

Chevron

Actual Wellpath Report

SD EA 18 19 FED COM P15 No. 16H_awp
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**BAKER
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a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect@ 5.1
North Reference	Grid	User	Gilbjosi
Scale	0.999967	Report Generated	09-Oct-18 at 10:59:47 AM
Convergence at slot	0.39° East	Database/Source file	WA_HOU_Midland_Defn/SD_EA_18_19_FED_COM_P15_No_16H_awp.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	725497.00	382461.00	32°02'57.879"N	103°36'19.905"W
Facility Reference Pt			725497.00	382461.00	32°02'57.879"N	103°36'19.905"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	3263.60ft
Horizontal Reference Pt	Slot	Rig: Nabors X30 (KB) to Mean Sea Level	3263.60ft
Vertical Reference Pt	Rig: Nabors X30 (KB)	Rig: Nabors X30 (KB) to Ground Level at Slot (SD EA 18 19 FED COM P15 No. 16H)	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 (188 stations) † = interpolated/extrapolated station

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
0.00†	0.000	52.820	0.00	0.00	0.00	0.00	725497.00	382461.00	32°02'57.879"N	103°36'19.905"W	0.00	0.00	0.00	
32.60	0.000	52.820	32.60	0.00	0.00	0.00	725497.00	382461.00	32°02'57.879"N	103°36'19.905"W	0.00	0.00	0.00	
186.00	0.180	52.820	186.00	-0.14	0.15	0.19	725497.19	382461.15	32°02'57.881"N	103°36'19.903"W	0.12	0.12	34.43	
275.00	1.140	173.760	274.99	0.65	-0.65	0.40	725497.40	382460.35	32°02'57.873"N	103°36'19.901"W	1.40	1.08	135.89	
363.00	0.440	105.210	362.99	1.62	-1.61	0.82	725497.82	382459.39	32°02'57.863"N	103°36'19.896"W	1.21	-0.80	-77.90	
465.00	1.060	217.880	464.98	2.46	-2.46	0.62	725497.62	382458.54	32°02'57.855"N	103°36'19.898"W	1.27	0.61	110.46	
549.00	0.790	282.980	548.97	2.94	-2.94	-0.42	725496.58	382458.06	32°02'57.850"N	103°36'19.910"W	1.22	-0.32	77.50	
634.00	0.880	158.290	633.97	3.41	-3.41	-0.75	725496.25	382457.59	32°02'57.846"N	103°36'19.914"W	1.74	0.11	-146.69	
719.00	0.700	301.110	718.96	3.75	-3.75	-0.95	725496.05	382457.25	32°02'57.842"N	103°36'19.917"W	1.76	-0.21	168.02	
804.00	0.700	301.030	803.96	3.20	-3.22	-1.84	725495.16	382457.78	32°02'57.848"N	103°36'19.927"W	0.00	0.00	-0.09	
830.00	0.700	299.790	829.98	3.04	-3.06	-2.12	725494.88	382457.94	32°02'57.849"N	103°36'19.930"W	0.06	0.00	-4.77	Imported Surface 186' - 830'
890.00	0.060	303.770	889.95	2.84	-2.86	-2.46	725494.54	382458.14	32°02'57.851"N	103°36'19.934"W	1.07	-1.07	6.63	
974.00	2.390	307.440	973.93	1.74	-1.77	-3.89	725493.11	382459.23	32°02'57.862"N	103°36'19.951"W	2.77	2.77	4.37	
1069.00	5.510	307.540	1068.69	-2.29	2.22	-9.08	725487.92	382463.22	32°02'57.902"N	103°36'20.011"W	3.28	3.28	0.11	
1164.00	7.940	304.410	1163.03	-8.84	8.71	-18.11	725478.89	382469.70	32°02'57.967"N	103°36'20.115"W	2.59	2.56	-3.29	
1258.00	9.910	301.530	1255.89	-16.83	16.60	-30.36	725466.64	382477.60	32°02'58.046"N	103°36'20.257"W	2.15	2.10	-3.06	
1353.00	12.250	302.150	1349.11	-26.59	26.24	-45.87	725451.14	382487.24	32°02'58.142"N	103°36'20.436"W	2.47	2.46	0.65	
1543.00	12.260	302.740	1534.78	-48.48	47.88	-79.90	725417.10	382508.88	32°02'58.358"N	103°36'20.830"W	0.07	0.01	0.31	
1734.00	11.910	305.160	1721.55	-71.04	70.20	-113.07	725383.93	382531.20	32°02'58.582"N	103°36'21.213"W	0.32	-0.18	1.27	
1923.00	11.460	304.620	1906.63	-93.18	92.10	-144.47	725352.54	382553.09	32°02'58.800"N	103°36'21.576"W	0.25	-0.24	-0.29	
2113.00	11.150	308.140	2092.95	-115.47	114.17	-174.45	725322.56	382575.16	32°02'59.021"N	103°36'21.923"W	0.40	-0.16	1.85	
2303.00	12.140	306.050	2279.04	-138.80	137.27	-205.05	725291.96	382598.26	32°02'59.251"N	103°36'22.277"W	0.57	0.52	-1.10	
2493.00	12.090	306.190	2464.80	-162.55	160.77	-237.26	725259.75	382621.77	32°02'59.486"N	103°36'22.649"W	0.03	-0.03	0.07	
2684.00	11.650	307.570	2651.72	-186.36	184.34	-268.69	725228.32	382645.34	32°02'59.721"N	103°36'23.012"W	0.27	-0.23	0.72	
2872.00	11.990	303.190	2835.74	-208.85	206.61	-300.08	725196.93	382667.60	32°02'59.944"N	103°36'23.375"W	0.51	0.18	-2.33	
3061.00	11.780	303.180	3020.69	-230.40	227.91	-332.66	725164.36	382688.91	32°03'00.157"N	103°36'23.752"W	0.11	-0.11	-0.01	
3249.00	11.110	303.840	3204.95	-251.23	248.50	-363.76	725133.25	382709.49	32°03'00.363"N	103°36'24.112"W	0.36	-0.36	0.35	
3439.00	10.880	306.230	3391.46	-272.24	269.29	-393.43	725103.58	382730.29	32°03'00.570"N	103°36'24.455"W	0.27	-0.12	1.26	
3628.00	11.740	308.820	3576.79	-295.06	291.89	-422.80	725074.21	382752.88	32°03'00.796"N	103°36'24.795"W	0.53	0.46	1.37	
3818.00	11.400	308.340	3762.93	-319.04	315.66	-452.59	725044.43	382776.65	32°03'01.033"N	103°36'25.139"W	0.19	-0.18	-0.25	



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Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH DATA (188 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
4007.00	11.740	307.140	3948.09	-342.46	338.85	-482.57	725014.45	382799.84	32°03'01.265"N	103°36'25.485"W	0.22	0.18	-0.63	
4197.00	9.070	303.270	4134.95	-362.58	358.74	-510.50	724986.51	382819.73	32°03'01.463"N	103°36'25.808"W	1.45	-1.41	-2.04	
4385.00	7.310	303.900	4321.02	-377.53	373.54	-532.82	724964.20	382834.53	32°03'01.611"N	103°36'26.066"W	0.94	-0.94	0.34	
4575.00	5.340	300.700	4509.86	-388.92	384.80	-550.46	724946.56	382845.79	32°03'01.724"N	103°36'26.270"W	1.05	-1.04	-1.68	
4764.00	4.410	298.270	4698.17	-396.96	392.73	-564.42	724932.60	382853.72	32°03'01.803"N	103°36'26.432"W	0.50	-0.49	-1.28	
4953.00	3.800	295.010	4886.69	-403.14	398.82	-576.50	724920.52	382859.81	32°03'01.864"N	103°36'26.572"W	0.35	-0.32	-1.72	
5142.00	3.220	273.010	5075.34	-406.15	401.75	-587.47	724909.55	382862.73	32°03'01.894"N	103°36'26.699"W	0.77	-0.31	-11.64	
5237.00	2.630	199.700	5170.25	-404.26	399.84	-590.87	724906.15	382860.82	32°03'01.875"N	103°36'26.739"W	3.71	-0.62	-77.17	
5331.00	3.680	177.930	5264.11	-399.22	394.79	-591.49	724905.53	382855.78	32°03'01.825"N	103°36'26.746"W	1.68	1.12	-23.16	
5520.00	1.830	171.160	5452.88	-390.17	385.75	-590.81	724906.21	382846.73	32°03'01.736"N	103°36'26.739"W	0.99	-0.98	-3.58	
5709.00	1.800	176.270	5641.78	-384.22	379.80	-590.15	724906.87	382840.79	32°03'01.677"N	103°36'26.732"W	0.09	-0.02	2.70	
5898.00	0.720	166.350	5830.74	-380.10	375.69	-589.68	724907.34	382836.67	32°03'01.636"N	103°36'26.727"W	0.58	-0.57	-5.25	
6089.00	0.790	173.320	6021.72	-377.62	373.21	-589.24	724907.78	382834.20	32°03'01.612"N	103°36'26.722"W	0.06	0.04	3.65	
6278.00	0.530	187.720	6210.71	-375.46	371.05	-589.21	724907.81	382832.04	32°03'01.590"N	103°36'26.722"W	0.16	-0.14	7.62	
6468.00	0.380	157.480	6400.70	-374.01	369.60	-589.08	724907.94	382830.59	32°03'01.576"N	103°36'26.720"W	0.15	-0.08	-15.92	
6657.00	0.370	191.690	6589.70	-372.83	368.42	-588.97	724908.05	382829.41	32°03'01.564"N	103°36'26.719"W	0.12	-0.01	18.10	
6847.00	0.220	261.770	6779.70	-372.18	367.77	-589.45	724907.57	382828.76	32°03'01.558"N	103°36'26.725"W	0.19	-0.08	36.88	
7035.00	0.120	273.310	6967.69	-372.15	367.73	-590.01	724907.01	382828.72	32°03'01.558"N	103°36'26.731"W	0.06	-0.05	6.14	
7225.00	0.060	2.970	7157.69	-372.26	367.84	-590.20	724906.82	382828.83	32°03'01.559"N	103°36'26.733"W	0.07	-0.03	47.19	
7415.00	0.040	128.540	7347.69	-372.32	367.90	-590.14	724906.88	382828.89	32°03'01.559"N	103°36'26.733"W	0.05	-0.01	66.09	
7606.00	0.100	292.670	7538.69	-372.34	367.92	-590.25	724906.77	382828.91	32°03'01.559"N	103°36'26.734"W	0.07	0.03	85.93	
7795.00	0.390	236.250	7727.69	-372.05	367.63	-590.93	724906.09	382828.61	32°03'01.557"N	103°36'26.742"W	0.18	0.15	-29.85	
7984.00	0.560	233.070	7916.69	-371.15	366.71	-592.21	724904.81	382827.70	32°03'01.548"N	103°36'26.757"W	0.09	0.09	-1.68	
8174.00	0.440	200.270	8106.68	-369.91	365.47	-593.20	724903.82	382826.46	32°03'01.535"N	103°36'26.768"W	0.16	-0.06	-17.26	
8364.00	0.570	174.850	8296.67	-368.29	363.85	-593.37	724903.65	382824.83	32°03'01.519"N	103°36'26.771"W	0.13	0.07	-13.38	
8553.00	0.500	143.760	8485.66	-366.68	362.25	-592.80	724904.22	382823.23	32°03'01.503"N	103°36'26.764"W	0.16	-0.04	-16.45	
8743.00	0.340	209.000	8675.66	-365.52	361.08	-592.58	724904.44	382822.07	32°03'01.492"N	103°36'26.762"W	0.25	-0.08	34.34	
8931.00	0.330	189.400	8863.66	-364.50	360.06	-592.94	724904.08	382821.05	32°03'01.482"N	103°36'26.766"W	0.06	-0.01	-10.43	
9119.00	0.300	154.270	9051.65	-363.52	359.08	-592.81	724904.21	382820.07	32°03'01.472"N	103°36'26.764"W	0.10	-0.02	-18.69	
9309.00	0.780	344.490	9241.65	-364.32	359.88	-592.94	724904.08	382820.87	32°03'01.480"N	103°36'26.766"W	0.57	0.25	-89.36	



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9499.00	0.300	304.650	9431.64	-365.86	361.41	-593.70	724903.32	382822.40	32°03'01.495"N	103°36'26.775"W	0.31	-0.25	-20.97	
9694.00	0.680	19.660	9626.63	-367.24	362.79	-593.73	724903.29	382823.78	32°03'01.509"N	103°36'26.775"W	0.34	0.19	38.47	
9885.00	0.170	194.900	9817.63	-368.03	363.58	-593.42	724903.60	382824.57	32°03'01.517"N	103°36'26.771"W	0.44	-0.27	91.75	
10075.00	0.530	141.260	10007.63	-367.07	362.63	-592.94	724904.08	382823.61	32°03'01.507"N	103°36'26.766"W	0.24	0.19	-28.23	
10264.00	1.030	89.200	10196.61	-366.39	361.97	-590.70	724906.32	382822.96	32°03'01.501"N	103°36'26.740"W	0.43	0.26	-27.54	
10452.00	0.460	265.840	10384.60	-366.35	361.94	-589.76	724907.26	382822.93	32°03'01.500"N	103°36'26.729"W	0.79	-0.30	93.96	
10642.00	0.280	282.080	10574.60	-366.40	361.98	-590.98	724906.05	382822.97	32°03'01.501"N	103°36'26.743"W	0.11	-0.09	8.55	
10831.00	1.270	91.930	10763.59	-366.42	362.01	-589.33	724907.69	382822.99	32°03'01.501"N	103°36'26.724"W	0.82	0.52	89.87	
11020.00	0.960	46.140	10952.55	-367.42	363.03	-586.10	724910.92	382824.02	32°03'01.511"N	103°36'26.686"W	0.48	-0.16	-24.23	
11210.00	2.970	353.320	11142.44	-373.41	369.02	-585.52	724911.50	382830.01	32°03'01.570"N	103°36'26.679"W	1.32	1.06	-27.80	
11399.00	1.920	321.240	11331.28	-380.76	376.36	-588.08	724908.95	382837.34	32°03'01.643"N	103°36'26.708"W	0.89	-0.56	-16.97	
11441.00	1.480	314.370	11373.26	-381.69	377.29	-588.90	724908.12	382838.27	32°03'01.652"N	103°36'26.718"W	1.15	-1.05	-16.36	12 1/4 BH MWD 890-11441
11546.00	0.380	44.590	11478.25	-382.90	378.48	-589.63	724907.39	382839.47	32°03'01.664"N	103°36'26.726"W	1.46	-1.05	85.92	
11641.00	0.040	72.360	11573.25	-383.13	378.72	-589.38	724907.64	382839.70	32°03'01.666"N	103°36'26.723"W	0.36	-0.36	29.23	
11736.00	7.920	178.800	11667.94	-376.58	372.17	-589.21	724907.81	382833.16	32°03'01.601"N	103°36'26.722"W	8.35	8.29	112.04	
11830.00	21.510	177.060	11758.65	-352.78	348.38	-588.18	724908.84	382809.36	32°03'01.366"N	103°36'26.712"W	14.46	14.46	-1.85	
11924.00	29.170	176.650	11843.54	-312.62	308.24	-585.96	724911.06	382769.23	32°03'00.969"N	103°36'26.689"W	8.15	8.15	-0.44	
12018.00	35.300	176.930	11923.01	-262.57	258.20	-583.16	724913.86	382719.19	32°03'00.473"N	103°36'26.660"W	6.52	6.52	0.30	
12113.00	41.780	177.200	11997.28	-203.47	199.12	-580.14	724916.88	382660.11	32°02'59.888"N	103°36'26.630"W	6.82	6.82	0.28	
12208.00	47.450	177.590	12064.88	-136.82	132.49	-577.12	724919.90	382593.49	32°02'59.229"N	103°36'26.600"W	5.98	5.97	0.41	
12302.00	54.270	178.590	12124.18	-63.98	59.67	-574.72	724922.30	382520.67	32°02'58.508"N	103°36'26.578"W	7.30	7.26	1.06	
12397.00	60.180	178.270	12175.58	15.85	-20.14	-572.53	724924.49	382440.86	32°02'57.718"N	103°36'26.558"W	6.23	6.22	-0.34	
12492.00	68.300	179.520	12216.84	101.32	-105.61	-570.91	724926.11	382355.39	32°02'56.872"N	103°36'26.546"W	8.63	8.55	1.32	
12587.00	77.400	179.900	12244.82	192.01	-196.29	-570.46	724926.56	382264.71	32°02'55.975"N	103°36'26.548"W	9.59	9.58	0.40	
12683.00	85.440	179.670	12259.13	288.85	-291.14	-570.10	724926.92	382189.87	32°02'55.036"N	103°36'26.551"W	8.38	8.37	-0.24	
12778.00	89.140	179.880	12263.62	381.73	-386.02	-569.73	724927.29	382075.00	32°02'54.097"N	103°36'26.554"W	3.90	3.89	0.22	
12873.00	89.200	179.440	12265.00	476.72	-481.00	-569.17	724927.85	381980.01	32°02'53.158"N	103°36'26.555"W	0.47	0.06	-0.46	
12968.00	89.880	176.990	12265.76	571.68	-575.95	-566.21	724930.81	381885.07	32°02'52.218"N	103°36'26.528"W	2.68	0.72	-2.58	
13064.00	89.480	180.730	12266.30	667.65	-671.91	-564.30	724932.72	381789.11	32°02'51.268"N	103°36'26.514"W	3.92	-0.42	3.90	
13158.00	89.260	175.960	12267.33	761.60	-765.84	-561.58	724935.44	381695.19	32°02'50.338"N	103°36'26.490"W	5.08	-0.23	-5.07	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH DATA (188 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
13252.00	88.980	181.720	12268.78	855.54	-859.77	-559.68	724937.34	381601.26	32°02'49.409"N	103°36'26.475"W	6.13	-0.30	6.13	
13346.00	89.820	180.770	12269.76	949.49	-953.74	-561.72	724935.30	381507.30	32°02'48.479"N	103°36'26.506"W	1.35	0.89	-1.01	
13439.00	89.510	180.780	12270.31	1042.47	-1046.73	-562.98	724934.04	381414.31	32°02'47.559"N	103°36'26.528"W	0.33	-0.33	0.01	
13533.00	90.650	178.180	12270.17	1136.46	-1140.71	-562.13	724934.89	381320.33	32°02'46.629"N	103°36'26.525"W	3.02	1.21	-2.77	
13627.00	89.720	173.560	12269.87	1230.24	-1234.44	-555.36	724941.66	381226.60	32°02'45.701"N	103°36'26.454"W	5.01	-0.99	-4.91	
13720.00	89.320	177.260	12270.65	1322.98	-1327.12	-547.92	724949.10	381133.92	32°02'44.783"N	103°36'26.375"W	4.00	-0.43	3.98	
13814.00	89.630	184.480	12271.51	1416.88	-1421.05	-549.35	724947.67	381040.00	32°02'43.854"N	103°36'26.399"W	7.69	0.33	7.68	
13908.00	89.630	183.030	12272.12	1510.63	-1514.84	-555.50	724941.52	380946.21	32°02'42.926"N	103°36'26.477"W	1.54	0.00	-1.54	
14001.00	89.510	176.910	12272.82	1603.58	-1607.79	-555.45	724941.57	380853.26	32°02'42.006"N	103°36'26.484"W	6.58	-0.13	-6.58	
14095.00	89.660	173.880	12273.50	1697.32	-1701.48	-547.91	724949.11	380759.58	32°02'41.079"N	103°36'26.404"W	3.23	0.16	-3.22	
14189.00	89.410	172.620	12274.26	1790.74	-1794.82	-536.86	724960.16	380666.24	32°02'40.154"N	103°36'26.283"W	1.37	-0.27	-1.34	
14283.00	90.800	178.450	12274.09	1884.47	-1888.49	-529.55	724967.47	380572.57	32°02'39.227"N	103°36'26.205"W	6.38	1.48	6.20	
14377.00	89.350	180.040	12273.97	1978.46	-1982.48	-528.31	724968.71	380478.59	32°02'38.297"N	103°36'26.198"W	2.29	-1.54	1.69	
14470.00	88.610	181.240	12275.62	2071.43	-2075.46	-529.35	724967.67	380385.62	32°02'37.377"N	103°36'26.217"W	1.52	-0.80	1.29	
14564.00	88.610	182.560	12277.90	2165.32	-2169.37	-532.46	724964.56	380291.70	32°02'36.448"N	103°36'26.261"W	1.40	0.00	1.40	
14661.00	89.690	184.080	12279.34	2262.10	-2266.20	-538.08	724958.94	380194.88	32°02'35.490"N	103°36'26.334"W	1.92	1.11	1.57	
14756.00	89.630	185.200	12279.91	2356.72	-2360.88	-545.76	724951.26	380100.20	32°02'34.554"N	103°36'26.430"W	1.18	-0.06	1.18	
14850.00	89.380	187.060	12280.72	2450.10	-2454.34	-555.80	724941.22	380006.75	32°02'33.629"N	103°36'26.554"W	2.00	-0.27	1.98	
14945.00	89.140	188.950	12281.94	2544.06	-2548.40	-569.03	724927.99	379912.69	32°02'32.700"N	103°36'26.715"W	2.01	-0.25	1.99	
15039.00	90.030	189.570	12282.63	2636.71	-2641.17	-584.15	724912.87	379819.92	32°02'31.783"N	103°36'26.898"W	1.15	0.95	0.66	
15133.00	89.880	187.740	12282.70	2729.53	-2734.10	-598.30	724898.72	379727.00	32°02'30.864"N	103°36'27.070"W	1.95	-0.16	-1.95	
15228.00	89.750	183.680	12283.01	2823.96	-2828.60	-607.75	724889.27	379632.49	32°02'29.929"N	103°36'27.187"W	4.28	-0.14	-4.27	
15323.00	89.750	179.450	12283.42	2918.88	-2923.55	-610.34	724886.68	379537.55	32°02'28.990"N	103°36'27.224"W	4.45	0.00	-4.45	
15418.00	89.170	177.260	12284.32	3013.85	-3018.50	-607.61	724889.41	379442.61	32°02'28.050"N	103°36'27.200"W	2.38	-0.61	-2.31	
15512.00	88.240	176.300	12286.44	3107.71	-3112.32	-602.34	724894.68	379348.79	32°02'27.121"N	103°36'27.146"W	1.42	-0.99	-1.02	
15607.00	88.180	175.620	12289.41	3202.48	-3207.04	-595.65	724901.37	379254.07	32°02'26.184"N	103°36'27.076"W	0.72	-0.06	-0.72	
15702.00	88.280	175.670	12292.34	3297.21	-3301.72	-588.44	724908.58	379159.39	32°02'25.246"N	103°36'27.000"W	0.12	0.11	0.05	
15796.00	90.180	177.210	12293.61	3391.06	-3395.52	-582.60	724914.42	379065.59	32°02'24.318"N	103°36'26.939"W	2.60	2.02	1.64	
15891.00	89.320	177.480	12294.02	3485.98	-3490.42	-578.20	724918.82	378970.70	32°02'23.378"N	103°36'26.895"W	0.95	-0.91	0.28	
15986.00	89.140	178.190	12295.30	3580.93	-3585.34	-574.61	724922.41	378875.78	32°02'22.439"N	103°36'26.861"W	0.77	-0.19	0.75	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH DATA (188 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
16080.00	88.460	178.950	12297.27	3674.89	-3679.29	-572.27	724924.75	378781.84	32°02'21.509"N	103°36'26.841"W	1.08	-0.72	0.81	
16174.00	87.110	178.130	12300.90	3768.80	-3773.19	-569.87	724927.15	378687.94	32°02'20.580"N	103°36'26.821"W	1.68	-1.44	-0.87	
16269.00	87.750	176.610	12305.16	3863.64	-3867.99	-565.52	724931.50	378593.15	32°02'19.641"N	103°36'26.778"W	1.73	0.67	-1.60	
16364.00	88.340	178.820	12308.40	3958.52	-3962.85	-561.73	724935.29	378498.29	32°02'18.702"N	103°36'26.741"W	2.41	0.62	2.33	
16459.00	88.800	179.640	12310.77	4053.49	-4057.81	-560.46	724936.56	378403.33	32°02'17.763"N	103°36'26.734"W	0.99	0.48	0.86	
16554.00	89.570	174.780	12312.12	4148.37	-4152.66	-555.83	724941.18	378308.48	32°02'16.824"N	103°36'26.687"W	5.18	0.81	-5.12	
16649.00	88.770	170.300	12313.50	4242.62	-4246.82	-543.51	724953.51	378214.32	32°02'15.891"N	103°36'26.551"W	4.79	-0.84	-4.72	
16743.00	88.580	168.980	12315.67	4335.19	-4339.26	-526.61	724970.41	378121.89	32°02'14.975"N	103°36'26.362"W	1.42	-0.20	-1.40	
16838.00	89.260	173.990	12317.47	4429.20	-4433.17	-512.55	724984.47	378027.98	32°02'14.045"N	103°36'26.206"W	5.32	0.72	5.27	
16933.00	89.280	177.920	12318.69	4523.98	-4527.91	-505.85	724991.17	377933.25	32°02'13.107"N	103°36'26.136"W	4.14	0.00	4.14	
17028.00	88.310	174.760	12320.71	4618.80	-4622.68	-499.79	724997.23	377838.48	32°02'12.169"N	103°36'26.073"W	3.47	-1.00	-3.33	
17123.00	88.980	178.080	12322.95	4713.61	-4717.45	-493.86	725003.16	377743.71	32°02'11.231"N	103°36'26.011"W	3.56	0.71	3.49	
17216.00	89.170	178.520	12324.46	4806.58	-4810.40	-491.10	725005.92	377650.77	32°02'10.311"N	103°36'25.987"W	0.52	0.20	0.47	
17311.00	89.170	180.000	12325.83	4901.56	-4905.38	-489.87	725007.15	377555.79	32°02'09.371"N	103°36'25.980"W	1.56	0.00	1.56	
17406.00	89.940	183.300	12326.57	4996.48	-5000.32	-492.61	725004.41	377460.85	32°02'08.431"N	103°36'26.019"W	3.57	0.81	3.47	
17500.00	89.690	185.740	12326.87	5090.13	-5094.02	-500.01	724997.00	377367.15	32°02'07.505"N	103°36'26.112"W	2.61	-0.27	2.60	
17596.00	89.050	183.420	12327.93	5185.75	-5189.70	-507.68	724989.34	377271.48	32°02'06.558"N	103°36'26.209"W	2.51	-0.67	-2.42	
17691.00	89.510	183.390	12329.12	5280.53	-5284.53	-513.32	724983.70	377176.66	32°02'05.620"N	103°36'26.282"W	0.49	0.48	-0.03	
17786.00	88.430	180.570	12330.83	5375.42	-5379.44	-516.60	724980.42	377081.74	32°02'04.681"N	103°36'26.327"W	3.18	-1.14	-2.97	
17881.00	89.110	181.940	12332.87	5470.35	-5474.40	-518.68	724978.34	376986.79	32°02'03.742"N	103°36'26.359"W	1.61	0.72	1.44	
17975.00	89.320	179.040	12334.16	5564.32	-5568.37	-519.49	724977.53	376892.82	32°02'02.812"N	103°36'26.376"W	3.09	0.22	-3.09	
18070.00	90.000	182.160	12334.72	5659.29	-5663.36	-520.48	724976.54	376797.84	32°02'01.872"N	103°36'26.395"W	3.36	0.72	3.28	
18164.00	90.060	185.170	12334.67	5753.04	-5757.15	-526.49	724970.53	376704.05	32°02'00.944"N	103°36'26.472"W	3.20	0.06	3.20	
18258.00	90.090	184.690	12334.55	5846.63	-5850.80	-534.57	724962.45	376610.40	32°02'00.018"N	103°36'26.573"W	0.51	0.03	-0.51	
18351.00	90.480	185.450	12334.10	5939.20	-5943.44	-542.79	724954.23	376517.77	32°01'59.102"N	103°36'26.675"W	0.91	0.40	0.82	
18446.00	90.430	186.140	12333.37	6033.63	-6037.95	-552.38	724944.64	376423.26	32°01'58.167"N	103°36'26.794"W	0.73	-0.03	0.73	
18541.00	90.620	184.630	12332.50	6128.14	-6132.52	-561.29	724935.73	376328.69	32°01'57.232"N	103°36'26.905"W	1.60	0.20	-1.59	
18636.00	90.060	180.490	12331.93	6222.99	-6227.41	-565.53	724931.48	376233.81	32°01'56.294"N	103°36'26.962"W	4.40	-0.59	-4.36	
18730.00	90.490	180.150	12331.48	6316.98	-6321.40	-566.06	724930.96	376139.82	32°01'55.363"N	103°36'26.975"W	0.58	0.46	-0.36	
18825.00	90.180	177.670	12330.92	6411.96	-6416.38	-564.25	724932.77	376044.85	32°01'54.423"N	103°36'26.962"W	2.63	-0.33	-2.61	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH DATA (188 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
18920.00	89.480	175.660	12331.21	6506.83	-6511.21	-558.73	724938.29	375950.02	32°01'53.485"N	103°36'26.905"W	2.24	-0.74	-2.12	
19015.00	89.480	176.050	12332.07	6601.63	-6605.96	-551.86	724945.16	375855.27	32°01'52.547"N	103°36'26.833"W	0.41	0.00	0.41	
19109.00	89.940	176.990	12332.54	6695.49	-6699.78	-546.15	724950.86	375761.45	32°01'51.618"N	103°36'26.774"W	1.11	0.49	1.00	
19204.00	90.280	174.760	12332.36	6790.29	-6794.53	-539.32	724957.70	375666.71	32°01'50.680"N	103°36'26.702"W	2.37	0.36	-2.35	
19299.00	90.180	176.960	12331.98	6885.08	-6889.27	-532.46	724964.55	375571.96	32°01'49.742"N	103°36'26.629"W	2.32	-0.11	2.32	
19394.00	90.740	180.400	12331.22	6980.06	-6984.23	-530.28	724966.74	375477.01	32°01'48.802"N	103°36'26.611"W	3.67	0.59	3.62	
19488.00	90.220	181.580	12330.43	7074.02	-7078.21	-531.90	724965.12	375383.03	32°01'47.872"N	103°36'26.638"W	1.37	-0.55	1.26	
19584.00	88.890	175.810	12331.18	7169.96	-7174.14	-529.71	724967.30	375287.11	32°01'46.923"N	103°36'26.620"W	6.17	-1.39	-6.01	
19678.00	89.110	177.230	12332.82	7263.81	-7267.95	-524.01	724973.01	375193.30	32°01'45.994"N	103°36'26.561"W	1.53	0.23	1.51	
19774.00	89.750	177.060	12333.77	7359.72	-7363.83	-519.23	724977.79	375097.43	32°01'45.045"N	103°36'26.513"W	0.69	0.67	-0.18	
19869.00	89.880	180.200	12334.08	7454.70	-7458.79	-516.96	724980.06	375002.47	32°01'44.105"N	103°36'26.494"W	3.31	0.14	3.31	
19964.00	90.180	181.830	12334.03	7549.66	-7553.77	-518.64	724978.38	374907.49	32°01'43.165"N	103°36'26.521"W	1.74	0.32	1.72	
20059.00	91.140	182.100	12332.94	7644.57	-7648.71	-521.90	724975.12	374812.56	32°01'42.226"N	103°36'26.566"W	1.05	1.01	0.28	
20154.00	89.200	178.760	12332.65	7739.54	-7743.68	-522.61	724974.41	374717.58	32°01'41.286"N	103°36'26.582"W	4.07	-2.04	-3.52	
20248.00	89.290	179.550	12333.89	7833.53	-7837.67	-521.22	724975.79	374623.61	32°01'40.356"N	103°36'26.573"W	0.85	0.10	0.84	
20342.00	88.340	175.450	12335.84	7927.43	-7931.54	-517.13	724979.89	374529.74	32°01'39.427"N	103°36'26.533"W	4.48	-1.01	-4.36	
20437.00	89.380	180.340	12337.73	8022.34	-8026.42	-513.64	724983.38	374434.86	32°01'38.488"N	103°36'26.500"W	5.26	1.09	5.15	
20532.00	90.520	181.380	12337.81	8117.31	-8121.41	-515.07	724981.95	374339.87	32°01'37.548"N	103°36'26.523"W	1.62	1.20	1.09	
20626.00	90.150	180.670	12337.26	8211.28	-8215.39	-516.75	724980.27	374245.89	32°01'36.618"N	103°36'26.550"W	0.85	-0.39	-0.76	
20719.00	90.800	182.220	12336.49	8304.23	-8308.36	-519.09	724977.93	374152.93	32°01'35.698"N	103°36'26.585"W	1.81	0.70	1.67	
20814.00	90.490	183.830	12335.42	8399.04	-8403.21	-524.10	724972.91	374058.08	32°01'34.760"N	103°36'26.650"W	1.73	-0.33	1.69	
20909.00	89.820	181.780	12335.16	8493.89	-8498.09	-528.75	724968.27	373963.20	32°01'33.821"N	103°36'26.712"W	2.27	-0.71	-2.16	
21004.00	90.060	183.560	12335.26	8588.74	-8592.99	-533.18	724963.84	373868.31	32°01'32.883"N	103°36'26.771"W	1.89	0.25	1.87	
21099.00	89.880	181.950	12335.31	8683.59	-8687.87	-537.74	724959.27	373773.43	32°01'31.944"N	103°36'26.831"W	1.71	-0.19	-1.69	
21194.00	89.690	182.160	12335.67	8778.50	-8782.81	-541.15	724955.87	373678.49	32°01'31.005"N	103°36'26.878"W	0.30	-0.20	0.22	
21289.00	89.970	180.380	12335.95	8873.46	-8877.78	-543.26	724953.76	373583.52	32°01'30.065"N	103°36'26.910"W	1.90	0.29	-1.87	
21384.00	89.660	176.990	12336.26	8968.43	-8972.74	-541.08	724955.94	373488.57	32°01'29.125"N	103°36'26.892"W	3.58	-0.33	-3.57	
21479.00	90.310	178.650	12336.28	9063.38	-9067.67	-537.46	724959.56	373393.64	32°01'28.186"N	103°36'26.857"W	1.88	0.68	1.75	
21575.00	90.060	177.210	12335.97	9159.34	-9163.61	-534.00	724963.02	373297.71	32°01'27.236"N	103°36'26.825"W	1.52	-0.26	-1.50	
21669.00	89.970	175.780	12335.95	9253.20	-9257.43	-528.25	724968.77	373203.89	32°01'26.307"N	103°36'26.765"W	1.52	-0.10	-1.52	



Actual Wellpath Report

SD EA 18 19 FED COM P15 No. 16H_awp
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**BAKER
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH DATA (188 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
21764.00	90.090	178.450	12335.90	9348.11	-9352.30	-523.47	724973.55	373109.03	32°01'25.368"N	103°36'26.717"W	2.81	0.13	2.81	
21858.00	90.280	181.120	12335.60	9442.10	-9446.29	-523.12	724973.90	373015.04	32°01'24.438"N	103°36'26.720"W	2.85	0.20	2.84	
21951.00	90.090	179.810	12335.29	9535.08	-9539.28	-523.87	724973.15	372922.05	32°01'23.518"N	103°36'26.736"W	1.42	-0.20	-1.41	
22047.00	90.180	178.240	12335.07	9631.08	-9635.27	-522.24	724974.78	372826.07	32°01'22.568"N	103°36'26.725"W	1.64	0.09	-1.64	
22142.00	90.520	179.890	12334.49	9726.07	-9730.25	-520.69	724976.33	372731.09	32°01'21.628"N	103°36'26.714"W	1.77	0.36	1.74	
22238.00	90.120	181.090	12333.95	9822.05	-9826.24	-521.51	724975.51	372635.10	32°01'20.678"N	103°36'26.731"W	1.32	-0.42	1.25	
22318.00	90.280	181.970	12333.67	9902.00	-9906.21	-523.64	724973.37	372555.13	32°01'19.887"N	103°36'26.762"W	1.12	0.20	1.10	1/2 BH MWD 11546-22318
22343.00	90.280	181.970	12333.55	9926.98	-9931.20	-524.50	724972.52	372530.15	32°01'19.640"N	103°36'26.774"W	0.00	0.00	0.00	Projection to bit 22343

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SD EA 18 19 FED P15 16H LTP	12297.19	-9779.34	-506.02	724991.00	372682.00	32°01'21.141"N	103°36'26.548"W	point
SD EA 18 19 FED P15 16H PBHL rev 3	12297.83	-9929.34	-505.02	724992.00	372532.00	32°01'19.657"N	103°36'26.548"W	point
SD EA 18 19 FED P15 16H FTP	12309.27	121.00	-581.02	724916.00	382582.00	32°02'59.115"N	103°36'26.646"W	point
SD EA 18 19 FED P15 16H MP	12334.60	-4829.17	-543.52	724953.50	377632.00	32°02'10.128"N	103°36'26.597"W	point



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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

WELLPATH COMPOSITION - Ref Wellbore: SD EA 18 19 FED COM P15 No. 16H Ref Wellpath: SD EA 18 19 FED COM P15 No. 16H_awp

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.60	830.00	ISCWSA MWD, Rev. 4 (Standard)	Imported Surface 186' - 830'	SD EA 18 19 FED COM P15 No. 16H
830.00	11441.00	BHI NaviTrak (Axial)	12 1/4 BH MWD 890-11441	SD EA 18 19 FED COM P15 No. 16H
11441.00	22318.00	BHI AutoTrak Curve (Axial)	8 1/2 BH MWD 11546-22318	SD EA 18 19 FED COM P15 No. 16H
22318.00	22343.00	Blind Drilling (std)	Projection to bit	SD EA 18 19 FED COM P15 No. 16H



Actual Wellpath Report

SD EA 18 19 FED COM P15 No. 16H_awp
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED COM P15 No. 16H
Area	Lea County, NM	Well	SD EA 18 19 FED COM P15 No. 16H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED COM P15 No. 16H
Facility	SD EA 18-19 Fed COM P15		

COMMENTS

Wellpath general comments

Well: SD EA 18 19 FED COM P15 No. 16H
Field: Bone Spring
Rig: Nabors X30
Location: Lea Co., TX
API: 30-025-44088
Latitude: 32° 02' 57.879" N
Longitude: 103° 36' 19.905" W
DF Elevation: 3263.60 feet
Elev. GL: 3231.00 feet
Proposed Direction: 179.57°
PBHL: 22343 feet
Duration: 9/02/2018-10/01/2018
FSE's: J. Kumar
SO#: 9205489
Imported Surface 186' - 830'
12 1/4 BH MWD 890-11441
8 1/2 BH MWD 11546-22318
Projection to bit 22343