

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Field: WELD COUNTY (KERR MCGEE) Well: HENRICKSON FEDERAL 36C-18HZ
Facility: SEC.07-T3N-R66W Wellbore: HENRICKSON FEDERAL 36C-18HZ PWB

Plot reference wellpath is HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP

True vertical depths are referenced to Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB)
Measured depths are referenced to Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB)
Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Mean Sea Level: 4811 feet
Mean Sea Level to Mud line (N Slot: SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)): 0 feet
Coordinates are in feet referenced to Slot
Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
North Reference: True north
Scale: True distance
Depths are in feet
Created by: pccain on 5/24/2013

Location Information

Facility Name				Grid East (US)	Grid North (US)	Latitude	Longitude
SEC.07-T3N-R66W				25857.460	12854.782	40°13'04.827"N	104°49'32.103"W
Site	Local N (ft)	Local E (ft)	Grid East (US)	Grid North (US)	Latitude	Longitude	
SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)	187.27	423.79	25858.211	12855.133	40°14'11.175"N	104°49'32.103"W	
Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Mean Sea Level (N Slot: SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07))						4811	
Mean Sea Level to Mud line (N Slot: SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07))						0	
Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Mean Sea Level						4811	

Survey Program

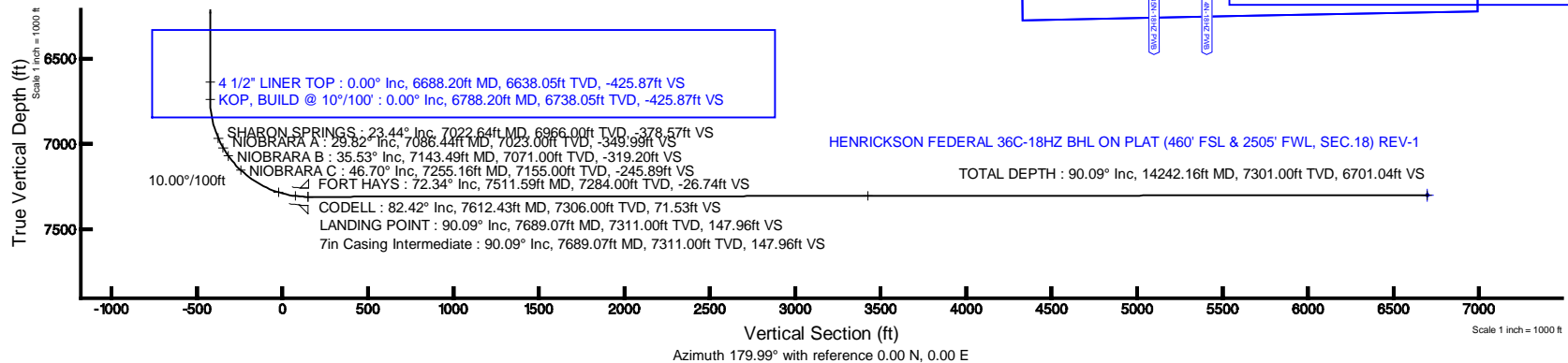
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7689.07	NaviTrak	NaviTrak (MagCorr)		HENRICKSON FEDERAL 36C-18HZ PWB
7689.07	14242.16	OnTrak	OnTrak (MagCorr)		HENRICKSON FEDERAL 36C-18HZ PWB

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	45.000	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	45.000	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1600.00	10.000	45.000	1597.47	30.78	30.78	2.00	-30.77
BEGIN DROP	4567.62	10.000	45.000	4520.00	395.16	395.16	0.00	-395.10
END DROP	5067.62	0.000	179.991	5017.47	425.94	425.94	2.00	-425.87
KOP, BUILD @ 10°/100'	6788.20	0.000	179.991	6738.05	425.94	425.94	0.00	-425.87
LANDING POINT	7689.07	90.087	179.991	7311.00	-147.89	426.02	10.00	147.96
TOTAL DEPTH	14242.16	90.087	179.991	7301.00	-6700.97	427.00	0.00	6701.04

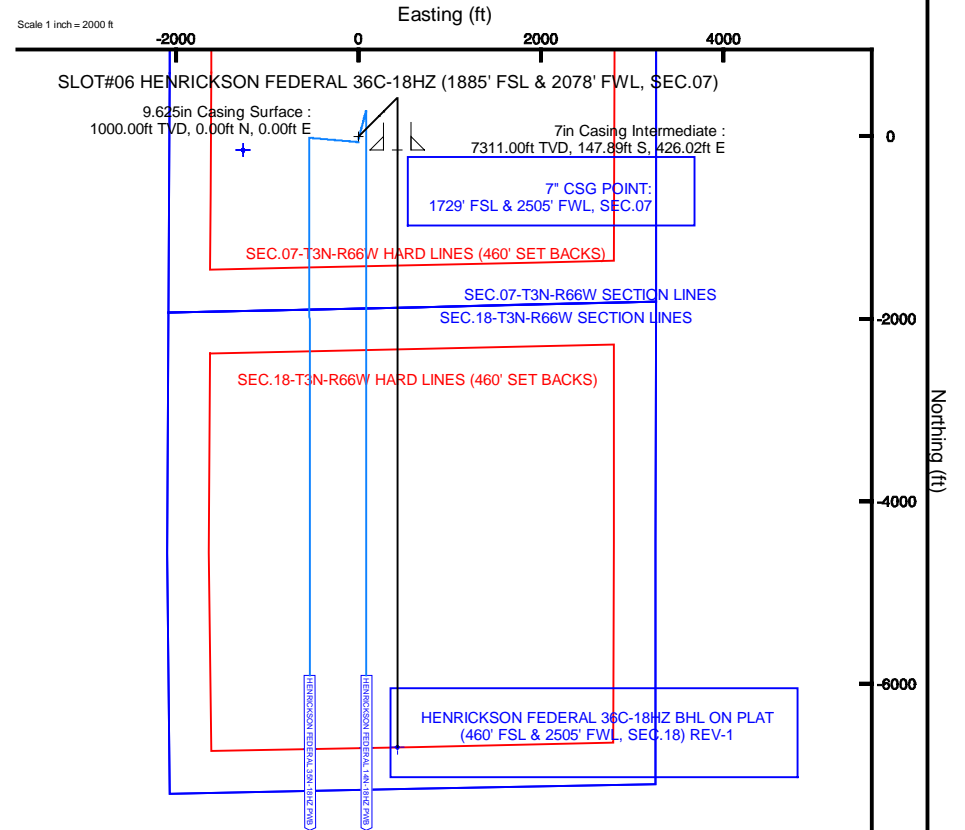
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US)	Grid North (US)	Latitude	Longitude
SEC.07-T3N-R66W HARD LINES (460' SET BACKS)	4811.00	-147.89	-1285.58	3187855.01	1285743.58	40°14'11.713"N	104°49'32.103"W	
SEC.07-T3N-R66W SECTION LINES	4811.00	-147.89	-1285.58	3187855.01	1285743.58	40°14'11.713"N	104°49'32.103"W	
SEC.18-T3N-R66W HARD LINES (460' SET BACKS)	4811.00	-147.89	-1285.58	3187855.01	1285743.58	40°14'11.713"N	104°49'32.103"W	
SEC.18-T3N-R66W SECTION LINES	4811.00	-147.89	-1285.58	3187855.01	1285743.58	40°14'11.713"N	104°49'32.103"W	
HENRICKSON FEDERAL 36C-18HZ BHL ON PLAT (460' FSL & 2505' FWL, SEC.18) REV-1	14242.16	7301.00	-6700.97	427.00	3188837.54	1283333.32	40°13'08.865"N	104°49'10.887"W



BGGM (1945.0 to 2014.0) Dip: 66.81° Field: 52736 nT
Magnetic North is 8.67 degrees East of True North (at 5/23/2013)

To correct azimuth from Magnetic to True add 8.67 degrees
For example: if the Magnetic North Azimuth = 90 degrees, then the True North Azimuth = 90 + 8.67 = 98.67





Planned Wellpath Report
HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect@ 3.0.2
North Reference	True	User	Precain
Scale	0.999957	Report Generated	5/24/2013 at 8:58:15 PM
Convergence at slot	0.44° East	Database/Source file	WellArchitectDB/HENRICKSON_FEDERAL_36C-18HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1871.27	-623.79	3189159.37	1329901.13	40°14'13.175"N	104°49'20.784"W
Facility Reference Pt			3189797.46	1328034.78	40°13'54.683"N	104°49'12.741"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Facility Vertical
Horizontal Reference Pt	Slot	Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB)	Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB) to Mud Line at Slo
MD Reference Pt	Rig on SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Planned Wellpath Report

HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

WELLPATH DATA (160 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	45.000	0.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
17.00	0.000	45.000	17.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	TIE-ON
117.00†	0.000	45.000	117.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
217.00†	0.000	45.000	217.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
317.00†	0.000	45.000	317.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
417.00†	0.000	45.000	417.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
517.00†	0.000	45.000	517.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	FOX HILLS BASE
617.00†	0.000	45.000	617.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
717.00†	0.000	45.000	717.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
817.00†	0.000	45.000	817.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
917.00†	0.000	45.000	917.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
1017.00†	0.000	45.000	1017.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	
1100.00	0.000	45.000	1100.00	0.00	0.00	0.00	40°14'13.175°N	104°49'20.784°W	0.00	BEGIN NUDGE
1117.00†	0.340	45.000	1117.00	-0.04	0.04	0.04	40°14'13.175°N	104°49'20.784°W	2.00	
1217.00†	2.340	45.000	1216.97	-1.69	1.69	1.69	40°14'13.192°N	104°49'20.762°W	2.00	
1317.00†	4.340	45.000	1316.79	-5.81	5.81	5.81	40°14'13.232°N	104°49'20.709°W	2.00	
1417.00†	6.340	45.000	1416.35	-12.39	12.39	12.39	40°14'13.297°N	104°49'20.624°W	2.00	
1517.00†	8.340	45.000	1515.53	-21.42	21.42	21.42	40°14'13.387°N	104°49'20.508°W	2.00	
1600.00	10.000	45.000	1597.47	-30.77	30.78	30.78	40°14'13.479°N	104°49'20.387°W	2.00	END NUDGE
1617.00†	10.000	45.000	1614.21	-32.86	32.86	32.86	40°14'13.500°N	104°49'20.360°W	0.00	
1717.00†	10.000	45.000	1712.69	-45.13	45.14	45.14	40°14'13.621°N	104°49'20.202°W	0.00	
1817.00†	10.000	45.000	1811.17	-57.41	57.42	57.42	40°14'13.742°N	104°49'20.044°W	0.00	
1917.00†	10.000	45.000	1909.65	-69.69	69.70	69.70	40°14'13.864°N	104°49'19.885°W	0.00	
2017.00†	10.000	45.000	2008.13	-81.96	81.98	81.98	40°14'13.985°N	104°49'19.727°W	0.00	
2117.00†	10.000	45.000	2106.61	-94.24	94.26	94.26	40°14'14.106°N	104°49'19.569°W	0.00	
2217.00†	10.000	45.000	2205.09	-106.52	106.54	106.54	40°14'14.228°N	104°49'19.410°W	0.00	
2317.00†	10.000	45.000	2303.57	-118.80	118.81	118.81	40°14'14.349°N	104°49'19.252°W	0.00	
2417.00†	10.000	45.000	2402.05	-131.07	131.09	131.09	40°14'14.470°N	104°49'19.094°W	0.00	
2517.00†	10.000	45.000	2500.53	-143.35	143.37	143.37	40°14'14.592°N	104°49'18.935°W	0.00	
2617.00†	10.000	45.000	2599.01	-155.63	155.65	155.65	40°14'14.713°N	104°49'18.777°W	0.00	
2717.00†	10.000	45.000	2697.50	-167.90	167.93	167.93	40°14'14.834°N	104°49'18.619°W	0.00	
2817.00†	10.000	45.000	2795.98	-180.18	180.21	180.21	40°14'14.956°N	104°49'18.460°W	0.00	
2917.00†	10.000	45.000	2894.46	-192.46	192.49	192.49	40°14'15.077°N	104°49'18.302°W	0.00	
3017.00†	10.000	45.000	2992.94	-204.73	204.77	204.77	40°14'15.198°N	104°49'18.144°W	0.00	
3117.00†	10.000	45.000	3091.42	-217.01	217.04	217.04	40°14'15.320°N	104°49'17.985°W	0.00	
3217.00†	10.000	45.000	3189.90	-229.29	229.32	229.32	40°14'15.441°N	104°49'17.827°W	0.00	
3317.00†	10.000	45.000	3288.38	-241.56	241.60	241.60	40°14'15.562°N	104°49'17.669°W	0.00	
3417.00†	10.000	45.000	3386.86	-253.84	253.88	253.88	40°14'15.684°N	104°49'17.510°W	0.00	
3517.00†	10.000	45.000	3485.34	-266.12	266.16	266.16	40°14'15.805°N	104°49'17.352°W	0.00	
3617.00†	10.000	45.000	3583.82	-278.39	278.44	278.44	40°14'15.926°N	104°49'17.194°W	0.00	
3717.00†	10.000	45.000	3682.30	-290.67	290.72	290.72	40°14'16.048°N	104°49'17.035°W	0.00	
3817.00†	10.000	45.000	3780.78	-302.95	303.00	303.00	40°14'16.169°N	104°49'16.877°W	0.00	
3843.62†	10.000	45.000	3807.00	-306.22	306.26	306.26	40°14'16.201°N	104°49'16.835°W	0.00	PARKMAN
3917.00†	10.000	45.000	3879.26	-315.22	315.27	315.27	40°14'16.290°N	104°49'16.719°W	0.00	
4017.00†	10.000	45.000	3977.75	-327.50	327.55	327.55	40°14'16.412°N	104°49'16.560°W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

WELLPATH DATA (160 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	10.000	45.000	4076.23	-339.78	339.83	339.83	40°14'16.533"N	104°49'16.402"W	0.00	
4217.00†	10.000	45.000	4174.71	-352.06	352.11	352.11	40°14'16.655"N	104°49'16.244"W	0.00	
4294.47†	10.000	45.000	4251.00	-361.57	361.62	361.62	40°14'16.749"N	104°49'16.121"W	0.00	SUSSEX
4317.00†	10.000	45.000	4273.19	-364.33	364.39	364.39	40°14'16.776"N	104°49'16.085"W	0.00	
4417.00†	10.000	45.000	4371.67	-376.61	376.67	376.67	40°14'16.897"N	104°49'15.927"W	0.00	
4517.00†	10.000	45.000	4470.15	-388.89	388.95	388.95	40°14'17.019"N	104°49'15.769"W	0.00	
4567.62	10.000	45.000	4520.00	-395.10	395.16	395.16	40°14'17.080"N	104°49'15.689"W	0.00	BEGIN DROP
4617.00†	9.012	45.000	4568.70	-400.87	400.93	400.93	40°14'17.137"N	104°49'15.614"W	2.00	
4717.00†	7.012	45.000	4667.72	-410.72	410.78	410.78	40°14'17.234"N	104°49'15.487"W	2.00	
4817.00†	5.012	45.000	4767.17	-418.13	418.19	418.19	40°14'17.307"N	104°49'15.392"W	2.00	
4917.00†	3.012	45.000	4866.92	-423.07	423.14	423.14	40°14'17.356"N	104°49'15.328"W	2.00	
5017.00†	1.012	45.000	4966.85	-425.55	425.62	425.62	40°14'17.381"N	104°49'15.296"W	2.00	
5067.62	0.000	179.991	5017.47	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	2.00	END DROP
5117.00†	0.000	179.991	5066.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5217.00†	0.000	179.991	5166.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5317.00†	0.000	179.991	5266.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5417.00†	0.000	179.991	5366.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5517.00†	0.000	179.991	5466.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5617.00†	0.000	179.991	5566.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5717.00†	0.000	179.991	5666.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5817.00†	0.000	179.991	5766.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
5917.00†	0.000	179.991	5866.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6017.00†	0.000	179.991	5966.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6117.00†	0.000	179.991	6066.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6217.00†	0.000	179.991	6166.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6317.00†	0.000	179.991	6266.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6417.00†	0.000	179.991	6366.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6517.00†	0.000	179.991	6466.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6617.00†	0.000	179.991	6566.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6688.20†	0.000	179.991	6638.05	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	4 1/2" LINER TOP
6717.00†	0.000	179.991	6666.85	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	
6788.20	0.000	179.991	6738.05	-425.87	425.94	425.94	40°14'17.384"N	104°49'15.292"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	2.880	179.991	6766.83	-425.15	425.21	425.94	40°14'17.377"N	104°49'15.292"W	10.00	
6917.00†	12.880	179.991	6865.76	-411.45	411.52	425.94	40°14'17.242"N	104°49'15.292"W	10.00	
7017.00†	22.880	179.991	6960.81	-380.79	380.86	425.94	40°14'16.939"N	104°49'15.292"W	10.00	
7022.64†	23.444	179.991	6966.00	-378.57	378.64	425.94	40°14'16.917"N	104°49'15.292"W	10.00	SHARON SPRINGS
7086.44†	29.824	179.991	7023.00	-349.99	350.05	425.95	40°14'16.634"N	104°49'15.292"W	10.00	NIOBRARA A
7117.00†	32.880	179.991	7049.09	-334.09	334.15	425.95	40°14'16.477"N	104°49'15.292"W	10.00	
7143.49†	35.529	179.991	7071.00	-319.20	319.27	425.95	40°14'16.330"N	104°49'15.292"W	10.00	NIOBRARA B
7217.00†	42.880	179.991	7127.92	-272.76	272.83	425.96	40°14'15.871"N	104°49'15.291"W	10.00	
7255.16†	46.696	179.991	7155.00	-245.89	245.96	425.96	40°14'15.605"N	104°49'15.291"W	10.00	NIOBRARA C
7317.00†	52.880	179.991	7194.91	-198.68	198.75	425.97	40°14'15.139"N	104°49'15.291"W	10.00	
7417.00†	62.880	179.991	7248.01	-114.10	114.17	425.98	40°14'14.303"N	104°49'15.291"W	10.00	
7511.59†	72.339	179.991	7284.00	-26.74	26.80	426.00	40°14'13.440"N	104°49'15.291"W	10.00	FORT HAYS
7517.00†	72.880	179.991	7285.62	-21.58	21.64	426.00	40°14'13.389"N	104°49'15.291"W	10.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

WELLPATH DATA (160 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7612.43†	82.423	179.991	7306.00	71.54	-71.47	426.01	40°14'12.469"N	104°49'15.291"W	10.00	CODELL
7617.00†	82.880	179.991	7306.59	76.07	-76.00	426.01	40°14'12.424"N	104°49'15.291"W	10.00	
7689.07	90.087	179.991	7311.00	147.96	-147.89	426.02	40°14'11.713"N	104°49'15.291"W	10.00	LANDING POINT
7717.00†	90.087	179.991	7310.96	175.89	-175.82	426.03	40°14'11.438"N	104°49'15.291"W	0.00	
7817.00†	90.087	179.991	7310.81	275.89	-275.82	426.04	40°14'10.449"N	104°49'15.291"W	0.00	
7917.00†	90.087	179.991	7310.65	375.89	-375.82	426.06	40°14'09.461"N	104°49'15.290"W	0.00	
8017.00†	90.087	179.991	7310.50	475.89	-475.82	426.07	40°14'08.473"N	104°49'15.290"W	0.00	
8117.00†	90.087	179.991	7310.35	575.89	-575.82	426.09	40°14'07.485"N	104°49'15.290"W	0.00	
8217.00†	90.087	179.991	7310.20	675.89	-675.82	426.10	40°14'06.497"N	104°49'15.290"W	0.00	
8317.00†	90.087	179.991	7310.04	775.89	-775.82	426.12	40°14'05.508"N	104°49'15.290"W	0.00	
8417.00†	90.087	179.991	7309.89	875.89	-875.82	426.13	40°14'04.520"N	104°49'15.290"W	0.00	
8517.00†	90.087	179.991	7309.74	975.89	-975.82	426.15	40°14'03.532"N	104°49'15.289"W	0.00	
8617.00†	90.087	179.991	7309.59	1075.89	-1075.82	426.16	40°14'02.544"N	104°49'15.289"W	0.00	
8717.00†	90.087	179.991	7309.43	1175.89	-1175.82	426.18	40°14'01.556"N	104°49'15.289"W	0.00	
8817.00†	90.087	179.991	7309.28	1275.89	-1275.82	426.19	40°14'00.567"N	104°49'15.289"W	0.00	
8917.00†	90.087	179.991	7309.13	1375.89	-1375.82	426.21	40°13'59.579"N	104°49'15.289"W	0.00	
9017.00†	90.087	179.991	7308.98	1475.89	-1475.82	426.22	40°13'58.591"N	104°49'15.288"W	0.00	
9117.00†	90.087	179.991	7308.82	1575.89	-1575.82	426.24	40°13'57.603"N	104°49'15.288"W	0.00	
9217.00†	90.087	179.991	7308.67	1675.89	-1675.82	426.25	40°13'56.615"N	104°49'15.288"W	0.00	
9317.00†	90.087	179.991	7308.52	1775.89	-1775.82	426.27	40°13'55.626"N	104°49'15.288"W	0.00	
9417.00†	90.087	179.991	7308.37	1875.89	-1875.82	426.28	40°13'54.638"N	104°49'15.288"W	0.00	
9517.00†	90.087	179.991	7308.21	1975.89	-1975.82	426.30	40°13'53.650"N	104°49'15.288"W	0.00	
9617.00†	90.087	179.991	7308.06	2075.89	-2075.82	426.31	40°13'52.662"N	104°49'15.287"W	0.00	
9717.00†	90.087	179.991	7307.91	2175.89	-2175.82	426.33	40°13'51.674"N	104°49'15.287"W	0.00	
9817.00†	90.087	179.991	7307.75	2275.89	-2275.82	426.34	40°13'50.686"N	104°49'15.287"W	0.00	
9917.00†	90.087	179.991	7307.60	2375.88	-2375.82	426.36	40°13'49.697"N	104°49'15.287"W	0.00	
10017.00†	90.087	179.991	7307.45	2475.88	-2475.82	426.37	40°13'48.709"N	104°49'15.287"W	0.00	
10117.00†	90.087	179.991	7307.30	2575.88	-2575.82	426.39	40°13'47.721"N	104°49'15.287"W	0.00	
10217.00†	90.087	179.991	7307.14	2675.88	-2675.82	426.40	40°13'46.733"N	104°49'15.286"W	0.00	
10317.00†	90.087	179.991	7306.99	2775.88	-2775.82	426.42	40°13'45.745"N	104°49'15.286"W	0.00	
10417.00†	90.087	179.991	7306.84	2875.88	-2875.82	426.43	40°13'44.756"N	104°49'15.286"W	0.00	
10517.00†	90.087	179.991	7306.69	2975.88	-2975.82	426.45	40°13'43.768"N	104°49'15.286"W	0.00	
10617.00†	90.087	179.991	7306.53	3075.88	-3075.82	426.46	40°13'42.780"N	104°49'15.286"W	0.00	
10717.00†	90.087	179.991	7306.38	3175.88	-3175.82	426.48	40°13'41.792"N	104°49'15.286"W	0.00	
10817.00†	90.087	179.991	7306.23	3275.88	-3275.82	426.49	40°13'40.804"N	104°49'15.285"W	0.00	
10917.00†	90.087	179.991	7306.08	3375.88	-3375.82	426.50	40°13'39.815"N	104°49'15.285"W	0.00	
11017.00†	90.087	179.991	7305.92	3475.88	-3475.82	426.52	40°13'38.827"N	104°49'15.285"W	0.00	
11117.00†	90.087	179.991	7305.77	3575.88	-3575.82	426.53	40°13'37.839"N	104°49'15.285"W	0.00	
11217.00†	90.087	179.991	7305.62	3675.88	-3675.82	426.55	40°13'36.851"N	104°49'15.285"W	0.00	
11317.00†	90.087	179.991	7305.46	3775.88	-3775.82	426.56	40°13'35.863"N	104°49'15.285"W	0.00	
11417.00†	90.087	179.991	7305.31	3875.88	-3875.82	426.58	40°13'34.874"N	104°49'15.284"W	0.00	
11517.00†	90.087	179.991	7305.16	3975.88	-3975.82	426.59	40°13'33.886"N	104°49'15.284"W	0.00	
11617.00†	90.087	179.991	7305.01	4075.88	-4075.82	426.61	40°13'32.898"N	104°49'15.284"W	0.00	
11717.00†	90.087	179.991	7304.85	4175.88	-4175.82	426.62	40°13'31.910"N	104°49'15.284"W	0.00	
11817.00†	90.087	179.991	7304.70	4275.88	-4275.82	426.64	40°13'30.922"N	104°49'15.284"W	0.00	



Planned Wellpath Report

HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

WELLPATH DATA (160 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11917.00†	90.087	179.991	7304.55	4375.88	-4375.82	426.65	40°13'29.933"N	104°49'15.284"W	0.00	
12017.00†	90.087	179.991	7304.40	4475.88	-4475.82	426.67	40°13'28.945"N	104°49'15.283"W	0.00	
12117.00†	90.087	179.991	7304.24	4575.88	-4575.82	426.68	40°13'27.957"N	104°49'15.283"W	0.00	
12217.00†	90.087	179.991	7304.09	4675.88	-4675.82	426.70	40°13'26.969"N	104°49'15.283"W	0.00	
12317.00†	90.087	179.991	7303.94	4775.88	-4775.82	426.71	40°13'25.981"N	104°49'15.283"W	0.00	
12417.00†	90.087	179.991	7303.79	4875.88	-4875.82	426.73	40°13'24.993"N	104°49'15.283"W	0.00	
12517.00†	90.087	179.991	7303.63	4975.88	-4975.81	426.74	40°13'24.004"N	104°49'15.283"W	0.00	
12617.00†	90.087	179.991	7303.48	5075.88	-5075.81	426.76	40°13'23.016"N	104°49'15.282"W	0.00	
12717.00†	90.087	179.991	7303.33	5175.88	-5175.81	426.77	40°13'22.028"N	104°49'15.282"W	0.00	
12817.00†	90.087	179.991	7303.18	5275.88	-5275.81	426.79	40°13'21.040"N	104°49'15.282"W	0.00	
12917.00†	90.087	179.991	7303.02	5375.88	-5375.81	426.80	40°13'20.052"N	104°49'15.282"W	0.00	
13017.00†	90.087	179.991	7302.87	5475.88	-5475.81	426.82	40°13'19.063"N	104°49'15.282"W	0.00	
13117.00†	90.087	179.991	7302.72	5575.88	-5575.81	426.83	40°13'18.075"N	104°49'15.282"W	0.00	
13217.00†	90.087	179.991	7302.56	5675.88	-5675.81	426.85	40°13'17.087"N	104°49'15.281"W	0.00	
13317.00†	90.087	179.991	7302.41	5775.88	-5775.81	426.86	40°13'16.099"N	104°49'15.281"W	0.00	
13417.00†	90.087	179.991	7302.26	5875.88	-5875.81	426.88	40°13'15.111"N	104°49'15.281"W	0.00	
13517.00†	90.087	179.991	7302.11	5975.88	-5975.81	426.89	40°13'14.122"N	104°49'15.281"W	0.00	
13617.00†	90.087	179.991	7301.95	6075.88	-6075.81	426.91	40°13'13.134"N	104°49'15.281"W	0.00	
13717.00†	90.087	179.991	7301.80	6175.88	-6175.81	426.92	40°13'12.146"N	104°49'15.280"W	0.00	
13817.00†	90.087	179.991	7301.65	6275.88	-6275.81	426.94	40°13'11.158"N	104°49'15.280"W	0.00	
13917.00†	90.087	179.991	7301.50	6375.88	-6375.81	426.95	40°13'10.170"N	104°49'15.280"W	0.00	
14017.00†	90.087	179.991	7301.34	6475.88	-6475.81	426.97	40°13'09.181"N	104°49'15.280"W	0.00	
14117.00†	90.087	179.991	7301.19	6575.88	-6575.81	426.98	40°13'08.193"N	104°49'15.280"W	0.00	
14217.00†	90.087	179.991	7301.04	6675.88	-6675.81	427.00	40°13'07.205"N	104°49'15.280"W	0.00	
14242.16	90.087	179.991	7301.00 ¹	6701.04	-6700.97	427.00	40°13'06.956"N	104°49'15.280"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: HENRICKSON FEDERAL 36C-18HZ PWB Ref Wellpath: HENRICKSON FEDERAL 36C-18HZ (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	7689.07	6689.07	1000.00	7311.00	0.00	0.00	-147.89	426.02
7in Casing Intermediate	17.00	7689.07	7672.07	17.00	7311.00	0.00	0.00	-147.89	426.02
6.125in Open Hole	7689.07	14242.16	6553.09	7311.00	7301.00	-147.89	426.02	-6700.97	427.00
4.5in Open Hole	17.00	14242.16	14225.16	17.00	7301.00	0.00	0.00	-6700.97	427.00



Planned Wellpath Report

HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.07-T3N-R66W HARD LINES (460' SET BACKS)		4811.00	-147.89	-1265.59	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.07-T3N-R66W SECTION LINES		4811.00	-147.89	-1265.59	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.18-T3N-R66W HARD LINES (460' SET BACKS)		4811.00	-147.89	-1265.58	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.18-T3N-R66W SECTION LINES		4811.00	-147.89	-1265.58	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
1) HENRICKSON FEDERAL 36C-18HZ BHL ON PLAT (460' FSL & 2505' FWL, SEC.18) REV-1	14242.16	7301.00	-6700.97	427.00	3189637.54	1323203.92	40°13'06.956"N	104°49'15.280"W	point

SURVEY PROGRAM - Ref Wellbore: HENRICKSON FEDERAL 36C-18HZ PWB Ref Wellpath: HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7689.07	NaviTrak (MagCorr)		HENRICKSON FEDERAL 36C-18HZ PWB
7689.07	14242.16	OnTrak (MagCorr)		HENRICKSON FEDERAL 36C-18HZ PWB



Planned Wellpath Report

HENRICKSON FEDERAL 36C-18HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 HENRICKSON FEDERAL 36C-18HZ (1885' FSL & 2078' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON FEDERAL 36C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON FEDERAL 36C-18HZ PWB
Facility	SEC.07-T3N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
517.00	0.000	45.000	517.00	FOX HILLS BASE
3843.62	10.000	45.000	3807.00	PARKMAN
4294.47	10.000	45.000	4251.00	SUSSEX
6688.20	0.000	179.991	6638.05	4 1/2" LINER TOP
7022.64	23.444	179.991	6966.00	SHARON SPRINGS
7086.44	29.824	179.991	7023.00	NIOBRARA A
7143.49	35.529	179.991	7071.00	NIOBRARA B
7255.16	46.696	179.991	7155.00	NIOBRARA C
7511.59	72.339	179.991	7284.00	FORT HAYS
7612.43	82.423	179.991	7306.00	CODELL

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	45.000	17.00	TIE-ON
1100.00	0.000	45.000	1100.00	BEGIN NUDGE
1600.00	10.000	45.000	1597.47	END NUDGE
4567.62	10.000	45.000	4520.00	BEGIN DROP
5067.62	0.000	179.991	5017.47	END DROP
6788.20	0.000	179.991	6738.05	KOP, BUILD @ 10°/100'
7689.07	90.087	179.991	7311.00	LANDING POINT
14242.16	90.087	179.991	7301.00	TOTAL DEPTH