



Edge Energy, LLC

Well Name:

GASPERICH 28-27-7H

Project Name:

Sec. 32-T8N-R65W Weld County CO

Pad Name:

Gasperich 32

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
1680.37	23.61	356.51	1647.25	239.31	-14.59	39.44	239.75	Hold 23.61 Inc, 356.51 Az
7154.24	23.61	356.51	6663.02	2427.35	-147.97	400.04	2431.86	KOP 8/100
8306.24	90.12	91.65	7343.00	2703.26	577.32	1168.73	3267.57	EP 90.12 Inc, 91.65 Az
18241.50	90.12	91.65	7323.00	2417.68	10508.46	10782.99	13202.82	TD at 18241.50

Geodetic Datum:

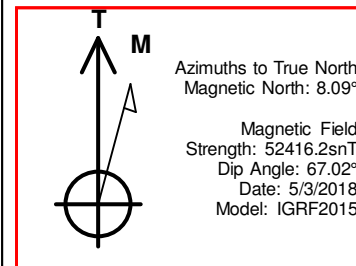
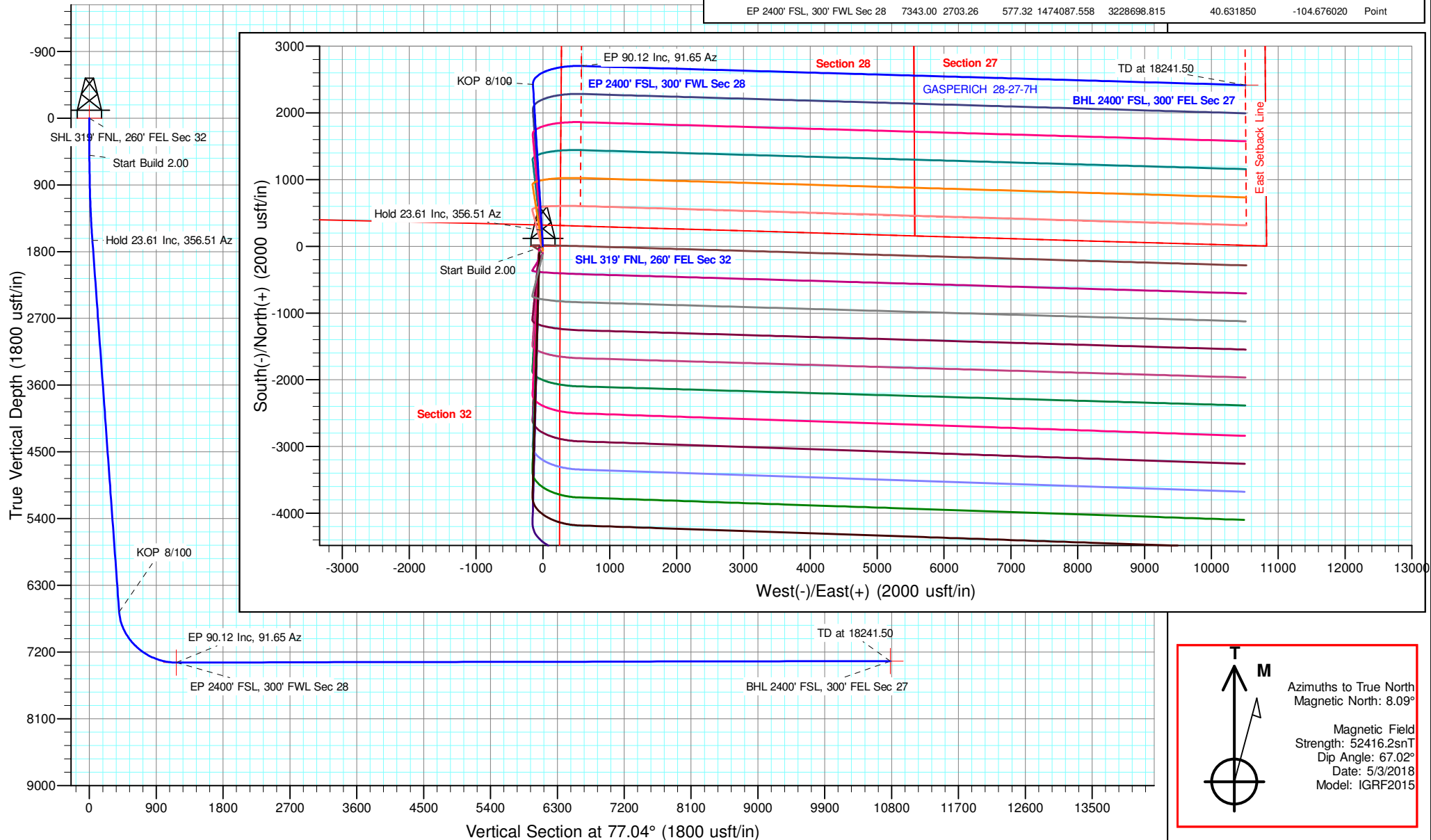
North American Datum 1983
US State Plane 1983 Colorado Northern Zone

Elevation:

Ground Elevation: 4948.00
KB Elevation: WELL @ 4963.00usft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL 319' FNL, 260' FEL Sec 32	0.00	0.00	0.00	1471379.069	3228146.574	40.624430	-104.678100	Point
BHL 2400' FSL, 300' FEL Sec 27	7323.00	2417.68	10508.46	1473894.043	3238632.177	40.631060	-104.640240	Point
EP 2400' FSL, 300' FWL Sec 28	7343.00	2703.26	577.32	1474087.558	3228698.815	40.631850	-104.676020	Point





Edge Energy, LLC

Sec. 32-T8N-R65W Weld County CO

Gasperich 32

GASPERICH 28-27-7H

Wellbore #1

Plan: Design #1 3May18 mnh

Standard Planning Report - Geographic

30 June, 2018



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 28-27-7H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 4963.00usft (Original Well Elev)
Project:	Sec. 32-T8N-R65W Weld County CO	MD Reference:	WELL @ 4963.00usft (Original Well Elev)
Site:	Gasperich 32	North Reference:	True
Well:	GASPERICH 28-27-7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 3May18 mnH		

Project	Sec. 32-T8N-R65W Weld County CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Gasperich 32				
Site Position:		Northing:	1,471,378.614 usft	Latitude:	40.624430	
From:	Lat/Long	Easting:	3,228,096.610 usft	Longitude:	-104.678280	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.53 °

Well	GASPERICH 28-27-7H					
Well Position	+N/-S	0.00 usft	Northing:	1,471,379.065 usft	Latitude:	40.624430
	+E/-W	0.00 usft	Easting:	3,228,146.574 usft	Longitude:	-104.678100
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,948.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/3/2018	8.09	67.02	52,416.21389943

Design	Design #1 3May18 mnH			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	77.04

Plan Survey Tool Program	Date	6/30/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,241.50 Design #1 3May18 mnH (Wellbor	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
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	
1,680.37	23.61	356.51	1,647.26	239.31	-14.59	2.00	2.00	0.00	356.51	
7,154.24	23.61	356.51	6,663.02	2,427.35	-147.97	0.00	0.00	0.00	0.00	
8,306.24	90.12	91.65	7,343.00	2,703.26	577.32	8.00	5.77	8.26	94.66	EP 2400' FSL, 300' F
18,241.50	90.12	91.65	7,323.00	2,417.68	10,508.46	0.00	0.00	0.00	0.00	BHL 2400' FSL, 300' I



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 28-27-7H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 4963.00usft (Original Well Elev)
Project:	Sec. 32-T8N-R65W Weld County CO	MD Reference:	WELL @ 4963.00usft (Original Well Elev)
Site:	Gasperich 32	North Reference:	True
Well:	GASPERICH 28-27-7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 3May18 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	1,471,379.065	3,228,146.574	40.624430	-104.678100
200.00	0.00	0.00	200.00	0.00	0.00	1,471,379.065	3,228,146.574	40.624430	-104.678100
400.00	0.00	0.00	400.00	0.00	0.00	1,471,379.065	3,228,146.574	40.624430	-104.678100
500.00	0.00	0.00	500.00	0.00	0.00	1,471,379.065	3,228,146.574	40.624430	-104.678100
Start Build 2.00									
600.00	2.00	356.51	599.98	1.74	-0.11	1,471,380.806	3,228,146.452	40.624435	-104.678101
800.00	6.00	356.51	799.45	15.66	-0.95	1,471,394.720	3,228,145.474	40.624473	-104.678104
1,000.00	10.00	356.51	997.47	43.44	-2.65	1,471,422.481	3,228,143.523	40.624549	-104.678110
1,200.00	14.00	356.51	1,193.06	84.94	-5.18	1,471,463.952	3,228,140.609	40.624663	-104.678119
1,400.00	18.00	356.51	1,385.27	139.95	-8.53	1,471,518.933	3,228,136.746	40.624814	-104.678131
1,600.00	22.00	356.51	1,573.17	208.22	-12.69	1,471,587.155	3,228,131.952	40.625002	-104.678146
1,680.37	23.61	356.51	1,647.26	239.31	-14.59	1,471,618.227	3,228,129.769	40.625087	-104.678153
Hold 23.61 Inc, 356.51 Az									
1,800.00	23.61	356.51	1,756.87	287.13	-17.50	1,471,666.017	3,228,126.411	40.625218	-104.678163
2,000.00	23.61	356.51	1,940.14	367.07	-22.38	1,471,745.913	3,228,120.797	40.625438	-104.678181
2,200.00	23.61	356.51	2,123.40	447.02	-27.25	1,471,825.810	3,228,115.183	40.625657	-104.678198
2,400.00	23.61	356.51	2,306.66	526.96	-32.12	1,471,905.706	3,228,109.568	40.625876	-104.678216
2,600.00	23.61	356.51	2,489.92	606.91	-37.00	1,471,985.603	3,228,103.954	40.626096	-104.678234
2,800.00	23.61	356.51	2,673.18	686.85	-41.87	1,472,065.499	3,228,098.340	40.626315	-104.678251
3,000.00	23.61	356.51	2,856.45	766.80	-46.74	1,472,145.396	3,228,092.726	40.626535	-104.678269
3,200.00	23.61	356.51	3,039.71	846.74	-51.62	1,472,225.292	3,228,087.112	40.626754	-104.678286
3,400.00	23.61	356.51	3,222.97	926.69	-56.49	1,472,305.189	3,228,081.498	40.626974	-104.678304
3,600.00	23.61	356.51	3,406.23	1,006.63	-61.36	1,472,385.085	3,228,075.884	40.627193	-104.678321
3,800.00	23.61	356.51	3,589.49	1,086.58	-66.24	1,472,464.982	3,228,070.270	40.627413	-104.678339
4,000.00	23.61	356.51	3,772.76	1,166.52	-71.11	1,472,544.878	3,228,064.655	40.627632	-104.678356
4,200.00	23.61	356.51	3,956.02	1,246.47	-75.98	1,472,624.775	3,228,059.041	40.627851	-104.678374
4,400.00	23.61	356.51	4,139.28	1,326.41	-80.86	1,472,704.671	3,228,053.427	40.628071	-104.678392
4,600.00	23.61	356.51	4,322.54	1,406.36	-85.73	1,472,784.568	3,228,047.813	40.628290	-104.678409
4,800.00	23.61	356.51	4,505.81	1,486.30	-90.60	1,472,864.464	3,228,042.199	40.628510	-104.678427
5,000.00	23.61	356.51	4,689.07	1,566.25	-95.48	1,472,944.361	3,228,036.585	40.628729	-104.678444
5,200.00	23.61	356.51	4,872.33	1,646.19	-100.35	1,473,024.257	3,228,030.971	40.628949	-104.678462
5,400.00	23.61	356.51	5,055.59	1,726.14	-105.22	1,473,104.154	3,228,025.357	40.629168	-104.678479
5,600.00	23.61	356.51	5,238.85	1,806.08	-110.10	1,473,184.050	3,228,019.742	40.629387	-104.678497
5,800.00	23.61	356.51	5,422.12	1,886.03	-114.97	1,473,263.947	3,228,014.128	40.629607	-104.678514
6,000.00	23.61	356.51	5,605.38	1,965.97	-119.84	1,473,343.843	3,228,008.514	40.629826	-104.678532
6,200.00	23.61	356.51	5,788.64	2,045.92	-124.72	1,473,423.740	3,228,002.900	40.630046	-104.678550
6,400.00	23.61	356.51	5,971.90	2,125.86	-129.59	1,473,503.636	3,227,997.286	40.630265	-104.678567
6,600.00	23.61	356.51	6,155.17	2,205.81	-134.46	1,473,583.533	3,227,991.672	40.630485	-104.678585
6,800.00	23.61	356.51	6,338.43	2,285.75	-139.34	1,473,663.429	3,227,986.058	40.630704	-104.678602
7,000.00	23.61	356.51	6,521.69	2,365.70	-144.21	1,473,743.326	3,227,980.444	40.630924	-104.678620
7,154.24	23.61	356.51	6,663.02	2,427.35	-147.97	1,473,804.941	3,227,976.114	40.631093	-104.678633
KOP 8/100									
7,200.00	23.58	5.67	6,704.97	2,445.61	-147.62	1,473,823.204	3,227,976.291	40.631143	-104.678632
7,400.00	29.09	40.12	6,885.18	2,523.10	-112.11	1,473,901.019	3,228,011.082	40.631356	-104.678504
7,600.00	40.23	60.63	7,049.98	2,592.41	-23.92	1,473,971.145	3,228,098.622	40.631546	-104.678186
7,800.00	53.56	72.85	7,186.61	2,648.18	110.11	1,474,028.148	3,228,232.130	40.631699	-104.677704
8,000.00	67.77	81.35	7,284.48	2,686.07	279.59	1,474,067.613	3,228,401.260	40.631803	-104.677093
8,200.00	82.33	88.23	7,336.00	2,703.16	471.41	1,474,086.481	3,228,592.911	40.631850	-104.676402
8,306.24	90.12	91.65	7,343.00	2,703.26	577.32	1,474,087.558	3,228,698.814	40.631850	-104.676020
EP 90.12 Inc, 91.65 Az									
8,400.00	90.12	91.65	7,342.81	2,700.56	671.04	1,474,085.732	3,228,792.559	40.631843	-104.675683
8,600.00	90.12	91.65	7,342.41	2,694.81	870.96	1,474,081.836	3,228,992.521	40.631827	-104.674962
8,800.00	90.12	91.65	7,342.01	2,689.07	1,070.88	1,474,077.941	3,229,192.482	40.631811	-104.674242
9,000.00	90.12	91.65	7,341.60	2,683.32	1,270.80	1,474,074.045	3,229,392.444	40.631795	-104.673522



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 28-27-7H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 4963.00usft (Original Well Elev)
Project:	Sec. 32-T8N-R65W Weld County CO	MD Reference:	WELL @ 4963.00usft (Original Well Elev)
Site:	Gasperich 32	North Reference:	True
Well:	GASPERICH 28-27-7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 3May18 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
9,200.00	90.12	91.65	7,341.20	2,677.57	1,470.71	1,474,070.150	3,229,592.406	40.631779	-104.672802
9,400.00	90.12	91.65	7,340.80	2,671.82	1,670.63	1,474,066.254	3,229,792.367	40.631764	-104.672081
9,600.00	90.12	91.65	7,340.40	2,666.07	1,870.55	1,474,062.359	3,229,992.329	40.631748	-104.671361
9,800.00	90.12	91.65	7,339.99	2,660.32	2,070.46	1,474,058.463	3,230,192.291	40.631732	-104.670641
10,000.00	90.12	91.65	7,339.59	2,654.57	2,270.38	1,474,054.568	3,230,392.252	40.631716	-104.669920
10,200.00	90.12	91.65	7,339.19	2,648.82	2,470.30	1,474,050.672	3,230,592.214	40.631700	-104.669200
10,400.00	90.12	91.65	7,338.79	2,643.08	2,670.21	1,474,046.777	3,230,792.176	40.631685	-104.668480
10,600.00	90.12	91.65	7,338.38	2,637.33	2,870.13	1,474,042.881	3,230,992.137	40.631669	-104.667760
10,800.00	90.12	91.65	7,337.98	2,631.58	3,070.05	1,474,038.986	3,231,192.099	40.631653	-104.667039
11,000.00	90.12	91.65	7,337.58	2,625.83	3,269.96	1,474,035.090	3,231,392.060	40.631637	-104.666319
11,200.00	90.12	91.65	7,337.17	2,620.08	3,469.88	1,474,031.194	3,231,592.022	40.631621	-104.665599
11,400.00	90.12	91.65	7,336.77	2,614.33	3,669.80	1,474,027.299	3,231,791.985	40.631605	-104.664879
11,600.00	90.12	91.65	7,336.37	2,608.58	3,869.72	1,474,023.403	3,231,991.946	40.631589	-104.664158
11,800.00	90.12	91.65	7,335.97	2,602.84	4,069.63	1,474,019.508	3,232,191.908	40.631574	-104.663438
12,000.00	90.12	91.65	7,335.56	2,597.09	4,269.55	1,474,015.612	3,232,391.870	40.631558	-104.662718
12,200.00	90.12	91.65	7,335.16	2,591.34	4,469.47	1,474,011.717	3,232,591.831	40.631542	-104.661998
12,400.00	90.12	91.65	7,334.76	2,585.59	4,669.38	1,474,007.821	3,232,791.793	40.631526	-104.661277
12,600.00	90.12	91.65	7,334.36	2,579.84	4,869.30	1,474,003.926	3,232,991.755	40.631510	-104.660557
12,800.00	90.12	91.65	7,333.95	2,574.09	5,069.22	1,474,000.030	3,233,191.716	40.631494	-104.659837
13,000.00	90.12	91.65	7,333.55	2,568.34	5,269.13	1,473,996.135	3,233,391.678	40.631478	-104.659116
13,200.00	90.12	91.65	7,333.15	2,562.59	5,469.05	1,473,992.239	3,233,591.640	40.631462	-104.658396
13,400.00	90.12	91.65	7,332.75	2,556.85	5,668.97	1,473,988.344	3,233,791.601	40.631446	-104.657676
13,600.00	90.12	91.65	7,332.34	2,551.10	5,868.89	1,473,984.448	3,233,991.563	40.631431	-104.656956
13,800.00	90.12	91.65	7,331.94	2,545.35	6,068.80	1,473,980.553	3,234,191.524	40.631415	-104.656235
14,000.00	90.12	91.65	7,331.54	2,539.60	6,268.72	1,473,976.657	3,234,391.486	40.631399	-104.655515
14,200.00	90.12	91.65	7,331.14	2,533.85	6,468.64	1,473,972.762	3,234,591.448	40.631383	-104.654795
14,400.00	90.12	91.65	7,330.73	2,528.10	6,668.55	1,473,968.866	3,234,791.409	40.631367	-104.654075
14,600.00	90.12	91.65	7,330.33	2,522.35	6,868.47	1,473,964.971	3,234,991.371	40.631351	-104.653354
14,800.00	90.12	91.65	7,329.93	2,516.60	7,068.39	1,473,961.075	3,235,191.333	40.631335	-104.652634
15,000.00	90.12	91.65	7,329.53	2,510.86	7,268.30	1,473,957.180	3,235,391.294	40.631319	-104.651914
15,200.00	90.12	91.65	7,329.12	2,505.11	7,468.22	1,473,953.284	3,235,591.256	40.631303	-104.651194
15,400.00	90.12	91.65	7,328.72	2,499.36	7,668.14	1,473,949.389	3,235,791.218	40.631287	-104.650473
15,600.00	90.12	91.65	7,328.32	2,493.61	7,868.05	1,473,945.493	3,235,991.179	40.631271	-104.649753
15,800.00	90.12	91.65	7,327.91	2,487.86	8,067.97	1,473,941.597	3,236,191.141	40.631255	-104.649033
16,000.00	90.12	91.65	7,327.51	2,482.11	8,267.89	1,473,937.702	3,236,391.103	40.631239	-104.648313
16,200.00	90.12	91.65	7,327.11	2,476.36	8,467.81	1,473,933.806	3,236,591.064	40.631223	-104.647592
16,400.00	90.12	91.65	7,326.71	2,470.61	8,667.72	1,473,929.911	3,236,791.026	40.631207	-104.646872
16,600.00	90.12	91.65	7,326.30	2,464.87	8,867.64	1,473,926.015	3,236,990.987	40.631191	-104.646152
16,800.00	90.12	91.65	7,325.90	2,459.12	9,067.56	1,473,922.120	3,237,190.949	40.631175	-104.645432
17,000.00	90.12	91.65	7,325.50	2,453.37	9,267.47	1,473,918.224	3,237,390.911	40.631159	-104.644711
17,200.00	90.12	91.65	7,325.10	2,447.62	9,467.39	1,473,914.329	3,237,590.872	40.631143	-104.643991
17,400.00	90.12	91.65	7,324.69	2,441.87	9,667.31	1,473,910.433	3,237,790.834	40.631127	-104.643271
17,600.00	90.12	91.65	7,324.29	2,436.12	9,867.22	1,473,906.538	3,237,990.796	40.631111	-104.642550
17,800.00	90.12	91.65	7,323.89	2,430.37	10,067.14	1,473,902.642	3,238,190.757	40.631095	-104.641830
18,000.00	90.12	91.65	7,323.49	2,424.62	10,267.06	1,473,898.747	3,238,390.719	40.631079	-104.641110
18,200.00	90.12	91.65	7,323.08	2,418.88	10,466.98	1,473,894.851	3,238,590.681	40.631063	-104.640390
18,241.50	90.12	91.65	7,323.00	2,417.68	10,508.46	1,473,894.043	3,238,632.177	40.631060	-104.640240
TD at 18241.50									



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 28-27-7H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 4963.00usft (Original Well Elev)
Project:	Sec. 32-T8N-R65W Weld County CO	MD Reference:	WELL @ 4963.00usft (Original Well Elev)
Site:	Gasperich 32	North Reference:	True
Well:	GASPERICH 28-27-7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 3May18 mnH		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
SHL 319' FNL, 260' FEL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,471,379.069	3,228,146.574	40.624430	-104.678100
BHL 2400' FSL, 300' FEL - plan hits target center - Point	0.00	0.00	7,323.00	2,417.68	10,508.46	1,473,894.043	3,238,632.177	40.631060	-104.640240
EP 2400' FSL, 300' FWL - plan hits target center - Point	0.00	0.00	7,343.00	2,703.26	577.32	1,474,087.558	3,228,698.814	40.631850	-104.676020

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
1,680.37	1,647.26	239.31	-14.59	Hold 23.61 Inc, 356.51 Az
7,154.24	6,663.02	2,427.35	-147.97	KOP 8/100
8,306.24	7,343.00	2,703.26	577.32	EP 90.12 Inc, 91.65 Az
18,241.50	7,323.00	2,417.68	10,508.46	TD at 18241.50