

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
 Field: WELD COUNTY (KERR MCGEE) Well: STEWARD 13N-6HZ
 Facility: SEC.07-T1N-R65W Wellbore: STEWARD 13N-6HZ PWB

Plot reference wellpath is STEWARD 13N-6HZ (PERMIT REV-1) 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: 5021 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: rboala01 on 25/Mar/2014

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.07-T1N-R65W		3224261.659	1265739.756	40°03'35.230"N	104°41'55.637"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)	-75.87	-3335.78	3220926.836	1265633.751	40°03'35.478"N
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07))	5021ft				
Mean Sea Level to Mud line (At Slot: SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07))	0ft				
PERMIT (17KB) (RKB) to Mean Sea Level	5021ft				

Survey Program

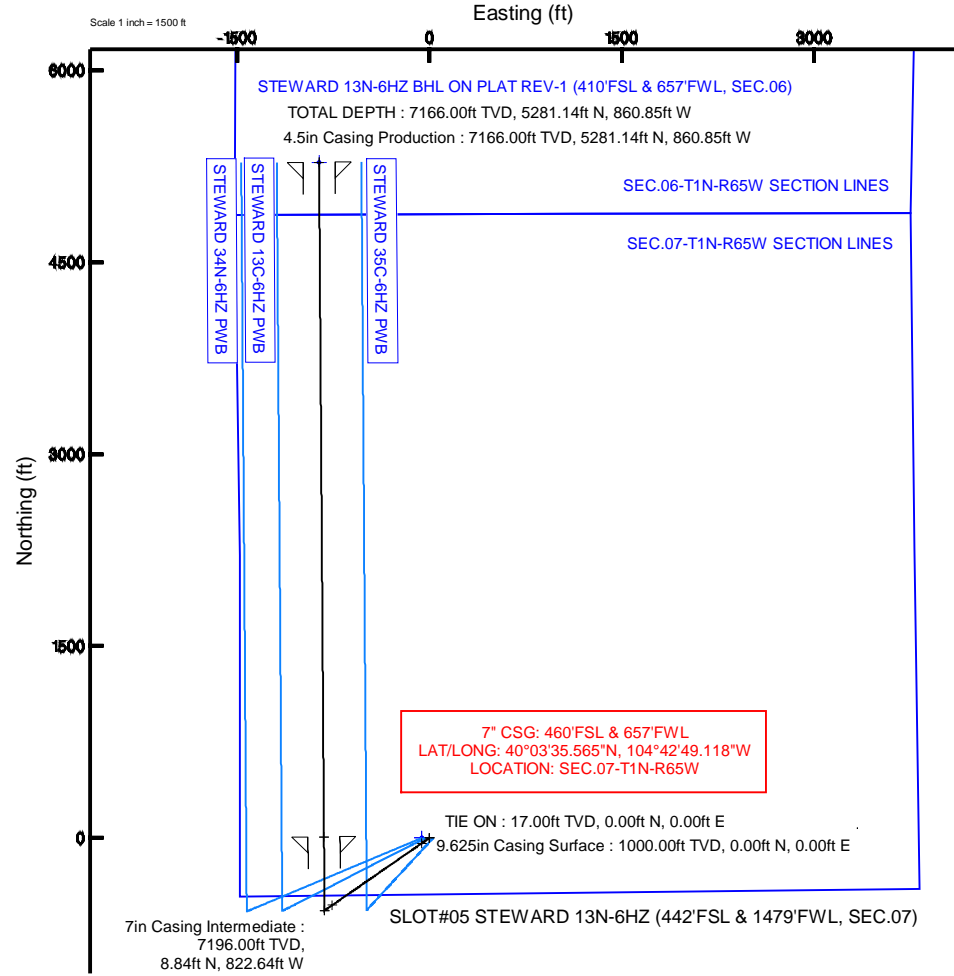
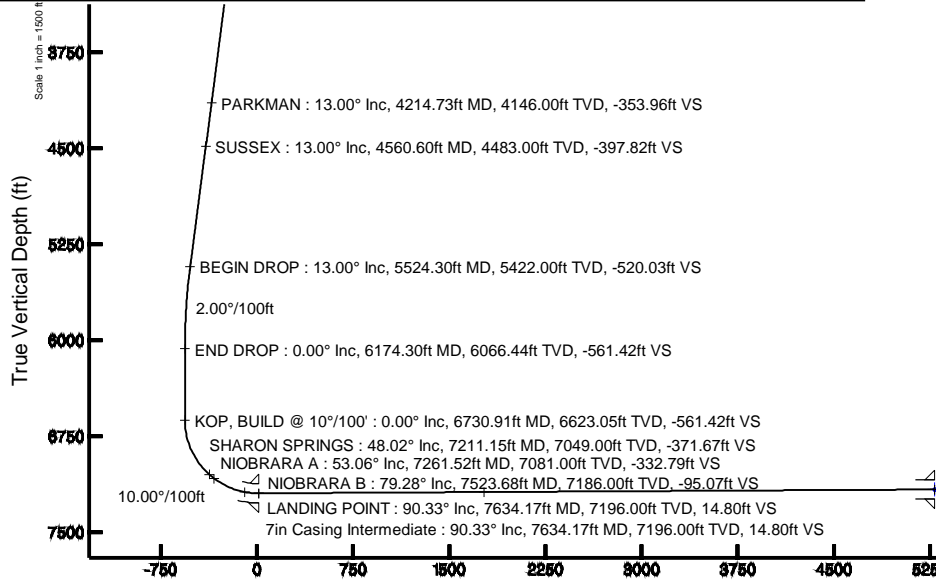
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	12906.69	NaviTrak	NaviTrak (MAGCORR,IFR)		STEWARD 13N-6HZ PWB

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	-0.40	-60.18	3220966.66	1265632.81	40°03'35.474"N	104°42'39.312"W
SEC.07-T1N-R65W SECTION LINES		0.00	-0.40	-60.18	3220966.66	1265632.81	40°03'35.474"N	104°42'39.312"W
STEWARD 13N-6HZ BHL ON PLAT REV-1 (410'FSL & 657'FWL, SEC.06)	12906.69	7166.00	5281.14	-860.85	3220919.05	1270906.81	40°04'27.667"N	104°42'49.612"W

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	235.270	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	235.270	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1750.00	13.000	235.270	1744.44	-41.83	-60.34	2.00	-41.39
BEGIN DROP	5524.30	13.000	235.270	5422.00	-525.53	-758.12	0.00	-520.03
END DROP	6174.30	0.000	359.585	6066.44	-567.36	-818.46	2.00	-561.42
KOP, BUILD @ 10°/100'	6730.91	0.000	359.585	6623.05	-567.36	-818.46	0.00	-561.42
LANDING POINT	7634.17	90.326	359.585	7196.00	8.84	-822.64	10.00	14.80
TOTAL DEPTH	12906.69	90.326	359.585	7166.00	5281.14	-860.85	0.00	5287.24



STEWARD 13N-6HZ BHL ON PLAT REV-1 (410'FSL & 657'FWL, SEC.06)
 4.5in Casing Production : 90.33° Inc, 12906.69ft MD, 7166.00ft TVD, 5287.23ft VS
 TOTAL DEPTH : 90.33° Inc, 12906.69ft MD, 7166.00ft TVD, 5287.24ft VS

Vertical Section (ft)
 Azimuth 359.58° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500 ft

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 13N-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	Robiale01
Scale	0.999962	Report Generated	14/May/2014 at 13:55
Convergence at slot	n/a	Database/Source file	WellArchitectDB/STEWARD_13N-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	-75.87	-3335.78	3220926.84	1265633.75	40°03'35.478"N	104°42'38.538"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	5021.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	5021.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07))	5021.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.58°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 13N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (144 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	235.270	0.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
17.00	0.000	235.270	17.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	TIE ON
117.00†	0.000	235.270	117.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
217.00†	0.000	235.270	217.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
317.00†	0.000	235.270	317.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
417.00†	0.000	235.270	417.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
517.00†	0.000	235.270	517.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
617.00†	0.000	235.270	617.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
717.00†	0.000	235.270	717.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
817.00†	0.000	235.270	817.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
917.00†	0.000	235.270	917.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
1017.00†	0.000	235.270	1017.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	
1100.00	0.000	235.270	1100.00	0.00	0.00	0.00	40°03'35.478"N	104°42'38.538"W	0.00	BEGIN NUDGE
1117.00†	0.340	235.270	1117.00	-0.03	-0.03	-0.04	40°03'35.478"N	104°42'38.539"W	2.00	
1217.00†	2.340	235.270	1216.97	-1.35	-1.36	-1.96	40°03'35.465"N	104°42'38.563"W	2.00	
1317.00†	4.340	235.270	1316.79	-4.63	-4.68	-6.75	40°03'35.432"N	104°42'38.625"W	2.00	
1417.00†	6.340	235.270	1416.35	-9.88	-9.98	-14.40	40°03'35.379"N	104°42'38.723"W	2.00	
1517.00†	8.340	235.270	1515.53	-17.08	-17.26	-24.90	40°03'35.307"N	104°42'38.858"W	2.00	
1541.75†	8.835	235.270	1540.00	-19.16	-19.37	-27.94	40°03'35.287"N	104°42'38.897"W	2.00	FOX HILLS MARKER
1617.00†	10.340	235.270	1614.20	-26.23	-26.51	-38.24	40°03'35.216"N	104°42'39.030"W	2.00	
1717.00†	12.340	235.270	1712.24	-37.31	-37.71	-54.39	40°03'35.105"N	104°42'39.238"W	2.00	
1750.00	13.000	235.270	1744.44	-41.39	-41.83	-60.34	40°03'35.065"N	104°42'39.314"W	2.00	END NUDGE
1817.00†	13.000	235.270	1809.72	-49.89	-50.42	-72.73	40°03'34.980"N	104°42'39.473"W	0.00	
1917.00†	13.000	235.270	1907.16	-62.57	-63.23	-91.22	40°03'34.853"N	104°42'39.711"W	0.00	
2017.00†	13.000	235.270	2004.59	-75.25	-76.05	-109.71	40°03'34.726"N	104°42'39.949"W	0.00	
2117.00†	13.000	235.270	2102.03	-87.93	-88.86	-128.19	40°03'34.600"N	104°42'40.187"W	0.00	
2217.00†	13.000	235.270	2199.47	-100.61	-101.68	-146.68	40°03'34.473"N	104°42'40.424"W	0.00	
2317.00†	13.000	235.270	2296.91	-113.30	-114.50	-165.17	40°03'34.347"N	104°42'40.662"W	0.00	
2417.00†	13.000	235.270	2394.34	-125.98	-127.31	-183.66	40°03'34.220"N	104°42'40.900"W	0.00	
2517.00†	13.000	235.270	2491.78	-138.66	-140.13	-202.14	40°03'34.093"N	104°42'41.138"W	0.00	
2617.00†	13.000	235.270	2589.22	-151.34	-152.94	-220.63	40°03'33.967"N	104°42'41.375"W	0.00	
2717.00†	13.000	235.270	2686.65	-164.02	-165.76	-239.12	40°03'33.840"N	104°42'41.613"W	0.00	
2817.00†	13.000	235.270	2784.09	-176.70	-178.57	-257.61	40°03'33.713"N	104°42'41.851"W	0.00	
2917.00†	13.000	235.270	2881.53	-189.38	-191.39	-276.09	40°03'33.587"N	104°42'42.089"W	0.00	
3017.00†	13.000	235.270	2978.96	-202.07	-204.21	-294.58	40°03'33.460"N	104°42'42.327"W	0.00	
3117.00†	13.000	235.270	3076.40	-214.75	-217.02	-313.07	40°03'33.333"N	104°42'42.564"W	0.00	
3217.00†	13.000	235.270	3173.84	-227.43	-229.84	-331.56	40°03'33.207"N	104°42'42.802"W	0.00	
3317.00†	13.000	235.270	3271.28	-240.11	-242.65	-350.04	40°03'33.080"N	104°42'43.040"W	0.00	
3417.00†	13.000	235.270	3368.71	-252.79	-255.47	-368.53	40°03'32.953"N	104°42'43.278"W	0.00	
3517.00†	13.000	235.270	3466.15	-265.47	-268.28	-387.02	40°03'32.827"N	104°42'43.515"W	0.00	
3617.00†	13.000	235.270	3563.59	-278.15	-281.10	-405.51	40°03'32.700"N	104°42'43.753"W	0.00	
3717.00†	13.000	235.270	3661.02	-290.84	-293.92	-423.99	40°03'32.573"N	104°42'43.991"W	0.00	
3817.00†	13.000	235.270	3758.46	-303.52	-306.73	-442.48	40°03'32.447"N	104°42'44.229"W	0.00	
3917.00†	13.000	235.270	3855.90	-316.20	-319.55	-460.97	40°03'32.320"N	104°42'44.466"W	0.00	
4017.00†	13.000	235.270	3953.33	-328.88	-332.36	-479.46	40°03'32.193"N	104°42'44.704"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 13N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (144 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	13.000	235.270	4050.77	-341.56	-345.18	-497.94	40°03'32.067"N	104°42'44.942"W	0.00	
4214.73†	13.000	235.270	4146.00	-353.96	-357.70	-516.01	40°03'31.943"N	104°42'45.174"W	0.00	PARKMAN
4217.00†	13.000	235.270	4148.21	-354.24	-357.99	-516.43	40°03'31.940"N	104°42'45.180"W	0.00	
4317.00†	13.000	235.270	4245.65	-366.93	-370.81	-534.92	40°03'31.814"N	104°42'45.417"W	0.00	
4417.00†	13.000	235.270	4343.08	-379.61	-383.62	-553.41	40°03'31.687"N	104°42'45.655"W	0.00	
4517.00†	13.000	235.270	4440.52	-392.29	-396.44	-571.89	40°03'31.560"N	104°42'45.893"W	0.00	
4560.60†	13.000	235.270	4483.00	-397.82	-402.03	-579.95	40°03'31.505"N	104°42'45.997"W	0.00	SUSSEX
4617.00†	13.000	235.270	4537.96	-404.97	-409.26	-590.38	40°03'31.434"N	104°42'46.131"W	0.00	
4717.00†	13.000	235.270	4635.39	-417.65	-422.07	-608.87	40°03'31.307"N	104°42'46.368"W	0.00	
4817.00†	13.000	235.270	4732.83	-430.33	-434.89	-627.36	40°03'31.180"N	104°42'46.606"W	0.00	
4917.00†	13.000	235.270	4830.27	-443.01	-447.70	-645.84	40°03'31.054"N	104°42'46.844"W	0.00	
5017.00†	13.000	235.270	4927.70	-455.70	-460.52	-664.33	40°03'30.927"N	104°42'47.082"W	0.00	
5117.00†	13.000	235.270	5025.14	-468.38	-473.33	-682.82	40°03'30.800"N	104°42'47.319"W	0.00	
5217.00†	13.000	235.270	5122.58	-481.06	-486.15	-701.31	40°03'30.674"N	104°42'47.557"W	0.00	
5317.00†	13.000	235.270	5220.02	-493.74	-498.97	-719.79	40°03'30.547"N	104°42'47.795"W	0.00	
5417.00†	13.000	235.270	5317.45	-506.42	-511.78	-738.28	40°03'30.420"N	104°42'48.033"W	0.00	
5517.00†	13.000	235.270	5414.89	-519.10	-524.60	-756.77	40°03'30.294"N	104°42'48.270"W	0.00	
5524.30	13.000	235.270	5422.00	-520.03	-525.53	-758.12	40°03'30.284"N	104°42'48.288"W	0.00	BEGIN DROP
5617.00†	11.146	235.270	5512.65	-530.96	-536.58	-774.05	40°03'30.175"N	104°42'48.493"W	2.00	
5717.00†	9.146	235.270	5611.08	-540.89	-546.61	-788.53	40°03'30.076"N	104°42'48.679"W	2.00	
5817.00†	7.146	235.270	5710.07	-548.88	-554.69	-800.17	40°03'29.996"N	104°42'48.829"W	2.00	
5917.00†	5.146	235.270	5809.49	-554.91	-560.79	-808.97	40°03'29.936"N	104°42'48.942"W	2.00	
6017.00†	3.146	235.270	5909.22	-558.99	-564.90	-814.91	40°03'29.895"N	104°42'49.018"W	2.00	
6117.00†	1.146	235.270	6009.14	-561.10	-567.04	-817.99	40°03'29.874"N	104°42'49.058"W	2.00	
6174.30	0.000	359.584	6066.44	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	2.00	END DROP
6217.00†	0.000	359.584	6109.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6317.00†	0.000	359.584	6209.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6417.00†	0.000	359.584	6309.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6517.00†	0.000	359.584	6409.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6617.00†	0.000	359.584	6509.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6717.00†	0.000	359.584	6609.14	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	
6730.91	0.000	359.584	6623.05	-561.42	-567.36	-818.46	40°03'29.871"N	104°42'49.064"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	8.609	359.584	6708.82	-554.96	-560.91	-818.51	40°03'29.935"N	104°42'49.064"W	10.00	
6917.00†	18.609	359.584	6805.88	-531.46	-537.41	-818.68	40°03'30.167"N	104°42'49.067"W	10.00	
7017.00†	28.609	359.584	6897.40	-491.47	-497.41	-818.97	40°03'30.562"N	104°42'49.070"W	10.00	
7117.00†	38.609	359.584	6980.58	-436.18	-442.13	-819.37	40°03'31.109"N	104°42'49.076"W	10.00	
7211.15†	48.024	359.584	7049.00	-371.67	-377.61	-819.84	40°03'31.746"N	104°42'49.082"W	10.00	SHARON SPRINGS
7217.00†	48.609	359.584	7052.89	-367.30	-373.25	-819.87	40°03'31.789"N	104°42'49.082"W	10.00	
7261.52†	53.061	359.584	7081.00	-332.79	-338.74	-820.12	40°03'32.130"N	104°42'49.085"W	10.00	NIOBRARA A
7317.00†	58.609	359.584	7112.14	-286.90	-292.85	-820.45	40°03'32.584"N	104°42'49.090"W	10.00	
7417.00†	68.609	359.584	7156.54	-197.44	-203.39	-821.10	40°03'33.468"N	104°42'49.098"W	10.00	
7517.00†	78.609	359.584	7184.72	-101.62	-107.58	-821.80	40°03'34.415"N	104°42'49.107"W	10.00	
7523.68†	79.277	359.584	7186.00	-95.07	-101.02	-821.84	40°03'34.480"N	104°42'49.108"W	10.00	NIOBRARA B
7617.00†	88.609	359.584	7195.84	-2.37	-8.33	-822.52	40°03'35.396"N	104°42'49.116"W	10.00	
7634.17	90.326	359.584	7196.00	14.80	8.84	-822.64	40°03'35.565"N	104°42'49.118"W	10.00	LANDING POINT

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 13N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH DATA (144 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	90.326	359.584	7195.52	97.63	91.67	-823.24	40°03'36.384"N	104°42'49.126"W	0.00	
7817.00†	90.326	359.584	7194.96	197.63	191.66	-823.97	40°03'37.372"N	104°42'49.135"W	0.00	
7917.00†	90.326	359.584	7194.39	297.63	291.66	-824.69	40°03'38.360"N	104°42'49.144"W	0.00	
8017.00†	90.326	359.584	7193.82	397.62	391.66	-825.42	40°03'39.348"N	104°42'49.154"W	0.00	
8117.00†	90.326	359.584	7193.25	497.62	491.65	-826.14	40°03'40.336"N	104°42'49.163"W	0.00	
8217.00†	90.326	359.584	7192.68	597.62	591.65	-826.87	40°03'41.325"N	104°42'49.172"W	0.00	
8317.00†	90.326	359.584	7192.11	697.62	691.64	-827.59	40°03'42.313"N	104°42'49.182"W	0.00	
8417.00†	90.326	359.584	7191.54	797.62	791.64	-828.32	40°03'43.301"N	104°42'49.191"W	0.00	
8517.00†	90.326	359.584	7190.97	897.62	891.63	-829.04	40°03'44.289"N	104°42'49.201"W	0.00	
8617.00†	90.326	359.584	7190.40	997.61	991.63	-829.77	40°03'45.277"N	104°42'49.210"W	0.00	
8717.00†	90.326	359.584	7189.84	1097.61	1091.63	-830.49	40°03'46.266"N	104°42'49.219"W	0.00	
8817.00†	90.326	359.584	7189.27	1197.61	1191.62	-831.22	40°03'47.254"N	104°42'49.229"W	0.00	
8917.00†	90.326	359.584	7188.70	1297.61	1291.62	-831.94	40°03'48.242"N	104°42'49.238"W	0.00	
9017.00†	90.326	359.584	7188.13	1397.61	1391.61	-832.67	40°03'49.230"N	104°42'49.247"W	0.00	
9117.00†	90.326	359.584	7187.56	1497.61	1491.61	-833.39	40°03'50.218"N	104°42'49.257"W	0.00	
9217.00†	90.326	359.584	7186.99	1597.60	1591.60	-834.12	40°03'51.206"N	104°42'49.266"W	0.00	
9317.00†	90.326	359.584	7186.42	1697.60	1691.60	-834.84	40°03'52.195"N	104°42'49.276"W	0.00	
9391.18†	90.326	359.584	7186.00	1771.78	1765.78	-835.38	40°03'52.928"N	104°42'49.283"W	0.00	NIOBRARA B
9417.00†	90.326	359.584	7185.85	1797.60	1791.60	-835.57	40°03'53.183"N	104°42'49.285"W	0.00	
9517.00†	90.326	359.584	7185.28	1897.60	1891.59	-836.29	40°03'54.171"N	104°42'49.294"W	0.00	
9617.00†	90.326	359.584	7184.72	1997.60	1991.59	-837.02	40°03'55.159"N	104°42'49.304"W	0.00	
9717.00†	90.326	359.584	7184.15	2097.60	2091.58	-837.75	40°03'56.147"N	104°42'49.313"W	0.00	
9817.00†	90.326	359.584	7183.58	2197.59	2191.58	-838.47	40°03'57.136"N	104°42'49.322"W	0.00	
9917.00†	90.326	359.584	7183.01	2297.59	2291.57	-839.20	40°03'58.124"N	104°42'49.332"W	0.00	
10017.00†	90.326	359.584	7182.44	2397.59	2391.57	-839.92	40°03'59.112"N	104°42'49.341"W	0.00	
10117.00†	90.326	359.584	7181.87	2497.59	2491.57	-840.65	40°04'00.100"N	104°42'49.351"W	0.00	
10217.00†	90.326	359.584	7181.30	2597.59	2591.56	-841.37	40°04'01.088"N	104°42'49.360"W	0.00	
10317.00†	90.326	359.584	7180.73	2697.59	2691.56	-842.10	40°04'02.076"N	104°42'49.369"W	0.00	
10417.00†	90.326	359.584	7180.16	2797.58	2791.55	-842.82	40°04'03.065"N	104°42'49.379"W	0.00	
10517.00†	90.326	359.584	7179.60	2897.58	2891.55	-843.55	40°04'04.053"N	104°42'49.388"W	0.00	
10617.00†	90.326	359.584	7179.03	2997.58	2991.54	-844.27	40°04'05.041"N	104°42'49.397"W	0.00	
10717.00†	90.326	359.584	7178.46	3097.58	3091.54	-845.00	40°04'06.029"N	104°42'49.407"W	0.00	
10817.00†	90.326	359.584	7177.89	3197.58	3191.54	-845.72	40°04'07.017"N	104°42'49.416"W	0.00	
10917.00†	90.326	359.584	7177.32	3297.58	3291.53	-846.45	40°04'08.005"N	104°42'49.426"W	0.00	
11017.00†	90.326	359.584	7176.75	3397.58	3391.53	-847.17	40°04'08.994"N	104°42'49.435"W	0.00	
11117.00†	90.326	359.584	7176.18	3497.57	3491.52	-847.90	40°04'09.982"N	104°42'49.444"W	0.00	
11217.00†	90.326	359.584	7175.61	3597.57	3591.52	-848.62	40°04'10.970"N	104°42'49.454"W	0.00	
11317.00†	90.326	359.584	7175.04	3697.57	3691.52	-849.35	40°04'11.958"N	104°42'49.463"W	0.00	
11417.00†	90.326	359.584	7174.47	3797.57	3791.51	-850.07	40°04'12.946"N	104°42'49.472"W	0.00	
11517.00†	90.326	359.584	7173.91	3897.57	3891.51	-850.80	40°04'13.935"N	104°42'49.482"W	0.00	
11617.00†	90.326	359.584	7173.34	3997.57	3991.50	-851.52	40°04'14.923"N	104°42'49.491"W	0.00	
11717.00†	90.326	359.584	7172.77	4097.56	4091.50	-852.25	40°04'15.911"N	104°42'49.500"W	0.00	
11817.00†	90.326	359.584	7172.20	4197.56	4191.49	-852.98	40°04'16.899"N	104°42'49.510"W	0.00	
11917.00†	90.326	359.584	7171.63	4297.56	4291.49	-853.70	40°04'17.887"N	104°42'49.519"W	0.00	
12017.00†	90.326	359.584	7171.06	4397.56	4391.49	-854.43	40°04'18.875"N	104°42'49.529"W	0.00	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO		Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	STEWARD 13N-6HZ PWB
Facility	SEC.07-T1N-R65W			

WELLPATH DATA (144 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.326	359.584	7170.49	4497.56	4491.48	-855.15	40°04'19.864"N	104°42'49.538"W	0.00	
12217.00†	90.326	359.584	7169.92	4597.56	4591.48	-855.88	40°04'20.852"N	104°42'49.547"W	0.00	
12317.00†	90.326	359.584	7169.35	4697.55	4691.47	-856.60	40°04'21.840"N	104°42'49.557"W	0.00	
12417.00†	90.326	359.584	7168.79	4797.55	4791.47	-857.33	40°04'22.828"N	104°42'49.566"W	0.00	
12517.00†	90.326	359.584	7168.22	4897.55	4891.46	-858.05	40°04'23.816"N	104°42'49.575"W	0.00	
12617.00†	90.326	359.584	7167.65	4997.55	4991.46	-858.78	40°04'24.805"N	104°42'49.585"W	0.00	
12717.00†	90.326	359.584	7167.08	5097.55	5091.46	-859.50	40°04'25.793"N	104°42'49.594"W	0.00	
12817.00†	90.326	359.584	7166.51	5197.55	5191.45	-860.23	40°04'26.781"N	104°42'49.604"W	0.00	
12906.67	90.326	359.584	7166.00 ¹	5287.22	5281.12	-860.88	40°04'27.667"N	104°42'49.612"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: STEWARD 13N-6HZ PWB Ref Wellpath: STEWARD 13N-6HZ (PERMIT REV-1) 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	1000.00	983.00	17.00	1000.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1000.00	983.00	17.00	1000.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1000.00	7634.17	6634.17	1000.00	7196.00	0.00	0.00	8.84	-822.64
7in Casing Intermediate	17.00	7634.17	7617.17	17.00	7196.00	0.00	0.00	8.84	-822.64
6.125in Open Hole	7634.17	12906.67	5272.50	7196.00	7166.00	8.84	-822.64	5281.12	-860.88
4.5in Casing Production	17.00	12906.67	12889.67	17.00	7166.00	0.00	0.00	5281.12	-860.88

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	-0.40	-60.18	3220866.66	1265632.81	40°03'35.474"N	104°42'39.312"W	polygon
SEC.07-T1N-R65W SECTION LINES		0.00	-0.40	-60.18	3220866.66	1265632.81	40°03'35.474"N	104°42'39.312"W	polygon
1) STEWARD 13N-6HZ BHL ON PLAT REV-1 (410'FSL & 657'FWL, SEC.06)	12906.67	7166.00	5281.12	-860.88	3220019.02	1270906.79	40°04'27.667"N	104°42'49.612"W	point

SURVEY PROGRAM - Ref Wellbore: STEWARD 13N-6HZ PWB Ref Wellpath: STEWARD 13N-6HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12906.69	NaviTrak (MAGCORR,IFR)		STEWARD 13N-6HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 STEWARD 13N-6HZ (442'FSL & 1479'FWL, SEC.07)
Area	COLORADO	Well	STEWARD 13N-6HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	STEWARD 13N-6HZ PWB
Facility	SEC.07-T1N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1541.75	8.835	235.270	1540.00	FOX HILLS MARKER	
4214.73	13.000	235.270	4146.00	PARKMAN	
4560.60	13.000	235.270	4483.00	SUSSEX	
7211.15	48.024	359.584	7049.00	SHARON SPRINGS	
7261.52	53.061	359.584	7081.00	NIOBRARA A	
7523.68	79.277	359.584	7186.00	NIOBRARA B	
9391.18	90.326	359.584	7186.00	NIOBRARA B	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	235.270	17.00	TIE ON	
1100.00	0.000	235.270	1100.00	BEGIN NUDGE	
1750.00	13.000	235.270	1744.44	END NUDGE	
5524.30	13.000	235.270	5422.00	BEGIN DROP	
6174.30	0.000	359.584	6066.44	END DROP	
6730.91	0.000	359.584	6623.05	KOP, BUILD @ 10°/100'	
7634.17	90.326	359.584	7196.00	LANDING POINT	
12906.67	90.326	359.584	7166.00	TOTAL DEPTH	