



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'
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HOBBS OCD
AUG 21 2017
RECEIVED



REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Buiduyh
Scale	0.999961	Report Generated	14/Mar/2017 at 15:14
Convergence at slot	0.37° East	Database/Source file	WA_Midland/SD_WE_23_Federal_P25_No_3H_ST01_awp_8380__ - 19394__Proj_19419_.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	50.00	713282.00	372222.00	32°01'17.347"N	103°38'42.583"W
Facility Reference Pt			713232.00	372222.00	32°01'17.350"N	103°38'43.163"W
Field Reference Pt			152400.30	0.00	30°59'42.846"N	105°26'33.659"W

WELLPATH DATUM

Calculation method	Minimum curvature	Nabors X-30 (KB) to Facility Vertical Datum	3155.60ft
Horizontal Reference Pt	Slot	Nabors X-30 (KB) to Mean Sea Level	3155.60ft
Vertical Reference Pt	Nabors X-30 (KB)	Nabors X-30 (KB) to Ground Level at Slot (SD WE 23 Fed P25 No. 3H)	32.60ft
MD Reference Pt	Nabors X-30 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.73°

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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Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

WELLPATH DATA (213 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]	Comments
0.00†	0.000	65.800	0.00	0.00	0.00	0.00	713282.00	372222.00	32°01'17.347"N	103°38'42.583"W	0.00	
32.60	0.000	65.800	32.60	0.00	0.00	0.00	713282.00	372222.00	32°01'17.347"N	103°38'42.583"W	0.00	
294.00	1.400	65.800	293.97	1.30	1.31	2.91	713284.91	372223.31	32°01'17.360"N	103°38'42.549"W	0.54	
385.00	1.100	97.800	384.95	1.62	1.65	4.79	713286.79	372223.65	32°01'17.363"N	103°38'42.527"W	0.82	
478.00	1.100	96.800	477.94	1.39	1.42	6.56	713288.56	372223.42	32°01'17.361"N	103°38'42.506"W	0.02	
530.00	0.900	103.800	529.93	1.23	1.26	7.46	713289.45	372223.26	32°01'17.359"N	103°38'42.496"W	0.45	
630.00	0.800	98.800	629.92	0.93	0.97	8.91	713290.91	372222.97	32°01'17.356"N	103°38'42.479"W	0.12	
720.00	1.700	89.800	719.89	0.83	0.88	10.86	713292.86	372222.88	32°01'17.355"N	103°38'42.456"W	1.02	
738.00	0.800	85.800	737.89	0.83	0.89	11.26	713293.26	372222.89	32°01'17.355"N	103°38'42.452"W	5.02	Imported surveys from 294' - 738'
779.00	0.770	102.910	778.89	0.79	0.85	11.81	713293.81	372222.85	32°01'17.355"N	103°38'42.445"W	0.57	
890.00	0.590	107.320	889.88	0.45	0.51	13.08	713295.08	372222.51	32°01'17.352"N	103°38'42.431"W	0.17	
981.00	0.500	124.060	980.87	0.08	0.15	13.86	713295.86	372222.15	32°01'17.348"N	103°38'42.422"W	0.20	
1072.00	0.400	99.460	1071.87	-0.19	-0.13	14.50	713296.50	372221.87	32°01'17.345"N	103°38'42.414"W	0.24	
1160.00	0.340	106.020	1159.87	-0.32	-0.25	15.06	713297.05	372221.75	32°01'17.344"N	103°38'42.408"W	0.08	
1249.00	1.100	94.010	1248.86	-0.46	-0.38	16.16	713298.16	372221.62	32°01'17.343"N	103°38'42.395"W	0.87	
1337.00	2.860	96.860	1336.81	-0.79	-0.70	19.18	713301.18	372221.30	32°01'17.339"N	103°38'42.360"W	2.00	
1425.00	3.680	98.780	1424.66	-1.51	-1.40	24.15	713306.15	372220.60	32°01'17.332"N	103°38'42.302"W	0.94	
1514.00	3.800	98.560	1513.47	-2.41	-2.27	29.89	713311.89	372219.73	32°01'17.323"N	103°38'42.236"W	0.14	
1602.00	4.010	99.470	1601.27	-3.38	-3.21	35.81	713317.81	372218.79	32°01'17.313"N	103°38'42.167"W	0.25	
1691.00	5.050	95.440	1689.99	-4.30	-4.09	42.78	713324.78	372217.91	32°01'17.304"N	103°38'42.086"W	1.22	
1779.00	5.650	93.610	1777.61	-4.97	-4.73	50.96	713332.96	372217.27	32°01'17.297"N	103°38'41.991"W	0.71	
1868.00	6.920	98.370	1866.07	-6.08	-5.79	60.64	713342.64	372216.21	32°01'17.286"N	103°38'41.879"W	1.54	
1956.00	7.360	102.060	1953.39	-8.08	-7.74	71.39	713353.39	372214.26	32°01'17.266"N	103°38'41.754"W	0.72	
2045.00	7.700	102.660	2041.62	-10.63	-10.24	82.79	713364.78	372211.76	32°01'17.241"N	103°38'41.622"W	0.39	
2133.00	7.890	104.430	2128.81	-13.48	-13.04	94.39	713376.38	372208.97	32°01'17.212"N	103°38'41.487"W	0.35	
2221.00	8.090	105.210	2215.95	-16.67	-16.17	106.21	713388.21	372205.84	32°01'17.181"N	103°38'41.350"W	0.26	
2310.00	8.420	105.010	2304.03	-20.05	-19.50	118.55	713400.54	372202.51	32°01'17.147"N	103°38'41.207"W	0.37	
2398.00	8.760	104.200	2391.04	-23.43	-22.81	131.27	713413.26	372199.19	32°01'17.113"N	103°38'41.060"W	0.41	
2487.00	9.020	103.390	2478.97	-26.77	-26.09	144.63	713426.62	372195.91	32°01'17.080"N	103°38'40.905"W	0.32	
2575.00	9.150	104.050	2565.87	-30.13	-29.38	158.12	713440.12	372192.62	32°01'17.047"N	103°38'40.748"W	0.19	



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Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

WELLPATH DATA (213 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]	Comments
2664.00	9.480	104.460	2653.70	-33.74	-32.93	172.09	713454.08	372189.07	32°01'17.011"N	103°38'40.586"W	0.38	
2752.00	10.140	105.130	2740.41	-37.64	-36.76	186.58	713468.57	372185.24	32°01'16.972"N	103°38'40.418"W	0.76	
2841.00	10.130	103.730	2828.02	-41.61	-40.66	201.75	713483.74	372181.34	32°01'16.932"N	103°38'40.242"W	0.28	
2929.00	10.240	102.990	2914.63	-45.28	-44.26	216.89	713498.88	372177.74	32°01'16.896"N	103°38'40.067"W	0.19	
3018.00	10.500	103.300	3002.18	-49.00	-47.90	232.49	713514.48	372174.10	32°01'16.859"N	103°38'39.886"W	0.30	
3106.00	10.450	101.870	3088.71	-52.56	-51.39	248.10	713530.09	372170.61	32°01'16.823"N	103°38'39.705"W	0.30	
3196.00	10.330	100.100	3177.24	-55.73	-54.48	264.03	713546.02	372167.52	32°01'16.792"N	103°38'39.520"W	0.38	
3284.00	10.880	98.600	3263.73	-58.43	-57.11	280.01	713562.00	372164.89	32°01'16.765"N	103°38'39.335"W	0.70	
3373.00	11.320	97.660	3351.07	-60.93	-59.53	296.97	713578.96	372162.47	32°01'16.740"N	103°38'39.138"W	0.53	
3462.00	11.170	98.070	3438.36	-63.38	-61.90	314.17	713596.15	372160.10	32°01'16.715"N	103°38'38.938"W	0.19	
3550.00	10.170	98.040	3524.84	-65.74	-64.19	330.30	713612.29	372157.82	32°01'16.691"N	103°38'38.751"W	1.14	
3638.00	9.290	98.080	3611.57	-67.90	-66.27	345.02	713627.01	372155.73	32°01'16.670"N	103°38'38.580"W	1.00	
3727.00	8.890	97.420	3699.45	-69.86	-68.17	358.96	713640.94	372153.83	32°01'16.650"N	103°38'38.419"W	0.46	
3815.00	8.460	97.550	3786.45	-71.65	-69.90	372.12	713654.10	372152.10	32°01'16.632"N	103°38'38.266"W	0.49	
3904.00	8.030	96.200	3874.53	-73.24	-71.43	384.79	713666.77	372150.57	32°01'16.616"N	103°38'38.119"W	0.53	
3992.00	8.430	97.900	3961.62	-74.85	-72.98	397.29	713679.27	372149.02	32°01'16.600"N	103°38'37.974"W	0.53	
4081.00	8.540	98.230	4049.65	-76.76	-74.82	410.29	713692.27	372147.18	32°01'16.581"N	103°38'37.823"W	0.14	
4169.00	9.100	99.640	4136.61	-78.92	-76.92	423.62	713705.60	372145.08	32°01'16.559"N	103°38'37.668"W	0.68	
4258.00	10.000	103.580	4224.37	-81.98	-79.92	438.07	713720.05	372142.09	32°01'16.529"N	103°38'37.501"W	1.25	
4346.00	10.340	102.700	4310.99	-85.58	-83.45	453.20	713735.18	372138.56	32°01'16.493"N	103°38'37.325"W	0.42	
4434.00	10.270	101.200	4397.57	-88.91	-86.71	468.60	713750.58	372135.30	32°01'16.460"N	103°38'37.147"W	0.32	12 1/4 BHI MWD 779' - 4434'
4516.00	10.120	100.310	4478.28	-91.69	-89.42	482.85	713764.84	372132.59	32°01'16.432"N	103°38'36.981"W	0.27	
4693.00	9.160	99.410	4652.77	-96.91	-94.50	512.05	713794.03	372127.50	32°01'16.380"N	103°38'36.642"W	0.55	
4871.00	8.820	97.280	4828.59	-101.09	-98.55	539.57	713821.55	372123.46	32°01'16.338"N	103°38'36.323"W	0.27	
5047.00	8.180	94.850	5002.65	-103.98	-101.32	565.43	713847.41	372120.69	32°01'16.309"N	103°38'36.023"W	0.42	
5225.00	7.710	93.350	5178.95	-105.86	-103.09	589.97	713871.94	372118.92	32°01'16.290"N	103°38'35.738"W	0.29	
5402.00	8.120	95.170	5354.26	-107.80	-104.91	614.27	713896.24	372117.10	32°01'16.270"N	103°38'35.456"W	0.27	
5579.00	7.330	104.540	5529.66	-111.87	-108.87	637.65	713919.62	372113.14	32°01'16.230"N	103°38'35.185"W	0.84	
5755.00	6.280	103.930	5704.42	-117.10	-114.00	657.86	713939.83	372108.00	32°01'16.178"N	103°38'34.950"W	0.60	
5932.00	5.940	99.760	5880.41	-121.07	-117.89	676.28	713958.26	372104.12	32°01'16.138"N	103°38'34.737"W	0.32	



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WELLPATH DATA (213 stations)

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6109.00	7.510	108.470	6056.19	-126.38	-123.10	696.28	713978.25	372098.90	32°01'16.085"N	103°38'34.505"W	1.06	
6287.00	7.280	103.560	6232.71	-132.82	-129.43	718.28	714000.25	372092.57	32°01'16.021"N	103°38'34.250"W	0.38	
6464.00	6.260	102.610	6408.48	-137.65	-134.17	738.60	714020.57	372087.84	32°01'15.973"N	103°38'34.014"W	0.58	
6641.00	5.250	103.460	6584.58	-141.72	-138.16	755.89	714037.86	372083.84	32°01'15.932"N	103°38'33.814"W	0.57	
6729.00	5.010	104.070	6672.23	-143.63	-140.03	763.53	714045.50	372081.97	32°01'15.913"N	103°38'33.725"W	0.28	
6818.00	4.650	104.070	6760.91	-145.49	-141.85	770.80	714052.77	372080.15	32°01'15.895"N	103°38'33.641"W	0.40	
6995.00	4.160	102.930	6937.39	-148.73	-145.04	784.02	714065.99	372076.97	32°01'15.863"N	103°38'33.487"W	0.28	
7172.00	3.480	105.440	7114.00	-151.65	-147.90	795.46	714077.42	372074.10	32°01'15.834"N	103°38'33.355"W	0.40	
7349.00	2.610	109.070	7290.75	-154.44	-150.65	804.44	714086.41	372071.36	32°01'15.806"N	103°38'33.251"W	0.50	
7525.00	2.420	112.140	7466.58	-157.18	-153.36	811.67	714093.64	372068.65	32°01'15.779"N	103°38'33.167"W	0.13	
7702.00	1.920	126.500	7643.45	-160.38	-156.53	817.52	714099.48	372065.48	32°01'15.747"N	103°38'33.099"W	0.42	
7879.00	1.770	124.090	7820.36	-163.70	-159.83	822.16	714104.13	372062.18	32°01'15.714"N	103°38'33.046"W	0.10	
8056.00	1.370	131.350	7997.29	-166.65	-162.76	826.02	714107.98	372059.25	32°01'15.685"N	103°38'33.001"W	0.25	
8234.00	1.340	145.820	8175.24	-169.79	-165.88	828.78	714110.75	372056.12	32°01'15.653"N	103°38'32.969"W	0.19	
8322.00	1.380	151.870	8263.22	-171.58	-167.67	829.86	714111.83	372054.34	32°01'15.636"N	103°38'32.957"W	0.17	8 3/4 BHI MWD 4516' - 8322'
8380.00	4.440	141.390	8321.14	-173.96	-170.04	831.59	714113.56	372051.97	32°01'15.612"N	103°38'32.937"W	5.33	
8396.00	5.060	144.770	8337.08	-175.02	-171.10	832.38	714114.35	372050.91	32°01'15.602"N	103°38'32.928"W	4.25	
8438.00	5.250	147.200	8378.91	-178.16	-174.23	834.49	714116.46	372047.78	32°01'15.571"N	103°38'32.903"W	0.69	
8484.00	4.810	138.830	8424.73	-181.39	-177.45	836.90	714118.87	372044.56	32°01'15.539"N	103°38'32.876"W	1.86	
8528.00	5.810	101.020	8468.56	-183.22	-179.27	840.30	714122.27	372042.74	32°01'15.520"N	103°38'32.836"W	8.10	
8582.00	8.500	83.510	8522.14	-183.33	-179.34	846.96	714128.92	372042.67	32°01'15.519"N	103°38'32.759"W	6.36	
8626.00	8.800	64.280	8565.65	-181.53	-177.51	853.22	714135.18	372044.50	32°01'15.537"N	103°38'32.686"W	6.58	
8661.00	10.330	53.300	8600.16	-178.51	-174.47	858.15	714140.11	372047.54	32°01'15.567"N	103°38'32.629"W	6.78	
8705.00	14.470	39.940	8643.14	-171.97	-167.89	864.84	714146.81	372054.11	32°01'15.631"N	103°38'32.550"W	11.39	
8750.00	17.370	29.890	8686.41	-161.86	-157.76	871.80	714153.77	372064.25	32°01'15.731"N	103°38'32.469"W	8.87	
8794.00	20.700	17.850	8728.02	-148.78	-144.65	877.46	714159.43	372077.36	32°01'15.861"N	103°38'32.402"W	11.67	
8838.00	24.320	12.680	8768.66	-132.56	-128.40	881.84	714163.80	372093.60	32°01'16.021"N	103°38'32.350"W	9.37	
8882.00	28.260	11.590	8808.10	-113.52	-109.35	885.92	714167.89	372112.65	32°01'16.209"N	103°38'32.301"W	9.02	
8927.00	31.160	5.730	8847.19	-91.51	-87.32	889.23	714171.19	372134.68	32°01'16.427"N	103°38'32.261"W	9.11	
8971.00	34.570	0.160	8884.15	-67.69	-63.50	890.40	714172.36	372158.50	32°01'16.663"N	103°38'32.246"W	10.35	



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Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

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9015.00	35.830	359.790	8920.11	-42.33	-38.14	890.39	714172.35	372183.86	32°01'16.914"N	103°38'32.244"W	2.90	
9061.00	37.480	1.300	8957.01	-14.88	-10.68	890.65	714172.62	372211.32	32°01'17.185"N	103°38'32.239"W	4.09	
9105.00	40.740	359.380	8991.15	12.87	17.07	890.80	714172.77	372239.07	32°01'17.460"N	103°38'32.235"W	7.90	
9147.00	46.950	357.820	9021.42	41.94	46.14	890.07	714172.03	372268.14	32°01'17.748"N	103°38'32.242"W	15.01	
9192.00	52.860	356.720	9050.40	76.32	80.51	888.42	714170.38	372302.50	32°01'18.088"N	103°38'32.258"W	13.27	
9236.00	59.670	355.580	9074.82	112.82	116.99	885.95	714167.91	372338.99	32°01'18.449"N	103°38'32.284"W	15.63	
9281.00	66.320	354.580	9095.24	152.75	156.91	882.50	714164.46	372378.91	32°01'18.844"N	103°38'32.321"W	14.91	
9325.00	73.870	353.910	9110.21	193.90	198.05	878.35	714160.31	372420.04	32°01'19.252"N	103°38'32.366"W	17.22	
9369.00	82.060	352.010	9119.38	236.60	240.71	873.07	714155.03	372462.70	32°01'19.674"N	103°38'32.425"W	19.09	
9435.00	94.190	351.900	9121.53	301.83	305.91	863.85	714145.82	372527.89	32°01'20.320"N	103°38'32.527"W	18.38	
9523.00	96.360	350.850	9113.44	388.52	392.54	850.71	714132.68	372614.52	32°01'21.178"N	103°38'32.673"W	2.74	
9612.00	97.350	349.440	9102.82	475.65	479.59	835.59	714117.56	372701.57	32°01'22.040"N	103°38'32.842"W	1.93	
9700.00	99.620	348.040	9089.83	561.08	564.95	818.60	714100.57	372786.93	32°01'22.886"N	103°38'33.033"W	3.02	
9788.00	97.950	347.770	9076.39	646.20	649.98	800.38	714082.35	372871.96	32°01'23.729"N	103°38'33.238"W	1.92	
9877.00	94.780	349.540	9066.53	732.99	736.69	782.99	714064.96	372958.66	32°01'24.588"N	103°38'33.434"W	4.07	
9965.00	94.480	354.560	9059.42	819.89	823.53	770.86	714052.83	373045.50	32°01'25.448"N	103°38'33.568"W	5.70	
10054.00	96.460	357.820	9050.93	908.30	911.92	764.97	714046.94	373133.88	32°01'26.323"N	103°38'33.630"W	4.27	
10142.00	92.530	359.150	9044.04	995.99	999.60	762.65	714044.62	373221.55	32°01'27.191"N	103°38'33.651"W	4.71	
10230.00	88.400	1.120	9043.32	1083.96	1087.57	762.86	714044.83	373309.52	32°01'28.061"N	103°38'33.642"W	5.20	
10319.00	90.520	3.000	9044.16	1172.88	1176.50	766.06	714048.03	373398.45	32°01'28.941"N	103°38'33.598"W	3.18	
10407.00	92.090	4.430	9042.16	1260.63	1264.29	771.76	714053.73	373486.23	32°01'29.809"N	103°38'33.525"W	2.41	
10496.00	91.720	4.160	9039.20	1349.30	1352.99	778.42	714060.39	373574.93	32°01'30.687"N	103°38'33.441"W	0.51	
10585.00	92.440	3.310	9035.97	1438.03	1441.74	784.22	714066.18	373663.68	32°01'31.565"N	103°38'33.367"W	1.25	
10674.00	93.980	3.170	9030.99	1526.72	1530.45	789.24	714071.21	373752.39	32°01'32.442"N	103°38'33.302"W	1.74	
10762.00	94.230	2.580	9024.69	1614.36	1618.12	793.64	714075.61	373840.05	32°01'33.309"N	103°38'33.245"W	0.73	
10850.00	94.600	2.250	9017.91	1702.00	1705.78	797.34	714079.31	373927.71	32°01'34.177"N	103°38'33.195"W	0.56	
10939.00	93.820	0.760	9011.38	1790.71	1794.50	799.67	714081.64	374016.43	32°01'35.054"N	103°38'33.162"W	1.89	
11027.00	92.410	1.430	9006.60	1878.56	1882.35	801.35	714083.32	374104.28	32°01'35.924"N	103°38'33.136"W	1.77	
11116.00	87.040	358.330	9007.02	1967.51	1971.31	801.16	714083.13	374193.23	32°01'36.804"N	103°38'33.131"W	6.97	
11205.00	87.970	358.620	9010.90	2056.41	2060.19	798.80	714080.76	374282.11	32°01'37.684"N	103°38'33.152"W	1.09	



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

WELLPATH DATA (213 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]	Comments
11293.00	91.570	359.180	9011.25	2144.38	2148.16	797.11	714079.07	374370.07	32°01'38.554"N	103°38'33.165"W	4.14	
11382.00	92.530	359.240	9008.07	2233.32	2237.09	795.88	714077.85	374459.00	32°01'39.434"N	103°38'33.173"W	1.08	
11470.00	89.970	359.180	9006.15	2321.29	2325.06	794.67	714076.64	374546.96	32°01'40.305"N	103°38'33.180"W	2.91	
11559.00	90.190	359.160	9006.02	2410.28	2414.05	793.38	714075.35	374635.95	32°01'41.186"N	103°38'33.189"W	0.25	
11648.00	90.950	359.220	9005.14	2499.27	2503.03	792.12	714074.09	374724.93	32°01'42.066"N	103°38'33.197"W	0.86	
11736.00	91.080	358.970	9003.58	2587.25	2591.01	790.73	714072.70	374812.90	32°01'42.937"N	103°38'33.206"W	0.32	
11827.00	89.080	0.300	9003.45	2678.25	2682.00	790.15	714072.12	374903.89	32°01'43.837"N	103°38'33.206"W	2.64	
11918.00	88.770	0.850	9005.16	2769.22	2772.98	791.06	714073.03	374994.87	32°01'44.738"N	103°38'33.189"W	0.69	
12008.00	88.000	0.610	9007.70	2859.17	2862.94	792.21	714074.18	375084.82	32°01'45.628"N	103°38'33.169"W	0.90	
12100.00	86.730	0.080	9011.93	2951.07	2954.83	792.76	714074.73	375176.71	32°01'46.537"N	103°38'33.156"W	1.50	
12191.00	86.580	358.690	9017.24	3041.91	3045.67	791.79	714073.76	375267.55	32°01'47.436"N	103°38'33.160"W	1.53	
12282.00	89.450	1.910	9020.39	3132.83	3136.59	792.27	714074.23	375358.47	32°01'48.336"N	103°38'33.148"W	4.74	
12373.00	90.220	1.050	9020.65	3223.78	3227.56	794.62	714076.59	375449.43	32°01'49.236"N	103°38'33.114"W	1.27	
12465.00	94.750	1.900	9016.66	3315.63	3319.42	796.98	714078.95	375541.29	32°01'50.145"N	103°38'33.080"W	5.01	
12556.00	91.790	4.930	9011.47	3406.27	3410.09	802.40	714084.36	375631.95	32°01'51.041"N	103°38'33.010"W	4.65	
12645.00	88.270	2.650	9011.42	3495.03	3498.88	808.28	714090.24	375720.73	32°01'51.920"N	103°38'32.935"W	4.71	
12734.00	88.400	359.630	9014.01	3583.95	3587.81	810.05	714092.01	375809.66	32°01'52.800"N	103°38'32.908"W	3.39	
12823.00	88.270	358.410	9016.60	3672.91	3676.76	808.53	714090.49	375898.61	32°01'53.680"N	103°38'32.919"W	1.38	
12941.00	89.450	0.220	9018.95	3790.87	3794.72	807.12	714089.08	376016.56	32°01'54.847"N	103°38'32.927"W	1.83	
13030.00	90.460	359.930	9019.02	3879.87	3883.72	807.23	714089.20	376105.56	32°01'55.728"N	103°38'32.919"W	1.18	
13118.00	90.460	2.490	9018.31	3967.83	3971.69	809.09	714091.06	376193.53	32°01'56.598"N	103°38'32.891"W	2.91	
13206.00	90.250	359.170	9017.76	4055.80	4059.66	810.36	714092.33	376281.50	32°01'57.469"N	103°38'32.869"W	3.78	
13295.00	89.480	356.650	9017.97	4144.75	4148.60	807.12	714089.09	376370.43	32°01'58.349"N	103°38'32.900"W	2.96	
13383.00	91.260	355.560	9017.40	4232.57	4236.39	801.14	714083.11	376458.21	32°01'59.218"N	103°38'32.963"W	2.37	
13472.00	94.100	357.120	9013.24	4321.30	4325.10	795.47	714077.43	376546.92	32°02'00.096"N	103°38'33.023"W	3.64	
13560.00	90.370	356.960	9009.81	4409.12	4412.90	790.93	714072.89	376634.72	32°02'00.966"N	103°38'33.069"W	4.24	
13649.00	89.880	357.330	9009.62	4498.03	4501.79	786.49	714068.46	376723.60	32°02'01.845"N	103°38'33.114"W	0.69	
13738.00	89.410	359.130	9010.17	4586.99	4590.74	783.74	714065.71	376812.55	32°02'02.726"N	103°38'33.139"W	2.09	
13827.00	90.710	359.820	9010.08	4675.99	4679.73	782.93	714064.90	376901.54	32°02'03.607"N	103°38'33.142"W	1.65	
13915.00	89.140	359.580	9010.19	4763.99	4767.73	782.47	714064.44	376989.53	32°02'04.477"N	103°38'33.141"W	1.80	



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

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REFERENCE WELLPATH IDENTIFICATION												
Operator	Chevron U.S.A. Inc.						Slot	SD WE 23 Fed P25 No. 3H				
Area	Lea County, NM						Well	SD WE 23 Federal P25 No. 3H ST01				
Field	Jennings / Upper BN SPR Shale (Lea County, NM)						Wellbore	SD WE 23 Fed P25 No. 3H ST01				
Facility	SD WE 23 Fed P25						Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD				
WELLPATH DATA (213 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]	Comments
14004.00	89.320	0.240	9011.39	4852.98	4856.72	782.33	714064.30	377078.52	32°02'05.358"N	103°38'33.136"W	0.77	
14092.00	89.380	0.230	9012.39	4940.97	4944.71	782.69	714064.66	377166.51	32°02'06.229"N	103°38'33.125"W	0.07	
14180.00	90.520	359.210	9012.46	5028.97	5032.71	782.26	714064.23	377254.50	32°02'07.099"N	103°38'33.123"W	1.74	
14269.00	89.350	359.460	9012.56	5117.96	5121.70	781.23	714063.19	377343.49	32°02'07.980"N	103°38'33.129"W	1.34	
14357.00	89.230	359.200	9013.65	5205.95	5209.69	780.20	714062.17	377431.48	32°02'08.851"N	103°38'33.134"W	0.33	
14446.00	89.230	0.570	9014.85	5294.94	5298.68	780.02	714061.99	377520.46	32°02'09.732"N	103°38'33.130"W	1.54	
14534.00	88.340	0.970	9016.72	5382.91	5386.65	781.20	714063.17	377608.43	32°02'10.602"N	103°38'33.109"W	1.11	
14623.00	90.150	1.510	9017.89	5471.87	5475.62	783.13	714065.09	377697.39	32°02'11.482"N	103°38'33.080"W	2.12	
14711.00	88.120	359.390	9019.22	5559.84	5563.59	783.82	714065.79	377785.37	32°02'12.353"N	103°38'33.066"W	3.34	
14800.00	90.090	359.710	9020.61	5648.82	5652.58	783.12	714065.09	377874.35	32°02'13.233"N	103°38'33.067"W	2.24	
14888.00	92.900	0.490	9018.31	5736.78	5740.54	783.27	714065.24	377962.30	32°02'14.104"N	103°38'33.059"W	3.31	
14978.00	90.000	359.200	9016.03	5826.74	5830.50	783.03	714065.00	378052.26	32°02'14.994"N	103°38'33.055"W	3.53	
15066.00	89.850	358.770	9016.15	5914.73	5918.48	781.47	714063.44	378140.24	32°02'15.865"N	103°38'33.067"W	0.52	
15155.00	90.310	358.970	9016.03	6003.72	6007.46	779.71	714061.68	378229.22	32°02'16.745"N	103°38'33.080"W	0.56	
15243.00	90.250	359.870	9015.60	6091.72	6095.46	778.82	714060.79	378317.21	32°02'17.616"N	103°38'33.084"W	1.02	
15332.00	90.220	1.510	9015.23	6180.70	6184.45	779.90	714061.86	378406.20	32°02'18.497"N	103°38'33.065"W	1.84	
15420.00	91.020	4.540	9014.28	6268.54	6272.31	784.54	714066.51	378494.05	32°02'19.366"N	103°38'33.005"W	3.56	
15509.00	89.970	5.180	9013.51	6357.18	6360.98	792.08	714074.05	378582.72	32°02'20.243"N	103°38'32.911"W	1.38	
15597.00	89.910	4.720	9013.60	6444.82	6448.66	799.67	714081.64	378670.39	32°02'21.110"N	103°38'32.816"W	0.53	
15686.00	89.690	2.310	9013.91	6533.61	6537.48	805.13	714087.09	378759.21	32°02'21.989"N	103°38'32.746"W	2.72	
15774.00	88.490	359.580	9015.31	6621.57	6625.45	806.58	714088.55	378847.18	32°02'22.859"N	103°38'32.723"W	3.39	
15863.00	92.590	358.890	9014.47	6710.55	6714.42	805.39	714087.36	378936.14	32°02'23.739"N	103°38'32.730"W	4.67	
15951.00	90.430	357.620	9012.15	6798.48	6802.34	802.71	714084.88	379024.06	32°02'24.610"N	103°38'32.754"W	2.85	
16039.00	89.970	357.010	9011.85	6886.40	6890.24	798.59	714080.56	379111.96	32°02'25.480"N	103°38'32.796"W	0.87	
16128.00	89.750	355.700	9012.06	6975.24	6979.06	792.93	714074.90	379200.77	32°02'26.359"N	103°38'32.855"W	1.49	
16217.00	89.230	355.690	9012.85	7064.02	7067.80	786.25	714068.22	379289.51	32°02'27.238"N	103°38'32.926"W	0.58	
16305.00	89.690	357.210	9013.68	7151.87	7155.63	780.80	714062.77	379377.34	32°02'28.107"N	103°38'32.983"W	1.80	
16394.00	89.110	359.340	9014.62	7240.83	7244.58	778.12	714060.09	379466.28	32°02'28.987"N	103°38'33.007"W	2.48	
16484.00	90.340	0.180	9015.05	7330.83	7334.57	777.75	714059.72	379556.27	32°02'29.878"N	103°38'33.005"W	1.65	
16573.00	90.280	0.030	9014.57	7419.82	7423.57	777.91	714059.88	379645.27	32°02'30.759"N	103°38'32.996"W	0.18	



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

WELLPATH DATA (213 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]	Comments
16661.00	89.940	359.160	9014.40	7507.82	7511.57	777.29	714059.26	379733.26	32°02'31.629"N	103°38'32.997"W	1.06	
16750.00	89.940	359.480	9014.49	7596.82	7600.56	776.23	714058.20	379822.25	32°02'32.510"N	103°38'33.003"W	0.36	
16839.00	89.540	357.560	9014.89	7685.79	7689.53	773.93	714055.90	379911.21	32°02'33.391"N	103°38'33.023"W	2.20	
16927.00	90.120	357.560	9015.16	7773.73	7777.45	770.19	714052.16	379999.13	32°02'34.261"N	103°38'33.060"W	0.66	
17016.00	89.880	358.630	9015.16	7862.69	7866.40	767.23	714049.20	380088.07	32°02'35.141"N	103°38'33.087"W	1.23	
17105.00	89.880	0.070	9015.34	7951.69	7955.39	766.22	714048.19	380177.06	32°02'36.022"N	103°38'33.093"W	1.62	
17193.00	89.820	0.500	9015.57	8039.68	8043.39	766.66	714048.63	380265.06	32°02'36.893"N	103°38'33.081"W	0.49	
17281.00	89.850	358.280	9015.83	8127.68	8131.37	765.72	714047.69	380353.04	32°02'37.764"N	103°38'33.085"W	2.52	
17370.00	89.750	355.680	9016.14	8216.56	8220.24	761.03	714043.00	380441.91	32°02'38.643"N	103°38'33.133"W	2.92	
17458.00	89.780	356.020	9016.50	8304.36	8308.01	754.66	714036.63	380529.67	32°02'39.512"N	103°38'33.201"W	0.39	
17547.00	92.840	0.830	9014.46	8393.28	8396.92	752.22	714034.19	380618.57	32°02'40.392"N	103°38'33.222"W	6.40	
17635.00	90.180	358.800	9012.14	8481.24	8484.87	751.93	714033.90	380706.53	32°02'41.262"N	103°38'33.219"W	3.80	
17723.00	93.140	2.390	9009.59	8569.17	8572.81	752.84	714034.81	380794.46	32°02'42.133"N	103°38'33.202"W	5.29	
17812.00	90.090	0.620	9007.09	8658.07	8661.73	755.18	714037.15	380883.37	32°02'43.012"N	103°38'33.168"W	3.96	
17900.00	89.880	3.070	9007.11	8746.01	8749.68	758.01	714039.98	380971.32	32°02'43.882"N	103°38'33.129"W	2.79	
17989.00	89.970	4.730	9007.22	8834.77	8838.47	764.06	714046.03	381060.11	32°02'44.761"N	103°38'33.052"W	1.87	
18077.00	89.690	2.860	9007.49	8922.54	8926.27	769.89	714051.86	381147.90	32°02'45.629"N	103°38'32.978"W	2.15	
18165.00	89.540	359.660	9008.08	9010.50	9014.23	771.82	714053.79	381235.87	32°02'46.500"N	103°38'32.949"W	3.64	
18254.00	90.590	357.390	9007.98	9099.47	9103.20	769.53	714051.50	381324.83	32°02'47.380"N	103°38'32.969"W	2.81	
18342.00	89.880	358.330	9007.62	9187.42	9191.13	766.25	714048.21	381412.76	32°02'48.250"N	103°38'33.000"W	1.34	
18431.00	93.240	1.110	9005.19	9276.37	9280.08	765.81	714047.78	381501.70	32°02'49.131"N	103°38'32.999"W	4.90	
18518.00	89.690	359.270	9002.97	9363.32	9367.03	766.10	714048.07	381588.65	32°02'49.991"N	103°38'32.989"W	4.60	
18607.00	89.780	357.660	9003.38	9452.29	9456.00	763.71	714045.68	381677.61	32°02'50.871"N	103°38'33.010"W	1.81	
18696.00	90.400	358.940	9003.24	9541.26	9544.95	761.07	714043.04	381766.56	32°02'51.752"N	103°38'33.034"W	1.60	
18784.00	89.720	357.220	9003.15	9629.22	9632.90	758.12	714040.09	381854.51	32°02'52.622"N	103°38'33.062"W	2.10	
18873.00	90.740	358.460	9002.79	9718.17	9721.83	754.77	714036.74	381943.44	32°02'53.503"N	103°38'33.094"W	1.80	
18961.00	89.910	359.500	9002.29	9806.16	9809.82	753.20	714035.17	382031.42	32°02'54.373"N	103°38'33.106"W	1.51	
19050.00	88.920	0.240	9003.20	9895.15	9898.81	753.00	714034.97	382120.41	32°02'55.254"N	103°38'33.102"W	1.39	
19138.00	89.290	359.870	9004.57	9983.14	9986.80	753.09	714035.06	382208.39	32°02'56.125"N	103°38'33.094"W	0.59	
19227.00	89.540	1.570	9005.48	10072.12	10075.78	754.20	714036.17	382297.37	32°02'57.005"N	103°38'33.075"W	1.93	



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

WELLPATH DATA (213 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]	Comments
19315.00	89.910	2.080	9005.91	10160.06	10163.74	757.01	714038.98	382385.32	32°02'57.875"N	103°38'33.035"W	0.72	
19394.00	89.880	2.230	9006.05	10238.99	10242.68	759.98	714041.95	382464.26	32°02'58.656"N	103°38'32.995"W	0.19	8 3/4 BHI MWD 8380' - 19394'
19419.00	89.880	2.230	9006.10	10263.96	10267.66	760.95	714042.92	382489.24	32°02'58.904"N	103°38'32.982"W	0.00	Projection to TD: 19419'

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SD WE 23 Fed P25 No. 3H BHL rev 2	9007.00	10264.42	763.03	714045.00	382486.00	32°02'58.871"N	103°38'32.958"W	point
SD WE 23 Fed P25 No. 3H 7500' from LP rev 2	9017.00	7918.65	774.07	714056.04	380140.33	32°02'35.658"N	103°38'33.004"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD WE 23 Fed P25 No. 3H ST01 Ref Wellpath: SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.60	738.00	ISCWSA MWD, Rev. 4 (Standard)	Imported surveys from 294' - 738'	SD WE 23 Fed P25 No. 3H AWB
738.00	4434.00	BHI NaviTrak (Standard)	12 1/4 BHI MWD 779' - 4434'	SD WE 23 Fed P25 No. 3H AWB
4434.00	8322.00	BHI NaviTrak (Standard)	8 3/4 BHI MWD 4516' - 8322'	SD WE 23 Fed P25 No. 3H AWB
8322.00	19394.00	BHI AutoTrak Curve (Short)	8 3/4 BHI MWD 8380' - 19394'	SD WE 23 Fed P25 No. 3H ST01
19394.00	19419.00	Blind Drilling (std)	Projection to bit	SD WE 23 Fed P25 No. 3H ST01



Actual Wellpath Report

SD WE 23 Federal P25 No. 3H ST01 awp 8380' - 19394' Proj: 19419'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 23 Fed P25 No. 3H
Area	Lea County, NM	Well	SD WE 23 Federal P25 No. 3H ST01
Field	Jennings / Upper BN SPR Shale (Lea County, NM)	Wellbore	SD WE 23 Fed P25 No. 3H ST01
Facility	SD WE 23 Fed P25	Sidetrack from	SD WE 23 Federal P25 No. 3H awp 249' - 8849' Proj: 8894' at 8322.00 MD

COMMENTS

Wellpath general comments

Well: SD WE 23 Federal P25 No. 3H ST01

Field: Jennings / Upper BN SPR Shale

Rig: X30

Location: Lea Co., NM

API: 30-025-43462-01

Latitude: 32° 01' 17.347" N

Longitude: 103° 38' 42.583" W

DF Elevation: 3155.6 feet

Elev. GL: 3123 feet

Proposed Direction: 359.73°

PBHL: 19419 feet

Duration: 02/02/2017-03/02/2017

FSE's: J. Sosa

SO#: 8369341

8 3/4 BHI MWD 8380' - 19394'

Projection to TD: 19419'

Well: SD WE 23 Federal P25 No. 3H

Field: Jennings / Upper BN SPR Shale

Rig: X30

Location: Lea Co., NM

API: 30-025-43462-00

Latitude: 32° 01' 17.347" N

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DF Elevation: 3155.6 feet

Elev. GL: 3123 feet

Proposed Direction: 359.73°

PBHL: 8894 feet

Duration: 02/02/2017-02/11/2017

FSE's: J. Sosa

SO#: 8369341

Imported surveys from 294' - 738'

12 1/4 BHI MWD 779' - 4434'

8 3/4 BHI MWD 4516' - 8322'

8 3/4 BHI MWD 8406' - 8849'

Projection to TD: 8894'