

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8)
Field: WELD COUNTY (KERR MCGEE) Well: SATER 40N-5HZ
Facility: SEC.08-T2N-R67W Wellbore: SATER 40N-5HZ PWB

Plot reference wellpath is SATER 40N-5HZ (PERMIT REV-1) PWP

True vertical depths are referenced to Rig on SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8) (RKB)	North Reference: True north
Rig on SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8) (RKB) to Mean Sea Level: 4963 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wllaj02 on 6/27/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.08-T2N-R67W	3163883.162	1299302.310	40°09'12.578"N	104°54'49.320"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8)	70.43	2257.24	3166139.789	1299388.261
Rig on SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8) (RKB) to Mud line (At Slot: SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8))				4963R
Mean Sea Level to Mud line (At Slot: SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8))				0ft
Rig on SLOT#08 SATER 40N-5HZ (2367°FNL & 297°FEL, SEC.8) (RKB) to Mean Sea Level				4963R

Survey Program

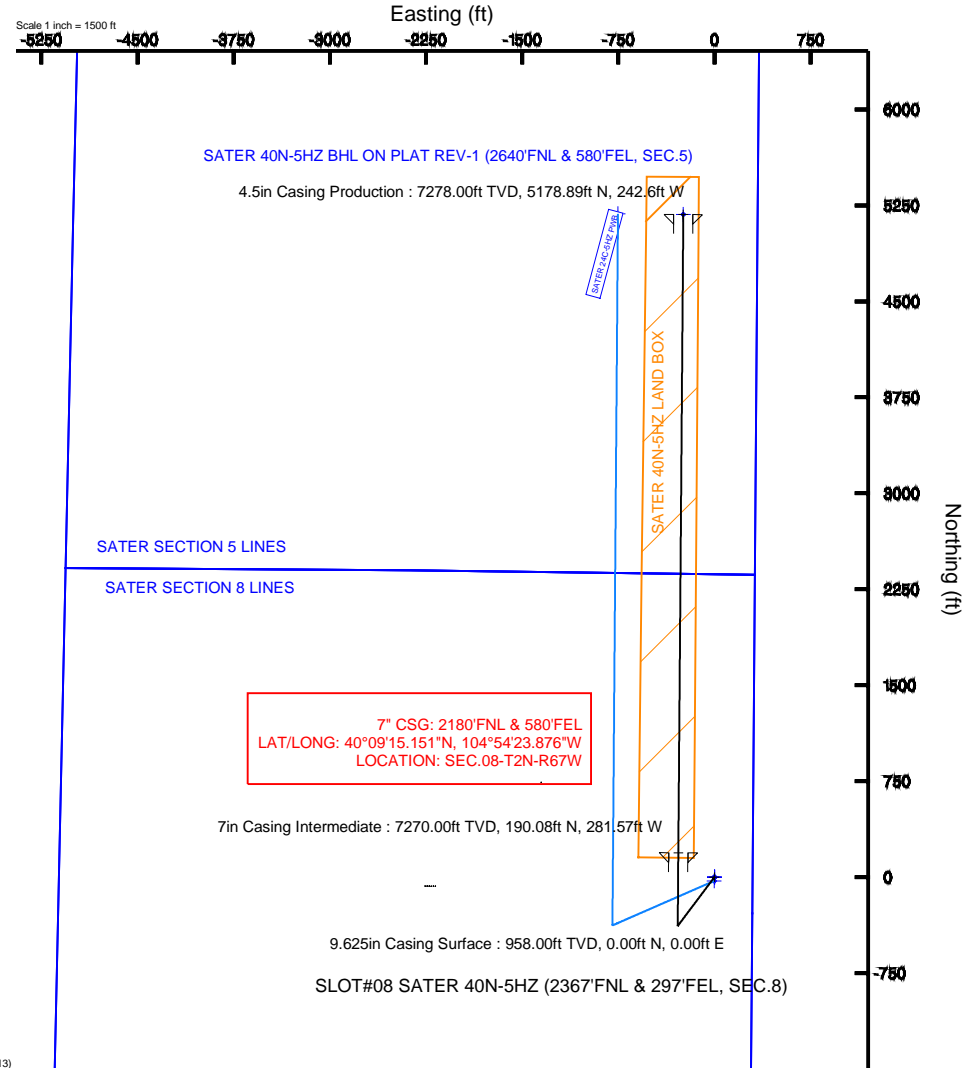
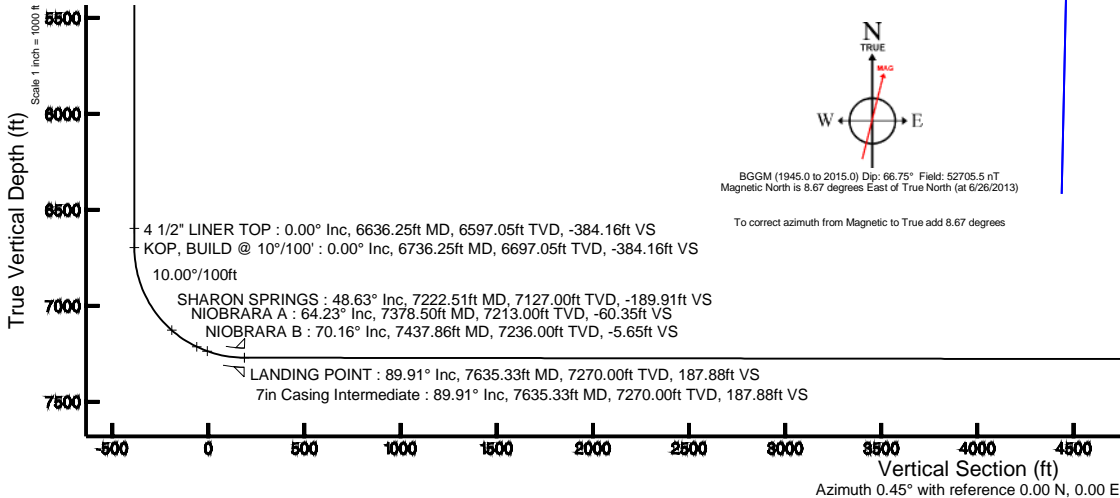
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7635.33	NaviTrak	NaviTrak (Standard)		SATER 40N-5HZ PWB
7635.33	12624.27	OnTrak	OnTrak (Standard)		SATER 40N-5HZ PWB

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	216.830	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1200.00	0.000	216.830	1200.00	0.00	0.00	0.00	0.00
END NUDGE	1700.00	10.000	216.830	1697.47	-34.84	-26.09	2.00	-35.04
BEGIN DROP	3946.67	10.000	216.830	3910.00	-347.10	-259.95	0.00	-349.12
END DROP	4446.67	0.000	0.448	4407.47	-381.94	-286.04	2.00	-384.16
KOP, BUILD @ 10°/100'	6736.25	0.000	0.448	6697.05	-381.94	-286.04	0.00	-384.16
LANDING POINT	7635.33	89.908	0.448	7270.00	190.08	-281.57	10.00	187.88
TOTAL DEPTH	12624.29	89.908	0.448	7278.00	5178.89	-242.60	0.00	5176.81

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SATER SECTION 5 LINES		0.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W
SATER SECTION 8 LINES		0.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W
SATER 40N-5HZ BHL ON PLAT REV-1 (2640°FNL & 580°FEL, SEC.5)	12624.27	7278.00	5178.87	-242.59	3166862.51	1304665.16	40°10'04.451"N	104°54'23.375"W
SATER 40N-5HZ LAND BOX		7300.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W





Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-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	Wilsjef02
Scale	0.999958	Report Generated	6/27/2013 at 11:01:40
Convergence at slot	n/a	Database/Source file	WellArchitectDB/SATER_40N-5HZ_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	70.43	2257.24	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W
Facility Reference Pt			3163883.16	1299302.91	40°09'12.578"N	104°54'49.320"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#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8) (RKB) to Facility Vertical Datum	4963.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8) (RKB) to Mean Sea Level	4963.00ft
Vertical Reference Pt	Rig on SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8) (RKB)	Rig on SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8) (RKB) to Mud Line at Slot (SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8))	4963.00ft
MD Reference Pt	Rig on SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.45°



Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-T2N-R67W		

WELLPATH DATA (142 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	216.830	0.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
17.00	0.000	216.830	17.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	TIE-ON
117.00†	0.000	216.830	117.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
217.00†	0.000	216.830	217.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
317.00†	0.000	216.830	317.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
417.00†	0.000	216.830	417.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
517.00†	0.000	216.830	517.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
617.00†	0.000	216.830	617.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
717.00†	0.000	216.830	717.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
817.00†	0.000	216.830	817.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
908.00†	0.000	216.830	908.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	FOX HILLS BASE
917.00†	0.000	216.830	917.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
1017.00†	0.000	216.830	1017.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
1117.00†	0.000	216.830	1117.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	
1200.00	0.000	216.830	1200.00	0.00	0.00	0.00	40°09'13.273"N	104°54'20.250"W	0.00	BEGIN NUDGE
1217.00†	0.340	216.830	1217.00	-0.04	-0.04	-0.03	40°09'13.273"N	104°54'20.250"W	2.00	
1317.00†	2.340	216.830	1316.97	-1.92	-1.91	-1.43	40°09'13.254"N	104°54'20.268"W	2.00	
1417.00†	4.340	216.830	1416.79	-6.61	-6.58	-4.92	40°09'13.208"N	104°54'20.313"W	2.00	
1517.00†	6.340	216.830	1516.35	-14.11	-14.02	-10.50	40°09'13.134"N	104°54'20.385"W	2.00	
1617.00†	8.340	216.830	1615.53	-24.39	-24.25	-18.16	40°09'13.033"N	104°54'20.484"W	2.00	
1700.00	10.000	216.830	1697.47	-35.04	-34.84	-26.09	40°09'12.929"N	104°54'20.586"W	2.00	END NUDGE
1717.00†	10.000	216.830	1714.21	-37.42	-37.20	-27.86	40°09'12.905"N	104°54'20.609"W	0.00	
1817.00†	10.000	216.830	1812.69	-51.40	-51.10	-38.27	40°09'12.768"N	104°54'20.743"W	0.00	
1917.00†	10.000	216.830	1911.17	-65.38	-65.00	-48.68	40°09'12.631"N	104°54'20.877"W	0.00	
2017.00†	10.000	216.830	2009.65	-79.36	-78.90	-59.09	40°09'12.493"N	104°54'21.011"W	0.00	
2117.00†	10.000	216.830	2108.13	-93.34	-92.80	-69.50	40°09'12.356"N	104°54'21.145"W	0.00	
2217.00†	10.000	216.830	2206.61	-107.32	-106.69	-79.90	40°09'12.219"N	104°54'21.279"W	0.00	
2317.00†	10.000	216.830	2305.09	-121.30	-120.59	-90.31	40°09'12.081"N	104°54'21.413"W	0.00	
2417.00†	10.000	216.830	2403.57	-135.28	-134.49	-100.72	40°09'11.944"N	104°54'21.547"W	0.00	
2517.00†	10.000	216.830	2502.05	-149.26	-148.39	-111.13	40°09'11.807"N	104°54'21.681"W	0.00	
2617.00†	10.000	216.830	2600.53	-163.24	-162.29	-121.54	40°09'11.669"N	104°54'21.815"W	0.00	
2717.00†	10.000	216.830	2699.01	-177.22	-176.19	-131.95	40°09'11.532"N	104°54'21.949"W	0.00	
2817.00†	10.000	216.830	2797.50	-191.20	-190.09	-142.36	40°09'11.395"N	104°54'22.083"W	0.00	
2917.00†	10.000	216.830	2895.98	-205.18	-203.99	-152.77	40°09'11.257"N	104°54'22.217"W	0.00	
3017.00†	10.000	216.830	2994.46	-219.16	-217.89	-163.18	40°09'11.120"N	104°54'22.351"W	0.00	
3117.00†	10.000	216.830	3092.94	-233.14	-231.79	-173.59	40°09'10.982"N	104°54'22.486"W	0.00	
3217.00†	10.000	216.830	3191.42	-247.12	-245.69	-184.00	40°09'10.845"N	104°54'22.620"W	0.00	
3317.00†	10.000	216.830	3289.90	-261.10	-259.58	-194.41	40°09'10.708"N	104°54'22.754"W	0.00	
3417.00†	10.000	216.830	3388.38	-275.08	-273.48	-204.82	40°09'10.570"N	104°54'22.888"W	0.00	
3517.00†	10.000	216.830	3486.86	-289.06	-287.38	-215.22	40°09'10.433"N	104°54'23.022"W	0.00	
3617.00†	10.000	216.830	3585.34	-303.04	-301.28	-225.63	40°09'10.296"N	104°54'23.156"W	0.00	
3717.00†	10.000	216.830	3683.82	-317.02	-315.18	-236.04	40°09'10.158"N	104°54'23.290"W	0.00	
3817.00†	10.000	216.830	3782.30	-331.00	-329.08	-246.45	40°09'10.021"N	104°54'23.424"W	0.00	
3917.00†	10.000	216.830	3880.78	-344.98	-342.98	-256.86	40°09'09.884"N	104°54'23.558"W	0.00	
3922.30†	10.000	216.830	3886.00	-345.72	-343.72	-257.41	40°09'09.876"N	104°54'23.565"W	0.00	PARKMAN



Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-T2N-R67W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3946.67	10.000	216.830	3910.00	-349.12	-347.10	-259.95	40°09'09.843"N	104°54'23.598"W	0.00	BEGIN DROP
4017.00†	8.593	216.830	3979.41	-358.27	-356.20	-266.76	40°09'09.753"N	104°54'23.685"W	2.00	
4117.00†	6.593	216.830	4078.53	-368.91	-366.77	-274.68	40°09'09.649"N	104°54'23.787"W	2.00	
4217.00†	4.593	216.830	4178.04	-376.76	-374.57	-280.52	40°09'09.571"N	104°54'23.863"W	2.00	
4317.00†	2.593	216.830	4277.84	-381.80	-379.59	-284.28	40°09'09.522"N	104°54'23.911"W	2.00	
4371.19†	1.509	216.830	4332.00	-383.36	-381.14	-285.44	40°09'09.507"N	104°54'23.926"W	2.00	SUSSEX
4417.00†	0.593	216.830	4377.80	-384.04	-381.82	-285.95	40°09'09.500"N	104°54'23.933"W	2.00	
4446.67	0.000	0.448	4407.47	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	2.00	END DROP
4517.00†	0.000	0.448	4477.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
4617.00†	0.000	0.448	4577.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
4717.00†	0.000	0.448	4677.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
4817.00†	0.000	0.448	4777.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
4917.00†	0.000	0.448	4877.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5017.00†	0.000	0.448	4977.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5117.00†	0.000	0.448	5077.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5217.00†	0.000	0.448	5177.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5317.00†	0.000	0.448	5277.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5417.00†	0.000	0.448	5377.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5517.00†	0.000	0.448	5477.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5617.00†	0.000	0.448	5577.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5717.00†	0.000	0.448	5677.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5817.00†	0.000	0.448	5777.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
5917.00†	0.000	0.448	5877.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6017.00†	0.000	0.448	5977.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6117.00†	0.000	0.448	6077.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6217.00†	0.000	0.448	6177.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6317.00†	0.000	0.448	6277.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6417.00†	0.000	0.448	6377.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6517.00†	0.000	0.448	6477.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6617.00†	0.000	0.448	6577.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6636.25†	0.000	0.448	6597.05	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	4 1/2" LINER TOP
6717.00†	0.000	0.448	6677.80	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	
6736.25	0.000	0.448	6697.05	-384.16	-381.94	-286.04	40°09'09.499"N	104°54'23.934"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	8.075	0.448	6777.53	-378.48	-376.26	-285.99	40°09'09.555"N	104°54'23.933"W	10.00	
6917.00†	18.075	0.448	6874.82	-355.89	-353.66	-285.82	40°09'09.778"N	104°54'23.931"W	10.00	
7017.00†	28.075	0.448	6966.70	-316.74	-314.52	-285.51	40°09'10.165"N	104°54'23.927"W	10.00	
7117.00†	38.075	0.448	7050.39	-262.24	-260.02	-285.09	40°09'10.703"N	104°54'23.921"W	10.00	
7217.00†	48.075	0.448	7123.34	-194.03	-191.81	-284.55	40°09'11.378"N	104°54'23.915"W	10.00	
7222.51†	48.626	0.448	7127.00	-189.91	-187.70	-284.52	40°09'11.418"N	104°54'23.914"W	10.00	SHARON SPRINGS
7317.00†	58.075	0.448	7183.34	-114.19	-111.97	-283.93	40°09'12.166"N	104°54'23.907"W	10.00	
7378.50†	64.225	0.448	7213.00	-60.35	-58.13	-283.51	40°09'12.699"N	104°54'23.901"W	10.00	NIOBRARA A
7417.00†	68.075	0.448	7228.56	-25.14	-22.93	-283.23	40°09'13.046"N	104°54'23.898"W	10.00	
7437.86†	70.162	0.448	7236.00	-5.65	-3.44	-283.08	40°09'13.239"N	104°54'23.896"W	10.00	NIOBRARA B
7517.00†	78.075	0.448	7257.64	70.41	72.62	-282.49	40°09'13.991"N	104°54'23.888"W	10.00	
7617.00†	88.075	0.448	7269.68	169.55	171.76	-281.71	40°09'14.970"N	104°54'23.878"W	10.00	



Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-T2N-R67W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7635.33	89.908	0.448	7270.00	187.88	190.08	-281.57	40°09'15.151"N	104°54'23.876"W	10.00	LANDING POINT
7717.00†	89.908	0.448	7270.13	269.55	271.75	-280.93	40°09'15.958"N	104°54'23.868"W	0.00	
7817.00†	89.908	0.448	7270.29	369.55	371.75	-280.15	40°09'16.947"N	104°54'23.858"W	0.00	
7917.00†	89.908	0.448	7270.45	469.55	471.75	-279.37	40°09'17.935"N	104°54'23.848"W	0.00	
8017.00†	89.908	0.448	7270.61	569.55	571.74	-278.59	40°09'18.923"N	104°54'23.838"W	0.00	
8117.00†	89.908	0.448	7270.77	669.55	671.74	-277.81	40°09'19.911"N	104°54'23.828"W	0.00	
8217.00†	89.908	0.448	7270.93	769.55	771.74	-277.03	40°09'20.899"N	104°54'23.818"W	0.00	
8317.00†	89.908	0.448	7271.10	869.55	871.73	-276.25	40°09'21.888"N	104°54'23.808"W	0.00	
8417.00†	89.908	0.448	7271.26	969.55	971.73	-275.46	40°09'22.876"N	104°54'23.798"W	0.00	
8517.00†	89.908	0.448	7271.42	1069.55	1071.73	-274.68	40°09'23.864"N	104°54'23.788"W	0.00	
8617.00†	89.908	0.448	7271.58	1169.55	1171.72	-273.90	40°09'24.852"N	104°54'23.778"W	0.00	
8717.00†	89.908	0.448	7271.74	1269.55	1271.72	-273.12	40°09'25.840"N	104°54'23.768"W	0.00	
8817.00†	89.908	0.448	7271.90	1369.55	1371.72	-272.34	40°09'26.828"N	104°54'23.758"W	0.00	
8917.00†	89.908	0.448	7272.06	1469.55	1471.71	-271.56	40°09'27.817"N	104°54'23.747"W	0.00	
9017.00†	89.908	0.448	7272.22	1569.55	1571.71	-270.78	40°09'28.805"N	104°54'23.737"W	0.00	
9117.00†	89.908	0.448	7272.38	1669.55	1671.71	-270.00	40°09'29.793"N	104°54'23.727"W	0.00	
9217.00†	89.908	0.448	7272.54	1769.55	1771.70	-269.22	40°09'30.781"N	104°54'23.717"W	0.00	
9317.00†	89.908	0.448	7272.70	1869.55	1871.70	-268.43	40°09'31.769"N	104°54'23.707"W	0.00	
9417.00†	89.908	0.448	7272.86	1969.55	1971.70	-267.65	40°09'32.757"N	104°54'23.697"W	0.00	
9517.00†	89.908	0.448	7273.02	2069.54	2071.69	-266.87	40°09'33.746"N	104°54'23.687"W	0.00	
9617.00†	89.908	0.448	7273.18	2169.54	2171.69	-266.09	40°09'34.734"N	104°54'23.677"W	0.00	
9717.00†	89.908	0.448	7273.34	2269.54	2271.69	-265.31	40°09'35.722"N	104°54'23.667"W	0.00	
9817.00†	89.908	0.448	7273.50	2369.54	2371.69	-264.53	40°09'36.710"N	104°54'23.657"W	0.00	
9917.00†	89.908	0.448	7273.66	2469.54	2471.68	-263.75	40°09'37.698"N	104°54'23.647"W	0.00	
10017.00†	89.908	0.448	7273.82	2569.54	2571.68	-262.97	40°09'38.686"N	104°54'23.637"W	0.00	
10117.00†	89.908	0.448	7273.98	2669.54	2671.68	-262.19	40°09'39.675"N	104°54'23.627"W	0.00	
10217.00†	89.908	0.448	7274.14	2769.54	2771.67	-261.40	40°09'40.663"N	104°54'23.617"W	0.00	
10317.00†	89.908	0.448	7274.30	2869.54	2871.67	-260.62	40°09'41.651"N	104°54'23.607"W	0.00	
10417.00†	89.908	0.448	7274.46	2969.54	2971.67	-259.84	40°09'42.639"N	104°54'23.597"W	0.00	
10517.00†	89.908	0.448	7274.62	3069.54	3071.66	-259.06	40°09'43.627"N	104°54'23.587"W	0.00	
10617.00†	89.908	0.448	7274.78	3169.54	3171.66	-258.28	40°09'44.615"N	104°54'23.577"W	0.00	
10717.00†	89.908	0.448	7274.94	3269.54	3271.66	-257.50	40°09'45.604"N	104°54'23.567"W	0.00	
10817.00†	89.908	0.448	7275.10	3369.54	3371.65	-256.72	40°09'46.592"N	104°54'23.557"W	0.00	
10917.00†	89.908	0.448	7275.26	3469.54	3471.65	-255.94	40°09'47.580"N	104°54'23.547"W	0.00	
11017.00†	89.908	0.448	7275.42	3569.54	3571.65	-255.16	40°09'48.568"N	104°54'23.537"W	0.00	
11117.00†	89.908	0.448	7275.58	3669.54	3671.64	-254.37	40°09'49.556"N	104°54'23.526"W	0.00	
11217.00†	89.908	0.448	7275.74	3769.54	3771.64	-253.59	40°09'50.545"N	104°54'23.516"W	0.00	
11317.00†	89.908	0.448	7275.90	3869.54	3871.64	-252.81	40°09'51.533"N	104°54'23.506"W	0.00	
11417.00†	89.908	0.448	7276.06	3969.54	3971.63	-252.03	40°09'52.521"N	104°54'23.496"W	0.00	
11517.00†	89.908	0.448	7276.22	4069.54	4071.63	-251.25	40°09'53.509"N	104°54'23.486"W	0.00	
11617.00†	89.908	0.448	7276.39	4169.54	4171.63	-250.47	40°09'54.497"N	104°54'23.476"W	0.00	
11717.00†	89.908	0.448	7276.55	4269.54	4271.63	-249.69	40°09'55.485"N	104°54'23.466"W	0.00	
11817.00†	89.908	0.448	7276.71	4369.54	4371.62	-248.91	40°09'56.474"N	104°54'23.456"W	0.00	
11917.00†	89.908	0.448	7276.87	4469.54	4471.62	-248.13	40°09'57.462"N	104°54'23.446"W	0.00	
12017.00†	89.908	0.448	7277.03	4569.54	4571.62	-247.34	40°09'58.450"N	104°54'23.436"W	0.00	



Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-T2N-R67W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	89.908	0.448	7277.19	4669.54	4671.61	-246.56	40°09'59.438"N	104°54'23.426"W	0.00	
12217.00†	89.908	0.448	7277.35	4769.54	4771.61	-245.78	40°10'00.426"N	104°54'23.416"W	0.00	
12317.00†	89.908	0.448	7277.51	4869.54	4871.61	-245.00	40°10'01.414"N	104°54'23.406"W	0.00	
12417.00†	89.908	0.448	7277.67	4969.54	4971.60	-244.22	40°10'02.403"N	104°54'23.396"W	0.00	
12517.00†	89.908	0.448	7277.83	5069.54	5071.60	-243.44	40°10'03.391"N	104°54'23.386"W	0.00	
12617.00†	89.908	0.448	7277.99	5169.54	5171.60	-242.66	40°10'04.379"N	104°54'23.376"W	0.00	
12624.29	89.908	0.448	7278.00 ¹	5176.83	5178.89	-242.60	40°10'04.451"N	104°54'23.375"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: SATER 40N-5HZ PWB Ref Wellpath: SATER 40N-5HZ (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	958.00	941.00	17.00	958.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	958.00	941.00	17.00	958.00	0.00	0.00	0.00	0.00
8.75in Open Hole	958.00	7635.33	6677.33	958.00	7270.00	0.00	0.00	190.08	-281.57
7in Casing Intermediate	17.00	7635.33	7618.33	17.00	7270.00	0.00	0.00	190.08	-281.57
6.125in Open Hole	7635.33	12624.29	4988.96	7270.00	7278.00	190.08	-281.57	5178.89	-242.60
4.5in Casing Production	17.00	12624.29	12607.29	17.00	7278.00	0.00	0.00	5178.89	-242.60

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SATER SECTION 5 LINES		0.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W	polygon
SATER SECTION 8 LINES		0.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W	polygon
1) SATER 40N-5HZ BHL ON PLAT REV-1 (2640'FNL & 580'FEL, SEC.5)	12624.29	7278.00	5178.89	-242.60	3165862.49	1304565.18	40°10'04.451"N	104°54'23.375"W	point
SATER 40N-5HZ LAND BOX		7300.00	0.00	0.00	3166139.79	1299388.26	40°09'13.273"N	104°54'20.250"W	polygon

SURVEY PROGRAM - Ref Wellbore: SATER 40N-5HZ PWB Ref Wellpath: SATER 40N-5HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7635.33	NaviTrak (Standard)		SATER 40N-5HZ PWB
7635.33	12624.27	OnTrak (Standard)		SATER 40N-5HZ PWB



Planned Wellpath Report

SATER 40N-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 SATER 40N-5HZ (2367'FNL & 297'FEL, SEC.8)
Area	COLORADO	Well	SATER 40N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	SATER 40N-5HZ PWB
Facility	SEC.08-T2N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
908.00	0.000	216.830	908.00	FOX HILLS BASE
3922.30	10.000	216.830	3886.00	PARKMAN
4371.19	1.509	216.830	4332.00	SUSSEX
6636.25	0.000	0.448	6597.05	4 1/2" LINER TOP
7222.51	48.626	0.448	7127.00	SHARON SPRINGS
7378.50	64.225	0.448	7213.00	NIOBRARA A
7437.86	70.162	0.448	7236.00	NIOBRARA B