

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)

Field: WELD COUNTY (KERR MCGEE) Well: AGGREGATE STATE 37C-16HZ

Facility: SEC.09-T2N-R66W Wellbore: AGGREGATE STATE 37C-16HZ PWB

Plot reference wellpath is AGGREGATE STATE 37C-16HZ (REV-A.0) PWP

True vertical depths are referenced to ENSIGN 145 (13KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to ENSIGN 145 (13KB) (RKB)	North Reference: True north
ENSIGN 145 (13KB) (RKB) to Mean Sea Level: 4937 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 25/Feb/2014

Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.09-T2N-R66W				3202706.219	1299788.954	40°09'14.544"N	104°46'29.280"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)	-768.66	-373.19	3202339.346	1299017.289	40°09'06.948"N	104°46'34.086"W	
ENSIGN 145 (13KB) (RKB) to Mud line (At Slot: SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09))						4937ft	
Mean Sea Level to Mud line (At Slot: SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09))						0ft	
ENSIGN 145 (13KB) (RKB) to Mean Sea Level						4937ft	

Survey Program

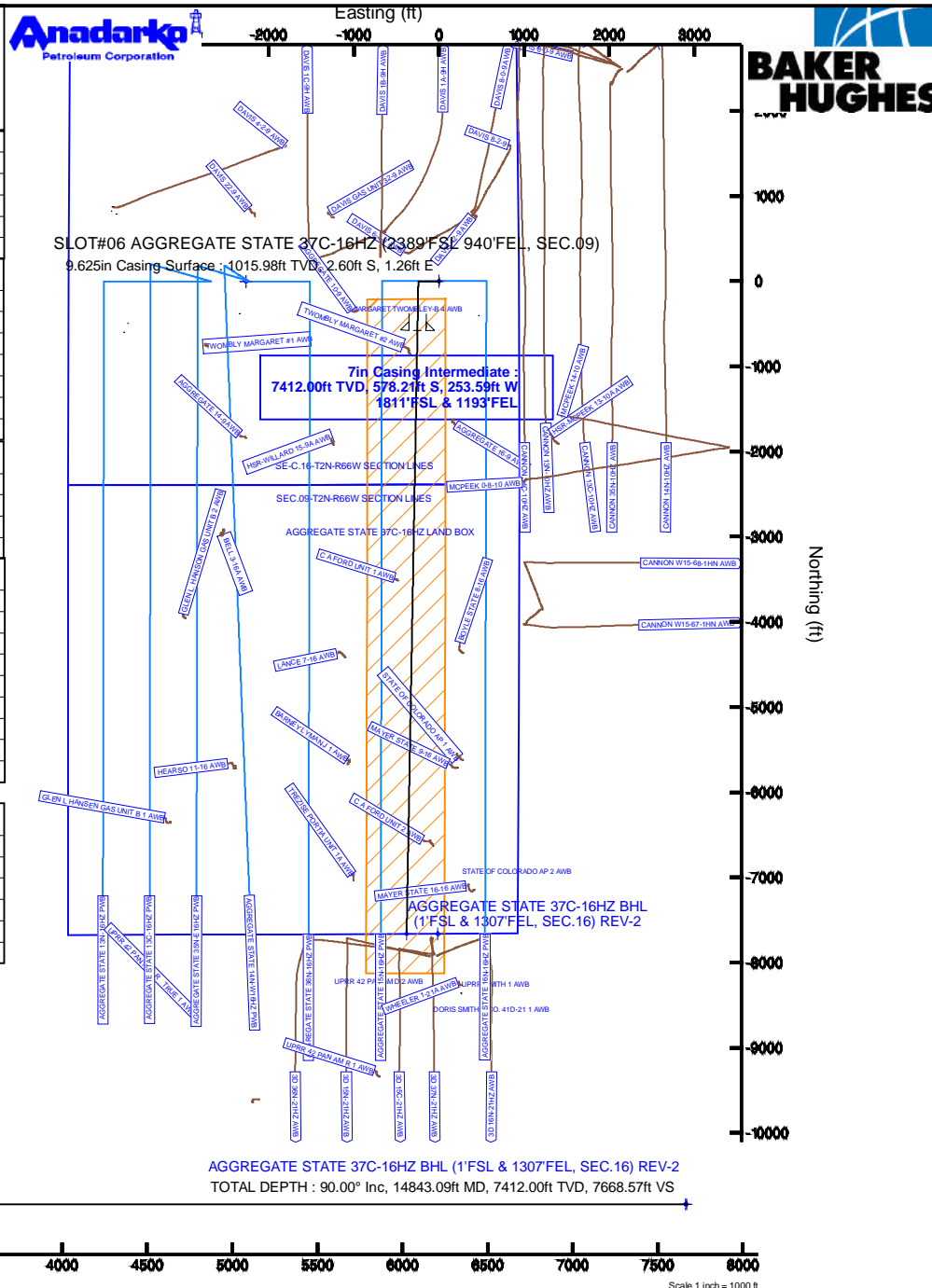
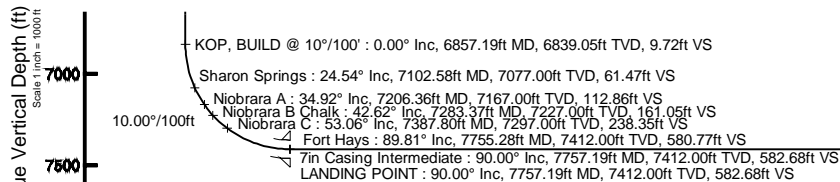
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
13.00	913.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		AGGREGATE STATE 37C-16HZ AWB
913.00	7757.19	NaviTrak	NaviTrak (MAGCORR,IFR)		AGGREGATE STATE 37C-16HZ PWB
7757.19	14843.09	NaviTrak	NaviTrak (MAGCORR,IFR)		AGGREGATE STATE 37C-16HZ PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-ON	913.00	0.440	255.460	912.98	-2.40	2.02	0.07	2.37
BEGIN NUDGE	2200.06	0.440	255.460	2200.00	-4.88	-7.54	0.00	5.02
END NUDGE	2678.79	10.000	270.000	2676.20	-5.35	-50.99	2.00	6.26
BEGIN DROP	3535.61	10.000	270.000	3520.00	-5.35	-199.77	0.00	8.94
END DROP	4035.61	0.000	181.030	4017.47	-5.35	-243.30	2.00	9.72
KOP, BUILD @ 10°/100'	6857.19	0.000	181.030	6839.05	-5.35	-243.30	0.00	9.72
LANDING POINT	7757.19	90.000	181.030	7412.00	-578.21	-253.59	10.00	582.68
TOTAL DEPTH	14843.09	90.000	181.031	7412.00	-7662.96	-380.98	0.00	7668.57

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.16-T2N-R66W SECTION LINES		10.00	-2.43	-2266.23	3200073.31	1298996.37	40°09'06.923"N	104°47'03.271"W
SEC.09-T2N-R66W SECTION LINES		10.00	-2.43	-2266.23	3200073.31	1298996.37	40°09'06.923"N	104°47'03.271"W
AGGREGATE STATE 37C-16HZ BHL (1'FSL & 1307'FEL, SEC.16) REV-2	14843.09	7412.00	-7662.96	-380.98	3202020.95	1291351.81	40°07'51.222"N	104°46'38.991"W
AGGREGATE STATE 37C-16HZ BHL ON-PLAT (1'FSL & 940'FEL, SEC.16) REV-1		7412.00	-7662.96	-13.98	3202387.82	1291354.81	40°07'51.222"N	104°46'34.086"W
AGGREGATE STATE 37C-16HZ LAND BOX		7412.00	0.00	0.00	3202339.35	1298917.30	40°09'06.948"N	104°46'34.086"W



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precain
Scale	0.999958	Report Generated	25/Feb/2014 at 08:26
Convergence at slot	n/a	Database/Source file	WellArchitectDB/AGGREGATE_STATE_37C-16HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-768.66	-373.19	3202339.35	1299017.30	40°09'06.948"N	104°46'34.086"W
Facility Reference Pt			3202706.22	1299788.95	40°09'14.544"N	104°46'29.280"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	ENSIGN 145 (13'KB) (RKB) to Facility Vertical Datum	4937.00ft
Horizontal Reference Pt	Slot	ENSIGN 145 (13'KB) (RKB) to Mean Sea Level	4937.00ft
Vertical Reference Pt	ENSIGN 145 (13'KB) (RKB)	ENSIGN 145 (13'KB) (RKB) to Mud Line at Slot (SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09))	4937.00ft
MD Reference Pt	ENSIGN 145 (13'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.03°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

WELLPATH DATA (165 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	98.070	0.00	0.00	0.00	0.00	40°09'06.948"N	104°46'34.086"W	0.00	
13.00	0.000	98.070	13.00	0.00	0.00	0.00	40°09'06.948"N	104°46'34.086"W	0.00	
113.00	0.540	98.070	113.00	0.06	-0.07	0.47	40°09'06.947"N	104°46'34.080"W	0.54	
213.00	0.490	127.440	212.99	0.37	-0.39	1.27	40°09'06.944"N	104°46'34.070"W	0.27	
313.00	0.440	128.780	312.99	0.86	-0.89	1.91	40°09'06.939"N	104°46'34.061"W	0.05	
413.00	0.360	155.720	412.99	1.38	-1.42	2.34	40°09'06.934"N	104°46'34.056"W	0.20	
513.00	0.260	239.780	512.99	1.78	-1.82	2.27	40°09'06.930"N	104°46'34.057"W	0.42	
613.00	0.420	71.260	612.99	1.77	-1.82	2.42	40°09'06.930"N	104°46'34.055"W	0.68	
713.00	0.320	125.960	712.99	1.81	-1.86	3.00	40°09'06.930"N	104°46'34.047"W	0.35	
813.00	0.500	251.370	812.98	2.12	-2.17	2.81	40°09'06.927"N	104°46'34.050"W	0.73	
887.02†	0.455	254.294	887.00	2.31	-2.35	2.22	40°09'06.925"N	104°46'34.057"W	0.07	Fox Hills Base
913.00	0.440	255.460	912.98	2.37	-2.40	2.02	40°09'06.924"N	104°46'34.060"W	0.07	TIE-ON
1013.00†	0.440	255.460	1012.98	2.57	-2.59	1.28	40°09'06.922"N	104°46'34.069"W	0.00	
1113.00†	0.440	255.460	1112.97	2.78	-2.79	0.54	40°09'06.920"N	104°46'34.079"W	0.00	
1213.00†	0.440	255.460	1212.97	2.98	-2.98	-0.21	40°09'06.919"N	104°46'34.089"W	0.00	
1313.00†	0.440	255.460	1312.97	3.19	-3.17	-0.95	40°09'06.917"N	104°46'34.098"W	0.00	
1413.00†	0.440	255.460	1412.97	3.40	-3.37	-1.69	40°09'06.915"N	104°46'34.108"W	0.00	
1513.00†	0.440	255.460	1512.96	3.60	-3.56	-2.44	40°09'06.913"N	104°46'34.117"W	0.00	
1613.00†	0.440	255.460	1612.96	3.81	-3.75	-3.18	40°09'06.911"N	104°46'34.127"W	0.00	
1713.00†	0.440	255.460	1712.96	4.01	-3.94	-3.92	40°09'06.909"N	104°46'34.137"W	0.00	
1813.00†	0.440	255.460	1812.95	4.22	-4.14	-4.67	40°09'06.907"N	104°46'34.146"W	0.00	
1913.00†	0.440	255.460	1912.95	4.43	-4.33	-5.41	40°09'06.905"N	104°46'34.156"W	0.00	
2013.00†	0.440	255.460	2012.95	4.63	-4.52	-6.15	40°09'06.903"N	104°46'34.165"W	0.00	
2113.00†	0.440	255.460	2112.95	4.84	-4.72	-6.90	40°09'06.901"N	104°46'34.175"W	0.00	
2200.06	0.440	255.460	2200.00	5.02	-4.88	-7.54	40°09'06.900"N	104°46'34.183"W	0.00	BEGIN NUDGE
2213.00†	0.693	261.077	2212.94	5.05	-4.91	-7.67	40°09'06.899"N	104°46'34.185"W	2.00	
2313.00†	2.686	268.195	2312.89	5.27	-5.08	-10.61	40°09'06.898"N	104°46'34.223"W	2.00	
2413.00†	4.685	269.247	2412.68	5.51	-5.20	-17.03	40°09'06.897"N	104°46'34.305"W	2.00	
2513.00†	6.684	269.670	2512.19	5.77	-5.29	-26.94	40°09'06.896"N	104°46'34.433"W	2.00	
2613.00†	8.684	269.899	2611.28	6.06	-5.34	-40.31	40°09'06.895"N	104°46'34.605"W	2.00	
2678.79	10.000	270.000	2676.20	6.26	-5.35	-50.99	40°09'06.895"N	104°46'34.743"W	2.00	END NUDGE
2713.00†	10.000	270.000	2709.89	6.37	-5.35	-56.93	40°09'06.895"N	104°46'34.819"W	0.00	
2813.00†	10.000	270.000	2808.37	6.68	-5.35	-74.29	40°09'06.895"N	104°46'35.043"W	0.00	
2913.00†	10.000	270.000	2906.85	6.99	-5.35	-91.66	40°09'06.895"N	104°46'35.266"W	0.00	
3013.00†	10.000	270.000	3005.33	7.30	-5.35	-109.02	40°09'06.895"N	104°46'35.490"W	0.00	
3113.00†	10.000	270.000	3103.81	7.62	-5.35	-126.39	40°09'06.895"N	104°46'35.714"W	0.00	
3213.00†	10.000	270.000	3202.29	7.93	-5.35	-143.75	40°09'06.895"N	104°46'35.937"W	0.00	
3313.00†	10.000	270.000	3300.77	8.24	-5.35	-161.12	40°09'06.895"N	104°46'36.161"W	0.00	
3413.00†	10.000	270.000	3399.25	8.55	-5.35	-178.48	40°09'06.895"N	104°46'36.385"W	0.00	
3513.00†	10.000	270.000	3497.73	8.87	-5.35	-195.85	40°09'06.895"N	104°46'36.608"W	0.00	
3535.61	10.000	270.000	3520.00	8.94	-5.35	-199.77	40°09'06.895"N	104°46'36.659"W	0.00	BEGIN DROP
3613.00†	8.452	270.000	3596.39	9.16	-5.35	-212.18	40°09'06.895"N	104°46'36.819"W	2.00	
3713.00†	6.452	270.000	3695.54	9.39	-5.35	-225.15	40°09'06.895"N	104°46'36.986"W	2.00	
3813.00†	4.452	270.000	3795.08	9.56	-5.35	-234.65	40°09'06.895"N	104°46'37.108"W	2.00	
3913.00†	2.452	270.000	3894.89	9.67	-5.35	-240.67	40°09'06.895"N	104°46'37.185"W	2.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

WELLPATH DATA (165 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4013.00†	0.452	270.000	3994.86	9.72	-5.35	-243.21	40°09'06.895"N	104°46'37.218"W	2.00	
4032.14†	0.069	270.000	4014.00	9.72	-5.35	-243.29	40°09'06.895"N	104°46'37.219"W	2.00	Parkman
4035.61	0.000	181.030	4017.47	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	2.00	END DROP
4113.00†	0.000	181.030	4094.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4213.00†	0.000	181.030	4194.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4313.00†	0.000	181.030	4294.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4413.00†	0.000	181.030	4394.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4439.14†	0.000	181.030	4421.00	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	Sussex
4513.00†	0.000	181.030	4494.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4613.00†	0.000	181.030	4594.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4713.00†	0.000	181.030	4694.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4813.00†	0.000	181.030	4794.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
4913.00†	0.000	181.030	4894.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5013.00†	0.000	181.030	4994.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5113.00†	0.000	181.030	5094.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5213.00†	0.000	181.030	5194.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5313.00†	0.000	181.030	5294.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5413.00†	0.000	181.030	5394.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5513.00†	0.000	181.030	5494.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5613.00†	0.000	181.030	5594.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5713.00†	0.000	181.030	5694.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5813.00†	0.000	181.030	5794.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
5913.00†	0.000	181.030	5894.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6013.00†	0.000	181.030	5994.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6113.00†	0.000	181.030	6094.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6213.00†	0.000	181.030	6194.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6313.00†	0.000	181.030	6294.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6413.00†	0.000	181.030	6394.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6513.00†	0.000	181.030	6494.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6613.00†	0.000	181.030	6594.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6713.00†	0.000	181.030	6694.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6813.00†	0.000	181.030	6794.86	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	
6857.19	0.000	181.030	6839.05	9.72	-5.35	-243.30	40°09'06.895"N	104°46'37.219"W	0.00	KOP, BUILD @ 10°/100'
6913.00†	5.581	181.029	6894.77	12.43	-8.06	-243.34	40°09'06.868"N	104°46'37.220"W	10.00	
7013.00†	15.581	181.030	6992.94	30.77	-26.40	-243.67	40°09'06.687"N	104°46'37.224"W	10.00	
7102.58†	24.539	181.030	7077.00	61.47	-57.09	-244.23	40°09'06.384"N	104°46'37.231"W	10.00	Sharon Springs
7113.00†	25.581	181.029	7086.44	65.88	-61.50	-244.31	40°09'06.340"N	104°46'37.232"W	10.00	
7206.36†	34.917	181.030	7167.00	112.86	-108.47	-245.15	40°09'05.876"N	104°46'37.243"W	10.00	Niobrara A
7213.00†	35.581	181.030	7172.42	116.69	-112.30	-245.22	40°09'05.838"N	104°46'37.244"W	10.00	
7283.37†	42.618	181.030	7227.00	161.05	-156.65	-246.01	40°09'05.400"N	104°46'37.254"W	10.00	Niobrara B Chalk
7313.00†	45.581	181.030	7248.28	181.66	-177.26	-246.39	40°09'05.196"N	104°46'37.259"W	10.00	
7387.80†	53.062	181.030	7297.00	238.35	-233.94	-247.40	40°09'04.636"N	104°46'37.272"W	10.00	Niobrara C
7413.00†	55.581	181.030	7311.69	258.82	-254.41	-247.77	40°09'04.434"N	104°46'37.277"W	10.00	
7513.00†	65.581	181.030	7360.75	345.81	-341.39	-249.33	40°09'03.574"N	104°46'37.297"W	10.00	
7613.00†	75.581	181.030	7393.96	440.00	-435.56	-251.03	40°09'02.644"N	104°46'37.319"W	10.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

WELLPATH DATA (165 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7713.00†	85.581	181.030	7410.30	538.53	-534.07	-252.80	40°09'01.670"N	104°46'37.342"W	10.00	
7755.28†	89.809	181.029	7412.00	580.77	-576.30	-253.56	40°09'01.253"N	104°46'37.351"W	10.00	Fort Hays
7757.19	90.000	181.030	7412.00	582.68	-578.21	-253.59	40°09'01.234"N	104°46'37.352"W	10.00	LANDING POINT
7813.00†	90.000	181.030	7412.00	638.49	-634.01	-254.59	40°09'00.683"N	104°46'37.365"W	0.00	
7913.00†	90.000	181.030	7412.00	738.49	-734.00	-256.39	40°08'59.695"N	104°46'37.388"W	0.00	
8013.00†	90.000	181.030	7412.00	838.49	-833.98	-258.19	40°08'58.707"N	104°46'37.411"W	0.00	
8113.00†	90.000	181.030	7412.00	938.49	-933.96	-259.98	40°08'57.718"N	104°46'37.434"W	0.00	
8213.00†	90.000	181.030	7412.00	1038.49	-1033.95	-261.78	40°08'56.730"N	104°46'37.457"W	0.00	
8313.00†	90.000	181.030	7412.00	1138.49	-1133.93	-263.58	40°08'55.742"N	104°46'37.480"W	0.00	
8413.00†	90.000	181.030	7412.00	1238.49	-1233.92	-265.37	40°08'54.754"N	104°46'37.503"W	0.00	
8513.00†	90.000	181.030	7412.00	1338.49	-1333.90	-267.17	40°08'53.766"N	104°46'37.527"W	0.00	
8613.00†	90.000	181.030	7412.00	1438.49	-1433.88	-268.97	40°08'52.778"N	104°46'37.550"W	0.00	
8713.00†	90.000	181.030	7412.00	1538.49	-1533.87	-270.76	40°08'51.790"N	104°46'37.573"W	0.00	
8813.00†	90.000	181.030	7412.00	1638.49	-1633.85	-272.56	40°08'50.802"N	104°46'37.596"W	0.00	
8913.00†	90.000	181.030	7412.00	1738.49	-1733.84	-274.36	40°08'49.814"N	104°46'37.619"W	0.00	
9013.00†	90.000	181.030	7412.00	1838.49	-1833.82	-276.16	40°08'48.826"N	104°46'37.642"W	0.00	
9113.00†	90.000	181.030	7412.00	1938.49	-1933.80	-277.95	40°08'47.838"N	104°46'37.665"W	0.00	
9213.00†	90.000	181.030	7412.00	2038.49	-2033.79	-279.75	40°08'46.850"N	104°46'37.688"W	0.00	
9313.00†	90.000	181.030	7412.00	2138.49	-2133.77	-281.55	40°08'45.862"N	104°46'37.712"W	0.00	
9413.00†	90.000	181.030	7412.00	2238.49	-2233.75	-283.34	40°08'44.874"N	104°46'37.735"W	0.00	
9513.00†	90.000	181.030	7412.00	2338.49	-2333.74	-285.14	40°08'43.886"N	104°46'37.758"W	0.00	
9613.00†	90.000	181.030	7412.00	2438.49	-2433.72	-286.94	40°08'42.898"N	104°46'37.781"W	0.00	
9713.00†	90.000	181.030	7412.00	2538.49	-2533.71	-288.74	40°08'41.910"N	104°46'37.804"W	0.00	
9813.00†	90.000	181.030	7412.00	2638.49	-2633.69	-290.53	40°08'40.922"N	104°46'37.827"W	0.00	
9913.00†	90.000	181.030	7412.00	2738.49	-2733.67	-292.33	40°08'39.934"N	104°46'37.850"W	0.00	
10013.00†	90.000	181.030	7412.00	2838.49	-2833.66	-294.13	40°08'38.946"N	104°46'37.873"W	0.00	
10113.00†	90.000	181.030	7412.00	2938.49	-2933.64	-295.93	40°08'37.958"N	104°46'37.897"W	0.00	
10213.00†	90.000	181.030	7412.00	3038.49	-3033.63	-297.72	40°08'36.969"N	104°46'37.920"W	0.00	
10313.00†	90.000	181.030	7412.00	3138.49	-3133.61	-299.52	40°08'35.981"N	104°46'37.943"W	0.00	
10413.00†	90.000	181.030	7412.00	3238.49	-3233.59	-301.32	40°08'34.993"N	104°46'37.966"W	0.00	
10513.00†	90.000	181.030	7412.00	3338.49	-3333.58	-303.12	40°08'34.005"N	104°46'37.989"W	0.00	
10613.00†	90.000	181.030	7412.00	3438.49	-3433.56	-304.91	40°08'33.017"N	104°46'38.012"W	0.00	
10713.00†	90.000	181.030	7412.00	3538.49	-3533.54	-306.71	40°08'32.029"N	104°46'38.035"W	0.00	
10813.00†	90.000	181.030	7412.00	3638.49	-3633.53	-308.51	40°08'31.041"N	104°46'38.058"W	0.00	
10913.00†	90.000	181.030	7412.00	3738.49	-3733.51	-310.31	40°08'30.053"N	104°46'38.082"W	0.00	
11013.00†	90.000	181.030	7412.00	3838.49	-3833.50	-312.10	40°08'29.065"N	104°46'38.105"W	0.00	
11113.00†	90.000	181.030	7412.00	3938.49	-3933.48	-313.90	40°08'28.077"N	104°46'38.128"W	0.00	
11213.00†	90.000	181.030	7412.00	4038.49	-4033.46	-315.70	40°08'27.089"N	104°46'38.151"W	0.00	
11313.00†	90.000	181.030	7412.00	4138.49	-4133.45	-317.50	40°08'26.101"N	104°46'38.174"W	0.00	
11413.00†	90.000	181.030	7412.00	4238.49	-4233.43	-319.30	40°08'25.113"N	104°46'38.197"W	0.00	
11513.00†	90.000	181.030	7412.00	4338.49	-4333.42	-321.09	40°08'24.125"N	104°46'38.220"W	0.00	
11613.00†	90.000	181.030	7412.00	4438.49	-4433.40	-322.89	40°08'23.137"N	104°46'38.244"W	0.00	
11713.00†	90.000	181.030	7412.00	4538.49	-4533.38	-324.69	40°08'22.149"N	104°46'38.267"W	0.00	
11813.00†	90.000	181.030	7412.00	4638.49	-4633.37	-326.49	40°08'21.161"N	104°46'38.290"W	0.00	
11913.00†	90.000	181.030	7412.00	4738.49	-4733.35	-328.28	40°08'20.173"N	104°46'38.313"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

WELLPATH DATA (165 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12013.00†	90.000	181.030	7412.00	4838.49	-4833.33	-330.08	40°08'19.185"N	104°46'38.336"W	0.00	
12113.00†	90.000	181.030	7412.00	4938.49	-4933.32	-331.88	40°08'18.197"N	104°46'38.359"W	0.00	
12213.00†	90.000	181.030	7412.00	5038.49	-5033.30	-333.68	40°08'17.209"N	104°46'38.382"W	0.00	
12313.00†	90.000	181.030	7412.00	5138.49	-5133.29	-335.48	40°08'16.220"N	104°46'38.405"W	0.00	
12413.00†	90.000	181.030	7412.00	5238.49	-5233.27	-337.28	40°08'15.232"N	104°46'38.429"W	0.00	
12513.00†	90.000	181.030	7412.00	5338.49	-5333.25	-339.07	40°08'14.244"N	104°46'38.452"W	0.00	
12613.00†	90.000	181.030	7412.00	5438.49	-5433.24	-340.87	40°08'13.256"N	104°46'38.475"W	0.00	
12713.00†	90.000	181.030	7412.00	5538.49	-5533.22	-342.67	40°08'12.268"N	104°46'38.498"W	0.00	
12813.00†	90.000	181.030	7412.00	5638.49	-5633.21	-344.47	40°08'11.280"N	104°46'38.521"W	0.00	
12913.00†	90.000	181.030	7412.00	5738.49	-5733.19	-346.27	40°08'10.292"N	104°46'38.544"W	0.00	
13013.00†	90.000	181.030	7412.00	5838.49	-5833.17	-348.06	40°08'09.304"N	104°46'38.567"W	0.00	
13113.00†	90.000	181.030	7412.00	5938.49	-5933.16	-349.86	40°08'08.316"N	104°46'38.591"W	0.00	
13213.00†	90.000	181.030	7412.00	6038.49	-6033.14	-351.66	40°08'07.328"N	104°46'38.614"W	0.00	
13313.00†	90.000	181.030	7412.00	6138.49	-6133.12	-353.46	40°08'06.340"N	104°46'38.637"W	0.00	
13413.00†	90.000	181.030	7412.00	6238.49	-6233.11	-355.26	40°08'05.352"N	104°46'38.660"W	0.00	
13513.00†	90.000	181.030	7412.00	6338.49	-6333.09	-357.06	40°08'04.364"N	104°46'38.683"W	0.00	
13613.00†	90.000	181.031	7412.00	6438.49	-6433.08	-358.85	40°08'03.376"N	104°46'38.706"W	0.00	
13713.00†	90.000	181.031	7412.00	6538.49	-6533.06	-360.65	40°08'02.388"N	104°46'38.729"W	0.00	
13813.00†	90.000	181.031	7412.00	6638.49	-6633.04	-362.45	40°08'01.400"N	104°46'38.752"W	0.00	
13913.00†	90.000	181.031	7412.00	6738.49	-6733.03	-364.25	40°08'00.412"N	104°46'38.776"W	0.00	
14013.00†	90.000	181.031	7412.00	6838.49	-6833.01	-366.05	40°07'59.424"N	104°46'38.799"W	0.00	
14113.00†	90.000	181.031	7412.00	6938.49	-6933.00	-367.85	40°07'58.436"N	104°46'38.822"W	0.00	
14213.00†	90.000	181.031	7412.00	7038.49	-7032.98	-369.65	40°07'57.448"N	104°46'38.845"W	0.00	
14313.00†	90.000	181.031	7412.00	7138.49	-7132.96	-371.44	40°07'56.459"N	104°46'38.868"W	0.00	
14413.00†	90.000	181.031	7412.00	7238.49	-7232.95	-373.24	40°07'55.471"N	104°46'38.891"W	0.00	
14513.00†	90.000	181.031	7412.00	7338.49	-7332.93	-375.04	40°07'54.483"N	104°46'38.914"W	0.00	
14613.00†	90.000	181.031	7412.00	7438.49	-7432.91	-376.84	40°07'53.495"N	104°46'38.938"W	0.00	
14713.00†	90.000	181.031	7412.00	7538.49	-7532.90	-378.64	40°07'52.507"N	104°46'38.961"W	0.00	
14813.00†	90.000	181.031	7412.00	7638.49	-7632.88	-380.44	40°07'51.519"N	104°46'38.984"W	0.00	
14843.09	90.000	181.031	7412.00 [†]	7668.57	-7662.96	-380.98	40°07'51.222"N	104°46'38.991"W	0.00	TOTAL DEPTH

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: AGGREGATE STATE 37C-16HZ PWB Ref Wellpath: AGGREGATE STATE 37C-16HZ (REV-A.0) 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	13.00	913.00	900.00	13.00	912.98	0.00	0.00	-2.40	2.02
13.5in Open Hole	913.00	1025.00	112.00	912.98	1024.98	-2.40	2.02	-2.62	1.19
9.625in Casing Surface	13.00	1016.00	1003.00	13.00	1015.98	0.00	0.00	-2.60	1.26
8.75in Open Hole	1025.00	7757.19	6732.19	1024.98	7412.00	-2.62	1.19	-578.21	-253.59
7in Casing Intermediate	13.00	7757.19	7744.19	13.00	7412.00	0.00	0.00	-578.21	-253.59
6.125in Open Hole	7757.19	14843.09	7085.90	7412.00	7412.00	-578.21	-253.59	-7662.96	-380.98
4.5in Casing Intermediate	13.00	14843.09	14830.09	13.00	7412.00	0.00	0.00	-7662.96	-380.98

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SE-C.16-T2N-R66W SECTION LINES		10.00	-2.43	-2266.23	3200073.31	1298996.37	40°09'06.923"N	104°47'03.271"W	polygon
SEC.09-T2N-R66W SECTION LINES		10.00	-2.43	-2266.23	3200073.31	1298996.37	40°09'06.923"N	104°47'03.271"W	polygon
1) AGGREGATE STATE 37C-16HZ BHL (1'FSL & 1307'FEL, SEC.16) REV-2	14843.09	7412.00	-7662.96	-380.98	3202020.95	1291351.81	40°07'51.222"N	104°46'38.991"W	point
AGGREGATE STATE 37C-16HZ BHL ON PLAT (1'FSL & 940'FEL, SEC.16) REV-1		7412.00	-7662.96	-13.98	3202387.92	1291354.81	40°07'51.222"N	104°46'34.266"W	point
AGGREGATE STATE 37C-16HZ LAND BOX		7412.00	0.00	0.00	3202339.35	1299017.30	40°09'06.948"N	104°46'34.086"W	polygon

SURVEY PROGRAM - Ref Wellbore: AGGREGATE STATE 37C-16HZ PWB Ref Wellpath: AGGREGATE STATE 37C-16HZ (REV-A.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	913.00	Generic gyro - continuous (Standard)		AGGREGATE STATE 37C-16HZ AWB
913.00	7757.19	NaviTrak (MAGCORR,IFR)		AGGREGATE STATE 37C-16HZ PWB
7757.19	14843.09	NaviTrak (MAGCORR,IFR)		AGGREGATE STATE 37C-16HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 AGGREGATE STATE 37C-16HZ (2389'FSL 940'FEL, SEC.09)
Area	COLORADO	Well	AGGREGATE STATE 37C-16HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	AGGREGATE STATE 37C-16HZ PWB
Facility	SEC.09-T2N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
887.02	0.455	254.294	887.00	Fox Hills Base
4032.14	0.069	270.000	4014.00	Parkman
4439.14	0.000	181.030	4421.00	Sussex
7102.58	24.539	181.030	7077.00	Sharon Springs
7206.36	34.917	181.030	7167.00	Niobrara A
7283.37	42.618	181.030	7227.00	Niobrara B Chalk
7387.80	53.062	181.030	7297.00	Niobrara C
7755.28	89.809	181.029	7412.00	Fort Hays

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
913.00	0.440	255.460	912.98	TIE-ON
2200.06	0.440	255.460	2200.00	BEGIN NUDGE
2678.79	10.000	270.000	2676.20	END NUDGE
3535.61	10.000	270.000	3520.00	BEGIN DROP
4035.61	0.000	181.030	4017.47	END DROP
6857.19	0.000	181.030	6839.05	KOP, BUILD @ 10°/100'
7757.19	90.000	181.030	7412.00	LANDING POINT
14843.09	90.000	181.031	7412.00	TOTAL DEPTH