

Location:	COLORADO	Slot:	SLOT#08 WILLOW 22-16-1L (185°FSL & 1221°FWL, SEC.22)
Field:	WELD COUNTY (NAD83, TRUE NORTH)	Well:	WILLOW 22-16-1L
Facility:	SEC.22-T01N-R65W	Wellbore:	WILLOW 22-16-1L PWB
<b>Plot reference wellpath is WILLOW 22-16-1L 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: S108 feet		Depths are in feet	
Mean Sea Level to Mud line (At Slot: SLOT#08 WILLOW 22-16-1L (185°FSL & 1221°FWL, SEC.22): 0 feet		Created by: robale01 on 2019-02-27	
Coordinates are in feet referenced to Slot		Database: WADENVER	

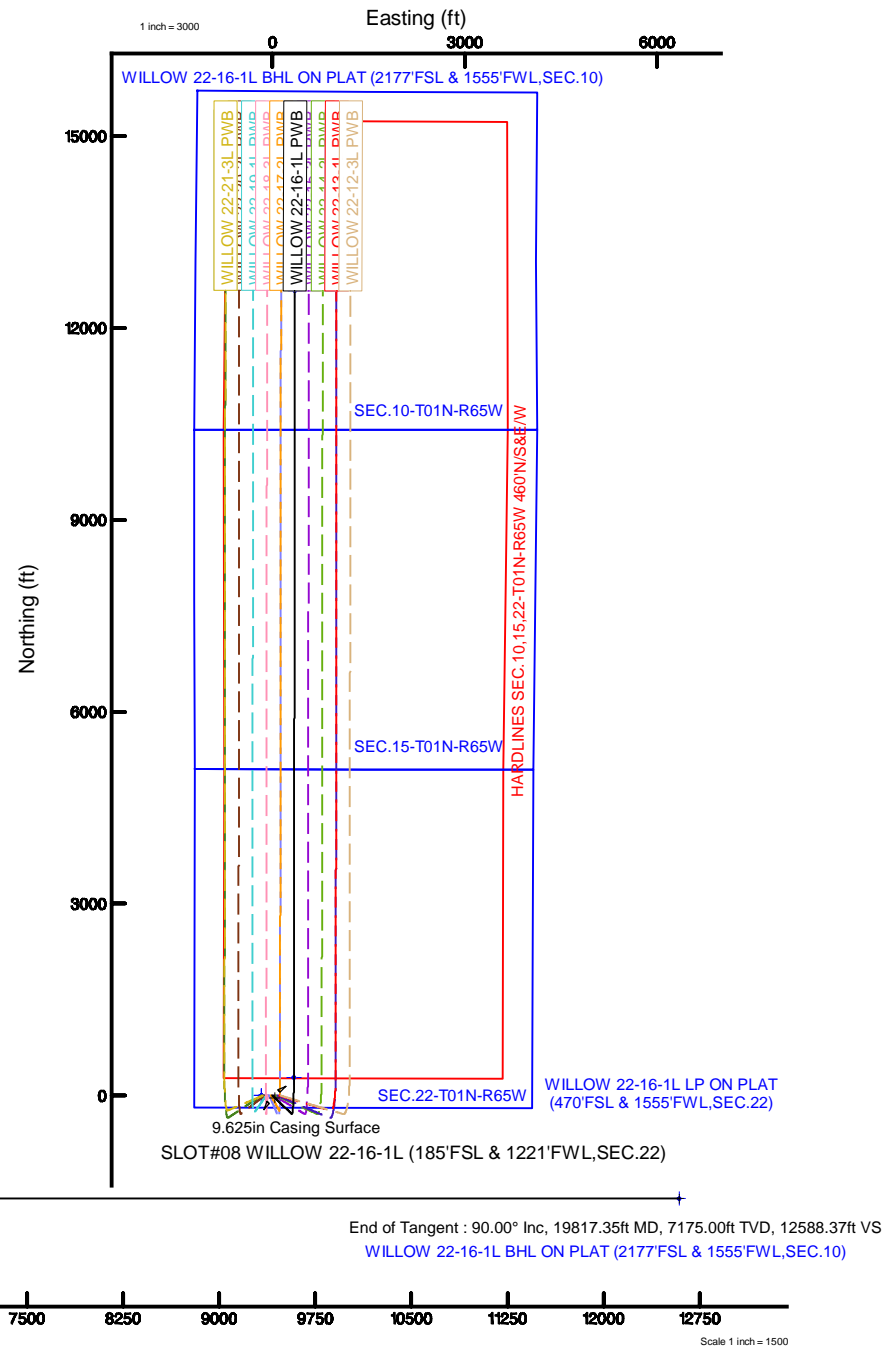
Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.22-701N-R66W			3236383.461	1254962.137	40°01'48.612"N	104°39'21.060"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#08 WILLOW 22-16-1L (185FSL & 1211FWL,SEC.22)	0.00	173.62	3236557.072	1254963.790	40°01'48.612"N	104°39'16.828"W
RIG (17') (RKB) to Mud line (At Slot: SLOT#08 WILLOW 22-16-1L (185FSL & 1211FWL,SEC.22))					5108ft	
Mean Sea Level to Mud line (At Slot: SLOT#08 WILLOW 22-16-1L (185FSL & 1211FWL,SEC.22))					0ft	
RIG (17') (RKB) 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-T01N-R65W 480N/S&E/W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.10-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.15-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
SEC.22-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W
WILLOW 22-16-1L BHL ON PLAT (2177FSL & 1555FWL SEC.10)	19817.35	7175.00	12583.54	348.47	3236785.64	1267549.61	40°03'52.966"N	104°39'14.348"W
WILLOW 22-16-1L LP ON PLAT (470FSL & 1555FWL SEC.22)	7517.94	7175.00	284.15	333.24	3236887.58	1255251.09	40°01'51.420"N	104°39'14.544"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 22-16-1L PWB
1500.00	19817.35	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-16-1L 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	133.751	17.00	0.00	0.00	0.00	0.00
End of Tangent	750.00	0.000	133.751	750.00	0.00	0.00	0.00	0.00
End of Build	958.25	4.165	133.751	958.07	-5.23	5.47	2.00	-5.08
End of Tangent	6589.19	4.165	133.751	6574.14	-288.05	300.89	0.00	-279.61
End of 3D Arc	7517.94	90.000	0.071	7175.00	284.15	333.24	10.00	293.26
End of Tangent	19817.35	90.000	0.071	7175.00	12583.54	348.47	0.00	12588.37

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
19817.35	90.000	0.071	7175.00	12583.54	348.47	3236785.64	1267549.61	40°03'52.966"N	104°39'14.346"W



# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L 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 1:29:33 PM
Convergence at slot	0.55° East	Database/Source file	WA DENVER/WILLOW_22-16-1L_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	173.62	3236557.07	1254963.79	40°01'48.612"N	104°39'18.828"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#08 WILLOW 22-16-1L (185'FSL & 1221'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	1.59°

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (205 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	133.751	0.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
17.00	0.000	133.751	17.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	Tie On
117.00†	0.000	133.751	117.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
217.00†	0.000	133.751	217.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
317.00†	0.000	133.751	317.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
417.00†	0.000	133.751	417.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
517.00†	0.000	133.751	517.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
617.00†	0.000	133.751	617.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
717.00†	0.000	133.751	717.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	
750.00	0.000	133.751	750.00	0.00	0.00	0.00	40°01'48.612"N	104°39'18.828"W	0.00	End of Tangent
817.00†	1.340	133.751	816.99	-0.53	-0.54	0.57	40°01'48.607"N	104°39'18.821"W	2.00	
917.00†	3.340	133.751	916.91	-3.27	-3.37	3.52	40°01'48.579"N	104°39'18.783"W	2.00	
958.25	4.165	133.751	958.07	-5.08	-5.23	5.47	40°01'48.560"N	104°39'18.758"W	2.00	End of Build
1017.00†	4.165	133.751	1016.66	-7.94	-8.18	8.55	40°01'48.531"N	104°39'18.718"W	0.00	
1117.00†	4.165	133.751	1116.40	-12.82	-13.21	13.79	40°01'48.482"N	104°39'18.651"W	0.00	
1217.00†	4.165	133.751	1216.13	-17.69	-18.23	19.04	40°01'48.432"N	104°39'18.583"W	0.00	
1317.00†	4.165	133.751	1315.87	-22.57	-23.25	24.29	40°01'48.382"N	104°39'18.516"W	0.00	
1417.00†	4.165	133.751	1415.61	-27.44	-28.27	29.53	40°01'48.333"N	104°39'18.448"W	0.00	
1517.00†	4.165	133.751	1515.34	-32.32	-33.30	34.78	40°01'48.283"N	104°39'18.381"W	0.00	
1617.00†	4.165	133.751	1615.08	-37.20	-38.32	40.03	40°01'48.233"N	104°39'18.313"W	0.00	
1717.00†	4.165	133.751	1714.81	-42.07	-43.34	45.27	40°01'48.184"N	104°39'18.246"W	0.00	
1817.00†	4.165	133.751	1814.55	-46.95	-48.36	50.52	40°01'48.134"N	104°39'18.179"W	0.00	
1917.00†	4.165	133.751	1914.28	-51.82	-53.39	55.77	40°01'48.084"N	104°39'18.111"W	0.00	
2017.00†	4.165	133.751	2014.02	-56.70	-58.41	61.01	40°01'48.035"N	104°39'18.044"W	0.00	
2117.00†	4.165	133.751	2113.76	-61.57	-63.43	66.26	40°01'47.985"N	104°39'17.976"W	0.00	
2217.00†	4.165	133.751	2213.49	-66.45	-68.45	71.51	40°01'47.936"N	104°39'17.909"W	0.00	
2317.00†	4.165	133.751	2313.23	-71.32	-73.48	76.75	40°01'47.886"N	104°39'17.841"W	0.00	
2417.00†	4.165	133.751	2412.96	-76.20	-78.50	82.00	40°01'47.836"N	104°39'17.774"W	0.00	
2517.00†	4.165	133.751	2512.70	-81.07	-83.52	87.24	40°01'47.787"N	104°39'17.706"W	0.00	
2617.00†	4.165	133.751	2612.44	-85.95	-88.54	92.49	40°01'47.737"N	104°39'17.639"W	0.00	
2717.00†	4.165	133.751	2712.17	-90.82	-93.57	97.74	40°01'47.687"N	104°39'17.572"W	0.00	
2817.00†	4.165	133.751	2811.91	-95.70	-98.59	102.98	40°01'47.638"N	104°39'17.504"W	0.00	
2917.00†	4.165	133.751	2911.64	-100.58	-103.61	108.23	40°01'47.588"N	104°39'17.437"W	0.00	
3017.00†	4.165	133.751	3011.38	-105.45	-108.63	113.48	40°01'47.538"N	104°39'17.369"W	0.00	
3117.00†	4.165	133.751	3111.12	-110.33	-113.66	118.72	40°01'47.489"N	104°39'17.302"W	0.00	
3217.00†	4.165	133.751	3210.85	-115.20	-118.68	123.97	40°01'47.439"N	104°39'17.234"W	0.00	

WELLPATH DATA (205 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3317.00†	4.165	133.751	3310.59	-120.08	-123.70	129.22	40°01'47.390"N	104°39'17.167"W	0.00	
3417.00†	4.165	133.751	3410.32	-124.95	-128.72	134.46	40°01'47.340"N	104°39'17.099"W	0.00	
3517.00†	4.165	133.751	3510.06	-129.83	-133.75	139.71	40°01'47.290"N	104°39'17.032"W	0.00	
3617.00†	4.165	133.751	3609.79	-134.70	-138.77	144.96	40°01'47.241"N	104°39'16.965"W	0.00	
3717.00†	4.165	133.751	3709.53	-139.58	-143.79	150.20	40°01'47.191"N	104°39'16.897"W	0.00	
3817.00†	4.165	133.751	3809.27	-144.45	-148.81	155.45	40°01'47.141"N	104°39'16.830"W	0.00	
3917.00†	4.165	133.751	3909.00	-149.33	-153.84	160.69	40°01'47.092"N	104°39'16.762"W	0.00	
4017.00†	4.165	133.751	4008.74	-154.21	-158.86	165.94	40°01'47.042"N	104°39'16.695"W	0.00	
4117.00†	4.165	133.751	4108.47	-159.08	-163.88	171.19	40°01'46.992"N	104°39'16.627"W	0.00	

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	4.165	133.751	4208.21	-163.96	-168.90	176.43	40°01'46.943"N	104°39'16.560"W	0.00	
4317.00†	4.165	133.751	4307.95	-168.83	-173.93	181.68	40°01'46.893"N	104°39'16.492"W	0.00	
4417.00†	4.165	133.751	4407.68	-173.71	-178.95	186.93	40°01'46.844"N	104°39'16.425"W	0.00	
4517.00†	4.165	133.751	4507.42	-178.58	-183.97	192.17	40°01'46.794"N	104°39'16.358"W	0.00	
4617.00†	4.165	133.751	4607.15	-183.46	-188.99	197.42	40°01'46.744"N	104°39'16.290"W	0.00	
4717.00†	4.165	133.751	4706.89	-188.33	-194.02	202.67	40°01'46.695"N	104°39'16.223"W	0.00	
4817.00†	4.165	133.751	4806.63	-193.21	-199.04	207.91	40°01'46.645"N	104°39'16.155"W	0.00	
4917.00†	4.165	133.751	4906.36	-198.08	-204.06	213.16	40°01'46.595"N	104°39'16.088"W	0.00	
5017.00†	4.165	133.751	5006.10	-202.96	-209.09	218.41	40°01'46.546"N	104°39'16.020"W	0.00	
5117.00†	4.165	133.751	5105.83	-207.83	-214.11	223.65	40°01'46.496"N	104°39'15.953"W	0.00	
5217.00†	4.165	133.751	5205.57	-212.71	-219.13	228.90	40°01'46.446"N	104°39'15.885"W	0.00	
5317.00†	4.165	133.751	5305.30	-217.59	-224.15	234.15	40°01'46.397"N	104°39'15.818"W	0.00	
5417.00†	4.165	133.751	5405.04	-222.46	-229.18	239.39	40°01'46.347"N	104°39'15.751"W	0.00	
5517.00†	4.165	133.751	5504.78	-227.34	-234.20	244.64	40°01'46.298"N	104°39'15.683"W	0.00	
5617.00†	4.165	133.751	5604.51	-232.21	-239.22	249.88	40°01'46.248"N	104°39'15.616"W	0.00	
5717.00†	4.165	133.751	5704.25	-237.09	-244.24	255.13	40°01'46.198"N	104°39'15.548"W	0.00	
5817.00†	4.165	133.751	5803.98	-241.96	-249.27	260.38	40°01'46.149"N	104°39'15.481"W	0.00	
5917.00†	4.165	133.751	5903.72	-246.84	-254.29	265.62	40°01'46.099"N	104°39'15.413"W	0.00	
6017.00†	4.165	133.751	6003.46	-251.71	-259.31	270.87	40°01'46.049"N	104°39'15.346"W	0.00	
6117.00†	4.165	133.751	6103.19	-256.59	-264.33	276.12	40°01'46.000"N	104°39'15.278"W	0.00	
6217.00†	4.165	133.751	6202.93	-261.46	-269.36	281.36	40°01'45.950"N	104°39'15.211"W	0.00	
6317.00†	4.165	133.751	6302.66	-266.34	-274.38	286.61	40°01'45.901"N	104°39'15.144"W	0.00	
6417.00†	4.165	133.751	6402.40	-271.21	-279.40	291.86	40°01'45.851"N	104°39'15.076"W	0.00	
6517.00†	4.165	133.751	6502.14	-276.09	-284.42	297.10	40°01'45.801"N	104°39'15.009"W	0.00	
6589.19	4.165	133.751	6574.14	-279.61	-288.05	300.89	40°01'45.765"N	104°39'14.960"W	0.00	End of Tangent
6617.00†	3.016	91.862	6601.89	-280.29	-288.77	302.35	40°01'45.758"N	104°39'14.941"W	10.00	
6717.00†	10.350	16.831	6701.26	-271.61	-280.24	307.60	40°01'45.843"N	104°39'14.874"W	10.00	
6817.00†	20.124	8.335	6797.64	-245.80	-254.55	312.70	40°01'46.096"N	104°39'14.808"W	10.00	
6917.00†	30.043	5.296	6888.10	-203.63	-212.50	317.52	40°01'46.512"N	104°39'14.746"W	10.00	
7017.00†	40.001	3.669	6969.89	-146.38	-155.35	321.90	40°01'47.077"N	104°39'14.690"W	10.00	
7117.00†	49.973	2.606	7040.53	-75.81	-84.85	325.71	40°01'47.773"N	104°39'14.641"W	10.00	
7217.00†	59.952	1.817	7097.87	5.96	-3.14	328.83	40°01'48.581"N	104°39'14.601"W	10.00	
7317.00†	69.935	1.173	7140.17	96.44	87.30	331.17	40°01'49.475"N	104°39'14.571"W	10.00	
7417.00†	79.920	0.607	7166.14	192.87	183.73	332.65	40°01'50.428"N	104°39'14.552"W	10.00	
7517.00†	89.906	0.076	7175.00	292.32	283.21	333.24	40°01'51.411"N	104°39'14.544"W	10.00	
7517.94	90.000	0.071		293.26	284.15	333.24	40°01'51.420"N	104°39'14.544"W	10.00	End of 3D Arc

WELLPATH DATA (205 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
			7175.00†							
7617.00†	90.000	0.071	7175.00	392.29	383.21	333.37	40°01'52.399"N	104°39'14.542"W	0.00	
7717.00†	90.000	0.071	7175.00	492.25	483.21	333.49	40°01'53.387"N	104°39'14.541"W	0.00	
7817.00†	90.000	0.071	7175.00	592.22	583.21	333.61	40°01'54.375"N	104°39'14.539"W	0.00	
7917.00†	90.000	0.071	7175.00	692.18	683.21	333.74	40°01'55.364"N	104°39'14.538"W	0.00	
8017.00†	90.000	0.071	7175.00	792.15	783.21	333.86	40°01'56.352"N	104°39'14.536"W	0.00	
8117.00†	90.000	0.071	7175.00	892.11	883.20	333.99	40°01'57.340"N	104°39'14.534"W	0.00	
8217.00†	90.000	0.071	7175.00	992.08	983.20	334.11	40°01'58.328"N	104°39'14.533"W	0.00	
8317.00†	90.000	0.071	7175.00	1092.04	1083.20	334.23	40°01'59.316"N	104°39'14.531"W	0.00	
8417.00†	90.000	0.071	7175.00	1192.01	1183.20	334.36	40°02'00.305"N	104°39'14.530"W	0.00	

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (205 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	0.071	7175.00	1291.97	1283.20	334.48	40°02'01.293"N	104°39'14.528"W	0.00	
8617.00†	90.000	0.071	7175.00	1391.94	1383.20	334.60	40°02'02.281"N	104°39'14.526"W	0.00	
8717.00†	90.000	0.071	7175.00	1491.90	1483.20	334.73	40°02'03.269"N	104°39'14.525"W	0.00	
8817.00†	90.000	0.071	7175.00	1591.87	1583.20	334.85	40°02'04.258"N	104°39'14.523"W	0.00	
8917.00†	90.000	0.071	7175.00	1691.83	1683.20	334.98	40°02'05.246"N	104°39'14.521"W	0.00	
9017.00†	90.000	0.071	7175.00	1791.80	1783.20	335.10	40°02'06.234"N	104°39'14.520"W	0.00	
9117.00†	90.000	0.071	7175.00	1891.76	1883.20	335.22	40°02'07.222"N	104°39'14.518"W	0.00	
9217.00†	90.000	0.071	7175.00	1991.73	1983.20	335.35	40°02'08.211"N	104°39'14.517"W	0.00	
9317.00†	90.000	0.071	7175.00	2091.69	2083.20	335.47	40°02'09.199"N	104°39'14.515"W	0.00	
9417.00†	90.000	0.071	7175.00	2191.66	2183.20	335.60	40°02'10.187"N	104°39'14.513"W	0.00	
9517.00†	90.000	0.071	7175.00	2291.62	2283.20	335.72	40°02'11.175"N	104°39'14.512"W	0.00	
9617.00†	90.000	0.071	7175.00	2391.59	2383.20	335.84	40°02'12.163"N	104°39'14.510"W	0.00	
9717.00†	90.000	0.071	7175.00	2491.55	2483.20	335.97	40°02'13.152"N	104°39'14.509"W	0.00	
9817.00†	90.000	0.071	7175.00	2591.52	2583.20	336.09	40°02'14.140"N	104°39'14.507"W	0.00	
9917.00†	90.000	0.071	7175.00	2691.48	2683.20	336.21	40°02'15.128"N	104°39'14.505"W	0.00	
10017.00†	90.000	0.071	7175.00	2791.45	2783.20	336.34	40°02'16.116"N	104°39'14.504"W	0.00	
10117.00†	90.000	0.071	7175.00	2891.41	2883.20	336.46	40°02'17.105"N	104°39'14.502"W	0.00	
10217.00†	90.000	0.071	7175.00	2991.38	2983.20	336.59	40°02'18.093"N	104°39'14.501"W	0.00	
10317.00†	90.000	0.071	7175.00	3091.34	3083.20	336.71	40°02'19.081"N	104°39'14.499"W	0.00	
10417.00†	90.000	0.071	7175.00	3191.31	3183.20	336.83	40°02'20.069"N	104°39'14.497"W	0.00	
10517.00†	90.000	0.071	7175.00	3291.27	3283.20	336.96	40°02'21.057"N	104°39'14.496"W	0.00	
10617.00†	90.000	0.071	7175.00	3391.24	3383.20	337.08	40°02'22.046"N	104°39'14.494"W	0.00	
10717.00†	90.000	0.071	7175.00	3491.20	3483.20	337.21	40°02'23.034"N	104°39'14.493"W	0.00	
10817.00†	90.000	0.071	7175.00	3591.17	3583.20	337.33	40°02'24.022"N	104°39'14.491"W	0.00	
10917.00†	90.000	0.071	7175.00	3691.13	3683.20	337.45	40°02'25.010"N	104°39'14.489"W	0.00	
11017.00†	90.000	0.071	7175.00	3791.10	3783.20	337.58	40°02'25.999"N	104°39'14.488"W	0.00	
11117.00†	90.000	0.071	7175.00	3891.06	3883.20	337.70	40°02'26.987"N	104°39'14.486"W	0.00	
11217.00†	90.000	0.071	7175.00	3991.03	3983.20	337.82	40°02'27.975"N	104°39'14.484"W	0.00	
11317.00†	90.000	0.071	7175.00	4090.99	4083.20	337.95	40°02'28.963"N	104°39'14.483"W	0.00	
11417.00†	90.000	0.071	7175.00	4190.96	4183.20	338.07	40°02'29.951"N	104°39'14.481"W	0.00	
11517.00†	90.000	0.071	7175.00	4290.92	4283.20	338.20	40°02'30.940"N	104°39'14.480"W	0.00	
11617.00†	90.000	0.071	7175.00	4390.89	4383.20	338.32	40°02'31.928"N	104°39'14.478"W	0.00	
11717.00†	90.000	0.071	7175.00	4490.85	4483.20	338.44	40°02'32.916"N	104°39'14.476"W	0.00	
11817.00†	90.000	0.071	7175.00	4590.82	4583.20	338.57	40°02'33.904"N	104°39'14.475"W	0.00	
11917.00†	90.000	0.071	7175.00	4690.78	4683.20	338.69	40°02'34.893"N	104°39'14.473"W	0.00	
12017.00†	90.000	0.071	7175.00	4790.75	4783.20	338.81	40°02'35.881"N	104°39'14.472"W	0.00	

WELLPATH DATA (205 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	0.071	7175.00	4890.71	4883.20	338.94	40°02'36.869"N	104°39'14.470"W	0.00	
12217.00†	90.000	0.071	7175.00	4990.68	4983.20	339.06	40°02'37.857"N	104°39'14.468"W	0.00	
12317.00†	90.000	0.071	7175.00	5090.64	5083.20	339.19	40°02'38.846"N	104°39'14.467"W	0.00	
12417.00†	90.000	0.071	7175.00	5190.61	5183.20	339.31	40°02'39.834"N	104°39'14.465"W	0.00	
12517.00†	90.000	0.071	7175.00	5290.57	5283.20	339.43	40°02'40.822"N	104°39'14.464"W	0.00	
12617.00†	90.000	0.071	7175.00	5390.54	5383.20	339.56	40°02'41.810"N	104°39'14.462"W	0.00	
12717.00†	90.000	0.071	7175.00	5490.50	5483.20	339.68	40°02'42.798"N	104°39'14.460"W	0.00	
12817.00†	90.000	0.071	7175.00	5590.47	5583.20	339.81	40°02'43.787"N	104°39'14.459"W	0.00	
12917.00†	90.000	0.071	7175.00	5690.43	5683.20	339.93	40°02'44.775"N	104°39'14.457"W	0.00	



# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

WELLPATH DATA (205 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	0.071	7175.00	5790.40	5783.20	340.05	40°02'45.763"N	104°39'14.455"W	0.00	
13117.00†	90.000	0.071	7175.00	5890.36	5883.20	340.18	40°02'46.751"N	104°39'14.454"W	0.00	
13217.00†	90.000	0.071	7175.00	5990.33	5983.20	340.30	40°02'47.740"N	104°39'14.452"W	0.00	
13317.00†	90.000	0.071	7175.00	6090.29	6083.20	340.42	40°02'48.728"N	104°39'14.451"W	0.00	
13417.00†	90.000	0.071	7175.00	6190.26	6183.20	340.55	40°02'49.716"N	104°39'14.449"W	0.00	
13517.00†	90.000	0.071	7175.00	6290.22	6283.20	340.67	40°02'50.704"N	104°39'14.447"W	0.00	
13617.00†	90.000	0.071	7175.00	6390.19	6383.20	340.80	40°02'51.692"N	104°39'14.446"W	0.00	
13717.00†	90.000	0.071	7175.00	6490.15	6483.20	340.92	40°02'52.681"N	104°39'14.444"W	0.00	
13817.00†	90.000	0.071	7175.00	6590.12	6583.20	341.04	40°02'53.669"N	104°39'14.443"W	0.00	
13917.00†	90.000	0.071	7175.00	6690.08	6683.20	341.17	40°02'54.657"N	104°39'14.441"W	0.00	
14017.00†	90.000	0.071	7175.00	6790.05	6783.20	341.29	40°02'55.645"N	104°39'14.439"W	0.00	
14117.00†	90.000	0.071	7175.00	6890.01	6883.20	341.42	40°02'56.634"N	104°39'14.438"W	0.00	
14217.00†	90.000	0.071	7175.00	6989.98	6983.20	341.54	40°02'57.622"N	104°39'14.436"W	0.00	
14317.00†	90.000	0.071	7175.00	7089.94	7083.20	341.66	40°02'58.610"N	104°39'14.435"W	0.00	
14417.00†	90.000	0.071	7175.00	7189.91	7183.20	341.79	40°02'59.598"N	104°39'14.433"W	0.00	
14517.00†	90.000	0.071	7175.00	7289.87	7283.20	341.91	40°03'00.586"N	104°39'14.431"W	0.00	
14617.00†	90.000	0.071	7175.00	7389.84	7383.20	342.03	40°03'01.575"N	104°39'14.430"W	0.00	
14717.00†	90.000	0.071	7175.00	7489.80	7483.20	342.16	40°03'02.563"N	104°39'14.428"W	0.00	
14817.00†	90.000	0.071	7175.00	7589.77	7583.20	342.28	40°03'03.551"N	104°39'14.427"W	0.00	
14917.00†	90.000	0.071	7175.00	7689.73	7683.20	342.41	40°03'04.539"N	104°39'14.425"W	0.00	
15017.00†	90.000	0.071	7175.00	7789.70	7783.20	342.53	40°03'05.528"N	104°39'14.423"W	0.00	
15117.00†	90.000	0.071	7175.00	7889.66	7883.20	342.65	40°03'06.516"N	104°39'14.422"W	0.00	
15217.00†	90.000	0.071	7175.00	7989.63	7983.20	342.78	40°03'07.504"N	104°39'14.420"W	0.00	
15317.00†	90.000	0.071	7175.00	8089.59	8083.20	342.90	40°03'08.492"N	104°39'14.418"W	0.00	
15417.00†	90.000	0.071	7175.00	8189.56	8183.20	343.02	40°03'09.480"N	104°39'14.417"W	0.00	
15517.00†	90.000	0.071	7175.00	8289.52	8283.20	343.15	40°03'10.469"N	104°39'14.415"W	0.00	
15617.00†	90.000	0.071	7175.00	8389.49	8383.20	343.27	40°03'11.457"N	104°39'14.414"W	0.00	
15717.00†	90.000	0.071	7175.00	8489.45	8483.20	343.40	40°03'12.445"N	104°39'14.412"W	0.00	
15817.00†	90.000	0.071	7175.00	8589.42	8583.20	343.52	40°03'13.433"N	104°39'14.410"W	0.00	
15917.00†	90.000	0.071	7175.00	8689.38	8683.20	343.64	40°03'14.422"N	104°39'14.409"W	0.00	
16017.00†	90.000	0.071	7175.00	8789.35	8783.20	343.77	40°03'15.410"N	104°39'14.407"W	0.00	
16117.00†	90.000	0.071	7175.00	8889.31	8883.20	343.89	40°03'16.398"N	104°39'14.406"W	0.00	
16217.00†	90.000	0.071	7175.00	8989.28	8983.20	344.02	40°03'17.386"N	104°39'14.404"W	0.00	
16317.00†	90.000	0.071	7175.00	9089.24	9083.20	344.14	40°03'18.374"N	104°39'14.402"W	0.00	
16417.00†	90.000	0.071	7175.00	9189.21	9183.20	344.26	40°03'19.363"N	104°39'14.401"W	0.00	
16517.00†	90.000	0.071	7175.00	9289.17	9283.20	344.39	40°03'20.351"N	104°39'14.399"W	0.00	

WELLPATH DATA (205 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	0.071	7175.00	9389.14	9383.20	344.51	40°03'21.339"N	104°39'14.398"W	0.00	
16717.00†	90.000	0.071	7175.00	9489.10	9483.20	344.63	40°03'22.327"N	104°39'14.396"W	0.00	
16817.00†	90.000	0.071	7175.00	9589.07	9583.20	344.76	40°03'23.316"N	104°39'14.394"W	0.00	
16917.00†	90.000	0.071	7175.00	9689.03	9683.20	344.88	40°03'24.304"N	104°39'14.393"W	0.00	
17017.00†	90.000	0.071	7175.00	9789.00	9783.20	345.01	40°03'25.292"N	104°39'14.391"W	0.00	
17117.00†	90.000	0.071	7175.00	9888.96	9883.20	345.13	40°03'26.280"N	104°39'14.389"W	0.00	
17217.00†	90.000	0.071	7175.00	9988.93	9983.20	345.25	40°03'27.268"N	104°39'14.388"W	0.00	
17317.00†	90.000	0.071	7175.00	10088.89	10083.20	345.38	40°03'28.257"N	104°39'14.386"W	0.00	
17417.00†	90.000	0.071	7175.00	10188.86	10183.20	345.50	40°03'29.245"N	104°39'14.385"W	0.00	

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

## WELLPATH DATA (205 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	0.071	7175.00	10288.82	10283.20	345.63	40°03'30.233"N	104°39'14.383"W	0.00	
17617.00†	90.000	0.071	7175.00	10388.79	10383.20	345.75	40°03'31.221"N	104°39'14.381"W	0.00	
17717.00†	90.000	0.071	7175.00	10488.75	10483.20	345.87	40°03'32.210"N	104°39'14.380"W	0.00	
17817.00†	90.000	0.071	7175.00	10588.72	10583.20	346.00	40°03'33.198"N	104°39'14.378"W	0.00	
17917.00†	90.000	0.071	7175.00	10688.68	10683.20	346.12	40°03'34.186"N	104°39'14.377"W	0.00	
18017.00†	90.000	0.071	7175.00	10788.65	10783.20	346.24	40°03'35.174"N	104°39'14.375"W	0.00	
18117.00†	90.000	0.071	7175.00	10888.61	10883.20	346.37	40°03'36.163"N	104°39'14.373"W	0.00	
18217.00†	90.000	0.071	7175.00	10988.58	10983.20	346.49	40°03'37.151"N	104°39'14.372"W	0.00	
18317.00†	90.000	0.071	7175.00	11088.54	11083.20	346.62	40°03'38.139"N	104°39'14.370"W	0.00	
18417.00†	90.000	0.071	7175.00	11188.51	11183.20	346.74	40°03'39.127"N	104°39'14.369"W	0.00	
18517.00†	90.000	0.071	7175.00	11288.47	11283.20	346.86	40°03'40.115"N	104°39'14.367"W	0.00	
18617.00†	90.000	0.071	7175.00	11388.44	11383.20	346.99	40°03'41.104"N	104°39'14.365"W	0.00	
18717.00†	90.000	0.071	7175.00	11488.40	11483.20	347.11	40°03'42.092"N	104°39'14.364"W	0.00	
18817.00†	90.000	0.071	7175.00	11588.37	11583.20	347.23	40°03'43.080"N	104°39'14.362"W	0.00	
18917.00†	90.000	0.071	7175.00	11688.34	11683.20	347.36	40°03'44.068"N	104°39'14.361"W	0.00	
19017.00†	90.000	0.071	7175.00	11788.30	11783.20	347.48	40°03'45.057"N	104°39'14.359"W	0.00	
19117.00†	90.000	0.071	7175.00	11888.27	11883.20	347.61	40°03'46.045"N	104°39'14.357"W	0.00	
19217.00†	90.000	0.071	7175.00	11988.23	11983.20	347.73	40°03'47.033"N	104°39'14.356"W	0.00	
19317.00†	90.000	0.071	7175.00	12088.20	12083.20	347.85	40°03'48.021"N	104°39'14.354"W	0.00	
19417.00†	90.000	0.071	7175.00	12188.16	12183.20	347.98	40°03'49.009"N	104°39'14.352"W	0.00	
19517.00†	90.000	0.071	7175.00	12288.13	12283.20	348.10	40°03'49.998"N	104°39'14.351"W	0.00	
19617.00†	90.000	0.071	7175.00	12388.09	12383.20	348.23	40°03'50.986"N	104°39'14.349"W	0.00	
19717.00†	90.000	0.071	7175.00	12488.06	12483.20	348.35	40°03'51.974"N	104°39'14.348"W	0.00	
19817.00†	90.000	0.071	7175.00	12588.02	12583.20	348.47	40°03'52.962"N	104°39'14.346"W	0.00	
19817.35	90.000	0.071	7175.00 <sup>2</sup>	12588.37	12583.54	348.47	40°03'52.966"N	104°39'14.346"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: WILLOW 22-16-1L PWB Ref Wellpath: WILLOW 22-16-1L 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	1498.39	0.00	0.00	-32.44	33.89

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L 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		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.10-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.15-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
SEC.22-T01N-R65W		0.00	0.00	-173.62	3236383.46	1254962.14	40°01'48.612"N	104°39'21.060"W	polygon
2) WILLOW 22-16-1L BHL ON PLAT (2177'FSL & 1555'FWL,SEC.10)	19817.35	7175.00	12583.54	348.47	3236785.64	1267549.61	40°03'52.966"N	104°39'14.346"W	point
1) WILLOW 22-16-1L LP ON PLAT (470'FSL & 1555'FWL,SEC.22)	7517.94	7175.00	284.15	333.24	3236887.58	1255251.09	40°01'51.420"N	104°39'14.544"W	point

## SURVEY PROGRAM - Ref Wellbore: WILLOW 22-16-1L PWB Ref Wellpath: WILLOW 22-16-1L 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 22-16-1L PWB
1500.00	19817.35	BHI AutoTrak Curve (Axial Corr, Short spacing)		WILLOW 22-16-1L PWB

# Planned Wellpath Report

WILLOW 22-16-1L PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CONFLUENCE RESOURCES	Slot	SLOT#08 WILLOW 22-16-1L (185'FSL & 1221'FWL,SEC.22)
Area	COLORADO	Well	WILLOW 22-16-1L
Field	WELD COUNTY (NAD83, TRUE NORTH)	Wellbore	WILLOW 22-16-1L PWB
Facility	SEC.22-T01N-R65W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	133.751	17.00	Tie On
750.00	0.000	133.751	750.00	End of Tangent
958.25	4.165	133.751	958.07	End of Build
6589.19	4.165	133.751	6574.14	End of Tangent
7517.94	90.000	0.071	7175.00	End of 3D Arc
19817.35	90.000	0.071	7175.00	End of Tangent