	-500.25	-183.06	40°05'13.296"N	104°54'01.459"W	0.00	
4617.00†	10.000	200.100	4570.15	-508.05	-516.55	-189.03	40°05'13.135"N	104°54'01.536"W	0.00	
4717.00†	10.000	200.100	4668.63	-524.09	-532.86	-195.00	40°05'12.974"N	104°54'01.613"W	0.00	
4748.85†	10.000	200.100	4700.00	-529.20	-538.05	-196.90	40°05'12.923"N	104°54'01.637"W	0.00	SUSSEX
4817.00†	10.000	200.100	4767.11	-540.13	-549.17	-200.97	40°05'12.813"N	104°54'01.690"W	0.00	
4917.00†	10.000	200.100	4865.59	-556.17	-565.47	-206.93	40°05'12.652"N	104°54'01.766"W	0.00	
5017.00†	10.000	200.100	4964.07	-572.21	-581.78	-212.90	40°05'12.491"N	104°54'01.843"W	0.00	
5117.00†	10.000	200.100	5062.55	-588.25	-598.09	-218.87	40°05'12.330"N	104°54'01.920"W	0.00	
5174.32†	10.000	200.100	5119.00	-597.44	-607.44	-222.29	40°05'12.237"N	104°54'01.964"W	0.00	SHANNON
5217.00†	10.000	200.100	5161.03	-604.28	-614.40	-224.84	40°05'12.168"N	104°54'01.997"W	0.00	
5317.00†	10.000	200.100	5259.52	-620.32	-630.70	-230.80	40°05'12.007"N	104°54'02.074"W	0.00	
5417.00†	10.000	200.100	5358.00	-636.36	-647.01	-236.77	40°05'11.846"N	104°54'02.150"W	0.00	
5517.00†	10.000	200.100	5456.48	-652.40	-663.32	-242.74	40°05'11.685"N	104°54'02.227"W	0.00	
5535.81	10.000	200.100	5475.00	-655.42	-666.38	-243.86	40°05'11.655"N	104°54'02.242"W	0.00	BEGIN DROP
5617.00†	8.376	200.100	5555.15	-667.39	-678.56	-248.32	40°05'11.534"N	104°54'02.299"W	2.00	
5717.00†	6.376	200.100	5654.31	-679.25	-690.61	-252.73	40°05'11.415"N	104°54'02.356"W	2.00	
5817.00†	4.376	200.100	5753.87	-687.90	-699.41	-255.95	40°05'11.328"N	104°54'02.397"W	2.00	
5917.00†	2.376	200.100	5853.69	-693.34	-704.94	-257.97	40°05'11.274"N	104°54'02.423"W	2.00	
6017.00†	0.376	200.100	5953.66	-695.56	-707.20	-258.80	40°05'11.251"N	104°54'02.434"W	2.00	
6035.81	0.000	0.731	5972.47	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	2.00	END DROP
6117.00†	0.000	0.731	6053.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6217.00†	0.000	0.731	6153.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6317.00†	0.000	0.731	6253.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6417.00†	0.000	0.731	6353.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6517.00†	0.000	0.731	6453.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6617.00†	0.000	0.731	6553.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6717.00†	0.000	0.731	6653.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6817.00†	0.000	0.731	6753.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
6917.00†	0.000	0.731	6853.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
7017.00†	0.000	0.731	6953.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
7117.00†	0.000	0.731	7053.66	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	
7192.39	0.000	0.731	7129.05	-695.62	-707.26	-258.82	40°05'11.251"N	104°54'02.434"W	0.00	KOP, BUILD @ 10°/100'
7217.00†	2.461	0.731	7153.65	-695.09	-706.73	-258.81	40°05'11.256"N	104°54'02.434"W	10.00	
7317.00†	12.461	0.731	7252.68	-682.14	-693.76	-258.65	40°05'11.384"N	104°54'02.432"W	10.00	
7417.00†	22.461	0.731	7347.95	-652.22	-663.80	-258.26	40°05'11.680"N	104°54'02.427"W	10.00	
7421.39†	22.900	0.731	7352.00	-650.53	-662.10	-258.24	40°05'11.697"N	104°54'02.427"W	10.00	SHARON SPRINGS
7506.90†	31.451	0.731	7428.00	-611.57	-623.09	-257.75	40°05'12.083"N	104°54'02.420"W	10.00	NIOBRARA
7517.00†	32.461	0.731	7436.57	-606.23	-617.74	-257.68	40°05'12.135"N	104°54'02.419"W	10.00	
7577.75†	38.536	0.731	7486.00	-571.03	-582.49	-257.23	40°05'12.484"N	104°54'02.413"W	10.00	NIOBRARA B
7617.00†	42.461	0.731	7515.84	-545.58	-557.00	-256.90	40°05'12.736"N	104°54'02.409"W	10.00	
7671.14†	47.875	0.731	7554.00	-507.26	-518.62	-256.41	40°05'13.115"N	104°54'02.403"W	10.00	NIOBRARA C



Planned Wellpath Report

TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	52.461	0.731	7583.37	-472.10	-483.42	-255.96	40°05'13.463"N	104°54'02.397"W	10.00	
7817.00†	62.461	0.731	7637.09	-388.04	-399.23	-254.89	40°05'14.295"N	104°54'02.383"W	10.00	
7917.00†	72.461	0.731	7675.37	-295.93	-306.99	-253.71	40°05'15.206"N	104°54'02.368"W	10.00	
7919.11†	72.672	0.731	7676.00	-293.92	-304.98	-253.69	40°05'15.226"N	104°54'02.368"W	10.00	FORT HAYS
8016.62†	82.423	0.731	7697.00	-198.97	-209.89	-252.47	40°05'16.166"N	104°54'02.352"W	10.00	CODELL
8017.00†	82.461	0.731	7697.05	-198.59	-209.51	-252.47	40°05'16.170"N	104°54'02.352"W	10.00	
8094.61	90.222	0.731	7702.00	-121.32	-132.13	-251.48	40°05'16.934"N	104°54'02.340"W	10.00	LANDING POINT
8117.00†	90.222	0.731	7701.91	-98.96	-109.74	-251.19	40°05'17.156"N	104°54'02.336"W	0.00	
8217.00†	90.222	0.731	7701.53	0.89	-9.75	-249.92	40°05'18.144"N	104°54'02.320"W	0.00	
8317.00†	90.222	0.731	7701.14	100.73	90.25	-248.64	40°05'19.132"N	104°54'02.303"W	0.00	
8417.00†	90.222	0.731	7700.75	200.58	190.24	-247.37	40°05'20.120"N	104°54'02.287"W	0.00	
8517.00†	90.222	0.731	7700.36	300.43	290.23	-246.09	40°05'21.108"N	104°54'02.270"W	0.00	
8617.00†	90.222	0.731	7699.98	400.27	390.22	-244.82	40°05'22.096"N	104°54'02.254"W	0.00	
8717.00†	90.222	0.731	7699.59	500.12	490.21	-243.54	40°05'23.084"N	104°54'02.237"W	0.00	
8817.00†	90.222	0.731	7699.20	599.96	590.20	-242.26	40°05'24.072"N	104°54'02.221"W	0.00	
8917.00†	90.222	0.731	7698.82	699.81	690.19	-240.99	40°05'25.061"N	104°54'02.205"W	0.00	
9017.00†	90.222	0.731	7698.43	799.66	790.18	-239.71	40°05'26.049"N	104°54'02.188"W	0.00	
9117.00†	90.222	0.731	7698.04	899.50	890.17	-238.44	40°05'27.037"N	104°54'02.172"W	0.00	
9217.00†	90.222	0.731	7697.65	999.35	990.17	-237.16	40°05'28.025"N	104°54'02.155"W	0.00	
9317.00†	90.222	0.731	7697.27	1099.20	1090.16	-235.88	40°05'29.013"N	104°54'02.139"W	0.00	
9385.90†	90.222	0.731	7697.00	1167.99	1159.05	-235.00	40°05'29.694"N	104°54'02.128"W	0.00	CODELL
9417.00†	90.222	0.731	7696.88	1199.04	1190.15	-234.61	40°05'30.001"N	104°54'02.123"W	0.00	
9517.00†	90.222	0.731	7696.49	1298.89	1290.14	-233.33	40°05'30.989"N	104°54'02.106"W	0.00	
9617.00†	90.222	0.731	7696.11	1398.74	1390.13	-232.06	40°05'31.977"N	104°54'02.090"W	0.00	
9717.00†	90.222	0.731	7695.72	1498.58	1490.12	-230.78	40°05'32.966"N	104°54'02.073"W	0.00	
9817.00†	90.222	0.731	7695.33	1598.43	1590.11	-229.50	40°05'33.954"N	104°54'02.057"W	0.00	
9917.00†	90.222	0.731	7694.94	1698.28	1690.10	-228.23	40°05'34.942"N	104°54'02.041"W	0.00	
10017.00†	90.222	0.731	7694.56	1798.12	1790.09	-226.95	40°05'35.930"N	104°54'02.024"W	0.00	
10117.00†	90.222	0.731	7694.17	1897.97	1890.09	-225.68	40°05'36.918"N	104°54'02.008"W	0.00	
10217.00†	90.222	0.731	7693.78	1997.82	1990.08	-224.40	40°05'37.906"N	104°54'01.991"W	0.00	
10317.00†	90.222	0.731	7693.40	2097.66	2090.07	-223.12	40°05'38.894"N	104°54'01.975"W	0.00	
10417.00†	90.222	0.731	7693.01	2197.51	2190.06	-221.85	40°05'39.883"N	104°54'01.959"W	0.00	
10517.00†	90.222	0.731	7692.62	2297.36	2290.05	-220.57	40°05'40.871"N	104°54'01.942"W	0.00	
10617.00†	90.222	0.731	7692.23	2397.20	2390.04	-219.30	40°05'41.859"N	104°54'01.926"W	0.00	
10717.00†	90.222	0.731	7691.85	2497.05	2490.03	-218.02	40°05'42.847"N	104°54'01.909"W	0.00	
10817.00†	90.222	0.731	7691.46	2596.89	2590.02	-216.74	40°05'43.835"N	104°54'01.893"W	0.00	
10917.00†	90.222	0.731	7691.07	2696.74	2690.01	-215.47	40°05'44.823"N	104°54'01.877"W	0.00	
11017.00†	90.222	0.731	7690.69	2796.59	2790.01	-214.19	40°05'45.811"N	104°54'01.860"W	0.00	
11117.00†	90.222	0.731	7690.30	2896.43	2890.00	-212.92	40°05'46.799"N	104°54'01.844"W	0.00	
11217.00†	90.222	0.731	7689.91	2996.28	2989.99	-211.64	40°05'47.788"N	104°54'01.827"W	0.00	
11317.00†	90.222	0.731	7689.52	3096.13	3089.98	-210.37	40°05'48.776"N	104°54'01.811"W	0.00	
11417.00†	90.222	0.731	7689.14	3195.97	3189.97	-209.09	40°05'49.764"N	104°54'01.795"W	0.00	
11517.00†	90.222	0.731	7688.75	3295.82	3289.96	-207.81	40°05'50.752"N	104°54'01.778"W	0.00	
11617.00†	90.222	0.731	7688.36	3395.67	3389.95	-206.54	40°05'51.740"N	104°54'01.762"W	0.00	
11717.00†	90.222	0.731	7687.98	3495.51	3489.94	-205.26	40°05'52.728"N	104°54'01.745"W	0.00	



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TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH DATA (146 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	0.731	7687.59	3595.36	3589.93	-203.99	40°05'53.716"N	104°54'01.729"W	0.00	
11917.00†	90.222	0.731	7687.20	3695.21	3689.93	-202.71	40°05'54.704"N	104°54'01.713"W	0.00	
12017.00†	90.222	0.731	7686.81	3795.05	3789.92	-201.43	40°05'55.693"N	104°54'01.696"W	0.00	
12117.00†	90.222	0.731	7686.43	3894.90	3889.91	-200.16	40°05'56.681"N	104°54'01.680"W	0.00	
12217.00†	90.222	0.731	7686.04	3994.75	3989.90	-198.88	40°05'57.669"N	104°54'01.663"W	0.00	
12317.00†	90.222	0.731	7685.65	4094.59	4089.89	-197.61	40°05'58.657"N	104°54'01.647"W	0.00	
12417.00†	90.222	0.731	7685.27	4194.44	4189.88	-196.33	40°05'59.645"N	104°54'01.630"W	0.00	
12517.00†	90.222	0.731	7684.88	4294.29	4289.87	-195.05	40°06'00.633"N	104°54'01.614"W	0.00	
12617.00†	90.222	0.731	7684.49	4394.13	4389.86	-193.78	40°06'01.621"N	104°54'01.598"W	0.00	
12717.00†	90.222	0.731	7684.10	4493.98	4489.85	-192.50	40°06'02.609"N	104°54'01.581"W	0.00	
12744.01	90.222	0.731	7684.00 ¹	4520.95	4516.87	-192.16	40°06'02.876"N	104°54'01.577"W	0.00	TARGET DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: TROUDT 35C-33HZ PWB Ref Wellpath: TROUDT 35C-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	8094.61	6990.61	1104.00	7702.00	0.00	0.00	-132.12	-251.48
7in Casing Intermediate	17.00	8094.61	8077.61	17.00	7702.00	0.00	0.00	-132.12	-251.48
6.125in Open Hole	8094.61	12744.01	4649.40	7702.00	7684.00	-132.12	-251.48	4516.87	-192.16
4.5in Casing Production	17.00	12744.01	12727.01	17.00	7684.00	0.00	0.00	4516.87	-192.16



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TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-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
TROUDT 35-33HZ HARDLINES (460' SETBACK)		7684.00	-5.67	2173.52	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W	polygon
TROUDT 35-33HZ SECTION 33		7684.00	-5.67	2173.52	3170116.04	1275626.24	40°05'18.183"N	104°53'31.139"W	polygon
1) TROUDT 35C-33HZ BHL REV-1 (460'FNL & 1310'FWL, SEC.33)	12744.01	7684.00	4516.87	-192.16	3167719.90	1280132.48	40°06'02.876"N	104°54'01.577"W	point
TROUDT 35C-33HZ LANDBOX		7684.00	0.00	0.00	3167942.62	1275617.20	40°05'18.240"N	104°53'59.104"W	polygon

SURVEY PROGRAM - Ref Wellbore: TROUDT 35C-33HZ PWB Ref Wellpath: TROUDT 35C-33HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	8094.61	NaviTrak (Standard)		TROUDT 35C-33HZ PWB
8094.61	12744.01	OnTrak (Standard)		TROUDT 35C-33HZ PWB



Planned Wellpath Report

TROUDT 35C-33HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 TROUDT 35C-33HZ (305'FSL & 1560'FWL, SEC.33)
Area	COLORADO	Well	TROUDT 35C-33HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	TROUDT 35C-33HZ PWB
Facility	SEC.33-T2N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1054.00	0.000	200.100	1054.00	FOX HILLS BASE
4748.85	10.000	200.100	4700.00	SUSSEX
5174.32	10.000	200.100	5119.00	SHANNON
7421.39	22.900	0.731	7352.00	SHARON SPRINGS
7506.90	31.451	0.731	7428.00	NIOBRARA
7577.75	38.536	0.731	7486.00	NIOBRARA B
7671.14	47.875	0.731	7554.00	NIOBRARA C
7919.11	72.672	0.731	7676.00	FORT HAYS
8016.62	82.423	0.731	7697.00	CODELL
9385.90	90.222	0.731	7697.00	CODELL

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	200.100	17.00	TIE ON
1200.00	0.000	200.100	1200.00	BEGIN NUDGE
1700.00	10.000	200.100	1697.47	END NUDGE
5535.81	10.000	200.100	5475.00	BEGIN DROP
6035.81	0.000	0.731	5972.47	END DROP
7192.39	0.000	0.731	7129.05	KOP, BUILD @ 10°/100'
8094.61	90.222	0.731	7702.00	LANDING POINT
12744.01	90.222	0.731	7684.00	TARGET DEPTH