

HOBBS OCD

APR 01 2019

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Actual Wellpath Report
SD EA 29 Federal COM P8 No. 12H AWB Pilot
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 Federal COM P8 No. 12H
Area	Lea County, NM	Well	SD EA 29 Federal COM P8 No. 12H
Field	Bone Spring	Wellbore	SD EA 29 Federal COM P8 No. 12H AWB Pilot
Facility	SD EA 29 Fed Com P8		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Marimic
Scale	0.999970	Report Generated	2/16/2018 at 12:48:25 PM
Convergence at slot	0.39° East	Database/Source file	WA_HOU_Midland_Defn/SD_EA_29_Federal_COM_P8_No_12H_AWB_Pilot.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	730235.00	372253.00	32°01'16.543"N	103°35'25.673"W
Facility Reference Pt			730235.00	372253.00	32°01'16.543"N	103°35'25.673"W
Field Reference Pt			152400.30	0.00	30°59'42.846"N	105°26'33.659"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig: Nabors X30 (KB) to Facility Vertical Datum	3279.60ft
Horizontal Reference Pt	Slot	Rig: Nabors X30 (KB) to Mean Sea Level	3279.60ft
Vertical Reference Pt	Rig: Nabors X30 (KB)	Rig: Nabors X30 (KB) to Ground Level at Slot (SD EA 29 Federal COM P8 No. 12H)	32.60ft
MD Reference Pt	Rig: Nabors X30 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.57°

We hereby certify that the surveys contained herein, are to the best of our knowledge a true and accurate account of the well.


MWD COORDINATOR



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WELLPATH DATA (88 stations) † = interpolated/extrapolated station														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(°/100ft)	(°/100ft)	(°/100ft)	
0.00	0.00	275.500	0.00	0.00	0.00	0.00	730235.00	372253.00	32°01'16.543"N	103°35'25.673"W	0.00	0.00	0.00	
32.60	0.00	275.500	32.60	0.00	0.00	0.00	730235.00	372253.00	32°01'16.543"N	103°35'25.673"W	0.00	0.00	0.00	
249.00	0.900	275.500	248.99	-0.18	0.16	-1.69	730233.31	372253.16	32°01'16.545"N	103°35'25.693"W	0.42	0.42	-39.05	
259.00	0.700	282.500	258.99	-0.20	0.18	-1.83	730233.17	372253.18	32°01'16.545"N	103°35'25.694"W	2.22	-2.00	70.00	
350.00	0.800	299.500	349.98	-0.64	0.62	-2.93	730232.07	372253.62	32°01'16.549"N	103°35'25.707"W	0.27	0.91	18.68	
444.00	0.900	315.500	443.97	-1.50	1.47	-4.01	730230.99	372254.47	32°01'16.558"N	103°35'25.720"W	0.27	0.11	17.02	
535.00	1.000	315.500	534.96	-2.58	2.54	-5.07	730229.93	372255.54	32°01'16.569"N	103°35'25.732"W	0.11	0.11	0.00	
627.00	1.300	309.500	626.94	-3.83	3.78	-6.44	730228.56	372256.78	32°01'16.581"N	103°35'25.748"W	0.35	0.33	-6.52	
717.00	1.600	302.500	716.91	-5.17	5.10	-8.29	730226.71	372258.10	32°01'16.594"N	103°35'25.769"W	0.39	0.33	-7.78	
809.00	2.400	297.500	808.86	-6.77	6.68	-11.08	730223.92	372259.68	32°01'16.610"N	103°35'25.801"W	0.89	0.87	-5.43	Imported surface gyro 249' @ 809'
884.00	2.260	297.450	883.79	-8.19	8.09	-13.78	730221.22	372261.09	32°01'16.624"N	103°35'25.833"W	0.19	-0.19	-0.07	
976.00	1.550	172.550	975.77	-7.81	7.69	-15.23	730219.77	372260.69	32°01'16.620"N	103°35'25.849"W	3.69	-0.77	-135.76	
1168.00	4.060	152.690	1167.53	0.84	-0.92	-11.78	730223.22	372252.08	32°01'16.535"N	103°35'25.810"W	1.38	1.31	-10.34	
1358.00	3.100	148.440	1357.15	11.23	-11.28	-6.00	730229.00	372241.72	32°01'16.432"N	103°35'25.744"W	0.52	-0.51	-2.24	
1549.00	2.690	146.830	1547.91	-19.42	-19.43	-0.85	730234.15	372233.57	32°01'16.351"N	103°35'25.684"W	0.22	-0.21	-0.84	
1738.00	2.010	149.810	1736.75	26.03	-26.01	3.25	730238.25	372226.99	32°01'16.286"N	103°35'25.637"W	0.37	-0.36	1.58	
1928.00	1.530	155.960	1926.68	31.25	-31.20	5.96	730240.96	372221.80	32°01'16.234"N	103°35'25.606"W	0.27	-0.25	3.24	
2115.00	4.140	132.800	2113.42	38.16	-38.07	11.93	730246.93	372214.93	32°01'16.166"N	103°35'25.538"W	1.60	1.40	-12.39	
2304.00	3.300	143.150	2302.02	47.21	-47.06	20.19	730255.19	372205.94	32°01'16.076"N	103°35'25.442"W	0.57	-0.44	5.48	
2493.00	5.660	125.760	2490.44	157.09	-156.86	3.102	730266.02	372196.14	32°01'15.978"N	103°35'25.317"W	1.43	1.25	-9.20	
2683.00	8.250	132.450	2679.03	71.90	-71.54	48.69	730283.69	372181.46	32°01'15.832"N	103°35'25.113"W	1.43	1.36	3.52	
2873.00	8.100	135.820	2867.10	90.85	-90.34	68.07	730303.07	372162.66	32°01'15.645"N	103°35'24.890"W	0.26	-0.08	1.77	
3062.00	7.670	140.460	3054.31	110.25	-109.62	85.38	730320.38	372143.39	32°01'15.453"N	103°35'24.690"W	0.41	-0.23	2.46	
3252.00	7.150	135.200	3242.73	128.55	-127.79	101.79	730336.78	372125.22	32°01'15.272"N	103°35'24.501"W	0.45	-0.27	-2.77	
3441.00	7.800	133.320	3430.12	145.82	-144.93	119.41	730354.40	372108.07	32°01'15.101"N	103°35'24.298"W	0.37	-0.34	-0.99	
3630.00	9.460	124.490	3616.98	163.58	-162.53	141.54	730376.54	372090.48	32°01'14.925"N	103°35'24.042"W	1.12	0.88	-4.67	
3818.00	10.570	118.610	3802.12	180.80	-179.53	169.41	730404.41	372073.47	32°01'14.755"N	103°35'23.720"W	0.80	0.59	-3.13	
4006.00	9.410	116.980	3987.27	195.25	-194.76	198.25	730433.24	372058.24	32°01'14.602"N	103°35'23.386"W	0.64	-0.62	-0.87	
4195.00	7.780	115.090	4174.14	208.87	-207.20	223.61	730458.60	372045.81	32°01'14.478"N	103°35'23.093"W	0.88	-0.86	-1.00	
4386.00	10.000	129.060	4362.85	224.99	-223.13	248.20	730483.19	372029.87	32°01'14.318"N	103°35'22.808"W	1.61	1.16	7.31	



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Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (88 stations)														
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
4575.00	10.150	130.970	4548.94	246.44	-244.39	273.51	730508.50	372008.61	32°01'14.106"N	103°35'22.516"W	0.19	0.08	1.01	
4765.00	9.670	131.050	4736.10	268.08	-265.85	298.19	730533.18	371987.16	32°01'13.892"N	103°35'22.231"W	0.25	-0.25	0.04	
4956.00	6.530	134.110	4925.17	286.33	-283.95	318.09	730553.08	371969.06	32°01'13.712"N	103°35'22.001"W	1.66	-1.64	1.60	
5145.00	6.390	134.020	5112.97	301.23	-298.74	333.37	730568.36	371954.27	32°01'13.564"N	103°35'21.825"W	0.07	-0.07	-0.05	
5335.00	6.190	134.480	5301.83	315.87	-313.26	348.28	730583.27	371939.75	32°01'13.420"N	103°35'21.653"W	0.11	-0.11	0.24	
5525.00	5.320	135.510	5490.87	329.43	-326.72	361.76	730596.75	371926.29	32°01'13.285"N	103°35'21.498"W	0.46	-0.46	0.54	
5716.00	4.330	133.790	5681.19	340.82	-338.03	373.17	730608.16	371914.98	32°01'13.173"N	103°35'21.366"W	0.52	-0.52	-0.90	
5906.00	3.310	138.140	5870.77	349.94	-347.08	382.01	730617.00	371905.93	32°01'13.083"N	103°35'21.264"W	0.56	-0.54	2.29	
6096.00	2.290	137.660	6060.54	356.87	-353.97	388.23	730623.21	371899.04	32°01'13.014"N	103°35'21.192"W	0.54	-0.54	-0.25	
6287.00	3.510	116.280	6251.30	362.34	-359.38	396.04	730631.03	371893.63	32°01'12.960"N	103°35'21.102"W	0.84	0.64	-11.19	
6475.00	6.090	105.080	6438.62	367.60	-364.52	410.83	730645.82	371888.49	32°01'12.908"N	103°35'20.931"W	1.45	1.37	-5.96	
6665.00	8.520	102.320	6627.07	373.40	-370.15	434.32	730669.30	371882.86	32°01'12.851"N	103°35'20.658"W	1.29	1.28	-1.45	
6854.00	8.500	104.210	6813.99	380.02	-376.56	461.54	730696.52	371876.45	32°01'12.785"N	103°35'20.343"W	0.15	-0.01	1.00	
7043.00	8.520	96.880	7000.91	385.33	-381.67	488.98	730723.96	371871.34	32°01'12.733"N	103°35'20.024"W	0.57	0.01	-3.88	
7232.00	8.930	85.880	7187.74	386.17	-382.29	517.51	730752.49	371870.72	32°01'12.725"N	103°35'19.693"W	0.91	0.22	25.82	
7422.00	9.030	85.540	7375.41	384.17	-380.08	547.08	730782.07	371872.94	32°01'12.745"N	103°35'19.349"W	0.06	0.05	-0.18	
7612.00	8.310	88.410	7563.24	382.84	-378.53	575.68	730810.66	371874.48	32°01'12.758"N	103°35'19.017"W	0.44	-0.38	1.51	
7802.00	7.680	90.850	7751.39	382.85	-378.34	602.09	730837.08	371874.67	32°01'12.758"N	103°35'18.710"W	0.38	-0.33	1.28	
7990.00	6.390	94.090	7937.97	383.96	-379.27	625.09	730860.07	371873.74	32°01'12.747"N	103°35'18.443"W	0.72	-0.69	1.72	
8179.00	5.960	92.990	8125.88	385.37	-380.54	645.98	730880.36	371872.48	32°01'12.734"N	103°35'18.208"W	0.24	0.23	0.58	
8376.00	8.400	88.940	8321.32	385.82	-380.80	669.99	730904.96	371872.21	32°01'12.729"N	103°35'17.922"W	1.26	1.24	-2.06	
8567.00	8.570	90.180	8510.23	385.82	-380.59	698.17	730933.14	371872.42	32°01'12.729"N	103°35'17.595"W	0.13	0.09	0.65	
8754.00	8.450	93.430	8695.17	386.89	-381.46	725.81	730960.79	371871.56	32°01'12.719"N	103°35'17.274"W	0.27	-0.06	1.74	
8942.00	8.330	94.950	8881.16	389.10	-383.46	753.17	730988.15	371869.55	32°01'12.697"N	103°35'16.956"W	0.13	-0.06	0.81	
9131.00	7.470	96.520	9068.38	391.87	-386.03	779.02	731013.89	371866.98	32°01'12.670"N	103°35'16.656"W	0.47	0.46	0.83	
9320.00	6.610	90.140	9255.94	393.46	-387.46	802.10	731037.07	371865.56	32°01'12.654"N	103°35'16.388"W	0.61	-0.46	-3.38	
9509.00	6.850	94.720	9443.64	394.58	-388.41	824.21	731059.19	371864.60	32°01'12.643"N	103°35'16.131"W	0.31	0.13	2.42	
9698.00	6.640	83.110	9630.92	394.00	-387.63	849.54	731084.51	371865.38	32°01'12.649"N	103°35'15.837"W	1.25	0.95	-6.14	
9887.00	6.260	83.820	9818.31	391.37	-384.82	873.88	731108.86	371868.19	32°01'12.676"N	103°35'15.554"W	1.26	-1.26	0.38	
10075.00	6.710	80.410	10005.10	388.59	-381.89	894.90	731129.87	371871.52	32°01'12.703"N	103°35'15.310"W	0.31	0.24	1.81	



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10262.00	10.010	85.530	10190.09	385.71	-378.80	921.89	731156.86	371874.21	32°01'12.732"N	103°35'14.996"W	1.81	1.76	2.74	
10452.00	9.550	91.440	10377.34	385.06	-377.91	954.11	731189.08	371875.10	32°01'12.739"N	103°35'14.622"W	0.58	-0.24	3.11	
10546.00	10.170	79.040	10469.96	383.80	-376.53	970.05	731205.02	371876.48	32°01'12.751"N	103°35'14.437"W	2.35	0.66	-13.19	
10640.00	11.250	79.020	10562.32	380.60	-373.20	987.20	731222.17	371879.81	32°01'12.783"N	103°35'14.237"W	1.15	1.15	-0.02	
10735.00	10.670	78.830	10655.59	377.27	-369.73	1004.93	731239.89	371883.28	32°01'12.816"N	103°35'14.031"W	0.61	-0.61	-0.20	
10831.00	9.820	79.270	10750.06	374.15	-366.49	1021.69	731256.66	371886.52	32°01'12.847"N	103°35'13.836"W	0.89	-0.89	0.46	
10926.00	8.530	79.460	10843.84	371.46	-363.69	1036.58	731271.54	371889.32	32°01'12.874"N	103°35'13.663"W	1.36	-1.36	0.20	
11109.00	6.550	76.010	11025.25	366.63	-358.69	1060.05	731295.01	371894.33	32°01'12.922"N	103°35'13.390"W	1.11	-1.08	-1.89	
11204.00	4.860	69.980	11119.78	364.01	-356.00	1069.09	731304.05	371897.01	32°01'12.947"N	103°35'13.285"W	1.89	-1.78	-6.35	
11300.00	5.010	66.620	11215.42	361.01	-352.94	1076.76	731311.72	371900.07	32°01'12.972"N	103°35'13.195"W	0.34	0.18	-3.50	
11395.00	7.420	71.930	11309.85	357.54	-349.39	1086.40	731321.36	371903.62	32°01'13.012"N	103°35'13.083"W	2.61	2.54	5.59	
11489.00	6.970	82.660	11403.12	355.01	-346.78	1097.83	731332.79	371906.23	32°01'13.037"N	103°35'12.950"W	1.51	-0.48	11.41	
11584.00	7.220	82.480	11497.39	353.58	-345.26	1109.46	731344.42	371907.75	32°01'13.051"N	103°35'12.815"W	0.26	0.26	-0.19	
11678.00	8.220	86.850	11590.54	352.53	-344.12	1122.03	731356.99	371908.89	32°01'13.061"N	103°35'12.669"W	1.23	1.06	4.65	
11775.00	7.530	90.850	11686.62	352.34	-343.83	1135.31	731370.27	371909.18	32°01'13.063"N	103°35'12.515"W	0.91	-0.71	4.12	
11870.00	7.510	89.150	11780.81	352.44	-343.83	1147.74	731382.70	371909.18	32°01'13.062"N	103°35'12.370"W	0.24	-0.02	-1.79	
11964.00	8.630	84.730	11873.88	351.80	-343.10	1160.90	731395.87	371909.92	32°01'13.069"N	103°35'12.217"W	1.36	1.19	-4.70	
12058.00	8.380	83.480	11966.84	350.48	-341.67	1174.73	731409.69	371911.34	32°01'13.082"N	103°35'12.057"W	0.33	-0.27	-1.33	
12152.00	7.700	83.400	12059.92	349.07	-340.17	1187.79	731422.75	371912.84	32°01'13.096"N	103°35'11.905"W	0.72	-0.72	-0.09	
12247.00	7.300	83.160	12154.10	347.72	-338.72	1200.11	731436.07	371914.29	32°01'13.110"N	103°35'11.762"W	0.42	-0.42	-0.25	
12309.00	6.730	81.630	12215.64	346.77	-337.72	1207.61	731442.57	371915.29	32°01'13.119"N	103°35'11.674"W	0.97	-0.92	-2.47	
12368.00	6.470	81.370	12274.25	345.82	-336.72	1214.32	731449.28	371916.29	32°01'13.128"N	103°35'11.597"W	0.44	-0.44	-0.44	
12463.00	5.430	78.680	12366.74	344.21	-335.03	1224.02	731458.98	371917.98	32°01'13.144"N	103°35'11.484"W	1.13	-1.09	-2.83	
12652.00	3.100	87.860	12557.20	342.37	-333.09	1237.90	731472.86	371919.92	32°01'13.163"N	103°35'11.322"W	1.28	-1.23	4.86	
12746.00	2.450	84.520	12651.09	342.11	-332.80	1242.44	731477.40	371920.21	32°01'13.165"N	103°35'11.270"W	0.71	-0.69	-3.55	
12842.00	1.170	83.680	12747.04	341.83	-332.50	1245.45	731480.41	371920.52	32°01'13.168"N	103°35'11.235"W	1.33	-1.33	-0.87	
12937.00	0.960	81.110	12842.03	341.62	-332.27	1247.20	731482.16	371920.74	32°01'13.170"N	103°35'11.214"W	0.23	-0.22	-2.71	BH MWD 884' - 12937'
13000.00	0.960	81.110	12905.02	341.46	-332.10	1248.25	731483.21	371920.91	32°01'13.172"N	103°35'11.202"W	0.00	0.00	0.00	



Actual Wellpath Report
 SD EA 29 Federal COM P8 No. 12H AWB Pilot
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 Federal COM P8 No. 12H
Area	Lea County, NM	Well	SD EA 29 Federal COM P8 No. 12H
Field	Bone Spring	Wellbore	SD EA 29 Federal COM P8 No. 12H AWB Pilot
Facility	SD EA 29 Fed Com P8		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SD EA 29 FED COM P8 No. Well 3 (A2) FTP	12575.00	-185.47	1279.30	731514.26	372067.54	32°01'14.621"N	103°35'10.830"W	point
SD EA 29 FED COM P8 12H 1	12735.00	-2573.53	1296.88	731531.84	369679.55	32°00'50.988"N	103°35'10.817"W	point
SD EA 29 FED COM P8 12H 3	12762.00	-6853.41	1329.14	731564.10	365399.81	32°00'08.634"N	103°35'10.786"W	point
SD EA 29 FED COM P8 12H PBHL rev 3	12766.00	-7503.24	1334.04	731569.00	364750.00	32°00'02.203"N	103°35'10.781"W	point
SD EA 29 FED COM P8 12H 2	12767.00	-5678.44	1320.29	731555.25	366574.74	32°00'20.262"N	103°35'10.795"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD EA 29 Federal COM P8 No. 12H AWB Pilot Ref Wellpath: SD EA 29 Federal COM P8 No. 12H AWB Pilot					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
32.60	809.00	BHI Generic gyro - northseeking (Standard)	Imported surface gyro 249' - 809'	SD EA 29 Federal COM P8 No. 12H AWB Pilot	
809.00	12937.00	BHI NaviTrak (Standard)	BH MWD 884' - 12937'	SD EA 29 Federal COM P8 No. 12H AWB Pilot	
12937.00	13000.00	Blind Drilling (std)	Projection to bit	SD EA 29 Federal COM P8 No. 12H AWB Pilot	



Actual Wellpath Report
SD EA 29 Federal COM P8 No. 12H AWB Pilot
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 Federal COM P8 No. 12H
Area	Lea County, NM	Well	SD EA 29 Federal COM P8 No. 12H
Field	Bone Spring	Wellbore	SD EA 29 Federal COM P8 No. 12H AWB Pilot
Facility	SD EA 29 Fed Com P8		

COMMENTS

Wellpath general comments

Chevron U.S.A. Inc.
Well: SD EA 29 Federal COM P8 No. 12H
Field: Bone Spring
Rig: Nabors X30
Location: Lea Co., NM
API: 30-025-43271-00
Latitude: 32° 1' 16.543" N
Longitude: 103° 35' 25.673" W
DF Elevation: 3279.6 feet
Elev. GL: 3247 feet
Proposed Direction: 179.57°
PBHL: 13923 feet
Duration: 10/25/2017-11/21/2017
FSE's: D. Hardeman
SO#: 8793362
Imported surface gyro 249' - 809'
BH MWD 884' - 12937'