

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
 Field: WELD COUNTY (KERR MCGEE) Well: MILLENSIFER FED 15C-30HZ
 Facility: SEC.30-T3N-R66W Wellbore: MILLENSIFER FED 15C-30HZ PWB

Plot reference wellpath is MILLENSIFER FED 15C-30HZ (PERMIT) PWB

True vertical depths are referenced to Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'FEL, SEC.30) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'FEL, SEC.30) (RKB)	North Reference: True north
Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'FEL, SEC.30) (RKB) to Mean Sea Level: 4843 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wisjet02 on 8/23/2012

Location Information

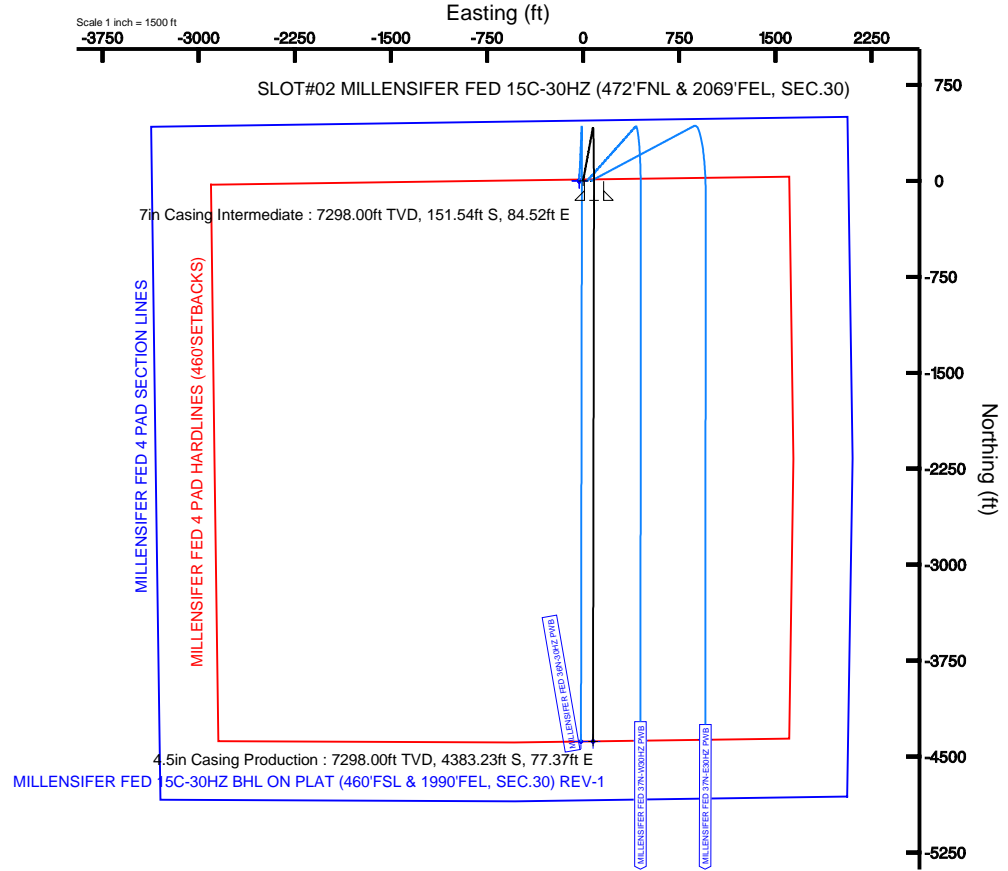
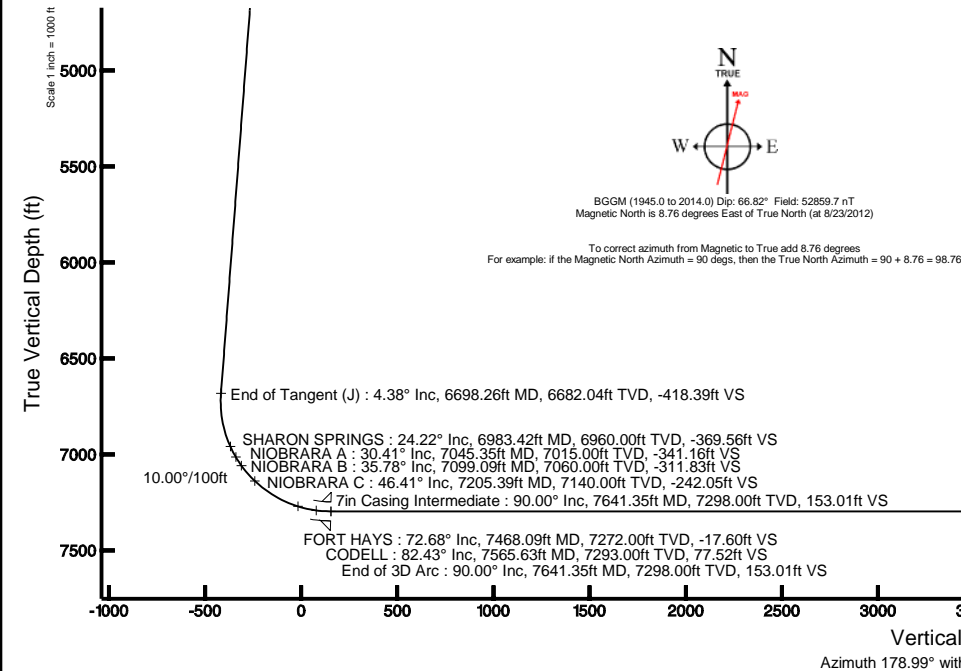
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.30-T3N-R66W		3190547.453	1317021.436	40°12'05.792"N	104°49'04.163"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)	6.40	-59.75	3190487.707	1317021.442	40°12'05.796"N	104°49'04.933"W
Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'FEL, SEC.30) (RKB) to Mud line (At Slot: SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30))						
4843ft						
Mean Sea Level to Mud line (At Slot: SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30))						
0ft						
Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'FEL, SEC.30) (RKB) to Mean Sea Level						
4843ft						

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	16.00	0.000	10.400	16.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	10.400	1000.00	0.00	0.00	0.00	0.00
End of Build (J)	1219.00	4.380	10.400	1218.79	8.23	1.51	2.00	-8.20
End of Tangent (J)	6698.26	4.380	10.400	6682.04	419.81	77.05	0.00	-418.39
End of 3D Arc	7641.35	90.000	180.097	7298.00	-151.54	84.52	10.00	153.01
End of 3D Arc	11873.05	90.000	180.097	7298.00	-4383.23	77.37	0.00	4383.91

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
MILLENSIFER FED 4 PAD SECTION LINES	0.00	0.00	-30.18	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	
MILLENSIFER FED 15C-30HZ BHL ON PLAT (460'FSL & 1990'FEL, SEC.30) REV-1	11873.05	7298.00	-4383.23	77.37	3190598.78	1312639.13	40°11'22.481"N	104°49'03.938"W
MILLENSIFER FED 4 PAD HARDLINES (460'SETBACKS)	7300.00	0.00	-30.18	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	





Planned Wellpath Report
 MILLENSIFER FED 15C-30HZ (PERMIT) PWP
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.999957	Report Generated	8/23/2012 at 12:51:19
Convergence at slot	0.44° East	Database/Source file	WellArchitectDB/MILLENSIFER_FED_15C-30HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.40	-59.75	3190487.71	1317021.44	40°12'05.796"N	104°49'04.933"W
Facility Reference Pt			3190547.45	1317021.50	40°12'05.792"N	104°49'04.163"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#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'fel, SEC.30) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'fel, SEC.30) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'fel, SEC.30) (RKB)	Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'fel, SEC.30) (RKB) to Mud Line at Slot (SLOT#
MD Reference Pt	Rig on SLOT#03 MILLENSIFER FED 15C-30HZ (472'FNL & 2070'fel, SEC.30) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Planned Wellpath Report

MILLENSIFER FED 15C-30HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (134 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	10.400	0.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
16.00	0.000	10.400	16.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	Tie On
116.00†	0.000	10.400	116.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
216.00†	0.000	10.400	216.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
316.00†	0.000	10.400	316.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
416.00†	0.000	10.400	416.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
516.00†	0.000	10.400	516.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
616.00†	0.000	10.400	616.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
706.00†	0.000	10.400	706.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	FOX HILLS
716.00†	0.000	10.400	716.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
816.00†	0.000	10.400	816.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
916.00†	0.000	10.400	916.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	
1000.00	0.000	10.400	1000.00	0.00	0.00	0.00	40°12'05.796"N	104°49'04.933"W	0.00	End of Tangent
1016.00†	0.320	10.400	1016.00	-0.04	0.04	0.01	40°12'05.796"N	104°49'04.933"W	2.00	
1116.00†	2.320	10.400	1115.97	-2.30	2.31	0.42	40°12'05.819"N	104°49'04.928"W	2.00	
1216.00†	4.320	10.400	1215.80	-7.98	8.01	1.47	40°12'05.875"N	104°49'04.914"W	2.00	
1219.00	4.380	10.400	1218.79	-8.20	8.23	1.51	40°12'05.877"N	104°49'04.914"W	2.00	End of Build (J)
1316.00†	4.380	10.400	1315.50	-15.46	15.52	2.85	40°12'05.949"N	104°49'04.896"W	0.00	
1416.00†	4.380	10.400	1415.21	-22.95	23.03	4.23	40°12'06.024"N	104°49'04.879"W	0.00	
1516.00†	4.380	10.400	1514.92	-30.44	30.54	5.60	40°12'06.098"N	104°49'04.861"W	0.00	
1616.00†	4.380	10.400	1614.63	-37.92	38.05	6.98	40°12'06.172"N	104°49'04.843"W	0.00	
1716.00†	4.380	10.400	1714.34	-45.41	45.56	8.36	40°12'06.246"N	104°49'04.825"W	0.00	
1816.00†	4.380	10.400	1814.04	-52.89	53.07	9.74	40°12'06.320"N	104°49'04.807"W	0.00	
1916.00†	4.380	10.400	1913.75	-60.38	60.59	11.12	40°12'06.395"N	104°49'04.790"W	0.00	
2016.00†	4.380	10.400	2013.46	-67.87	68.10	12.50	40°12'06.469"N	104°49'04.772"W	0.00	
2116.00†	4.380	10.400	2113.17	-75.35	75.61	13.88	40°12'06.543"N	104°49'04.754"W	0.00	
2216.00†	4.380	10.400	2212.87	-82.84	83.12	15.26	40°12'06.617"N	104°49'04.736"W	0.00	
2316.00†	4.380	10.400	2312.58	-90.32	90.63	16.63	40°12'06.692"N	104°49'04.719"W	0.00	
2416.00†	4.380	10.400	2412.29	-97.81	98.14	18.01	40°12'06.766"N	104°49'04.701"W	0.00	
2516.00†	4.380	10.400	2512.00	-105.30	105.66	19.39	40°12'06.840"N	104°49'04.683"W	0.00	
2616.00†	4.380	10.400	2611.71	-112.78	113.17	20.77	40°12'06.914"N	104°49'04.665"W	0.00	
2716.00†	4.380	10.400	2711.41	-120.27	120.68	22.15	40°12'06.989"N	104°49'04.648"W	0.00	
2816.00†	4.380	10.400	2811.12	-127.75	128.19	23.53	40°12'07.063"N	104°49'04.630"W	0.00	
2916.00†	4.380	10.400	2910.83	-135.24	135.70	24.91	40°12'07.137"N	104°49'04.612"W	0.00	
3016.00†	4.380	10.400	3010.54	-142.73	143.21	26.28	40°12'07.211"N	104°49'04.594"W	0.00	
3116.00†	4.380	10.400	3110.25	-150.21	150.72	27.66	40°12'07.285"N	104°49'04.576"W	0.00	
3216.00†	4.380	10.400	3209.95	-157.70	158.24	29.04	40°12'07.360"N	104°49'04.559"W	0.00	
3316.00†	4.380	10.400	3309.66	-165.19	165.75	30.42	40°12'07.434"N	104°49'04.541"W	0.00	
3343.42†	4.380	10.400	3337.00	-167.24	167.81	30.80	40°12'07.454"N	104°49'04.536"W	0.00	PARKMAN
3416.00†	4.380	10.400	3409.37	-172.67	173.26	31.80	40°12'07.508"N	104°49'04.523"W	0.00	
3516.00†	4.380	10.400	3509.08	-180.16	180.77	33.18	40°12'07.582"N	104°49'04.505"W	0.00	
3616.00†	4.380	10.400	3608.79	-187.64	188.28	34.56	40°12'07.657"N	104°49'04.488"W	0.00	
3716.00†	4.380	10.400	3708.49	-195.13	195.79	35.94	40°12'07.731"N	104°49'04.470"W	0.00	
3816.00†	4.380	10.400	3808.20	-202.62	203.31	37.31	40°12'07.805"N	104°49'04.452"W	0.00	
3916.00†	4.380	10.400	3907.91	-210.10	210.82	38.69	40°12'07.879"N	104°49'04.434"W	0.00	



Planned Wellpath Report

MILLENSIFER FED 15C-30HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (134 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4016.00†	4.380	10.400	4007.62	-217.59	218.33	40.07	40°12'07.954"N	104°49'04.417"W	0.00	
4116.00†	4.380	10.400	4107.33	-225.07	225.84	41.45	40°12'08.028"N	104°49'04.399"W	0.00	
4216.00†	4.380	10.400	4207.03	-232.56	233.35	42.83	40°12'08.102"N	104°49'04.381"W	0.00	
4250.07†	4.380	10.400	4241.00	-235.11	235.91	43.30	40°12'08.127"N	104°49'04.375"W	0.00	SUSSEX
4316.00†	4.380	10.400	4306.74	-240.05	240.86	44.21	40°12'08.176"N	104°49'04.363"W	0.00	
4416.00†	4.380	10.400	4406.45	-247.53	248.38	45.59	40°12'08.250"N	104°49'04.346"W	0.00	
4516.00†	4.380	10.400	4506.16	-255.02	255.89	46.96	40°12'08.325"N	104°49'04.328"W	0.00	
4616.00†	4.380	10.400	4605.87	-262.51	263.40	48.34	40°12'08.399"N	104°49'04.310"W	0.00	
4716.00†	4.380	10.400	4705.57	-269.99	270.91	49.72	40°12'08.473"N	104°49'04.292"W	0.00	
4816.00†	4.380	10.400	4805.28	-277.48	278.42	51.10	40°12'08.547"N	104°49'04.274"W	0.00	
4916.00†	4.380	10.400	4904.99	-284.96	285.93	52.48	40°12'08.622"N	104°49'04.257"W	0.00	
5016.00†	4.380	10.400	5004.70	-292.45	293.45	53.86	40°12'08.696"N	104°49'04.239"W	0.00	
5116.00†	4.380	10.400	5104.41	-299.94	300.96	55.24	40°12'08.770"N	104°49'04.221"W	0.00	
5216.00†	4.380	10.400	5204.11	-307.42	308.47	56.61	40°12'08.844"N	104°49'04.203"W	0.00	
5316.00†	4.380	10.400	5303.82	-314.91	315.98	57.99	40°12'08.919"N	104°49'04.186"W	0.00	
5416.00†	4.380	10.400	5403.53	-322.39	323.49	59.37	40°12'08.993"N	104°49'04.168"W	0.00	
5516.00†	4.380	10.400	5503.24	-329.88	331.00	60.75	40°12'09.067"N	104°49'04.150"W	0.00	
5616.00†	4.380	10.400	5602.95	-337.37	338.52	62.13	40°12'09.141"N	104°49'04.132"W	0.00	
5716.00†	4.380	10.400	5702.65	-344.85	346.03	63.51	40°12'09.215"N	104°49'04.115"W	0.00	
5816.00†	4.380	10.400	5802.36	-352.34	353.54	64.89	40°12'09.290"N	104°49'04.097"W	0.00	
5916.00†	4.380	10.400	5902.07	-359.82	361.05	66.27	40°12'09.364"N	104°49'04.079"W	0.00	
6016.00†	4.380	10.400	6001.78	-367.31	368.56	67.64	40°12'09.438"N	104°49'04.061"W	0.00	
6116.00†	4.380	10.400	6101.48	-374.80	376.07	69.02	40°12'09.512"N	104°49'04.043"W	0.00	
6216.00†	4.380	10.400	6201.19	-382.28	383.59	70.40	40°12'09.587"N	104°49'04.026"W	0.00	
6316.00†	4.380	10.400	6300.90	-389.77	391.10	71.78	40°12'09.661"N	104°49'04.008"W	0.00	
6416.00†	4.380	10.400	6400.61	-397.26	398.61	73.16	40°12'09.735"N	104°49'03.990"W	0.00	
6516.00†	4.380	10.400	6500.32	-404.74	406.12	74.54	40°12'09.809"N	104°49'03.972"W	0.00	
6616.00†	4.380	10.400	6600.02	-412.23	413.63	75.92	40°12'09.884"N	104°49'03.955"W	0.00	
6698.26	4.380	10.400	6682.04	-418.39	419.81	77.05	40°12'09.945"N	104°49'03.940"W	0.00	End of Tangent (J)
6716.00†	2.654	17.287	6699.75	-419.44	420.87	77.29	40°12'09.955"N	104°49'03.937"W	10.00	
6816.00†	7.506	174.129	6799.52	-415.12	416.57	78.65	40°12'09.913"N	104°49'03.919"W	10.00	
6916.00†	17.482	177.604	6897.03	-393.54	395.01	79.95	40°12'09.700"N	104°49'03.903"W	10.00	
6983.42†	24.219	178.352	6960.00	-369.56	371.05	80.77	40°12'09.463"N	104°49'03.892"W	10.00	SHARON SPRINGS
7016.00†	27.475	178.587	6989.32	-355.36	356.85	81.15	40°12'09.322"N	104°49'03.887"W	10.00	
7045.35†	30.409	178.760	7015.00	-341.16	342.65	81.48	40°12'09.182"N	104°49'03.883"W	10.00	NIOBRARA A
7099.09†	35.781	179.008	7060.00	-311.83	313.33	82.05	40°12'08.892"N	104°49'03.876"W	10.00	NIOBRARA B
7116.00†	37.472	179.073	7073.57	-301.74	303.24	82.22	40°12'08.793"N	104°49'03.873"W	10.00	
7205.39†	46.409	179.350	7140.00	-242.05	243.56	83.03	40°12'08.203"N	104°49'03.863"W	10.00	NIOBRARA C
7216.00†	47.470	179.377	7147.24	-234.30	235.81	83.11	40°12'08.126"N	104°49'03.862"W	10.00	
7316.00†	57.468	179.596	7208.09	-155.10	156.61	83.81	40°12'07.344"N	104°49'03.853"W	10.00	
7416.00†	67.467	179.771	7254.25	-66.55	68.05	84.29	40°12'06.468"N	104°49'03.847"W	10.00	
7468.09†	72.675	179.852	7272.00	-17.60	19.10	84.45	40°12'05.985"N	104°49'03.845"W	10.00	FORT HAYS
7516.00†	77.466	179.923	7284.34	28.67	-27.19	84.54	40°12'05.527"N	104°49'03.843"W	10.00	
7565.63†	82.428	179.993	7293.00	77.52	-76.04	84.58	40°12'05.045"N	104°49'03.843"W	10.00	CODELL
7616.00†	87.465	180.062	7297.44	127.67	-126.20	84.56	40°12'04.549"N	104°49'03.843"W	10.00	



Planned Wellpath Report

MILLENSIFER FED 15C-30HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (134 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7641.35	90.000	180.097	7298.00	153.01	-151.54	84.52	40°12'04.298"N	104°49'03.844"W	10.00	End of 3D Arc
7716.00†	90.000	180.097	7298.00	227.64	-226.19	84.39	40°12'03.561"N	104°49'03.845"W	0.00	
7816.00†	90.000	180.097	7298.00	327.62	-326.19	84.22	40°12'02.573"N	104°49'03.848"W	0.00	
7916.00†	90.000	180.097	7298.00	427.60	-426.19	84.06	40°12'01.584"N	104°49'03.850"W	0.00	
8016.00†	90.000	180.097	7298.00	527.59	-526.19	83.89	40°12'00.596"N	104°49'03.852"W	0.00	
8116.00†	90.000	180.097	7298.00	627.57	-626.19	83.72	40°11'59.608"N	104°49'03.854"W	0.00	
8216.00†	90.000	180.097	7298.00	727.55	-726.19	83.55	40°11'58.620"N	104°49'03.856"W	0.00	
8316.00†	90.000	180.097	7298.00	827.53	-826.19	83.38	40°11'57.632"N	104°49'03.858"W	0.00	
8416.00†	90.000	180.097	7298.00	927.51	-926.19	83.21	40°11'56.643"N	104°49'03.861"W	0.00	
8516.00†	90.000	180.097	7298.00	1027.49	-1026.19	83.04	40°11'55.655"N	104°49'03.863"W	0.00	
8616.00†	90.000	180.097	7298.00	1127.47	-1126.19	82.87	40°11'54.667"N	104°49'03.865"W	0.00	
8716.00†	90.000	180.097	7298.00	1227.46	-1226.19	82.70	40°11'53.679"N	104°49'03.867"W	0.00	
8816.00†	90.000	180.097	7298.00	1327.44	-1326.19	82.53	40°11'52.691"N	104°49'03.869"W	0.00	
8916.00†	90.000	180.097	7298.00	1427.42	-1426.19	82.36	40°11'51.702"N	104°49'03.872"W	0.00	
9016.00†	90.000	180.097	7298.00	1527.40	-1526.19	82.20	40°11'50.714"N	104°49'03.874"W	0.00	
9116.00†	90.000	180.097	7298.00	1627.38	-1626.19	82.03	40°11'49.726"N	104°49'03.876"W	0.00	
9216.00†	90.000	180.097	7298.00	1727.36	-1726.19	81.86	40°11'48.738"N	104°49'03.878"W	0.00	
9316.00†	90.000	180.097	7298.00	1827.34	-1826.19	81.69	40°11'47.750"N	104°49'03.880"W	0.00	
9416.00†	90.000	180.097	7298.00	1927.32	-1926.19	81.52	40°11'46.761"N	104°49'03.882"W	0.00	
9516.00†	90.000	180.097	7298.00	2027.31	-2026.19	81.35	40°11'45.773"N	104°49'03.885"W	0.00	
9616.00†	90.000	180.097	7298.00	2127.29	-2126.19	81.18	40°11'44.785"N	104°49'03.887"W	0.00	
9716.00†	90.000	180.097	7298.00	2227.27	-2226.19	81.01	40°11'43.797"N	104°49'03.889"W	0.00	
9816.00†	90.000	180.097	7298.00	2327.25	-2326.18	80.84	40°11'42.809"N	104°49'03.891"W	0.00	
9916.00†	90.000	180.097	7298.00	2427.23	-2426.18	80.67	40°11'41.820"N	104°49'03.893"W	0.00	
10016.00†	90.000	180.097	7298.00	2527.21	-2526.18	80.51	40°11'40.832"N	104°49'03.896"W	0.00	
10116.00†	90.000	180.097	7298.00	2627.19	-2626.18	80.34	40°11'39.844"N	104°49'03.898"W	0.00	
10216.00†	90.000	180.097	7298.00	2727.17	-2726.18	80.17	40°11'38.856"N	104°49'03.900"W	0.00	
10316.00†	90.000	180.097	7298.00	2827.16	-2826.18	80.00	40°11'37.868"N	104°49'03.902"W	0.00	
10416.00†	90.000	180.097	7298.00	2927.14	-2926.18	79.83	40°11'36.879"N	104°49'03.904"W	0.00	
10516.00†	90.000	180.097	7298.00	3027.12	-3026.18	79.66	40°11'35.891"N	104°49'03.906"W	0.00	
10616.00†	90.000	180.097	7298.00	3127.10	-3126.18	79.49	40°11'34.903"N	104°49'03.909"W	0.00	
10716.00†	90.000	180.097	7298.00	3227.08	-3226.18	79.32	40°11'33.915"N	104°49'03.911"W	0.00	
10816.00†	90.000	180.097	7298.00	3327.06	-3326.18	79.16	40°11'32.927"N	104°49'03.913"W	0.00	
10916.00†	90.000	180.097	7298.00	3427.04	-3426.18	78.99	40°11'31.939"N	104°49'03.915"W	0.00	
11016.00†	90.000	180.097	7298.00	3527.03	-3526.18	78.82	40°11'30.950"N	104°49'03.917"W	0.00	
11116.00†	90.000	180.097	7298.00	3627.01	-3626.18	78.65	40°11'29.962"N	104°49'03.920"W	0.00	
11216.00†	90.000	180.097	7298.00	3726.99	-3726.18	78.48	40°11'28.974"N	104°49'03.922"W	0.00	
11316.00†	90.000	180.097	7298.00	3826.97	-3826.18	78.31	40°11'27.986"N	104°49'03.924"W	0.00	
11416.00†	90.000	180.097	7298.00	3926.95	-3926.18	78.14	40°11'26.998"N	104°49'03.926"W	0.00	
11516.00†	90.000	180.097	7298.00	4026.93	-4026.18	77.98	40°11'26.009"N	104°49'03.928"W	0.00	
11616.00†	90.000	180.097	7298.00	4126.91	-4126.18	77.81	40°11'25.021"N	104°49'03.930"W	0.00	
11716.00†	90.000	180.097	7298.00	4226.89	-4226.18	77.64	40°11'24.033"N	104°49'03.933"W	0.00	
11816.00†	90.000	180.097	7298.00	4326.88	-4326.18	77.47	40°11'23.045"N	104°49'03.935"W	0.00	
11873.05	90.000	180.097	7298.00 ¹	4383.91	-4383.23	77.37	40°11'22.481"N	104°49'03.936"W	0.00	End of 3D Arc



Planned Wellpath Report

MILLENSIFER FED 15C-30HZ (PERMIT) PWP
Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: MILLENSIFER FED 15C-30HZ PWB Ref Wellpath: MILLENSIFER FED 15C-30HZ (PERMIT) PWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	16.00	700.00	684.00	16.00	700.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	16.00	700.00	684.00	16.00	700.00	0.00	0.00	0.00	0.00
8.75in Open Hole	700.00	7641.35	6941.35	700.00	7298.00	0.00	0.00	-151.54	84.52
7in Casing Intermediate	16.00	7641.35	7625.35	16.00	7298.00	0.00	0.00	-151.54	84.52
6.125in Open Hole	7641.35	11873.05	4231.70	7298.00	7298.00	-151.54	84.52	-4383.23	77.37
4.5in Casing Production	16.00	11873.05	11857.05	16.00	7298.00	0.00	0.00	-4383.23	77.37

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
MILLENSIFER FED 4 PAD SECTION LINES		0.00	0.00	-30.18	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon
1) MILLENSIFER FED 15C-30HZ BHL ON PLAT (460'FSL & 1990'FEL, SEC.30) REV-1	11873.05	7298.00	-4383.23	77.37	3190598.78	1312639.13	40°11'22.481"N	104°49'03.936"W	point
MILLENSIFER FED 4 PAD HARDLINES (460'SETBACKS)		7300.00	0.00	-30.18	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon

SURVEY PROGRAM - Ref Wellbore: MILLENSIFER FED 15C-30HZ PWB Ref Wellpath: MILLENSIFER FED 15C-30HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	7641.35	NaviTrak (Standard)		MILLENSIFER FED 15C-30HZ PWB
7641.35	11873.05	OnTrak (Standard)		MILLENSIFER FED 15C-30HZ PWB



Planned Wellpath Report
 MILLENSIFER FED 15C-30HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#02 MILLENSIFER FED 15C-30HZ (472'FNL & 2069'FEL, SEC.30)
Area	COLORADO	Well	MILLENSIFER FED 15C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MILLENSIFER FED 15C-30HZ PWB
Facility	SEC.30-T3N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
706.00	0.000	10.400	706.00	FOX HILLS
3343.42	4.380	10.400	3337.00	PARKMAN
4250.07	4.380	10.400	4241.00	SUSSEX
6983.42	24.219	178.352	6960.00	SHARON SPRINGS
7045.35	30.409	178.760	7015.00	NIOBRARA A
7099.09	35.781	179.008	7060.00	NIOBRARA B
7205.39	46.409	179.350	7140.00	NIOBRARA C
7468.09	72.675	179.852	7272.00	FORT HAYS
7565.63	82.428	179.993	7293.00	CODELL