



Well Name:

GASPERICH 33-34-5H

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
1211.43	14.23	184.13	1204.14	-87.66	-6.32	9.70	87.88	Hold 14.23 Inc, 184.13 Az
6820.78	14.23	184.13	6641.41	-1462.81	-105.51	161.93	1466.61	KOP 8/100
7953.34	90.00	91.66	7343.00	-1661.27	605.18	896.85	2235.24	EP 90 Inc, 91.66 Az
17912.65	90.00	91.66	7343.00	-1950.47	10560.30	10738.92	12194.56	TD at 17912.65

Geodetic Datum:

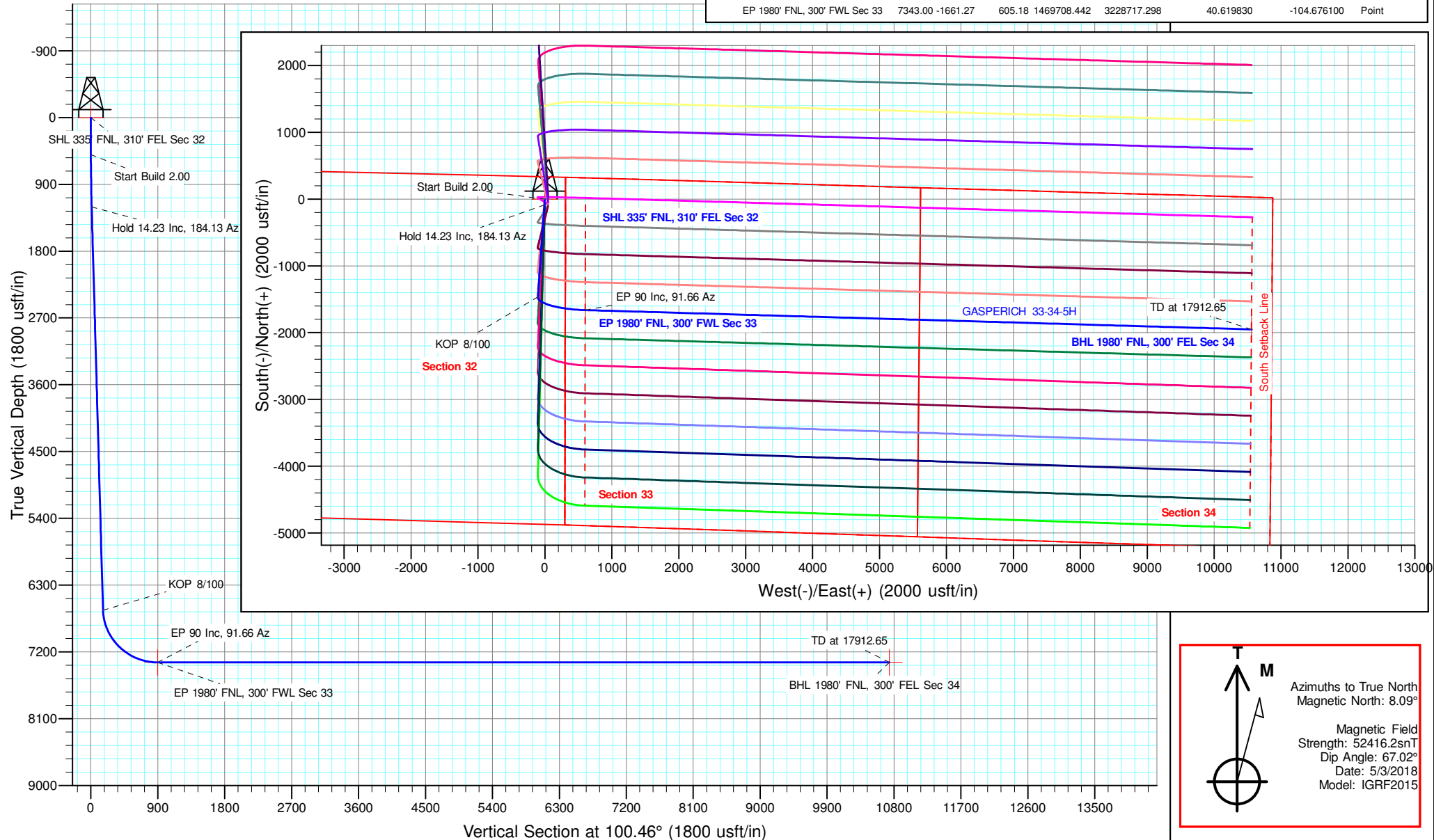
North American Datum 1983
US State Plane 1983 Colorado Northern Zone

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 335' FNL, 310' FEL Sec 32	0.00	0.00	0.00	1471364.038	3228096.746	40.624390	-104.678280	Point
BHL 1980' FNL, 300' FEL Sec 34	7343.00	-1950.47	10560.30	1469511.508	3238674.670	40.619030	-104.640240	Point
EP 1980' FNL, 300' FWL Sec 33	7343.00	-1661.27	605.18	1469708.442	3228717.298	40.619830	-104.676100	Point





Edge Energy, LLC

Sec. 32-T8N-R65W Weld County CO

Gasperich 32

GASPERICH 33-34-5H

Wellbore #1

Plan: Design #1 2May18 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 33-34-5H
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 33-34-5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2May18 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 33-34-5H					
Well Position	+N/-S	0.00 usft	Northing:	1,471,364.034 usft	Latitude:	40.624390
	+E/-W	0.00 usft	Easting:	3,228,096.745 usft	Longitude:	-104.678280
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	52,416.17467441

Design	Design #1 2May18 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	100.46

Plan Survey Tool Program	Date	6/30/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,912.66 Design #1 2May18 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	
1,211.43	14.23	184.13	1,204.14	-87.66	-6.32	2.00	2.00	0.00	184.13	
6,820.78	14.23	184.13	6,641.41	-1,462.81	-105.51	0.00	0.00	0.00	0.00	
7,953.34	90.00	91.66	7,343.00	-1,661.27	605.18	8.00	6.69	-8.16	-92.39	EP 1980' FNL, 300' F'
17,912.66	90.00	91.66	7,343.00	-1,950.47	10,560.30	0.00	0.00	0.00	0.00	BHL 1980' FNL, 300'



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 33-34-5H
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 33-34-5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2May18 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	1,471,364.034	3,228,096.745	40.624390	-104.678280
200.00	0.00	0.00	200.00	0.00	0.00	1,471,364.034	3,228,096.745	40.624390	-104.678280
400.00	0.00	0.00	400.00	0.00	0.00	1,471,364.034	3,228,096.745	40.624390	-104.678280
500.00	0.00	0.00	500.00	0.00	0.00	1,471,364.034	3,228,096.745	40.624390	-104.678280
Start Build 2.00									
600.00	2.00	184.13	599.98	-1.74	-0.13	1,471,362.292	3,228,096.636	40.624385	-104.678281
800.00	6.00	184.13	799.45	-15.65	-1.13	1,471,348.371	3,228,095.761	40.624347	-104.678284
1,000.00	10.00	184.13	997.47	-43.41	-3.13	1,471,320.597	3,228,094.017	40.624271	-104.678292
1,200.00	14.00	184.13	1,193.06	-84.88	-6.12	1,471,279.105	3,228,091.410	40.624157	-104.678302
1,211.43	14.23	184.13	1,204.14	-87.66	-6.32	1,471,276.323	3,228,091.235	40.624149	-104.678303
Hold 14.23 Inc, 184.13 Az									
1,400.00	14.23	184.13	1,386.93	-133.88	-9.66	1,471,230.066	3,228,088.330	40.624023	-104.678315
1,600.00	14.23	184.13	1,580.79	-182.92	-13.19	1,471,181.004	3,228,085.248	40.623888	-104.678328
1,800.00	14.23	184.13	1,774.65	-231.95	-16.73	1,471,131.942	3,228,082.165	40.623753	-104.678341
2,000.00	14.23	184.13	1,968.52	-280.98	-20.27	1,471,082.881	3,228,079.083	40.623619	-104.678353
2,200.00	14.23	184.13	2,162.38	-330.01	-23.80	1,471,033.819	3,228,076.001	40.623484	-104.678366
2,400.00	14.23	184.13	2,356.25	-379.04	-27.34	1,470,984.758	3,228,072.919	40.623350	-104.678379
2,600.00	14.23	184.13	2,550.11	-428.07	-30.88	1,470,935.696	3,228,069.837	40.623215	-104.678391
2,800.00	14.23	184.13	2,743.98	-477.10	-34.41	1,470,886.635	3,228,066.755	40.623080	-104.678404
3,000.00	14.23	184.13	2,937.84	-526.13	-37.95	1,470,837.573	3,228,063.673	40.622946	-104.678417
3,200.00	14.23	184.13	3,131.71	-575.16	-41.49	1,470,788.512	3,228,060.591	40.622811	-104.678430
3,400.00	14.23	184.13	3,325.57	-624.19	-45.02	1,470,739.450	3,228,057.509	40.622677	-104.678442
3,600.00	14.23	184.13	3,519.44	-673.22	-48.56	1,470,690.388	3,228,054.427	40.622542	-104.678455
3,800.00	14.23	184.13	3,713.30	-722.26	-52.10	1,470,641.327	3,228,051.345	40.622408	-104.678468
4,000.00	14.23	184.13	3,907.16	-771.29	-55.63	1,470,592.265	3,228,048.263	40.622273	-104.678481
4,200.00	14.23	184.13	4,101.03	-820.32	-59.17	1,470,543.204	3,228,045.181	40.622138	-104.678493
4,400.00	14.23	184.13	4,294.89	-869.35	-62.70	1,470,494.142	3,228,042.099	40.622004	-104.678506
4,600.00	14.23	184.13	4,488.76	-918.38	-66.24	1,470,445.081	3,228,039.017	40.621869	-104.678519
4,800.00	14.23	184.13	4,682.62	-967.41	-69.78	1,470,396.019	3,228,035.935	40.621735	-104.678532
5,000.00	14.23	184.13	4,876.49	-1,016.44	-73.31	1,470,346.958	3,228,032.853	40.621600	-104.678544
5,200.00	14.23	184.13	5,070.35	-1,065.47	-76.85	1,470,297.896	3,228,029.771	40.621465	-104.678557
5,400.00	14.23	184.13	5,264.22	-1,114.50	-80.39	1,470,248.835	3,228,026.689	40.621331	-104.678570
5,600.00	14.23	184.13	5,458.08	-1,163.53	-83.92	1,470,199.773	3,228,023.607	40.621196	-104.678583
5,800.00	14.23	184.13	5,651.95	-1,212.56	-87.46	1,470,150.711	3,228,020.525	40.621062	-104.678595
6,000.00	14.23	184.13	5,845.81	-1,261.60	-91.00	1,470,101.650	3,228,017.443	40.620927	-104.678608
6,200.00	14.23	184.13	6,039.67	-1,310.63	-94.53	1,470,052.588	3,228,014.361	40.620793	-104.678621
6,400.00	14.23	184.13	6,233.54	-1,359.66	-98.07	1,470,003.527	3,228,011.279	40.620658	-104.678634
6,600.00	14.23	184.13	6,427.40	-1,408.69	-101.61	1,469,954.465	3,228,008.197	40.620523	-104.678646
6,800.00	14.23	184.13	6,621.27	-1,457.72	-105.14	1,469,905.404	3,228,005.115	40.620389	-104.678659
6,820.78	14.23	184.13	6,641.41	-1,462.81	-105.51	1,469,900.307	3,228,004.795	40.620375	-104.678660
KOP 8/100									
7,000.00	19.67	136.80	6,813.55	-1,507.00	-86.35	1,469,856.301	3,228,024.363	40.620254	-104.678591
7,200.00	32.67	114.93	6,993.06	-1,554.60	-13.89	1,469,809.374	3,228,097.266	40.620123	-104.678330
7,400.00	47.42	105.13	7,145.90	-1,596.84	106.94	1,469,768.251	3,228,218.476	40.620007	-104.677895
7,600.00	62.67	99.19	7,260.21	-1,630.46	266.76	1,469,736.118	3,228,378.603	40.619915	-104.677319
7,800.00	78.11	94.72	7,327.15	-1,652.84	453.20	1,469,715.466	3,228,565.240	40.619853	-104.676648
7,953.34	90.00	91.66	7,343.00	-1,661.27	605.18	1,469,708.442	3,228,717.297	40.619830	-104.676100
EP 90 Inc, 91.66 Az									
8,000.00	90.00	91.66	7,343.00	-1,662.63	651.83	1,469,707.519	3,228,763.953	40.619826	-104.675932
8,200.00	90.00	91.66	7,343.00	-1,668.43	851.74	1,469,703.564	3,228,963.913	40.619810	-104.675212
8,400.00	90.00	91.66	7,343.00	-1,674.24	1,051.66	1,469,699.610	3,229,163.874	40.619794	-104.674492
8,600.00	90.00	91.66	7,343.00	-1,680.05	1,251.58	1,469,695.655	3,229,363.835	40.619778	-104.673772
8,800.00	90.00	91.66	7,343.00	-1,685.86	1,451.49	1,469,691.700	3,229,563.796	40.619763	-104.673052
9,000.00	90.00	91.66	7,343.00	-1,691.66	1,651.41	1,469,687.745	3,229,763.757	40.619747	-104.672332



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 33-34-5H
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 33-34-5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2May18 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	90.00	91.66	7,343.00	-1,697.47	1,851.32	1,469,683.790	3,229,963.718	40.619731	-104.671611
9,400.00	90.00	91.66	7,343.00	-1,703.28	2,051.24	1,469,679.836	3,230,163.679	40.619715	-104.670891
9,600.00	90.00	91.66	7,343.00	-1,709.09	2,251.15	1,469,675.881	3,230,363.640	40.619699	-104.670171
9,800.00	90.00	91.66	7,343.00	-1,714.89	2,451.07	1,469,671.926	3,230,563.601	40.619683	-104.669451
10,000.00	90.00	91.66	7,343.00	-1,720.70	2,650.99	1,469,667.971	3,230,763.561	40.619667	-104.668731
10,200.00	90.00	91.66	7,343.00	-1,726.51	2,850.90	1,469,664.017	3,230,963.522	40.619651	-104.668011
10,400.00	90.00	91.66	7,343.00	-1,732.32	3,050.82	1,469,660.062	3,231,163.483	40.619635	-104.667291
10,600.00	90.00	91.66	7,343.00	-1,738.12	3,250.73	1,469,656.107	3,231,363.444	40.619619	-104.666570
10,800.00	90.00	91.66	7,343.00	-1,743.93	3,450.65	1,469,652.152	3,231,563.405	40.619603	-104.665850
11,000.00	90.00	91.66	7,343.00	-1,749.74	3,650.56	1,469,648.198	3,231,763.367	40.619587	-104.665130
11,200.00	90.00	91.66	7,343.00	-1,755.55	3,850.48	1,469,644.243	3,231,963.328	40.619571	-104.664410
11,400.00	90.00	91.66	7,343.00	-1,761.35	4,050.39	1,469,640.288	3,232,163.289	40.619554	-104.663690
11,600.00	90.00	91.66	7,343.00	-1,767.16	4,250.31	1,469,636.333	3,232,363.249	40.619538	-104.662970
11,800.00	90.00	91.66	7,343.00	-1,772.97	4,450.23	1,469,632.378	3,232,563.210	40.619522	-104.662250
12,000.00	90.00	91.66	7,343.00	-1,778.78	4,650.14	1,469,628.424	3,232,763.171	40.619506	-104.661530
12,200.00	90.00	91.66	7,343.00	-1,784.59	4,850.06	1,469,624.469	3,232,963.132	40.619490	-104.660809
12,400.00	90.00	91.66	7,343.00	-1,790.39	5,049.97	1,469,620.514	3,233,163.093	40.619474	-104.660089
12,600.00	90.00	91.66	7,343.00	-1,796.20	5,249.89	1,469,616.559	3,233,363.054	40.619458	-104.659369
12,800.00	90.00	91.66	7,343.00	-1,802.01	5,449.80	1,469,612.605	3,233,563.015	40.619442	-104.658649
13,000.00	90.00	91.66	7,343.00	-1,807.82	5,649.72	1,469,608.650	3,233,762.976	40.619426	-104.657929
13,200.00	90.00	91.66	7,343.00	-1,813.62	5,849.64	1,469,604.695	3,233,962.937	40.619410	-104.657209
13,400.00	90.00	91.66	7,343.00	-1,819.43	6,049.55	1,469,600.740	3,234,162.897	40.619394	-104.656489
13,600.00	90.00	91.66	7,343.00	-1,825.24	6,249.47	1,469,596.786	3,234,362.858	40.619378	-104.655769
13,800.00	90.00	91.66	7,343.00	-1,831.05	6,449.38	1,469,592.831	3,234,562.819	40.619362	-104.655048
14,000.00	90.00	91.66	7,343.00	-1,836.85	6,649.30	1,469,588.876	3,234,762.780	40.619346	-104.654328
14,200.00	90.00	91.66	7,343.00	-1,842.66	6,849.21	1,469,584.921	3,234,962.741	40.619330	-104.653608
14,400.00	90.00	91.66	7,343.00	-1,848.47	7,049.13	1,469,580.966	3,235,162.702	40.619314	-104.652888
14,600.00	90.00	91.66	7,343.00	-1,854.28	7,249.05	1,469,577.012	3,235,362.663	40.619297	-104.652168
14,800.00	90.00	91.66	7,343.00	-1,860.08	7,448.96	1,469,573.057	3,235,562.624	40.619281	-104.651448
15,000.00	90.00	91.66	7,343.00	-1,865.89	7,648.88	1,469,569.102	3,235,762.585	40.619265	-104.650728
15,200.00	90.00	91.66	7,343.00	-1,871.70	7,848.79	1,469,565.147	3,235,962.545	40.619249	-104.650007
15,400.00	90.00	91.66	7,343.00	-1,877.51	8,048.71	1,469,561.193	3,236,162.506	40.619233	-104.649287
15,600.00	90.00	91.66	7,343.00	-1,883.31	8,248.62	1,469,557.238	3,236,362.467	40.619217	-104.648567
15,800.00	90.00	91.66	7,343.00	-1,889.12	8,448.54	1,469,553.283	3,236,562.428	40.619201	-104.647847
16,000.00	90.00	91.66	7,343.00	-1,894.93	8,648.46	1,469,549.328	3,236,762.389	40.619185	-104.647127
16,200.00	90.00	91.66	7,343.00	-1,900.74	8,848.37	1,469,545.374	3,236,962.350	40.619168	-104.646407
16,400.00	90.00	91.66	7,343.00	-1,906.54	9,048.29	1,469,541.419	3,237,162.311	40.619152	-104.645687
16,600.00	90.00	91.66	7,343.00	-1,912.35	9,248.20	1,469,537.464	3,237,362.272	40.619136	-104.644967
16,800.00	90.00	91.66	7,343.00	-1,918.16	9,448.12	1,469,533.509	3,237,562.233	40.619120	-104.644247
17,000.00	90.00	91.66	7,343.00	-1,923.97	9,648.03	1,469,529.554	3,237,762.193	40.619104	-104.643526
17,200.00	90.00	91.66	7,343.00	-1,929.77	9,847.95	1,469,525.600	3,237,962.154	40.619088	-104.642806
17,400.00	90.00	91.66	7,343.00	-1,935.58	10,047.86	1,469,521.645	3,238,162.115	40.619072	-104.642086
17,600.00	90.00	91.66	7,343.00	-1,941.39	10,247.78	1,469,517.690	3,238,362.076	40.619055	-104.641366
17,800.00	90.00	91.66	7,343.00	-1,947.20	10,447.70	1,469,513.735	3,238,562.037	40.619039	-104.640646
17,912.66	90.00	91.66	7,343.00	-1,950.47	10,560.30	1,469,511.508	3,238,674.670	40.619030	-104.640240
TD at 17912.65									



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well GASPERICH 33-34-5H
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 33-34-5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2May18 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 335' FNL, 310' FEL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,471,364.038	3,228,096.745	40.624390	-104.678280
BHL 1980' FNL, 300' FE - plan hits target center - Point	0.00	0.00	7,343.00	-1,950.47	10,560.30	1,469,511.508	3,238,674.670	40.619030	-104.640240
EP 1980' FNL, 300' FWL - plan hits target center - Point	0.00	0.00	7,343.00	-1,661.27	605.18	1,469,708.442	3,228,717.297	40.619830	-104.676100

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
1,211.43	1,204.14	-87.66	-6.32	Hold 14.23 Inc, 184.13 Az
6,820.78	6,641.41	-1,462.81	-105.51	KOP 8/100
7,953.34	7,343.00	-1,661.27	605.18	EP 90 Inc, 91.66 Az
17,912.66	7,343.00	-1,950.47	10,560.30	TD at 17912.65