

CONFLUENCE RESOURCES

Location: COLORADO Slot: SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Field: WELD COUNTY (NAD83, TRUE NORTH) Well: WILLOW 22-19-1L
Facility: SEC.22-T01N-R65W Wellbore: WILLOW 22-19-1L PWB

Plot reference wellpath is WILLOW 22-19-1L PWB (REV-A.0)	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: 5107 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)): 0 feet	Created by: robiale01 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#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)	0.00	72.81	3236456.265	1254962.830	40°01'48.612"N	104°39'20.124"W	
RIG (17) (RKB) to Mud line (At Slot: SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22))						5107ft	
Mean Sea Level to Mud line (At Slot: SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22))						0ft	
RIG (17) (RKB) to Mean Sea Level						5107ft	

Targets

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-T01N-R65W 460N/S&E/W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.10-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.15-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.22-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
WILLOW 22-19-1L BHL ON PLAT (2180'FSL & 904'FWL,SEC.10)	19801.21	7165.00	12586.42	-201.61	3236134.82	1267546.28	40°03'52.994"N	104°39'22.717"W
WILLOW 22-19-1L LP ON PLAT (470'FSL & 904'FWL,SEC.22)	7502.57	7165.00	287.79	-215.63	3236237.91	1255248.54	40°01'51.456"N	104°39'22.896"W

Survey Program

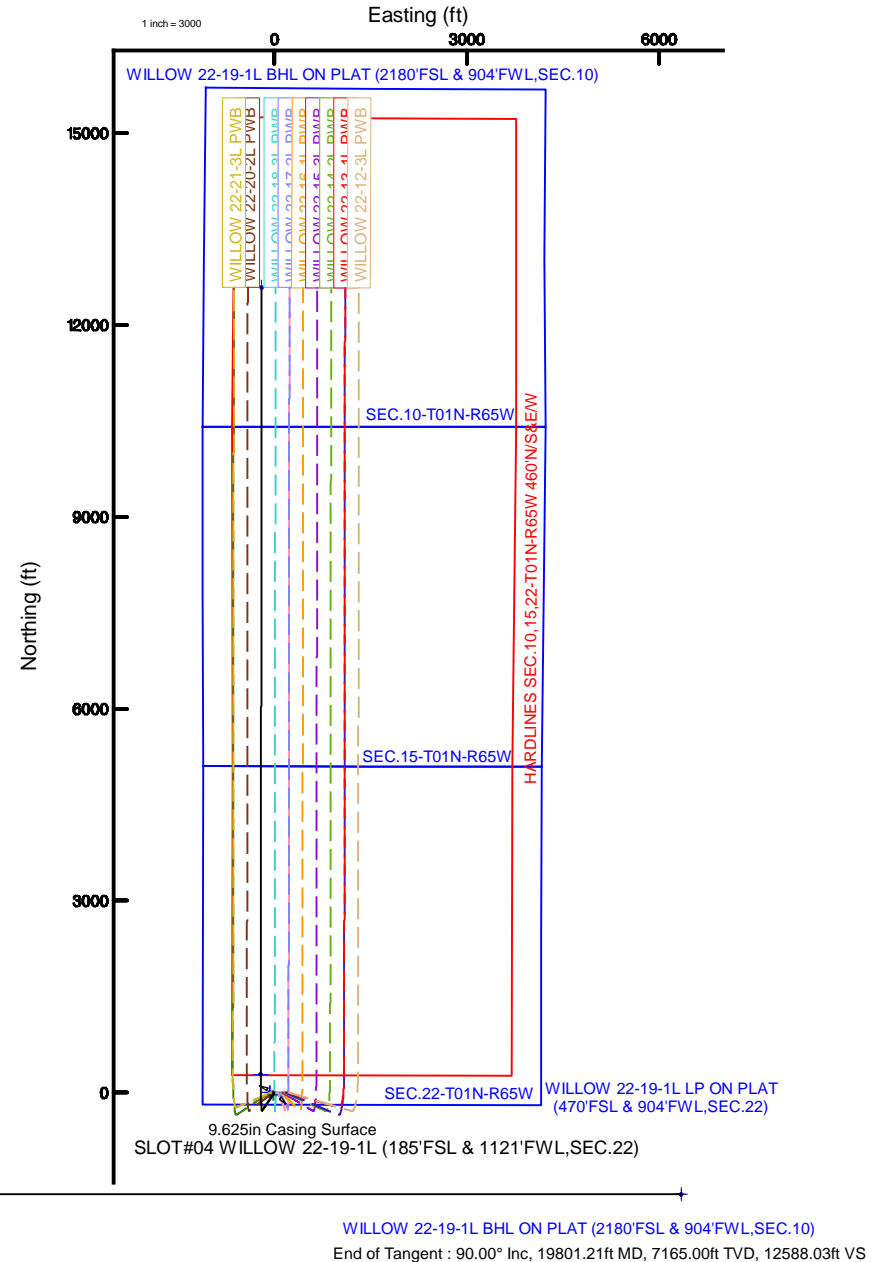
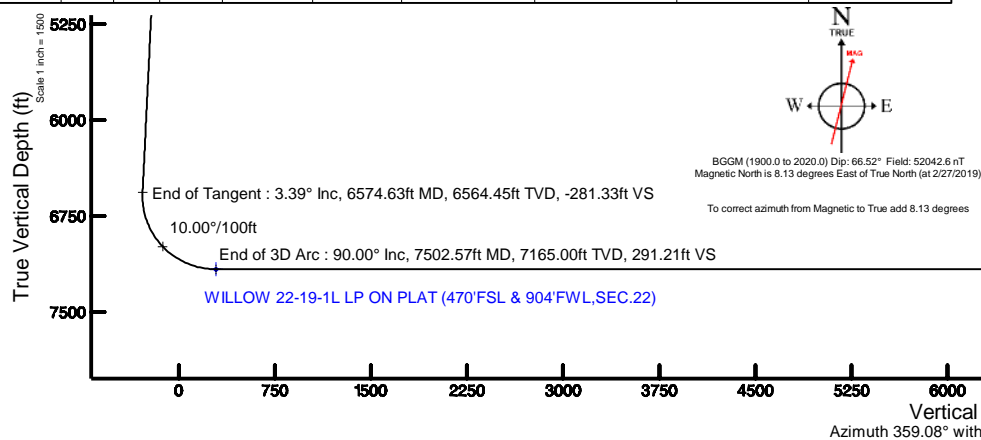
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1500.00	BHI NavTrak	BHI NavTrak (Rotating+Axial Corr)		WILLOW 22-19-1L PWB
1500.00	19801.21	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-19-1L PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	214.578	17.00	0.00	0.00	0.00	0.00
End of Tangent	650.00	0.000	214.578	650.00	0.00	0.00	0.00	0.00
End of Build	819.61	3.392	214.578	819.51	-4.13	-2.85	2.00	-4.09
End of Tangent	6574.63	3.392	214.578	6564.45	-284.51	-196.11	0.00	-281.33
End of 3D Arc	7502.57	90.000	0.065	7165.00	287.79	-215.63	10.00	291.21
End of Tangent	19801.21	90.000	0.065	7165.00	12586.42	-201.61	0.00	12588.03

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
19801.21	90.000	0.065	7165.00	12586.42	-201.61	3236134.82	1267546.28	40°03'52.994"N	104°39'22.717"W



Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 1 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L 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 12:40:11 PM
Convergence at slot	0.55° East	Database/Source file	WA DENVER/WILLOW_22-19-1L_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	72.81	3236456.27	1254962.83	40°01'48.612"N	104°39'20.124"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	5107.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	5107.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Mud Line at Slot (SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22))	5107.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.08°

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 2 of 8

REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (204 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	214.578	0.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
17.00	0.000	214.578	17.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	Tie On
117.00†	0.000	214.578	117.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
217.00†	0.000	214.578	217.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
317.00†	0.000	214.578	317.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
417.00†	0.000	214.578	417.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
517.00†	0.000	214.578	517.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
617.00†	0.000	214.578	617.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	
650.00	0.000	214.578	650.00	0.00	0.00	0.00	40°01'48.612"N	104°39'20.124"W	0.00	End of Tangent
717.00†	1.340	214.578	716.99	-0.64	-0.65	-0.44	40°01'48.606"N	104°39'20.130"W	2.00	
817.00†	3.340	214.578	816.91	-3.96	-4.01	-2.76	40°01'48.572"N	104°39'20.160"W	2.00	
819.61	3.392	214.578	819.51	-4.09	-4.13	-2.85	40°01'48.571"N	104°39'20.161"W	2.00	End of Build
917.00†	3.392	214.578	916.73	-8.78	-8.88	-6.12	40°01'48.524"N	104°39'20.203"W	0.00	
1017.00†	3.392	214.578	1016.56	-13.60	-13.75	-9.48	40°01'48.476"N	104°39'20.246"W	0.00	
1117.00†	3.392	214.578	1116.38	-18.41	-18.62	-12.84	40°01'48.428"N	104°39'20.289"W	0.00	
1217.00†	3.392	214.578	1216.20	-23.23	-23.49	-16.19	40°01'48.380"N	104°39'20.332"W	0.00	
1317.00†	3.392	214.578	1316.03	-28.05	-28.36	-19.55	40°01'48.332"N	104°39'20.375"W	0.00	
1417.00†	3.392	214.578	1415.85	-32.87	-33.24	-22.91	40°01'48.284"N	104°39'20.419"W	0.00	
1517.00†	3.392	214.578	1515.68	-37.68	-38.11	-26.27	40°01'48.235"N	104°39'20.462"W	0.00	
1617.00†	3.392	214.578	1615.50	-42.50	-42.98	-29.63	40°01'48.187"N	104°39'20.505"W	0.00	
1717.00†	3.392	214.578	1715.33	-47.32	-47.85	-32.98	40°01'48.139"N	104°39'20.548"W	0.00	
1817.00†	3.392	214.578	1815.15	-52.14	-52.72	-36.34	40°01'48.091"N	104°39'20.591"W	0.00	
1917.00†	3.392	214.578	1914.98	-56.95	-57.60	-39.70	40°01'48.043"N	104°39'20.634"W	0.00	
2017.00†	3.392	214.578	2014.80	-61.77	-62.47	-43.06	40°01'47.995"N	104°39'20.678"W	0.00	
2117.00†	3.392	214.578	2114.63	-66.59	-67.34	-46.42	40°01'47.947"N	104°39'20.721"W	0.00	
2217.00†	3.392	214.578	2214.45	-71.41	-72.21	-49.78	40°01'47.898"N	104°39'20.764"W	0.00	
2317.00†	3.392	214.578	2314.28	-76.22	-77.08	-53.13	40°01'47.850"N	104°39'20.807"W	0.00	
2417.00†	3.392	214.578	2414.10	-81.04	-81.96	-56.49	40°01'47.802"N	104°39'20.850"W	0.00	
2517.00†	3.392	214.578	2513.93	-85.86	-86.83	-59.85	40°01'47.754"N	104°39'20.893"W	0.00	
2617.00†	3.392	214.578	2613.75	-90.68	-91.70	-63.21	40°01'47.706"N	104°39'20.937"W	0.00	
2717.00†	3.392	214.578	2713.58	-95.49	-96.57	-66.57	40°01'47.658"N	104°39'20.980"W	0.00	
2817.00†	3.392	214.578	2813.40	-100.31	-101.44	-69.92	40°01'47.610"N	104°39'21.023"W	0.00	
2917.00†	3.392	214.578	2913.23	-105.13	-106.31	-73.28	40°01'47.561"N	104°39'21.066"W	0.00	
3017.00†	3.392	214.578	3013.05	-109.95	-111.19	-76.64	40°01'47.513"N	104°39'21.109"W	0.00	
3117.00†	3.392	214.578	3112.88	-114.76	-116.06	-80.00	40°01'47.465"N	104°39'21.152"W	0.00	
3217.00†	3.392	214.578	3212.70	-119.58	-120.93	-83.36	40°01'47.417"N	104°39'21.196"W	0.00	

WELLPATH DATA (204 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3317.00†	3.392	214.578	3312.53	-124.40	-125.80	-86.71	40°01'47.369"N	104°39'21.239"W	0.00	
3417.00†	3.392	214.578	3412.35	-129.21	-130.67	-90.07	40°01'47.321"N	104°39'21.282"W	0.00	
3517.00†	3.392	214.578	3512.17	-134.03	-135.55	-93.43	40°01'47.272"N	104°39'21.325"W	0.00	
3617.00†	3.392	214.578	3612.00	-138.85	-140.42	-96.79	40°01'47.224"N	104°39'21.368"W	0.00	
3717.00†	3.392	214.578	3711.82	-143.67	-145.29	-100.15	40°01'47.176"N	104°39'21.411"W	0.00	
3817.00†	3.392	214.578	3811.65	-148.48	-150.16	-103.51	40°01'47.128"N	104°39'21.455"W	0.00	
3917.00†	3.392	214.578	3911.47	-153.30	-155.03	-106.86	40°01'47.080"N	104°39'21.498"W	0.00	
4017.00†	3.392	214.578	4011.30	-158.12	-159.91	-110.22	40°01'47.032"N	104°39'21.541"W	0.00	
4117.00†	3.392	214.578	4111.12	-162.94	-164.78	-113.58	40°01'46.984"N	104°39'21.584"W	0.00	

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 3 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	3.392	214.578	4210.95	-167.75	-169.65	-116.94	40°01'46.935"N	104°39'21.627"W	0.00	
4317.00†	3.392	214.578	4310.77	-172.57	-174.52	-120.30	40°01'46.887"N	104°39'21.670"W	0.00	
4417.00†	3.392	214.578	4410.60	-177.39	-179.39	-123.65	40°01'46.839"N	104°39'21.714"W	0.00	
4517.00†	3.392	214.578	4510.42	-182.21	-184.26	-127.01	40°01'46.791"N	104°39'21.757"W	0.00	
4617.00†	3.392	214.578	4610.25	-187.02	-189.14	-130.37	40°01'46.743"N	104°39'21.800"W	0.00	
4717.00†	3.392	214.578	4710.07	-191.84	-194.01	-133.73	40°01'46.695"N	104°39'21.843"W	0.00	
4817.00†	3.392	214.578	4809.90	-196.66	-198.88	-137.09	40°01'46.647"N	104°39'21.886"W	0.00	
4917.00†	3.392	214.578	4909.72	-201.48	-203.75	-140.45	40°01'46.598"N	104°39'21.929"W	0.00	
5017.00†	3.392	214.578	5009.55	-206.29	-208.62	-143.80	40°01'46.550"N	104°39'21.973"W	0.00	
5117.00†	3.392	214.578	5109.37	-211.11	-213.50	-147.16	40°01'46.502"N	104°39'22.016"W	0.00	
5217.00†	3.392	214.578	5209.20	-215.93	-218.37	-150.52	40°01'46.454"N	104°39'22.059"W	0.00	
5317.00†	3.392	214.578	5309.02	-220.75	-223.24	-153.88	40°01'46.406"N	104°39'22.102"W	0.00	
5417.00†	3.392	214.578	5408.85	-225.56	-228.11	-157.24	40°01'46.358"N	104°39'22.145"W	0.00	
5517.00†	3.392	214.578	5508.67	-230.38	-232.98	-160.59	40°01'46.310"N	104°39'22.188"W	0.00	
5617.00†	3.392	214.578	5608.50	-235.20	-237.86	-163.95	40°01'46.261"N	104°39'22.232"W	0.00	
5717.00†	3.392	214.578	5708.32	-240.02	-242.73	-167.31	40°01'46.213"N	104°39'22.275"W	0.00	
5817.00†	3.392	214.578	5808.14	-244.83	-247.60	-170.67	40°01'46.165"N	104°39'22.318"W	0.00	
5917.00†	3.392	214.578	5907.97	-249.65	-252.47	-174.03	40°01'46.117"N	104°39'22.361"W	0.00	
6017.00†	3.392	214.578	6007.79	-254.47	-257.34	-177.39	40°01'46.069"N	104°39'22.404"W	0.00	
6117.00†	3.392	214.578	6107.62	-259.29	-262.21	-180.74	40°01'46.021"N	104°39'22.447"W	0.00	
6217.00†	3.392	214.578	6207.44	-264.10	-267.09	-184.10	40°01'45.973"N	104°39'22.491"W	0.00	
6317.00†	3.392	214.578	6307.27	-268.92	-271.96	-187.46	40°01'45.924"N	104°39'22.534"W	0.00	
6417.00†	3.392	214.578	6407.09	-273.74	-276.83	-190.82	40°01'45.876"N	104°39'22.577"W	0.00	
6517.00†	3.392	214.578	6506.92	-278.56	-281.70	-194.18	40°01'45.828"N	104°39'22.620"W	0.00	
6574.63	3.392	214.578	6564.45	-281.33	-284.51	-196.11	40°01'45.800"N	104°39'22.645"W	0.00	End of Tangent
6617.00†	2.404	306.944	6606.78	-281.81	-285.01	-197.53	40°01'45.795"N	104°39'22.663"W	10.00	
6717.00†	11.601	350.649	6705.97	-270.55	-273.80	-200.85	40°01'45.906"N	104°39'22.706"W	10.00	
6817.00†	21.525	355.180	6801.70	-242.23	-245.52	-204.04	40°01'46.186"N	104°39'22.747"W	10.00	
6917.00†	31.495	356.923	6891.08	-197.71	-201.05	-206.99	40°01'46.625"N	104°39'22.785"W	10.00	
7017.00†	41.479	357.888	6971.37	-138.34	-141.72	-209.62	40°01'47.211"N	104°39'22.819"W	10.00	
7117.00†	51.468	358.533	7040.16	-65.94	-69.34	-211.84	40°01'47.927"N	104°39'22.847"W	10.00	
7217.00†	61.460	359.019	7095.33	17.31	13.89	-213.60	40°01'48.749"N	104°39'22.870"W	10.00	
7317.00†	71.453	359.420	7135.23	108.87	105.44	-214.84	40°01'49.654"N	104°39'22.886"W	10.00	
7417.00†	81.447	359.776	7158.62	205.96	202.53	-215.51	40°01'50.613"N	104°39'22.894"W	10.00	
7502.57	90.000	0.065	7165.00†	291.21	287.79	-215.63	40°01'51.456"N	104°39'22.896"W	10.00	End of 3D Arc

WELLPATH DATA (204 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7517.00†	90.000	0.065	7165.00	305.63	302.21	-215.61	40°01'51.599"N	104°39'22.896"W	0.00	
7617.00†	90.000	0.065	7165.00	405.61	402.21	-215.50	40°01'52.587"N	104°39'22.894"W	0.00	
7717.00†	90.000	0.065	7165.00	505.60	502.21	-215.38	40°01'53.575"N	104°39'22.893"W	0.00	
7817.00†	90.000	0.065	7165.00	605.58	602.21	-215.27	40°01'54.563"N	104°39'22.891"W	0.00	
7917.00†	90.000	0.065	7165.00	705.57	702.21	-215.16	40°01'55.551"N	104°39'22.890"W	0.00	
8017.00†	90.000	0.065	7165.00	805.56	802.21	-215.04	40°01'56.540"N	104°39'22.889"W	0.00	
8117.00†	90.000	0.065	7165.00	905.54	902.21	-214.93	40°01'57.528"N	104°39'22.887"W	0.00	
8217.00†	90.000	0.065	7165.00	1005.53	1002.21	-214.81	40°01'58.516"N	104°39'22.886"W	0.00	
8317.00†	90.000	0.065	7165.00	1105.51	1102.21	-214.70	40°01'59.504"N	104°39'22.884"W	0.00	
8417.00†	90.000	0.065	7165.00	1205.50	1202.21	-214.59	40°02'00.493"N	104°39'22.883"W	0.00	

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 4 of 8

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (204 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	7165.00	1305.48	1302.21	-214.47	40°02'01.481"N	104°39'22.881"W	0.00	
8617.00†	90.000	0.065	7165.00	1405.47	1402.21	-214.36	40°02'02.469"N	104°39'22.880"W	0.00	
8717.00†	90.000	0.065	7165.00	1505.45	1502.21	-214.24	40°02'03.457"N	104°39'22.878"W	0.00	
8817.00†	90.000	0.065	7165.00	1605.44	1602.21	-214.13	40°02'04.445"N	104°39'22.877"W	0.00	
8917.00†	90.000	0.065	7165.00	1705.42	1702.21	-214.02	40°02'05.434"N	104°39'22.875"W	0.00	
9017.00†	90.000	0.065	7165.00	1805.41	1802.21	-213.90	40°02'06.422"N	104°39'22.874"W	0.00	
9117.00†	90.000	0.065	7165.00	1905.39	1902.21	-213.79	40°02'07.410"N	104°39'22.873"W	0.00	
9217.00†	90.000	0.065	7165.00	2005.38	2002.21	-213.67	40°02'08.398"N	104°39'22.871"W	0.00	
9317.00†	90.000	0.065	7165.00	2105.36	2102.21	-213.56	40°02'09.387"N	104°39'22.870"W	0.00	
9417.00†	90.000	0.065	7165.00	2205.35	2202.21	-213.45	40°02'10.375"N	104°39'22.868"W	0.00	
9517.00†	90.000	0.065	7165.00	2305.33	2302.21	-213.33	40°02'11.363"N	104°39'22.867"W	0.00	
9617.00†	90.000	0.065	7165.00	2405.32	2402.21	-213.22	40°02'12.351"N	104°39'22.865"W	0.00	
9717.00†	90.000	0.065	7165.00	2505.31	2502.21	-213.10	40°02'13.340"N	104°39'22.864"W	0.00	
9817.00†	90.000	0.065	7165.00	2605.29	2602.21	-212.99	40°02'14.328"N	104°39'22.862"W	0.00	
9917.00†	90.000	0.065	7165.00	2705.28	2702.21	-212.88	40°02'15.316"N	104°39'22.861"W	0.00	
10017.00†	90.000	0.065	7165.00	2805.26	2802.21	-212.76	40°02'16.304"N	104°39'22.859"W	0.00	
10117.00†	90.000	0.065	7165.00	2905.25	2902.21	-212.65	40°02'17.292"N	104°39'22.858"W	0.00	
10217.00†	90.000	0.065	7165.00	3005.23	3002.21	-212.53	40°02'18.281"N	104°39'22.857"W	0.00	
10317.00†	90.000	0.065	7165.00	3105.22	3102.21	-212.42	40°02'19.269"N	104°39'22.855"W	0.00	
10417.00†	90.000	0.065	7165.00	3205.20	3202.21	-212.31	40°02'20.257"N	104°39'22.854"W	0.00	
10517.00†	90.000	0.065	7165.00	3305.19	3302.21	-212.19	40°02'21.245"N	104°39'22.852"W	0.00	
10617.00†	90.000	0.065	7165.00	3405.17	3402.21	-212.08	40°02'22.234"N	104°39'22.851"W	0.00	
10717.00†	90.000	0.065	7165.00	3505.16	3502.21	-211.96	40°02'23.222"N	104°39'22.849"W	0.00	
10817.00†	90.000	0.065	7165.00	3605.14	3602.21	-211.85	40°02'24.210"N	104°39'22.848"W	0.00	
10917.00†	90.000	0.065	7165.00	3705.13	3702.21	-211.74	40°02'25.198"N	104°39'22.846"W	0.00	
11017.00†	90.000	0.065	7165.00	3805.11	3802.21	-211.62	40°02'26.186"N	104°39'22.845"W	0.00	
11117.00†	90.000	0.065	7165.00	3905.10	3902.21	-211.51	40°02'27.175"N	104°39'22.843"W	0.00	
11217.00†	90.000	0.065	7165.00	4005.08	4002.21	-211.39	40°02'28.163"N	104°39'22.842"W	0.00	
11317.00†	90.000	0.065	7165.00	4105.07	4102.21	-211.28	40°02'29.151"N	104°39'22.841"W	0.00	
11417.00†	90.000	0.065	7165.00	4205.05	4202.21	-211.17	40°02'30.139"N	104°39'22.839"W	0.00	
11517.00†	90.000	0.065	7165.00	4305.04	4302.21	-211.05	40°02'31.128"N	104°39'22.838"W	0.00	
11617.00†	90.000	0.065	7165.00	4405.03	4402.21	-210.94	40°02'32.116"N	104°39'22.836"W	0.00	
11717.00†	90.000	0.065	7165.00	4505.01	4502.21	-210.82	40°02'33.104"N	104°39'22.835"W	0.00	
11817.00†	90.000	0.065	7165.00	4605.00	4602.21	-210.71	40°02'34.092"N	104°39'22.833"W	0.00	
11917.00†	90.000	0.065	7165.00	4704.98	4702.21	-210.60	40°02'35.080"N	104°39'22.832"W	0.00	
12017.00†	90.000	0.065	7165.00	4804.97	4802.21	-210.48	40°02'36.069"N	104°39'22.830"W	0.00	

WELLPATH DATA (204 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	7165.00	4904.95	4902.21	-210.37	40°02'37.057"N	104°39'22.829"W	0.00	
12217.00†	90.000	0.065	7165.00	5004.94	5002.21	-210.26	40°02'38.045"N	104°39'22.827"W	0.00	
12317.00†	90.000	0.065	7165.00	5104.92	5102.21	-210.14	40°02'39.033"N	104°39'22.826"W	0.00	
12417.00†	90.000	0.065	7165.00	5204.91	5202.21	-210.03	40°02'40.022"N	104°39'22.825"W	0.00	
12517.00†	90.000	0.065	7165.00	5304.89	5302.21	-209.91	40°02'41.010"N	104°39'22.823"W	0.00	
12617.00†	90.000	0.065	7165.00	5404.88	5402.21	-209.80	40°02'41.998"N	104°39'22.822"W	0.00	
12717.00†	90.000	0.065	7165.00	5504.86	5502.21	-209.69	40°02'42.986"N	104°39'22.820"W	0.00	
12817.00†	90.000	0.065	7165.00	5604.85	5602.21	-209.57	40°02'43.975"N	104°39'22.819"W	0.00	
12917.00†	90.000	0.065	7165.00	5704.83	5702.21	-209.46	40°02'44.963"N	104°39'22.817"W	0.00	

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 5 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (204 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	7165.00	5804.82	5802.21	-209.34	40°02'45.951"N	104°39'22.816"W	0.00	
13117.00†	90.000	0.065	7165.00	5904.80	5902.21	-209.23	40°02'46.939"N	104°39'22.814"W	0.00	
13217.00†	90.000	0.065	7165.00	6004.79	6002.21	-209.12	40°02'47.927"N	104°39'22.813"W	0.00	
13317.00†	90.000	0.065	7165.00	6104.78	6102.21	-209.00	40°02'48.916"N	104°39'22.811"W	0.00	
13417.00†	90.000	0.065	7165.00	6204.76	6202.21	-208.89	40°02'49.904"N	104°39'22.810"W	0.00	
13517.00†	90.000	0.065	7165.00	6304.75	6302.21	-208.77	40°02'50.892"N	104°39'22.809"W	0.00	
13617.00†	90.000	0.065	7165.00	6404.73	6402.21	-208.66	40°02'51.880"N	104°39'22.807"W	0.00	
13717.00†	90.000	0.065	7165.00	6504.72	6502.21	-208.55	40°02'52.869"N	104°39'22.806"W	0.00	
13817.00†	90.000	0.065	7165.00	6604.70	6602.21	-208.43	40°02'53.857"N	104°39'22.804"W	0.00	
13917.00†	90.000	0.065	7165.00	6704.69	6702.21	-208.32	40°02'54.845"N	104°39'22.803"W	0.00	
14017.00†	90.000	0.065	7165.00	6804.67	6802.21	-208.20	40°02'55.833"N	104°39'22.801"W	0.00	
14117.00†	90.000	0.065	7165.00	6904.66	6902.21	-208.09	40°02'56.821"N	104°39'22.800"W	0.00	
14217.00†	90.000	0.065	7165.00	7004.64	7002.21	-207.98	40°02'57.810"N	104°39'22.798"W	0.00	
14317.00†	90.000	0.065	7165.00	7104.63	7102.21	-207.86	40°02'58.798"N	104°39'22.797"W	0.00	
14417.00†	90.000	0.065	7165.00	7204.61	7202.21	-207.75	40°02'59.786"N	104°39'22.795"W	0.00	
14517.00†	90.000	0.065	7165.00	7304.60	7302.21	-207.63	40°03'00.774"N	104°39'22.794"W	0.00	
14617.00†	90.000	0.065	7165.00	7404.58	7402.21	-207.52	40°03'01.763"N	104°39'22.793"W	0.00	
14717.00†	90.000	0.065	7165.00	7504.57	7502.21	-207.41	40°03'02.751"N	104°39'22.791"W	0.00	
14817.00†	90.000	0.065	7165.00	7604.55	7602.21	-207.29	40°03'03.739"N	104°39'22.790"W	0.00	
14917.00†	90.000	0.065	7165.00	7704.54	7702.21	-207.18	40°03'04.727"N	104°39'22.788"W	0.00	
15017.00†	90.000	0.065	7165.00	7804.53	7802.21	-207.06	40°03'05.715"N	104°39'22.787"W	0.00	
15117.00†	90.000	0.065	7165.00	7904.51	7902.21	-206.95	40°03'06.704"N	104°39'22.785"W	0.00	
15217.00†	90.000	0.065	7165.00	8004.50	8002.21	-206.84	40°03'07.692"N	104°39'22.784"W	0.00	
15317.00†	90.000	0.065	7165.00	8104.48	8102.21	-206.72	40°03'08.680"N	104°39'22.782"W	0.00	
15417.00†	90.000	0.065	7165.00	8204.47	8202.21	-206.61	40°03'09.668"N	104°39'22.781"W	0.00	
15517.00†	90.000	0.065	7165.00	8304.45	8302.21	-206.49	40°03'10.657"N	104°39'22.779"W	0.00	
15617.00†	90.000	0.065	7165.00	8404.44	8402.21	-206.38	40°03'11.645"N	104°39'22.778"W	0.00	
15717.00†	90.000	0.065	7165.00	8504.42	8502.21	-206.27	40°03'12.633"N	104°39'22.777"W	0.00	
15817.00†	90.000	0.065	7165.00	8604.41	8602.21	-206.15	40°03'13.621"N	104°39'22.775"W	0.00	
15917.00†	90.000	0.065	7165.00	8704.39	8702.21	-206.04	40°03'14.609"N	104°39'22.774"W	0.00	
16017.00†	90.000	0.065	7165.00	8804.38	8802.21	-205.92	40°03'15.598"N	104°39'22.772"W	0.00	
16117.00†	90.000	0.065	7165.00	8904.36	8902.21	-205.81	40°03'16.586"N	104°39'22.771"W	0.00	
16217.00†	90.000	0.065	7165.00	9004.35	9002.21	-205.70	40°03'17.574"N	104°39'22.769"W	0.00	
16317.00†	90.000	0.065	7165.00	9104.33	9102.21	-205.58	40°03'18.562"N	104°39'22.768"W	0.00	
16417.00†	90.000	0.065	7165.00	9204.32	9202.21	-205.47	40°03'19.551"N	104°39'22.766"W	0.00	
16517.00†	90.000	0.065	7165.00	9304.30	9302.21	-205.35	40°03'20.539"N	104°39'22.765"W	0.00	

WELLPATH DATA (204 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	7165.00	9404.29	9402.21	-205.24	40°03'21.527"N	104°39'22.763"W	0.00	
16717.00†	90.000	0.065	7165.00	9504.27	9502.21	-205.13	40°03'22.515"N	104°39'22.762"W	0.00	
16817.00†	90.000	0.065	7165.00	9604.26	9602.21	-205.01	40°03'23.503"N	104°39'22.761"W	0.00	
16917.00†	90.000	0.065	7165.00	9704.25	9702.21	-204.90	40°03'24.492"N	104°39'22.759"W	0.00	
17017.00†	90.000	0.065	7165.00	9804.23	9802.21	-204.78	40°03'25.480"N	104°39'22.758"W	0.00	
17117.00†	90.000	0.065	7165.00	9904.22	9902.21	-204.67	40°03'26.468"N	104°39'22.756"W	0.00	
17217.00†	90.000	0.065	7165.00	10004.20	10002.21	-204.56	40°03'27.456"N	104°39'22.755"W	0.00	
17317.00†	90.000	0.065	7165.00	10104.19	10102.21	-204.44	40°03'28.445"N	104°39'22.753"W	0.00	
17417.00†	90.000	0.065	7165.00	10204.17	10202.21	-204.33	40°03'29.433"N	104°39'22.752"W	0.00	

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 6 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (204 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	7165.00	10304.16	10302.21	-204.21	40°03'30.421"N	104°39'22.750"W	0.00	
17617.00†	90.000	0.065	7165.00	10404.14	10402.21	-204.10	40°03'31.409"N	104°39'22.749"W	0.00	
17717.00†	90.000	0.065	7165.00	10504.13	10502.21	-203.99	40°03'32.397"N	104°39'22.747"W	0.00	
17817.00†	90.000	0.065	7165.00	10604.11	10602.21	-203.87	40°03'33.386"N	104°39'22.746"W	0.00	
17917.00†	90.000	0.065	7165.00	10704.10	10702.21	-203.76	40°03'34.374"N	104°39'22.745"W	0.00	
18017.00†	90.000	0.065	7165.00	10804.08	10802.21	-203.64	40°03'35.362"N	104°39'22.743"W	0.00	
18117.00†	90.000	0.065	7165.00	10904.07	10902.21	-203.53	40°03'36.350"N	104°39'22.742"W	0.00	
18217.00†	90.000	0.065	7165.00	11004.05	11002.21	-203.42	40°03'37.339"N	104°39'22.740"W	0.00	
18317.00†	90.000	0.065	7165.00	11104.04	11102.21	-203.30	40°03'38.327"N	104°39'22.739"W	0.00	
18417.00†	90.000	0.065	7165.00	11204.02	11202.21	-203.19	40°03'39.315"N	104°39'22.737"W	0.00	
18517.00†	90.000	0.065	7165.00	11304.01	11302.21	-203.07	40°03'40.303"N	104°39'22.736"W	0.00	
18617.00†	90.000	0.065	7165.00	11404.00	11402.21	-202.96	40°03'41.291"N	104°39'22.734"W	0.00	
18717.00†	90.000	0.065	7165.00	11503.98	11502.21	-202.85	40°03'42.280"N	104°39'22.733"W	0.00	
18817.00†	90.000	0.065	7165.00	11603.97	11602.21	-202.73	40°03'43.268"N	104°39'22.731"W	0.00	
18917.00†	90.000	0.065	7165.00	11703.95	11702.21	-202.62	40°03'44.256"N	104°39'22.730"W	0.00	
19017.00†	90.000	0.065	7165.00	11803.94	11802.21	-202.50	40°03'45.244"N	104°39'22.728"W	0.00	
19117.00†	90.000	0.065	7165.00	11903.92	11902.21	-202.39	40°03'46.233"N	104°39'22.727"W	0.00	
19217.00†	90.000	0.065	7165.00	12003.91	12002.21	-202.28	40°03'47.221"N	104°39'22.726"W	0.00	
19317.00†	90.000	0.065	7165.00	12103.89	12102.21	-202.16	40°03'48.209"N	104°39'22.724"W	0.00	
19417.00†	90.000	0.065	7165.00	12203.88	12202.21	-202.05	40°03'49.197"N	104°39'22.723"W	0.00	
19517.00†	90.000	0.065	7165.00	12303.86	12302.21	-201.93	40°03'50.186"N	104°39'22.721"W	0.00	
19617.00†	90.000	0.065	7165.00	12403.85	12402.21	-201.82	40°03'51.174"N	104°39'22.720"W	0.00	
19717.00†	90.000	0.065	7165.00	12503.83	12502.21	-201.71	40°03'52.162"N	104°39'22.718"W	0.00	
19801.21	90.000	0.065	7165.00 ²	12588.03	12586.42	-201.61	40°03'52.994"N	104°39'22.717"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: WILLOW 22-19-1L PWB Ref Wellpath: WILLOW 22-19-1L 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	1498.71	0.00	0.00	-37.28	-25.70

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 7 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L 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		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.10-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.15-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.22-T01N-R65W		-1.00	0.00	-72.81	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
2) WILLOW 22-19-1L BHL ON PLAT (2180'FSL & 904'FWL,SEC.10)	19801.21	7165.00	12586.42	-201.61	3236134.82	1267546.28	40°03'52.994"N	104°39'22.717"W	point
1) WILLOW 22-19-1L LP ON PLAT (470'FSL & 904'FWL,SEC.22)	7502.57	7165.00	287.79	-215.63	3236237.91	1255248.54	40°01'51.456"N	104°39'22.896"W	point

SURVEY PROGRAM - Ref Wellbore: WILLOW 22-19-1L PWB Ref Wellpath: WILLOW 22-19-1L 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 22-19-1L PWB
1500.00	19801.21	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-19-1L PWB

Planned Wellpath Report

WILLOW 22-19-1L PWP (REV-A.0)

Page 8 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#04 WILLOW 22-19-1L (185'FSL & 1121'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-19-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-19-1L PWB
Facility	SEC.22-T01N-R65W		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	214.578	17.00	Tie On
650.00	0.000	214.578	650.00	End of Tangent
819.61	3.392	214.578	819.51	End of Build
6574.63	3.392	214.578	6564.45	End of Tangent
7502.57	90.000	0.065	7165.00	End of 3D Arc
19801.21	90.000	0.065	7165.00	End of Tangent