

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)  
Field: WELD COUNTY (KERR MCGEE) Well: HENRICKSON 13N-18HZ  
Facility: SEC.07-T3N-R66W Wellbore: HENRICKSON 13N-18HZ PWB

Plot reference wellpath is HENRICKSON 13N-18HZ (PERMIT REV-1) PWP	
True vertical depths are referenced to Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB)	North Reference: True north
Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB) to Mean Sea Level: 4819 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: preccain on 5/24/2013

## Location Information

Facility Name			Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SEC.07-T3N-R66W			3188792.460	1328034.750	40°12'54.482"N	104°48'32.741"W
Slot	Local N (ft)	Local E (ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)	1883.28	-1885.84	3187885.215	1328083.448	40°14'11.119"N	104°48'37.138"W
Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB) to Mud line (At Slot: SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07))						4819 ft
Mean Sea Level to Mud line (At Slot: SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07))						0 ft
Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB) to Mean Sea Level						4819 ft

## Survey Program

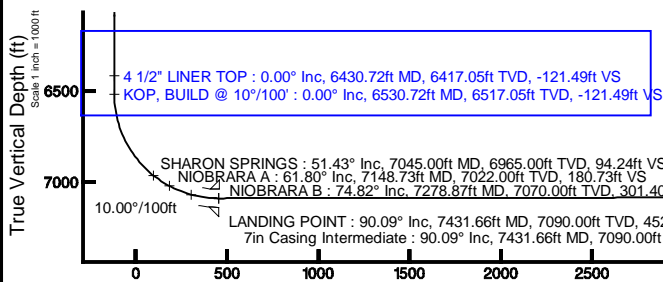
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7431.66	NaviTrak	NaviTrak (MagCorr)		HENRICKSON 13N-18HZ PWB
7431.66	13504.71	OnTrak	OnTrak (MagCorr)		HENRICKSON 13N-18HZ PWB

## 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	49.000	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1300.00	0.000	49.000	1300.00	0.00	0.00	0.00	0.00
END NUDGE	1800.00	10.000	49.000	1797.47	28.55	32.85	2.00	-28.53
BEGIN DROP	2366.14	10.000	49.000	2355.00	93.05	107.04	0.00	-92.96
END DROP	2866.14	0.000	179.952	2852.47	121.60	139.89	2.00	-121.49
KOP, BUILD @ 10°/100'	6530.72	0.000	179.952	6517.05	121.60	139.89	0.00	-121.49
LANDING POINT	7431.66	90.094	179.952	7090.00	-452.30	140.37	10.00	452.42
TOTAL DEPTH	13504.71	90.094	179.952	7080.00	-6525.34	145.47	0.00	6525.46

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SEC.07-T3N-R66W HARD LINES (460' SET BACKS)	4810.00	60.13	0.25	3187895.01	1328743.58	40°14'11.713"N	104°48'37.103"W	
SEC.07-T3N-R66W SECTION LINES	4810.00	60.13	0.25	3187895.01	1328743.58	40°14'11.713"N	104°48'37.103"W	
SEC.18-T3N-R66W HARD LINES (460' SET BACKS)	4810.00	60.13	0.25	3187895.01	1328743.58	40°14'11.713"N	104°48'37.103"W	
SEC.18-T3N-R66W SECTION LINES	4810.00	60.13	0.25	3187895.01	1328743.58	40°14'11.713"N	104°48'37.103"W	
HENRICKSON 13N-18HZ BHL ON PLAT (460' FSL & 957' FWL, SEC.18) REV-1	13504.71	7080.00	-6525.34	145.47	3188090.20	1323159.69	40°13'06.636"N	104°48'35.231"W

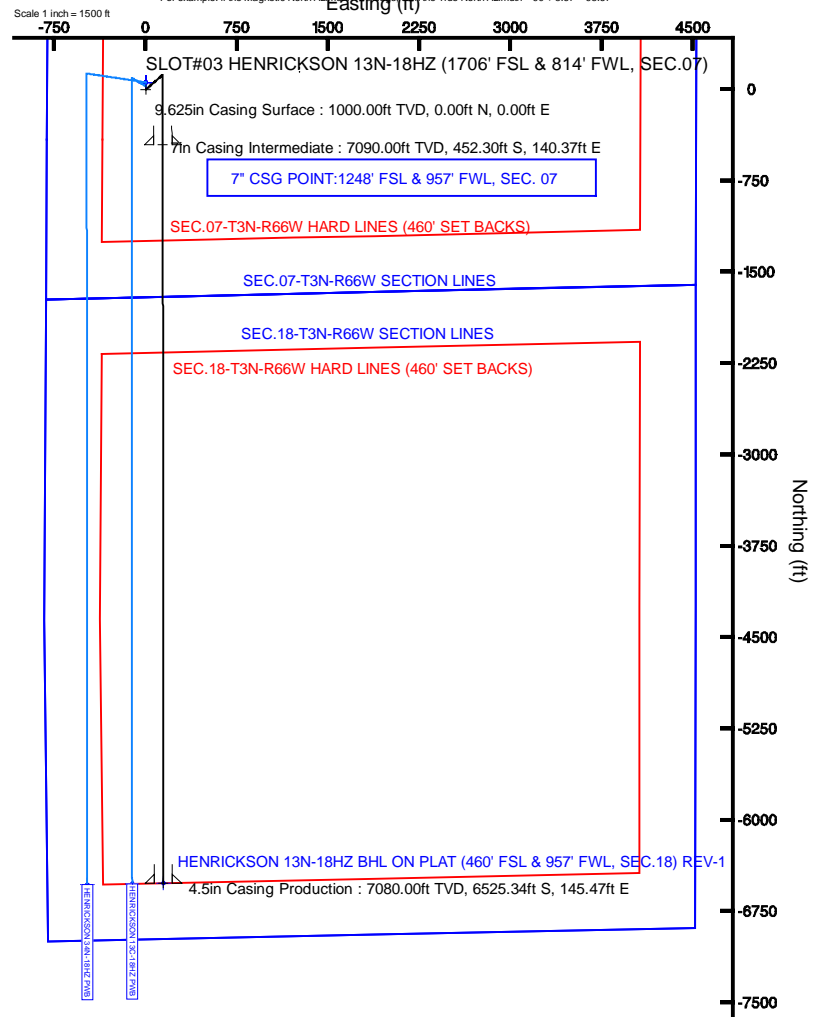


Vertical Section (ft)  
Azimuth 179.95° with reference 0.00 N, 0.00 E



BGGM (1945.0 to 2014.0) Dip: 66.81° Field: 52772.4 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 is 90° the True North Azimuth = 90 + 8.67 = 98.67



HENRICKSON 13N-18HZ BHL ON PLAT (460' FSL & 957' FWL, SEC.18) REV-1  
TOTAL DEPTH : 90.09° Inc, 13504.71ft MD, 7080.00ft TVD, 6525.46ft VS  
4.5in Casing Production : 90.09° Inc, 13504.71ft MD, 7080.00ft TVD, 6525.46ft VS

Scale 1 inch = 1000 ft



# Planned Wellpath Report

HENRICKSON 13N-18HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-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 9:35:24 AM
Convergence at slot	0.43° East	Database/Source file	WellArchitectDB/_HENRICKSON_13N-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	1663.28	-1889.64	3187895.22	1329683.45	40°14'11.119"N	104°49'37.106"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
Horizontal Reference Pt	Slot
Vertical Reference Pt	Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB)
MD Reference Pt	Rig on SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07) (RKB)
Field Vertical Reference	Mean Sea Level

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-18HZ PWB
Facility	SEC.07-T3N-R66W		

## WELLPATH DATA (150 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	49.000	0.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
17.00	0.000	49.000	17.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	TIE-ON
117.00†	0.000	49.000	117.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
217.00†	0.000	49.000	217.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
317.00†	0.000	49.000	317.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
417.00†	0.000	49.000	417.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
516.00†	0.000	49.000	516.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	FOX HILLS BASE
517.00†	0.000	49.000	517.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
617.00†	0.000	49.000	617.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
717.00†	0.000	49.000	717.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
817.00†	0.000	49.000	817.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
917.00†	0.000	49.000	917.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
1017.00†	0.000	49.000	1017.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
1117.00†	0.000	49.000	1117.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
1217.00†	0.000	49.000	1217.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	
1300.00	0.000	49.000	1300.00	0.00	0.00	0.00	40°14'11.119°N	104°49'37.106°W	0.00	BEGIN NUDGE
1317.00†	0.340	49.000	1317.00	-0.03	0.03	0.04	40°14'11.119°N	104°49'37.106°W	2.00	
1417.00†	2.340	49.000	1416.97	-1.57	1.57	1.80	40°14'11.134°N	104°49'37.083°W	2.00	
1517.00†	4.340	49.000	1516.79	-5.38	5.39	6.20	40°14'11.172°N	104°49'37.026°W	2.00	
1617.00†	6.340	49.000	1616.35	-11.48	11.49	13.22	40°14'11.233°N	104°49'36.935°W	2.00	
1717.00†	8.340	49.000	1715.53	-19.86	19.88	22.86	40°14'11.315°N	104°49'36.811°W	2.00	
1800.00	10.000	49.000	1797.47	-28.53	28.55	32.85	40°14'11.401°N	104°49'36.682°W	2.00	END NUDGE
1817.00†	10.000	49.000	1814.21	-30.46	30.49	35.07	40°14'11.420°N	104°49'36.654°W	0.00	
1917.00†	10.000	49.000	1912.69	-41.84	41.88	48.18	40°14'11.533°N	104°49'36.485°W	0.00	
2017.00†	10.000	49.000	2011.17	-53.22	53.27	61.29	40°14'11.645°N	104°49'36.316°W	0.00	
2117.00†	10.000	49.000	2109.65	-64.60	64.67	74.39	40°14'11.758°N	104°49'36.147°W	0.00	
2217.00†	10.000	49.000	2208.13	-75.99	76.06	87.50	40°14'11.871°N	104°49'35.978°W	0.00	
2317.00†	10.000	49.000	2306.61	-87.37	87.45	100.60	40°14'11.983°N	104°49'35.809°W	0.00	
2366.14	10.000	49.000	2355.00	-92.96	93.05	107.04	40°14'12.039°N	104°49'35.726°W	0.00	BEGIN DROP
2417.00†	8.983	49.000	2405.17	-98.46	98.55	113.37	40°14'12.093°N	104°49'35.644°W	2.00	
2517.00†	6.983	49.000	2504.19	-107.56	107.66	123.85	40°14'12.183°N	104°49'35.509°W	2.00	
2617.00†	4.983	49.000	2603.64	-114.39	114.50	131.72	40°14'12.250°N	104°49'35.408°W	2.00	
2717.00†	2.983	49.000	2703.40	-118.94	119.06	136.96	40°14'12.296°N	104°49'35.340°W	2.00	
2817.00†	0.983	49.000	2803.33	-121.21	121.33	139.57	40°14'12.318°N	104°49'35.306°W	2.00	
2866.14	0.000	179.952	2852.47	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	2.00	END DROP
2917.00†	0.000	179.952	2903.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3017.00†	0.000	179.952	3003.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3117.00†	0.000	179.952	3103.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3217.00†	0.000	179.952	3203.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3317.00†	0.000	179.952	3303.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3417.00†	0.000	179.952	3403.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3517.00†	0.000	179.952	3503.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3617.00†	0.000	179.952	3603.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3717.00†	0.000	179.952	3703.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	
3817.00†	0.000	179.952	3803.33	-121.49	121.60	139.89	40°14'12.321°N	104°49'35.302°W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-18HZ PWB
Facility	SEC.07-T3N-R66W		

## WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3819.67†	0.000	179.952	3806.00	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	PARKMAN
3917.00†	0.000	179.952	3903.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4017.00†	0.000	179.952	4003.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4117.00†	0.000	179.952	4103.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4217.00†	0.000	179.952	4203.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4263.67†	0.000	179.952	4250.00	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	SUSSEX
4317.00†	0.000	179.952	4303.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4417.00†	0.000	179.952	4403.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4517.00†	0.000	179.952	4503.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4617.00†	0.000	179.952	4603.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4717.00†	0.000	179.952	4703.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4817.00†	0.000	179.952	4803.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
4917.00†	0.000	179.952	4903.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5017.00†	0.000	179.952	5003.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5117.00†	0.000	179.952	5103.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5217.00†	0.000	179.952	5203.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5317.00†	0.000	179.952	5303.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5417.00†	0.000	179.952	5403.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5517.00†	0.000	179.952	5503.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5617.00†	0.000	179.952	5603.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5717.00†	0.000	179.952	5703.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5817.00†	0.000	179.952	5803.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
5917.00†	0.000	179.952	5903.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6017.00†	0.000	179.952	6003.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6117.00†	0.000	179.952	6103.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6217.00†	0.000	179.952	6203.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6317.00†	0.000	179.952	6303.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6417.00†	0.000	179.952	6403.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6430.72†	0.000	179.952	6417.05	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	4 1/2" LINER TOP
6517.00†	0.000	179.952	6503.33	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	
6530.72	0.000	179.952	6517.05	-121.49	121.60	139.89	40°14'12.321"N	104°49'35.302"W	0.00	KOP, BUILD @ 10°/100'
6617.00†	8.628	179.952	6603.00	-115.00	115.12	139.89	40°14'12.257"N	104°49'35.302"W	10.00	
6717.00†	18.628	179.952	6700.07	-91.47	91.59	139.91	40°14'12.024"N	104°49'35.302"W	10.00	
6817.00†	28.628	179.952	6791.57	-51.44	51.56	139.95	40°14'11.628"N	104°49'35.301"W	10.00	
6917.00†	38.628	179.952	6874.72	3.87	-3.75	139.99	40°14'11.082"N	104°49'35.301"W	10.00	
7017.00†	48.628	179.952	6947.02	72.78	-72.66	140.05	40°14'10.401"N	104°49'35.300"W	10.00	
7045.00†	51.428	179.952	6965.00	94.24	-94.12	140.07	40°14'10.189"N	104°49'35.300"W	10.00	SHARON SPRINGS
7117.00†	58.628	179.952	7006.24	153.20	-153.08	140.12	40°14'09.606"N	104°49'35.299"W	10.00	
7148.73†	61.801	179.952	7022.00	180.73	-180.61	140.14	40°14'09.334"N	104°49'35.299"W	10.00	NIOBRARA A
7217.00†	68.628	179.952	7050.60	242.68	-242.56	140.19	40°14'08.722"N	104°49'35.298"W	10.00	
7278.87†	74.816	179.952	7070.00	301.40	-301.28	140.24	40°14'08.142"N	104°49'35.298"W	10.00	NIOBRARA B
7317.00†	78.628	179.952	7078.76	338.50	-338.38	140.27	40°14'07.775"N	104°49'35.297"W	10.00	
7417.00†	88.628	179.952	7089.84	437.76	-437.64	140.36	40°14'06.794"N	104°49'35.296"W	10.00	
7431.66	90.094	179.952	7090.00	452.42	-452.30	140.37	40°14'06.649"N	104°49'35.296"W	10.00	LANDING POINT
7517.00†	90.094	179.952	7089.86	537.76	-537.64	140.44	40°14'05.806"N	104°49'35.295"W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-18HZ PWB
Facility	SEC.07-T3N-R66W		

## WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7617.00†	90.094	179.952	7089.70	637.76	-637.64	140.53	40°14'04.818"N	104°49'35.294"W	0.00	
7717.00†	90.094	179.952	7089.53	737.76	-737.64	140.61	40°14'03.830"N	104°49'35.293"W	0.00	
7817.00†	90.094	179.952	7089.37	837.76	-837.64	140.69	40°14'02.842"N	104°49'35.292"W	0.00	
7917.00†	90.094	179.952	7089.20	937.76	-937.64	140.78	40°14'01.853"N	104°49'35.291"W	0.00	
8017.00†	90.094	179.952	7089.04	1037.76	-1037.64	140.86	40°14'00.865"N	104°49'35.290"W	0.00	
8117.00†	90.094	179.952	7088.87	1137.76	-1137.64	140.95	40°13'59.877"N	104°49'35.289"W	0.00	
8217.00†	90.094	179.952	7088.71	1237.76	-1237.64	141.03	40°13'58.889"N	104°49'35.288"W	0.00	
8317.00†	90.094	179.952	7088.54	1337.76	-1337.64	141.11	40°13'57.901"N	104°49'35.287"W	0.00	
8417.00†	90.094	179.952	7088.38	1437.76	-1437.64	141.20	40°13'56.912"N	104°49'35.285"W	0.00	
8517.00†	90.094	179.952	7088.21	1537.76	-1537.64	141.28	40°13'55.924"N	104°49'35.284"W	0.00	
8617.00†	90.094	179.952	7088.05	1637.76	-1637.64	141.36	40°13'54.936"N	104°49'35.283"W	0.00	
8717.00†	90.094	179.952	7087.89	1737.75	-1737.64	141.45	40°13'53.948"N	104°49'35.282"W	0.00	
8817.00†	90.094	179.952	7087.72	1837.75	-1837.64	141.53	40°13'52.960"N	104°49'35.281"W	0.00	
8917.00†	90.094	179.952	7087.56	1937.75	-1937.64	141.62	40°13'51.971"N	104°49'35.280"W	0.00	
9017.00†	90.094	179.952	7087.39	2037.75	-2037.64	141.70	40°13'50.983"N	104°49'35.279"W	0.00	
9117.00†	90.094	179.952	7087.23	2137.75	-2137.64	141.78	40°13'49.995"N	104°49'35.278"W	0.00	
9217.00†	90.094	179.952	7087.06	2237.75	-2237.64	141.87	40°13'49.007"N	104°49'35.277"W	0.00	
9317.00†	90.094	179.952	7086.90	2337.75	-2337.64	141.95	40°13'48.019"N	104°49'35.276"W	0.00	
9417.00†	90.094	179.952	7086.73	2437.75	-2437.64	142.04	40°13'47.030"N	104°49'35.275"W	0.00	
9517.00†	90.094	179.952	7086.57	2537.75	-2537.64	142.12	40°13'46.042"N	104°49'35.274"W	0.00	
9617.00†	90.094	179.952	7086.40	2637.75	-2637.64	142.20	40°13'45.054"N	104°49'35.273"W	0.00	
9717.00†	90.094	179.952	7086.24	2737.75	-2737.64	142.29	40°13'44.066"N	104°49'35.272"W	0.00	
9817.00†	90.094	179.952	7086.07	2837.75	-2837.64	142.37	40°13'43.078"N	104°49'35.270"W	0.00	
9917.00†	90.094	179.952	7085.91	2937.75	-2937.63	142.46	40°13'42.090"N	104°49'35.269"W	0.00	
10017.00†	90.094	179.952	7085.74	3037.75	-3037.63	142.54	40°13'41.101"N	104°49'35.268"W	0.00	
10117.00†	90.094	179.952	7085.58	3137.75	-3137.63	142.62	40°13'40.113"N	104°49'35.267"W	0.00	
10217.00†	90.094	179.952	7085.41	3237.75	-3237.63	142.71	40°13'39.125"N	104°49'35.266"W	0.00	
10317.00†	90.094	179.952	7085.25	3337.75	-3337.63	142.79	40°13'38.137"N	104°49'35.265"W	0.00	
10417.00†	90.094	179.952	7085.09	3437.75	-3437.63	142.88	40°13'37.149"N	104°49'35.264"W	0.00	
10517.00†	90.094	179.952	7084.92	3537.75	-3537.63	142.96	40°13'36.160"N	104°49'35.263"W	0.00	
10617.00†	90.094	179.952	7084.76	3637.75	-3637.63	143.04	40°13'35.172"N	104°49'35.262"W	0.00	
10717.00†	90.094	179.952	7084.59	3737.75	-3737.63	143.13	40°13'34.184"N	104°49'35.261"W	0.00	
10817.00†	90.094	179.952	7084.43	3837.75	-3837.63	143.21	40°13'33.196"N	104°49'35.260"W	0.00	
10917.00†	90.094	179.952	7084.26	3937.75	-3937.63	143.30	40°13'32.208"N	104°49'35.259"W	0.00	
11017.00†	90.094	179.952	7084.10	4037.75	-4037.63	143.38	40°13'31.219"N	104°49'35.258"W	0.00	
11117.00†	90.094	179.952	7083.93	4137.75	-4137.63	143.46	40°13'30.231"N	104°49'35.256"W	0.00	
11217.00†	90.094	179.952	7083.77	4237.75	-4237.63	143.55	40°13'29.243"N	104°49'35.255"W	0.00	
11317.00†	90.094	179.952	7083.60	4337.75	-4337.63	143.63	40°13'28.255"N	104°49'35.254"W	0.00	
11417.00†	90.094	179.952	7083.44	4437.75	-4437.63	143.72	40°13'27.267"N	104°49'35.253"W	0.00	
11517.00†	90.094	179.952	7083.27	4537.75	-4537.63	143.80	40°13'26.278"N	104°49'35.252"W	0.00	
11617.00†	90.094	179.952	7083.11	4637.75	-4637.63	143.88	40°13'25.290"N	104°49'35.251"W	0.00	
11717.00†	90.094	179.952	7082.94	4737.75	-4737.63	143.97	40°13'24.302"N	104°49'35.250"W	0.00	
11817.00†	90.094	179.952	7082.78	4837.75	-4837.63	144.05	40°13'23.314"N	104°49'35.249"W	0.00	
11917.00†	90.094	179.952	7082.61	4937.75	-4937.63	144.14	40°13'22.326"N	104°49'35.248"W	0.00	
12017.00†	90.094	179.952	7082.45	5037.75	-5037.63	144.22	40°13'21.337"N	104°49'35.247"W	0.00	



# Planned Wellpath Report

HENRICKSON 13N-18HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-18HZ PWB
Facility	SEC.07-T3N-R66W		

## WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.094	179.952	7082.29	5137.75	-5137.63	144.30	40°13'20.349"N	104°49'35.246"W	0.00	
12217.00†	90.094	179.952	7082.12	5237.75	-5237.63	144.39	40°13'19.361"N	104°49'35.245"W	0.00	
12317.00†	90.094	179.952	7081.96	5337.75	-5337.63	144.47	40°13'18.373"N	104°49'35.244"W	0.00	
12417.00†	90.094	179.952	7081.79	5437.75	-5437.63	144.55	40°13'17.385"N	104°49'35.242"W	0.00	
12517.00†	90.094	179.952	7081.63	5537.75	-5537.63	144.64	40°13'16.397"N	104°49'35.241"W	0.00	
12617.00†	90.094	179.952	7081.46	5637.75	-5637.63	144.72	40°13'15.408"N	104°49'35.240"W	0.00	
12717.00†	90.094	179.952	7081.30	5737.75	-5737.63	144.81	40°13'14.420"N	104°49'35.239"W	0.00	
12817.00†	90.094	179.952	7081.13	5837.75	-5837.63	144.89	40°13'13.432"N	104°49'35.238"W	0.00	
12917.00†	90.094	179.952	7080.97	5937.75	-5937.63	144.97	40°13'12.444"N	104°49'35.237"W	0.00	
13017.00†	90.094	179.952	7080.80	6037.75	-6037.63	145.06	40°13'11.456"N	104°49'35.236"W	0.00	
13117.00†	90.094	179.952	7080.64	6137.75	-6137.63	145.14	40°13'10.467"N	104°49'35.235"W	0.00	
13217.00†	90.094	179.952	7080.47	6237.75	-6237.63	145.23	40°13'09.479"N	104°49'35.234"W	0.00	
13317.00†	90.094	179.952	7080.31	6337.75	-6337.63	145.31	40°13'08.491"N	104°49'35.233"W	0.00	
13417.00†	90.094	179.952	7080.14	6437.75	-6437.63	145.39	40°13'07.503"N	104°49'35.232"W	0.00	
13504.71	90.094	179.952	7080.00 <sup>1</sup>	6525.46	-6525.34	145.47	40°13'06.636"N	104°49'35.231"W	0.00	TOTAL DEPTH

## HOLE & CASING SECTIONS - Ref Wellbore: HENRICKSON 13N-18HZ PWB Ref Wellpath: HENRICKSON 13N-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	7431.66	6431.66	1000.00	7090.00	0.00	0.00	-452.30	140.37
7in Casing Intermediate	17.00	7431.66	7414.66	17.00	7090.00	0.00	0.00	-452.30	140.37
6.125in Open Hole	7431.66	13504.71	6073.05	7090.00	7080.00	-452.30	140.37	-6525.34	145.47
4.5in Casing Production	17.00	13504.71	13487.71	17.00	7080.00	0.00	0.00	-6525.34	145.47



# Planned Wellpath Report

HENRICKSON 13N-18HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-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)		4810.00	60.13	0.25	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.07-T3N-R66W SECTION LINES		4810.00	60.13	0.25	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.18-T3N-R66W HARD LINES (460' SET BACKS)		4810.00	60.13	0.25	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
SEC.18-T3N-R66W SECTION LINES		4810.00	60.13	0.25	3187895.01	1329743.58	40°14'11.713"N	104°49'37.103"W	polygon
1) HENRICKSON 13N-18HZ BHL ON PLAT (460' FSL & 957' FWL, SEC.18) REV-1	13504.71	7080.00	-6525.34	145.47	3188090.20	1323159.69	40°13'06.636"N	104°49'35.231"W	point

## SURVEY PROGRAM - Ref Wellbore: HENRICKSON 13N-18HZ PWB Ref Wellpath: HENRICKSON 13N-18HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7431.66	NaviTrak (MagCorr)		HENRICKSON 13N-18HZ PWB
7431.66	13504.71	OnTrak (MagCorr)		HENRICKSON 13N-18HZ PWB



**Planned Wellpath Report**  
HENRICKSON 13N-18HZ (PERMIT REV-1) PWP  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 HENRICKSON 13N-18HZ (1706' FSL & 814' FWL, SEC.07)
Area	COLORADO	Well	HENRICKSON 13N-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HENRICKSON 13N-18HZ PWB
Facility	SEC.07-T3N-R66W		

**WELLPATH COMMENTS**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
516.00	0.000	49.000	516.00	FOX HILLS BASE
3819.67	0.000	179.952	3806.00	PARKMAN
4263.67	0.000	179.952	4250.00	SUSSEX
6430.72	0.000	179.952	6417.05	4 1/2" LINER TOP
7045.00	51.428	179.952	6965.00	SHARON SPRINGS
7148.73	61.801	179.952	7022.00	NIOBRARA A
7278.87	74.816	179.952	7070.00	NIOBRARA B

**DESIGN COMMENTS**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	49.000	17.00	TIE-ON
1300.00	0.000	49.000	1300.00	BEGIN NUDGE
1800.00	10.000	49.000	1797.47	END NUDGE
2366.14	10.000	49.000	2355.00	BEGIN DROP
2866.14	0.000	179.952	2852.47	END DROP
6530.72	0.000	179.952	6517.05	KOP, BUILD @ 10°/100'
7431.66	90.094	179.952	7090.00	LANDING POINT
13504.71	90.094	179.952	7080.00	TOTAL DEPTH