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Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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**BAKER
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a GE company


REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
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	4/17/2018 at 11:29:45 AM
Convergence at slot	0.39° East	Database/Source file	WA_Midland/SD_EA_29_FED_COM_P8_No_11H_32.6_259_-19635_Proj_19660_.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	-25.00	730210.00	372253.00	32°01'16.545"N	103°35'25.963"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 FED COM P8 11H)	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°



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Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 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	0.00	112.500	0.00	0.00	0.00	0.00	730210.00	372253.00	32°01'16.545"N	103°35'25.963"W	0.00	0.00	0.00	
32.60	0.000	112.500	32.60	0.00	0.00	0.00	730210.00	372253.00	32°01'16.545"N	103°35'25.963"W	0.00	0.00	0.00	
259.00	0.400	112.500	259.00	0.31	-0.30	0.73	730210.73	372252.70	32°01'16.542"N	103°35'25.955"W	0.18	0.18	49.69	
347.00	0.400	99.500	347.00	0.48	-0.47	1.32	730211.32	372252.53	32°01'16.540"N	103°35'25.948"W	0.10	0.00	-14.77	
444.00	0.400	47.500	443.99	0.31	-0.30	1.90	730211.90	372252.70	32°01'16.542"N	103°35'25.941"W	0.36	0.00	-53.81	
535.00	0.400	14.500	534.99	-0.21	0.22	2.21	730212.21	372253.22	32°01'16.547"N	103°35'25.938"W	0.25	0.00	-36.26	
627.00	0.600	349.500	626.99	-0.99	1.01	2.21	730212.21	372254.01	32°01'16.555"N	103°35'25.938"W	0.32	0.22	-27.17	
717.00	0.800	298.500	716.98	-1.76	1.77	1.57	730211.57	372254.77	32°01'16.562"N	103°35'25.945"W	0.70	0.22	-56.67	
812.00	1.200	299.500	811.97	-2.58	2.58	0.12	730210.12	372255.58	32°01'16.570"N	103°35'25.962"W	0.42	0.42	1.05	Gyro Surveys 0' - 812'
1010.00	1.550	329.920	1009.91	-5.94	5.92	-3.03	730206.97	372258.92	32°01'16.604"N	103°35'25.998"W	0.40	0.16	15.36	
1169.00	0.340	273.890	1168.89	-7.84	7.81	-4.58	730205.42	372260.81	32°01'16.622"N	103°35'26.016"W	0.87	-0.76	-35.24	
1359.00	0.760	193.900	1358.88	-6.67	6.62	-5.44	730204.56	372259.62	32°01'16.611"N	103°35'26.026"W	0.41	0.22	-42.10	
1550.00	0.420	192.290	1549.87	-4.75	4.71	-5.89	730204.11	372257.71	32°01'16.592"N	103°35'26.032"W	0.18	-0.18	-0.84	
1739.00	0.240	183.560	1738.87	-3.68	3.64	-6.07	730203.93	372256.64	32°01'16.581"N	103°35'26.034"W	0.10	-0.10	-4.62	
1930.00	0.250	230.860	1929.87	-3.02	2.98	-6.41	730203.59	372255.98	32°01'16.575"N	103°35'26.038"W	0.10	0.01	24.76	
2116.00	1.280	131.700	2115.85	-1.38	1.34	-5.18	730204.82	372254.34	32°01'16.558"N	103°35'26.023"W	0.72	0.55	-53.31	
2305.00	2.730	130.320	2304.73	2.98	-2.98	-0.17	730209.83	372250.02	32°01'16.515"N	103°35'25.966"W	0.77	0.77	-0.73	
2494.00	4.520	128.840	2493.35	10.63	-10.56	9.06	730219.06	372242.44	32°01'16.440"N	103°35'25.859"W	0.95	0.95	-0.78	
2684.00	6.910	129.100	2682.39	22.64	-22.47	23.77	730233.77	372230.53	32°01'16.321"N	103°35'25.689"W	1.26	1.26	0.14	
2874.00	8.120	133.240	2870.75	39.19	-38.87	42.41	730252.41	372214.13	32°01'16.157"N	103°35'25.474"W	0.70	0.64	2.18	
3063.00	8.660	127.480	3057.73	57.15	-56.67	63.43	730273.43	372196.33	32°01'15.980"N	103°35'25.231"W	0.53	0.29	-3.05	
3253.00	9.930	112.720	3245.26	72.38	-71.71	89.90	730299.89	372181.30	32°01'15.829"N	103°35'24.925"W	1.42	0.67	-7.77	
3443.00	10.910	102.900	3432.14	82.96	-82.05	122.54	730332.53	372170.96	32°01'15.725"N	103°35'24.547"W	1.07	0.52	-5.17	
3632.00	12.280	100.170	3617.28	90.79	-89.59	159.76	730369.75	372163.41	32°01'15.647"N	103°35'24.115"W	0.78	0.72	-1.44	
3820.00	12.360	99.880	3800.95	98.07	-96.57	199.26	730409.25	372158.43	32°01'15.576"N	103°35'23.657"W	1.05	1.04	-0.16	
4008.00	12.150	100.270	3984.67	105.34	-103.55	238.55	730448.54	372149.45	32°01'15.504"N	103°35'23.201"W	0.12	-0.11	0.21	
4196.00	11.610	102.340	4168.64	113.19	-111.12	276.50	730486.49	372141.88	32°01'15.426"N	103°35'22.761"W	0.37	-0.29	1.10	
4387.00	11.800	103.700	4355.67	122.21	-119.86	314.25	730524.24	372133.15	32°01'15.337"N	103°35'22.323"W	0.18	0.10	0.71	
4576.00	11.890	107.930	4540.65	133.06	-130.43	351.55	730561.53	372122.58	32°01'15.230"N	103°35'21.891"W	0.46	0.05	2.24	
4766.00	11.170	101.080	4726.82	142.90	-139.99	388.23	730598.22	372113.02	32°01'15.133"N	103°35'21.488"W	0.81	-0.38	-3.81	



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Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 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
4957.00	9.690	104.950	4914.66	150.85	-147.69	421.92	730631.91	372105.31	32°01'15.055"N	103°35'21.075"W	0.86	-0.77	2.03	
5145.00	9.050	105.520	5100.15	159.11	-155.73	451.45	730661.44	372097.27	32°01'14.973"N	103°35'20.733"W	0.34	-0.34	0.30	
5335.00	8.950	105.630	5287.81	167.31	-163.71	480.08	730690.07	372089.29	32°01'14.892"N	103°35'20.401"W	0.05	-0.05	0.06	
5526.00	7.570	103.820	5476.83	174.52	-170.72	506.61	730716.59	372082.29	32°01'14.821"N	103°35'20.093"W	0.74	-0.72	-0.95	
5716.00	6.950	101.580	5665.31	179.98	-176.01	530.02	730740.01	372076.99	32°01'14.767"N	103°35'19.822"W	0.36	-0.33	-1.18	
5906.00	4.560	97.110	5854.33	183.36	-179.25	548.78	730758.77	372073.75	32°01'14.734"N	103°35'19.604"W	1.28	-1.26	-2.34	
6096.00	2.940	87.940	6043.92	184.22	-180.01	561.15	730771.13	372073.00	32°01'14.725"N	103°35'19.460"W	0.91	-0.85	-4.83	
6285.00	2.130	66.150	6232.74	182.68	-178.42	569.21	730779.19	372074.59	32°01'14.741"N	103°35'19.367"W	0.66	-0.43	-11.53	
6474.00	1.380	62.030	6421.65	180.23	-175.93	574.43	730784.41	372077.08	32°01'14.765"N	103°35'19.306"W	0.40	-0.40	-2.18	
6664.00	1.320	58.910	6611.60	178.06	-173.73	578.32	730788.30	372079.28	32°01'14.786"N	103°35'19.260"W	0.05	-0.03	-1.64	
6854.00	1.100	52.490	6801.56	175.85	-171.48	581.64	730791.63	372081.52	32°01'14.808"N	103°35'19.222"W	0.14	-0.12	-3.38	
7042.00	0.540	30.310	6989.54	174.00	-169.62	583.52	730793.50	372083.38	32°01'14.827"N	103°35'19.200"W	0.34	-0.30	-11.80	
7232.00	0.220	350.960	7179.53	172.87	-168.49	583.92	730793.90	372084.52	32°01'14.838"N	103°35'19.195"W	0.21	-0.17	-20.71	
7421.00	0.340	232.240	7368.53	172.85	-168.47	583.42	730793.40	372084.53	32°01'14.838"N	103°35'19.201"W	0.26	0.06	-62.81	
7612.00	0.400	207.190	7559.53	173.78	-169.41	582.66	730792.65	372083.59	32°01'14.829"N	103°35'19.210"W	0.09	-0.03	-13.12	
7707.00	0.440	219.910	7654.52	174.35	-169.99	582.28	730792.26	372083.02	32°01'14.823"N	103°35'19.214"W	0.11	0.04	13.39	
7802.00	0.400	183.850	7749.52	174.96	-170.60	582.02	730792.00	372082.41	32°01'14.817"N	103°35'19.217"W	0.28	-0.04	-37.96	
7897.00	0.340	138.550	7844.52	175.51	-171.14	582.19	730792.17	372081.86	32°01'14.812"N	103°35'19.215"W	0.31	-0.06	-47.68	
7990.00	0.090	85.020	7937.52	175.71	-171.34	582.44	730792.42	372081.66	32°01'14.810"N	103°35'19.212"W	0.32	-0.27	-57.56	
8084.00	0.350	130.010	8031.52	175.89	-171.52	582.74	730792.72	372081.49	32°01'14.808"N	103°35'19.209"W	0.31	0.28	47.86	
8179.00	0.520	135.470	8126.52	176.39	-172.01	583.26	730793.24	372080.99	32°01'14.803"N	103°35'19.203"W	0.18	0.18	5.75	
8273.00	0.740	118.590	8220.51	176.99	-172.61	584.09	730794.07	372080.40	32°01'14.797"N	103°35'19.193"W	0.30	0.23	-17.96	
8367.00	0.590	119.130	8314.50	177.52	-173.13	585.05	730795.03	372079.87	32°01'14.792"N	103°35'19.182"W	0.16	-0.16	0.57	
8463.00	0.680	108.130	8410.50	177.94	-173.55	586.02	730796.00	372079.45	32°01'14.788"N	103°35'19.171"W	0.16	0.09	-11.46	
8558.00	0.370	133.350	8505.49	178.34	-173.94	586.78	730796.78	372079.07	32°01'14.784"N	103°35'19.162"W	0.40	-0.33	26.55	
8652.00	0.170	155.310	8599.49	178.67	-174.27	587.06	730797.04	372078.73	32°01'14.780"N	103°35'19.159"W	0.24	-0.21	23.36	
8745.00	0.460	166.290	8692.49	179.16	-174.76	587.20	730797.19	372078.24	32°01'14.776"N	103°35'19.157"W	0.32	0.31	11.81	
8839.00	0.320	136.850	8786.49	179.72	-175.32	587.47	730797.45	372077.69	32°01'14.770"N	103°35'19.154"W	0.26	-0.19	-31.32	
8933.00	0.300	190.780	8880.49	180.16	-175.75	587.61	730797.59	372077.25	32°01'14.766"N	103°35'19.153"W	0.30	-0.02	57.37	
9028.00	0.200	224.300	8975.49	180.52	-176.12	587.44	730797.43	372076.89	32°01'14.762"N	103°35'19.155"W	0.18	-0.11	35.28	



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Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 stations)

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]	
9122.00	0.040	259.860	9089.49	180.84	-176.24	587.30	730797.28	372076.77	32°01'14.761"N	103°35'19.156"W	0.18	-0.17	37.83	
9216.00	0.170	176.110	9163.49	180.79	-176.38	587.28	730797.28	372076.62	32°01'14.759"N	103°35'19.157"W	0.18	0.14	-89.10	
9311.00	0.110	142.090	9258.49	181.00	-176.60	587.34	730797.32	372076.41	32°01'14.757"N	103°35'19.156"W	0.11	-0.06	-35.81	
9405.00	0.350	11.880	9352.49	180.79	-176.39	587.46	730797.44	372076.62	32°01'14.759"N	103°35'19.155"W	0.46	0.26	-138.52	
9500.00	0.570	354.610	9447.48	180.04	-175.63	587.47	730797.45	372077.37	32°01'14.767"N	103°35'19.154"W	0.27	0.23	-18.18	
9594.00	0.680	328.690	9541.48	179.09	-174.69	587.14	730797.12	372078.32	32°01'14.776"N	103°35'19.158"W	0.32	0.12	-27.57	
9689.00	0.880	333.820	9636.47	177.95	-173.55	586.52	730796.50	372079.45	32°01'14.788"N	103°35'19.165"W	0.22	0.21	5.40	
9783.00	0.810	329.570	9730.46	176.72	-172.33	585.87	730795.85	372080.67	32°01'14.800"N	103°35'19.173"W	0.10	-0.07	-4.52	
9878.00	0.710	320.470	9825.45	175.69	-171.30	585.15	730795.13	372081.71	32°01'14.810"N	103°35'19.181"W	0.16	-0.11	-9.58	
9972.00	0.500	339.540	9919.45	174.85	-170.47	584.64	730794.62	372082.54	32°01'14.818"N	103°35'19.187"W	0.31	-0.22	20.29	
10066.00	0.400	297.500	10013.44	174.31	-169.93	584.20	730794.18	372083.08	32°01'14.824"N	103°35'19.192"W	0.36	-0.11	-44.72	
10161.00	0.220	272.170	10108.44	174.15	-169.77	583.73	730793.71	372083.24	32°01'14.825"N	103°35'19.197"W	0.23	-0.19	-26.66	
10255.00	0.340	194.030	10202.44	174.41	-170.03	583.48	730793.46	372082.97	32°01'14.823"N	103°35'19.200"W	0.39	0.13	-83.13	
10350.00	0.630	150.560	10297.44	175.14	-170.76	583.67	730793.65	372082.24	32°01'14.815"N	103°35'19.198"W	0.47	0.31	-45.76	
10445.00	1.080	167.940	10392.43	176.47	-172.09	584.11	730794.09	372080.91	32°01'14.802"N	103°35'19.193"W	0.64	0.47	-18.29	
10539.00	0.990	180.090	10486.41	178.15	-173.77	584.30	730794.28	372079.23	32°01'14.786"N	103°35'19.191"W	0.25	-0.10	12.93	
10633.00	1.610	184.640	10580.39	180.28	-175.90	584.19	730794.17	372077.11	32°01'14.764"N	103°35'19.193"W	0.67	0.66	4.84	
10729.00	1.960	181.080	10676.34	183.26	-178.89	584.05	730794.03	372074.12	32°01'14.735"N	103°35'19.194"W	0.38	0.36	-3.71	
10824.00	1.740	185.020	10771.29	186.32	-181.95	583.89	730793.87	372071.06	32°01'14.705"N	103°35'19.196"W	0.27	-0.23	4.15	
10919.00	1.370	207.690	10868.26	188.76	-184.39	583.24	730793.22	372068.62	32°01'14.681"N	103°35'19.204"W	0.75	-0.38	-23.76	
11014.00	1.380	218.140	10961.23	190.66	-186.30	582.01	730791.99	372066.71	32°01'14.662"N	103°35'19.219"W	0.27	0.01	11.11	
11109.00	1.620	197.590	11056.20	192.83	-188.48	580.89	730790.87	372064.53	32°01'14.640"N	103°35'19.232"W	0.62	0.25	-21.63	12-1/4" BH MWD 1010' - 11109'
11260.00	0.860	115.540	11207.17	195.36	-191.00	581.27	730791.25	372062.01	32°01'14.615"N	103°35'19.228"W	1.14	-0.50	-54.34	
11355.00	0.070	112.130	11302.17	195.69	-191.33	581.97	730791.95	372061.68	32°01'14.612"N	103°35'19.220"W	0.83	-0.83	-3.59	
11449.00	0.250	122.700	11396.17	195.82	-191.46	582.19	730792.17	372061.55	32°01'14.611"N	103°35'19.217"W	0.19	0.18	-11.24	
11544.00	0.060	128.290	11491.17	195.97	-191.60	582.41	730792.39	372061.40	32°01'14.609"N	103°35'19.214"W	0.20	-0.20	5.88	
11638.00	0.090	30.800	11585.17	195.94	-191.57	582.48	730792.46	372061.44	32°01'14.610"N	103°35'19.214"W	0.12	0.03	-103.71	
11733.00	0.040	152.360	11680.17	195.90	-191.54	582.54	730792.52	372061.47	32°01'14.610"N	103°35'19.213"W	0.12	-0.05	127.96	
11827.00	2.370	113.530	11774.14	196.72	-192.34	584.33	730794.32	372060.67	32°01'14.602"N	103°35'19.192"W	2.49	2.48	-41.31	
11920.00	12.390	106.590	11866.25	200.43	-195.97	595.69	730805.67	372057.04	32°01'14.565"N	103°35'19.061"W	10.80	-10.77	-7.46	



Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 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
12014.00	22.900	104.570	11955.70	208.14	-203.47	623.13	730833.11	372049.54	32°01'14.489"N	103°35'18.742"W	11.20	11.18	-2.15	
12109.00	32.450	107.220	12039.74	220.68	-215.69	665.46	730875.44	372037.32	32°01'14.365"N	103°35'18.252"W	10.13	10.05	2.79	
12204.00	39.710	116.820	12116.53	242.35	-236.97	717.00	730926.98	372016.03	32°01'14.151"N	103°35'17.655"W	9.67	7.64	10.11	
12298.00	46.470	128.120	12185.24	277.43	-271.65	770.75	730980.73	371981.36	32°01'13.804"N	103°35'17.033"W	10.89	7.19	12.02	
12394.00	53.670	138.960	12246.93	328.63	-322.46	823.68	731033.66	371930.55	32°01'13.298"N	103°35'16.423"W	11.44	7.50	11.29	
12489.00	59.470	149.780	12299.35	393.38	-386.86	869.53	731079.51	371866.15	32°01'12.657"N	103°35'15.895"W	11.29	6.11	11.39	
12584.00	67.920	157.790	12341.46	470.00	-463.20	906.88	731116.85	371789.81	32°01'11.899"N	103°35'15.468"W	11.68	8.89	8.43	
12678.00	75.000	165.420	12371.37	554.68	-547.68	934.85	731144.82	371705.34	32°01'11.062"N	103°35'15.150"W	10.76	7.53	8.12	
12772.00	80.440	172.930	12391.39	644.93	-637.80	952.02	731161.99	371615.22	32°01'10.169"N	103°35'14.957"W	9.71	5.79	7.99	
12866.00	88.150	181.790	12400.74	738.23	-731.08	956.27	731168.24	371521.95	32°01'09.245"N	103°35'14.916"W	12.45	6.20	9.43	
12961.00	91.630	184.590	12400.93	833.02	-825.91	950.98	731160.95	371427.12	32°01'08.307"N	103°35'14.985"W	4.70	3.66	2.95	
13055.00	91.630	185.300	12398.25	926.57	-919.52	942.88	731152.85	371333.51	32°01'07.381"N	103°35'15.086"W	0.76	0.00	0.76	
13149.00	92.090	185.570	12395.20	1020.03	-1013.04	933.98	731143.95	371239.99	32°01'06.457"N	103°35'15.197"W	0.57	0.49	0.29	
13244.00	89.540	187.240	12393.85	1114.33	-1107.43	923.39	731133.36	371145.60	32°01'05.523"N	103°35'15.328"W	3.21	-2.68	1.76	
13338.00	89.690	187.940	12394.48	1207.41	-1200.60	910.97	731120.94	371052.43	32°01'04.602"N	103°35'15.479"W	0.76	0.16	0.74	
13432.00	90.180	186.950	12394.59	1300.52	-1293.81	898.79	731108.76	370959.23	32°01'03.681"N	103°35'15.628"W	1.18	0.52	-1.05	
13527.00	89.880	183.390	12394.54	1395.05	-1388.41	890.23	731100.21	370864.64	32°01'02.745"N	103°35'15.735"W	3.76	-0.32	-3.75	
13621.00	89.600	180.750	12394.96	1488.95	-1482.34	886.84	731096.81	370770.71	32°01'01.816"N	103°35'15.782"W	2.82	-0.30	-2.81	
13716.00	90.220	181.340	12395.11	1583.92	-1577.32	885.11	731095.08	370675.73	32°01'00.876"N	103°35'15.810"W	0.90	0.65	0.62	
13810.00	90.400	179.530	12394.60	1677.90	-1671.31	884.39	731094.36	370581.74	32°00'59.946"N	103°35'15.826"W	1.94	0.19	-1.93	
13905.00	90.310	181.590	12394.02	1772.88	-1766.30	883.46	731093.44	370486.76	32°00'59.006"N	103°35'15.844"W	2.17	-0.09	2.17	
13999.00	91.510	182.950	12392.52	1866.76	-1860.21	879.74	731089.71	370392.85	32°00'58.077"N	103°35'15.895"W	1.93	1.28	1.45	
14094.00	90.370	183.450	12390.96	1961.56	-1955.05	874.44	731084.41	370298.01	32°00'57.139"N	103°35'15.964"W	1.31	-1.20	0.53	
14188.00	89.690	181.190	12390.92	2055.44	-2048.97	870.63	731080.61	370204.10	32°00'56.210"N	103°35'16.016"W	2.51	-0.72	-2.40	
14282.00	90.520	175.690	12390.74	2149.39	-2142.89	873.19	731083.18	370110.18	32°00'55.280"N	103°35'15.994"W	5.82	0.86	-5.85	
14377.00	89.630	175.910	12390.62	2244.18	-2237.64	880.15	731090.12	370015.43	32°00'54.342"N	103°35'15.920"W	0.97	-0.94	0.23	
14472.00	89.970	173.360	12390.95	2338.82	-2332.21	889.03	731099.00	369920.86	32°00'53.406"N	103°35'15.825"W	2.71	0.36	-2.68	
14566.00	89.850	174.880	12391.10	2432.39	-2425.72	898.66	731108.63	369827.36	32°00'52.480"N	103°35'15.720"W	1.62	-0.13	1.62	
14661.00	92.340	179.620	12389.28	2527.26	-2520.55	903.22	731113.19	369732.53	32°00'51.541"N	103°35'15.675"W	5.63	2.62	4.99	
14755.00	92.430	178.880	12385.37	2621.18	-2614.48	904.45	731114.42	369638.62	32°00'50.612"N	103°35'15.668"W	0.79	0.10	-0.78	



Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 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
14850.00	90.090	172.240	12383.28	2715.86	-2709.10	911.80	731121.77	369543.99	32°00'49.675"N	103°35'15.591"W	7.41	-2.46	-6.99	
14945.00	90.620	173.760	12382.69	2810.23	-2803.38	923.38	731133.35	369449.71	32°00'48.741"N	103°35'15.464"W	1.69	0.56	1.60	
15040.00	94.010	175.370	12378.85	2904.78	-2897.86	932.37	731142.34	369355.23	32°00'47.805"N	103°35'15.367"W	3.95	3.57	1.69	
15136.00	88.740	175.430	12376.55	3000.46	-2993.49	940.08	731150.03	369259.61	32°00'46.859"N	103°35'15.285"W	5.49	-5.49	0.06	
15231.00	90.340	178.300	12377.31	3095.34	-3088.33	945.25	731155.22	369164.77	32°00'45.920"N	103°35'15.232"W	3.46	1.68	3.02	
15326.00	90.770	181.570	12376.39	3190.32	-3183.32	945.36	731155.33	369069.79	32°00'44.980"N	103°35'15.239"W	3.47	0.45	3.44	
15421.00	90.220	189.340	12375.57	3284.74	-3277.81	936.34	731146.31	368975.30	32°00'44.045"N	103°35'15.351"W	8.20	-0.58	8.18	
15516.00	89.010	193.630	12376.21	3377.67	-3370.88	917.43	731127.40	368882.23	32°00'43.126"N	103°35'15.578"W	4.69	-1.27	4.52	
15612.00	90.090	191.700	12376.96	3471.17	-3464.54	896.38	731106.35	368788.57	32°00'42.200"N	103°35'15.830"W	2.30	1.13	-2.01	
15707.00	89.820	185.460	12377.04	3564.95	-3558.43	882.22	731092.19	368694.69	32°00'41.272"N	103°35'16.002"W	6.57	-0.28	-6.57	
15802.00	90.520	185.360	12376.76	3659.45	-3653.00	873.26	731083.23	368600.11	32°00'40.337"N	103°35'16.114"W	0.74	0.74	-0.11	
15897.00	90.120	186.700	12376.23	3753.85	-3747.47	863.28	731073.25	368505.65	32°00'39.403"N	103°35'16.237"W	1.47	-0.42	1.41	
15991.00	90.250	180.270	12375.92	3847.58	-3841.25	857.57	731067.54	368411.87	32°00'38.475"N	103°35'16.311"W	6.84	0.14	-6.84	
16086.00	89.570	173.870	12376.07	3942.44	-3936.08	862.42	731072.40	368317.05	32°00'37.536"N	103°35'16.262"W	6.77	-0.72	-6.74	
16182.00	89.880	172.340	12376.53	4037.82	-4031.38	873.95	731083.92	368221.75	32°00'36.593"N	103°35'16.138"W	1.63	0.32	-1.59	
16276.00	89.200	170.190	12377.29	4130.83	-4124.28	886.22	731098.19	368128.85	32°00'35.672"N	103°35'15.978"W	2.40	-0.72	-2.29	
16372.00	90.120	173.630	12377.86	4225.95	-4219.31	901.73	731111.70	368033.83	32°00'34.731"N	103°35'15.828"W	3.71	0.96	3.58	
16466.00	90.180	178.290	12377.61	4319.74	-4313.05	908.35	731118.32	367940.09	32°00'33.803"N	103°35'15.759"W	4.96	0.06	4.96	
16562.00	90.000	180.080	12377.46	4415.74	-4409.03	909.71	731119.69	367844.11	32°00'32.853"N	103°35'15.751"W	1.87	-0.19	1.86	
16657.00	90.060	179.210	12377.41	4510.73	-4504.03	910.30	731120.27	367749.12	32°00'31.913"N	103°35'15.752"W	0.92	0.06	-0.92	
16753.00	89.570	177.550	12377.72	4606.71	-4599.99	913.02	731122.99	367653.16	32°00'30.963"N	103°35'15.728"W	1.80	-0.51	-1.73	
16847.00	89.910	175.890	12378.15	4700.59	-4693.83	918.40	731128.37	367559.32	32°00'30.034"N	103°35'15.673"W	1.80	0.36	-1.77	
16943.00	90.180	176.440	12378.07	4796.42	-4789.61	924.82	731134.79	367463.54	32°00'29.086"N	103°35'15.606"W	0.64	0.28	0.57	
17038.00	89.720	179.680	12378.15	4891.37	-4884.55	928.03	731138.00	367368.61	32°00'28.146"N	103°35'15.576"W	3.44	-0.48	3.41	
17131.00	89.570	178.010	12378.73	4984.36	-4977.52	929.91	731139.88	367275.64	32°00'27.226"N	103°35'15.562"W	1.80	-0.16	-1.80	
17226.00	90.060	177.770	12379.04	5079.32	-5072.46	933.40	731143.37	367180.71	32°00'26.286"N	103°35'15.529"W	0.57	0.52	-0.25	
17321.00	90.180	180.050	12378.84	5174.31	-5167.43	935.21	731145.18	367085.73	32°00'25.347"N	103°35'15.516"W	2.40	0.13	2.40	
17416.00	90.650	183.990	12378.15	5269.20	-5262.35	931.86	731141.83	366990.82	32°00'24.407"N	103°35'15.562"W	4.18	0.49	4.15	
17511.00	90.060	186.290	12377.56	5363.74	-5356.96	923.35	731133.32	366896.21	32°00'23.472"N	103°35'15.669"W	2.50	-0.62	2.42	
17607.00	89.660	184.370	12377.80	5459.25	-5452.54	914.44	731124.41	366800.63	32°00'22.527"N	103°35'15.780"W	2.04	-0.42	-2.00	



Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

WELLPATH DATA (173 stations)														
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]	
17701.00	90.150	181.400	12377.95	5553.08	-5546.41	909.70	731119.68	366706.77	32°00'21.598"N	103°35'15.842"W	3.20	0.52	-3.16	
17797.00	90.150	179.640	12377.70	5649.07	-5642.40	908.83	731118.80	366610.78	32°00'20.648"N	103°35'15.860"W	1.83	0.00	-1.83	
17892.00	90.030	177.280	12377.55	5744.04	-5737.36	911.39	731121.36	366515.82	32°00'19.708"N	103°35'15.838"W	2.49	-0.13	-2.48	
17987.00	90.120	178.980	12377.43	5839.01	-5832.31	914.49	731124.46	366420.88	32°00'18.769"N	103°35'15.810"W	1.79	0.09	1.79	
18082.00	90.280	182.660	12377.09	5933.97	-5927.28	913.13	731123.10	366325.91	32°00'17.829"N	103°35'15.833"W	3.88	0.17	3.87	
18176.00	90.250	184.740	12376.66	6027.72	-6021.08	907.06	731117.03	366232.11	32°00'16.901"N	103°35'15.911"W	2.21	-0.03	2.21	
18271.00	89.820	184.980	12376.60	6122.31	-6115.74	899.01	731108.98	366137.46	32°00'15.965"N	103°35'16.012"W	0.52	-0.45	0.25	
18366.00	90.520	184.240	12376.32	6216.94	-6210.43	891.38	731101.35	366042.77	32°00'15.028"N	103°35'16.108"W	1.07	0.74	-0.78	
18461.00	90.490	181.850	12375.48	6311.76	-6305.28	886.33	731096.30	365947.92	32°00'14.090"N	103°35'16.174"W	2.52	-0.03	-2.52	
18556.00	90.000	179.380	12375.08	6406.73	-6400.27	885.31	731095.28	365852.94	32°00'13.150"N	103°35'16.194"W	2.65	-0.52	-2.60	
18651.00	90.340	177.600	12374.79	6501.71	-6495.23	887.82	731097.79	365757.98	32°00'12.210"N	103°35'16.172"W	1.91	0.36	-1.87	
18746.00	90.920	180.100	12373.75	6596.69	-6590.20	889.72	731099.69	365663.01	32°00'11.271"N	103°35'16.158"W	2.70	0.61	2.63	
18841.00	90.340	178.830	12372.70	6691.68	-6685.19	890.61	731100.58	365568.03	32°00'10.331"N	103°35'16.155"W	1.47	-0.61	-1.34	
18935.00	90.860	178.740	12371.72	6785.67	-6779.16	892.60	731102.57	365474.06	32°00'09.400"N	103°35'16.140"W	0.56	0.55	-0.10	
19030.00	90.460	178.840	12370.63	6880.66	-6874.13	894.61	731104.58	365379.09	32°00'08.461"N	103°35'16.124"W	0.43	-0.42	0.11	
19125.00	90.180	175.810	12370.10	6975.57	-6969.02	899.04	731109.01	365284.21	32°00'07.521"N	103°35'16.080"W	3.20	-0.29	-3.19	
19219.00	89.940	172.800	12370.00	7069.16	-7062.54	908.37	731118.34	365190.69	32°00'06.595"N	103°35'15.979"W	3.21	-0.26	-3.20	
19314.00	89.850	171.780	12370.17	7163.39	-7156.68	921.11	731131.08	365096.55	32°00'05.663"N	103°35'15.839"W	1.08	-0.09	-1.07	
19409.00	90.520	173.380	12369.86	7257.68	-7250.88	933.38	731143.35	365002.35	32°00'04.730"N	103°35'15.704"W	1.83	0.71	1.68	
19505.00	89.910	176.000	12369.50	7353.33	-7346.48	942.28	731152.23	364906.78	32°00'03.783"N	103°35'15.608"W	2.80	2.04	2.73	
19600.00	90.710	179.480	12368.99	7448.26	-7441.37	946.01	731155.98	364811.87	32°00'02.844"N	103°35'15.572"W	3.76	0.84	3.66	
19635.00	90.550	181.030	12368.61	7483.25	-7476.37	945.85	731155.82	364776.87	32°00'02.498"N	103°35'15.577"W	4.45	-0.46	4.43	8-1/2" BH ATC (11109') 11260'-19635'
19660.00	90.550	181.030	12368.37	7508.25	-7501.36	945.40	731155.37	364751.88	32°00'02.250"N	103°35'15.584"W	0.00	0.00	0.00	Projection to TD: 19660



Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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**BAKER
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
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 11H ip1	12380.23	-1953.45	896.20	731106.17	370299.61	32°00'57.153"N	103°35'15.711"W	point
SD EA 29 FED COM P8 11H ip2	12394.30	-2996.60	904.08	731114.05	369256.50	32°00'46.830"N	103°35'15.703"W	point
SD EA 29 FED COM P8 11H ip3	12407.10	-3644.82	908.91	731118.88	368608.30	32°00'40.415"N	103°35'15.699"W	point
SD EA 29 FED COM P8 11H ip4	12419.83	-4270.47	913.70	731123.67	367982.67	32°00'34.224"N	103°35'15.694"W	point
SD EA 29 FED COM P8 11H ip5	12430.43	-4968.39	918.90	731128.87	367284.77	32°00'27.317"N	103°35'15.689"W	point
SD EA 29 FED COM P8 11H ip6	12439.47	-6026.52	926.91	731136.89	366226.67	32°00'16.846"N	103°35'15.681"W	point
SD EA 29 FED COM P8 11H ip7	12447.12	-7070.90	934.80	731144.77	365182.33	32°00'06.511"N	103°35'15.673"W	point
SD EA 29 FED COM P8 11H TD/PBHL rev 4	12449.40	-7506.11	939.46	731149.43	364747.13	32°00'02.204"N	103°35'15.654"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD EA 29 FED COM P8 No. 11H PWB Ref Wellpath: SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.60	812.00	BHI Generic gyro - northseeking (Standard)	Gyro Surveys 0' - 812'	SD EA 29 FED COM P8 No. 11H PWB
812.00	11109.00	BHI NaviTrak (Standard)	12-1/4" BH MWD 1010' - 11109'	SD EA 29 FED COM P8 No. 11H PWB
11109.00	19635.00	BHI AutoTrak Curve (Short)	8-1/2" BH ATC (11109') 11260'-19635'	SD EA 29 FED COM P8 No. 11H PWB
19635.00	19660.00	Blind Drilling (std)	Projection to bit	SD EA 29 FED COM P8 No. 11H PWB



Actual Wellpath Report

SD EA 29 FED COM P8 No. 11H (32.6') 259'-19635' Proj: 19660'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 29 FED COM P8 11H
Area	Lea County, NM	Well	SD EA 29 FED COM P8 No. 11H
Field	Bone Spring (Lea County, NM) NAD 27	Wellbore	SD EA 29 FED COM P8 No. 11H PWB
Facility	SD EA 29 Fed Com P8		

COMMENTS

Wellpath general comments

Chevron U.S.A. Inc.

Well: SD EA 29 Federal COM P8 No. 11H

Field: Bone Spring

Rig: Nabors X30

Location: Lea Co., NM

API: 30-025-43270-00

Latitude: 32° 01' 16.545" N

Longitude: 103° 35' 25.963" W

DF Elevation: 3279.6 feet

Elev. GL: 3247 feet

Proposed Direction: 179.57°

PBHL: 19660 feet

Duration: 11/26/2017-4/5/2018

FSE's: D. Hardeman

SO#: 8793359

Gyro Surveys 0' - 812'

12-1/4" BH MWD 1010' - 11109'

8-1/2" BH ATC (11109') 11260'-19635'

Projection to TD: 19660

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