

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
 Field: WELD COUNTY (KERR MCGEE) Well: STEWARD 14N-6HZ
 Facility: SEC.07-T1N-R65W Wellbore: STEWARD 14N-6HZ PWB

Plot reference wellpath is STEWARD 14N-6HZ (PERMIT REV-3) PWP

True vertical depths are referenced to PERMIT (17KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMIT (17KB) (RKB)	North Reference: True north
PERMIT (17KB) (RKB) to Mean Sea Level: 5018 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcar on 10/2/2014

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.07-T1N-R65W		3224261.659	1265739.756	40°03'36.230"N	104°41'55.637"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)	-74.49	-3095.90	3221166.679	1265637.304	40°03'35.492"N	104°42'35.453"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07))						5018ft
Mean Sea Level to Mud line (At Slot: SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07))						0ft
PERMIT (17KB) (RKB) to Mean Sea Level						5018ft

Survey Program

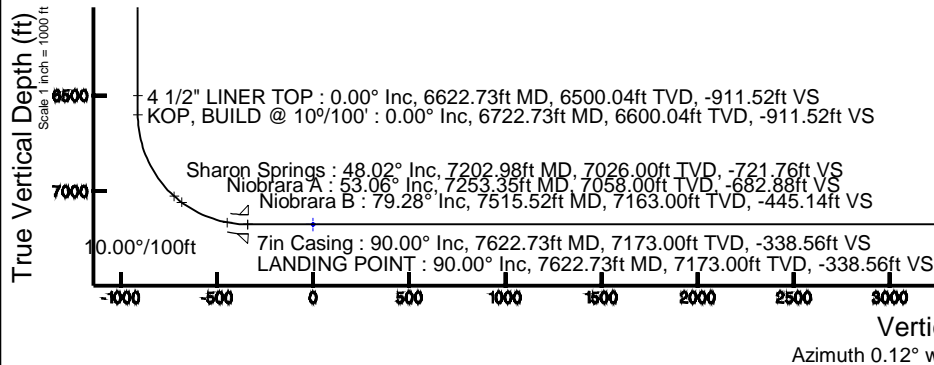
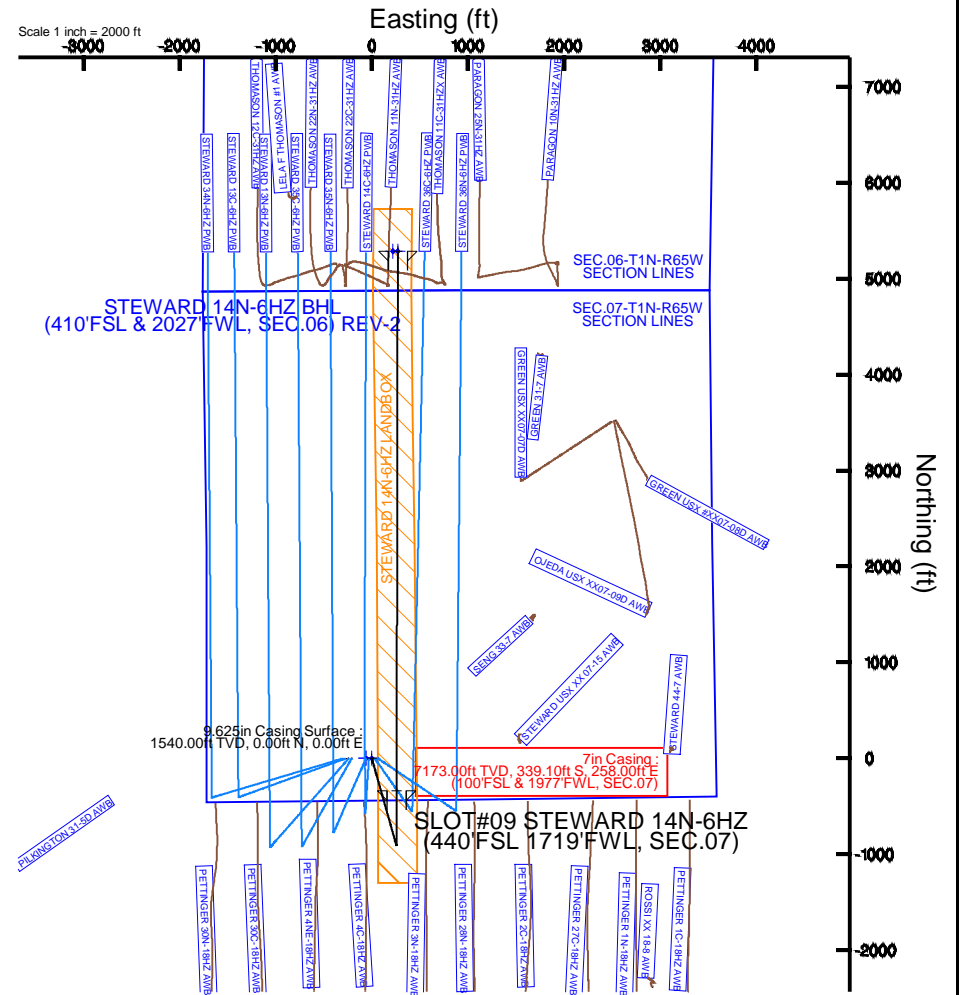
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13246.65	NaviTrak	NaviTrak (MAGCORR, IFR)		STEWARD 14N-6HZ PWB

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	164.275	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1700.00	0.000	164.275	1700.00	0.00	0.00	0.00	0.00
END NUDGE	2500.00	16.000	164.275	2489.64	-106.82	30.08	2.00	-106.76
BEGIN DROP	5132.33	16.000	164.275	5020.00	-805.23	226.73	0.00	-804.76
END DROP	5932.33	0.000	0.119	5809.64	-912.06	256.81	2.00	-911.52
KOP, BUILD @ 10°/100'	6722.73	0.000	0.119	6600.04	-912.06	256.81	0.00	-911.52
LANDING POINT	7622.73	90.000	0.119	7173.00	-339.10	258.00	10.00	-338.56
TOTAL DEPTH	13246.65	90.000	0.119	7173.00	5284.81	269.71	0.00	5285.36

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.06-T1N-R65W SECTION LINES		0.00	-0.30	-59.87	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W
SEC.07-T1N-R65W SECTION LINES		0.00	-0.30	-59.87	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W
STEWARD 14N-6HZ LANDING POINT		7173.00	0.00	0.00	3221166.68	1265637.30	40°03'35.492"N	104°42'35.453"W
STEWARD 14N-6HZ BHL (410'FSL & 2027'FWL, SEC.06) REV-2		7173.00	5284.81	269.71	3221389.28	1270924.10	40°04'27.718"N	104°42'31.984"W
STEWARD 14N-6HZ BHL ON PLAT (410'FSL & 1977'FWL, SEC.06) REV-1		7173.00	5284.81	219.71	3221339.28	1270923.65	40°04'27.718"N	104°42'32.627"W



STEWARD 14N-6HZ BHL (410'FSL & 2027'FWL, SEC.06) REV-2
 TOTAL DEPTH : 90.00° Inc, 13246.65ft MD, 7173.00ft TVD, 5285.36ft VS
 4.5in Casing Production : 90.00° Inc, 13246.65ft MD, 7173.00ft TVD, 5285.36ft VS

Azimuth 0.12° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Amarcar
Scale	0.999962	Report Generated	10/2/2014 at 12:42:12 PM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/STEWARD_14N-6HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-74.49	-3095.90	3221166.68	1265637.30	40°03'35.492"N	104°42'35.453"W
Facility Reference Pt			3224261.66	1265739.76	40°03'36.230"N	104°41'55.637"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	5018.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	5018.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07))	5018.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.12°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (148 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	164.275	0.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
17.00	0.000	164.275	17.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	TIE-ON
117.00†	0.000	164.275	117.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
217.00†	0.000	164.275	217.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
317.00†	0.000	164.275	317.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
417.00†	0.000	164.275	417.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
517.00†	0.000	164.275	517.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
617.00†	0.000	164.275	617.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
717.00†	0.000	164.275	717.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
817.00†	0.000	164.275	817.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
917.00†	0.000	164.275	917.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1017.00†	0.000	164.275	1017.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1117.00†	0.000	164.275	1117.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1217.00†	0.000	164.275	1217.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1317.00†	0.000	164.275	1317.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1417.00†	0.000	164.275	1417.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1517.00†	0.000	164.275	1517.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1537.00†	0.000	164.275	1537.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	Fox Hills Marker
1617.00†	0.000	164.275	1617.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	
1700.00	0.000	164.275	1700.00	0.00	0.00	0.00	40°03'35.492"N	104°42'35.453"W	0.00	BEGIN NUDGE
1717.00†	0.340	164.275	1717.00	-0.05	-0.05	0.01	40°03'35.492"N	104°42'35.453"W	2.00	
1817.00†	2.340	164.275	1816.97	-2.30	-2.30	0.65	40°03'35.469"N	104°42'35.445"W	2.00	
1917.00†	4.340	164.274	1916.79	-7.90	-7.91	2.23	40°03'35.414"N	104°42'35.424"W	2.00	
2017.00†	6.340	164.274	2016.35	-16.86	-16.86	4.75	40°03'35.325"N	104°42'35.392"W	2.00	
2117.00†	8.340	164.274	2115.53	-29.14	-29.16	8.21	40°03'35.204"N	104°42'35.347"W	2.00	
2217.00†	10.340	164.274	2214.20	-44.76	-44.78	12.61	40°03'35.049"N	104°42'35.291"W	2.00	
2317.00†	12.340	164.275	2312.24	-63.67	-63.71	17.94	40°03'34.862"N	104°42'35.222"W	2.00	
2417.00†	14.340	164.275	2409.54	-85.87	-85.92	24.19	40°03'34.643"N	104°42'35.142"W	2.00	
2500.00	16.000	164.275	2489.64	-106.76	-106.82	30.08	40°03'34.436"N	104°42'35.066"W	2.00	END NUDGE
2517.00†	16.000	164.275	2505.98	-111.27	-111.33	31.35	40°03'34.392"N	104°42'35.050"W	0.00	
2617.00†	16.000	164.275	2602.11	-137.78	-137.87	38.82	40°03'34.130"N	104°42'34.954"W	0.00	
2717.00†	16.000	164.275	2698.24	-164.30	-164.40	46.29	40°03'33.867"N	104°42'34.858"W	0.00	
2817.00†	16.000	164.275	2794.36	-190.82	-190.93	53.76	40°03'33.605"N	104°42'34.762"W	0.00	
2917.00†	16.000	164.274	2890.49	-217.33	-217.46	61.23	40°03'33.343"N	104°42'34.666"W	0.00	
3017.00†	16.000	164.275	2986.62	-243.85	-243.99	68.70	40°03'33.081"N	104°42'34.569"W	0.00	
3117.00†	16.000	164.275	3082.74	-270.37	-270.53	76.17	40°03'32.819"N	104°42'34.473"W	0.00	
3217.00†	16.000	164.274	3178.87	-296.88	-297.06	83.64	40°03'32.556"N	104°42'34.377"W	0.00	
3317.00†	16.000	164.275	3274.99	-323.40	-323.59	91.11	40°03'32.294"N	104°42'34.281"W	0.00	
3417.00†	16.000	164.275	3371.12	-349.92	-350.12	98.58	40°03'32.032"N	104°42'34.185"W	0.00	
3517.00†	16.000	164.275	3467.25	-376.43	-376.65	106.05	40°03'31.770"N	104°42'34.089"W	0.00	
3617.00†	16.000	164.274	3563.37	-402.95	-403.19	113.52	40°03'31.508"N	104°42'33.993"W	0.00	
3717.00†	16.000	164.275	3659.50	-429.47	-429.72	120.99	40°03'31.245"N	104°42'33.897"W	0.00	
3817.00†	16.000	164.275	3755.62	-455.98	-456.25	128.47	40°03'30.983"N	104°42'33.801"W	0.00	
3917.00†	16.000	164.274	3851.75	-482.50	-482.78	135.94	40°03'30.721"N	104°42'33.705"W	0.00	
4017.00†	16.000	164.274	3947.88	-509.02	-509.31	143.41	40°03'30.459"N	104°42'33.609"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	16.000	164.275	4044.00	-535.53	-535.85	150.88	40°03'30.197"N	104°42'33.513"W	0.00	
4199.18†	16.000	164.275	4123.00	-557.32	-557.65	157.02	40°03'29.981"N	104°42'33.434"W	0.00	Parkman
4217.00†	16.000	164.275	4140.13	-562.05	-562.38	158.35	40°03'29.934"N	104°42'33.417"W	0.00	
4317.00†	16.000	164.275	4236.26	-588.57	-588.91	165.82	40°03'29.672"N	104°42'33.320"W	0.00	
4417.00†	16.000	164.275	4332.38	-615.08	-615.44	173.29	40°03'29.410"N	104°42'33.224"W	0.00	
4517.00†	16.000	164.275	4428.51	-641.60	-641.97	180.76	40°03'29.148"N	104°42'33.128"W	0.00	
4549.76†	16.000	164.275	4460.00	-650.29	-650.67	183.21	40°03'29.062"N	104°42'33.097"W	0.00	Sussex
4617.00†	16.000	164.275	4524.63	-668.11	-668.51	188.23	40°03'28.886"N	104°42'33.032"W	0.00	
4717.00†	16.000	164.275	4620.76	-694.63	-695.04	195.70	40°03'28.623"N	104°42'32.936"W	0.00	
4817.00†	16.000	164.275	4716.89	-721.15	-721.57	203.17	40°03'28.361"N	104°42'32.840"W	0.00	
4917.00†	16.000	164.274	4813.01	-747.66	-748.10	210.64	40°03'28.099"N	104°42'32.744"W	0.00	
5017.00†	16.000	164.275	4909.14	-774.18	-774.64	218.11	40°03'27.837"N	104°42'32.648"W	0.00	
5117.00†	16.000	164.274	5005.26	-800.70	-801.17	225.58	40°03'27.575"N	104°42'32.552"W	0.00	
5132.33	16.000	164.275	5020.00	-804.76	-805.23	226.73	40°03'27.534"N	104°42'32.537"W	0.00	BEGIN DROP
5217.00†	14.307	164.275	5101.72	-826.05	-826.54	232.73	40°03'27.324"N	104°42'32.460"W	2.00	
5317.00†	12.307	164.274	5199.03	-848.19	-848.69	238.96	40°03'27.105"N	104°42'32.380"W	2.00	
5417.00†	10.307	164.275	5297.09	-867.05	-867.56	244.28	40°03'26.919"N	104°42'32.311"W	2.00	
5517.00†	8.307	164.274	5395.77	-882.61	-883.13	248.66	40°03'26.765"N	104°42'32.255"W	2.00	
5617.00†	6.307	164.275	5494.95	-894.84	-895.37	252.11	40°03'26.644"N	104°42'32.211"W	2.00	
5717.00†	4.307	164.274	5594.52	-903.74	-904.27	254.61	40°03'26.556"N	104°42'32.179"W	2.00	
5817.00†	2.307	164.274	5694.34	-909.29	-909.82	256.18	40°03'26.501"N	104°42'32.158"W	2.00	
5917.00†	0.307	164.275	5794.31	-911.48	-912.02	256.79	40°03'26.479"N	104°42'32.151"W	2.00	
5932.33	0.000	0.119	5809.64	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	2.00	END DROP
6017.00†	0.000	0.119	5894.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6117.00†	0.000	0.119	5994.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6217.00†	0.000	0.119	6094.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6317.00†	0.000	0.119	6194.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6417.00†	0.000	0.119	6294.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6517.00†	0.000	0.119	6394.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6617.00†	0.000	0.119	6494.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6622.73†	0.000	0.119	6500.04	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	4 1/2" LINER TOP
6717.00†	0.000	0.119	6594.31	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	
6722.73	0.000	0.119	6600.04	-911.52	-912.06	256.81	40°03'26.479"N	104°42'32.150"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	9.427	0.119	6693.89	-903.78	-904.32	256.82	40°03'26.555"N	104°42'32.150"W	10.00	
6917.00†	19.427	0.119	6790.61	-878.90	-879.44	256.87	40°03'26.801"N	104°42'32.149"W	10.00	
7017.00†	29.427	0.119	6881.55	-837.60	-838.14	256.96	40°03'27.209"N	104°42'32.148"W	10.00	
7117.00†	39.427	0.119	6963.93	-781.14	-781.67	257.08	40°03'27.767"N	104°42'32.147"W	10.00	
7202.98†	48.025	0.119	7026.00	-721.76	-722.30	257.20	40°03'28.354"N	104°42'32.145"W	10.00	Sharon Springs
7217.00†	49.427	0.119	7035.25	-711.22	-711.76	257.22	40°03'28.458"N	104°42'32.145"W	10.00	
7253.35†	53.062	0.119	7058.00	-682.88	-683.42	257.28	40°03'28.738"N	104°42'32.144"W	10.00	Niobrara A
7317.00†	59.427	0.119	7093.35	-629.99	-630.53	257.39	40°03'29.261"N	104°42'32.143"W	10.00	
7417.00†	69.427	0.119	7136.46	-539.90	-540.44	257.58	40°03'30.151"N	104°42'32.140"W	10.00	
7515.52†	79.280	0.119	7163.00	-445.14	-445.68	257.78	40°03'31.088"N	104°42'32.138"W	10.00	Niobrara B
7517.00†	79.427	0.119	7163.27	-443.69	-444.23	257.78	40°03'31.102"N	104°42'32.138"W	10.00	
7617.00†	89.427	0.119	7172.97	-344.29	-344.83	257.99	40°03'32.084"N	104°42'32.135"W	10.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7622.73	90.000	0.119	7173.00 ²	-338.56	-339.10	258.00	40°03'32.141"N	104°42'32.135"W	10.00	LANDING POINT
7717.00†	90.000	0.119	7173.00	-244.29	-244.83	258.20	40°03'33.073"N	104°42'32.132"W	0.00	
7817.00†	90.000	0.119	7173.00	-144.29	-144.83	258.40	40°03'34.061"N	104°42'32.130"W	0.00	
7917.00†	90.000	0.119	7173.00	-44.29	-44.83	258.61	40°03'35.049"N	104°42'32.127"W	0.00	
8017.00†	90.000	0.119	7173.00	55.71	55.17	258.82	40°03'36.037"N	104°42'32.124"W	0.00	
8117.00†	90.000	0.119	7173.00	155.71	155.17	259.03	40°03'37.025"N	104°42'32.122"W	0.00	
8217.00†	90.000	0.119	7173.00	255.71	255.17	259.24	40°03'38.014"N	104°42'32.119"W	0.00	
8317.00†	90.000	0.119	7173.00	355.71	355.17	259.44	40°03'39.002"N	104°42'32.116"W	0.00	
8417.00†	90.000	0.119	7173.00	455.71	455.17	259.65	40°03'39.990"N	104°42'32.114"W	0.00	
8517.00†	90.000	0.119	7173.00	555.71	555.17	259.86	40°03'40.978"N	104°42'32.111"W	0.00	
8617.00†	90.000	0.119	7173.00	655.71	655.17	260.07	40°03'41.967"N	104°42'32.108"W	0.00	
8717.00†	90.000	0.119	7173.00	755.71	755.17	260.28	40°03'42.955"N	104°42'32.105"W	0.00	
8817.00†	90.000	0.119	7173.00	855.71	855.17	260.49	40°03'43.943"N	104°42'32.103"W	0.00	
8917.00†	90.000	0.119	7173.00	955.71	955.17	260.69	40°03'44.931"N	104°42'32.100"W	0.00	
9017.00†	90.000	0.119	7173.00	1055.71	1055.17	260.90	40°03'45.919"N	104°42'32.097"W	0.00	
9117.00†	90.000	0.119	7173.00	1155.71	1155.17	261.11	40°03'46.908"N	104°42'32.095"W	0.00	
9217.00†	90.000	0.119	7173.00	1255.71	1255.17	261.32	40°03'47.896"N	104°42'32.092"W	0.00	
9317.00†	90.000	0.119	7173.00	1355.71	1355.17	261.53	40°03'48.884"N	104°42'32.089"W	0.00	
9417.00†	90.000	0.119	7173.00	1455.71	1455.17	261.74	40°03'49.872"N	104°42'32.087"W	0.00	
9517.00†	90.000	0.119	7173.00	1555.71	1555.17	261.94	40°03'50.860"N	104°42'32.084"W	0.00	
9617.00†	90.000	0.119	7173.00	1655.71	1655.17	262.15	40°03'51.849"N	104°42'32.081"W	0.00	
9717.00†	90.000	0.119	7173.00	1755.71	1755.17	262.36	40°03'52.837"N	104°42'32.079"W	0.00	
9817.00†	90.000	0.119	7173.00	1855.71	1855.17	262.57	40°03'53.825"N	104°42'32.076"W	0.00	
9917.00†	90.000	0.119	7173.00	1955.71	1955.17	262.78	40°03'54.813"N	104°42'32.073"W	0.00	
10017.00†	90.000	0.119	7173.00	2055.71	2055.17	262.98	40°03'55.802"N	104°42'32.071"W	0.00	
10117.00†	90.000	0.119	7173.00	2155.71	2155.16	263.19	40°03'56.790"N	104°42'32.068"W	0.00	
10217.00†	90.000	0.119	7173.00	2255.71	2255.16	263.40	40°03'57.778"N	104°42'32.065"W	0.00	
10317.00†	90.000	0.119	7173.00	2355.71	2355.16	263.61	40°03'58.766"N	104°42'32.062"W	0.00	
10417.00†	90.000	0.119	7173.00	2455.71	2455.16	263.82	40°03'59.754"N	104°42'32.060"W	0.00	
10517.00†	90.000	0.119	7173.00	2555.71	2555.16	264.03	40°04'00.743"N	104°42'32.057"W	0.00	
10617.00†	90.000	0.119	7173.00	2655.71	2655.16	264.23	40°04'01.731"N	104°42'32.054"W	0.00	
10717.00†	90.000	0.119	7173.00	2755.71	2755.16	264.44	40°04'02.719"N	104°42'32.052"W	0.00	
10817.00†	90.000	0.119	7173.00	2855.71	2855.16	264.65	40°04'03.707"N	104°42'32.049"W	0.00	
10917.00†	90.000	0.119	7173.00	2955.71	2955.16	264.86	40°04'04.696"N	104°42'32.046"W	0.00	
11017.00†	90.000	0.119	7173.00	3055.71	3055.16	265.07	40°04'05.684"N	104°42'32.044"W	0.00	
11117.00†	90.000	0.119	7173.00	3155.71	3155.16	265.28	40°04'06.672"N	104°42'32.041"W	0.00	
11217.00†	90.000	0.119	7173.00	3255.71	3255.16	265.48	40°04'07.660"N	104°42'32.038"W	0.00	
11317.00†	90.000	0.119	7173.00	3355.71	3355.16	265.69	40°04'08.648"N	104°42'32.036"W	0.00	
11417.00†	90.000	0.119	7173.00	3455.71	3455.16	265.90	40°04'09.637"N	104°42'32.033"W	0.00	
11517.00†	90.000	0.119	7173.00	3555.71	3555.16	266.11	40°04'10.625"N	104°42'32.030"W	0.00	
11617.00†	90.000	0.119	7173.00	3655.71	3655.16	266.32	40°04'11.613"N	104°42'32.027"W	0.00	
11717.00†	90.000	0.119	7173.00	3755.71	3755.16	266.52	40°04'12.601"N	104°42'32.025"W	0.00	
11817.00†	90.000	0.119	7173.00	3855.71	3855.16	266.73	40°04'13.590"N	104°42'32.022"W	0.00	
11917.00†	90.000	0.119	7173.00	3955.71	3955.16	266.94	40°04'14.578"N	104°42'32.019"W	0.00	
12017.00†	90.000	0.119	7173.00	4055.71	4055.16	267.15	40°04'15.566"N	104°42'32.017"W	0.00	

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Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.000	0.119	7173.00	4155.71	4155.16	267.36	40°04'16.554"N	104°42'32.014"W	0.00	
12217.00†	90.000	0.119	7173.00	4255.71	4255.16	267.57	40°04'17.542"N	104°42'32.011"W	0.00	
12317.00†	90.000	0.119	7173.00	4355.71	4355.16	267.77	40°04'18.531"N	104°42'32.009"W	0.00	
12417.00†	90.000	0.119	7173.00	4455.71	4455.16	267.98	40°04'19.519"N	104°42'32.006"W	0.00	
12517.00†	90.000	0.119	7173.00	4555.71	4555.16	268.19	40°04'20.507"N	104°42'32.003"W	0.00	
12617.00†	90.000	0.119	7173.00	4655.71	4655.16	268.40	40°04'21.495"N	104°42'32.001"W	0.00	
12717.00†	90.000	0.119	7173.00	4755.71	4755.16	268.61	40°04'22.483"N	104°42'31.998"W	0.00	
12817.00†	90.000	0.119	7173.00	4855.71	4855.16	268.82	40°04'23.472"N	104°42'31.995"W	0.00	
12917.00†	90.000	0.119	7173.00	4955.71	4955.16	269.02	40°04'24.460"N	104°42'31.992"W	0.00	
13017.00†	90.000	0.119	7173.00	5055.71	5055.16	269.23	40°04'25.448"N	104°42'31.990"W	0.00	
13117.00†	90.000	0.119	7173.00	5155.71	5155.16	269.44	40°04'26.436"N	104°42'31.987"W	0.00	
13217.00†	90.000	0.119	7173.00	5255.71	5255.16	269.65	40°04'27.425"N	104°42'31.984"W	0.00	
13246.65	90.000	0.119	7173.00 ²	5285.36	5284.81	269.71	40°04'27.718"N	104°42'31.984"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: STEWARD 14N-6HZ PWB Ref Wellpath: STEWARD 14N-6HZ (PERMIT REV-3) 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	1540.00	1523.00	17.00	1540.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1540.00	1523.00	17.00	1540.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1540.00	7622.73	6082.73	1540.00	7173.00	0.00	0.00	-339.10	258.00
7in Casing	17.00	7622.73	7605.73	17.00	7173.00	0.00	0.00	-339.10	258.00
6.125in Open Hole	7622.73	13246.65	5623.92	7173.00	7173.00	-339.10	258.00	5284.81	269.71
4.5in Casing Production	17.00	13246.65	13229.65	17.00	7173.00	0.00	0.00	5284.81	269.71

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Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.06-T1N-R65W SECTION LINES		0.00	-0.30	-59.87	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W	polygon
SEC.07-T1N-R65W SECTION LINES		0.00	-0.30	-59.87	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W	polygon
STEWARD 14N-6HZ LANDBOX		7173.00	0.00	0.00	3221166.68	1265637.30	40°03'35.492"N	104°42'35.453"W	polygon
2) STEWARD 14N-6HZ BHL (410'FSL & 2027'FWL, SEC.06) REV-2	13246.65	7173.00	5284.81	269.71	3221389.28	1270924.10	40°04'27.718"N	104°42'31.984"W	point
STEWARD 14N-6HZ BHL ON PLAT (410'FSL & 1977'FWL, SEC.06) REV-1		7173.00	5284.81	219.71	3221339.28	1270923.65	40°04'27.718"N	104°42'32.627"W	point

SURVEY PROGRAM - Ref Wellbore: STEWARD 14N-6HZ PWB Ref Wellpath: STEWARD 14N-6HZ (PERMIT REV-3) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13246.65	NaviTrak (MAGCORR,IFR)		STEWARD 14N-6HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 STEWARD 14N-6HZ (440'FSL 1719'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1537.00	0.000	164.275	1537.00	Fox Hills Marker
4199.18	16.000	164.275	4123.00	Parkman
4549.76	16.000	164.275	4460.00	Sussex
6622.73	0.000	0.119	6500.04	4 1/2" LINER TOP
7202.98	48.025	0.119	7026.00	Sharon Springs
7253.35	53.062	0.119	7058.00	Niobrara A
7515.52	79.280	0.119	7163.00	Niobrara B

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	164.275	17.00	TIE-ON
1700.00	0.000	164.275	1700.00	BEGIN NUDGE
2500.00	16.000	164.275	2489.64	END NUDGE
5132.33	16.000	164.275	5020.00	BEGIN DROP
5932.33	0.000	0.119	5809.64	END DROP
6722.73	0.000	0.119	6600.04	KOP, BUILD @ 10°/100'
7622.73	90.000	0.119	7173.00	LANDING POINT
13246.65	90.000	0.119	7173.00	TOTAL DEPTH