

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Field: WELD COUNTY (KERR MCGEE) Well: STEWARD 14C-6HZ
Facility: SEC.07-T1N-R65W Wellbore: STEWARD 14C-6HZ PWB

Plot reference wellpath is STEWARD 14C-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#08 STEWARD 14C-6HZ (440'FSL & 1689'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#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)	-74.79	-3125.84	3221136.749	1265636.734	40°03'35.489"N	104°42'35.838"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07))			5018ft			
Mean Sea Level to Mud line (At Slot: SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07))			0ft			
PERMIT (17KB) (RKB) to Mean Sea Level			5018ft			

Survey Program

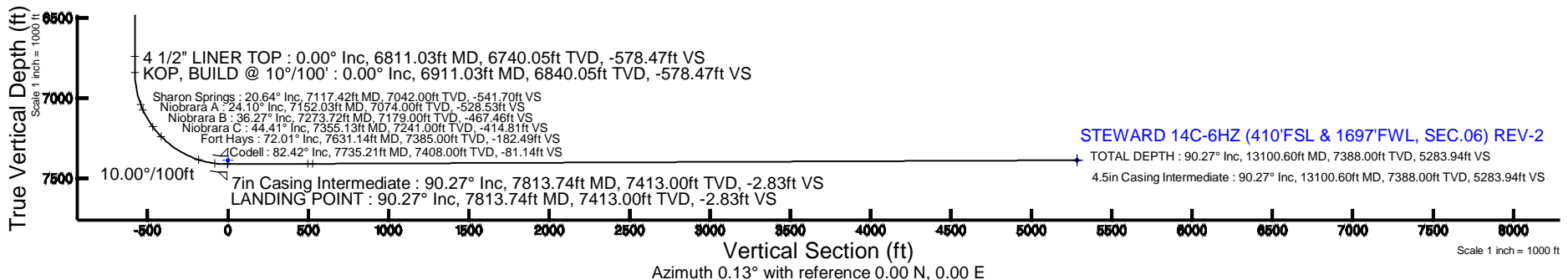
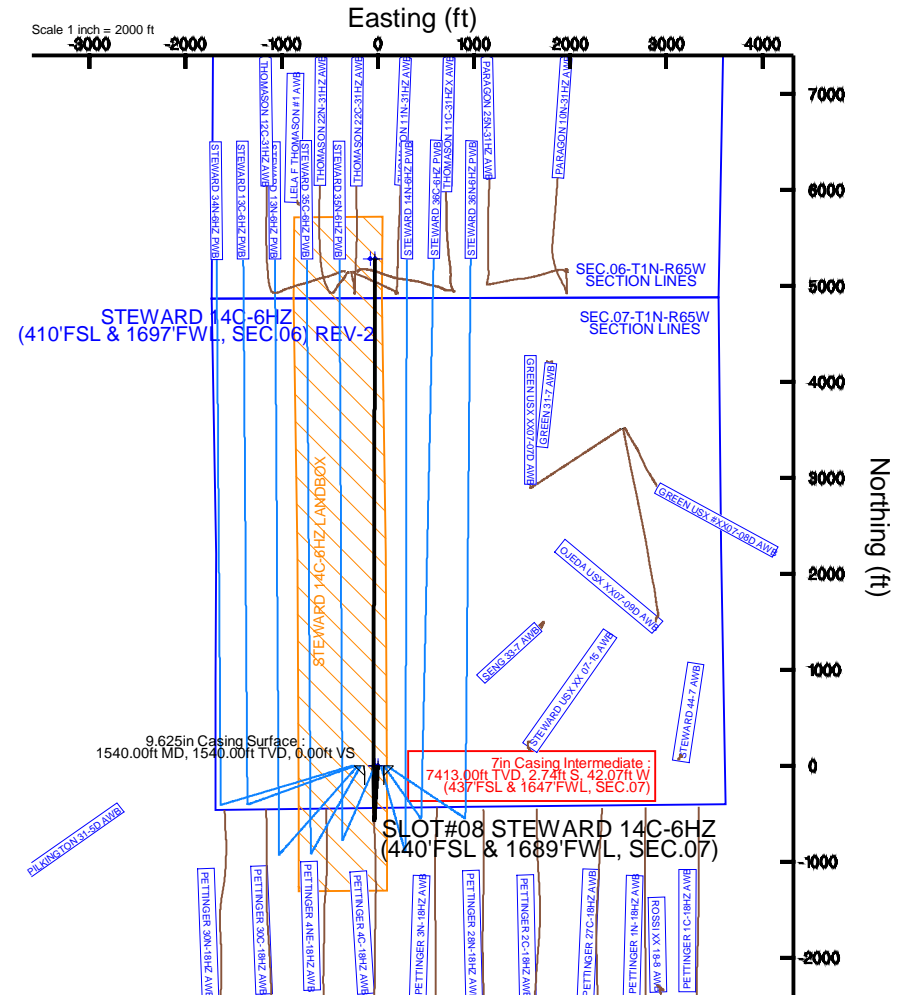
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13100.60	NaviTrak	NaviTrak (MAGCORR,IFR)		STEWARD 14C-6HZ PWB

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	183.750	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1700.00	0.000	183.750	1700.00	0.00	0.00	0.00	0.00
END NUDGE	2500.00	16.000	183.750	2489.64	-110.74	-7.26	2.00	-110.76
BEGIN DROP	3797.62	16.000	183.750	3737.00	-467.65	-30.65	0.00	-467.71
END DROP	4597.62	0.000	359.586	4526.64	-578.39	-37.91	2.00	-578.47
KOP, BUILD @ 10°/100'	6911.03	0.000	359.586	6840.05	-578.39	-37.91	0.00	-578.47
LANDING POINT	7813.74	90.271	359.586	7413.00	-2.73	-42.07	10.00	-2.83
BEGIN TURN	8313.74	90.271	359.586	7410.64	497.25	-45.68	0.00	497.14
END TURN	8343.73	90.271	0.186	7410.50	527.23	-45.74	2.00	527.13
TOTAL DEPTH	13100.60	90.271	0.186	7388.00	5284.02	-30.32	0.00	5283.94

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	0.00	-29.94	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W
SEC.07-T1N-R65W SECTION LINES		0.00	0.00	-29.94	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W
STEWARD 14C-6HZ (410'FSL & 1697'FWL, SEC.06) REV-2	13100.60	7388.00	5284.02	-30.32	3221059.36	1270920.06	40°04'27.707"N	104°42'36.228"W
STEWARD 14C-6HZ BHL ON PLAT (410'FSL & 1647'FWL, SEC.06) REV-1		7388.00	5284.02	-80.32	3221009.36	1270919.62	40°04'27.707"N	104°42'36.871"W
STEWARD 14C-6HZ LANDBOX		7388.00	0.00	0.00	3221136.75	1265636.73	40°03'35.489"N	104°42'35.838"W



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-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 1:12:08 PM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/STEWARD_14C-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	-74.79	-3125.84	3221136.75	1265636.73	40°03'35.489"N	104°42'35.838"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#08 STEWARD 14C-6HZ (440'FSL & 1689'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	0.13°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (151 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	183.750	0.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
17.00	0.000	183.750	17.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	TIE-ON
117.00†	0.000	183.750	117.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
217.00†	0.000	183.750	217.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
317.00†	0.000	183.750	317.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
417.00†	0.000	183.750	417.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
517.00†	0.000	183.750	517.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
617.00†	0.000	183.750	617.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
717.00†	0.000	183.750	717.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
817.00†	0.000	183.750	817.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
917.00†	0.000	183.750	917.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1017.00†	0.000	183.750	1017.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1117.00†	0.000	183.750	1117.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1217.00†	0.000	183.750	1217.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1317.00†	0.000	183.750	1317.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1417.00†	0.000	183.750	1417.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1517.00†	0.000	183.750	1517.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1537.00†	0.000	183.750	1537.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	Fox Hills Marker
1617.00†	0.000	183.750	1617.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	
1700.00	0.000	183.750	1700.00	0.00	0.00	0.00	40°03'35.489"N	104°42'35.838"W	0.00	BEGIN NUDGE
1717.00†	0.340	183.750	1717.00	-0.05	-0.05	0.00	40°03'35.489"N	104°42'35.838"W	2.00	
1817.00†	2.340	183.750	1816.97	-2.38	-2.38	-0.16	40°03'35.465"N	104°42'35.840"W	2.00	
1917.00†	4.340	183.750	1916.79	-8.20	-8.20	-0.54	40°03'35.408"N	104°42'35.845"W	2.00	
2017.00†	6.340	183.750	2016.35	-17.49	-17.48	-1.15	40°03'35.316"N	104°42'35.853"W	2.00	
2117.00†	8.340	183.750	2115.53	-30.24	-30.23	-1.98	40°03'35.190"N	104°42'35.863"W	2.00	
2217.00†	10.340	183.750	2214.20	-46.43	-46.42	-3.04	40°03'35.030"N	104°42'35.877"W	2.00	
2317.00†	12.340	183.750	2312.24	-66.05	-66.04	-4.33	40°03'34.836"N	104°42'35.894"W	2.00	
2417.00†	14.340	183.750	2409.54	-89.08	-89.07	-5.84	40°03'34.609"N	104°42'35.913"W	2.00	
2500.00	16.000	183.750	2489.64	-110.76	-110.74	-7.26	40°03'34.395"N	104°42'35.931"W	2.00	END NUDGE
2517.00†	16.000	183.750	2505.98	-115.43	-115.42	-7.56	40°03'34.348"N	104°42'35.935"W	0.00	
2617.00†	16.000	183.750	2602.11	-142.94	-142.92	-9.37	40°03'34.077"N	104°42'35.958"W	0.00	
2717.00†	16.000	183.750	2698.24	-170.45	-170.42	-11.17	40°03'33.805"N	104°42'35.982"W	0.00	
2817.00†	16.000	183.750	2794.36	-197.96	-197.93	-12.97	40°03'33.533"N	104°42'36.005"W	0.00	
2917.00†	16.000	183.750	2890.49	-225.47	-225.43	-14.78	40°03'33.261"N	104°42'36.028"W	0.00	
3017.00†	16.000	183.750	2986.62	-252.98	-252.94	-16.58	40°03'32.989"N	104°42'36.051"W	0.00	
3117.00†	16.000	183.750	3082.74	-280.48	-280.44	-18.38	40°03'32.718"N	104°42'36.074"W	0.00	
3217.00†	16.000	183.750	3178.87	-307.99	-307.95	-20.18	40°03'32.446"N	104°42'36.098"W	0.00	
3317.00†	16.000	183.750	3274.99	-335.50	-335.45	-21.99	40°03'32.174"N	104°42'36.121"W	0.00	
3417.00†	16.000	183.750	3371.12	-363.01	-362.96	-23.79	40°03'31.902"N	104°42'36.144"W	0.00	
3517.00†	16.000	183.750	3467.25	-390.52	-390.46	-25.59	40°03'31.630"N	104°42'36.167"W	0.00	
3617.00†	16.000	183.750	3563.37	-418.03	-417.97	-27.40	40°03'31.359"N	104°42'36.190"W	0.00	
3717.00†	16.000	183.750	3659.50	-445.54	-445.47	-29.20	40°03'31.087"N	104°42'36.214"W	0.00	
3797.62	16.000	183.750	3737.00	-467.71	-467.65	-30.65	40°03'30.868"N	104°42'36.232"W	0.00	BEGIN DROP
3817.00†	15.612	183.750	3755.64	-472.98	-472.91	-31.00	40°03'30.816"N	104°42'36.237"W	2.00	
3917.00†	13.612	183.750	3852.40	-498.16	-498.09	-32.65	40°03'30.567"N	104°42'36.258"W	2.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4017.00†	11.612	183.750	3949.98	-519.95	-519.87	-34.07	40°03'30.351"N	104°42'36.276"W	2.00	
4117.00†	9.612	183.750	4048.27	-538.33	-538.25	-35.28	40°03'30.170"N	104°42'36.292"W	2.00	
4208.79†	7.777	183.750	4139.00	-552.17	-552.10	-36.19	40°03'30.033"N	104°42'36.303"W	2.00	Parkman
4217.00†	7.612	183.750	4147.14	-553.27	-553.19	-36.26	40°03'30.022"N	104°42'36.304"W	2.00	
4317.00†	5.612	183.750	4246.47	-564.76	-564.68	-37.01	40°03'29.909"N	104°42'36.314"W	2.00	
4417.00†	3.612	183.750	4346.14	-572.79	-572.71	-37.54	40°03'29.829"N	104°42'36.321"W	2.00	
4517.00†	1.612	183.750	4446.03	-577.34	-577.25	-37.84	40°03'29.784"N	104°42'36.325"W	2.00	
4546.98†	1.013	183.750	4476.00	-578.02	-577.94	-37.88	40°03'29.778"N	104°42'36.325"W	2.00	Sussex
4597.62	0.000	359.586	4526.64	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	2.00	END DROP
4617.00†	0.000	359.586	4546.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
4717.00†	0.000	359.586	4646.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
4817.00†	0.000	359.586	4746.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
4917.00†	0.000	359.586	4846.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5017.00†	0.000	359.586	4946.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5117.00†	0.000	359.586	5046.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5217.00†	0.000	359.586	5146.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5317.00†	0.000	359.586	5246.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5417.00†	0.000	359.586	5346.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5517.00†	0.000	359.586	5446.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5617.00†	0.000	359.586	5546.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5717.00†	0.000	359.586	5646.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5817.00†	0.000	359.586	5746.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
5917.00†	0.000	359.586	5846.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6017.00†	0.000	359.586	5946.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6117.00†	0.000	359.586	6046.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6217.00†	0.000	359.586	6146.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6317.00†	0.000	359.586	6246.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6417.00†	0.000	359.586	6346.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6517.00†	0.000	359.586	6446.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6617.00†	0.000	359.586	6546.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6717.00†	0.000	359.586	6646.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6811.03†	0.000	359.586	6740.05	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	4 1/2" LINER TOP
6817.00†	0.000	359.586	6746.02	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	
6911.03	0.000	359.586	6840.05	-578.47	-578.39	-37.91	40°03'29.773"N	104°42'36.326"W	0.00	KOP, BUILD @ 10°/100'
6917.00†	0.597	359.586	6846.02	-578.44	-578.36	-37.91	40°03'29.774"N	104°42'36.326"W	10.00	
7017.00†	10.597	359.586	6945.41	-568.70	-568.62	-37.98	40°03'29.870"N	104°42'36.326"W	10.00	
7117.00†	20.597	359.586	7041.61	-541.85	-541.77	-38.17	40°03'30.135"N	104°42'36.329"W	10.00	
7117.42†	20.638	359.586	7042.00	-541.70	-541.62	-38.18	40°03'30.137"N	104°42'36.329"W	10.00	Sharon Springs
7152.03†	24.099	359.586	7074.00	-528.53	-528.45	-38.27	40°03'30.267"N	104°42'36.330"W	10.00	Niobrara A
7217.00†	30.597	359.586	7131.68	-498.70	-498.62	-38.49	40°03'30.562"N	104°42'36.333"W	10.00	
7273.72†	36.269	359.586	7179.00	-467.46	-467.38	-38.71	40°03'30.870"N	104°42'36.336"W	10.00	Niobrara B
7317.00†	40.597	359.586	7212.89	-440.57	-440.49	-38.91	40°03'31.136"N	104°42'36.338"W	10.00	
7355.13†	44.410	359.586	7241.00	-414.81	-414.73	-39.09	40°03'31.391"N	104°42'36.341"W	10.00	Niobrara C
7417.00†	50.597	359.586	7282.77	-369.22	-369.14	-39.42	40°03'31.841"N	104°42'36.345"W	10.00	
7517.00†	60.597	359.586	7339.20	-286.82	-286.73	-40.02	40°03'32.655"N	104°42'36.353"W	10.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7617.00†	70.597	359.586	7380.47	-195.88	-195.79	-40.67	40°03'33.554"N	104°42'36.361"W	10.00	
7631.14†	72.010	359.586	7385.00	-182.49	-182.40	-40.77	40°03'33.687"N	104°42'36.362"W	10.00	Fort Hays
7717.00†	80.597	359.586	7405.31	-99.15	-99.06	-41.37	40°03'34.510"N	104°42'36.370"W	10.00	
7735.21†	82.418	359.586	7408.00	-81.14	-81.05	-41.50	40°03'34.688"N	104°42'36.372"W	10.00	Codell
7813.74	90.271	359.586	7413.00	-2.83	-2.73	-42.07	40°03'35.462"N	104°42'36.379"W	10.00	LANDING POINT
7817.00†	90.271	359.586	7412.99	0.43	0.52	-42.09	40°03'35.494"N	104°42'36.379"W	0.00	
7917.00†	90.271	359.586	7412.52	100.42	100.52	-42.82	40°03'36.482"N	104°42'36.389"W	0.00	
8017.00†	90.271	359.586	7412.04	200.42	200.51	-43.54	40°03'37.471"N	104°42'36.398"W	0.00	
8117.00†	90.271	359.586	7411.57	300.41	300.51	-44.26	40°03'38.459"N	104°42'36.407"W	0.00	
8217.00†	90.271	359.586	7411.10	400.40	400.51	-44.98	40°03'39.447"N	104°42'36.417"W	0.00	
8313.74	90.271	359.586	7410.64	497.14	497.25	-45.68	40°03'40.403"N	104°42'36.426"W	0.00	BEGIN TURN
8317.00†	90.271	359.651	7410.62	500.40	500.50	-45.70	40°03'40.435"N	104°42'36.426"W	2.00	
8343.73	90.271	0.186	7410.50	527.13	527.23	-45.74	40°03'40.699"N	104°42'36.426"W	2.00	END TURN
8417.00†	90.271	0.186	7410.15	600.40	600.50	-45.50	40°03'41.423"N	104°42'36.423"W	0.00	
8517.00†	90.271	0.186	7409.68	700.40	700.50	-45.18	40°03'42.411"N	104°42'36.419"W	0.00	
8617.00†	90.271	0.186	7409.21	800.40	800.50	-44.86	40°03'43.400"N	104°42'36.415"W	0.00	
8717.00†	90.271	0.186	7408.73	900.39	900.50	-44.53	40°03'44.388"N	104°42'36.411"W	0.00	
8817.00†	90.271	0.186	7408.26	1000.39	1000.49	-44.21	40°03'45.376"N	104°42'36.407"W	0.00	
8917.00†	90.271	0.186	7407.79	1100.39	1100.49	-43.88	40°03'46.364"N	104°42'36.402"W	0.00	
9017.00†	90.271	0.186	7407.31	1200.39	1200.49	-43.56	40°03'47.353"N	104°42'36.398"W	0.00	
9117.00†	90.271	0.186	7406.84	1300.39	1300.49	-43.23	40°03'48.341"N	104°42'36.394"W	0.00	
9217.00†	90.271	0.186	7406.37	1400.39	1400.49	-42.91	40°03'49.329"N	104°42'36.390"W	0.00	
9317.00†	90.271	0.186	7405.89	1500.39	1500.49	-42.59	40°03'50.317"N	104°42'36.386"W	0.00	
9417.00†	90.271	0.186	7405.42	1600.39	1600.48	-42.26	40°03'51.305"N	104°42'36.382"W	0.00	
9517.00†	90.271	0.186	7404.95	1700.38	1700.48	-41.94	40°03'52.294"N	104°42'36.377"W	0.00	
9617.00†	90.271	0.186	7404.48	1800.38	1800.48	-41.61	40°03'53.282"N	104°42'36.373"W	0.00	
9717.00†	90.271	0.186	7404.00	1900.38	1900.48	-41.29	40°03'54.270"N	104°42'36.369"W	0.00	
9817.00†	90.271	0.186	7403.53	2000.38	2000.48	-40.97	40°03'55.258"N	104°42'36.365"W	0.00	
9917.00†	90.271	0.186	7403.06	2100.38	2100.48	-40.64	40°03'56.246"N	104°42'36.361"W	0.00	
10017.00†	90.271	0.186	7402.58	2200.38	2200.47	-40.32	40°03'57.235"N	104°42'36.357"W	0.00	
10117.00†	90.271	0.186	7402.11	2300.38	2300.47	-39.99	40°03'58.223"N	104°42'36.352"W	0.00	
10217.00†	90.271	0.186	7401.64	2400.38	2400.47	-39.67	40°03'59.211"N	104°42'36.348"W	0.00	
10317.00†	90.271	0.186	7401.16	2500.38	2500.47	-39.34	40°04'00.199"N	104°42'36.344"W	0.00	
10417.00†	90.271	0.186	7400.69	2600.37	2600.47	-39.02	40°04'01.187"N	104°42'36.340"W	0.00	
10517.00†	90.271	0.186	7400.22	2700.37	2700.47	-38.70	40°04'02.176"N	104°42'36.336"W	0.00	
10617.00†	90.271	0.186	7399.75	2800.37	2800.46	-38.37	40°04'03.164"N	104°42'36.332"W	0.00	
10717.00†	90.271	0.186	7399.27	2900.37	2900.46	-38.05	40°04'04.152"N	104°42'36.327"W	0.00	
10817.00†	90.271	0.186	7398.80	3000.37	3000.46	-37.72	40°04'05.140"N	104°42'36.323"W	0.00	
10917.00†	90.271	0.186	7398.33	3100.37	3100.46	-37.40	40°04'06.128"N	104°42'36.319"W	0.00	
11017.00†	90.271	0.186	7397.85	3200.37	3200.46	-37.07	40°04'07.117"N	104°42'36.315"W	0.00	
11117.00†	90.271	0.186	7397.38	3300.37	3300.46	-36.75	40°04'08.105"N	104°42'36.311"W	0.00	
11217.00†	90.271	0.186	7396.91	3400.37	3400.45	-36.43	40°04'09.093"N	104°42'36.307"W	0.00	
11317.00†	90.271	0.186	7396.44	3500.36	3500.45	-36.10	40°04'10.081"N	104°42'36.302"W	0.00	
11417.00†	90.271	0.186	7395.96	3600.36	3600.45	-35.78	40°04'11.069"N	104°42'36.298"W	0.00	
11517.00†	90.271	0.186	7395.49	3700.36	3700.45	-35.45	40°04'12.058"N	104°42'36.294"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11617.00†	90.271	0.186	7395.02	3800.36	3800.45	-35.13	40°04'13.046"N	104°42'36.290"W	0.00	
11717.00†	90.271	0.186	7394.54	3900.36	3900.45	-34.81	40°04'14.034"N	104°42'36.286"W	0.00	
11817.00†	90.271	0.186	7394.07	4000.36	4000.44	-34.48	40°04'15.022"N	104°42'36.282"W	0.00	
11917.00†	90.271	0.186	7393.60	4100.36	4100.44	-34.16	40°04'16.010"N	104°42'36.277"W	0.00	
12017.00†	90.271	0.186	7393.12	4200.36	4200.44	-33.83	40°04'16.999"N	104°42'36.273"W	0.00	
12117.00†	90.271	0.186	7392.65	4300.35	4300.44	-33.51	40°04'17.987"N	104°42'36.269"W	0.00	
12217.00†	90.271	0.186	7392.18	4400.35	4400.44	-33.18	40°04'18.975"N	104°42'36.265"W	0.00	
12317.00†	90.271	0.186	7391.71	4500.35	4500.44	-32.86	40°04'19.963"N	104°42'36.261"W	0.00	
12417.00†	90.271	0.186	7391.23	4600.35	4600.43	-32.54	40°04'20.951"N	104°42'36.257"W	0.00	
12517.00†	90.271	0.186	7390.76	4700.35	4700.43	-32.21	40°04'21.940"N	104°42'36.252"W	0.00	
12617.00†	90.271	0.186	7390.29	4800.35	4800.43	-31.89	40°04'22.928"N	104°42'36.248"W	0.00	
12717.00†	90.271	0.186	7389.81	4900.35	4900.43	-31.56	40°04'23.916"N	104°42'36.244"W	0.00	
12817.00†	90.271	0.186	7389.34	5000.35	5000.43	-31.24	40°04'24.904"N	104°42'36.240"W	0.00	
12917.00†	90.271	0.186	7388.87	5100.35	5100.43	-30.92	40°04'25.892"N	104°42'36.236"W	0.00	
13017.00†	90.271	0.186	7388.40	5200.34	5200.42	-30.59	40°04'26.881"N	104°42'36.232"W	0.00	
13100.60	90.271	0.186	7388.00 ¹	5283.94	5284.02	-30.32	40°04'27.707"N	104°42'36.228"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: STEWARD 14C-6HZ PWB Ref Wellpath: STEWARD 14C-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	7813.74	6273.74	1540.00	7413.00	0.00	0.00	-2.74	-42.07
7in Casing Intermediate	17.00	7813.74	7796.74	17.00	7413.00	0.00	0.00	-2.74	-42.07
6.125in Open Hole	7813.74	13100.60	5286.85	7413.00	7388.00	-2.73	-42.07	5284.02	-30.32
4.5in Casing Intermediate	17.00	13100.60	13083.60	17.00	7388.00	0.00	0.00	5284.02	-30.32

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-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	0.00	-29.94	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W	polygon
SEC.07-T1N-R65W SECTION LINES		0.00	0.00	-29.94	3221106.82	1265636.47	40°03'35.489"N	104°42'36.223"W	polygon
1) STEWARD 14C-6HZ (410'FSL & 1697'FWL, SEC.06) REV-2	13100.60	7388.00	5284.02	-30.32	3221059.36	1270920.06	40°04'27.707"N	104°42'36.228"W	point
STEWARD 14C-6HZ BHL ON PLAT (410'FSL & 1647'FWL, SEC.06) REV-1		7388.00	5284.02	-80.32	3221009.36	1270919.62	40°04'27.707"N	104°42'36.871"W	point
STEWARD 14C-6HZ LANDBOX		7388.00	0.00	0.00	3221136.75	1265636.73	40°03'35.489"N	104°42'35.838"W	polygon

SURVEY PROGRAM - Ref Wellbore: STEWARD 14C-6HZ PWB				Ref Wellpath: STEWARD 14C-6HZ (PERMIT REV-3) PWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
17.00	13100.60	NaviTrak (MAGCORR,IFR)			STEWARD 14C-6HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 STEWARD 14C-6HZ (440'FSL & 1689'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 14C-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 14C-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1537.00	0.000	183.750	1537.00	Fox Hills Marker
4208.79	7.777	183.750	4139.00	Parkman
4546.98	1.013	183.750	4476.00	Sussex
6811.03	0.000	359.586	6740.05	4 1/2" LINER TOP
7117.42	20.638	359.586	7042.00	Sharon Springs
7152.03	24.099	359.586	7074.00	Niobrara A
7273.72	36.269	359.586	7179.00	Niobrara B
7355.13	44.410	359.586	7241.00	Niobrara C
7631.14	72.010	359.586	7385.00	Fort Hays
7735.21	82.418	359.586	7408.00	Codell

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	183.750	17.00	TIE-ON
1700.00	0.000	183.750	1700.00	BEGIN NUDGE
2500.00	16.000	183.750	2489.64	END NUDGE
3797.62	16.000	183.750	3737.00	BEGIN DROP
4597.62	0.000	359.586	4526.64	END DROP
6911.03	0.000	359.586	6840.05	KOP, BUILD @ 10°/100'
7813.74	90.271	359.586	7413.00	LANDING POINT
8313.74	90.271	359.586	7410.64	BEGIN TURN
8343.73	90.271	0.186	7410.50	END TURN
13100.60	90.271	0.186	7388.00	TOTAL DEPTH