

# KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#12 MIRACLE 19-12 (2484'FSL & 2671'FEL)  
 Field: LARIMER COUNTY Well: MIRACLE 19-12  
 Facility: SEC.12-T5N-R68W Wellbore: MIRACLE 19-12 PWB

Plot reference wellpath is MIRACLE 19-12 (REV-A.0) PWP

True vertical depths are referenced to XTREME 6 (RT)

Measured depths are referenced to XTREME 6 (RT)

XTREME 6 (RT) to Mean Sea Level: 4978 feet

Mean Sea Level to Mud line (Facility: SEC.12-T5N-R68W): 0 feet

Coordinates are in feet referenced to Slot

Grid System: NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet

North Reference: True north

Scale: True distance

Depths are in feet

Created by: wagnjam on 10/26/2010



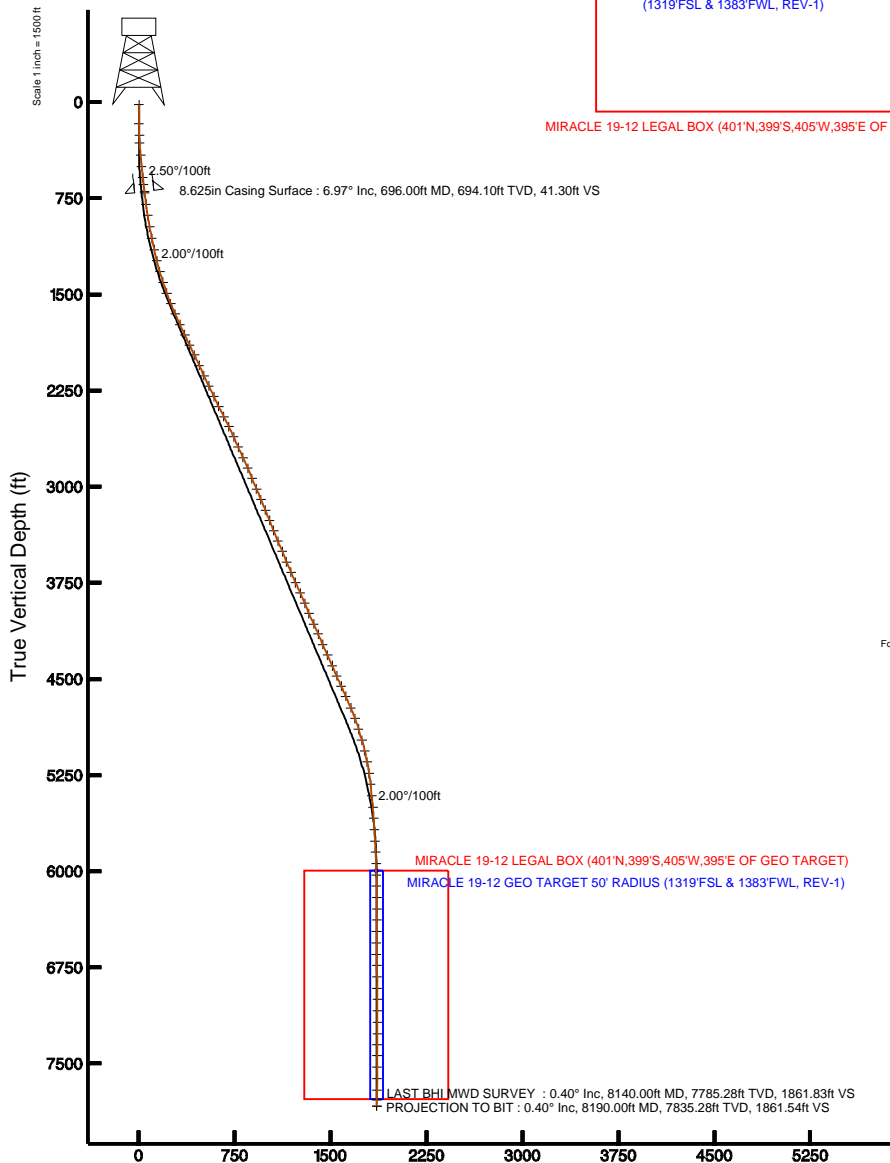
Scale 1 inch = 500

Easting (ft)

SLOT#12 MIRACLE 19-12 (2484'FSL & 2671'FEL)

8.625in Casing Surface : 694.10ft TVD, 27.89ft S, 30.63ft W

North (ft)



MIRACLE 19-12 LEGAL BOX (401'N,399'S,405'W,395'E OF GEO TARGET)

MIRACLE 19-12 GEO TARGET 50' RADIUS  
(1319'FSL & 1383'FWL, REV-1)

LAST BHI MWD SURVEY : 7785.28ft TVD, 1157.40ft S, 1458.49ft W  
 PROJECTION TO BIT : 7835.28ft TVD, 1157.38ft S, 1458.15ft W



BGGM (1945.0 to 2012.0) Dip: 67.07° Field: 53215.5 nT  
 Magnetic North is 9.02 degrees East of True North (at 10/13/2010)

To correct azimuth from Magnetic to True add 9.02 degrees  
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 9.02 = 99.02

LAST BHI MWD SURVEY : 0.40° Inc, 8140.00ft MD, 7785.28ft TVD, 1861.83ft VS  
 PROJECTION TO BIT : 0.40° Inc, 8190.00ft MD, 7835.28ft TVD, 1861.54ft VS

Vertical Section (ft)  
 Azimuth 232.17° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500 ft



# Actual Wellpath Report

MIRACLE 19-12 AWP

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 MIRACLE 19-12 (2484'FSL & 2671'FEL)
Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet	Software System	WellArchitect® 2.0
North Reference	True	User	Wagnjam
Scale	0.999961	Report Generated	10/26/2010 at 4:46:36 PM
Convergence at slot	0.35° East	Database/Source file	WA_Denver/MIRACLE_19-12_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	47.11	-2395.35	3152025.03	1394095.77	40°24'50.076"N	104°57'14.522"W
Facility Reference Pt			3154420.53	1394063.64	40°24'49.612"N	104°56'43.555"W
Field Reference Pt			3154420.53	1394063.64	40°24'49.612"N	104°56'43.555"W

## WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 6 (RT) to Facility Vertical Datum	4978.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RT) to Mean Sea Level	4978.00ft
Vertical Reference Pt	XTREME 6 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	XTREME 6 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	232.17°



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Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## WELLPATH DATA (95 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	201.300	0.00	0.00	0.00	0.00	0.00	
16.00	0.000	201.300	16.00	0.00	0.00	0.00	0.00	
163.00	0.400	201.300	163.00	0.44	-0.48	-0.19	0.27	
254.00	1.900	225.600	253.98	2.21	-1.83	-1.38	1.70	
316.00	3.100	230.200	315.92	4.91	-3.62	-3.40	1.96	
408.00	5.100	229.100	407.68	11.48	-7.89	-8.40	2.18	
499.00	5.400	230.200	498.30	19.80	-13.28	-14.75	0.35	
588.00	6.200	229.100	586.84	28.78	-19.11	-21.60	0.91	
640.00	6.800	225.600	638.51	34.64	-23.10	-25.92	1.38	
706.00	7.000	223.100	704.03	42.50	-28.77	-31.46	0.55	
797.00	7.900	228.000	794.26	54.21	-37.00	-39.90	1.21	
886.00	9.600	233.000	882.22	67.73	-45.56	-50.37	2.09	
977.00	10.300	235.800	971.85	83.44	-54.70	-63.16	0.93	
1067.00	11.300	237.300	1060.26	100.25	-63.99	-77.24	1.15	
1158.00	12.700	236.100	1149.27	119.11	-74.39	-93.04	1.56	
1247.00	13.900	228.100	1235.89	139.54	-86.98	-109.12	2.47	
1336.00	16.300	229.100	1321.81	162.68	-102.30	-126.52	2.71	
1423.00	18.200	229.100	1404.89	188.44	-119.19	-146.02	2.18	
1510.00	19.300	232.000	1487.27	216.38	-136.94	-167.62	1.66	
1599.00	21.900	235.400	1570.58	247.67	-155.43	-192.88	3.21	
1687.00	24.700	239.300	1651.40	282.31	-174.14	-222.20	3.63	
1778.00	25.400	236.100	1733.84	320.65	-194.73	-254.75	1.68	
1866.00	24.800	235.100	1813.53	357.91	-215.82	-285.56	0.83	
1953.00	25.400	230.300	1892.32	394.78	-238.18	-314.88	2.44	
2040.00	25.800	231.200	1970.78	432.36	-261.96	-343.99	0.64	
2130.00	25.100	231.200	2052.05	471.03	-286.19	-374.13	0.78	
2219.00	24.700	227.700	2132.78	508.44	-310.54	-402.60	1.72	
2308.00	25.400	229.100	2213.41	546.04	-335.55	-430.78	1.03	
2398.00	25.600	228.400	2294.64	584.72	-361.10	-459.91	0.40	
2485.00	26.700	231.900	2372.74	623.02	-385.64	-489.35	2.18	



# Actual Wellpath Report

MIRACLE 19-12 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 MIRACLE 19-12 (2484'FSL & 2671'FEL)
Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## WELLPATH DATA (95 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2574.00	27.300	234.000	2452.04	663.42	-409.97	-521.60	1.27	
2663.00	26.100	232.600	2531.55	703.40	-433.86	-553.66	1.52	
2750.00	24.000	229.400	2610.37	740.21	-457.00	-582.30	2.87	
2837.00	24.400	232.600	2689.73	775.86	-479.43	-610.01	1.58	
2927.00	24.600	232.300	2771.62	813.18	-502.18	-639.60	0.26	
3018.00	23.700	230.200	2854.66	850.40	-525.47	-668.64	1.37	
3105.00	22.900	231.600	2934.56	884.80	-547.18	-695.34	1.12	
3195.00	23.300	234.400	3017.35	920.10	-568.42	-723.54	1.30	
3284.00	22.800	236.100	3099.24	954.89	-588.28	-752.16	0.94	
3373.00	21.900	238.900	3181.56	988.58	-606.47	-780.69	1.57	
3460.00	22.000	234.400	3262.26	1020.98	-624.34	-807.84	1.94	
3547.00	22.300	235.100	3342.84	1053.75	-643.27	-834.62	0.46	
3636.00	22.500	231.600	3425.13	1087.64	-663.51	-861.82	1.52	
3723.00	22.600	230.200	3505.48	1120.99	-684.55	-887.71	0.63	
3812.00	23.300	229.100	3587.43	1155.66	-707.02	-914.15	0.92	
3899.00	23.100	228.400	3667.40	1189.87	-729.62	-939.92	0.39	
3988.00	24.400	228.400	3748.86	1225.64	-753.42	-966.72	1.46	
4077.00	24.000	230.000	3830.04	1262.07	-777.26	-994.34	0.86	
4164.00	23.000	230.900	3909.82	1296.74	-799.35	-1021.08	1.22	
4251.00	22.900	233.700	3989.94	1330.66	-820.09	-1047.91	1.26	
4340.00	24.800	238.000	4071.34	1366.54	-840.24	-1077.70	2.89	
4427.00	24.000	240.700	4150.57	1402.19	-858.57	-1108.61	1.58	
4517.00	23.800	237.600	4232.86	1438.37	-877.25	-1139.90	1.41	
4607.00	24.500	234.700	4314.98	1475.10	-897.77	-1170.47	1.53	
4698.00	23.300	238.600	4398.18	1511.83	-918.05	-1201.23	2.18	
4785.00	23.800	233.000	4477.95	1546.49	-937.58	-1229.94	2.63	
4872.00	24.100	231.600	4557.46	1581.80	-959.18	-1257.88	0.74	
4959.00	24.800	232.300	4636.65	1617.81	-981.37	-1286.24	0.87	
5059.00	23.200	231.200	4728.01	1658.48	-1006.54	-1318.19	1.66	
5146.00	20.100	230.900	4808.86	1690.57	-1026.71	-1343.15	3.57	



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Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## WELLPATH DATA (95 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5235.00	17.300	231.200	4893.15	1719.09	-1044.65	-1365.33	3.15	
5324.00	16.000	229.500	4978.42	1744.58	-1060.91	-1384.98	1.56	
5411.00	13.500	228.100	5062.55	1766.69	-1075.48	-1401.65	2.90	
5501.00	11.100	228.800	5150.47	1785.82	-1088.21	-1415.99	2.67	
5590.00	8.700	226.700	5238.14	1801.07	-1098.47	-1427.34	2.73	
5678.00	6.900	215.700	5325.33	1812.77	-1107.33	-1435.27	2.65	
5766.00	5.600	211.200	5412.80	1821.85	-1115.29	-1440.58	1.58	
5854.00	5.400	214.700	5500.40	1829.81	-1122.37	-1445.16	0.44	
5943.00	4.500	210.800	5589.07	1837.05	-1128.81	-1449.33	1.08	
6033.00	3.900	208.700	5678.83	1843.15	-1134.53	-1452.61	0.69	
6120.00	3.100	205.900	5765.66	1847.97	-1139.24	-1455.06	0.94	
6208.00	2.700	202.400	5853.55	1851.91	-1143.30	-1456.89	0.50	
6298.00	2.000	198.900	5943.47	1855.06	-1146.74	-1458.20	0.79	
6385.00	1.700	197.100	6030.43	1857.38	-1149.41	-1459.07	0.35	
6474.00	1.500	188.300	6119.39	1859.30	-1151.83	-1459.63	0.36	
6561.00	0.100	193.300	6206.38	1860.18	-1153.03	-1459.81	1.61	
6651.00	0.200	347.600	6296.38	1860.18	-1152.95	-1459.86	0.33	
6739.00	0.200	25.200	6384.38	1859.98	-1152.66	-1459.83	0.15	
6827.00	0.500	84.600	6472.38	1859.51	-1152.49	-1459.38	0.49	
6915.00	0.600	114.200	6560.38	1858.97	-1152.64	-1458.58	0.34	
7006.00	0.500	187.300	6651.37	1859.03	-1153.23	-1458.20	0.73	
7093.00	1.400	207.700	6738.36	1860.27	-1154.55	-1458.74	1.09	
7181.00	1.700	196.100	6826.33	1862.30	-1156.75	-1459.60	0.49	
7270.00	1.000	216.100	6915.30	1864.12	-1158.65	-1460.43	0.94	
7358.00	0.500	239.700	7003.30	1865.23	-1159.46	-1461.21	0.66	
7448.00	0.200	4.100	7093.29	1865.52	-1159.50	-1461.54	0.71	
7535.00	0.300	60.400	7180.29	1865.19	-1159.24	-1461.33	0.29	
7625.00	0.200	352.900	7270.29	1864.88	-1158.97	-1461.14	0.32	
7712.00	0.000	97.600	7357.29	1864.80	-1158.82	-1461.16	0.23	
7799.00	0.400	24.000	7444.29	1864.53	-1158.54	-1461.04	0.46	



# Actual Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 MIRACLE 19-12 (2484'FSL & 2671'FEL)
Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## WELLPATH DATA (95 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
7889.00	0.400	41.400	7534.29	1863.95	-1158.02	-1460.70	0.13	
7976.00	0.600	78.300	7621.29	1863.24	-1157.70	-1460.06	0.42	
8067.00	0.600	78.300	7712.28	1862.38	-1157.50	-1459.12	0.00	
8140.00	0.400	85.300	7785.28	1861.83	-1157.40	-1458.49	0.29	LAST BHI MWD SURVEY
8190.00	0.400	85.300	7835.28	1861.54	-1157.38	-1458.15	0.00	PROJECTION TO BIT

## HOLE & CASING SECTIONS Ref Wellbore: MIRACLE 19-12 AWB Ref Wellpath: MIRACLE 19-12 AWP

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]
12.625in Open Hole	16.00	696.00	680.00	16.00	694.10	0.00	0.00	-27.89	-30.63
8.625in Casing Surface	16.00	696.00	680.00	16.00	694.10	0.00	0.00	-27.89	-30.63
7.875in Open Hole	696.00	8190.00	7494.00	694.10	7835.28	-27.89	-30.63	-1157.38	-1458.15

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
MIRACLE 19-12 GEO TARGET 50' RADIUS (1319'FSL & 1383'FWL, REV-1)		6000.00	-1139.53	-1467.58	3150564.55	1392947.28	40°24'38.815"N	104°57'33.494"W	circle
MIRACLE 19-12 LEGAL BOX (401'N,399'S,405'W,395'E OF GEO TARGET)		6000.00	-1131.53	-1472.58	3150559.50	1392955.25	40°24'38.894"N	104°57'33.559"W	square

## WELLPATH COMPOSITION Ref Wellbore: MIRACLE 19-12 AWB Ref Wellpath: MIRACLE 19-12 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	640.00	NaviTrak (Standard)	BHI MWD SURVEY 12.25 HOLE <163-640>	MIRACLE 19-12 AWB
640.00	8140.00	NaviTrak (Standard)	BHI MWD SURVEYS 7.875 HOLE <706-8140>	MIRACLE 19-12 AWB
8140.00	8190.00	Blind Drilling (std)	Projection to bit	MIRACLE 19-12 AWB



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Area	COLORADO	Well	MIRACLE 19-12
Field	LARIMER COUNTY	Wellbore	MIRACLE 19-12 AWB
Facility	SEC.12-T5N-R68W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
8140.00	0.400	85.300	7785.28	LAST BHI MWD SURVEY
8190.00	0.400	85.300	7835.28	PROJECTION TO BIT