



Actual Wellpath Report

SD WE 24 FED P24 7H AWB_awp 167.5' - 19319' Proj: 19371'

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**BAKER
HUGHES**
a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Tranlam
Scale	0.999965	Report Generated	9/14/2017 at 2:32:56 PM
Convergence at slot	0.38° East	Database/Source file	WA_Midland/SD_WE_24_FED_P24_7H_AWB_awp_167.5_-19319_Proj_19371_.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	50.00	720095.00	372222.00	32°01'16.911"N	103°37'23.450"W
Facility Reference Pt			720045.00	372221.00	32°01'16.904"N	103°37'24.031"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 X-30 (KB) to Facility Vertical Datum	3169.00ft
Horizontal Reference Pt	Slot	Rig: Nabors X-30 (KB) to Mean Sea Level	3169.00ft
Vertical Reference Pt	Rig: Nabors X-30 (KB)	Rig: Nabors X-30 (KB) to Ground Level at Slot (SD WE 24 FED P24 7H)	33.00ft
MD Reference Pt	Rig: Nabors X-30 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.65°

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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Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

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]	Comments
0.00†	0.000	35.000	0.00	0.00	0.00	0.00	720095.00	372222.00	32°01'16.911"N	103°37'23.450"W	0.00	
33.00	0.000	35.000	33.00	0.00	0.00	0.00	720095.00	372222.00	32°01'16.911"N	103°37'23.450"W	0.00	
167.50	0.500	35.000	167.50	0.48	0.48	0.34	720095.34	372222.48	32°01'16.916"N	103°37'23.446"W	0.37	
372.50	0.200	137.000	372.50	0.95	0.95	1.09	720096.09	372222.95	32°01'16.920"N	103°37'23.437"W	0.28	
641.50	0.800	172.000	641.48	-1.26	-1.25	1.68	720096.68	372220.75	32°01'16.899"N	103°37'23.431"W	0.24	
706.00	0.740	165.390	705.98	-2.11	-2.10	1.84	720096.84	372219.90	32°01'16.890"N	103°37'23.429"W	0.17	
888.00	1.000	184.550	887.96	-4.83	-4.82	2.01	720097.01	372217.18	32°01'16.863"N	103°37'23.427"W	0.21	
1065.00	1.260	157.140	1064.92	-8.17	-8.15	2.65	720097.65	372213.85	32°01'16.830"N	103°37'23.420"W	0.33	
1242.00	4.730	96.630	1241.68	-10.86	-10.79	10.66	720105.66	372211.21	32°01'16.804"N	103°37'23.327"W	2.40	
1419.00	5.890	91.740	1417.92	-12.07	-11.91	26.98	720121.98	372210.09	32°01'16.791"N	103°37'23.138"W	0.70	
1597.00	6.270	91.780	1594.92	-12.77	-12.49	45.83	720140.83	372209.51	32°01'16.785"N	103°37'22.919"W	0.21	
1774.00	7.500	89.060	1770.64	-13.01	-12.60	67.04	720162.04	372209.40	32°01'16.782"N	103°37'22.672"W	0.72	
1952.00	8.800	92.270	1946.84	-13.51	-12.95	92.26	720187.26	372209.05	32°01'16.777"N	103°37'22.380"W	0.77	
2129.00	9.370	96.360	2121.62	-15.81	-15.08	120.11	720215.10	372206.92	32°01'16.754"N	103°37'22.056"W	0.49	
2307.00	10.120	101.020	2297.05	-20.59	-19.67	149.86	720244.86	372202.33	32°01'16.707"N	103°37'21.711"W	0.61	
2484.00	10.800	101.920	2471.11	-27.18	-26.07	181.35	720276.34	372195.93	32°01'16.641"N	103°37'21.346"W	0.40	
2661.00	10.120	107.420	2645.17	-35.45	-34.15	212.41	720307.41	372187.85	32°01'16.559"N	103°37'20.986"W	0.68	
2839.00	9.540	106.900	2820.56	-44.60	-43.12	241.45	720336.44	372178.88	32°01'16.469"N	103°37'20.649"W	0.33	
3016.00	6.470	94.050	2995.83	-49.71	-48.09	265.44	720360.43	372173.91	32°01'16.418"N	103°37'20.371"W	2.00	
3193.00	7.060	86.900	3171.60	-49.96	-48.21	286.25	720381.24	372173.79	32°01'16.415"N	103°37'20.129"W	0.58	
3370.00	8.500	87.730	3346.96	-49.00	-47.10	310.18	720405.17	372174.90	32°01'16.425"N	103°37'19.851"W	0.82	
3547.00	9.940	86.470	3521.67	-47.71	-45.64	338.50	720433.49	372176.36	32°01'16.437"N	103°37'19.522"W	0.82	
3724.00	11.000	84.780	3695.72	-45.43	-43.17	370.57	720465.55	372178.83	32°01'16.460"N	103°37'19.149"W	0.62	
3902.00	12.080	91.840	3870.13	-44.70	-42.22	406.10	720501.08	372179.78	32°01'16.467"N	103°37'18.737"W	1.00	
4078.00	13.430	98.400	4041.79	-48.51	-45.80	444.73	720539.71	372176.20	32°01'16.429"N	103°37'18.288"W	1.12	
4256.00	13.560	99.840	4214.88	-55.35	-52.38	485.74	720580.72	372169.62	32°01'16.361"N	103°37'17.813"W	0.20	
4432.00	13.780	105.820	4385.90	-64.84	-61.62	526.24	720621.22	372160.38	32°01'16.267"N	103°37'17.343"W	0.81	12 1/4 BH MWD 706' - 4432'
4612.00	14.360	107.600	4560.50	-77.69	-74.22	568.14	720663.12	372147.79	32°01'16.140"N	103°37'16.857"W	0.40	
4789.00	10.250	97.680	4733.42	-86.66	-82.96	604.69	720699.66	372139.04	32°01'16.051"N	103°37'16.433"W	2.60	
4967.00	10.000	98.300	4908.65	-91.19	-87.31	635.67	720730.65	372134.69	32°01'16.006"N	103°37'16.074"W	0.15	



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Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

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]	Comments
5144.00	9.270	100.790	5083.15	-96.26	-92.20	664.89	720759.86	372129.81	32°01'15.955"N	103°37'15.735"W	0.47	
5321.00	8.490	100.420	5258.03	-101.45	-97.23	691.74	720786.71	372124.77	32°01'15.904"N	103°37'15.423"W	0.44	
5499.00	8.010	101.420	5434.18	-106.44	-102.06	716.82	720811.79	372119.94	32°01'15.854"N	103°37'15.132"W	0.28	
5676.00	6.690	99.940	5609.73	-110.80	-106.28	739.06	720834.04	372115.72	32°01'15.811"N	103°37'14.874"W	0.75	
5853.00	4.060	94.730	5785.93	-113.19	-108.58	755.47	720850.44	372113.42	32°01'15.787"N	103°37'14.684"W	1.51	
6030.00	1.720	82.550	5962.70	-113.42	-108.75	764.35	720859.32	372113.25	32°01'15.785"N	103°37'14.581"W	1.36	
6207.00	1.770	86.210	6139.61	-112.93	-108.23	769.71	720864.68	372113.78	32°01'15.790"N	103°37'14.519"W	0.07	
6384.00	1.580	87.900	6316.54	-112.69	-107.96	774.87	720869.85	372114.05	32°01'15.792"N	103°37'14.459"W	0.11	
6561.00	1.510	62.160	6493.48	-111.54	-106.78	779.38	720874.35	372115.22	32°01'15.804"N	103°37'14.406"W	0.39	
6738.00	1.090	65.570	6670.43	-109.77	-104.99	782.97	720877.94	372117.01	32°01'15.821"N	103°37'14.364"W	0.24	
6915.00	0.760	69.670	6847.41	-108.69	-103.89	785.60	720880.57	372118.11	32°01'15.832"N	103°37'14.334"W	0.19	
7092.00	0.750	43.160	7024.39	-107.45	-102.64	787.50	720882.47	372119.37	32°01'15.844"N	103°37'14.312"W	0.20	
7269.00	0.670	210.630	7201.39	-107.49	-102.68	787.76	720882.73	372119.32	32°01'15.844"N	103°37'14.309"W	0.80	
7446.00	0.500	212.630	7378.38	-109.03	-104.22	786.82	720881.79	372117.78	32°01'15.828"N	103°37'14.320"W	0.10	
7623.00	0.560	245.120	7555.37	-110.03	-105.24	785.62	720880.59	372116.77	32°01'15.819"N	103°37'14.334"W	0.17	
7801.00	0.320	200.660	7733.37	-110.86	-106.07	784.65	720879.62	372115.94	32°01'15.810"N	103°37'14.345"W	0.22	
7978.00	0.090	191.400	7910.36	-111.46	-106.67	784.45	720879.42	372115.34	32°01'15.804"N	103°37'14.347"W	0.13	
8155.00	0.210	171.460	8087.36	-111.91	-107.12	784.47	720879.44	372114.88	32°01'15.800"N	103°37'14.347"W	0.07	
8332.00	0.540	163.220	8264.36	-113.04	-108.24	784.76	720879.73	372113.76	32°01'15.789"N	103°37'14.344"W	0.19	
8491.00	0.390	205.930	8423.36	-114.24	-109.45	784.74	720879.71	372112.56	32°01'15.777"N	103°37'14.344"W	0.23	8 3/4 BH MWD 4612' - 8491'
8580.00	0.580	180.190	8512.35	-114.96	-110.17	784.61	720879.58	372111.83	32°01'15.770"N	103°37'14.346"W	0.32	
8669.00	6.120	343.850	8601.20	-110.84	-106.06	783.28	720878.25	372115.94	32°01'15.811"N	103°37'14.361"W	7.50	
8757.00	21.230	352.000	8686.46	-90.42	-85.66	779.74	720874.71	372136.35	32°01'16.013"N	103°37'14.400"W	17.27	
8845.00	23.050	351.940	8767.97	-57.55	-52.82	775.11	720870.08	372169.18	32°01'16.338"N	103°37'14.452"W	2.07	
8934.00	30.010	349.040	8847.55	-18.36	-13.67	768.42	720863.40	372208.33	32°01'16.726"N	103°37'14.526"W	7.95	
9022.00	40.890	347.250	8919.13	31.55	36.18	757.85	720852.82	372258.18	32°01'17.220"N	103°37'14.645"W	12.42	
9111.00	51.860	348.990	8980.45	94.59	99.14	744.70	720839.67	372321.14	32°01'17.844"N	103°37'14.793"W	12.41	
9199.00	60.630	358.120	9029.37	167.18	171.69	736.80	720831.78	372393.68	32°01'18.562"N	103°37'14.879"W	13.17	
9288.00	70.140	0.160	9066.40	247.99	252.49	735.65	720830.62	372474.48	32°01'19.362"N	103°37'14.887"W	10.89	
9377.00	82.400	0.150	9087.48	334.28	338.78	735.88	720830.85	372560.77	32°01'20.216"N	103°37'14.877"W	13.78	



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SD WE 24 FED P24 7H AWP 167.5' - 19319' Proj: 19371'

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Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

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]	Comments
9469.00	90.000	1.110	9093.57	426.00	430.51	736.89	720831.86	372652.49	32°01'21.123"N	103°37'14.859"W	8.33	
9557.00	88.800	1.100	9094.49	513.96	518.48	738.59	720833.56	372740.46	32°01'21.994"N	103°37'14.832"W	1.36	
9645.00	89.170	1.230	9096.05	601.92	606.45	740.38	720835.35	372828.43	32°01'22.864"N	103°37'14.805"W	0.45	
9734.00	90.860	2.110	9096.03	690.86	695.41	742.97	720837.94	372917.38	32°01'23.744"N	103°37'14.768"W	2.14	
9822.00	91.600	1.580	9094.14	778.77	783.34	745.80	720840.78	373005.31	32°01'24.614"N	103°37'14.728"W	1.03	
9910.00	92.710	1.450	9090.83	866.66	871.25	748.13	720843.10	373093.22	32°01'25.484"N	103°37'14.694"W	1.27	
9999.00	89.750	0.030	9088.92	955.61	960.21	749.28	720844.25	373182.17	32°01'26.364"N	103°37'14.674"W	3.69	
10087.00	91.110	0.340	9088.26	1043.60	1048.20	749.56	720844.53	373270.16	32°01'27.235"N	103°37'14.664"W	1.59	
10176.00	91.790	359.520	9086.01	1132.57	1137.17	749.45	720844.42	373359.13	32°01'28.115"N	103°37'14.659"W	1.20	
10264.00	92.090	358.770	9083.03	1220.52	1225.11	748.14	720843.11	373447.07	32°01'28.986"N	103°37'14.667"W	0.92	
10353.00	92.650	358.620	9079.35	1309.43	1314.01	746.11	720841.09	373535.96	32°01'29.865"N	103°37'14.684"W	0.65	
10442.00	90.860	357.860	9076.62	1398.36	1402.92	743.38	720838.35	373624.87	32°01'30.745"N	103°37'14.709"W	2.18	
10530.00	91.730	358.220	9074.64	1486.30	1490.85	740.37	720835.35	373712.79	32°01'31.616"N	103°37'14.737"W	1.07	
10618.00	90.280	358.850	9073.09	1574.27	1578.80	738.12	720833.10	373800.75	32°01'32.486"N	103°37'14.756"W	1.80	
10706.00	91.230	357.920	9071.93	1662.23	1666.76	735.64	720830.62	373888.70	32°01'33.357"N	103°37'14.778"W	1.51	
10795.00	87.630	357.620	9072.82	1751.17	1755.67	732.18	720827.15	373977.61	32°01'34.237"N	103°37'14.812"W	4.06	
10883.00	87.600	356.890	9076.48	1839.01	1843.50	727.97	720822.94	374065.43	32°01'35.106"N	103°37'14.854"W	0.83	
10972.00	90.180	357.490	9078.20	1927.91	1932.36	723.61	720818.58	374154.29	32°01'35.986"N	103°37'14.898"W	2.98	
11061.00	88.430	358.220	9079.28	2016.85	2021.29	720.28	720815.25	374243.22	32°01'36.866"N	103°37'14.930"W	2.13	
11149.00	91.260	359.050	9079.52	2104.83	2109.26	718.18	720813.16	374331.18	32°01'37.737"N	103°37'14.947"W	3.35	
11240.00	92.250	358.970	9076.73	2195.78	2200.20	716.61	720811.58	374422.12	32°01'38.637"N	103°37'14.959"W	1.09	
11331.00	89.720	0.920	9075.17	2286.75	2291.17	716.52	720811.50	374513.09	32°01'39.537"N	103°37'14.953"W	3.51	
11422.00	89.600	0.000	9075.71	2377.74	2382.17	717.25	720812.23	374604.08	32°01'40.437"N	103°37'14.937"W	1.02	
11512.00	90.180	358.380	9075.88	2467.74	2472.16	715.98	720810.96	374694.06	32°01'41.328"N	103°37'14.945"W	1.91	
11603.00	89.940	357.870	9075.79	2558.70	2563.11	713.00	720807.98	374785.01	32°01'42.228"N	103°37'14.973"W	0.62	
11694.00	91.080	0.580	9074.98	2649.69	2654.08	711.77	720806.75	374875.98	32°01'43.128"N	103°37'14.980"W	3.23	
11785.00	92.190	1.010	9072.38	2740.63	2745.04	713.04	720808.01	374966.93	32°01'44.028"N	103°37'14.958"W	1.31	
11876.00	91.910	0.860	9069.13	2831.55	2835.97	714.52	720809.49	375057.86	32°01'44.928"N	103°37'14.934"W	0.35	
11967.00	90.060	1.740	9067.56	2922.49	2926.92	716.58	720811.56	375148.82	32°01'45.828"N	103°37'14.903"W	2.25	
12056.00	90.990	1.650	9066.75	3011.43	3015.88	719.22	720814.19	375237.77	32°01'46.708"N	103°37'14.866"W	1.05	



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SD WE 24 FED P24 7H AWP_ awp 167.5' - 19319' Proj: 19371'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWP
Facility	SD WE 24 Fed P24		

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]	Comments
12144.00	85.990	0.970	9069.06	3099.34	3103.80	721.23	720816.20	375325.68	32°01'47.578"N	103°37'14.836"W	5.73	
12233.00	84.780	0.070	9076.22	3188.03	3192.50	722.03	720817.01	375414.38	32°01'48.456"N	103°37'14.820"W	1.69	
12322.00	85.220	359.330	9083.98	3276.69	3281.16	721.57	720816.54	375503.04	32°01'49.333"N	103°37'14.818"W	0.96	
12410.00	85.500	359.180	9091.10	3364.40	3368.87	720.43	720815.40	375590.74	32°01'50.201"N	103°37'14.825"W	0.36	
12499.00	90.770	1.330	9094.00	3453.32	3457.78	720.83	720815.80	375679.65	32°01'51.081"N	103°37'14.813"W	6.39	
12587.00	92.280	1.680	9091.65	3541.24	3545.72	723.14	720818.11	375767.59	32°01'51.951"N	103°37'14.780"W	1.76	
12676.00	87.870	359.850	9091.54	3630.19	3634.68	724.33	720819.30	375856.55	32°01'52.831"N	103°37'14.759"W	5.36	
12765.00	89.910	0.330	9093.26	3719.17	3723.66	724.46	720819.44	375945.52	32°01'53.712"N	103°37'14.751"W	2.35	
12853.00	89.350	0.110	9093.83	3807.16	3811.66	724.80	720819.78	376033.52	32°01'54.582"N	103°37'14.740"W	0.68	
12941.00	89.110	359.510	9095.01	3895.15	3899.65	724.51	720819.48	376121.51	32°01'55.453"N	103°37'14.737"W	0.73	
13030.00	88.400	358.790	9096.95	3984.13	3988.62	723.19	720818.16	376210.47	32°01'56.334"N	103°37'14.745"W	1.14	
13118.00	90.220	359.330	9098.01	4072.11	4076.60	721.75	720816.72	376298.44	32°01'57.204"N	103°37'14.755"W	2.16	
13207.00	91.230	359.020	9096.88	4161.10	4165.58	720.47	720815.44	376387.42	32°01'58.085"N	103°37'14.763"W	1.19	
13295.00	90.860	358.260	9095.28	4249.07	4253.54	718.38	720813.35	376475.38	32°01'58.955"N	103°37'14.781"W	0.96	
13384.00	89.600	357.950	9094.92	4338.04	4342.49	715.44	720810.41	376564.33	32°01'59.836"N	103°37'14.808"W	1.46	
13472.00	90.430	357.600	9094.89	4425.99	4430.42	712.02	720806.99	376652.25	32°02'00.706"N	103°37'14.841"W	1.02	
13561.00	89.600	359.340	9094.87	4514.97	4519.38	709.64	720804.62	376741.22	32°02'01.587"N	103°37'14.862"W	2.17	
13650.00	90.220	359.730	9095.01	4603.96	4608.38	708.92	720803.89	376830.21	32°02'02.467"N	103°37'14.863"W	0.82	
13738.00	90.800	358.380	9094.23	4691.95	4696.36	707.47	720802.44	376918.19	32°02'03.338"N	103°37'14.873"W	1.67	
13827.00	89.480	357.310	9094.01	4780.91	4785.30	704.12	720799.10	377007.12	32°02'04.218"N	103°37'14.906"W	1.91	
13915.00	90.220	358.130	9094.24	4868.85	4873.23	700.62	720795.60	377095.04	32°02'05.089"N	103°37'14.939"W	1.26	
14004.00	88.740	357.870	9095.05	4957.81	4962.17	697.52	720792.49	377183.98	32°02'05.969"N	103°37'14.969"W	1.69	
14092.00	87.540	357.130	9097.90	5045.70	5050.03	693.68	720788.65	377271.84	32°02'06.839"N	103°37'15.007"W	1.60	
14181.00	85.900	357.760	9103.00	5134.49	5138.80	689.72	720784.69	377360.60	32°02'07.717"N	103°37'15.046"W	1.97	
14270.00	86.150	359.430	9109.17	5223.25	5227.55	687.54	720782.52	377449.36	32°02'08.596"N	103°37'15.064"W	1.89	
14358.00	87.040	1.620	9114.39	5311.08	5315.39	688.35	720783.32	377537.19	32°02'09.465"N	103°37'15.048"W	2.68	
14446.00	87.840	1.140	9118.32	5398.95	5403.27	690.46	720785.44	377625.07	32°02'10.334"N	103°37'15.017"W	1.06	
14536.00	88.610	0.920	9121.11	5488.88	5493.21	692.08	720787.06	377715.01	32°02'11.224"N	103°37'14.991"W	0.89	
14625.00	90.280	0.160	9121.97	5577.86	5582.20	692.92	720787.89	377803.99	32°02'12.105"N	103°37'14.975"W	2.06	
14714.00	89.010	1.760	9122.53	5666.83	5671.18	694.41	720789.38	377892.97	32°02'12.985"N	103°37'14.950"W	2.30	



Actual Wellpath Report

SD WE 24 FED P24 7H AWB_ awp 167.5' - 19319' Proj: 19371'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

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]	Comments
14802.00	89.630	2.120	9123.57	5754.76	5759.13	697.39	720792.36	377980.91	32°02'13.855"N	103°37'14.909"W	0.81	
14891.00	92.500	2.900	9121.92	5843.62	5848.01	701.29	720796.26	378069.80	32°02'14.735"N	103°37'14.857"W	3.34	
14979.00	93.420	2.150	9117.37	5931.39	5935.81	705.16	720800.13	378157.59	32°02'15.603"N	103°37'14.805"W	1.35	
15068.00	90.490	1.610	9114.34	6020.26	6024.70	708.08	720803.05	378246.47	32°02'16.483"N	103°37'14.765"W	3.35	
15157.00	89.540	0.690	9114.31	6109.23	6113.68	709.86	720804.83	378335.45	32°02'17.363"N	103°37'14.737"W	1.49	
15245.00	90.430	1.280	9114.34	6197.20	6201.67	711.37	720806.35	378423.43	32°02'18.234"N	103°37'14.713"W	1.21	
15334.00	90.620	1.580	9113.52	6286.16	6290.63	713.60	720808.57	378512.40	32°02'19.114"N	103°37'14.680"W	0.40	
15422.00	86.890	359.090	9115.43	6374.11	6378.59	714.11	720809.08	378600.35	32°02'19.984"N	103°37'14.667"W	5.10	
15510.00	87.840	359.960	9119.48	6462.01	6466.49	713.38	720808.36	378688.25	32°02'20.854"N	103°37'14.669"W	1.46	
15599.00	87.690	359.710	9122.95	6550.95	6555.42	713.13	720808.10	378777.18	32°02'21.734"N	103°37'14.665"W	0.33	
15687.00	87.380	359.280	9126.73	6638.86	6643.34	712.35	720807.32	378865.09	32°02'22.604"N	103°37'14.668"W	0.60	
15776.00	87.100	358.230	9131.02	6727.75	6732.21	710.42	720805.39	378953.96	32°02'23.484"N	103°37'14.683"W	1.22	
15864.00	91.630	359.490	9131.99	6815.71	6820.17	708.67	720803.64	379041.91	32°02'24.354"N	103°37'14.697"W	5.34	
15953.00	93.610	359.750	9127.93	6904.61	6909.07	708.08	720803.05	379130.81	32°02'25.234"N	103°37'14.697"W	2.24	
16042.00	92.440	0.520	9123.23	6993.48	6997.94	708.29	720803.26	379219.68	32°02'26.113"N	103°37'14.688"W	1.57	
16130.00	92.340	0.520	9119.56	7081.40	7085.86	709.09	720804.06	379307.59	32°02'26.983"N	103°37'14.672"W	0.11	
16219.00	91.390	359.790	9116.66	7170.34	7174.81	709.33	720804.30	379396.54	32°02'27.864"N	103°37'14.662"W	1.35	
16307.00	92.800	0.090	9113.45	7258.28	7262.75	709.24	720804.21	379484.48	32°02'28.734"N	103°37'14.656"W	1.64	
16396.00	93.360	0.180	9108.66	7347.15	7351.62	709.45	720804.42	379573.34	32°02'29.613"N	103°37'14.647"W	0.64	
16484.00	91.290	359.030	9105.09	7435.07	7439.54	708.84	720803.81	379661.26	32°02'30.483"N	103°37'14.647"W	2.69	
16573.00	90.180	358.510	9103.95	7524.05	7528.51	706.93	720801.90	379750.23	32°02'31.364"N	103°37'14.663"W	1.38	
16661.00	94.260	359.220	9100.54	7611.96	7616.41	705.19	720800.16	379838.12	32°02'32.234"N	103°37'14.676"W	4.71	
16750.00	90.650	357.640	9096.73	7700.84	7705.27	702.75	720797.72	379926.99	32°02'33.113"N	103°37'14.698"W	4.43	
16838.00	90.460	357.620	9095.88	7788.78	7793.19	699.11	720794.08	380014.90	32°02'33.983"N	103°37'14.733"W	0.22	
16927.00	89.070	358.510	9096.25	7877.74	7882.14	696.11	720791.08	380103.85	32°02'34.864"N	103°37'14.761"W	1.85	
17015.00	88.120	357.820	9098.40	7965.68	7970.07	693.29	720788.26	380191.77	32°02'35.734"N	103°37'14.787"W	1.33	
17103.00	88.920	357.200	9100.68	8053.59	8057.95	689.47	720784.44	380279.65	32°02'36.604"N	103°37'14.825"W	1.15	
17192.00	89.260	358.210	9102.09	8142.53	8146.87	685.90	720780.88	380368.57	32°02'37.484"N	103°37'14.860"W	1.20	
17280.00	90.000	358.630	9102.66	8230.51	8234.83	683.48	720778.45	380456.53	32°02'38.355"N	103°37'14.881"W	0.97	
17369.00	90.590	358.070	9102.20	8319.48	8323.79	680.91	720775.89	380545.48	32°02'39.235"N	103°37'14.904"W	0.91	



Actual Wellpath Report

SD WE 24 FED P24 7H AWP_ awp 167.5' - 19319' Proj: 19371'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

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]	Comments
17458.00	90.180	357.750	9101.60	8408.44	8412.73	677.67	720772.64	380634.42	32°02'40.116"N	103°37'14.935"W	0.58	
17546.00	90.030	358.060	9101.44	8496.40	8500.67	674.45	720769.43	380722.36	32°02'40.986"N	103°37'14.965"W	0.39	
17635.00	88.890	359.550	9102.28	8585.38	8589.65	672.60	720767.57	380811.33	32°02'41.867"N	103°37'14.980"W	2.11	
17723.00	89.750	0.170	9103.32	8673.37	8677.64	672.38	720767.36	380899.31	32°02'42.737"N	103°37'14.976"W	1.20	
17811.00	89.410	2.560	9103.97	8761.32	8765.61	674.48	720769.45	380987.28	32°02'43.608"N	103°37'14.945"W	2.74	
17900.00	90.180	3.630	9104.29	8850.16	8854.47	679.28	720774.26	381076.14	32°02'44.487"N	103°37'14.882"W	1.48	
17990.00	94.350	4.320	9100.73	8939.81	8944.17	685.51	720780.49	381165.83	32°02'45.374"N	103°37'14.803"W	4.70	
18078.00	91.910	2.410	9095.93	9027.49	9031.87	690.67	720785.64	381253.53	32°02'46.241"N	103°37'14.736"W	3.52	
18167.00	90.370	0.970	9094.16	9116.41	9120.81	693.29	720788.27	381342.47	32°02'47.121"N	103°37'14.699"W	2.37	
18255.00	90.680	1.120	9093.35	9204.38	9208.79	694.90	720789.87	381430.45	32°02'47.992"N	103°37'14.674"W	0.39	
18344.00	90.950	359.820	9092.08	9293.36	9297.78	695.63	720790.60	381519.43	32°02'48.872"N	103°37'14.658"W	1.49	
18433.00	89.720	359.390	9091.56	9382.35	9386.77	695.01	720789.99	381608.42	32°02'49.753"N	103°37'14.659"W	1.46	
18521.00	91.230	359.170	9090.83	9470.35	9474.76	693.91	720788.88	381696.41	32°02'50.624"N	103°37'14.665"W	1.73	
18609.00	92.870	359.850	9087.69	9558.29	9562.70	693.16	720788.13	381784.34	32°02'51.494"N	103°37'14.667"W	2.02	
18698.00	89.780	358.800	9085.63	9647.25	9651.66	692.11	720787.08	381873.29	32°02'52.374"N	103°37'14.672"W	3.67	
18787.00	86.800	358.180	9088.28	9736.18	9740.57	689.76	720784.74	381962.21	32°02'53.254"N	103°37'14.693"W	3.42	
18875.00	86.730	358.290	9093.25	9824.01	9828.39	687.06	720782.03	382050.03	32°02'54.124"N	103°37'14.717"W	0.15	
18963.00	85.160	356.500	9099.47	9911.72	9916.08	683.07	720778.04	382137.70	32°02'54.992"N	103°37'14.757"W	2.70	
19052.00	85.920	356.600	9106.39	10000.32	10004.64	677.73	720772.70	382226.27	32°02'55.868"N	103°37'14.812"W	0.86	
19141.00	86.880	357.080	9111.98	10089.03	10093.33	672.83	720767.81	382314.96	32°02'56.746"N	103°37'14.862"W	1.21	
19230.00	87.690	357.660	9116.20	10177.86	10182.14	668.75	720763.73	382403.76	32°02'57.625"N	103°37'14.903"W	1.12	
19319.00	88.060	357.570	9119.50	10266.75	10271.00	665.05	720760.03	382492.62	32°02'58.505"N	103°37'14.939"W	0.43	8 1/2 BH MWD 8580' - 19319'
19371.00	88.060	357.570	9121.26	10318.68	10322.92	662.85	720757.83	382544.54	32°02'59.019"N	103°37'14.961"W	0.00	Projection to TD: 19371'



Actual Wellpath Report

SD WE 24 FED P24 7H AWB_awp 167.5' - 19319' Proj: 19371'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SD WE 24 FED P24 7H ip1	9083.00	2881.82	726.84	720821.81	375103.71	32°01'45.381"N	103°37'14.788"W	point
SD WE 24 FED P24 7H ip4	9089.00	9411.69	686.72	720781.69	381633.34	32°02'50.000"N	103°37'14.753"W	point
SD WE 24 FED P24 7H FTP	9110.00	0.00	0.00	720095.00	372222.00	32°01'16.911"N	103°37'23.450"W	point
SD WE 24 FED P24 7H PBHL rev 3	9115.00	10338.39	681.03	720776.00	382560.00	32°02'59.171"N	103°37'14.748"W	rectangle
SD WE 24 FED P24 7H ip3	9115.00	7896.72	696.03	720791.00	380118.42	32°02'35.008"N	103°37'14.761"W	point
SD WE 24 FED P24 7H PBHL rev 2	9120.00	10338.39	681.03	720776.00	382560.00	32°02'59.171"N	103°37'14.748"W	rectangle
SD WE 24 FED P24 7H ip2	9135.00	6403.75	705.20	720800.17	378625.51	32°02'20.234"N	103°37'14.769"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD WE 24 FED P24 7H AWB					Ref Wellpath: SD WE 24 FED P24 7H AWB_awp 167.5' - 19319' Proj: 19371'	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
33.00	641.50	ISCWSA MWD, Rev. 4 (Standard)	Imported Surface 167.5' - 641.5		SD WE 24 FED P24 7H AWB	
641.50	4432.00	BHI NaviTrak (Standard)	12 1/4 BH MWD 706' - 4432'		SD WE 24 FED P24 7H AWB	
4432.00	8491.00	BHI NaviTrak (Standard)	8 3/4 BH MWD 4612' - 8491'		SD WE 24 FED P24 7H AWB	
8491.00	19319.00	BHI NaviTrak (Standard)	8 1/2 BH MWD 8580' - 19319'		SD WE 24 FED P24 7H AWB	
19319.00	19371.00	Blind Drilling (std)	Projection to bit		SD WE 24 FED P24 7H AWB	



Actual Wellpath Report

SD WE 24 FED P24 7H AWB_awp 167.5' - 19319' Proj: 19371'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 7H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 7H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 7H AWB
Facility	SD WE 24 Fed P24		

COMMENTS

Wellpath general comments

Well: SD WE 24 Federal P24 No. 7H
Field: Jennings/Upper BN SPRN, Shale
Rig: Nabors X30
Location: Lea Co., NM
API: 30-025-43675-00
Latitude: 32° 01' 16.911" N
Longitude: 103° 37' 23.450" W
DF Elevation: 3169 feet
Elev. GL: 3136 feet
Proposed Direction: 359.65°
PBHL: 19371 feet
Duration: 08/21/2017-09/06/2017
FSE's: D. Hardeman
SO#: 8708449
12 1/4 BH MWD 706' - 4432'
8 3/4 BH MWD 4612' - 8491'
8 1/2 BH MWD 8580' - 19319'
Projection to TD: 19371'