

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL)
Field: WELD COUNTY (KERR MCGEE) Well: BARCLAY 16C-26HZ
Facility: SEC.14-T2N-R67W Wellbore: BARCLAY 16C-26HZ PWB

Plot reference wellpath is BARCLAY 16C-26HZ (PERMIT REV-2) PWB

True vertical depths are referenced to PERMIT (17 KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMIT (17 KB) (RKB)	North Reference: True north
PERMIT (17 KB) (RKB) to Mean Sea Level: 4927 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: nobu601 on 08/Oct/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.14-T2N-R67W	3179914.406	1291732.033	40°07'56.662"N	104°51'23.560"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
	-186.96	1617.01	3181532.322	1291606.812
			40°07'56.308"N	104°51'02.747"W
SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL)				
PERMIT (17 KB) (RKB) to Mud line (At Slot: SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL))				4927ft
Mean Sea Level to Mud line (At Slot: SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL))				0ft
PERMIT (17 KB) (RKB) to Mean Sea Level				4927ft

Survey Program

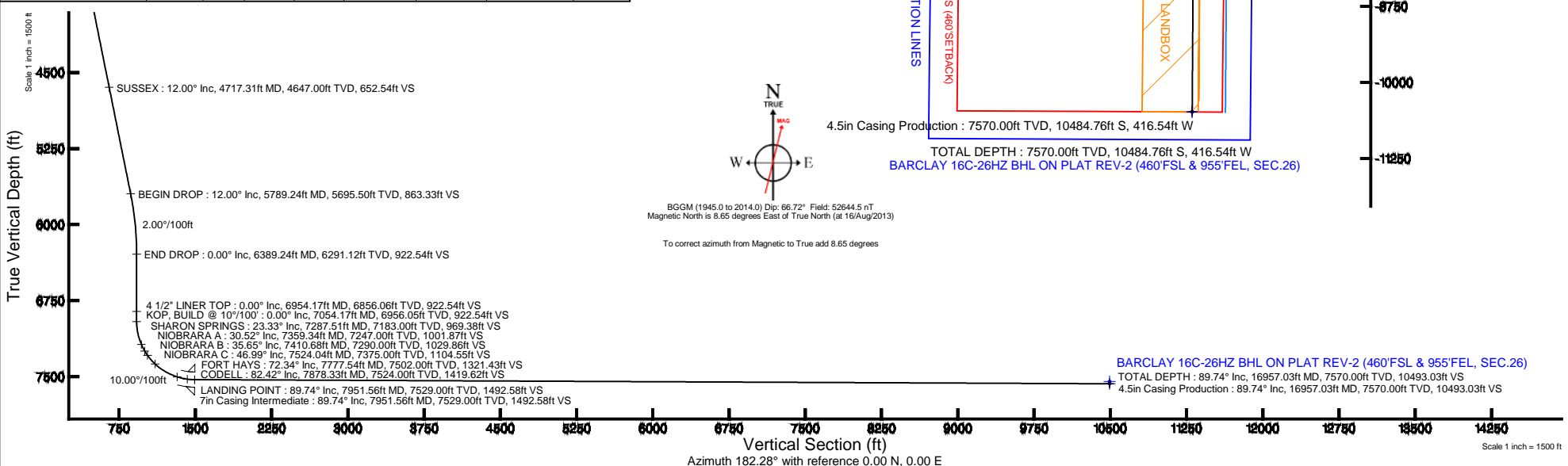
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7951.56	NavitTrak	NavitTrak (Standard)		BARCLAY 16C-26HZ PWB
7951.56	16957.03	OnTrak	OnTrak (Standard)		BARCLAY 16C-26HZ PWB

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.14-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
SEC.23-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
SEC.26-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
SEC.14-T2N-R67W HARDLINES (460'SETBACK)		7331.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
SEC.23-T2N-R67W HARDLINES (460'SETBACK)		7331.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
SEC.26-T2N-R67W HARDLINES (460'SETBACK)		7331.00	137.07	-1617.01	3179914.403	1291732.033	40°07'56.662"N	104°51'23.560"W
BARCLAY 16C-26HZ BHL ON PLAT (460'FSL & 955'FEL, SEC.26)		7547.00	-10484.76	-416.54	3181102.58	1281119.74	40°08'11.696"N	104°51'08.107"W
BARCLAY 16C-26HZ LAMDBOX		7547.00	0.91	-158.08	3181074.25	1291608.57	40°07'55.317"N	104°51'04.780"W
BARCLAY 16C-26HZ BHL ON PLAT REV-2 (460'FSL & 955'FEL, SEC.26)		16957.03	-10484.76	-416.54	3181102.58	1281119.74	40°08'11.696"N	104°51'08.107"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	201.225	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	201.225	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1700.00	12.000	201.225	1695.62	-58.36	-22.66	2.00	59.21
BEGIN DROP	5789.24	12.000	201.225	5695.50	-850.88	-330.46	0.00	863.33
END DROP	6389.24	0.000	180.379	6291.12	-909.24	-353.13	2.00	922.54
KOP, BUILD @ 10°/100'	7054.17	0.000	180.379	6956.05	-909.24	-353.13	0.00	922.54
LANDING POINT	7951.56	89.739	180.379	7529.00	-1479.58	-356.90	10.00	1492.58
TOTAL DEPTH	16957.03	89.739	180.379	7570.00	-10484.76	-416.54	0.00	10493.03





Planned Wellpath Report

BARCLAY 16C-26HZ (PERMIT REV-2) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (I
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

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	0.999959	Report Generated	09/Oct/2013 at 11:20
Convergence at slot	n/a	Database/Source file	WA_ANADARKO/BARCLAY_16C-26HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-136.96	1617.01	3181532.32	1291606.81	40°07'55.308"N	104°51'02.747"W
Facility Reference Pt			3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"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	4927.00ft
Horizontal Reference Pt	Slot	PERMIT (17' KB) (RKB) to Mean Sea Level	4927.00ft
Vertical Reference Pt	PERMIT (17' KB) (RKB)	PERMIT (17' KB) (RKB) to Mud Line at Slot (SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (NEW SHL))	4927.00ft
MD Reference Pt	PERMIT (17' KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	182.28°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (1
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (187 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	201.225	0.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
17.00	0.000	201.225	17.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	TIE ON
117.00†	0.000	201.225	117.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
217.00†	0.000	201.225	217.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
317.00†	0.000	201.225	317.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
417.00†	0.000	201.225	417.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
517.00†	0.000	201.225	517.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
617.00†	0.000	201.225	617.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
717.00†	0.000	201.225	717.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
817.00†	0.000	201.225	817.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
917.00†	0.000	201.225	917.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
1017.00†	0.000	201.225	1017.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	
1100.00	0.000	201.225	1100.00	0.00	0.00	0.00	40°07'55.308"N	104°51'02.747"W	0.00	BEGIN NUDGE
1117.00†	0.340	201.225	1117.00	0.05	-0.05	-0.02	40°07'55.308"N	104°51'02.747"W	2.00	
1217.00†	2.340	201.225	1216.97	2.26	-2.23	-0.86	40°07'55.286"N	104°51'02.758"W	2.00	
1227.04†	2.541	201.225	1227.00	2.66	-2.63	-1.02	40°07'55.282"N	104°51'02.760"W	2.00	FOX HILLS BASE
1317.00†	4.340	201.225	1316.79	7.77	-7.66	-2.97	40°07'55.232"N	104°51'02.785"W	2.00	
1417.00†	6.340	201.225	1416.35	16.57	-16.33	-6.34	40°07'55.147"N	104°51'02.828"W	2.00	
1517.00†	8.340	201.225	1515.53	28.65	-28.24	-10.97	40°07'55.029"N	104°51'02.888"W	2.00	
1617.00†	10.340	201.225	1614.20	44.00	-43.37	-16.84	40°07'54.879"N	104°51'02.964"W	2.00	
1700.00	12.000	201.225	1695.62	59.21	-58.36	-22.66	40°07'54.731"N	104°51'03.039"W	2.00	END NUDGE
1717.00†	12.000	201.225	1712.25	62.55	-61.65	-23.94	40°07'54.699"N	104°51'03.055"W	0.00	
1817.00†	12.000	201.225	1810.07	82.22	-81.03	-31.47	40°07'54.507"N	104°51'03.152"W	0.00	
1917.00†	12.000	201.225	1907.88	101.88	-100.41	-39.00	40°07'54.316"N	104°51'03.249"W	0.00	
2017.00†	12.000	201.225	2005.70	121.55	-119.79	-46.52	40°07'54.124"N	104°51'03.346"W	0.00	
2117.00†	12.000	201.225	2103.51	141.21	-139.17	-54.05	40°07'53.933"N	104°51'03.443"W	0.00	
2217.00†	12.000	201.225	2201.33	160.87	-158.55	-61.58	40°07'53.741"N	104°51'03.540"W	0.00	
2317.00†	12.000	201.225	2299.14	180.54	-177.94	-69.11	40°07'53.550"N	104°51'03.636"W	0.00	
2417.00†	12.000	201.225	2396.95	200.20	-197.32	-76.63	40°07'53.358"N	104°51'03.733"W	0.00	
2517.00†	12.000	201.225	2494.77	219.87	-216.70	-84.16	40°07'53.167"N	104°51'03.830"W	0.00	
2617.00†	12.000	201.225	2592.58	239.53	-236.08	-91.69	40°07'52.975"N	104°51'03.927"W	0.00	
2717.00†	12.000	201.225	2690.40	259.20	-255.46	-99.21	40°07'52.784"N	104°51'04.024"W	0.00	
2817.00†	12.000	201.225	2788.21	278.86	-274.84	-106.74	40°07'52.592"N	104°51'04.121"W	0.00	
2917.00†	12.000	201.225	2886.03	298.52	-294.22	-114.27	40°07'52.400"N	104°51'04.218"W	0.00	
3017.00†	12.000	201.225	2983.84	318.19	-313.60	-121.80	40°07'52.209"N	104°51'04.315"W	0.00	
3117.00†	12.000	201.225	3081.66	337.85	-332.98	-129.32	40°07'52.017"N	104°51'04.412"W	0.00	
3217.00†	12.000	201.225	3179.47	357.52	-352.36	-136.85	40°07'51.826"N	104°51'04.509"W	0.00	
3317.00†	12.000	201.225	3277.29	377.18	-371.74	-144.38	40°07'51.634"N	104°51'04.606"W	0.00	
3417.00†	12.000	201.225	3375.10	396.85	-391.12	-151.90	40°07'51.443"N	104°51'04.702"W	0.00	
3517.00†	12.000	201.225	3472.92	416.51	-410.51	-159.43	40°07'51.251"N	104°51'04.799"W	0.00	
3617.00†	12.000	201.225	3570.73	436.18	-429.89	-166.96	40°07'51.060"N	104°51'04.896"W	0.00	
3717.00†	12.000	201.225	3668.55	455.84	-449.27	-174.48	40°07'50.868"N	104°51'04.993"W	0.00	
3817.00†	12.000	201.225	3766.36	475.50	-468.65	-182.01	40°07'50.677"N	104°51'05.090"W	0.00	
3917.00†	12.000	201.225	3864.18	495.17	-488.03	-189.54	40°07'50.485"N	104°51'05.187"W	0.00	
4017.00†	12.000	201.225	3961.99	514.83	-507.41	-197.07	40°07'50.294"N	104°51'05.284"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (1
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	12.000	201.225	4059.81	534.50	-526.79	-204.59	40°07'50.102"N	104°51'05.381"W	0.00	
4217.00†	12.000	201.225	4157.62	554.16	-546.17	-212.12	40°07'49.911"N	104°51'05.478"W	0.00	
4317.00†	12.000	201.225	4255.44	573.83	-565.55	-219.65	40°07'49.719"N	104°51'05.575"W	0.00	
4417.00†	12.000	201.225	4353.25	593.49	-584.93	-227.17	40°07'49.528"N	104°51'05.671"W	0.00	
4517.00†	12.000	201.225	4451.06	613.15	-604.31	-234.70	40°07'49.336"N	104°51'05.768"W	0.00	
4617.00†	12.000	201.225	4548.88	632.82	-623.69	-242.23	40°07'49.145"N	104°51'05.865"W	0.00	
4717.00†	12.000	201.225	4646.69	652.48	-643.08	-249.76	40°07'48.953"N	104°51'05.962"W	0.00	
4717.31†	12.000	201.225	4647.00	652.54	-643.14	-249.78	40°07'48.952"N	104°51'05.962"W	0.00	SUSSEX
4817.00†	12.000	201.225	4744.51	672.15	-662.46	-257.28	40°07'48.762"N	104°51'06.059"W	0.00	
4917.00†	12.000	201.225	4842.32	691.81	-681.84	-264.81	40°07'48.570"N	104°51'06.156"W	0.00	
5017.00†	12.000	201.225	4940.14	711.48	-701.22	-272.34	40°07'48.378"N	104°51'06.253"W	0.00	
5117.00†	12.000	201.225	5037.95	731.14	-720.60	-279.86	40°07'48.187"N	104°51'06.350"W	0.00	
5217.00†	12.000	201.225	5135.77	750.80	-739.98	-287.39	40°07'47.995"N	104°51'06.447"W	0.00	
5317.00†	12.000	201.225	5233.58	770.47	-759.36	-294.92	40°07'47.804"N	104°51'06.544"W	0.00	
5417.00†	12.000	201.225	5331.40	790.13	-778.74	-302.44	40°07'47.612"N	104°51'06.640"W	0.00	
5517.00†	12.000	201.225	5429.21	809.80	-798.12	-309.97	40°07'47.421"N	104°51'06.737"W	0.00	
5617.00†	12.000	201.225	5527.03	829.46	-817.50	-317.50	40°07'47.229"N	104°51'06.834"W	0.00	
5717.00†	12.000	201.225	5624.84	849.13	-836.88	-325.03	40°07'47.038"N	104°51'06.931"W	0.00	
5789.24	12.000	201.225	5695.50	863.33	-850.88	-330.46	40°07'46.899"N	104°51'07.001"W	0.00	BEGIN DROP
5817.00†	11.445	201.225	5722.68	868.67	-856.14	-332.51	40°07'46.848"N	104°51'07.027"W	2.00	
5917.00†	9.445	201.225	5821.02	885.81	-873.04	-339.07	40°07'46.681"N	104°51'07.112"W	2.00	
6017.00†	7.445	201.225	5919.93	899.70	-886.73	-344.38	40°07'46.545"N	104°51'07.180"W	2.00	
6117.00†	5.445	201.225	6019.30	910.32	-897.19	-348.45	40°07'46.442"N	104°51'07.233"W	2.00	
6217.00†	3.445	201.225	6118.99	917.65	-904.41	-351.25	40°07'46.370"N	104°51'07.269"W	2.00	
6317.00†	1.445	201.225	6218.89	921.68	-908.39	-352.80	40°07'46.331"N	104°51'07.289"W	2.00	
6389.24	0.000	180.379	6291.12	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	2.00	END DROP
6417.00†	0.000	180.379	6318.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6517.00†	0.000	180.379	6418.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6617.00†	0.000	180.379	6518.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6717.00†	0.000	180.379	6618.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6817.00†	0.000	180.379	6718.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6917.00†	0.000	180.379	6818.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
6954.17†	0.000	180.379	6856.06	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	4 1/2" LINER TOP
7017.00†	0.000	180.379	6918.89	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	
7054.17	0.000	180.379	6956.05	922.54	-909.24	-353.13	40°07'46.323"N	104°51'07.293"W	0.00	KOP, BUILD @ 10°/100'
7117.00†	6.283	180.379	7018.76	925.98	-912.68	-353.15	40°07'46.289"N	104°51'07.293"W	10.00	
7217.00†	16.283	180.379	7116.70	945.51	-932.22	-353.28	40°07'46.096"N	104°51'07.295"W	10.00	
7287.51†	23.334	180.379	7183.00	969.38	-956.10	-353.44	40°07'45.860"N	104°51'07.297"W	10.00	SHARON SPRINGS
7317.00†	26.283	180.379	7209.76	981.74	-968.47	-353.52	40°07'45.737"N	104°51'07.298"W	10.00	
7359.34†	30.517	180.379	7247.00	1001.87	-988.61	-353.65	40°07'45.538"N	104°51'07.300"W	10.00	NIOBRARA A
7410.68†	35.651	180.379	7290.00	1029.86	-1016.62	-353.84	40°07'45.262"N	104°51'07.302"W	10.00	NIOBRARA B
7417.00†	36.283	180.379	7295.12	1033.58	-1020.33	-353.86	40°07'45.225"N	104°51'07.302"W	10.00	
7517.00†	46.283	180.379	7370.17	1099.43	-1086.23	-354.30	40°07'44.574"N	104°51'07.308"W	10.00	
7524.04†	46.987	180.379	7375.00	1104.55	-1091.34	-354.33	40°07'44.523"N	104°51'07.308"W	10.00	NIOBRARA C
7617.00†	56.283	180.379	7432.64	1177.32	-1164.15	-354.82	40°07'43.804"N	104°51'07.315"W	10.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (1
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	66.283	180.379	7480.62	1264.86	-1251.74	-355.40	40°07'42.938"N	104°51'07.322"W	10.00	
7777.54†	72.337	180.379	7502.00	1321.43	-1308.34	-355.77	40°07'42.379"N	104°51'07.327"W	10.00	FORT HAYS
7817.00†	76.283	180.379	7512.67	1359.40	-1346.33	-356.02	40°07'42.003"N	104°51'07.330"W	10.00	
7878.33†	82.417	180.379	7524.00	1419.62	-1406.58	-356.42	40°07'41.408"N	104°51'07.335"W	10.00	CODELL
7917.00†	86.283	180.379	7527.81	1458.06	-1445.04	-356.68	40°07'41.028"N	104°51'07.339"W	10.00	
7951.56	89.739	180.379	7529.00	1492.58	-1479.58	-356.90	40°07'40.687"N	104°51'07.341"W	10.00	LANDING POINT
8017.00†	89.739	180.379	7529.30	1557.98	-1545.02	-357.34	40°07'40.040"N	104°51'07.347"W	0.00	
8117.00†	89.739	180.379	7529.76	1657.93	-1645.01	-358.00	40°07'39.052"N	104°51'07.356"W	0.00	
8217.00†	89.739	180.379	7530.21	1757.87	-1745.01	-358.66	40°07'38.064"N	104°51'07.364"W	0.00	
8317.00†	89.739	180.379	7530.67	1857.82	-1845.01	-359.32	40°07'37.075"N	104°51'07.373"W	0.00	
8417.00†	89.739	180.379	7531.12	1957.76	-1945.00	-359.99	40°07'36.087"N	104°51'07.381"W	0.00	
8517.00†	89.739	180.379	7531.58	2057.70	-2045.00	-360.65	40°07'35.099"N	104°51'07.390"W	0.00	
8617.00†	89.739	180.379	7532.03	2157.65	-2145.00	-361.31	40°07'34.111"N	104°51'07.398"W	0.00	
8717.00†	89.739	180.379	7532.49	2257.59	-2244.99	-361.97	40°07'33.123"N	104°51'07.407"W	0.00	
8817.00†	89.739	180.379	7532.94	2357.54	-2344.99	-362.63	40°07'32.135"N	104°51'07.415"W	0.00	
8917.00†	89.739	180.379	7533.40	2457.48	-2444.99	-363.30	40°07'31.146"N	104°51'07.424"W	0.00	
9017.00†	89.739	180.379	7533.86	2557.43	-2544.98	-363.96	40°07'30.158"N	104°51'07.432"W	0.00	
9117.00†	89.739	180.379	7534.31	2657.37	-2644.98	-364.62	40°07'29.170"N	104°51'07.441"W	0.00	
9217.00†	89.739	180.379	7534.77	2757.31	-2744.98	-365.28	40°07'28.182"N	104°51'07.449"W	0.00	
9317.00†	89.739	180.379	7535.22	2857.26	-2844.97	-365.95	40°07'27.194"N	104°51'07.458"W	0.00	
9417.00†	89.739	180.379	7535.68	2957.20	-2944.97	-366.61	40°07'26.205"N	104°51'07.466"W	0.00	
9517.00†	89.739	180.379	7536.13	3057.15	-3044.97	-367.27	40°07'25.217"N	104°51'07.475"W	0.00	
9617.00†	89.739	180.379	7536.59	3157.09	-3144.96	-367.93	40°07'24.229"N	104°51'07.483"W	0.00	
9717.00†	89.739	180.379	7537.04	3257.04	-3244.96	-368.59	40°07'23.241"N	104°51'07.492"W	0.00	
9817.00†	89.739	180.379	7537.50	3356.98	-3344.96	-369.26	40°07'22.253"N	104°51'07.500"W	0.00	
9917.00†	89.739	180.379	7537.95	3456.92	-3444.95	-369.92	40°07'21.265"N	104°51'07.509"W	0.00	
10017.00†	89.739	180.379	7538.41	3556.87	-3544.95	-370.58	40°07'20.276"N	104°51'07.517"W	0.00	
10117.00†	89.739	180.379	7538.86	3656.81	-3644.95	-371.24	40°07'19.288"N	104°51'07.526"W	0.00	
10217.00†	89.739	180.379	7539.32	3756.76	-3744.95	-371.90	40°07'18.300"N	104°51'07.534"W	0.00	
10317.00†	89.739	180.379	7539.77	3856.70	-3844.94	-372.57	40°07'17.312"N	104°51'07.543"W	0.00	
10417.00†	89.739	180.379	7540.23	3956.64	-3944.94	-373.23	40°07'16.324"N	104°51'07.551"W	0.00	
10517.00†	89.739	180.379	7540.68	4056.59	-4044.94	-373.89	40°07'15.336"N	104°51'07.560"W	0.00	
10617.00†	89.739	180.379	7541.14	4156.53	-4144.93	-374.55	40°07'14.347"N	104°51'07.568"W	0.00	
10717.00†	89.739	180.379	7541.59	4256.48	-4244.93	-375.22	40°07'13.359"N	104°51'07.577"W	0.00	
10817.00†	89.739	180.379	7542.05	4356.42	-4344.93	-375.88	40°07'12.371"N	104°51'07.585"W	0.00	
10917.00†	89.739	180.379	7542.50	4456.37	-4444.92	-376.54	40°07'11.383"N	104°51'07.594"W	0.00	
11017.00†	89.739	180.379	7542.96	4556.31	-4544.92	-377.20	40°07'10.395"N	104°51'07.602"W	0.00	
11117.00†	89.739	180.379	7543.41	4656.25	-4644.92	-377.86	40°07'09.406"N	104°51'07.611"W	0.00	
11217.00†	89.739	180.379	7543.87	4756.20	-4744.91	-378.53	40°07'08.418"N	104°51'07.619"W	0.00	
11317.00†	89.739	180.379	7544.33	4856.14	-4844.91	-379.19	40°07'07.430"N	104°51'07.628"W	0.00	
11417.00†	89.739	180.379	7544.78	4956.09	-4944.91	-379.85	40°07'06.442"N	104°51'07.636"W	0.00	
11517.00†	89.739	180.379	7545.24	5056.03	-5044.90	-380.51	40°07'05.454"N	104°51'07.645"W	0.00	
11617.00†	89.739	180.379	7545.69	5155.98	-5144.90	-381.18	40°07'04.466"N	104°51'07.653"W	0.00	
11717.00†	89.739	180.379	7546.15	5255.92	-5244.90	-381.84	40°07'03.477"N	104°51'07.662"W	0.00	
11817.00†	89.739	180.379	7546.60	5355.86	-5344.89	-382.50	40°07'02.489"N	104°51'07.670"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (1
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11917.00†	89.739	180.379	7547.06	5455.81	-5444.89	-383.16	40°07'01.501"N	104°51'07.679"W	0.00	
12017.00†	89.739	180.379	7547.51	5555.75	-5544.89	-383.82	40°07'00.513"N	104°51'07.687"W	0.00	
12117.00†	89.739	180.379	7547.97	5655.70	-5644.88	-384.49	40°06'59.525"N	104°51'07.696"W	0.00	
12217.00†	89.739	180.379	7548.42	5755.64	-5744.88	-385.15	40°06'58.536"N	104°51'07.704"W	0.00	
12317.00†	89.739	180.379	7548.88	5855.59	-5844.88	-385.81	40°06'57.548"N	104°51'07.713"W	0.00	
12417.00†	89.739	180.379	7549.33	5955.53	-5944.87	-386.47	40°06'56.560"N	104°51'07.721"W	0.00	
12517.00†	89.739	180.379	7549.79	6055.47	-6044.87	-387.13	40°06'55.572"N	104°51'07.730"W	0.00	
12617.00†	89.739	180.379	7550.24	6155.42	-6144.87	-387.80	40°06'54.584"N	104°51'07.738"W	0.00	
12717.00†	89.739	180.379	7550.70	6255.36	-6244.86	-388.46	40°06'53.596"N	104°51'07.747"W	0.00	
12817.00†	89.739	180.379	7551.15	6355.31	-6344.86	-389.12	40°06'52.607"N	104°51'07.755"W	0.00	
12917.00†	89.739	180.379	7551.61	6455.25	-6444.86	-389.78	40°06'51.619"N	104°51'07.764"W	0.00	
13017.00†	89.739	180.379	7552.06	6555.20	-6544.85	-390.45	40°06'50.631"N	104°51'07.772"W	0.00	
13117.00†	89.739	180.379	7552.52	6655.14	-6644.85	-391.11	40°06'49.643"N	104°51'07.781"W	0.00	
13217.00†	89.739	180.379	7552.97	6755.08	-6744.85	-391.77	40°06'48.655"N	104°51'07.789"W	0.00	
13317.00†	89.739	180.379	7553.43	6855.03	-6844.84	-392.43	40°06'47.666"N	104°51'07.798"W	0.00	
13417.00†	89.739	180.379	7553.88	6954.97	-6944.84	-393.09	40°06'46.678"N	104°51'07.806"W	0.00	
13517.00†	89.739	180.379	7554.34	7054.92	-7044.84	-393.76	40°06'45.690"N	104°51'07.815"W	0.00	
13617.00†	89.739	180.379	7554.80	7154.86	-7144.84	-394.42	40°06'44.702"N	104°51'07.823"W	0.00	
13717.00†	89.739	180.379	7555.25	7254.80	-7244.83	-395.08	40°06'43.714"N	104°51'07.832"W	0.00	
13817.00†	89.739	180.379	7555.71	7354.75	-7344.83	-395.74	40°06'42.726"N	104°51'07.840"W	0.00	
13917.00†	89.739	180.379	7556.16	7454.69	-7444.83	-396.41	40°06'41.737"N	104°51'07.849"W	0.00	
14017.00†	89.739	180.379	7556.62	7554.64	-7544.82	-397.07	40°06'40.749"N	104°51'07.857"W	0.00	
14117.00†	89.739	180.379	7557.07	7654.58	-7644.82	-397.73	40°06'39.761"N	104°51'07.866"W	0.00	
14217.00†	89.739	180.379	7557.53	7754.53	-7744.82	-398.39	40°06'38.773"N	104°51'07.874"W	0.00	
14317.00†	89.739	180.379	7557.98	7854.47	-7844.81	-399.05	40°06'37.785"N	104°51'07.883"W	0.00	
14417.00†	89.739	180.379	7558.44	7954.41	-7944.81	-399.72	40°06'36.796"N	104°51'07.891"W	0.00	
14517.00†	89.739	180.379	7558.89	8054.36	-8044.81	-400.38	40°06'35.808"N	104°51'07.900"W	0.00	
14617.00†	89.739	180.379	7559.35	8154.30	-8144.80	-401.04	40°06'34.820"N	104°51'07.908"W	0.00	
14717.00†	89.739	180.379	7559.80	8254.25	-8244.80	-401.70	40°06'33.832"N	104°51'07.917"W	0.00	
14817.00†	89.739	180.379	7560.26	8354.19	-8344.80	-402.36	40°06'32.844"N	104°51'07.925"W	0.00	
14917.00†	89.739	180.379	7560.71	8454.14	-8444.79	-403.03	40°06'31.856"N	104°51'07.934"W	0.00	
15017.00†	89.739	180.379	7561.17	8554.08	-8544.79	-403.69	40°06'30.867"N	104°51'07.942"W	0.00	
15117.00†	89.739	180.379	7561.62	8654.02	-8644.79	-404.35	40°06'29.879"N	104°51'07.951"W	0.00	
15217.00†	89.739	180.379	7562.08	8753.97	-8744.78	-405.01	40°06'28.891"N	104°51'07.959"W	0.00	
15317.00†	89.739	180.379	7562.53	8853.91	-8844.78	-405.68	40°06'27.903"N	104°51'07.968"W	0.00	
15417.00†	89.739	180.379	7562.99	8953.86	-8944.78	-406.34	40°06'26.915"N	104°51'07.976"W	0.00	
15517.00†	89.739	180.379	7563.44	9053.80	-9044.77	-407.00	40°06'25.926"N	104°51'07.985"W	0.00	
15617.00†	89.739	180.379	7563.90	9153.75	-9144.77	-407.66	40°06'24.938"N	104°51'07.993"W	0.00	
15717.00†	89.739	180.379	7564.36	9253.69	-9244.77	-408.32	40°06'23.950"N	104°51'08.002"W	0.00	
15817.00†	89.739	180.379	7564.81	9353.63	-9344.76	-408.99	40°06'22.962"N	104°51'08.010"W	0.00	
15917.00†	89.739	180.379	7565.27	9453.58	-9444.76	-409.65	40°06'21.974"N	104°51'08.019"W	0.00	
16017.00†	89.739	180.379	7565.72	9553.52	-9544.76	-410.31	40°06'20.986"N	104°51'08.027"W	0.00	
16117.00†	89.739	180.379	7566.18	9653.47	-9644.75	-410.97	40°06'19.997"N	104°51'08.036"W	0.00	
16217.00†	89.739	180.379	7566.63	9753.41	-9744.75	-411.63	40°06'19.009"N	104°51'08.044"W	0.00	
16317.00†	89.739	180.379	7567.09	9853.36	-9844.75	-412.30	40°06'18.021"N	104°51'08.053"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (I
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16417.00†	89.739	180.379	7567.54	9953.30	-9944.74	-412.96	40°06'17.033"N	104°51'08.061"W	0.00	
16517.00†	89.739	180.379	7568.00	10053.24	-10044.74	-413.62	40°06'16.045"N	104°51'08.070"W	0.00	
16617.00†	89.739	180.379	7568.45	10153.19	-10144.74	-414.28	40°06'15.056"N	104°51'08.078"W	0.00	
16717.00†	89.739	180.379	7568.91	10253.13	-10244.74	-414.95	40°06'14.068"N	104°51'08.087"W	0.00	
16817.00†	89.739	180.379	7569.36	10353.08	-10344.73	-415.61	40°06'13.080"N	104°51'08.095"W	0.00	
16917.00†	89.739	180.379	7569.82	10453.02	-10444.73	-416.27	40°06'12.092"N	104°51'08.104"W	0.00	
16957.03	89.739	180.379	7570.00 ¹	10493.03	-10484.76	-416.54	40°06'11.696"N	104°51'08.107"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS -

Ref Wellbore: BARCLAY 16C-26HZ PWB Ref Wellpath: BARCLAY 16C-26HZ (PERMIT REV-2) 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	1277.00	1260.00	17.00	1276.89	0.00	0.00	-5.10	-1.98
9.625in Casing Surface	17.00	1277.00	1260.00	17.00	1276.89	0.00	0.00	-5.10	-1.98
8.75in Open Hole	1277.00	7951.56	6674.56	1276.89	7529.00	-5.10	-1.98	-1479.58	-356.90
7in Casing Intermediate	17.00	7951.56	7934.56	17.00	7529.00	0.00	0.00	-1479.58	-356.90
6.125in Open Hole	7951.56	16957.03	9005.47	7529.00	7570.00	-1479.58	-356.90	-10484.76	-416.54
4.5in Casing Production	17.00	16957.03	16940.03	17.00	7570.00	0.00	0.00	-10484.76	-416.54

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (I
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.14-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
SEC.23-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
SEC.26-T2N-R67W SECTION LINES		-22.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
SEC.14-T2N-R67W HARDLINES (460' SETBACK)		7331.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
SEC.23-T2N-R67W HARDLINES (460' SETBACK)		7331.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
SEC.26-T2N-R67W HARDLINES (460' SETBACK)		7331.00	137.07	-1617.01	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W	polygon
BARCLAY 16C-26HZ BHL ON PLAT (460'FSL & 955'FEL, SEC.26)		7547.00	-10484.76	-416.54	3181192.58	1281119.74	40°06'11.696"N	104°51'08.107"W	point
BARCLAY 16C-26HZ LANDBOX		7547.00	0.91	-158.08	3181374.25	1291606.57	40°07'55.317"N	104°51'04.782"W	polygon
1) BARCLAY 16C-26HZ BHL ON PLAT REV-2 (460'FSL & 955'FEL, SEC.26)	16957.03	7570.00	-10484.76	-416.54	3181192.58	1281119.74	40°06'11.696"N	104°51'08.107"W	point

SURVEY PROGRAM - Ref Wellbore: BARCLAY 16C-26HZ PWB Ref Wellpath: BARCLAY 16C-26HZ (PERMIT REV-2) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7951.56	NaviTrak (Standard)		BARCLAY 16C-26HZ PWB
7951.56	16957.03	OnTrak (Standard)		BARCLAY 16C-26HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 BARCLAY 16C-26HZ (451'FSL & 606'FEL, SEC.14) (I
Area	COLORADO	Well	BARCLAY 16C-26HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 16C-26HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1227.04	2.541	201.225	1227.00	FOX HILLS BASE
4717.31	12.000	201.225	4647.00	SUSSEX
6954.17	0.000	180.379	6856.06	4 1/2" LINER TOP
7287.51	23.334	180.379	7183.00	SHARON SPRINGS
7359.34	30.517	180.379	7247.00	NIOBRARA A
7410.68	35.651	180.379	7290.00	NIOBRARA B
7524.04	46.987	180.379	7375.00	NIOBRARA C
7777.54	72.337	180.379	7502.00	FORT HAYS
7878.33	82.417	180.379	7524.00	CODELL

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	201.225	17.00	TIE ON
1100.00	0.000	201.225	1100.00	BEGIN NUDGE
1700.00	12.000	201.225	1695.62	END NUDGE
5789.24	12.000	201.225	5695.50	BEGIN DROP
6389.24	0.000	180.379	6291.12	END DROP
7054.17	0.000	180.379	6956.05	KOP, BUILD @ 10°/100'
7951.56	89.739	180.379	7529.00	LANDING POINT
16957.03	89.739	180.379	7570.00	TOTAL DEPTH