



Actual Wellpath Report

SD EA 18 19 FED P15 20H_awp 160' - 13894' Proj: 13952'
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HOBBS OCD
NOV 06 2019
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED P15 20H
Area	Lea County, NM	Well	SD EA 1819 Federal COM P15 No. 20H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED P15 20H
Facility	SD EA 18-19 Fed 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	Marimic
Scale	0.999967	Report Generated	16/Jul/2018 at 15:48
Convergence at slot	0.39° East	Database/Source file	WA_Midland/SD_EA_18_19_FED_P15_20H_awp_160_-13894_Proj_13952_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1.00	100.00	725597.00	382462.00	32°02'57.883"N	103°36'18.743"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 P15 20H)	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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Facility	SD EA 18-19 Fed P15		

WELLPATH DATA (115 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†	0.000	208.720	0.00	0.00	0.00	0.00	725597.00	382462.00	32°02'57.883"N	103°36'18.743"W	0.00	0.00	0.00	
32.60	0.000	208.720	32.60	0.00	0.00	0.00	725597.00	382462.00	32°02'57.883"N	103°36'18.743"W	0.00	0.00	0.00	
160.00	0.250	208.720	160.00	0.24	-0.24	-0.13	725596.87	382461.76	32°02'57.880"N	103°36'18.745"W	0.20	0.20	-118.74	17 1/2 BH MWD 160' - 815'
340.00	0.140	319.640	340.00	0.42	-0.42	-0.46	725596.54	382461.58	32°02'57.878"N	103°36'18.749"W	0.18	-0.06	61.62	
525.00	0.460	336.580	525.00	-0.44	0.43	-0.91	725596.09	382462.43	32°02'57.887"N	103°36'18.754"W	0.18	0.17	9.15	
706.00	0.880	321.850	705.98	-2.21	2.19	-2.05	725594.95	382464.19	32°02'57.904"N	103°36'18.767"W	0.25	0.23	-8.13	
815.00	0.630	335.900	814.97	-3.42	3.40	-2.82	725594.18	382465.40	32°02'57.916"N	103°36'18.776"W	0.28	-0.23	12.89	
881.00	0.570	334.010	880.97	-4.05	4.02	-3.11	725593.89	382466.02	32°02'57.923"N	103°36'18.779"W	0.10	-0.09	-2.86	12 1/4 BH MWD 881' - 4719'
976.00	2.080	46.910	975.95	-5.64	5.63	-2.06	725594.94	382467.63	32°02'57.938"N	103°36'18.767"W	2.09	1.59	76.74	
1071.00	4.030	54.670	1070.81	-8.72	8.74	1.93	725598.93	382470.74	32°02'57.969"N	103°36'18.720"W	2.09	2.05	8.17	
1166.00	4.900	58.300	1165.52	-12.74	12.80	8.10	725605.10	382474.80	32°02'58.009"N	103°36'18.648"W	0.96	0.92	3.82	
1260.00	5.540	60.100	1259.13	-17.05	17.17	15.45	725612.45	382479.17	32°02'58.051"N	103°36'18.562"W	0.70	0.68	1.91	
1355.00	5.660	59.600	1353.67	-21.65	21.83	23.47	725620.47	382483.83	32°02'58.097"N	103°36'18.469"W	0.14	0.13	-0.53	
1450.00	6.630	64.950	1448.13	-26.27	26.52	32.48	725629.48	382488.52	32°02'58.143"N	103°36'18.364"W	1.18	1.02	5.63	
1545.00	8.480	68.040	1542.30	-31.13	31.46	43.94	725640.94	382493.46	32°02'58.191"N	103°36'18.230"W	1.99	1.95	3.25	
1641.00	10.260	67.860	1637.02	-36.89	37.33	58.43	725655.43	382499.33	32°02'58.248"N	103°36'18.062"W	1.85	1.85	-0.19	
1735.00	12.180	66.770	1729.21	-43.83	44.40	75.30	725672.29	382506.40	32°02'58.317"N	103°36'17.865"W	2.05	2.04	-1.16	
1830.00	12.610	66.300	1822.00	-51.81	52.52	94.00	725691.00	382514.52	32°02'58.396"N	103°36'17.647"W	0.46	0.45	-0.49	
1925.00	12.450	67.120	1914.74	-59.82	60.67	112.93	725709.93	382522.67	32°02'58.475"N	103°36'17.427"W	0.25	-0.17	0.86	
2115.00	12.270	68.860	2100.33	-74.78	75.91	150.63	725747.63	382537.91	32°02'58.624"N	103°36'16.987"W	0.22	-0.09	0.92	
2305.00	12.260	68.700	2286.00	-89.11	90.52	188.26	725785.25	382552.52	32°02'58.766"N	103°36'16.549"W	0.02	-0.01	-0.08	
2495.00	12.230	69.890	2471.68	-103.07	104.77	225.95	725822.94	382566.76	32°02'58.904"N	103°36'16.110"W	0.13	-0.02	0.63	
2686.00	11.640	70.420	2658.55	-116.20	118.18	263.10	725860.09	382580.18	32°02'59.034"N	103°36'15.677"W	0.31	-0.31	0.28	
2873.00	11.670	71.860	2841.69	-128.15	130.39	298.85	725895.84	382592.39	32°02'59.153"N	103°36'15.261"W	0.16	0.02	0.77	
3062.00	12.650	67.470	3026.45	-141.75	144.27	336.13	725933.12	382606.27	32°02'59.288"N	103°36'14.827"W	0.71	0.52	-2.32	
3251.00	12.450	64.980	3210.94	-158.01	160.82	373.71	725970.69	382622.81	32°02'59.449"N	103°36'14.389"W	0.31	-0.11	-1.32	
3441.00	11.760	64.300	3396.71	-174.80	177.88	409.71	726006.70	382639.87	32°02'59.615"N	103°36'13.969"W	0.37	-0.36	-0.36	
3630.00	11.400	62.580	3581.86	-191.50	194.83	443.65	726040.63	382656.83	32°02'59.781"N	103°36'13.574"W	0.26	-0.19	-0.91	
3820.00	9.900	64.630	3768.59	-206.91	210.48	475.08	726072.06	382672.47	32°02'59.934"N	103°36'13.207"W	0.81	-0.79	1.08	
4009.00	8.670	64.770	3955.11	-219.73	223.51	502.64	726099.63	382685.50	32°03'00.061"N	103°36'12.886"W	0.65	-0.65	0.07	



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Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED P15 20H
Facility	SD EA 18-19 Fed P15		

WELLPATH DATA (115 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]	
4199.00	7.080	67.280	4143.31	-230.18	234.14	526.40	726123.38	382696.13	32°03'00.164"N	103°36'12.609"W	0.86	-0.84	1.32	
4293.00	7.130	71.540	4236.59	-234.19	238.22	537.28	726134.26	382700.22	32°03'00.204"N	103°36'12.483"W	0.56	0.05	4.53	
4387.00	4.620	75.410	4330.09	-236.92	241.03	546.48	726143.46	382703.02	32°03'00.231"N	103°36'12.375"W	2.70	-2.67	4.12	
4481.00	3.130	78.350	4423.87	-238.34	242.50	552.65	726149.63	382704.49	32°03'00.245"N	103°36'12.304"W	1.60	-1.59	3.13	
4577.00	1.680	94.670	4519.78	-238.73	242.91	558.62	726153.60	382704.90	32°03'00.249"N	103°36'12.257"W	1.66	-1.51	17.00	
4719.00	1.310	88.960	4661.74	-238.56	242.77	560.32	726157.30	382704.76	32°03'00.248"N	103°36'12.214"W	0.28	-0.26	-4.02	
4864.00	0.880	92.820	4806.71	-238.52	242.75	563.09	726160.07	382704.74	32°03'00.247"N	103°36'12.182"W	0.30	-0.30	2.66	1/2 BH MWD 4864' - 8654'
5053.00	0.760	101.210	4995.69	-238.18	242.43	565.77	726162.75	382704.42	32°03'00.244"N	103°36'12.151"W	0.09	-0.06	4.44	
5243.00	1.160	119.140	5185.66	-236.98	241.25	568.69	726165.67	382703.24	32°03'00.232"N	103°36'12.117"W	0.26	0.21	9.44	
5432.00	1.020	108.120	5374.63	-235.50	239.80	571.95	726168.94	382701.79	32°03'00.217"N	103°36'12.079"W	0.13	-0.07	-5.83	
5620.00	0.680	121.770	5562.61	-234.37	238.69	574.49	726171.47	382700.68	32°03'00.206"N	103°36'12.050"W	0.21	-0.18	7.26	
5810.00	0.370	299.410	5752.60	-234.07	238.40	574.92	726171.90	382700.39	32°03'00.203"N	103°36'12.045"W	0.55	-0.16	93.49	
6000.00	0.390	353.470	5942.60	-235.02	239.34	574.31	726171.29	382701.33	32°03'00.213"N	103°36'12.052"W	0.18	0.01	28.45	
6189.00	1.350	263.850	6131.58	-235.44	239.74	572.02	726169.00	382701.73	32°03'00.217"N	103°36'12.079"W	0.74	0.51	-47.42	
6380.00	1.380	267.620	6322.53	-235.14	239.40	567.47	726164.45	382701.40	32°03'00.214"N	103°36'12.132"W	0.05	0.02	1.97	
6568.00	1.230	271.580	6510.48	-235.13	239.36	563.18	726160.16	382701.36	32°03'00.214"N	103°36'12.182"W	0.10	-0.09	2.11	
6758.00	1.090	279.360	6700.44	-235.51	239.71	559.35	726156.34	382701.71	32°03'00.217"N	103°36'12.226"W	0.11	-0.07	4.09	
6947.00	0.910	282.770	6889.41	-236.16	240.34	556.12	726153.10	382702.33	32°03'00.224"N	103°36'12.263"W	0.10	-0.10	1.80	
7137.00	0.910	292.650	7079.39	-237.09	241.25	553.25	726150.23	382703.24	32°03'00.233"N	103°36'12.297"W	0.08	0.00	5.20	
7327.00	0.700	301.120	7269.37	-238.29	242.43	550.87	726147.85	382704.43	32°03'00.245"N	103°36'12.324"W	0.13	-0.11	4.48	
7518.00	0.680	303.070	7460.35	-239.53	243.66	548.92	726145.90	382705.65	32°03'00.257"N	103°36'12.347"W	0.02	-0.01	1.02	
7707.00	0.530	297.050	7649.34	-240.55	244.66	547.20	726144.18	382706.66	32°03'00.267"N	103°36'12.367"W	0.09	-0.08	-3.19	
7896.00	0.590	281.510	7838.33	-241.16	245.26	545.47	726142.45	382707.25	32°03'00.273"N	103°36'12.387"W	0.09	0.03	-8.22	
8086.00	0.630	265.620	8028.32	-241.29	245.37	543.47	726140.45	382707.36	32°03'00.274"N	103°36'12.410"W	0.09	0.02	-8.36	
8275.00	1.280	263.540	8217.30	-240.99	245.08	540.33	726137.32	382707.05	32°03'00.271"N	103°36'12.446"W	0.34	0.34	-1.10	
8464.00	1.110	255.320	8406.26	-240.32	244.35	536.47	726133.45	382706.35	32°03'00.265"N	103°36'12.491"W	0.13	-0.09	-4.35	
8654.00	0.760	283.150	8596.23	-240.16	244.17	533.46	726130.44	382706.17	32°03'00.263"N	103°36'12.526"W	0.30	-0.18	14.65	
8709.00	0.680	280.050	8651.23	-240.31	244.31	532.78	726129.76	382706.31	32°03'00.265"N	103°36'12.534"W	0.16	-0.15	-5.64	1/2 BH MWD 8709' - 11358'
8804.00	9.800	187.220	8745.76	-232.38	236.37	531.21	726128.19	382698.36	32°03'00.186"N	103°36'12.553"W	10.38	9.60	-97.72	
8898.00	16.520	184.070	8837.24	-211.10	215.08	529.25	726126.23	382677.07	32°02'59.976"N	103°36'12.578"W	7.19	7.15	-3.35	



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[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			["/100ft]	["/100ft]	["/100ft]	
8994.00	25.150	180.460	8926.88	-177.03	181.00	528.12	726125.10	382642.99	32°02'59.638"N	103°36'12.593"W	9.08	8.99	-3.76	
9089.00	33.840	178.590	9009.50	-130.31	134.28	528.61	726125.59	382596.28	32°02'59.176"N	103°36'12.591"W	9.20	9.15	-1.97	
9184.00	42.300	179.000	9084.22	-71.79	75.77	529.82	726126.80	382537.76	32°02'58.597"N	103°36'12.582"W	8.91	8.91	0.43	
9279.00	52.600	179.500	9148.37	-1.90	5.88	530.71	726127.69	382467.88	32°02'57.905"N	103°36'12.577"W	10.85	10.84	0.53	
9373.00	64.750	180.680	9197.15	78.24	-74.26	530.53	726127.51	382387.74	32°02'57.112"N	103°36'12.585"W	12.97	12.93	1.26	
9468.00	76.860	180.800	9228.33	167.78	-163.81	529.37	726126.35	382298.20	32°02'56.226"N	103°36'12.606"W	12.75	12.75	0.13	
9515.00	82.620	180.230	9236.70	214.00	-210.03	528.95	726125.94	382251.97	32°02'55.769"N	103°36'12.614"W	12.31	12.26	-1.21	
9562.00	87.320	180.190	9240.82	260.80	-256.84	528.78	726125.76	382205.17	32°02'55.306"N	103°36'12.620"W	10.00	10.00	-0.09	
9656.00	89.820	179.790	9243.16	354.76	-350.80	528.80	726125.78	382111.21	32°02'54.376"N	103°36'12.627"W	2.69	2.66	-0.43	
9752.00	89.110	179.080	9244.08	450.76	-448.79	529.78	726126.74	382015.22	32°02'53.426"N	103°36'12.624"W	1.08	-0.74	-0.76	
9846.00	90.680	179.110	9244.23	544.75	-540.78	531.26	726128.24	381921.24	32°02'52.496"N	103°36'12.614"W	1.67	1.67	0.05	
9941.00	91.880	180.040	9242.11	639.72	-635.75	531.97	726128.95	381826.27	32°02'51.556"N	103°36'12.613"W	1.60	1.26	0.98	
10035.00	91.760	179.430	9239.12	733.67	-729.70	532.40	726129.38	381732.33	32°02'50.626"N	103°36'12.615"W	0.66	-0.13	-0.65	
10129.00	89.230	177.700	9238.31	827.64	-823.65	534.76	726131.74	381638.37	32°02'49.696"N	103°36'12.595"W	3.26	-2.69	-1.84	
10224.00	90.920	178.780	9238.19	922.61	-918.61	537.67	726134.66	381543.43	32°02'48.757"N	103°36'12.569"W	2.11	1.78	1.14	
10319.00	88.520	177.860	9238.65	1017.58	-1013.56	540.46	726137.44	381448.48	32°02'47.817"N	103°36'12.544"W	2.71	-2.53	-0.97	
10414.00	89.720	178.870	9240.11	1112.55	-1108.50	543.17	726140.15	381353.54	32°02'46.877"N	103°36'12.520"W	1.65	1.26	1.06	
10508.00	89.290	180.480	9240.92	1206.54	-1202.49	543.70	726140.68	381259.55	32°02'45.947"N	103°36'12.521"W	1.77	-0.46	1.71	
10602.00	89.320	181.570	9242.06	1300.50	-1296.47	542.02	726139.00	381165.57	32°02'45.017"N	103°36'12.548"W	1.16	0.03	1.16	
10697.00	89.140	180.450	9243.34	1395.48	-1391.45	540.35	726137.33	381070.80	32°02'44.077"N	103°36'12.575"W	1.19	-0.19	-1.18	
10792.00	89.970	180.490	9244.08	1490.45	-1486.44	539.57	726136.55	380975.61	32°02'43.137"N	103°36'12.591"W	0.87	0.87	0.04	
10886.00	89.970	181.110	9244.13	1584.42	-1580.43	538.25	726135.24	380881.63	32°02'42.207"N	103°36'12.614"W	0.66	0.00	0.66	
10981.00	88.980	181.330	9245.00	1679.38	-1675.40	536.23	726133.21	380786.66	32°02'41.268"N	103°36'12.645"W	1.07	-1.04	0.23	
11075.00	92.130	181.610	9244.09	1773.31	-1769.36	533.82	726130.80	380692.71	32°02'40.338"N	103°36'12.680"W	3.36	3.35	0.30	
11170.00	92.000	181.610	9240.66	1868.19	-1864.26	531.15	726128.14	380597.81	32°02'39.399"N	103°36'12.719"W	0.14	-0.14	0.00	
11264.00	90.950	180.850	9238.24	1962.12	-1958.20	529.14	726126.12	380503.87	32°02'38.470"N	103°36'12.750"W	1.38	-1.12	-0.81	
11358.00	91.330	181.030	9236.37	2056.07	-2052.17	527.59	726124.58	380409.90	32°02'37.540"N	103°36'12.775"W	0.45	0.40	0.19	
11478.00	92.130	180.340	9232.75	2175.99	-2172.10	526.16	726123.14	380289.97	32°02'36.353"N	103°36'12.801"W	0.88	0.67	-0.58	B 1/2 BH MWD 11478' - 13894'
11573.00	93.390	180.470	9228.18	2270.87	-2266.99	525.49	726122.47	380195.09	32°02'35.414"N	103°36'12.816"W	1.33	1.33	0.14	
11667.00	93.950	180.980	9222.16	2364.66	-2360.79	524.30	726121.29	380101.29	32°02'34.486"N	103°36'12.837"W	0.81	0.60	0.54	



Actual Wellpath Report

SD EA 18 19 FED P15 20H_awp 160' - 13894' Proj: 13952'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED P15 20H
Area	Lea County, NM	Well	SD EA 1819 Federal COM P15 No. 20H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED P15 20H
Facility	SD EA 18-19 Fed P15		

WELLPATH DATA (115 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
11762.00	93.400	180.510	9216.07	2459.44	-2455.59	523.07	726120.05	380006.50	32°02'33.548"N	103°36'12.859"W	0.76	-0.58	-0.49	
11856.00	89.600	178.290	9213.61	2553.39	-2549.52	524.06	726121.04	379912.56	32°02'32.619"N	103°36'12.855"W	4.68	-4.04	-2.36	
11951.00	88.640	177.400	9215.07	2648.33	-2644.44	527.63	726124.61	379817.65	32°02'31.679"N	103°36'12.821"W	1.38	-1.01	-0.94	
12045.00	88.950	177.530	9217.05	2742.25	-2738.33	531.78	726128.77	379723.76	32°02'30.750"N	103°36'12.780"W	0.36	0.33	0.14	
12140.00	89.780	178.340	9218.10	2837.20	-2833.28	535.21	726132.19	379628.84	32°02'29.810"N	103°36'12.748"W	1.22	0.87	0.85	
12234.00	90.250	178.680	9218.07	2931.18	-2927.23	537.65	726134.63	379534.87	32°02'28.880"N	103°36'12.727"W	0.62	0.50	0.36	
12329.00	92.060	179.480	9216.16	3026.16	-3022.19	539.18	726136.16	379439.91	32°02'27.940"N	103°36'12.716"W	2.08	1.91	0.84	
12424.00	90.800	179.130	9213.79	3121.12	-3117.16	540.33	726137.31	379344.95	32°02'27.001"N	103°36'12.711"W	1.38	-1.33	-0.37	
12518.00	91.080	178.520	9212.25	3215.10	-3211.12	542.26	726139.24	379250.99	32°02'26.071"N	103°36'12.696"W	0.71	0.30	-0.65	
12613.00	87.320	179.400	9213.57	3310.07	-3306.08	543.98	726140.96	379156.03	32°02'25.131"N	103°36'12.683"W	4.06	-3.96	0.93	
12707.00	88.310	180.260	9217.16	3404.00	-3400.01	544.26	726141.24	379062.11	32°02'24.201"N	103°36'12.687"W	1.39	1.05	0.91	
12800.00	89.170	181.120	9219.20	3496.96	-3492.98	543.14	726140.12	378969.14	32°02'23.281"N	103°36'12.707"W	1.31	0.92	0.92	
12895.00	88.000	180.240	9221.55	3591.91	-3587.94	542.01	726138.99	378874.18	32°02'22.342"N	103°36'12.728"W	1.54	-1.23	-0.93	
12990.00	86.230	178.950	9226.33	3686.78	-3682.81	542.68	726139.66	378779.32	32°02'21.403"N	103°36'12.728"W	2.30	-1.86	-1.36	
13085.00	87.470	179.500	9231.55	3781.63	-3777.66	543.96	726140.95	378684.47	32°02'20.464"N	103°36'12.720"W	1.43	1.31	0.58	
13180.00	88.520	180.490	9234.87	3876.57	-3872.60	543.97	726140.95	378589.54	32°02'19.525"N	103°36'12.728"W	1.52	1.11	1.04	
13274.00	89.510	180.920	9236.49	3970.54	-3966.57	542.82	726139.80	378495.56	32°02'18.595"N	103°36'12.748"W	1.15	1.05	0.46	
13370.00	90.280	181.380	9236.66	4066.50	-4062.55	540.89	726137.87	378399.59	32°02'17.645"N	103°36'12.778"W	0.93	0.80	0.48	
13465.00	93.480	182.560	9233.55	4161.35	-4157.43	537.63	726134.61	378304.71	32°02'16.707"N	103°36'12.824"W	3.59	3.37	1.24	
13561.00	93.680	181.640	9227.55	4257.06	-4253.17	533.95	726130.93	378208.97	32°02'15.760"N	103°36'12.874"W	0.78	0.21	-0.75	
13656.00	93.850	180.180	9221.31	4351.82	-4347.95	532.28	726129.26	378114.20	32°02'14.822"N	103°36'12.901"W	1.75	0.18	-1.75	
13750.00	94.800	179.650	9214.23	4445.55	-4441.68	532.42	726129.40	378020.47	32°02'13.894"N	103°36'12.906"W	1.16	1.01	-0.56	
13846.00	95.330	179.420	9205.75	4541.18	-4537.30	533.19	726130.17	377924.85	32°02'12.948"N	103°36'12.905"W	0.60	0.55	-0.24	
13894.00	95.830	179.150	9201.08	4588.95	-4585.07	533.79	726130.77	377877.09	32°02'12.475"N	103°36'12.902"W	1.18	1.04	-0.56	
13952.00	95.830	179.150	9195.19	4646.65	-4642.76	534.64	726131.63	377819.40	32°02'11.804"N	103°36'12.896"W	0.00	0.00	0.00	Projection to TD: 13952'



Actual Wellpath Report

SD EA 18 19 FED P15 20H_awp 160' - 13894' Proj: 13952'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED P15 20H
Area	Lea County, NM	Well	SD EA 1819 Federal COM P15 No. 20H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED P15 20H
Facility	SD EA 18-19 Fed P15		

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 20H PBHL rev 1	9050.00	-4642.16	585.02	726182.00	377820.00	32°02'11.907"N	103°36'12.311"W	point
SD EA 18 19 FED P15 20H 1	9235.00	-1310.33	551.58	726148.56	381151.72	32°02'44.879"N	103°36'12.438"W	point
SD EA 18 19 FED P15 20H PBHL rev 2	9240.00	-4642.16	585.02	726182.00	377820.00	32°02'11.907"N	103°36'12.311"W	point
SD EA 18 19 FED P15 20H 2	9250.00	-3384.62	554.52	726151.50	379077.50	32°02'24.353"N	103°36'12.567"W	point
SD EA 18 19 FED P15 20H MP	9250.00	-2385.99	553.15	726150.13	380076.09	32°02'34.235"N	103°36'12.504"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD EA 18 19 FED P15 20H Ref Wellpath: SD EA 18 19 FED P15 20H_awp 160' - 13894' Proj: 13952'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.60	815.00	BHI NaviTrak (Axial)	17 1/2 BH MWD 160' - 815'	SD EA 18 19 FED P15 20H
815.00	4719.00	BHI NaviTrak (Axial)	12 1/4 BH MWD 881' - 4719'	SD EA 18 19 FED P15 20H
4719.00	8654.00	BHI NaviTrak (Axial)	8 1/2 BH MWD 4864' - 8654'	SD EA 18 19 FED P15 20H
8654.00	11358.00	BHI AutoTrak Curve (Axial)	8 1/2 BH MWD 8709' - 11358'	SD EA 18 19 FED P15 20H
11358.00	13894.00	BHI NaviTrak (Axial)	8 1/2 BH MWD 11478' - 13894'	SD EA 18 19 FED P15 20H
13894.00	13952.00	Blind Drilling (std)	Projection to bit	SD EA 18 19 FED P15 20H



Actual Wellpath Report

SD EA 18 19 FED P15 20H_awp 160' - 13894' Proj: 13952'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD EA 18 19 FED P15 20H
Area	Lea County, NM	Well	SD EA 1819 Federal COM P15 No. 20H
Field	Bone Spring (Lea County, NM) NAD27	Wellbore	SD EA 18 19 FED P15 20H
Facility	SD EA 18-19 Fed P15		

COMMENTS

Wellpath general comments

Well: SD EA 1819 Federal COM P15 No. 20H
Field: Bone Spring
Rig: Nabors X30
Location: Lea County, NM
API: 300254409100
Latitude: 32° 02' 57.883" N
Longitude: 103° 36' 18.743" W
DF Elevation: 3263.60 feet
Elev. GL: 3231 feet
Proposed Direction: 179.57°
PBHL: 13952.00 feet
Duration: 06/12/2018-06/23/2018
FSE's: D. Hardeman.
SO#: 9205519
17 1/2 BH MWD 160' - 815'
12 1/4 BH MWD 881' - 4719'
8 1/2 BH MWD 4864' - 8654'
8 1/2 BH MWD 8709' - 11358'
8 1/2 BH MWD 11478' - 13894'
Projection to TD: 13952'