

Location:	COLORADO	Slot:	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Field:	WELD COUNTY (NAD83, TRUE NORTH)	Well:	WILLOW 22-5-4L
Facility:	SEC.22-T01N-R65W	Wellbore:	WILLOW 22-5-4L PWB
<b>Plot reference wellpath is WILLOW 22-5-4L PWP (REV-A.0)</b>		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	
True vertical depths are referenced to RIG (17') (RKB)		North Reference: True north	
Measured depths are referenced to RIG (17') (RKB)		Scale: True distance	
RIG (17') (RKB) to Mean Sea Level: 5108 feet		Depths are in feet	
Mean Sea Level to Mud line (At Slot: SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)): 0 feet		Created by: robaleo1 on 2019-02-27	
Coordinates are in feet referenced to Slot		Database: WA DENVER	

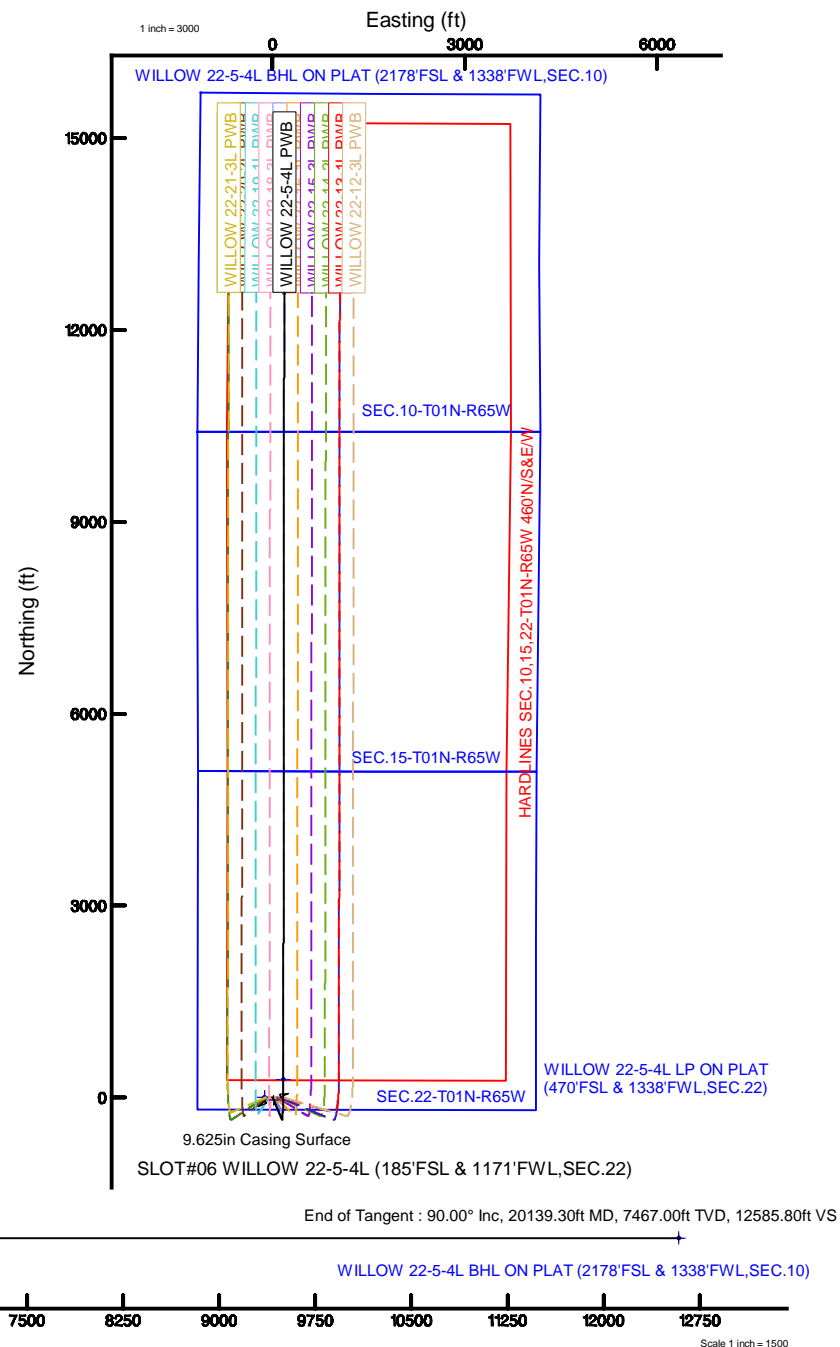
Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC 22-T01N-R65W			3236383.461	1254962.137	40°01'48.612"N	104°39'21.060"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#06 WILLOW 22-5-4L (185FTSL & 1171FWL,SEC.22)	0.00	123.22	3236506.668	1254963.310	40°01'48.612"N	104°39'19.476"W
RIG (17) (RK6) to Mud line (At Slot: SLOT#06 WILLOW 22-5-4L (185FTSL & 1171FWL,SEC.22))					5108ft	
Mean Sea Level to Mud line (At Slot: SLOT#06 WILLOW 22-5-4L (185FTSL & 1171FWL,SEC.22))					0ft	
RIG (17) (RK6) to Mean Sea Level					5108ft	

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
HARDLINES SEC.10.15-22-T01-R65W 480'N&E/W	0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	
SEC.10-T01N-R65W	0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	
SEC.15-T01N-R65W	0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	
SEC.22-T01N-R65W	0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	
WILLOW 22-5-4L BHL ON PLAT (217°FSL & 133F°FWL SEC.10)	20139.30	7467.00	12584.49	181.91	3236568.70	40°03'52.979"N	104°39'17.136"W	
WILLOW 22-5-4L LP ON PLAT (470°FSL & 133F°FWL SEC.22)	7842.60	7467.00	287.79	166.02	3236671.94	40°01'51.456"N	104°39'11.316"W	

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1500.00	BHI NavTrak	BHI NavTrak (Rotating+Axial Corr)		WILLOW 22-5-4L PWB
1500.00	20139.30	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-5-4L PWB

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	156.630	17.00	0.00	0.00	0.00	0.00
End of Tangent	750.00	0.000	156.630	750.00	0.00	0.00	0.00	0.00
End of Build	932.07	3.641	156.630	931.94	-5.31	2.29	2.00	-5.28
End of Tangent	6805.48	3.641	156.630	6793.50	-347.73	150.26	0.00	-345.52
End of 3D Arc	7842.60	90.000	0.065	7467.00	287.79	168.02	9.00	290.19
End of Tangent	20139.30	90.000	0.065	7467.00	12584.49	181.91	0.00	12585.80

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
20139.30	90.000	0.065	7467.00	12584.49	181.91	3236568.70	1267548.49	40°03'52.975"N	104°39'17.136"W



# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999964	Report Generated	2/27/2019 at 12:55:19 PM
Convergence at slot	0.55° East	Database/Source file	WA DENVER/WILLOW_22-5-4L_PWP_REV-A.0_.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	123.22	3236506.67	1254963.31	40°01'48.612"N	104°39'19.476"W
Facility Reference Pt			3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
Field Reference Pt			3230456.90	1245096.09	40°00'11.664"N	104°40'38.424"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (17') (RKB) to Facility Vertical Datum	5108.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	5108.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Mud Line at Slot (SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22))	5108.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.83°

# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (208 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	156.630	0.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
17.00	0.000	156.630	17.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	Tie On
117.00†	0.000	156.630	117.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
217.00†	0.000	156.630	217.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
317.00†	0.000	156.630	317.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
417.00†	0.000	156.630	417.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
517.00†	0.000	156.630	517.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
617.00†	0.000	156.630	617.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
717.00†	0.000	156.630	717.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	
750.00	0.000	156.630	750.00	0.00	0.00	0.00	40°01'48.612"N	104°39'19.476"W	0.00	End of Tangent
817.00†	1.340	156.630	816.99	-0.71	-0.72	0.31	40°01'48.605"N	104°39'19.472"W	2.00	
917.00†	3.340	156.630	916.91	-4.44	-4.47	1.93	40°01'48.568"N	104°39'19.451"W	2.00	
932.07	3.641	156.630	931.94	-5.28	-5.31	2.29	40°01'48.560"N	104°39'19.447"W	2.00	End of Build
1017.00†	3.641	156.630	1016.71	-10.20	-10.26	4.43	40°01'48.511"N	104°39'19.419"W	0.00	
1117.00†	3.641	156.630	1116.50	-15.99	-16.09	6.95	40°01'48.453"N	104°39'19.387"W	0.00	
1217.00†	3.641	156.630	1216.30	-21.78	-21.92	9.47	40°01'48.395"N	104°39'19.354"W	0.00	
1317.00†	3.641	156.630	1316.10	-27.57	-27.75	11.99	40°01'48.338"N	104°39'19.322"W	0.00	
1417.00†	3.641	156.630	1415.90	-33.37	-33.58	14.51	40°01'48.280"N	104°39'19.289"W	0.00	
1517.00†	3.641	156.630	1515.70	-39.16	-39.41	17.03	40°01'48.223"N	104°39'19.257"W	0.00	
1617.00†	3.641	156.630	1615.49	-44.95	-45.24	19.55	40°01'48.165"N	104°39'19.225"W	0.00	
1717.00†	3.641	156.630	1715.29	-50.75	-51.07	22.07	40°01'48.107"N	104°39'19.192"W	0.00	
1817.00†	3.641	156.630	1815.09	-56.54	-56.90	24.59	40°01'48.050"N	104°39'19.160"W	0.00	
1917.00†	3.641	156.630	1914.89	-62.33	-62.73	27.11	40°01'47.992"N	104°39'19.128"W	0.00	
2017.00†	3.641	156.630	2014.69	-68.13	-68.56	29.63	40°01'47.934"N	104°39'19.095"W	0.00	
2117.00†	3.641	156.630	2114.49	-73.92	-74.39	32.15	40°01'47.877"N	104°39'19.063"W	0.00	
2217.00†	3.641	156.630	2214.28	-79.71	-80.22	34.66	40°01'47.819"N	104°39'19.030"W	0.00	
2317.00†	3.641	156.630	2314.08	-85.50	-86.05	37.18	40°01'47.762"N	104°39'18.998"W	0.00	
2417.00†	3.641	156.630	2413.88	-91.30	-91.88	39.70	40°01'47.704"N	104°39'18.966"W	0.00	
2517.00†	3.641	156.630	2513.68	-97.09	-97.71	42.22	40°01'47.646"N	104°39'18.933"W	0.00	
2617.00†	3.641	156.630	2613.48	-102.88	-103.54	44.74	40°01'47.589"N	104°39'18.901"W	0.00	
2717.00†	3.641	156.630	2713.27	-108.68	-109.37	47.26	40°01'47.531"N	104°39'18.868"W	0.00	
2817.00†	3.641	156.630	2813.07	-114.47	-115.20	49.78	40°01'47.474"N	104°39'18.836"W	0.00	
2917.00†	3.641	156.630	2912.87	-120.26	-121.03	52.30	40°01'47.416"N	104°39'18.804"W	0.00	
3017.00†	3.641	156.630	3012.67	-126.06	-126.86	54.82	40°01'47.358"N	104°39'18.771"W	0.00	
3117.00†	3.641	156.630	3112.47	-131.85	-132.69	57.34	40°01'47.301"N	104°39'18.739"W	0.00	
3217.00†	3.641	156.630	3212.26	-137.64	-138.52	59.86	40°01'47.243"N	104°39'18.707"W	0.00	

WELLPATH DATA (208 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3317.00†	3.641	156.630	3312.06	-143.43	-144.35	62.38	40°01'47.185"N	104°39'18.674"W	0.00	
3417.00†	3.641	156.630	3411.86	-149.23	-150.18	64.90	40°01'47.128"N	104°39'18.642"W	0.00	
3517.00†	3.641	156.630	3511.66	-155.02	-156.01	67.41	40°01'47.070"N	104°39'18.609"W	0.00	
3617.00†	3.641	156.630	3611.46	-160.81	-161.84	69.93	40°01'47.013"N	104°39'18.577"W	0.00	
3717.00†	3.641	156.630	3711.26	-166.61	-167.67	72.45	40°01'46.955"N	104°39'18.545"W	0.00	
3817.00†	3.641	156.630	3811.05	-172.40	-173.50	74.97	40°01'46.897"N	104°39'18.512"W	0.00	
3917.00†	3.641	156.630	3910.85	-178.19	-179.33	77.49	40°01'46.840"N	104°39'18.480"W	0.00	
4017.00†	3.641	156.630	4010.65	-183.99	-185.16	80.01	40°01'46.782"N	104°39'18.447"W	0.00	
4117.00†	3.641	156.630	4110.45	-189.78	-190.99	82.53	40°01'46.725"N	104°39'18.415"W	0.00	

# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (208 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	3.641	156.630	4210.25	-195.57	-196.82	85.05	40°01'46.667"N	104°39'18.383"W	0.00	
4317.00†	3.641	156.630	4310.04	-201.36	-202.65	87.57	40°01'46.609"N	104°39'18.350"W	0.00	
4417.00†	3.641	156.630	4409.84	-207.16	-208.48	90.09	40°01'46.552"N	104°39'18.318"W	0.00	
4517.00†	3.641	156.630	4509.64	-212.95	-214.31	92.61	40°01'46.494"N	104°39'18.286"W	0.00	
4617.00†	3.641	156.630	4609.44	-218.74	-220.14	95.13	40°01'46.437"N	104°39'18.253"W	0.00	
4717.00†	3.641	156.630	4709.24	-224.54	-225.97	97.65	40°01'46.379"N	104°39'18.221"W	0.00	
4817.00†	3.641	156.630	4809.03	-230.33	-231.80	100.16	40°01'46.321"N	104°39'18.188"W	0.00	
4917.00†	3.641	156.630	4908.83	-236.12	-237.63	102.68	40°01'46.264"N	104°39'18.156"W	0.00	
5017.00†	3.641	156.630	5008.63	-241.92	-243.46	105.20	40°01'46.206"N	104°39'18.124"W	0.00	
5117.00†	3.641	156.630	5108.43	-247.71	-249.29	107.72	40°01'46.148"N	104°39'18.091"W	0.00	
5217.00†	3.641	156.630	5208.23	-253.50	-255.12	110.24	40°01'46.091"N	104°39'18.059"W	0.00	
5317.00†	3.641	156.630	5308.03	-259.29	-260.95	112.76	40°01'46.033"N	104°39'18.026"W	0.00	
5417.00†	3.641	156.630	5407.82	-265.09	-266.78	115.28	40°01'45.976"N	104°39'17.994"W	0.00	
5517.00†	3.641	156.630	5507.62	-270.88	-272.61	117.80	40°01'45.918"N	104°39'17.962"W	0.00	
5617.00†	3.641	156.630	5607.42	-276.67	-278.44	120.32	40°01'45.860"N	104°39'17.929"W	0.00	
5717.00†	3.641	156.630	5707.22	-282.47	-284.27	122.84	40°01'45.803"N	104°39'17.897"W	0.00	
5817.00†	3.641	156.630	5807.02	-288.26	-290.10	125.36	40°01'45.745"N	104°39'17.865"W	0.00	
5917.00†	3.641	156.630	5906.81	-294.05	-295.93	127.88	40°01'45.688"N	104°39'17.832"W	0.00	
6017.00†	3.641	156.630	6006.61	-299.85	-301.76	130.40	40°01'45.630"N	104°39'17.800"W	0.00	
6117.00†	3.641	156.630	6106.41	-305.64	-307.59	132.91	40°01'45.572"N	104°39'17.767"W	0.00	
6217.00†	3.641	156.630	6206.21	-311.43	-313.42	135.43	40°01'45.515"N	104°39'17.735"W	0.00	
6317.00†	3.641	156.630	6306.01	-317.22	-319.25	137.95	40°01'45.457"N	104°39'17.703"W	0.00	
6417.00†	3.641	156.630	6405.80	-323.02	-325.08	140.47	40°01'45.399"N	104°39'17.670"W	0.00	
6517.00†	3.641	156.630	6505.60	-328.81	-330.91	142.99	40°01'45.342"N	104°39'17.638"W	0.00	
6617.00†	3.641	156.630	6605.40	-334.60	-336.74	145.51	40°01'45.284"N	104°39'17.605"W	0.00	
6717.00†	3.641	156.630	6705.20	-340.40	-342.57	148.03	40°01'45.227"N	104°39'17.573"W	0.00	
6805.48	3.641	156.630	6793.50	-345.52	-347.73	150.26	40°01'45.176"N	104°39'17.544"W	0.00	End of Tangent
6817.00†	2.722	147.898	6805.00	-346.08	-348.30	150.55	40°01'45.170"N	104°39'17.541"W	9.00	
6917.00†	6.851	12.226	6904.79	-342.22	-344.47	153.08	40°01'45.208"N	104°39'17.508"W	9.00	
7017.00†	15.761	5.209	7002.76	-322.79	-325.08	155.58	40°01'45.399"N	104°39'17.476"W	9.00	
7117.00†	24.736	3.214	7096.48	-288.28	-290.59	157.99	40°01'45.740"N	104°39'17.445"W	9.00	
7217.00†	33.724	2.238	7183.66	-239.52	-241.86	160.25	40°01'46.222"N	104°39'17.416"W	9.00	
7317.00†	42.716	1.635	7262.15	-177.73	-180.09	162.31	40°01'46.832"N	104°39'17.389"W	9.00	
7417.00†	51.711	1.210	7330.00	-104.42	-106.80	164.11	40°01'47.557"N	104°39'17.366"W	9.00	
7517.00†	60.707	0.878	7385.56	-21.40	-23.80	165.61	40°01'48.377"N	104°39'17.347"W	9.00	
7617.00†	69.703	0.601	7427.46	69.29	66.89	166.77	40°01'49.273"N	104°39'17.332"W	9.00	

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	78.700	0.354	7454.65	165.41	163.01	167.57	40°01'50.223"N	104°39'17.322"W	9.00	
7817.00†	87.697	0.123	7466.49	264.60	262.20	167.98	40°01'51.203"N	104°39'17.317"W	9.00	
7842.60	90.000	0.065	7467.00 <sup>†</sup>	290.19	287.79	168.02	40°01'51.456"N	104°39'17.316"W	9.00	End of 3D Arc
7917.00†	90.000	0.065	7467.00	364.58	362.19	168.11	40°01'52.191"N	104°39'17.315"W	0.00	
8017.00†	90.000	0.065	7467.00	464.57	462.19	168.22	40°01'53.179"N	104°39'17.313"W	0.00	
8117.00†	90.000	0.065	7467.00	564.57	562.19	168.33	40°01'54.168"N	104°39'17.312"W	0.00	
8217.00†	90.000	0.065	7467.00	664.56	662.19	168.44	40°01'55.156"N	104°39'17.311"W	0.00	
8317.00†	90.000	0.065	7467.00	764.55	762.19	168.56	40°01'56.144"N	104°39'17.309"W	0.00	
8417.00†	90.000	0.065	7467.00	864.54	862.19	168.67	40°01'57.132"N	104°39'17.308"W	0.00	

# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (208 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8517.00†	90.000	0.065	7467.00	964.53	962.19	168.78	40°01'58.121"N	104°39'17.306"W	0.00	
8617.00†	90.000	0.065	7467.00	1064.52	1062.19	168.90	40°01'59.109"N	104°39'17.305"W	0.00	
8717.00†	90.000	0.065	7467.00	1164.51	1162.19	169.01	40°02'00.097"N	104°39'17.303"W	0.00	
8817.00†	90.000	0.065	7467.00	1264.50	1262.19	169.12	40°02'01.085"N	104°39'17.302"W	0.00	
8917.00†	90.000	0.065	7467.00	1364.49	1362.19	169.24	40°02'02.074"N	104°39'17.300"W	0.00	
9017.00†	90.000	0.065	7467.00	1464.49	1462.19	169.35	40°02'03.062"N	104°39'17.299"W	0.00	
9117.00†	90.000	0.065	7467.00	1564.48	1562.19	169.46	40°02'04.050"N	104°39'17.297"W	0.00	
9217.00†	90.000	0.065	7467.00	1664.47	1662.19	169.57	40°02'05.038"N	104°39'17.296"W	0.00	
9317.00†	90.000	0.065	7467.00	1764.46	1762.19	169.69	40°02'06.026"N	104°39'17.294"W	0.00	
9417.00†	90.000	0.065	7467.00	1864.45	1862.19	169.80	40°02'07.015"N	104°39'17.293"W	0.00	
9517.00†	90.000	0.065	7467.00	1964.44	1962.19	169.91	40°02'08.003"N	104°39'17.292"W	0.00	
9617.00†	90.000	0.065	7467.00	2064.43	2062.19	170.03	40°02'08.991"N	104°39'17.290"W	0.00	
9717.00†	90.000	0.065	7467.00	2164.42	2162.19	170.14	40°02'09.979"N	104°39'17.289"W	0.00	
9817.00†	90.000	0.065	7467.00	2264.42	2262.19	170.25	40°02'10.968"N	104°39'17.287"W	0.00	
9917.00†	90.000	0.065	7467.00	2364.41	2362.19	170.36	40°02'11.956"N	104°39'17.286"W	0.00	
10017.00†	90.000	0.065	7467.00	2464.40	2462.19	170.48	40°02'12.944"N	104°39'17.284"W	0.00	
10117.00†	90.000	0.065	7467.00	2564.39	2562.19	170.59	40°02'13.932"N	104°39'17.283"W	0.00	
10217.00†	90.000	0.065	7467.00	2664.38	2662.19	170.70	40°02'14.920"N	104°39'17.281"W	0.00	
10317.00†	90.000	0.065	7467.00	2764.37	2762.19	170.82	40°02'15.909"N	104°39'17.280"W	0.00	
10417.00†	90.000	0.065	7467.00	2864.36	2862.19	170.93	40°02'16.897"N	104°39'17.278"W	0.00	
10517.00†	90.000	0.065	7467.00	2964.35	2962.19	171.04	40°02'17.885"N	104°39'17.277"W	0.00	
10617.00†	90.000	0.065	7467.00	3064.34	3062.19	171.15	40°02'18.873"N	104°39'17.275"W	0.00	
10717.00†	90.000	0.065	7467.00	3164.34	3162.19	171.27	40°02'19.862"N	104°39'17.274"W	0.00	
10817.00†	90.000	0.065	7467.00	3264.33	3262.19	171.38	40°02'20.850"N	104°39'17.273"W	0.00	
10917.00†	90.000	0.065	7467.00	3364.32	3362.19	171.49	40°02'21.838"N	104°39'17.271"W	0.00	
11017.00†	90.000	0.065	7467.00	3464.31	3462.19	171.61	40°02'22.826"N	104°39'17.270"W	0.00	
11117.00†	90.000	0.065	7467.00	3564.30	3562.19	171.72	40°02'23.814"N	104°39'17.268"W	0.00	
11217.00†	90.000	0.065	7467.00	3664.29	3662.19	171.83	40°02'24.803"N	104°39'17.267"W	0.00	
11317.00†	90.000	0.065	7467.00	3764.28	3762.19	171.95	40°02'25.791"N	104°39'17.265"W	0.00	
11417.00†	90.000	0.065	7467.00	3864.27	3862.19	172.06	40°02'26.779"N	104°39'17.264"W	0.00	
11517.00†	90.000	0.065	7467.00	3964.26	3962.19	172.17	40°02'27.767"N	104°39'17.262"W	0.00	
11617.00†	90.000	0.065	7467.00	4064.26	4062.19	172.28	40°02'28.756"N	104°39'17.261"W	0.00	
11717.00†	90.000	0.065	7467.00	4164.25	4162.19	172.40	40°02'29.744"N	104°39'17.259"W	0.00	
11817.00†	90.000	0.065	7467.00	4264.24	4262.19	172.51	40°02'30.732"N	104°39'17.258"W	0.00	
11917.00†	90.000	0.065	7467.00	4364.23	4362.19	172.62	40°02'31.720"N	104°39'17.256"W	0.00	
12017.00†	90.000	0.065	7467.00	4464.22	4462.19	172.74	40°02'32.709"N	104°39'17.255"W	0.00	

WELLPATH DATA (208 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.000	0.065	7467.00	4564.21	4562.19	172.85	40°02'33.697"N	104°39'17.254"W	0.00	
12217.00†	90.000	0.065	7467.00	4664.20	4662.19	172.96	40°02'34.685"N	104°39'17.252"W	0.00	
12317.00†	90.000	0.065	7467.00	4764.19	4762.19	173.07	40°02'35.673"N	104°39'17.251"W	0.00	
12417.00†	90.000	0.065	7467.00	4864.18	4862.19	173.19	40°02'36.661"N	104°39'17.249"W	0.00	
12517.00†	90.000	0.065	7467.00	4964.18	4962.19	173.30	40°02'37.650"N	104°39'17.248"W	0.00	
12617.00†	90.000	0.065	7467.00	5064.17	5062.19	173.41	40°02'38.638"N	104°39'17.246"W	0.00	
12717.00†	90.000	0.065	7467.00	5164.16	5162.19	173.53	40°02'39.626"N	104°39'17.245"W	0.00	
12817.00†	90.000	0.065	7467.00	5264.15	5262.19	173.64	40°02'40.614"N	104°39'17.243"W	0.00	
12917.00†	90.000	0.065	7467.00	5364.14	5362.19	173.75	40°02'41.603"N	104°39'17.242"W	0.00	



# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (208 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13017.00†	90.000	0.065	7467.00	5464.13	5462.19	173.86	40°02'42.591"N	104°39'17.240"W	0.00	
13117.00†	90.000	0.065	7467.00	5564.12	5562.19	173.98	40°02'43.579"N	104°39'17.239"W	0.00	
13217.00†	90.000	0.065	7467.00	5664.11	5662.19	174.09	40°02'44.567"N	104°39'17.238"W	0.00	
13317.00†	90.000	0.065	7467.00	5764.10	5762.19	174.20	40°02'45.555"N	104°39'17.236"W	0.00	
13417.00†	90.000	0.065	7467.00	5864.10	5862.19	174.32	40°02'46.544"N	104°39'17.235"W	0.00	
13517.00†	90.000	0.065	7467.00	5964.09	5962.19	174.43	40°02'47.532"N	104°39'17.233"W	0.00	
13617.00†	90.000	0.065	7467.00	6064.08	6062.19	174.54	40°02'48.520"N	104°39'17.232"W	0.00	
13717.00†	90.000	0.065	7467.00	6164.07	6162.19	174.65	40°02'49.508"N	104°39'17.230"W	0.00	
13817.00†	90.000	0.065	7467.00	6264.06	6262.19	174.77	40°02'50.497"N	104°39'17.229"W	0.00	
13917.00†	90.000	0.065	7467.00	6364.05	6362.19	174.88	40°02'51.485"N	104°39'17.227"W	0.00	
14017.00†	90.000	0.065	7467.00	6464.04	6462.19	174.99	40°02'52.473"N	104°39'17.226"W	0.00	
14117.00†	90.000	0.065	7467.00	6564.03	6562.19	175.11	40°02'53.461"N	104°39'17.224"W	0.00	
14217.00†	90.000	0.065	7467.00	6664.02	6662.19	175.22	40°02'54.449"N	104°39'17.223"W	0.00	
14317.00†	90.000	0.065	7467.00	6764.02	6762.19	175.33	40°02'55.438"N	104°39'17.221"W	0.00	
14417.00†	90.000	0.065	7467.00	6864.01	6862.19	175.45	40°02'56.426"N	104°39'17.220"W	0.00	
14517.00†	90.000	0.065	7467.00	6964.00	6962.19	175.56	40°02'57.414"N	104°39'17.219"W	0.00	
14617.00†	90.000	0.065	7467.00	7063.99	7062.19	175.67	40°02'58.402"N	104°39'17.217"W	0.00	
14717.00†	90.000	0.065	7467.00	7163.98	7162.19	175.78	40°02'59.391"N	104°39'17.216"W	0.00	
14817.00†	90.000	0.065	7467.00	7263.97	7262.19	175.90	40°03'00.379"N	104°39'17.214"W	0.00	
14917.00†	90.000	0.065	7467.00	7363.96	7362.19	176.01	40°03'01.367"N	104°39'17.213"W	0.00	
15017.00†	90.000	0.065	7467.00	7463.95	7462.19	176.12	40°03'02.355"N	104°39'17.211"W	0.00	
15117.00†	90.000	0.065	7467.00	7563.94	7562.19	176.24	40°03'03.343"N	104°39'17.210"W	0.00	
15217.00†	90.000	0.065	7467.00	7663.94	7662.19	176.35	40°03'04.332"N	104°39'17.208"W	0.00	
15317.00†	90.000	0.065	7467.00	7763.93	7762.19	176.46	40°03'05.320"N	104°39'17.207"W	0.00	
15417.00†	90.000	0.065	7467.00	7863.92	7862.19	176.57	40°03'06.308"N	104°39'17.205"W	0.00	
15517.00†	90.000	0.065	7467.00	7963.91	7962.19	176.69	40°03'07.296"N	104°39'17.204"W	0.00	
15617.00†	90.000	0.065	7467.00	8063.90	8062.19	176.80	40°03'08.285"N	104°39'17.202"W	0.00	
15717.00†	90.000	0.065	7467.00	8163.89	8162.19	176.91	40°03'09.273"N	104°39'17.201"W	0.00	
15817.00†	90.000	0.065	7467.00	8263.88	8262.19	177.03	40°03'10.261"N	104°39'17.200"W	0.00	
15917.00†	90.000	0.065	7467.00	8363.87	8362.19	177.14	40°03'11.249"N	104°39'17.198"W	0.00	
16017.00†	90.000	0.065	7467.00	8463.86	8462.19	177.25	40°03'12.238"N	104°39'17.197"W	0.00	
16117.00†	90.000	0.065	7467.00	8563.86	8562.19	177.36	40°03'13.226"N	104°39'17.195"W	0.00	
16217.00†	90.000	0.065	7467.00	8663.85	8662.19	177.48	40°03'14.214"N	104°39'17.194"W	0.00	
16317.00†	90.000	0.065	7467.00	8763.84	8762.19	177.59	40°03'15.202"N	104°39'17.192"W	0.00	
16417.00†	90.000	0.065	7467.00	8863.83	8862.19	177.70	40°03'16.190"N	104°39'17.191"W	0.00	
16517.00†	90.000	0.065	7467.00	8963.82	8962.19	177.82	40°03'17.179"N	104°39'17.189"W	0.00	

WELLPATH DATA (208 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16617.00†	90.000	0.065	7467.00	9063.81	9062.19	177.93	40°03'18.167"N	104°39'17.188"W	0.00	
16717.00†	90.000	0.065	7467.00	9163.80	9162.19	178.04	40°03'19.155"N	104°39'17.186"W	0.00	
16817.00†	90.000	0.065	7467.00	9263.79	9262.19	178.15	40°03'20.143"N	104°39'17.185"W	0.00	
16917.00†	90.000	0.065	7467.00	9363.78	9362.19	178.27	40°03'21.132"N	104°39'17.183"W	0.00	
17017.00†	90.000	0.065	7467.00	9463.78	9462.19	178.38	40°03'22.120"N	104°39'17.182"W	0.00	
17117.00†	90.000	0.065	7467.00	9563.77	9562.19	178.49	40°03'23.108"N	104°39'17.181"W	0.00	
17217.00†	90.000	0.065	7467.00	9663.76	9662.19	178.61	40°03'24.096"N	104°39'17.179"W	0.00	
17317.00†	90.000	0.065	7467.00	9763.75	9762.19	178.72	40°03'25.084"N	104°39'17.178"W	0.00	
17417.00†	90.000	0.065	7467.00	9863.74	9862.19	178.83	40°03'26.073"N	104°39'17.176"W	0.00	

# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (208 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17517.00†	90.000	0.065	7467.00	9963.73	9962.19	178.95	40°03'27.061"N	104°39'17.175"W	0.00	
17617.00†	90.000	0.065	7467.00	10063.72	10062.19	179.06	40°03'28.049"N	104°39'17.173"W	0.00	
17717.00†	90.000	0.065	7467.00	10163.71	10162.19	179.17	40°03'29.037"N	104°39'17.172"W	0.00	
17817.00†	90.000	0.065	7467.00	10263.70	10262.19	179.28	40°03'30.026"N	104°39'17.170"W	0.00	
17917.00†	90.000	0.065	7467.00	10363.70	10362.19	179.40	40°03'31.014"N	104°39'17.169"W	0.00	
18017.00†	90.000	0.065	7467.00	10463.69	10462.19	179.51	40°03'32.002"N	104°39'17.167"W	0.00	
18117.00†	90.000	0.065	7467.00	10563.68	10562.19	179.62	40°03'32.990"N	104°39'17.166"W	0.00	
18217.00†	90.000	0.065	7467.00	10663.67	10662.19	179.74	40°03'33.978"N	104°39'17.164"W	0.00	
18317.00†	90.000	0.065	7467.00	10763.66	10762.19	179.85	40°03'34.967"N	104°39'17.163"W	0.00	
18417.00†	90.000	0.065	7467.00	10863.65	10862.19	179.96	40°03'35.955"N	104°39'17.162"W	0.00	
18517.00†	90.000	0.065	7467.00	10963.64	10962.19	180.07	40°03'36.943"N	104°39'17.160"W	0.00	
18617.00†	90.000	0.065	7467.00	11063.63	11062.19	180.19	40°03'37.931"N	104°39'17.159"W	0.00	
18717.00†	90.000	0.065	7467.00	11163.62	11162.18	180.30	40°03'38.920"N	104°39'17.157"W	0.00	
18817.00†	90.000	0.065	7467.00	11263.62	11262.18	180.41	40°03'39.908"N	104°39'17.156"W	0.00	
18917.00†	90.000	0.065	7467.00	11363.61	11362.18	180.53	40°03'40.896"N	104°39'17.154"W	0.00	
19017.00†	90.000	0.065	7467.00	11463.60	11462.18	180.64	40°03'41.884"N	104°39'17.153"W	0.00	
19117.00†	90.000	0.065	7467.00	11563.59	11562.18	180.75	40°03'42.872"N	104°39'17.151"W	0.00	
19217.00†	90.000	0.065	7467.00	11663.58	11662.18	180.86	40°03'43.861"N	104°39'17.150"W	0.00	
19317.00†	90.000	0.065	7467.00	11763.57	11762.18	180.98	40°03'44.849"N	104°39'17.148"W	0.00	
19417.00†	90.000	0.065	7467.00	11863.56	11862.18	181.09	40°03'45.837"N	104°39'17.147"W	0.00	
19517.00†	90.000	0.065	7467.00	11963.55	11962.18	181.20	40°03'46.825"N	104°39'17.145"W	0.00	
19617.00†	90.000	0.065	7467.00	12063.55	12062.18	181.32	40°03'47.814"N	104°39'17.144"W	0.00	
19717.00†	90.000	0.065	7467.00	12163.54	12162.18	181.43	40°03'48.802"N	104°39'17.143"W	0.00	
19817.00†	90.000	0.065	7467.00	12263.53	12262.18	181.54	40°03'49.790"N	104°39'17.141"W	0.00	
19917.00†	90.000	0.065	7467.00	12363.52	12362.18	181.65	40°03'50.778"N	104°39'17.140"W	0.00	
20017.00†	90.000	0.065	7467.00	12463.51	12462.18	181.77	40°03'51.766"N	104°39'17.138"W	0.00	
20117.00†	90.000	0.065	7467.00	12563.50	12562.18	181.88	40°03'52.755"N	104°39'17.137"W	0.00	
20139.30	90.000	0.065	7467.00 <sup>2</sup>	12585.80	12584.49	181.91	40°03'52.975"N	104°39'17.136"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: WILLOW 22-5-4L PWB Ref Wellpath: WILLOW 22-5-4L PWP (REV-A.0)

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]
9.625in Casing Surface	17.00	1500.00	1483.00	17.00	1498.73	0.00	0.00	-38.42	16.60

# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HARDLINES SEC.10,15,22-T01N-R65W 460'N/S&E/W		0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.10-T01N-R65W		0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.15-T01N-R65W		0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.22-T01N-R65W		0.00	0.00	-123.22	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
2) WILLOW 22-5-4L BHL ON PLAT (2178'FSL & 1338'FWL,SEC.10)	20139.30	7467.00	12584.49	181.91	3236568.70	1267548.49	40°03'52.975"N	104°39'17.136"W	point
1) WILLOW 22-5-4L LP ON PLAT (470'FSL & 1338'FWL,SEC.22)	7842.60	7467.00	287.79	168.02	3236671.94	1255252.68	40°01'51.456"N	104°39'17.316"W	point

## SURVEY PROGRAM - Ref Wellbore: WILLOW 22-5-4L PWB Ref Wellpath: WILLOW 22-5-4L PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1500.00	BHI NaviTrak (Rotating+Axial Corr)		WILLOW 22-5-4L PWB
1500.00	20139.30	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-5-4L PWB

# Planned Wellpath Report

WILLOW 22-5-4L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#06 WILLOW 22-5-4L (185'FSL & 1171'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-5-4L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-5-4L PWB
Facility	SEC.22-T01N-R65W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	156.630	17.00	Tie On
750.00	0.000	156.630	750.00	End of Tangent
932.07	3.641	156.630	931.94	End of Build
6805.48	3.641	156.630	6793.50	End of Tangent
7842.60	90.000	0.065	7467.00	End of 3D Arc
20139.30	90.000	0.065	7467.00	End of Tangent