

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)  
 Field: WELD COUNTY (KERR MCGEE) Well: PETTINGER 2C-18HZ  
 Facility: SEC.18-T1N-R65W Wellbore: PETTINGER 2C-18HZ PWB

Plot reference wellpath is PETTINGER 2C-18HZ (REV-A.0) PWP

True vertical depths are referenced to XTREME 6 (RKB 16) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB 16) (RKB)	North Reference: True north
XTREME 6 (RKB 16) (RKB) to Mean Sea Level: 5013 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wlsjef02 on 1/16/2014

## Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.18-T1N-R65W		3223115.986	1260355.537	40°02'43.124"N	104°42'10.994"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)	78.22	0.23	3223115.496	1260433.754	40°02'43.897"N	104°42'10.991"W
XTREME 6 (RKB 16) (RKB) to Mud line (At Slot: SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18))		5013ft				
Mean Sea Level to Mud line (At Slot: SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18))		0ft				
XTREME 6 (RKB 16) (RKB) to Mean Sea Level		5013ft				

## Survey Program

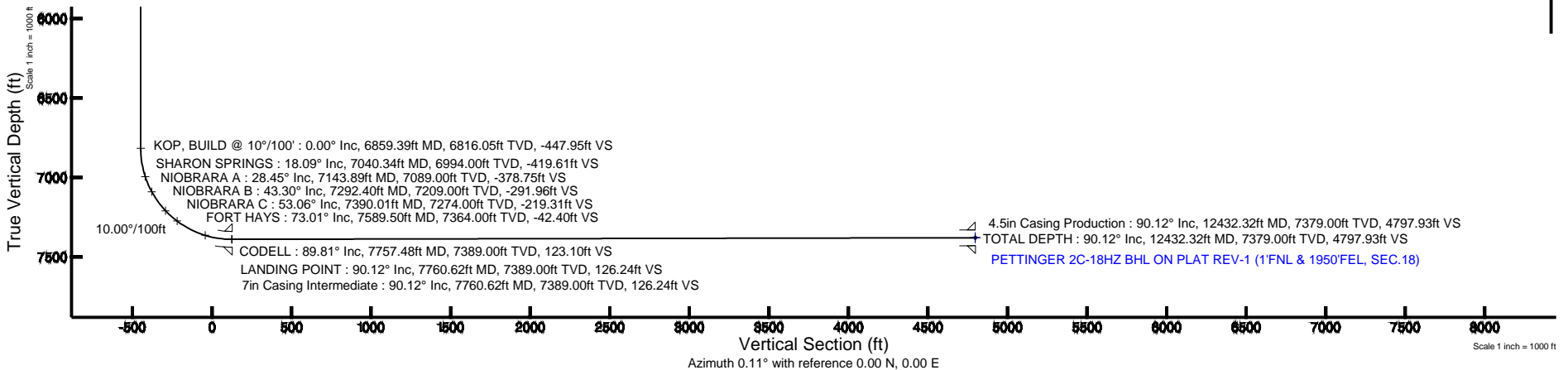
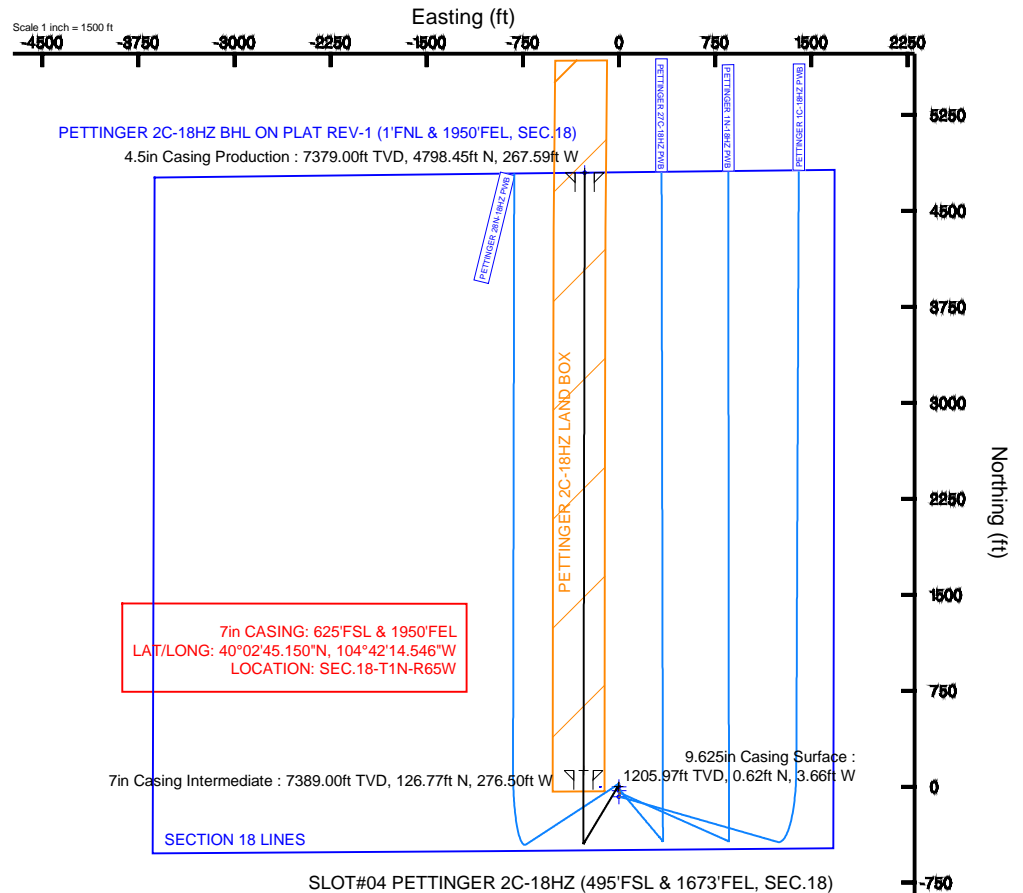
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
16.00	1116.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		PETTINGER 2C-18HZ AWB
1116.00	7760.62	Navitrak	Navitrak (MAGCORR,IFR)		PETTINGER 2C-18HZ PWB
7760.62	12432.32	Navitrak	Navitrak (MAGCORR,IFR)		PETTINGER 2C-18HZ PWB

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SECTION 18 LINES		5.00	-78.32	-0.23	3223115.97	1260355.44	40°02'43.123"N	104°42'10.994"W
PETTINGER 2C-18HZ BHL ON PLAT REV-1 (1'FNL & 1950'FEL, SEC.18)	12432.32	7379.00	4798.45	-267.59	3222804.80	1265279.42	40°03'31.316"N	104°42'14.432"W
PETTINGER 2C-18HZ LAND BOX	7400.00	0.00	0.00	0.00	3223115.50	1260433.75	40°02'43.897"N	104°42'10.991"W

## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-INTO GYROS	1116.00	0.550	270.880	1115.97	0.61	-2.79	0.16	0.60
BEGIN NUDGE	1450.04	0.550	270.880	1450.00	0.66	-6.00	0.00	0.65
END NUDGE	1936.82	10.000	211.000	1934.23	-35.62	-30.16	2.00	-35.68
BEGIN DROP	4452.81	10.000	211.000	4412.00	-410.11	-255.18	0.00	-410.60
END DROP	4952.81	0.000	0.109	4909.47	-447.42	-277.60	2.00	-447.95
KOP, BUILD @ 10°/100'	6859.39	0.000	0.109	6816.05	-447.42	-277.60	0.00	-447.95
LANDING POINT	7760.62	90.123	0.109	7389.00	126.76	-276.50	10.00	126.24
TOTAL DEPTH	12432.32	90.123	0.109	7379.00	4798.45	-267.59	0.00	4797.93





# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 1 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#04 PETTINGER 2C-18HZ (495'FSL &amp; 1673'FEL, SEC.18)</b>
Area	<b>COLORADO</b>	Well	<b>PETTINGER 2C-18HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>PETTINGER 2C-18HZ PWB</b>
Facility	<b>SEC.18-T1N-R65W</b>		

## REPORT SETUP INFORMATION

Projection System	<b>NAD83 / Lambert Colorado SP, Northern Zone (501), US feet</b>	Software System	<b>WellArchitect® 4.0.0</b>
North Reference	<b>True</b>	User	<b>Wilsjef02</b>
Scale	<b>0.999963</b>	Report Generated	<b>1/16/2014 at 07:39:43</b>
Convergence at slot	<b>n/a</b>	Database/Source file	<b>WellArchitectDB/PETTINGER_2C-18HZ_PWB.xml</b>

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	78.22	0.23	3223115.50	1260433.75	<b>40°02'43.897"N</b>	<b>104°42'10.991"W</b>
Facility Reference Pt			3223115.97	1260355.54	<b>40°02'43.124"N</b>	<b>104°42'10.994"W</b>
Field Reference Pt			<b>3197771.84</b>	<b>1268891.29</b>	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	<b>Minimum curvature</b>	XTREME 6 (RKB 16') (RKB) to Facility Vertical Datum	<b>5013.00ft</b>
Horizontal Reference Pt	<b>Slot</b>	XTREME 6 (RKB 16') (RKB) to Mean Sea Level	<b>5013.00ft</b>
Vertical Reference Pt	<b>XTREME 6 (RKB 16') (RKB)</b>	XTREME 6 (RKB 16') (RKB) to Mud Line at Slot (SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18))	<b>5013.00ft</b>
MD Reference Pt	<b>XTREME 6 (RKB 16') (RKB)</b>	Section Origin	<b>N 0.00, E 0.00 ft</b>
Field Vertical Reference	<b>Mean Sea Level</b>	Section Azimuth	<b>0.11°</b>



# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 2C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 2C-18HZ PWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (141 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	151.620	0.00	0.00	0.00	0.00	40°02'43.897"N	104°42'10.991"W	0.00	
16.00	0.000	151.620	16.00	0.00	0.00	0.00	40°02'43.897"N	104°42'10.991"W	0.00	TIE-ON
116.00	0.380	151.620	116.00	-0.29	-0.29	0.16	40°02'43.894"N	104°42'10.989"W	0.38	BEGIN GYRO SURVEYS
216.00	0.080	87.160	216.00	-0.58	-0.58	0.38	40°02'43.891"N	104°42'10.986"W	0.35	
316.00	0.660	166.820	316.00	-1.14	-1.14	0.59	40°02'43.886"N	104°42'10.983"W	0.65	
416.00	0.380	123.680	415.99	-1.88	-1.88	0.99	40°02'43.878"N	104°42'10.978"W	0.46	
516.00	0.310	312.600	515.99	-1.88	-1.88	1.07	40°02'43.878"N	104°42'10.977"W	0.69	
616.00	0.370	305.410	615.99	-1.51	-1.51	0.61	40°02'43.882"N	104°42'10.983"W	0.07	
716.00	0.420	327.270	715.99	-1.02	-1.02	0.15	40°02'43.887"N	104°42'10.989"W	0.16	
816.00	0.540	311.630	815.98	-0.40	-0.40	-0.40	40°02'43.893"N	104°42'10.996"W	0.18	
916.00	0.480	300.090	915.98	0.13	0.13	-1.12	40°02'43.898"N	104°42'11.005"W	0.12	
1016.00	0.500	287.610	1015.98	0.47	0.47	-1.90	40°02'43.902"N	104°42'11.015"W	0.11	
1116.00	0.550	270.880	1115.97	0.60	0.61	-2.79	40°02'43.903"N	104°42'11.027"W	0.16	TIE-INTO GYROS
1216.00†	0.550	270.880	1215.97	0.62	0.62	-3.75	40°02'43.903"N	104°42'11.039"W	0.00	
1316.00†	0.550	270.880	1315.96	0.63	0.64	-4.71	40°02'43.903"N	104°42'11.052"W	0.00	
1416.00†	0.550	270.880	1415.96	0.64	0.65	-5.67	40°02'43.903"N	104°42'11.064"W	0.00	
1450.04	0.550	270.880	1450.00	0.65	0.66	-6.00	40°02'43.904"N	104°42'11.068"W	0.00	BEGIN NUDGE
1516.00†	1.646	225.490	1515.94	-0.01	0.00	-6.99	40°02'43.897"N	104°42'11.081"W	2.00	
1616.00†	3.605	216.006	1615.84	-3.57	-3.55	-9.86	40°02'43.862"N	104°42'11.118"W	2.00	
1716.00†	5.593	213.223	1715.51	-10.20	-10.17	-14.38	40°02'43.796"N	104°42'11.176"W	2.00	
1816.00†	7.587	211.898	1814.84	-19.89	-19.85	-20.54	40°02'43.701"N	104°42'11.255"W	2.00	
1916.00†	9.584	211.123	1913.72	-32.64	-32.59	-28.33	40°02'43.575"N	104°42'11.355"W	2.00	
1936.82	10.000	211.000	1934.23	-35.68	-35.62	-30.16	40°02'43.545"N	104°42'11.379"W	2.00	END NUDGE
2016.00†	10.000	211.000	2012.21	-47.48	-47.41	-37.24	40°02'43.429"N	104°42'11.470"W	0.00	
2116.00†	10.000	211.000	2110.69	-62.38	-62.29	-46.19	40°02'43.281"N	104°42'11.585"W	0.00	
2216.00†	10.000	211.000	2209.17	-77.28	-77.18	-55.13	40°02'43.134"N	104°42'11.700"W	0.00	
2316.00†	10.000	211.000	2307.65	-92.18	-92.06	-64.07	40°02'42.987"N	104°42'11.815"W	0.00	
2416.00†	10.000	211.000	2406.13	-107.08	-106.94	-73.02	40°02'42.840"N	104°42'11.930"W	0.00	
2516.00†	10.000	211.000	2504.61	-121.99	-121.83	-81.96	40°02'42.693"N	104°42'12.045"W	0.00	
2616.00†	10.000	211.000	2603.10	-136.89	-136.71	-90.90	40°02'42.546"N	104°42'12.160"W	0.00	
2716.00†	10.000	211.000	2701.58	-151.79	-151.60	-99.85	40°02'42.399"N	104°42'12.275"W	0.00	
2816.00†	10.000	211.000	2800.06	-166.69	-166.48	-108.79	40°02'42.252"N	104°42'12.390"W	0.00	
2916.00†	10.000	211.000	2898.54	-181.59	-181.37	-117.73	40°02'42.105"N	104°42'12.505"W	0.00	
3016.00†	10.000	211.000	2997.02	-196.49	-196.25	-126.68	40°02'41.958"N	104°42'12.620"W	0.00	
3116.00†	10.000	211.000	3095.50	-211.39	-211.14	-135.62	40°02'41.810"N	104°42'12.735"W	0.00	
3216.00†	10.000	211.000	3193.98	-226.30	-226.02	-144.56	40°02'41.663"N	104°42'12.850"W	0.00	
3316.00†	10.000	211.000	3292.46	-241.20	-240.91	-153.51	40°02'41.516"N	104°42'12.965"W	0.00	
3416.00†	10.000	211.000	3390.94	-256.10	-255.79	-162.45	40°02'41.369"N	104°42'13.080"W	0.00	
3516.00†	10.000	211.000	3489.42	-271.00	-270.67	-171.40	40°02'41.222"N	104°42'13.195"W	0.00	
3616.00†	10.000	211.000	3587.90	-285.90	-285.56	-180.34	40°02'41.075"N	104°42'13.310"W	0.00	
3716.00†	10.000	211.000	3686.38	-300.80	-300.44	-189.28	40°02'40.928"N	104°42'13.425"W	0.00	
3816.00†	10.000	211.000	3784.86	-315.71	-315.33	-198.23	40°02'40.781"N	104°42'13.540"W	0.00	
3916.00†	10.000	211.000	3883.35	-330.61	-330.21	-207.17	40°02'40.634"N	104°42'13.655"W	0.00	
4016.00†	10.000	211.000	3981.83	-345.51	-345.10	-216.11	40°02'40.487"N	104°42'13.770"W	0.00	
4116.00†	10.000	211.000	4080.31	-360.41	-359.98	-225.06	40°02'40.340"N	104°42'13.885"W	0.00	



# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 3 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 2C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 2C-18HZ PWB
Facility	SEC.18-T1N-R65W		

## WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4193.88†	10.000	211.000	4157.00	-372.01	-371.57	-232.02	40°02'40.225"N	104°42'13.974"W	0.00	PARKMAN
4216.00†	10.000	211.000	4178.79	-375.31	-374.87	-234.00	40°02'40.192"N	104°42'14.000"W	0.00	
4316.00†	10.000	211.000	4277.27	-390.21	-389.75	-242.94	40°02'40.045"N	104°42'14.115"W	0.00	
4416.00†	10.000	211.000	4375.75	-405.11	-404.64	-251.89	40°02'39.898"N	104°42'14.230"W	0.00	
4452.81	10.000	211.000	4412.00	-410.60	-410.11	-255.18	40°02'39.844"N	104°42'14.272"W	0.00	BEGIN DROP
4516.00†	8.736	211.000	4474.35	-419.43	-418.93	-260.48	40°02'39.757"N	104°42'14.340"W	2.00	
4577.27†	7.511	211.000	4535.00	-426.86	-426.35	-264.94	40°02'39.684"N	104°42'14.398"W	2.00	SUSSEX
4616.00†	6.736	211.000	4573.43	-430.98	-430.47	-267.41	40°02'39.643"N	104°42'14.429"W	2.00	
4716.00†	4.736	211.000	4672.93	-439.55	-439.04	-272.56	40°02'39.558"N	104°42'14.496"W	2.00	
4816.00†	2.736	211.000	4772.71	-445.15	-444.62	-275.91	40°02'39.503"N	104°42'14.539"W	2.00	
4916.00†	0.736	211.000	4872.66	-447.75	-447.22	-277.47	40°02'39.477"N	104°42'14.559"W	2.00	
4952.81	0.000	0.109	4909.47	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	2.00	END DROP
5016.00†	0.000	0.109	4972.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5116.00†	0.000	0.109	5072.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5216.00†	0.000	0.109	5172.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5316.00†	0.000	0.109	5272.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5416.00†	0.000	0.109	5372.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5516.00†	0.000	0.109	5472.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5616.00†	0.000	0.109	5572.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5716.00†	0.000	0.109	5672.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5816.00†	0.000	0.109	5772.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
5916.00†	0.000	0.109	5872.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6016.00†	0.000	0.109	5972.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6116.00†	0.000	0.109	6072.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6216.00†	0.000	0.109	6172.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6316.00†	0.000	0.109	6272.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6416.00†	0.000	0.109	6372.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6516.00†	0.000	0.109	6472.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6616.00†	0.000	0.109	6572.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6716.00†	0.000	0.109	6672.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6816.00†	0.000	0.109	6772.66	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	
6859.39	0.000	0.109	6816.05	-447.95	-447.42	-277.60	40°02'39.475"N	104°42'14.560"W	0.00	KOP, BUILD @ 10°/100'
6916.00†	5.661	0.109	6872.56	-445.15	-444.63	-277.59	40°02'39.503"N	104°42'14.560"W	10.00	
7016.00†	15.661	0.109	6970.71	-426.68	-426.15	-277.55	40°02'39.686"N	104°42'14.560"W	10.00	
7040.34†	18.095	0.109	6994.00	-419.61	-419.08	-277.54	40°02'39.755"N	104°42'14.560"W	10.00	SHARON SPRINGS
7116.00†	25.661	0.109	7064.16	-391.44	-390.91	-277.49	40°02'40.034"N	104°42'14.559"W	10.00	
7143.89†	28.450	0.109	7089.00	-378.75	-378.23	-277.46	40°02'40.159"N	104°42'14.559"W	10.00	NIOBRARA A
7216.00†	35.661	0.109	7150.07	-340.51	-339.98	-277.39	40°02'40.537"N	104°42'14.558"W	10.00	
7292.40†	43.301	0.109	7209.00	-291.96	-291.44	-277.30	40°02'41.017"N	104°42'14.556"W	10.00	NIOBRARA B
7316.00†	45.661	0.109	7225.83	-275.43	-274.90	-277.27	40°02'41.180"N	104°42'14.556"W	10.00	
7390.01†	53.062	0.109	7274.00	-219.31	-218.79	-277.16	40°02'41.735"N	104°42'14.555"W	10.00	NIOBRARA C
7416.00†	55.661	0.109	7289.15	-198.19	-197.66	-277.12	40°02'41.944"N	104°42'14.554"W	10.00	
7516.00†	65.661	0.109	7338.08	-111.13	-110.60	-276.95	40°02'42.804"N	104°42'14.552"W	10.00	
7589.50†	73.011	0.109	7364.00	-42.40	-41.87	-276.82	40°02'43.483"N	104°42'14.550"W	10.00	FORT HAYS
7616.00†	75.661	0.109	7371.15	-16.89	-16.36	-276.77	40°02'43.735"N	104°42'14.550"W	10.00	



# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 2C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 2C-18HZ PWB
Facility	SEC.18-T1N-R65W		

## WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7716.00†	85.661	0.109	7387.36	81.66	82.19	-276.59	40°02'44.709"N	104°42'14.547"W	10.00	
7757.48†	89.809	0.109	7389.00	123.10	123.63	-276.51	40°02'45.119"N	104°42'14.546"W	10.00	CODELL
7760.62	90.123	0.109	7389.00	126.24	126.76	-276.50	40°02'45.150"N	104°42'14.546"W	10.00	LANDING POINT
7816.00†	90.123	0.109	7388.88	181.62	182.15	-276.39	40°02'45.697"N	104°42'14.545"W	0.00	
7916.00†	90.123	0.109	7388.67	281.62	282.15	-276.20	40°02'46.685"N	104°42'14.543"W	0.00	
8016.00†	90.123	0.109	7388.46	381.62	382.14	-276.01	40°02'47.673"N	104°42'14.540"W	0.00	
8116.00†	90.123	0.109	7388.24	481.62	482.14	-275.82	40°02'48.662"N	104°42'14.538"W	0.00	
8216.00†	90.123	0.109	7388.03	581.62	582.14	-275.63	40°02'49.650"N	104°42'14.535"W	0.00	
8316.00†	90.123	0.109	7387.81	681.62	682.14	-275.44	40°02'50.638"N	104°42'14.533"W	0.00	
8416.00†	90.123	0.109	7387.60	781.62	782.14	-275.25	40°02'51.626"N	104°42'14.530"W	0.00	
8516.00†	90.123	0.109	7387.38	881.62	882.14	-275.06	40°02'52.615"N	104°42'14.528"W	0.00	
8616.00†	90.123	0.109	7387.17	981.62	982.14	-274.87	40°02'53.603"N	104°42'14.525"W	0.00	
8716.00†	90.123	0.109	7386.96	1081.62	1082.14	-274.68	40°02'54.591"N	104°42'14.523"W	0.00	
8816.00†	90.123	0.109	7386.74	1181.62	1182.14	-274.49	40°02'55.579"N	104°42'14.521"W	0.00	
8916.00†	90.123	0.109	7386.53	1281.62	1282.14	-274.30	40°02'56.567"N	104°42'14.518"W	0.00	
9016.00†	90.123	0.109	7386.31	1381.62	1382.14	-274.11	40°02'57.556"N	104°42'14.516"W	0.00	
9116.00†	90.123	0.109	7386.10	1481.62	1482.14	-273.92	40°02'58.544"N	104°42'14.513"W	0.00	
9216.00†	90.123	0.109	7385.89	1581.62	1582.14	-273.72	40°02'59.532"N	104°42'14.511"W	0.00	
9316.00†	90.123	0.109	7385.67	1681.62	1682.14	-273.53	40°03'00.520"N	104°42'14.508"W	0.00	
9416.00†	90.123	0.109	7385.46	1781.62	1782.14	-273.34	40°03'01.509"N	104°42'14.506"W	0.00	
9516.00†	90.123	0.109	7385.24	1881.62	1882.14	-273.15	40°03'02.497"N	104°42'14.504"W	0.00	
9616.00†	90.123	0.109	7385.03	1981.62	1982.14	-272.96	40°03'03.485"N	104°42'14.501"W	0.00	
9716.00†	90.123	0.109	7384.82	2081.62	2082.14	-272.77	40°03'04.473"N	104°42'14.499"W	0.00	
9816.00†	90.123	0.109	7384.60	2181.62	2182.14	-272.58	40°03'05.461"N	104°42'14.496"W	0.00	
9916.00†	90.123	0.109	7384.39	2281.61	2282.14	-272.39	40°03'06.450"N	104°42'14.494"W	0.00	
10016.00†	90.123	0.109	7384.17	2381.61	2382.14	-272.20	40°03'07.438"N	104°42'14.491"W	0.00	
10116.00†	90.123	0.109	7383.96	2481.61	2482.14	-272.01	40°03'08.426"N	104°42'14.489"W	0.00	
10216.00†	90.123	0.109	7383.75	2581.61	2582.14	-271.82	40°03'09.414"N	104°42'14.486"W	0.00	
10316.00†	90.123	0.109	7383.53	2681.61	2682.14	-271.63	40°03'10.402"N	104°42'14.484"W	0.00	
10416.00†	90.123	0.109	7383.32	2781.61	2782.14	-271.44	40°03'11.391"N	104°42'14.482"W	0.00	
10516.00†	90.123	0.109	7383.10	2881.61	2882.13	-271.25	40°03'12.379"N	104°42'14.479"W	0.00	
10616.00†	90.123	0.109	7382.89	2981.61	2982.13	-271.05	40°03'13.367"N	104°42'14.477"W	0.00	
10716.00†	90.123	0.109	7382.67	3081.61	3082.13	-270.86	40°03'14.355"N	104°42'14.474"W	0.00	
10816.00†	90.123	0.109	7382.46	3181.61	3182.13	-270.67	40°03'15.344"N	104°42'14.472"W	0.00	
10916.00†	90.123	0.109	7382.25	3281.61	3282.13	-270.48	40°03'16.332"N	104°42'14.469"W	0.00	
11016.00†	90.123	0.109	7382.03	3381.61	3382.13	-270.29	40°03'17.320"N	104°42'14.467"W	0.00	
11116.00†	90.123	0.109	7381.82	3481.61	3482.13	-270.10	40°03'18.308"N	104°42'14.464"W	0.00	
11216.00†	90.123	0.109	7381.60	3581.61	3582.13	-269.91	40°03'19.296"N	104°42'14.462"W	0.00	
11316.00†	90.123	0.109	7381.39	3681.61	3682.13	-269.72	40°03'20.285"N	104°42'14.460"W	0.00	
11416.00†	90.123	0.109	7381.18	3781.61	3782.13	-269.53	40°03'21.273"N	104°42'14.457"W	0.00	
11516.00†	90.123	0.109	7380.96	3881.61	3882.13	-269.34	40°03'22.261"N	104°42'14.455"W	0.00	
11616.00†	90.123	0.109	7380.75	3981.61	3982.13	-269.15	40°03'23.249"N	104°42'14.452"W	0.00	
11716.00†	90.123	0.109	7380.53	4081.61	4082.13	-268.96	40°03'24.238"N	104°42'14.450"W	0.00	
11816.00†	90.123	0.109	7380.32	4181.61	4182.13	-268.77	40°03'25.226"N	104°42'14.447"W	0.00	
11916.00†	90.123	0.109	7380.11	4281.61	4282.13	-268.58	40°03'26.214"N	104°42'14.445"W	0.00	



# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 2C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 2C-18HZ PWB
Facility	SEC.18-T1N-R65W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12016.00†	90.123	0.109	7379.89	4381.61	4382.13	-268.39	40°03'27.202"N	104°42'14.443"W	0.00	
12116.00†	90.123	0.109	7379.68	4481.61	4482.13	-268.19	40°03'28.190"N	104°42'14.440"W	0.00	
12216.00†	90.123	0.109	7379.46	4581.61	4582.13	-268.00	40°03'29.179"N	104°42'14.438"W	0.00	
12316.00†	90.123	0.109	7379.25	4681.61	4682.13	-267.81	40°03'30.167"N	104°42'14.435"W	0.00	
12416.00†	90.123	0.109	7379.03	4781.61	4782.13	-267.62	40°03'31.155"N	104°42'14.433"W	0.00	
12432.32	90.123	0.109	7379.00 <sup>1</sup>	4797.93	4798.45	-267.59	40°03'31.316"N	104°42'14.432"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: PETTINGER 2C-18HZ PWB Ref Wellpath: PETTINGER 2C-18HZ (REV-A.0) 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	16.00	1116.00	1100.00	16.00	1115.97	0.00	0.00	0.61	-2.79	
9.625in Casing Surface	16.00	1206.00	1190.00	16.00	1205.97	0.00	0.00	0.62	-3.66	
8.75in Open Hole	1116.00	7760.62	6644.62	1115.97	7389.00	0.61	-2.79	126.77	-276.50	
7in Casing Intermediate	16.00	7760.62	7744.62	16.00	7389.00	0.00	0.00	126.77	-276.50	
6.125in Open Hole	7760.62	12432.32	4671.70	7389.00	7379.00	126.77	-276.50	4798.45	-267.59	
4.5in Casing Production	16.00	12432.32	12416.32	16.00	7379.00	0.00	0.00	4798.45	-267.59	

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
SECTION 18 LINES		5.00	-78.32	-0.23	3223115.97	1260355.44	40°02'43.123"N	104°42'10.994"W	polygon	
1) PETTINGER 2C-18HZ BHL ON PLAT REV-1 (1'FNL & 1950'FEL, SEC.18)	12432.32	7379.00	4798.45	-267.59	3222804.80	1265229.42	40°03'31.316"N	104°42'14.432"W	point	
PETTINGER 2C-18HZ LAND BOX		7400.00	0.00	0.00	3223115.50	1260433.75	40°02'43.897"N	104°42'10.991"W	polygon	

SURVEY PROGRAM - Ref Wellbore: PETTINGER 2C-18HZ PWB Ref Wellpath: PETTINGER 2C-18HZ (REV-A.0) PWP										
Start MD [ft]	End MD [ft]	Positional Uncertainty Model				Log Name/Comment		Wellbore		
16.00	1116.00	Generic gyro - continuous (Standard)						PETTINGER 2C-18HZ AWB		
1116.00	7760.62	NaviTrak (MAGCORR,IFR)						PETTINGER 2C-18HZ PWB		
7760.62	12432.32	NaviTrak (MAGCORR,IFR)						PETTINGER 2C-18HZ PWB		



# Planned Wellpath Report

PETTINGER 2C-18HZ (REV-A.0) PWP

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 PETTINGER 2C-18HZ (495'FSL & 1673'FEL, SEC.18)
Area	COLORADO	Well	PETTINGER 2C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	PETTINGER 2C-18HZ PWB
Facility	SEC.18-T1N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
16.00	0.000	151.620	16.00	TIE-ON	
116.00	0.380	151.620	116.00	BEGIN GYRO SURVEYS	
4193.88	10.000	211.000	4157.00	PARKMAN	
4577.27	7.511	211.000	4535.00	SUSSEX	
7040.34	18.095	0.109	6994.00	SHARON SPRINGS	
7143.89	28.450	0.109	7089.00	NIOBRARA A	
7292.40	43.301	0.109	7209.00	NIOBRARA B	
7390.01	53.062	0.109	7274.00	NIOBRARA C	
7589.50	73.011	0.109	7364.00	FORT HAYS	
7757.48	89.809	0.109	7389.00	CODELL	