



# Edge Energy, LLC

Well Name:

SLB 17-18-9H

Project Name:

Sec. 16-T8N-R67W, Weld County CO

Pad Name:

SLB 16

## ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
1896.12	27.92	294.96	1841.51	140.71	-302.37	311.04	333.51	Hold 27.92 Inc, 294.96 Az
7326.70	27.92	294.96	6639.88	1213.65	-2607.96	2682.66	2876.53	KOP 8/100
8149.94	90.46	267.65	7046.00	1286.28	-3268.33	3346.40	3545.43	EP 90.46 Inc, 267.65 Az
18108.13	90.46	267.65	6966.00	877.93	-13217.83	13246.95	13503.31	TD at 18108.13

## Geodetic Datum:

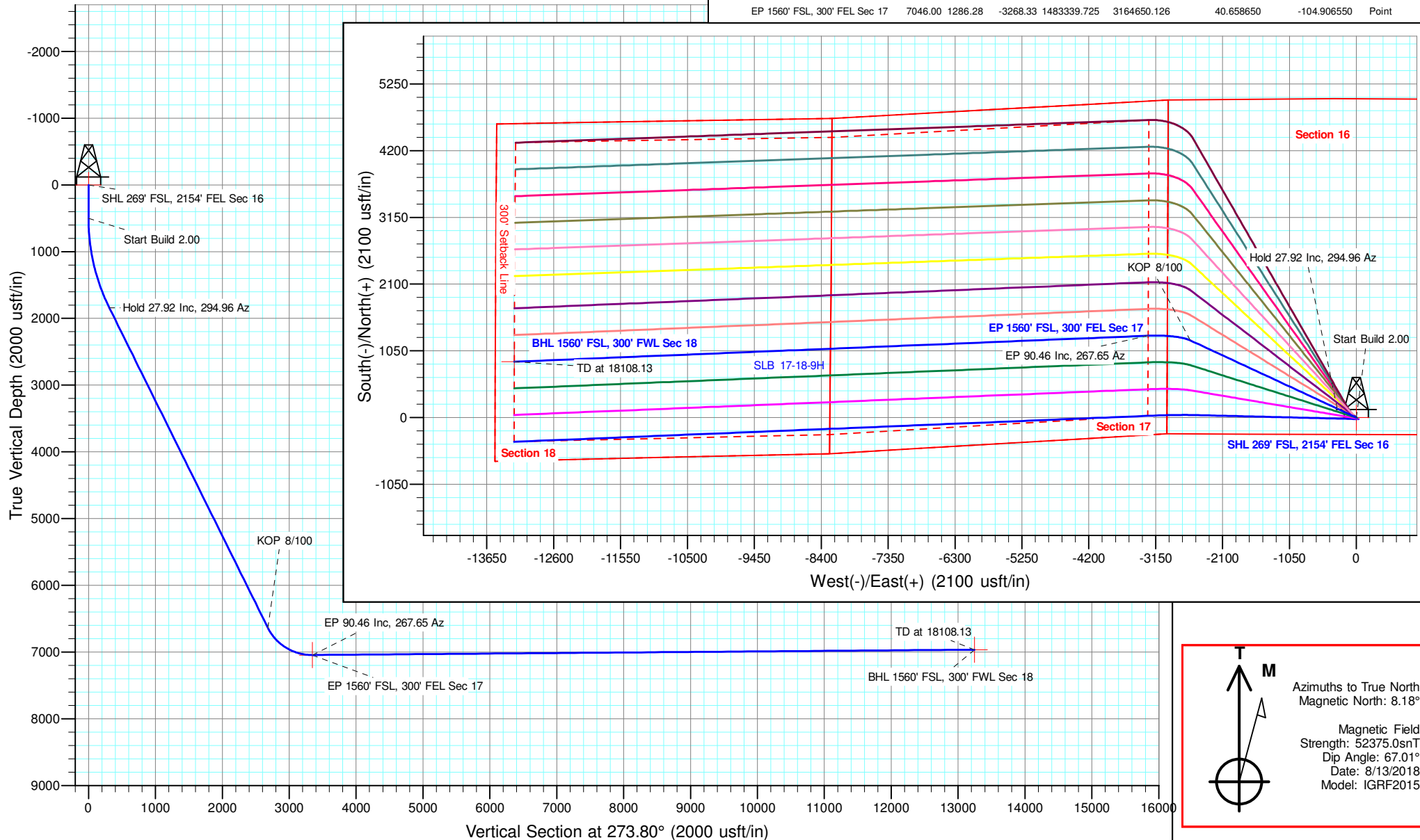
North American Datum 1983  
US State Plane 1983 Colorado Northern Zone

## Elevation:

Ground Elevation: 5251.00  
KB Elevation: WELL @ 5266.00usft (Original Well Elev)

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL 269' FSL, 2154' FEL Sec 16	0.00	0.00	0.00	1482075.784	3167927.163	40.655120	-104.894770	Point
BHL 1560' FSL, 300' FWL Sec 18	6966.00	877.93	-13217.83	1482863.478	3154703.648	40.657520	-104.942410	Point
EP 1560' FSL, 300' FEL Sec 17	7046.00	1286.28	-3268.33	1483339.725	3164650.126	40.658650	-104.906550	Point





## **Edge Energy, LLC**

**Sec. 16-T8N-R67W, Weld County CO**

**SLB 16**

**SLB 17-18-9H**

**Wellbore #1**

**Plan: Design #1 11Aug18 mnh**

## **Standard Planning Report - Geographic**

**14 August, 2018**

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Company:</b>	Edge Energy, LLC	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site:</b>	SLB 16	<b>North Reference:</b>	True
<b>Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 11Aug18 mnH		

<b>Project</b>	Sec. 16-T8N-R67W, Weld County CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site	SLB 16				
Site Position:		Northing:	1,482,180.969 usft	Latitude:	40.655410
From:	Lat/Long	Easting:	3,167,857.078 usft	Longitude:	-104.895020
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	SLB 17-18-9H					
Well Position	+N/-S	0.00 usft	Northing:	1,482,075.784 usft	Latitude:	40.655120
	+E/-W	0.00 usft	Easting:	3,167,927.162 usft	Longitude:	-104.894770
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,251.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	8/13/2018	8.18	67.01	52,375.04823153

<b>Design</b>	Design #1 11Aug18 mnH			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	273.80

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/14/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	18,108.13 Design #1 11Aug18 mnH (Wellbo	MWD	
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,896.12	27.92	294.96	1,841.51	140.71	-302.37	2.00	2.00	0.00	294.96	
7,326.70	27.92	294.96	6,639.88	1,213.65	-2,607.96	0.00	0.00	0.00	0.00	
8,149.94	90.46	267.65	7,046.00	1,286.28	-3,268.33	8.00	7.60	-3.32	-30.18	EP 1560' FSL, 300' FI
18,108.13	90.46	267.65	6,966.00	877.93	-13,217.83	0.00	0.00	0.00	0.00	BHL 1560' FSL, 300' I



Microsoft  
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SLB 17-18-9H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5266.00usft (Original Well Elev)
Project:	Sec. 16-T8N-R67W, Weld County CO	MD Reference:	WELL @ 5266.00usft (Original Well Elev)
Site:	SLB 16	North Reference:	True
Well:	SLB 17-18-9H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 11Aug18 mnH		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	1,482,075.784	3,167,927.162	40.655120	-104.894770	
500.00	0.00	0.00	500.00	0.00	0.00	1,482,075.784	3,167,927.162	40.655120	-104.894770	
Start Build 2.00										
600.00	2.00	294.96	599.98	0.74	-1.58	1,482,076.509	3,167,925.575	40.655122	-104.894776	
700.00	4.00	294.96	699.84	2.94	-6.33	1,482,078.685	3,167,920.815	40.655128	-104.894793	
800.00	6.00	294.96	799.45	6.62	-14.23	1,482,082.308	3,167,912.889	40.655138	-104.894822	
900.00	8.00	294.96	898.70	11.76	-25.28	1,482,087.374	3,167,901.806	40.655152	-104.894861	
1,000.00	10.00	294.96	997.47	18.36	-39.46	1,482,093.877	3,167,887.579	40.655170	-104.894912	
1,100.00	12.00	294.96	1,095.62	26.41	-56.76	1,482,101.809	3,167,870.226	40.655193	-104.894975	
1,200.00	14.00	294.96	1,193.06	35.90	-77.15	1,482,111.160	3,167,849.768	40.655219	-104.895048	
1,300.00	16.00	294.96	1,289.64	46.82	-100.62	1,482,121.919	3,167,826.229	40.655249	-104.895133	
1,400.00	18.00	294.96	1,385.27	59.16	-127.12	1,482,134.073	3,167,799.640	40.655282	-104.895228	
1,500.00	20.00	294.96	1,479.82	72.89	-156.64	1,482,147.607	3,167,770.031	40.655320	-104.895335	
1,600.00	22.00	294.96	1,573.17	88.01	-189.13	1,482,162.504	3,167,737.439	40.655362	-104.895452	
1,700.00	24.00	294.96	1,665.21	104.50	-224.55	1,482,178.747	3,167,701.905	40.655407	-104.895580	
1,800.00	26.00	294.96	1,755.84	122.33	-262.86	1,482,196.315	3,167,663.470	40.655456	-104.895718	
1,896.12	27.92	294.96	1,841.51	140.71	-302.37	1,482,214.431	3,167,623.835	40.655506	-104.895860	
Hold 27.92 Inc, 294.96 Az										
1,900.00	27.92	294.96	1,844.94	141.48	-304.02	1,482,215.186	3,167,622.184	40.655508	-104.895866	
2,000.00	27.92	294.96	1,933.30	161.24	-346.48	1,482,234.653	3,167,579.594	40.655563	-104.896019	
2,100.00	27.92	294.96	2,021.65	181.00	-388.93	1,482,254.120	3,167,537.005	40.655617	-104.896172	
2,200.00	27.92	294.96	2,110.01	200.75	-431.39	1,482,273.587	3,167,494.416	40.655671	-104.896325	
2,300.00	27.92	294.96	2,198.37	220.51	-473.84	1,482,293.055	3,167,451.826	40.655725	-104.896478	
2,400.00	27.92	294.96	2,286.73	240.27	-516.30	1,482,312.522	3,167,409.237	40.655780	-104.896631	
2,500.00	27.92	294.96	2,375.09	260.02	-558.75	1,482,331.989	3,167,366.647	40.655834	-104.896784	
2,600.00	27.92	294.96	2,463.45	279.78	-601.21	1,482,351.456	3,167,324.058	40.655888	-104.896937	
2,700.00	27.92	294.96	2,551.80	299.54	-643.66	1,482,370.923	3,167,281.468	40.655942	-104.897090	
2,800.00	27.92	294.96	2,640.16	319.30	-686.12	1,482,390.390	3,167,238.879	40.655996	-104.897243	
2,900.00	27.92	294.96	2,728.52	339.05	-728.58	1,482,409.857	3,167,196.290	40.656051	-104.897396	
3,000.00	27.92	294.96	2,816.88	358.81	-771.03	1,482,429.325	3,167,153.700	40.656105	-104.897549	
3,100.00	27.92	294.96	2,905.24	378.57	-813.49	1,482,448.792	3,167,111.111	40.656159	-104.897702	
3,200.00	27.92	294.96	2,993.59	398.33	-855.94	1,482,468.259	3,167,068.521	40.656213	-104.897855	
3,300.00	27.92	294.96	3,081.95	418.08	-898.40	1,482,487.726	3,167,025.932	40.656268	-104.898008	
3,400.00	27.92	294.96	3,170.31	437.84	-940.85	1,482,507.193	3,166,983.342	40.656322	-104.898161	
3,500.00	27.92	294.96	3,258.67	457.60	-983.31	1,482,526.660	3,166,940.753	40.656376	-104.898314	
3,600.00	27.92	294.96	3,347.03	477.36	-1,025.76	1,482,546.127	3,166,898.164	40.656430	-104.898467	
3,700.00	27.92	294.96	3,435.39	497.11	-1,068.22	1,482,565.595	3,166,855.574	40.656484	-104.898620	
3,800.00	27.92	294.96	3,523.74	516.87	-1,110.68	1,482,585.062	3,166,812.985	40.656539	-104.898773	
3,900.00	27.92	294.96	3,612.10	536.63	-1,153.13	1,482,604.529	3,166,770.395	40.656593	-104.898926	
4,000.00	27.92	294.96	3,700.46	556.39	-1,195.59	1,482,623.996	3,166,727.806	40.656647	-104.899079	
4,100.00	27.92	294.96	3,788.82	576.14	-1,238.04	1,482,643.463	3,166,685.217	40.656701	-104.899232	
4,200.00	27.92	294.96	3,877.18	595.90	-1,280.50	1,482,662.930	3,166,642.627	40.656756	-104.899385	
4,300.00	27.92	294.96	3,965.54	615.66	-1,322.95	1,482,682.397	3,166,600.038	40.656810	-104.899538	
4,400.00	27.92	294.96	4,053.89	635.41	-1,365.41	1,482,701.864	3,166,557.448	40.656864	-104.899691	
4,500.00	27.92	294.96	4,142.25	655.17	-1,407.86	1,482,721.332	3,166,514.859	40.656918	-104.899844	
4,600.00	27.92	294.96	4,230.61	674.93	-1,450.32	1,482,740.799	3,166,472.269	40.656973	-104.899997	
4,700.00	27.92	294.96	4,318.97	694.69	-1,492.78	1,482,760.266	3,166,429.680	40.657027	-104.900151	
4,800.00	27.92	294.96	4,407.33	714.44	-1,535.23	1,482,779.733	3,166,387.091	40.657081	-104.900304	
4,900.00	27.92	294.96	4,495.68	734.20	-1,577.69	1,482,799.200	3,166,344.501	40.657135	-104.900457	
5,000.00	27.92	294.96	4,584.04	753.96	-1,620.14	1,482,818.667	3,166,301.912	40.657189	-104.900610	
5,100.00	27.92	294.96	4,672.40	773.72	-1,662.60	1,482,838.134	3,166,259.322	40.657244	-104.900763	
5,200.00	27.92	294.96	4,760.76	793.47	-1,705.05	1,482,857.602	3,166,216.733	40.657298	-104.900916	
5,300.00	27.92	294.96	4,849.12	813.23	-1,747.51	1,482,877.069	3,166,174.144	40.657352	-104.901069	
5,400.00	27.92	294.96	4,937.48	832.99	-1,789.96	1,482,896.536	3,166,131.554	40.657406	-104.901222	



**Microsoft**  
Planning Report - Geographic

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Company:</b>	Edge Energy, LLC	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site:</b>	SLB 16	<b>North Reference:</b>	True
<b>Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 11Aug18 mnH		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,500.00	27.92	294.96	5,025.83	852.75	-1,832.42	1,482,916.003	3,166,088.965	40.657461	-104.901375
5,600.00	27.92	294.96	5,114.19	872.50	-1,874.88	1,482,935.470	3,166,046.375	40.657515	-104.901528
5,700.00	27.92	294.96	5,202.55	892.26	-1,917.33	1,482,954.937	3,166,003.786	40.657569	-104.901681
5,800.00	27.92	294.96	5,290.91	912.02	-1,959.79	1,482,974.404	3,165,961.196	40.657623	-104.901834
5,900.00	27.92	294.96	5,379.27	931.78	-2,002.24	1,482,993.872	3,165,918.607	40.657677	-104.901987
6,000.00	27.92	294.96	5,467.62	951.53	-2,044.70	1,483,013.339	3,165,876.018	40.657732	-104.902140
6,100.00	27.92	294.96	5,555.98	971.29	-2,087.15	1,483,032.806	3,165,833.428	40.657786	-104.902293
6,200.00	27.92	294.96	5,644.34	991.05	-2,129.61	1,483,052.273	3,165,790.839	40.657840	-104.902446
6,300.00	27.92	294.96	5,732.70	1,010.80	-2,172.06	1,483,071.740	3,165,748.249	40.657894	-104.902599
6,400.00	27.92	294.96	5,821.06	1,030.56	-2,214.52	1,483,091.207	3,165,705.660	40.657949	-104.902752
6,500.00	27.92	294.96	5,909.42	1,050.32	-2,256.98	1,483,110.674	3,165,663.071	40.658003	-104.902905
6,600.00	27.92	294.96	5,997.77	1,070.08	-2,299.43	1,483,130.142	3,165,620.481	40.658057	-104.903058
6,700.00	27.92	294.96	6,086.13	1,089.83	-2,341.89	1,483,149.609	3,165,577.892	40.658111	-104.903211
6,800.00	27.92	294.96	6,174.49	1,109.59	-2,384.34	1,483,169.076	3,165,535.302	40.658165	-104.903364
6,900.00	27.92	294.96	6,262.85	1,129.35	-2,426.80	1,483,188.543	3,165,492.713	40.658220	-104.903517
7,000.00	27.92	294.96	6,351.21	1,149.11	-2,469.25	1,483,208.010	3,165,450.123	40.658274	-104.903670
7,100.00	27.92	294.96	6,439.56	1,168.86	-2,511.71	1,483,227.477	3,165,407.534	40.658328	-104.903823
7,200.00	27.92	294.96	6,527.92	1,188.62	-2,554.16	1,483,246.944	3,165,364.945	40.658382	-104.903976
7,300.00	27.92	294.96	6,616.28	1,208.38	-2,596.62	1,483,266.412	3,165,322.355	40.658436	-104.904129
7,326.70	27.92	294.96	6,639.88	1,213.65	-2,607.96	1,483,271.610	3,165,310.982	40.658451	-104.904170
KOP 8/100									
7,400.00	33.11	289.56	6,703.01	1,227.61	-2,642.41	1,483,285.330	3,165,276.434	40.658489	-104.904294
7,500.00	40.46	284.26	6,783.06	1,244.78	-2,699.69	1,483,302.104	3,165,219.040	40.658536	-104.904501
7,600.00	47.99	280.36	6,854.68	1,259.47	-2,767.79	1,483,316.337	3,165,150.839	40.658577	-104.904746
7,700.00	55.62	277.30	6,916.48	1,271.42	-2,845.39	1,483,327.752	3,165,073.158	40.658609	-104.905026
7,800.00	63.31	274.75	6,967.25	1,280.38	-2,930.98	1,483,336.129	3,164,987.508	40.658634	-104.905334
7,900.00	71.05	272.53	7,006.01	1,286.18	-3,022.90	1,483,341.302	3,164,895.557	40.658650	-104.905666
8,000.00	78.81	270.51	7,032.00	1,288.71	-3,119.34	1,483,343.172	3,164,799.095	40.658657	-104.906013
8,100.00	86.58	268.59	7,044.71	1,287.92	-3,218.45	1,483,341.703	3,164,699.999	40.658655	-104.906370
8,149.94	90.46	267.65	7,046.00	1,286.28	-3,268.33	1,483,339.725	3,164,650.125	40.658650	-104.906550
EP 90.46 Inc, 267.65 Az									
8,200.00	90.46	267.65	7,045.60	1,284.23	-3,318.35	1,483,337.331	3,164,600.124	40.658644	-104.906731
8,300.00	90.46	267.65	7,044.79	1,280.12	-3,418.26	1,483,332.548	3,164,500.242	40.658633	-104.907091
8,400.00	90.46	267.65	7,043.99	1,276.02	-3,518.18	1,483,327.766	3,164,400.359	40.658622	-104.907451
8,500.00	90.46	267.65	7,043.19	1,271.92	-3,618.09	1,483,322.983	3,164,300.477	40.658611	-104.907811
8,600.00	90.46	267.65	7,042.38	1,267.82	-3,718.00	1,483,318.201	3,164,200.595	40.658599	-104.908171
8,700.00	90.46	267.65	7,041.58	1,263.72	-3,817.91	1,483,313.419	3,164,100.712	40.658588	-104.908531
8,800.00	90.46	267.65	7,040.78	1,259.62	-3,917.83	1,483,308.636	3,164,000.830	40.658577	-104.908891
8,900.00	90.46	267.65	7,039.97	1,255.52	-4,017.74	1,483,303.854	3,163,900.948	40.658565	-104.909251
9,000.00	90.46	267.65	7,039.17	1,251.42	-4,117.65	1,483,299.071	3,163,801.065	40.658554	-104.909611
9,100.00	90.46	267.65	7,038.37	1,247.32	-4,217.56	1,483,294.289	3,163,701.183	40.658543	-104.909972
9,200.00	90.46	267.65	7,037.56	1,243.22	-4,317.48	1,483,289.506	3,163,601.301	40.658531	-104.910332
9,300.00	90.46	267.65	7,036.76	1,239.12	-4,417.39	1,483,284.724	3,163,501.418	40.658520	-104.910692
9,400.00	90.46	267.65	7,035.96	1,235.02	-4,517.30	1,483,279.941	3,163,401.536	40.658509	-104.911052
9,500.00	90.46	267.65	7,035.15	1,230.92	-4,617.22	1,483,275.159	3,163,301.654	40.658498	-104.911412
9,600.00	90.46	267.65	7,034.35	1,226.82	-4,717.13	1,483,270.376	3,163,201.771	40.658486	-104.911772
9,700.00	90.46	267.65	7,033.55	1,222.72	-4,817.04	1,483,265.594	3,163,101.889	40.658475	-104.912132
9,800.00	90.46	267.65	7,032.74	1,218.62	-4,916.95	1,483,260.811	3,163,002.007	40.658464	-104.912492
9,900.00	90.46	267.65	7,031.94	1,214.51	-5,016.87	1,483,256.029	3,162,902.124	40.658452	-104.912852
10,000.00	90.46	267.65	7,031.14	1,210.41	-5,116.78	1,483,251.246	3,162,802.242	40.658441	-104.913213
10,100.00	90.46	267.65	7,030.33	1,206.31	-5,216.69	1,483,246.464	3,162,702.360	40.658430	-104.913573
10,200.00	90.46	267.65	7,029.53	1,202.21	-5,316.60	1,483,241.682	3,162,602.477	40.658418	-104.913933
10,300.00	90.46	267.65	7,028.73	1,198.11	-5,416.52	1,483,236.899	3,162,502.595	40.658407	-104.914293
10,400.00	90.46	267.65	7,027.92	1,194.01	-5,516.43	1,483,232.117	3,162,402.713	40.658396	-104.914653



Microsoft  
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SLB 17-18-9H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5266.00usft (Original Well Elev)
Project:	Sec. 16-T8N-R67W, Weld County CO	MD Reference:	WELL @ 5266.00usft (Original Well Elev)
Site:	SLB 16	North Reference:	True
Well:	SLB 17-18-9H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 11Aug18 mnH		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
10,500.00	90.46	267.65	7,027.12	1,189.91	-5,616.34	1,483,227.334	3,162,302.830	40.658384	-104.915013	
10,600.00	90.46	267.65	7,026.32	1,185.81	-5,716.25	1,483,222.552	3,162,202.948	40.658373	-104.915373	
10,700.00	90.46	267.65	7,025.51	1,181.71	-5,816.17	1,483,217.769	3,162,103.066	40.658362	-104.915733	
10,800.00	90.46	267.65	7,024.71	1,177.61	-5,916.08	1,483,212.987	3,162,003.183	40.658350	-104.916093	
10,900.00	90.46	267.65	7,023.91	1,173.51	-6,015.99	1,483,208.204	3,161,903.301	40.658339	-104.916454	
11,000.00	90.46	267.65	7,023.10	1,169.41	-6,115.91	1,483,203.422	3,161,803.418	40.658328	-104.916814	
11,100.00	90.46	267.65	7,022.30	1,165.31	-6,215.82	1,483,198.639	3,161,703.536	40.658316	-104.917174	
11,200.00	90.46	267.65	7,021.50	1,161.21	-6,315.73	1,483,193.857	3,161,603.654	40.658305	-104.917534	
11,300.00	90.46	267.65	7,020.69	1,157.11	-6,415.64	1,483,189.074	3,161,503.771	40.658294	-104.917894	
11,400.00	90.46	267.65	7,019.89	1,153.01	-6,515.56	1,483,184.292	3,161,403.889	40.658283	-104.918254	
11,500.00	90.46	267.65	7,019.09	1,148.90	-6,615.47	1,483,179.509	3,161,304.007	40.658271	-104.918614	
11,600.00	90.46	267.65	7,018.28	1,144.80	-6,715.38	1,483,174.727	3,161,204.124	40.658260	-104.918974	
11,700.00	90.46	267.65	7,017.48	1,140.70	-6,815.29	1,483,169.944	3,161,104.242	40.658249	-104.919334	
11,800.00	90.46	267.65	7,016.68	1,136.60	-6,915.21	1,483,165.162	3,161,004.360	40.658237	-104.919694	
11,900.00	90.46	267.65	7,015.87	1,132.50	-7,015.12	1,483,160.380	3,160,904.477	40.658226	-104.920055	
12,000.00	90.46	267.65	7,015.07	1,128.40	-7,115.03	1,483,155.597	3,160,804.595	40.658215	-104.920415	
12,100.00	90.46	267.65	7,014.27	1,124.30	-7,214.94	1,483,150.815	3,160,704.713	40.658203	-104.920775	
12,200.00	90.46	267.65	7,013.46	1,120.20	-7,314.86	1,483,146.032	3,160,604.830	40.658192	-104.921135	
12,300.00	90.46	267.65	7,012.66	1,116.10	-7,414.77	1,483,141.250	3,160,504.948	40.658181	-104.921495	
12,400.00	90.46	267.65	7,011.86	1,112.00	-7,514.68	1,483,136.467	3,160,405.066	40.658169	-104.921855	
12,500.00	90.46	267.65	7,011.05	1,107.90	-7,614.60	1,483,131.685	3,160,305.183	40.658158	-104.922215	
12,600.00	90.46	267.65	7,010.25	1,103.80	-7,714.51	1,483,126.902	3,160,205.301	40.658146	-104.922575	
12,700.00	90.46	267.65	7,009.45	1,099.70	-7,814.42	1,483,122.120	3,160,105.419	40.658135	-104.922935	
12,800.00	90.46	267.65	7,008.64	1,095.60	-7,914.33	1,483,117.337	3,160,005.536	40.658124	-104.923296	
12,900.00	90.46	267.65	7,007.84	1,091.50	-8,014.25	1,483,112.555	3,159,905.654	40.658112	-104.923656	
13,000.00	90.46	267.65	7,007.04	1,087.39	-8,114.16	1,483,107.772	3,159,805.772	40.658101	-104.924016	
13,100.00	90.46	267.65	7,006.23	1,083.29	-8,214.07	1,483,102.990	3,159,705.889	40.658090	-104.924376	
13,200.00	90.46	267.65	7,005.43	1,079.19	-8,313.98	1,483,098.207	3,159,606.007	40.658078	-104.924736	
13,300.00	90.46	267.65	7,004.63	1,075.09	-8,413.90	1,483,093.425	3,159,506.125	40.658067	-104.925096	
13,400.00	90.46	267.65	7,003.82	1,070.99	-8,513.81	1,483,088.643	3,159,406.242	40.658056	-104.925456	
13,500.00	90.46	267.65	7,003.02	1,066.89	-8,613.72	1,483,083.860	3,159,306.360	40.658044	-104.925816	
13,600.00	90.46	267.65	7,002.22	1,062.79	-8,713.63	1,483,079.078	3,159,206.478	40.658033	-104.926176	
13,700.00	90.46	267.65	7,001.41	1,058.69	-8,813.55	1,483,074.295	3,159,106.595	40.658022	-104.926536	
13,800.00	90.46	267.65	7,000.61	1,054.59	-8,913.46	1,483,069.513	3,159,006.713	40.658010	-104.926897	
13,900.00	90.46	267.65	6,999.81	1,050.49	-9,013.37	1,483,064.730	3,158,906.831	40.657999	-104.927257	
14,000.00	90.46	267.65	6,999.00	1,046.39	-9,113.29	1,483,059.948	3,158,806.948	40.657988	-104.927617	
14,100.00	90.46	267.65	6,998.20	1,042.29	-9,213.20	1,483,055.165	3,158,707.066	40.657976	-104.927977	
14,200.00	90.46	267.65	6,997.40	1,038.19	-9,313.11	1,483,050.383	3,158,607.184	40.657965	-104.928337	
14,300.00	90.46	267.65	6,996.59	1,034.09	-9,413.02	1,483,045.600	3,158,507.301	40.657954	-104.928697	
14,400.00	90.46	267.65	6,995.79	1,029.99	-9,512.94	1,483,040.818	3,158,407.419	40.657942	-104.929057	
14,500.00	90.46	267.65	6,994.99	1,025.89	-9,612.85	1,483,036.035	3,158,307.537	40.657931	-104.929417	
14,600.00	90.46	267.65	6,994.18	1,021.78	-9,712.76	1,483,031.253	3,158,207.654	40.657919	-104.929777	
14,700.00	90.46	267.65	6,993.38	1,017.68	-9,812.67	1,483,026.470	3,158,107.772	40.657908	-104.930138	
14,800.00	90.46	267.65	6,992.58	1,013.58	-9,912.59	1,483,021.688	3,158,007.890	40.657897	-104.930498	
14,900.00	90.46	267.65	6,991.77	1,009.48	-10,012.50	1,483,016.906	3,157,908.007	40.657885	-104.930858	
15,000.00	90.46	267.65	6,990.97	1,005.38	-10,112.41	1,483,012.123	3,157,808.125	40.657874	-104.931218	
15,100.00	90.46	267.65	6,990.17	1,001.28	-10,212.32	1,483,007.341	3,157,708.243	40.657863	-104.931578	
15,200.00	90.46	267.65	6,989.36	997.18	-10,312.24	1,483,002.558	3,157,608.360	40.657851	-104.931938	
15,300.00	90.46	267.65	6,988.56	993.08	-10,412.15	1,482,997.776	3,157,508.478	40.657840	-104.932298	
15,400.00	90.46	267.65	6,987.76	988.98	-10,512.06	1,482,992.993	3,157,408.596	40.657828	-104.932658	
15,500.00	90.46	267.65	6,986.95	984.88	-10,611.98	1,482,988.211	3,157,308.713	40.657817	-104.933018	
15,600.00	90.46	267.65	6,986.15	980.78	-10,711.89	1,482,983.428	3,157,208.831	40.657806	-104.933378	
15,700.00	90.46	267.65	6,985.35	976.68	-10,811.80	1,482,978.646	3,157,108.949	40.657794	-104.933739	
15,800.00	90.46	267.65	6,984.54	972.58	-10,911.71	1,482,973.863	3,157,009.066	40.657783	-104.934099	
15,900.00	90.46	267.65	6,983.74	968.48	-11,011.63	1,482,969.081	3,156,909.184	40.657772	-104.934459	

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Company:</b>	Edge Energy, LLC	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site:</b>	SLB 16	<b>North Reference:</b>	True
<b>Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 11Aug18 mnh		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,000.00	90.46	267.65	6,982.94	964.38	-11,111.54	1,482,964.298	3,156,809.302	40.657760	-104.934819
16,100.00	90.46	267.65	6,982.13	960.28	-11,211.45	1,482,959.516	3,156,709.419	40.657749	-104.935179
16,200.00	90.46	267.65	6,981.33	956.17	-11,311.36	1,482,954.733	3,156,609.537	40.657737	-104.935539
16,300.00	90.46	267.65	6,980.53	952.07	-11,411.28	1,482,949.951	3,156,509.655	40.657726	-104.935899
16,400.00	90.46	267.65	6,979.72	947.97	-11,511.19	1,482,945.169	3,156,409.772	40.657715	-104.936259
16,500.00	90.46	267.65	6,978.92	943.87	-11,611.10	1,482,940.386	3,156,309.890	40.657703	-104.936619
16,600.00	90.46	267.65	6,978.12	939.77	-11,711.01	1,482,935.604	3,156,210.007	40.657692	-104.936979
16,700.00	90.46	267.65	6,977.31	935.67	-11,810.93	1,482,930.821	3,156,110.125	40.657681	-104.937340
16,800.00	90.46	267.65	6,976.51	931.57	-11,910.84	1,482,926.039	3,156,010.243	40.657669	-104.937700
16,900.00	90.46	267.65	6,975.71	927.47	-12,010.75	1,482,921.256	3,155,910.360	40.657658	-104.938060
17,000.00	90.46	267.65	6,974.90	923.37	-12,110.66	1,482,916.474	3,155,810.478	40.657646	-104.938420
17,100.00	90.46	267.65	6,974.10	919.27	-12,210.58	1,482,911.691	3,155,710.596	40.657635	-104.938780
17,200.00	90.46	267.65	6,973.30	915.17	-12,310.49	1,482,906.909	3,155,610.713	40.657624	-104.939140
17,300.00	90.46	267.65	6,972.49	911.07	-12,410.40	1,482,902.126	3,155,510.831	40.657612	-104.939500
17,400.00	90.46	267.65	6,971.69	906.97	-12,510.32	1,482,897.344	3,155,410.949	40.657601	-104.939860
17,500.00	90.46	267.65	6,970.89	902.87	-12,610.23	1,482,892.561	3,155,311.066	40.657589	-104.940220
17,600.00	90.46	267.65	6,970.08	898.77	-12,710.14	1,482,887.779	3,155,211.184	40.657578	-104.940580
17,700.00	90.46	267.65	6,969.28	894.67	-12,810.05	1,482,882.996	3,155,111.302	40.657567	-104.940941
17,800.00	90.46	267.65	6,968.48	890.56	-12,909.97	1,482,878.214	3,155,011.419	40.657555	-104.941301
17,900.00	90.46	267.65	6,967.67	886.46	-13,009.88	1,482,873.431	3,154,911.537	40.657544	-104.941661
18,000.00	90.46	267.65	6,966.87	882.36	-13,109.79	1,482,868.649	3,154,811.655	40.657532	-104.942021
18,100.00	90.46	267.65	6,966.07	878.26	-13,209.70	1,482,863.867	3,154,711.772	40.657521	-104.942381
18,108.13	90.46	267.65	6,966.00	877.93	-13,217.83	1,482,863.478	3,154,703.649	40.657520	-104.942410
TD at 18108.13									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 269' FSL, 2154' FEI - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,482,075.784	3,167,927.162	40.655120	-104.894770
BHL 1560' FSL, 300' FW - plan hits target center - Point	0.00	0.00	6,966.00	877.93	-13,217.83	1,482,863.478	3,154,703.649	40.657520	-104.942410
EP 1560' FSL, 300' FEL - plan hits target center - Point	0.00	0.00	7,046.00	1,286.28	-3,268.33	1,483,339.725	3,164,650.125	40.658650	-104.906550

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
500.00	500.00	0.00	0.00	Start Build 2.00
1,896.12	1,841.51	140.71	-302.37	Hold 27.92 Inc, 294.96 Az
7,326.70	6,639.88	1,213.65	-2,607.96	KOP 8/100
8,149.94	7,046.00	1,286.28	-3,268.33	EP 90.46 Inc, 267.65 Az
18,108.13	6,966.00	877.93	-13,217.83	TD at 18108.13



## **Edge Energy, LLC**

**Sec. 16-T8N-R67W, Weld County CO**

**SLB 16**

**SLB 17-18-9H**

**Wellbore #1**

**Design #1 11Aug18 mnH**

# **Anticollision Summary Report**

**14 August, 2018**



Microsoft  
Anticollision Summary Report

<b>Company:</b>	Edge Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Reference Site:</b>	SLB 16	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 11Aug18 mnH	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Design #1 11Aug18 mnH		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 9,999.98 usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	8/14/2018		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	18,108.13	Design #1 11Aug18 mnH (Wellbore #1)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SLB 16						
SLB 16-9-10H - Wellbore #1 - Design #1 8Aug18 mnH	500.00	500.00	44.57	41.40	14.050	CC, ES
SLB 16-9-10H - Wellbore #1 - Design #1 8Aug18 mnH	700.00	697.95	52.53	47.97	11.521	SF
SLB 16-9-11H - Wellbore #1 - Design #1 8Aug18 mnH	500.00	500.00	52.03	48.85	16.399	CC, ES
SLB 16-9-11H - Wellbore #1 - Design #1 8Aug18 mnH	700.00	696.58	62.74	58.18	13.764	SF
SLB 16-9-12H - Wellbore #1 - Design #1 8Aug18 mnH	416.33	417.33	61.15	58.57	23.737	CC
SLB 16-9-12H - Wellbore #1 - Design #1 8Aug18 mnH	500.00	500.98	61.15	57.97	19.255	ES
SLB 16-9-12H - Wellbore #1 - Design #1 8Aug18 mnH	700.00	696.31	73.70	69.14	16.163	SF
SLB 16-9-1H - Wellbore #1 - Design #1 8Aug18 mnH	1,409.69	1,386.98	71.53	61.94	7.455	CC, ES
SLB 16-9-1H - Wellbore #1 - Design #1 8Aug18 mnH	7,750.00	9,352.02	286.49	207.39	3.622	SF
SLB 16-9-2H - Wellbore #1 - Design #1 8Aug18 mnH	1,352.88	1,336.40	58.75	49.54	6.384	CC, ES
SLB 16-9-2H - Wellbore #1 - Design #1 8Aug18 mnH	1,400.00	1,381.31	59.76	50.21	6.259	SF
SLB 16-9-3H - Wellbore #1 - Design #1 8Aug18 mnH	1,275.24	1,264.65	42.32	33.68	4.896	CC, ES
SLB 16-9-3H - Wellbore #1 - Design #1 8Aug18 mnH	1,300.00	1,288.41	42.70	33.88	4.841	SF
SLB 16-9-4H - Wellbore #1 - Design #1 8Aug18 mnH	1,207.86	1,201.72	27.64	19.46	3.379	CC, ES, SF
SLB 16-9-5H - Wellbore #1 - Design #1 8Aug18 mnH	1,119.26	1,117.11	11.71	4.15	1.548	CC, ES, SF
SLB 16-9-6H - Wellbore #1 - Design #1 8Aug18 mnH	1,020.83	1,021.88	9.53	2.67	1.389	Level 3, CC, ES, SF
SLB 16-9-7H - Wellbore #1 - Design #1 9Aug18 mnH	912.70	914.83	23.20	17.13	3.820	CC, ES, SF
SLB 16-9-8H - Wellbore #1 - Design #1 9Aug18 mnH	773.44	775.01	35.44	30.36	6.979	CC, ES
SLB 16-9-8H - Wellbore #1 - Design #1 9Aug18 mnH	800.00	801.28	35.75	30.49	6.789	SF
SLB 16-9-9H - Wellbore #1 - Design #1 9Aug18 mnH	579.46	579.76	41.16	37.43	11.042	CC
SLB 16-9-9H - Wellbore #1 - Design #1 9Aug18 mnH	600.00	600.34	41.18	37.31	10.638	ES
SLB 16-9-9H - Wellbore #1 - Design #1 9Aug18 mnH	700.00	699.99	42.70	38.14	9.362	SF
SLB 17-18-10H - Wellbore #1 - Design #1 10Aug18 mnH	500.00	500.00	15.67	12.50	4.939	CC
SLB 17-18-10H - Wellbore #1 - Design #1 10Aug18 mnH	18,108.13	18,118.42	430.42	-219.23	0.663	Level 1, ES, SF
SLB 17-18-11H - Wellbore #1 - Design #1 10Aug18 mnH	500.00	500.00	30.91	27.74	9.743	CC
SLB 17-18-11H - Wellbore #1 - Design #1 10Aug18 mnH	700.00	701.93	31.50	26.92	6.874	ES
SLB 17-18-11H - Wellbore #1 - Design #1 10Aug18 mnH	18,108.13	17,971.18	837.11	172.16	1.259	Level 3, SF
SLB 17-18-12H - Wellbore #1 - Design #1 10Aug18 mnH	500.00	499.00	44.17	41.00	13.932	CC
SLB 17-18-12H - Wellbore #1 - Design #1 10Aug18 mnH	600.00	600.28	44.46	40.58	11.461	ES
SLB 17-18-12H - Wellbore #1 - Design #1 10Aug18 mnH	18,108.13	18,032.15	1,263.43	600.55	1.906	SF
SLB 17-18-1H - Wellbore #1 - Design #1 11Aug18 mnH	892.95	876.47	120.38	114.49	20.423	CC
SLB 17-18-1H - Wellbore #1 - Design #1 11Aug18 mnH	1,000.00	978.84	120.78	114.14	18.186	ES
SLB 17-18-1H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	19,449.19	3,446.54	2,781.36	5.181	SF
SLB 17-18-2H - Wellbore #1 - Design #1 11Aug18 mnH	832.94	820.61	103.22	97.73	18.821	CC
SLB 17-18-2H - Wellbore #1 - Design #1 11Aug18 mnH	900.00	885.22	103.32	97.37	17.369	ES
SLB 17-18-2H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	19,285.61	3,029.21	2,364.52	4.557	SF
SLB 17-18-3H - Wellbore #1 - Design #1 11Aug18 mnH	802.76	792.90	87.90	82.62	16.658	CC

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Microsoft**  
Anticollision Summary Report

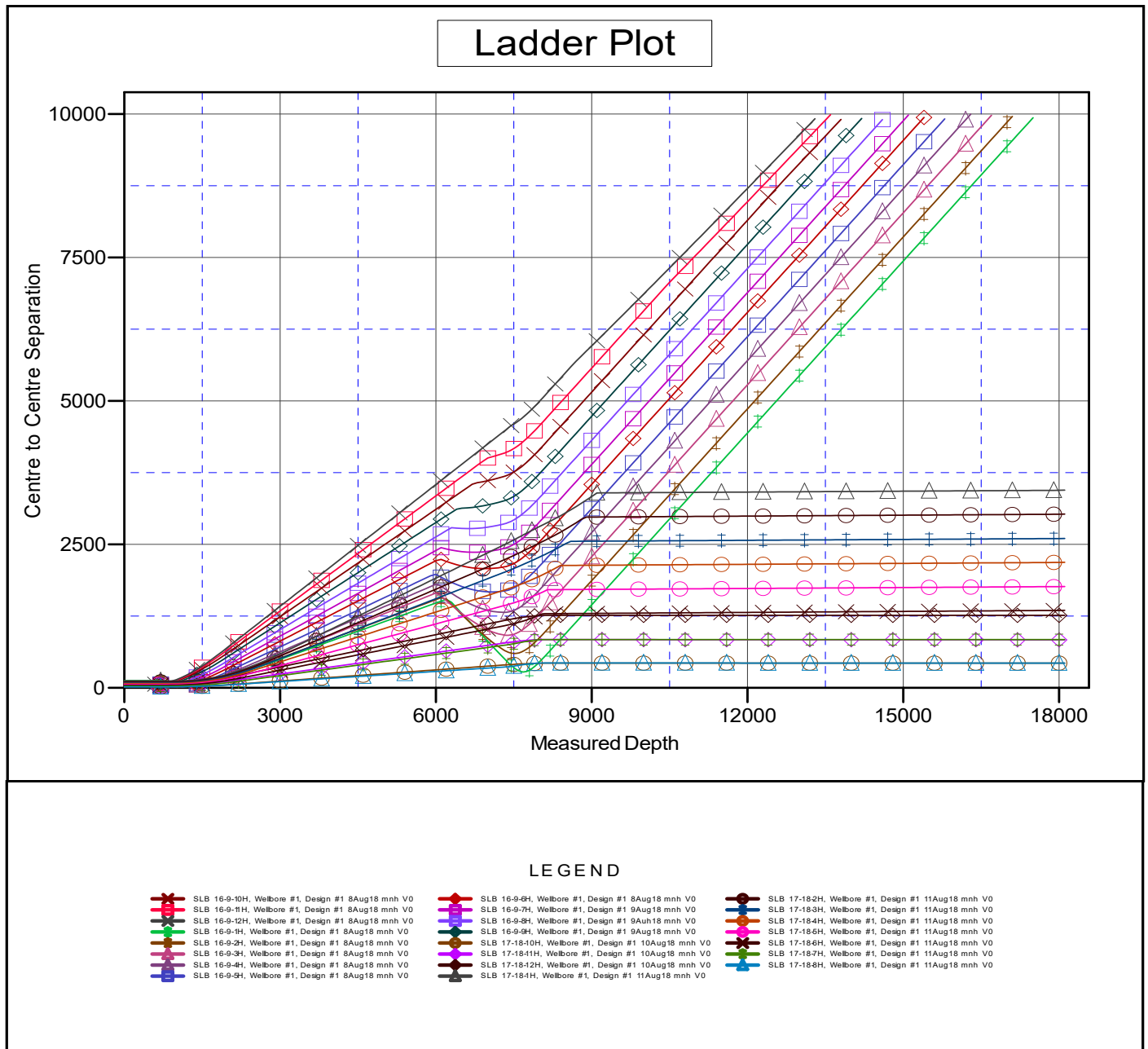
<b>Company:</b>	Edge Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Reference Site:</b>	SLB 16	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 11Aug18 mnH	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SLB 16						
SLB 17-18-3H - Wellbore #1 - Design #1 11Aug18 mnH	900.00	887.11	88.10	82.15	14.799	ES
SLB 17-18-3H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,994.56	2,604.94	1,939.03	3.912	SF
SLB 17-18-4H - Wellbore #1 - Design #1 11Aug18 mnH	691.01	686.20	75.03	70.53	16.650	CC
SLB 17-18-4H - Wellbore #1 - Design #1 11Aug18 mnH	900.00	889.66	75.64	69.68	12.689	ES
SLB 17-18-4H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,870.32	2,188.24	1,523.40	3.291	SF
SLB 17-18-5H - Wellbore #1 - Design #1 11Aug18 mnH	651.21	648.16	59.58	55.35	14.076	CC
SLB 17-18-5H - Wellbore #1 - Design #1 11Aug18 mnH	900.00	891.70	60.28	54.31	10.102	ES
SLB 17-18-5H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,610.96	1,766.98	1,100.57	2.651	SF
SLB 17-18-6H - Wellbore #1 - Design #1 11Aug18 mnH	500.00	500.00	44.25	41.08	13.948	CC
SLB 17-18-6H - Wellbore #1 - Design #1 11Aug18 mnH	800.00	795.37	44.89	39.62	8.514	ES
SLB 17-18-6H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,535.46	1,351.70	687.64	2.035	SF
SLB 17-18-7H - Wellbore #1 - Design #1 11Aug18 mnH	500.00	500.00	28.71	25.54	9.051	CC
SLB 17-18-7H - Wellbore #1 - Design #1 11Aug18 mnH	900.00	895.95	29.92	23.93	4.999	ES
SLB 17-18-7H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,309.43	841.59	174.98	1.262	Level 3, SF
SLB 17-18-8H - Wellbore #1 - Design #1 11Aug18 mnH	500.00	500.00	15.58	12.40	4.910	CC
SLB 17-18-8H - Wellbore #1 - Design #1 11Aug18 mnH	18,108.13	18,286.17	430.74	-217.14	0.665	Level 1, ES, SF

<b>Company:</b>	Edge Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Reference Site:</b>	SLB 16	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 11Aug18 mnH	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5266.00usft (Original Well E  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: SLB 17-18-9H  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.39°



<b>Company:</b>	Edge Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well SLB 17-18-9H
<b>Project:</b>	Sec. 16-T8N-R67W, Weld County CO	<b>TVD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Reference Site:</b>	SLB 16	<b>MD Reference:</b>	WELL @ 5266.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SLB 17-18-9H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 11Aug18 mnH	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5266.00usft (Original Well E

Offset Depths are relative to Offset Datum

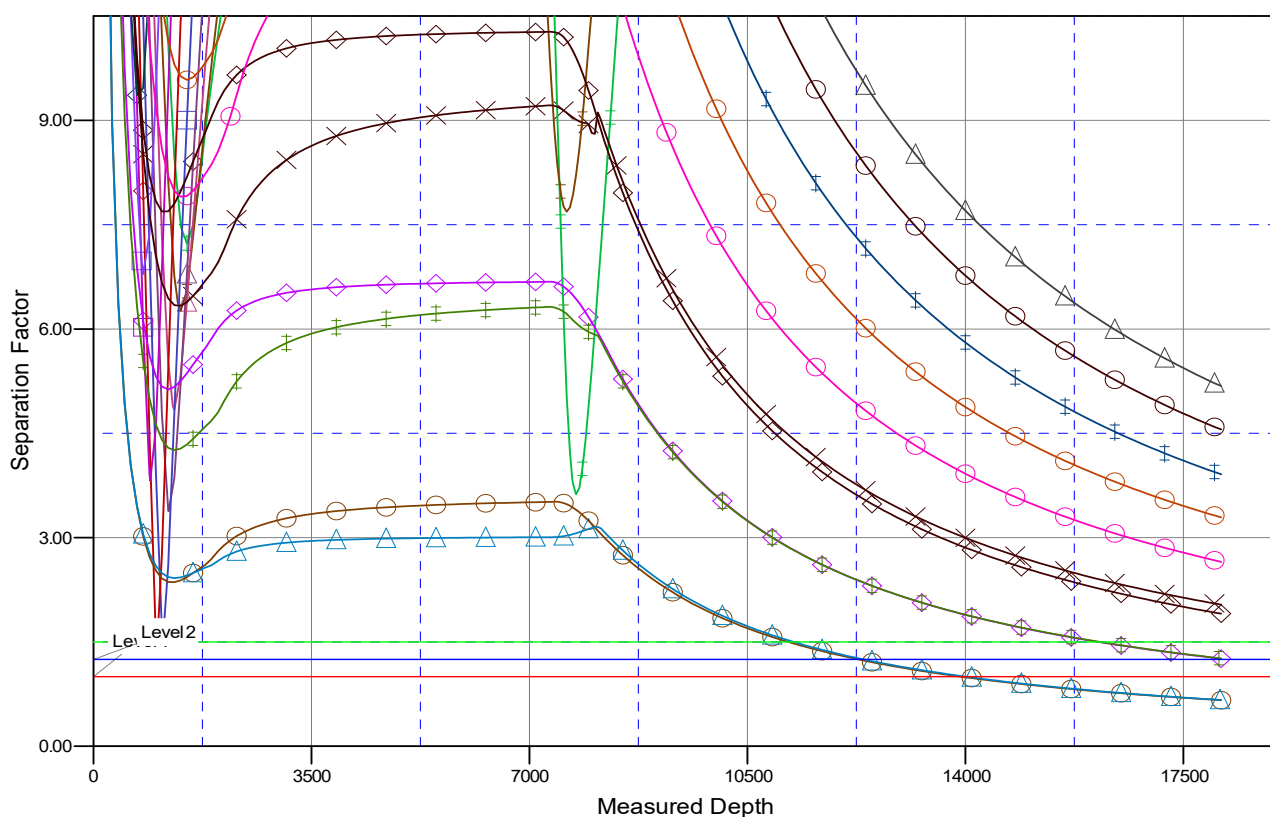
Central Meridian is -105.500000

Coordinates are relative to: SLB 17-18-9H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.39°

## Separation Factor Plot



### LEGEND

SLB 16-9-10H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 16-9-9H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 17-18-2H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-11H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 16-9-7H, Wellbore #1, Design #1 9Aug18 mnH V0	SLB 17-18-3H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-12H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 16-9-8H, Wellbore #1, Design #1 9Aug18 mnH V0	SLB 17-18-4H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-1H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 16-9-9H, Wellbore #1, Design #1 9Aug18 mnH V0	SLB 17-18-5H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-2H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 17-18-10H, Wellbore #1, Design #1 10Aug18 mnH V0	SLB 17-18-6H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-3H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 17-18-11H, Wellbore #1, Design #1 10Aug18 mnH V0	SLB 17-18-7H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-4H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 17-18-12H, Wellbore #1, Design #1 10Aug18 mnH V0	SLB 17-18-8H, Wellbore #1, Design #1 11Aug18 mnH V0
SLB 16-9-5H, Wellbore #1, Design #1 8Aug18 mnH V0	SLB 17-18-14H, Wellbore #1, Design #1 11Aug18 mnH V0	