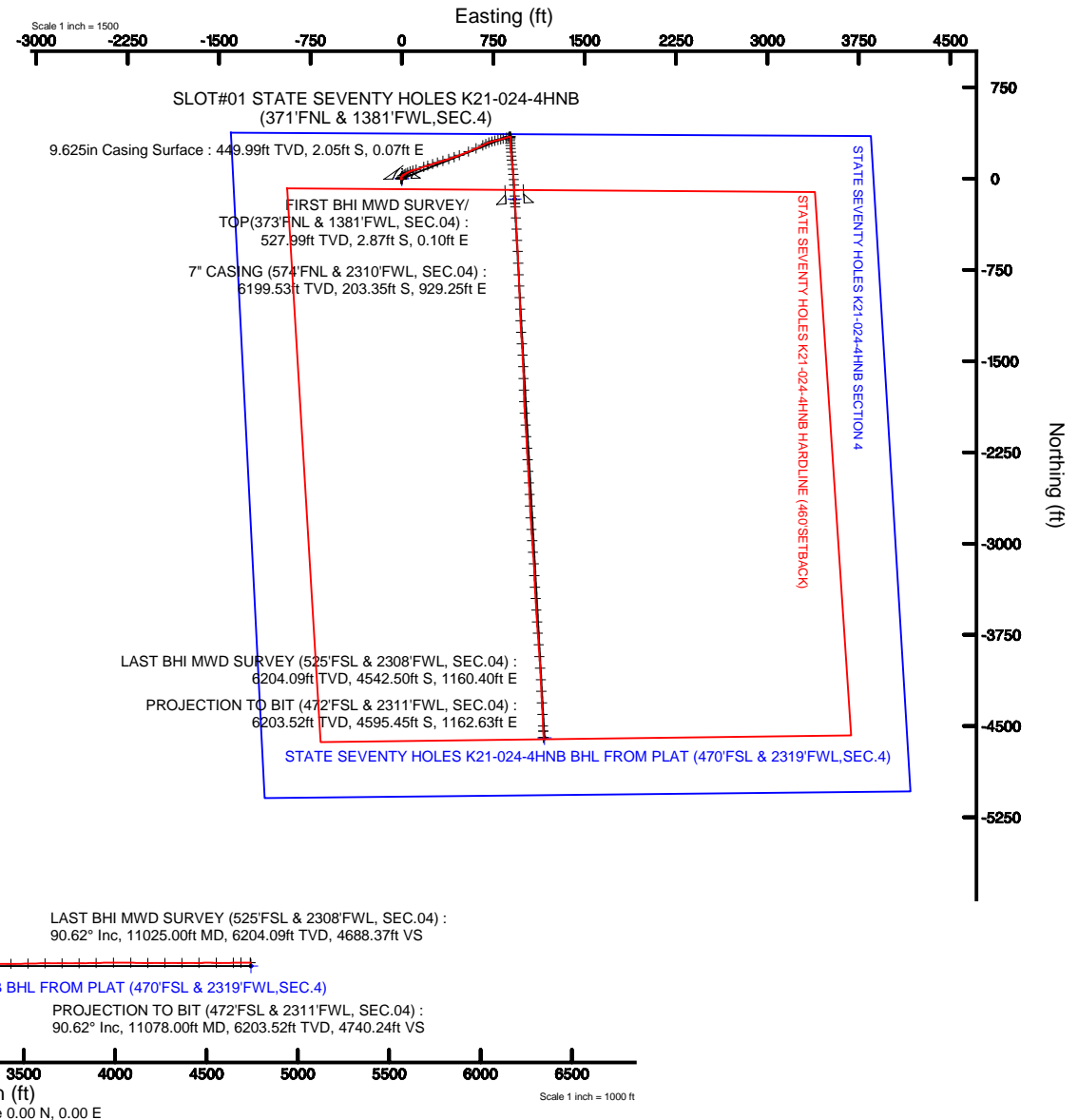
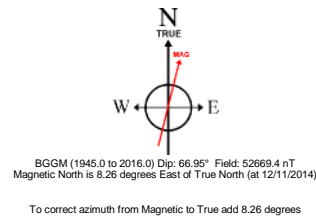


Location:	COLORADO	Slot:	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Field:	WELD COUNTY	Well:	STATE SEVENTY HOLES K21-024-4HNB
Facility:	SEC.04-T4N-R62W	Wellbore:	STATE SEVENTY HOLES K21-024-4HNB PWB

True vertical depths are referenced to Frontier 4 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Frontier 4 (RKB)	North Reference: True north
Frontier 4 (RKB) to Mean Sea Level: 4574 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371YFNL & 1381WSEC.4)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingmjmr on 3/27/2015





Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWB
Facility	SEC.04-T4N-R62W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Ingmjmr
Scale	0.999958	Report Generated	3/27/2015 at 10:54:16 AM
Convergence at slot	0.75° East	Database/Source file	Denver/STATE_SEVENTY_HOLES_K21-024-4HNB_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3324450.87	1371717.58	40°20'52.512"N	104°20'09.276"W
Facility Reference Pt			3324450.87	1371717.58	40°20'52.512"N	104°20'09.276"W
Field Reference Pt			3335925.10	1457282.25	40°34'56.460"N	104°17'26.016"W

WELLPATH DATUM

Calculation method	Minimum curvature	Frontier 4 (RKB) to Facility Vertical Datum	4574.00ft
Horizontal Reference Pt	Slot	Frontier 4 (RKB) to Mean Sea Level	4574.00ft
Vertical Reference Pt	Frontier 4 (RKB)	Frontier 4 (RKB) to Mud Line at Slot (SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4))	4574.00ft
MD Reference Pt	Frontier 4 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	165.71°



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL, SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWB
Facility	SEC.04-T4N-R62W		

WELLPATH DATA (111 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	178.080	0.00	0.00	0.00	0.00	0.00	
22.00	0.000	178.080	22.00	0.00	0.00	0.00	0.00	
528.00	0.650	178.080	527.99	2.80	-2.87	0.10	0.13	FIRST BHI MWD SURVEY/ TOP(373'FNL & 1381'FWL, SEC.04)
716.00	0.650	164.610	715.98	4.91	-4.96	0.41	0.08	
906.00	1.250	291.590	905.96	4.77	-5.24	-1.23	0.91	
1095.00	1.310	297.370	1094.92	2.13	-3.49	-5.06	0.08	
1284.00	0.700	356.030	1283.89	-0.44	-1.34	-7.06	0.59	
1473.00	0.560	9.570	1472.88	-2.42	0.72	-6.99	0.11	
1662.00	0.720	357.250	1661.87	-4.43	2.82	-6.89	0.11	
1850.00	0.990	18.090	1849.85	-6.96	5.54	-6.44	0.22	
1944.00	1.110	21.030	1943.83	-8.39	7.16	-5.86	0.14	
2133.00	2.710	22.190	2132.72	-13.47	13.01	-3.52	0.85	
2322.00	4.280	45.700	2321.37	-20.60	22.07	3.22	1.11	
2416.00	5.760	52.670	2415.01	-24.20	27.38	9.48	1.70	
2510.00	8.650	56.440	2508.26	-28.38	34.15	19.12	3.11	
2605.00	10.340	61.060	2601.95	-32.89	42.23	32.54	1.95	
2699.00	11.580	62.570	2694.24	-37.17	50.66	48.29	1.35	
2793.00	13.680	64.110	2785.96	-41.55	59.86	66.67	2.26	
2888.00	16.000	73.780	2877.80	-44.25	68.42	89.35	3.56	
2982.00	19.600	75.640	2967.28	-44.71	75.95	117.08	3.88	
3172.00	20.640	68.010	3145.72	-49.24	96.40	179.01	1.48	
3266.00	23.580	72.820	3232.80	-52.41	108.16	212.35	3.67	
3361.00	26.570	73.540	3318.84	-54.17	119.80	250.88	3.16	
3455.00	28.940	72.690	3402.02	-56.17	132.52	292.76	2.56	
3549.00	30.510	72.600	3483.65	-58.66	146.43	337.25	1.67	
3644.00	31.480	72.130	3565.08	-61.52	161.25	383.87	1.05	
3738.00	29.050	70.020	3646.27	-65.32	176.58	428.69	2.82	
3833.00	27.840	69.040	3729.80	-70.18	192.40	471.08	1.37	
4022.00	23.330	67.850	3900.22	-80.43	222.31	546.99	2.40	
4211.00	19.210	66.140	4076.31	-90.73	249.01	610.12	2.20	



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWP
Facility	SEC.04-T4N-R62W		

WELLPATH DATA (111 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4398.00	17.630	64.510	4253.72	-101.34	273.64	663.82	0.89	
4492.00	16.930	64.570	4343.48	-106.75	285.65	689.03	0.74	
4587.00	15.780	69.050	4434.64	-110.93	296.20	713.59	1.80	
4682.00	16.560	74.080	4525.89	-112.81	304.54	738.67	1.69	
4775.00	16.420	75.170	4615.06	-113.31	311.54	764.12	0.37	
4870.00	15.370	76.610	4706.43	-113.24	317.89	789.35	1.18	
4964.00	13.440	74.860	4797.47	-113.21	323.63	812.02	2.10	
5059.00	10.240	73.230	4890.43	-113.74	328.95	830.77	3.39	
5249.00	6.620	74.300	5078.35	-114.74	336.79	857.49	1.91	
5438.00	4.590	70.200	5266.44	-115.73	342.30	875.09	1.09	
5533.00	3.670	77.840	5361.19	-115.99	344.23	881.64	1.13	
5628.00	2.650	85.360	5456.05	-115.51	345.05	886.80	1.16	
5722.00	0.680	97.190	5550.00	-114.94	345.15	889.52	2.12	
5799.00	0.490	145.860	5627.00	-114.46	344.82	890.16	0.67	
5816.00	0.510	148.850	5644.00	-114.32	344.70	890.24	0.19	
5910.00	8.520	180.730	5737.63	-107.18	337.36	890.37	8.61	
5957.00	16.000	184.260	5783.53	-97.66	327.41	889.84	15.99	
6005.00	21.280	179.470	5829.00	-82.92	312.09	889.43	11.44	
6052.00	25.070	177.430	5872.20	-64.88	293.61	889.96	8.24	
6099.00	30.030	175.030	5913.86	-43.51	271.93	891.42	10.81	
6146.00	35.060	174.600	5953.46	-18.55	246.76	893.71	10.71	
6194.00	39.980	175.260	5991.52	10.29	217.65	896.29	10.28	
6242.00	44.600	175.630	6027.02	42.12	185.46	898.85	9.64	
6288.00	47.750	174.070	6058.87	74.88	152.41	901.84	7.27	
6335.00	54.190	172.160	6088.45	111.07	116.19	906.24	14.06	
6383.00	58.840	173.570	6114.93	150.77	76.48	911.20	9.99	
6431.00	64.940	175.860	6137.54	192.56	34.34	915.07	13.39	
6477.00	70.450	176.720	6154.99	234.38	-8.11	917.82	12.10	
6524.00	70.790	176.660	6170.59	277.91	-52.37	920.38	0.73	
6571.00	72.850	177.140	6185.25	321.71	-96.96	922.79	4.49	



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWP
Facility	SEC.04-T4N-R62W		

WELLPATH DATA (111 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
6618.00	81.150	176.200	6195.81	366.63	-142.64	925.45	17.77	
6648.00	87.770	176.330	6198.71	395.97	-172.42	927.40	22.07	
6679.00†	89.183	176.829	6199.53	426.40	-203.35	929.25	4.84	7" CASING (574'FNL & 2310'FWL, SEC.04)
6707.00	90.460	177.280	6199.62	453.85	-231.31	930.69	4.84	
6799.00	89.630	176.420	6199.55	544.12	-323.17	935.74	1.30	
6891.00	90.280	177.280	6199.62	634.38	-415.03	940.80	1.17	
6983.00	88.480	176.830	6200.61	724.58	-506.90	945.52	2.02	
7075.00	88.950	177.370	6202.68	814.74	-598.76	950.18	0.78	
7171.00	89.140	177.120	6204.28	908.79	-694.63	954.79	0.33	
7266.00	90.250	177.420	6204.78	1001.86	-789.52	959.31	1.21	
7359.00	87.850	177.940	6206.33	1092.82	-882.43	963.08	2.64	
7454.00	88.270	177.860	6209.54	1185.63	-977.31	966.56	0.45	
7549.00	89.600	177.860	6211.31	1278.48	-1072.22	970.10	1.40	
7645.00	90.190	177.880	6211.48	1372.33	-1168.16	973.67	0.61	
7740.00	90.370	176.000	6211.02	1465.50	-1263.02	978.74	1.99	
7834.00	91.200	176.590	6209.73	1557.89	-1356.81	984.82	1.08	
7929.00	89.540	176.790	6209.12	1651.15	-1451.65	990.30	1.76	
8024.00	89.780	177.380	6209.68	1744.28	-1546.52	995.13	0.67	
8120.00	90.340	177.870	6209.58	1838.21	-1642.44	999.11	0.78	
8217.00	92.310	178.890	6207.34	1932.82	-1739.37	1001.85	2.29	
8312.00	89.810	177.820	6205.58	2025.49	-1834.30	1004.58	2.86	
8407.00	90.890	176.580	6205.00	2118.58	-1929.18	1009.22	1.73	
8503.00	90.120	176.170	6204.15	2212.92	-2024.99	1015.29	0.91	
8598.00	89.690	176.470	6204.31	2306.30	-2119.79	1021.39	0.55	
8693.00	90.830	176.970	6203.88	2399.55	-2214.63	1026.82	1.31	
8790.00	90.060	176.950	6203.13	2494.68	-2311.49	1031.97	0.79	
8884.00	89.780	176.620	6203.26	2586.93	-2405.34	1037.24	0.46	
8980.00	89.970	177.000	6203.47	2681.13	-2501.20	1042.58	0.44	
9076.00	89.110	176.790	6204.24	2775.31	-2597.05	1047.78	0.92	
9171.00	90.830	178.060	6204.29	2868.32	-2691.95	1052.05	2.25	



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWP
Facility	SEC.04-T4N-R62W		

WELLPATH DATA (111 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
9267.00	87.260	175.640	6205.89	2962.48	-2787.77	1057.32	4.49	
9362.00	88.800	176.350	6209.15	3055.90	-2882.48	1063.95	1.78	
9457.00	90.460	176.700	6209.77	3149.20	-2977.30	1069.71	1.79	
9552.00	89.600	175.490	6209.72	3242.64	-3072.07	1076.18	1.56	
9647.00	89.940	176.570	6210.10	3336.11	-3166.84	1082.75	1.19	
9743.00	89.970	177.990	6210.17	3430.15	-3262.73	1087.31	1.48	
9838.00	91.330	176.750	6209.10	3523.18	-3357.62	1091.67	1.94	
9933.00	91.110	176.360	6207.07	3616.47	-3452.43	1097.38	0.47	
10028.00	89.200	176.250	6206.82	3709.84	-3547.23	1103.50	2.01	
10124.00	90.590	177.010	6206.99	3804.10	-3643.06	1109.14	1.65	
10218.00	91.240	175.590	6205.49	3896.49	-3736.85	1115.21	1.66	
10314.00	90.560	175.770	6203.98	3991.02	-3832.56	1122.44	0.73	
10410.00	89.100	176.380	6204.27	4085.45	-3928.33	1129.01	1.65	
10505.00	89.720	176.680	6205.25	4178.76	-4023.15	1134.76	0.73	
10600.00	89.880	176.900	6205.58	4271.99	-4118.00	1140.08	0.29	
10696.00	90.310	177.560	6205.42	4366.06	-4213.89	1144.72	0.82	
10791.00	90.430	177.150	6204.81	4459.10	-4308.79	1149.10	0.45	
10887.00	89.540	176.820	6204.83	4553.25	-4404.65	1154.15	0.99	
10982.00	90.740	177.750	6204.60	4646.31	-4499.54	1158.65	1.60	
11025.00	90.620	177.590	6204.09	4688.37	-4542.50	1160.40	0.47	LAST BHI MWD SURVEY (525'FSL & 2308'FWL, SEC.04)
11078.00	90.620	177.590	6203.52	4740.24	-4595.45	1162.63	0.00	PROJECTION TO BIT (472'FSL & 2311'FWL, SEC.04)



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL,SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWP
Facility	SEC.04-T4N-R62W		

HOLE & CASING SECTIONS -

Ref Wellbore: STATE SEVENTY HOLES K21-024-4HNB AWP Ref Wellpath: STATE SEVENTY HOLES K21-024-4HNB AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	22.00	450.00	428.00	22.00	449.99	0.00	0.00	-2.05	0.07
9.625in Casing Surface	22.00	450.00	428.00	22.00	449.99	0.00	0.00	-2.05	0.07
8.75in Open Hole	450.00	6679.00	6229.00	449.99	6199.53	-2.05	0.07	-203.35	929.25
7in Casing Intermediate	22.00	6679.00	6657.00	22.00	6199.53	0.00	0.00	-203.35	929.25
6.125in Open Hole	6679.00	11078.00	4399.00	6199.53	6203.52	-203.35	929.25	-4595.45	1162.63

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
STATE SEVENTY HOLES K21-024-4HNB SECTION 4	0.00	0.00	0.00	3324450.86	1371717.58	40°20'52.512"N	104°20'09.276"W	polygon
STATE SEVENTY HOLES K21-024-4HNB BHL FROM PLAT (470'FSL & 2319'FWL,SEC.4)	6222.00	-4597.54	1170.91	3325681.97	1367136.00	40°20'07.080"N	104°19'54.156"W	point
STATE SEVENTY HOLES K21-024-4HNB HARDLINE (460'SETBACK)	6222.00	0.00	0.00	3324450.86	1371717.58	40°20'52.512"N	104°20'09.276"W	polygon
STATE SEVENTY HOLES K21-024-4HNB TARGET	6222.00	-167.56	925.41	3325378.36	1371562.18	40°20'50.856"N	104°19'57.324"W	point

WELLPATH COMPOSITION -

Ref Wellbore: STATE SEVENTY HOLES K21-024-4HNB AWP Ref Wellpath: STATE SEVENTY HOLES K21-024-4HNB AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	6648.00	NaviTrak (Standard)	BHI/NAVITRAK MWD 8.75" HOLE <528'-6648'>	STATE SEVENTY HOLES K21-024-4HNB AWP
6648.00	11025.00	NaviTrak (Standard)	BHI/NAVITRAK MWD 5.875" HOLE <6707'-11025'>	STATE SEVENTY HOLES K21-024-4HNB AWP
11025.00	11078.00	Blind Drilling (std)	Projection to bit	STATE SEVENTY HOLES K21-024-4HNB AWP



Actual Wellpath Report

STATE SEVENTY HOLES K21-024-4HNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE SEVENTY HOLES K21-024-4HNB (371'FNL & 1381'FWL, SEC.4)
Area	COLORADO	Well	STATE SEVENTY HOLES K21-024-4HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES K21-024-4HNB AWB
Facility	SEC.04-T4N-R62W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
528.00	0.650	178.080	527.99	FIRST BHI MWD SURVEY/ TOP(373'FNL & 1381'FWL, SEC.04)
6679.00	89.183	176.829	6199.53	7" CASING (574'FNL & 2310'FWL, SEC.04)
11025.00	90.620	177.590	6204.09	LAST BHI MWD SURVEY (525'FSL & 2308'FWL, SEC.04)
11078.00	90.620	177.590	6203.52	PROJECTION TO BIT (472'FSL & 2311'FWL, SEC.04)