

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Field: WELD COUNTY (KERR MCGEE) Well: MELBA 26N-14HZ
Facility: SEC.23-T3N-R66W Wellbore: MELBA 26N-14HZ PWB

Plot reference wellpath is MELBA 26N-14HZ (PERMIT REV-1) PWP

True vertical depths are referenced to PERMIT (17KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMIT (17KB) (RKB)	North Reference: True north
PERMIT (17KB) (RKB) to Mean Sea Level: 4977 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 15/Nov/2013

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC 23-T3N-R66W			3213104.907	1321212.980	40°12'45.396"N	104°44'12.984"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)	1295.11	-1074.91	3212018.940	1322498.736	40°12'58.194"N	104°44'26.840"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23))					4977ft	
Mean Sea Level to Mud line (At Slot: SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23))					0ft	
PERMIT (17KB) (RKB) to Mean Sea Level					4977ft	

Survey Program

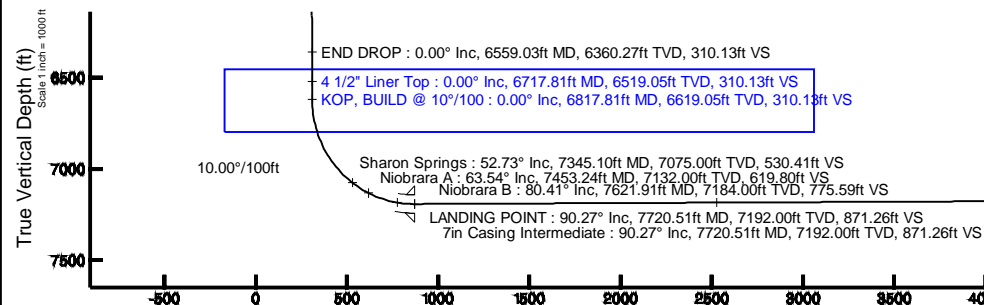
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13027.00	NaviTrak	NaviTrak (MagCorr)		MELBA 26N-14HZ PWB

Well Profile Data

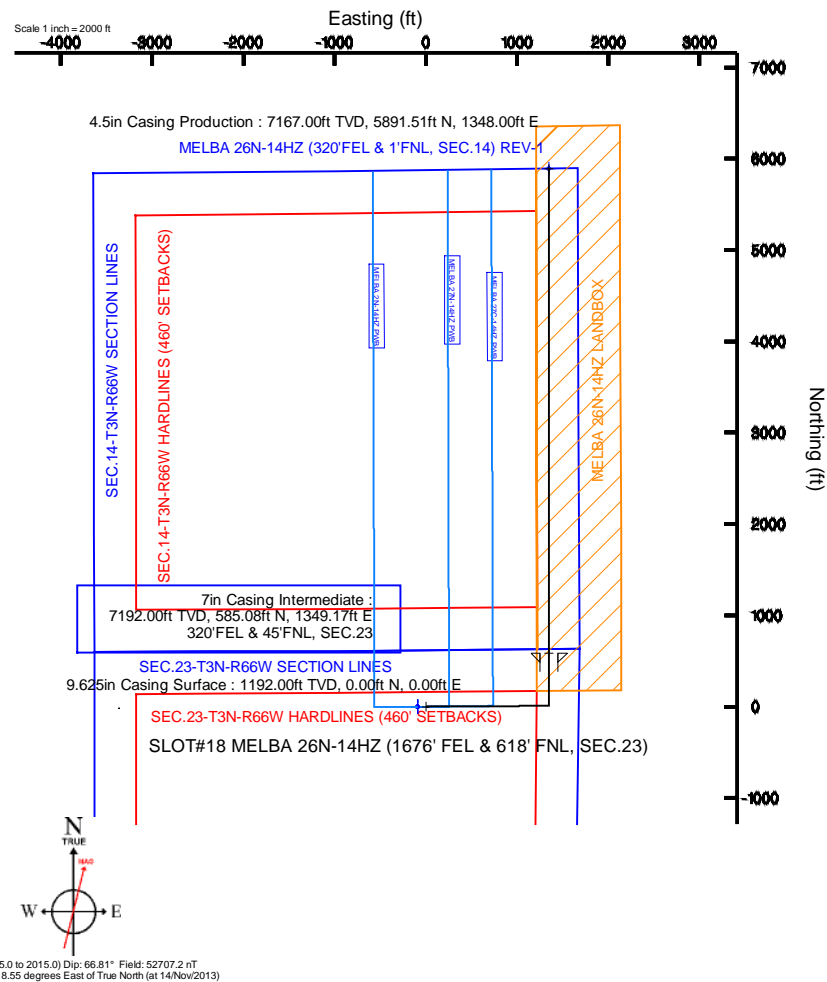
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-ON	17.00	0.000	89.600	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1300.00	0.000	89.600	1300.00	0.00	0.00	0.00	0.00
END NUDGE	2200.00	18.000	89.600	2185.27	0.98	140.21	2.00	32.23
BEGIN DROP	5659.03	18.000	89.600	5475.00	8.44	1209.08	0.00	277.90
END DROP	6559.03	0.000	359.987	6360.27	9.42	1349.29	2.00	310.13
KOP, BUILD @ 10°/100	6817.81	0.000	359.987	6619.05	9.42	1349.29	0.00	310.13
LANDING POINT	7720.51	90.270	359.987	7192.00	585.08	1349.17	10.00	871.26
TOTAL DEPTH	13027.00	90.270	359.987	7167.00	5891.51	1348.00	0.00	6043.76

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.14-T3N-R66W HARDLINES (460' SETBACKS)		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W
SEC.14-T3N-R66W SECTION LINES		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W
SEC.23-T3N-R66W HARDLINES (460' SETBACKS)		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W
SEC.23-T3N-R66W SECTION LINES		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W
MELBA 26N-14HZ (320'FEL & 1'FNL, SEC.14) REV-1	13027.00	7167.00	5891.51	1348.00	3213316.39	1328401.31	40°13'56.413"N	104°44'09.460"W
MELBA 26N-14HZ LANDBOX		7177.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W



Vertical Section (ft)
Azimuth 12.89° with reference 0.00 N, 0.00 E



BGGM (1945.0 to 2015.0) Dip: 66.81° Field: 52707.2 nT
Magnetic North is 8.55 degrees East of True North (at 14/Nov/2013)

To correct azimuth from Magnetic to True add 8.55 degrees

MELBA 26N-14HZ (320'FEL & 1'FNL, SEC.14) REV-1

4.5in Casing Production: 90.27° Inc, 13027.00ft MD, 7167.00ft TVD, 6043.76ft VS
TOTAL DEPTH: 90.27° Inc, 13027.00ft MD, 7167.00ft TVD, 6043.76ft VS

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precain
Scale	0.999957	Report Generated	15/Nov/2013 at 14:35
Convergence at slot	n/a	Database/Source file	WellArchitectDB/MELBA_26N-14HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1295.11	-1074.91	3212018.94	1322498.74	40°12'58.194"N	104°44'26.840"W
Facility Reference Pt			3213104.91	1321212.98	40°12'45.396"N	104°44'12.984"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	4977.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	4977.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23))	4977.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	12.89°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

WELLPATH DATA (146 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	89.600	0.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
17.00	0.000	89.600	17.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	TIE-ON
117.00†	0.000	89.600	117.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
217.00†	0.000	89.600	217.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
317.00†	0.000	89.600	317.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
417.00†	0.000	89.600	417.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
517.00†	0.000	89.600	517.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
617.00†	0.000	89.600	617.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
717.00†	0.000	89.600	717.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
817.00†	0.000	89.600	817.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
917.00†	0.000	89.600	917.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
1017.00†	0.000	89.600	1017.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
1117.00†	0.000	89.600	1117.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
1142.00†	0.000	89.600	1142.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	Fox Hills Marker
1217.00†	0.000	89.600	1217.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	
1300.00	0.000	89.600	1300.00	0.00	0.00	0.00	40°12'58.194"N	104°44'26.840"W	0.00	BEGIN NUDGE
1317.00†	0.340	89.600	1317.00	0.01	0.00	0.05	40°12'58.194"N	104°44'26.839"W	2.00	
1417.00†	2.340	89.600	1416.97	0.55	0.02	2.39	40°12'58.194"N	104°44'26.809"W	2.00	
1517.00†	4.340	89.600	1516.79	1.89	0.06	8.21	40°12'58.195"N	104°44'26.734"W	2.00	
1617.00†	6.340	89.600	1616.35	4.03	0.12	17.52	40°12'58.195"N	104°44'26.614"W	2.00	
1717.00†	8.340	89.600	1715.53	6.96	0.21	30.30	40°12'58.196"N	104°44'26.449"W	2.00	
1817.00†	10.340	89.600	1814.20	10.69	0.32	46.52	40°12'58.197"N	104°44'26.240"W	2.00	
1917.00†	12.340	89.600	1912.24	15.21	0.46	66.18	40°12'58.199"N	104°44'25.987"W	2.00	
2017.00†	14.340	89.600	2009.54	20.52	0.62	89.26	40°12'58.200"N	104°44'25.689"W	2.00	
2117.00†	16.340	89.600	2105.97	26.60	0.81	115.71	40°12'58.202"N	104°44'25.348"W	2.00	
2200.00	18.000	89.600	2185.27	32.23	0.98	140.21	40°12'58.204"N	104°44'25.033"W	2.00	END NUDGE
2217.00†	18.000	89.600	2201.44	33.43	1.02	145.46	40°12'58.204"N	104°44'24.965"W	0.00	
2317.00†	18.000	89.600	2296.54	40.54	1.23	176.36	40°12'58.206"N	104°44'24.567"W	0.00	
2417.00†	18.000	89.600	2391.65	47.64	1.45	207.26	40°12'58.208"N	104°44'24.168"W	0.00	
2517.00†	18.000	89.600	2486.75	54.74	1.66	238.17	40°12'58.210"N	104°44'23.770"W	0.00	
2617.00†	18.000	89.600	2581.86	61.84	1.88	269.07	40°12'58.213"N	104°44'23.372"W	0.00	
2717.00†	18.000	89.600	2676.96	68.95	2.09	299.97	40°12'58.215"N	104°44'22.973"W	0.00	
2817.00†	18.000	89.600	2772.07	76.05	2.31	330.87	40°12'58.217"N	104°44'22.575"W	0.00	
2917.00†	18.000	89.600	2867.18	83.15	2.53	361.77	40°12'58.219"N	104°44'22.177"W	0.00	
3017.00†	18.000	89.600	2962.28	90.25	2.74	392.67	40°12'58.221"N	104°44'21.778"W	0.00	
3117.00†	18.000	89.600	3057.39	97.36	2.96	423.57	40°12'58.223"N	104°44'21.380"W	0.00	
3217.00†	18.000	89.600	3152.49	104.46	3.17	454.47	40°12'58.225"N	104°44'20.982"W	0.00	
3317.00†	18.000	89.600	3247.60	111.56	3.39	485.37	40°12'58.227"N	104°44'20.583"W	0.00	
3417.00†	18.000	89.600	3342.70	118.66	3.60	516.27	40°12'58.230"N	104°44'20.185"W	0.00	
3517.00†	18.000	89.600	3437.81	125.77	3.82	547.17	40°12'58.232"N	104°44'19.787"W	0.00	
3617.00†	18.000	89.600	3532.92	132.87	4.04	578.08	40°12'58.234"N	104°44'19.388"W	0.00	
3717.00†	18.000	89.600	3628.02	139.97	4.25	608.98	40°12'58.236"N	104°44'18.990"W	0.00	
3817.00†	18.000	89.600	3723.13	147.07	4.47	639.88	40°12'58.238"N	104°44'18.592"W	0.00	
3917.00†	18.000	89.600	3818.23	154.18	4.68	670.78	40°12'58.240"N	104°44'18.193"W	0.00	
4017.00†	18.000	89.600	3913.34	161.28	4.90	701.68	40°12'58.242"N	104°44'17.795"W	0.00	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)	
Area	COLORADO	Well	MELBA 26N-14HZ	
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB	
Facility	SEC.23-T3N-R66W			

WELLPATH DATA (146 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4079.73†	18.000	89.600	3973.00	165.73	5.03	721.06	40°12'58.244"N	104°44'17.545"W	0.00	Parkman
4117.00†	18.000	89.600	4008.44	168.38	5.11	732.58	40°12'58.244"N	104°44'17.397"W	0.00	
4217.00†	18.000	89.600	4103.55	175.48	5.33	763.48	40°12'58.247"N	104°44'16.998"W	0.00	
4317.00†	18.000	89.600	4198.66	182.59	5.55	794.38	40°12'58.249"N	104°44'16.600"W	0.00	
4417.00†	18.000	89.600	4293.76	189.69	5.76	825.28	40°12'58.251"N	104°44'16.202"W	0.00	
4517.00†	18.000	89.600	4388.87	196.79	5.98	856.18	40°12'58.253"N	104°44'15.803"W	0.00	
4533.96†	18.000	89.600	4405.00	198.00	6.01	861.43	40°12'58.253"N	104°44'15.736"W	0.00	Sussex
4617.00†	18.000	89.600	4483.97	203.89	6.19	887.09	40°12'58.255"N	104°44'15.405"W	0.00	
4717.00†	18.000	89.600	4579.08	211.00	6.41	917.99	40°12'58.257"N	104°44'15.007"W	0.00	
4817.00†	18.000	89.600	4674.18	218.10	6.62	948.89	40°12'58.259"N	104°44'14.608"W	0.00	
4917.00†	18.000	89.600	4769.29	225.20	6.84	979.79	40°12'58.261"N	104°44'14.210"W	0.00	
5017.00†	18.000	89.600	4864.39	232.30	7.06	1010.69	40°12'58.264"N	104°44'13.812"W	0.00	
5117.00†	18.000	89.600	4959.50	239.41	7.27	1041.59	40°12'58.266"N	104°44'13.414"W	0.00	
5217.00†	18.000	89.600	5054.61	246.51	7.49	1072.49	40°12'58.268"N	104°44'13.015"W	0.00	
5317.00†	18.000	89.600	5149.71	253.61	7.70	1103.39	40°12'58.270"N	104°44'12.617"W	0.00	
5417.00†	18.000	89.600	5244.82	260.71	7.92	1134.29	40°12'58.272"N	104°44'12.219"W	0.00	
5517.00†	18.000	89.600	5339.92	267.82	8.13	1165.19	40°12'58.274"N	104°44'11.820"W	0.00	
5617.00†	18.000	89.600	5435.03	274.92	8.35	1196.09	40°12'58.276"N	104°44'11.422"W	0.00	
5659.03	18.000	89.600	5475.00	277.90	8.44	1209.08	40°12'58.277"N	104°44'11.254"W	0.00	BEGIN DROP
5717.00†	16.841	89.600	5530.31	281.89	8.56	1226.44	40°12'58.278"N	104°44'11.031"W	2.00	
5817.00†	14.841	89.600	5626.51	288.17	8.75	1253.73	40°12'58.280"N	104°44'10.679"W	2.00	
5917.00†	12.841	89.600	5723.60	293.66	8.92	1277.65	40°12'58.282"N	104°44'10.371"W	2.00	
6017.00†	10.841	89.600	5821.47	298.38	9.06	1298.17	40°12'58.283"N	104°44'10.106"W	2.00	
6117.00†	8.841	89.600	5919.99	302.31	9.18	1315.26	40°12'58.284"N	104°44'09.886"W	2.00	
6217.00†	6.841	89.600	6019.05	305.44	9.28	1328.90	40°12'58.285"N	104°44'09.710"W	2.00	
6317.00†	4.841	89.600	6118.53	307.78	9.35	1339.07	40°12'58.286"N	104°44'09.579"W	2.00	
6417.00†	2.841	89.600	6218.30	309.32	9.40	1345.77	40°12'58.286"N	104°44'09.492"W	2.00	
6517.00†	0.841	89.600	6318.24	310.06	9.42	1348.98	40°12'58.287"N	104°44'09.451"W	2.00	
6559.03	0.000	359.987	6360.27	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	2.00	END DROP
6617.00†	0.000	359.987	6418.24	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	0.00	
6717.00†	0.000	359.987	6518.24	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	0.00	
6717.81†	0.000	359.987	6519.05	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	0.00	4 1/2" Liner Top
6817.00†	0.000	359.987	6618.24	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	0.00	
6817.81	0.000	359.987	6619.05	310.13	9.42	1349.29	40°12'58.287"N	104°44'09.447"W	0.00	KOP, BUILD @ 10°/100
6917.00†	9.919	359.987	6717.75	318.48	17.98	1349.29	40°12'58.371"N	104°44'09.447"W	10.00	
7017.00†	19.919	359.987	6814.25	343.54	43.70	1349.28	40°12'58.625"N	104°44'09.447"W	10.00	
7117.00†	29.919	359.987	6904.83	384.56	85.78	1349.27	40°12'59.041"N	104°44'09.447"W	10.00	
7217.00†	39.919	359.987	6986.72	440.29	142.95	1349.26	40°12'59.606"N	104°44'09.447"W	10.00	
7317.00†	49.919	359.987	7057.44	509.03	213.47	1349.25	40°13'00.303"N	104°44'09.448"W	10.00	
7345.10†	52.730	359.987	7075.00	530.41	235.41	1349.24	40°13'00.520"N	104°44'09.448"W	10.00	Sharon Springs
7417.00†	59.919	359.987	7114.84	588.70	295.20	1349.23	40°13'01.111"N	104°44'09.448"W	10.00	
7453.24†	63.543	359.987	7132.00	619.80	327.11	1349.22	40°13'01.426"N	104°44'09.448"W	10.00	Niobrara A
7517.00†	69.919	359.987	7157.18	676.87	385.66	1349.21	40°13'02.005"N	104°44'09.448"W	10.00	
7617.00†	79.919	359.987	7183.16	770.87	482.09	1349.19	40°13'02.958"N	104°44'09.448"W	10.00	
7621.91†	80.410	359.987	7184.00	775.58	486.93	1349.19	40°13'03.005"N	104°44'09.448"W	10.00	Niobrara B

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	89.919	359.987	7192.01	867.84	581.57	1349.17	40°13'03.941"N	104°44'09.448"W	10.00	
7720.51	90.270	359.987	7192.00	871.26	585.08	1349.17	40°13'03.975"N	104°44'09.448"W	10.00	LANDING POINT
7817.00†	90.270	359.987	7191.55	965.31	681.57	1349.14	40°13'04.929"N	104°44'09.449"W	0.00	
7917.00†	90.270	359.987	7191.07	1062.79	781.57	1349.12	40°13'05.917"N	104°44'09.449"W	0.00	
8017.00†	90.270	359.987	7190.60	1160.26	881.57	1349.10	40°13'06.905"N	104°44'09.449"W	0.00	
8117.00†	90.270	359.987	7190.13	1257.74	981.56	1349.08	40°13'07.893"N	104°44'09.449"W	0.00	
8217.00†	90.270	359.987	7189.66	1355.21	1081.56	1349.06	40°13'08.882"N	104°44'09.449"W	0.00	
8317.00†	90.270	359.987	7189.19	1452.69	1181.56	1349.03	40°13'09.870"N	104°44'09.450"W	0.00	
8417.00†	90.270	359.987	7188.72	1550.16	1281.56	1349.01	40°13'10.858"N	104°44'09.450"W	0.00	
8517.00†	90.270	359.987	7188.25	1647.64	1381.56	1348.99	40°13'11.846"N	104°44'09.450"W	0.00	
8617.00†	90.270	359.987	7187.78	1745.11	1481.56	1348.97	40°13'12.834"N	104°44'09.450"W	0.00	
8717.00†	90.270	359.987	7187.31	1842.59	1581.56	1348.95	40°13'13.823"N	104°44'09.450"W	0.00	
8817.00†	90.270	359.987	7186.83	1940.06	1681.56	1348.93	40°13'14.811"N	104°44'09.451"W	0.00	
8917.00†	90.270	359.987	7186.36	2037.54	1781.56	1348.90	40°13'15.799"N	104°44'09.451"W	0.00	
9017.00†	90.270	359.987	7185.89	2135.01	1881.55	1348.88	40°13'16.787"N	104°44'09.451"W	0.00	
9117.00†	90.270	359.987	7185.42	2232.49	1981.55	1348.86	40°13'17.775"N	104°44'09.451"W	0.00	
9217.00†	90.270	359.987	7184.95	2329.96	2081.55	1348.84	40°13'18.763"N	104°44'09.452"W	0.00	
9317.00†	90.270	359.987	7184.48	2427.44	2181.55	1348.82	40°13'19.752"N	104°44'09.452"W	0.00	
9417.00†	90.270	359.987	7184.01	2524.91	2281.55	1348.79	40°13'20.740"N	104°44'09.452"W	0.00	
9517.00†	90.270	359.987	7183.54	2622.39	2381.55	1348.77	40°13'21.728"N	104°44'09.452"W	0.00	
9617.00†	90.270	359.987	7183.07	2719.86	2481.55	1348.75	40°13'22.716"N	104°44'09.452"W	0.00	
9717.00†	90.270	359.987	7182.59	2817.34	2581.55	1348.73	40°13'23.704"N	104°44'09.453"W	0.00	
9817.00†	90.270	359.987	7182.12	2914.81	2681.55	1348.71	40°13'24.693"N	104°44'09.453"W	0.00	
9917.00†	90.270	359.987	7181.65	3012.29	2781.54	1348.68	40°13'25.681"N	104°44'09.453"W	0.00	
10017.00†	90.270	359.987	7181.18	3109.76	2881.54	1348.66	40°13'26.669"N	104°44'09.453"W	0.00	
10117.00†	90.270	359.987	7180.71	3207.24	2981.54	1348.64	40°13'27.657"N	104°44'09.453"W	0.00	
10217.00†	90.270	359.987	7180.24	3304.71	3081.54	1348.62	40°13'28.645"N	104°44'09.454"W	0.00	
10317.00†	90.270	359.987	7179.77	3402.19	3181.54	1348.60	40°13'29.633"N	104°44'09.454"W	0.00	
10417.00†	90.270	359.987	7179.30	3499.66	3281.54	1348.57	40°13'30.622"N	104°44'09.454"W	0.00	
10517.00†	90.270	359.987	7178.83	3597.14	3381.54	1348.55	40°13'31.610"N	104°44'09.454"W	0.00	
10617.00†	90.270	359.987	7178.35	3694.61	3481.54	1348.53	40°13'32.598"N	104°44'09.454"W	0.00	
10717.00†	90.270	359.987	7177.88	3792.09	3581.54	1348.51	40°13'33.586"N	104°44'09.455"W	0.00	
10817.00†	90.270	359.987	7177.41	3889.56	3681.53	1348.49	40°13'34.574"N	104°44'09.455"W	0.00	
10917.00†	90.270	359.987	7176.94	3987.04	3781.53	1348.47	40°13'35.563"N	104°44'09.455"W	0.00	
11017.00†	90.270	359.987	7176.47	4084.51	3881.53	1348.44	40°13'36.551"N	104°44'09.455"W	0.00	
11117.00†	90.270	359.987	7176.00	4181.99	3981.53	1348.42	40°13'37.539"N	104°44'09.456"W	0.00	
11217.00†	90.270	359.987	7175.53	4279.46	4081.53	1348.40	40°13'38.527"N	104°44'09.456"W	0.00	
11317.00†	90.270	359.987	7175.06	4376.94	4181.53	1348.38	40°13'39.515"N	104°44'09.456"W	0.00	
11417.00†	90.270	359.987	7174.59	4474.41	4281.53	1348.36	40°13'40.503"N	104°44'09.456"W	0.00	
11517.00†	90.270	359.987	7174.11	4571.89	4381.53	1348.33	40°13'41.492"N	104°44'09.456"W	0.00	
11617.00†	90.270	359.987	7173.64	4669.36	4481.53	1348.31	40°13'42.480"N	104°44'09.457"W	0.00	
11717.00†	90.270	359.987	7173.17	4766.84	4581.52	1348.29	40°13'43.468"N	104°44'09.457"W	0.00	
11817.00†	90.270	359.987	7172.70	4864.31	4681.52	1348.27	40°13'44.456"N	104°44'09.457"W	0.00	
11917.00†	90.270	359.987	7172.23	4961.79	4781.52	1348.25	40°13'45.444"N	104°44'09.457"W	0.00	
12017.00†	90.270	359.987	7171.76	5059.26	4881.52	1348.22	40°13'46.433"N	104°44'09.457"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.270	359.987	7171.29	5156.74	4981.52	1348.20	40°13'47.421"N	104°44'09.458"W	0.00	
12217.00†	90.270	359.987	7170.82	5254.21	5081.52	1348.18	40°13'48.409"N	104°44'09.458"W	0.00	
12317.00†	90.270	359.987	7170.34	5351.69	5181.52	1348.16	40°13'49.397"N	104°44'09.458"W	0.00	
12417.00†	90.270	359.987	7169.87	5449.16	5281.52	1348.14	40°13'50.385"N	104°44'09.458"W	0.00	
12517.00†	90.270	359.987	7169.40	5546.64	5381.52	1348.11	40°13'51.373"N	104°44'09.459"W	0.00	
12617.00†	90.270	359.987	7168.93	5644.11	5481.51	1348.09	40°13'52.362"N	104°44'09.459"W	0.00	
12717.00†	90.270	359.987	7168.46	5741.59	5581.51	1348.07	40°13'53.350"N	104°44'09.459"W	0.00	
12817.00†	90.270	359.987	7167.99	5839.06	5681.51	1348.05	40°13'54.338"N	104°44'09.459"W	0.00	
12917.00†	90.270	359.987	7167.52	5936.54	5781.51	1348.03	40°13'55.326"N	104°44'09.459"W	0.00	
13017.00†	90.270	359.987	7167.05	6034.01	5881.51	1348.01	40°13'56.314"N	104°44'09.460"W	0.00	
13027.00	90.270	359.987	7167.00 ¹	6043.76	5891.51	1348.00	40°13'56.413"N	104°44'09.460"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: MELBA 26N-14HZ PWB Ref Wellpath: MELBA 26N-14HZ (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	1192.00	1175.00	17.00	1192.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1192.00	1175.00	17.00	1192.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1192.00	7720.51	6528.51	1192.00	7192.00	0.00	0.00	585.08	1349.17
7in Casing Intermediate	17.00	7720.51	7703.51	17.00	7192.00	0.00	0.00	585.08	1349.17
6.125in Open Hole	7720.51	13027.00	5306.49	7192.00	7167.00	585.08	1349.17	5891.51	1348.00
4.5in Casing Production	17.00	13027.00	13010.00	17.00	7167.00	0.00	0.00	5891.51	1348.00

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.14-T3N-R66W HARDLINES (460' SETBACKS)		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W	polygon
SEC.14-T3N-R66W SECTION LINES		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W	polygon
SEC.23-T3N-R66W HARDLINES (460' SETBACKS)		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W	polygon
SEC.23-T3N-R66W SECTION LINES		0.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W	polygon
1) MELBA 26N-14HZ (320'FEL & 1'FNL, SEC.14) REV-1	13027.00	7167.00	5891.51	1348.00	3213316.39	1328401.31	40°13'56.413"N	104°44'09.460"W	point
MELBA 26N-14HZ LANDBOX		7177.00	-0.71	-90.22	3211928.73	1322497.26	40°12'58.187"N	104°44'28.003"W	polygon

SURVEY PROGRAM - Ref Wellbore: MELBA 26N-14HZ PWB				Ref Wellpath: MELBA 26N-14HZ (PERMIT REV-1) PWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
17.00	13027.00	NaviTrak (MagCorr)			MELBA 26N-14HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 MELBA 26N-14HZ (1676' FEL & 618' FNL, SEC.23)
Area	COLORADO	Well	MELBA 26N-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	MELBA 26N-14HZ PWB
Facility	SEC.23-T3N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1142.00	0.000	89.600	1142.00	Fox Hills Marker
4079.73	18.000	89.600	3973.00	Parkman
4533.96	18.000	89.600	4405.00	Sussex
6717.81	0.000	359.987	6519.05	4 1/2" Liner Top
7345.10	52.730	359.987	7075.00	Sharon Springs
7453.24	63.543	359.987	7132.00	Niobrara A
7621.91	80.410	359.987	7184.00	Niobrara B

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	89.600	17.00	TIE-ON
1300.00	0.000	89.600	1300.00	BEGIN NUDGE
2200.00	18.000	89.600	2185.27	END NUDGE
5659.03	18.000	89.600	5475.00	BEGIN DROP
6559.03	0.000	359.987	6360.27	END DROP
6817.81	0.000	359.987	6619.05	KOP, BUILD @ 10°/100
7720.51	90.270	359.987	7192.00	LANDING POINT
13027.00	90.270	359.987	7167.00	TOTAL DEPTH