



Edge Energy, LLC

Sec. 1-T8N-R67W

Akbary 1B

AKBARY 12-11-6H

Wellbore #1

Plan: Design #1 30Jul18 mnh

Standard Planning Report - Geographic

02 August, 2018



Well Name:

AKBARY 12-11-6H

Project Name:

Sec. 1-T8N-R67W

Pad Name:

Akbar 1B

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
1698.39	23.97	162.02	1663.75	-234.96	76.23	-12.64	247.02	Hold 23.97 Inc, 162.02 Az
7299.65	23.97	162.02	6782.03	-2399.27	778.42	-129.10	2522.39	KOP 8/100
8518.78	90.12	270.57	7527.00	-2706.92	63.80	640.88	3380.17	EP 90.12 Inc, 270.57 Az
18296.67	90.12	270.57	7507.00	-2610.28	-9713.60	10058.21	13158.04	TD at 18296.67

Geodetic Datum:

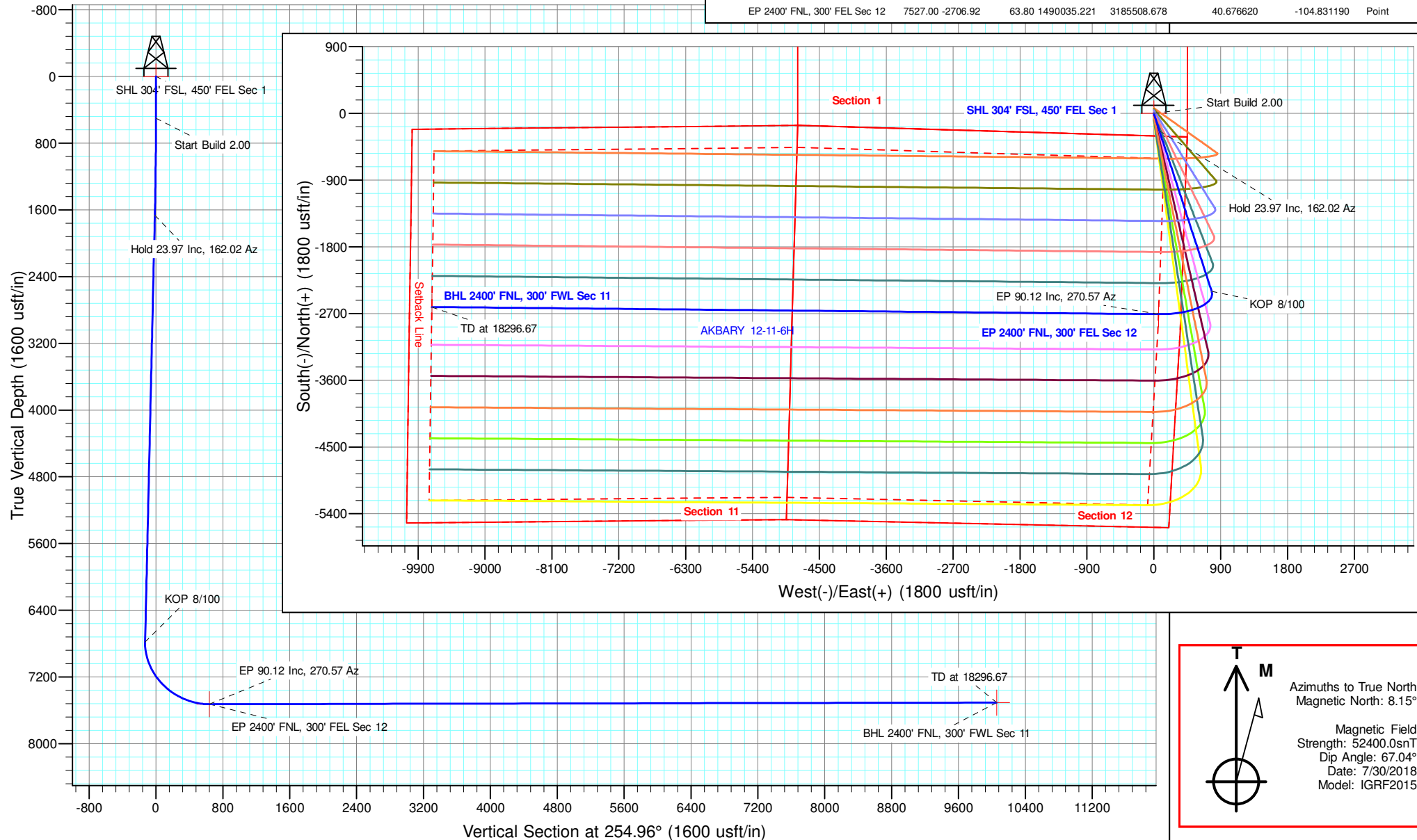
North American Datum 1983
US State Plane 1983 Colorado Northern Zone

Elevation:

Ground Elevation: 5362.00
KB Elevation: WELL @ 5377.00usft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL 304' FSL, 450' FEL Sec 1	0.00	0.00	0.00	1492741.583	3185424.475	40.684050	-104.831420	Point
BHL 2400' FNL, 300' FWL Sec 11	7507.00	-2610.28	-9713.60	1490058.143	3175730.835	40.676880	-104.866440	Point
EP 2400' FNL, 300' FEL Sec 12	7527.00	-2706.92	63.80	1490035.221	3185508.678	40.676620	-104.831190	Point



Azimuths to True North
Magnetic North: 8.15°

Magnetic Field
Strength: 52400.0nT
Dip Angle: 67.04°
Date: 7/30/2018
Model: IGRF2015



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well AKBARY 12-11-6H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5377.00usft (Original Well Elev)
Project:	Sec. 1-T8N-R67W	MD Reference:	WELL @ 5377.00usft (Original Well Elev)
Site:	Akbary 1B	North Reference:	True
Well:	AKBARY 12-11-6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jul18 mnh		

Project	Sec. 1-T8N-R67W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Akbary 1B				
Site Position:		Northing:	1,492,727.015 usft	Latitude:	40.684010	
From:	Lat/Long	Easting:	3,185,424.585 usft	Longitude:	-104.831420	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	AKBARY 12-11-6H					
Well Position	+N/-S	0.00 usft	Northing:	1,492,741.583 usft	Latitude:	40.684050
	+E/-W	0.00 usft	Easting:	3,185,424.475 usft	Longitude:	-104.831420
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,362.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/30/2018	8.15	67.04	52,400.03701312

Design	Design #1 30Jul18 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	254.96

Plan Survey Tool Program	Date	8/2/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,296.67 Design #1 30Jul18 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	
1,698.39	23.97	162.02	1,663.75	-234.96	76.23	2.00	2.00	0.00	162.02	
7,299.65	23.97	162.02	6,782.03	-2,399.27	778.42	0.00	0.00	0.00	0.00	
8,518.78	90.12	270.57	7,527.00	-2,706.92	63.80	8.00	5.43	8.90	106.99	EP 2400' FNL, 300' FI
18,296.67	90.12	270.57	7,507.00	-2,610.28	-9,713.60	0.00	0.00	0.00	0.00	BHL 2400' FNL, 300' I



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well AKBARY 12-11-6H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5377.00usft (Original Well Elev)
Project:	Sec. 1-T8N-R67W	MD Reference:	WELL @ 5377.00usft (Original Well Elev)
Site:	Akbary 1B	North Reference:	True
Well:	AKBARY 12-11-6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jul18 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	1,492,741.583	3,185,424.475	40.684050	-104.831420	
200.00	0.00	0.00	200.00	0.00	0.00	1,492,741.583	3,185,424.475	40.684050	-104.831420	
400.00	0.00	0.00	400.00	0.00	0.00	1,492,741.583	3,185,424.475	40.684050	-104.831420	
500.00	0.00	0.00	500.00	0.00	0.00	1,492,741.583	3,185,424.475	40.684050	-104.831420	
Start Build 2.00										
600.00	2.00	162.02	599.98	-1.66	0.54	1,492,739.928	3,185,425.026	40.684046	-104.831418	
800.00	6.00	162.02	799.45	-14.93	4.84	1,492,726.693	3,185,429.430	40.684009	-104.831403	
1,000.00	10.00	162.02	997.47	-41.40	13.43	1,492,700.288	3,185,438.218	40.683936	-104.831372	
1,200.00	14.00	162.02	1,193.06	-80.94	26.26	1,492,660.841	3,185,451.345	40.683828	-104.831326	
1,400.00	18.00	162.02	1,385.27	-133.37	43.27	1,492,608.544	3,185,468.749	40.683684	-104.831264	
1,600.00	22.00	162.02	1,573.17	-198.42	64.38	1,492,543.653	3,185,490.344	40.683505	-104.831188	
1,698.39	23.97	162.02	1,663.75	-234.96	76.23	1,492,507.201	3,185,502.476	40.683405	-104.831145	
Hold 23.97 Inc, 162.02 Az										
1,800.00	23.97	162.02	1,756.59	-274.22	88.97	1,492,468.038	3,185,515.509	40.683297	-104.831099	
2,000.00	23.97	162.02	1,939.35	-351.50	114.04	1,492,390.949	3,185,541.163	40.683085	-104.831009	
2,200.00	23.97	162.02	2,122.10	-428.78	139.11	1,492,313.861	3,185,566.818	40.682873	-104.830919	
2,400.00	23.97	162.02	2,304.86	-506.06	164.19	1,492,236.773	3,185,592.472	40.682661	-104.830828	
2,600.00	23.97	162.02	2,487.61	-583.34	189.26	1,492,159.685	3,185,618.126	40.682449	-104.830738	
2,800.00	23.97	162.02	2,670.37	-660.62	214.33	1,492,082.597	3,185,643.781	40.682237	-104.830647	
3,000.00	23.97	162.02	2,853.12	-737.90	239.40	1,492,005.509	3,185,669.435	40.682025	-104.830557	
3,200.00	23.97	162.02	3,035.88	-815.18	264.48	1,491,928.421	3,185,695.090	40.681813	-104.830467	
3,400.00	23.97	162.02	3,218.63	-892.46	289.55	1,491,851.333	3,185,720.744	40.681600	-104.830376	
3,600.00	23.97	162.02	3,401.38	-969.74	314.62	1,491,774.245	3,185,746.398	40.681388	-104.830286	
3,800.00	23.97	162.02	3,584.14	-1,047.02	339.69	1,491,697.156	3,185,772.053	40.681176	-104.830196	
4,000.00	23.97	162.02	3,766.89	-1,124.30	364.77	1,491,620.068	3,185,797.707	40.680964	-104.830105	
4,200.00	23.97	162.02	3,949.65	-1,201.58	389.84	1,491,542.980	3,185,823.361	40.680752	-104.830015	
4,400.00	23.97	162.02	4,132.40	-1,278.86	414.91	1,491,465.892	3,185,849.016	40.680540	-104.829924	
4,600.00	23.97	162.02	4,315.16	-1,356.14	439.98	1,491,388.804	3,185,874.670	40.680328	-104.829834	
4,800.00	23.97	162.02	4,497.91	-1,433.41	465.06	1,491,311.716	3,185,900.325	40.680116	-104.829744	
5,000.00	23.97	162.02	4,680.67	-1,510.69	490.13	1,491,234.628	3,185,925.979	40.679903	-104.829653	
5,200.00	23.97	162.02	4,863.42	-1,587.97	515.20	1,491,157.540	3,185,951.633	40.679691	-104.829563	
5,400.00	23.97	162.02	5,046.18	-1,665.25	540.27	1,491,080.452	3,185,977.288	40.679479	-104.829472	
5,600.00	23.97	162.02	5,228.93	-1,742.53	565.35	1,491,003.364	3,186,002.942	40.679267	-104.829382	
5,800.00	23.97	162.02	5,411.69	-1,819.81	590.42	1,490,926.275	3,186,028.596	40.679055	-104.829292	
6,000.00	23.97	162.02	5,594.44	-1,897.09	615.49	1,490,849.187	3,186,054.251	40.678843	-104.829201	
6,200.00	23.97	162.02	5,777.20	-1,974.37	640.56	1,490,772.099	3,186,079.905	40.678631	-104.829111	
6,400.00	23.97	162.02	5,959.95	-2,051.65	665.64	1,490,695.011	3,186,105.560	40.678419	-104.829020	
6,600.00	23.97	162.02	6,142.70	-2,128.93	690.71	1,490,617.923	3,186,131.214	40.678207	-104.828930	
6,800.00	23.97	162.02	6,325.46	-2,206.21	715.78	1,490,540.835	3,186,156.868	40.677994	-104.828840	
7,000.00	23.97	162.02	6,508.21	-2,283.49	740.85	1,490,463.747	3,186,182.523	40.677782	-104.828749	
7,200.00	23.97	162.02	6,690.97	-2,360.77	765.92	1,490,386.659	3,186,208.177	40.677570	-104.828659	
7,299.65	23.97	162.02	6,782.03	-2,399.27	778.42	1,490,348.248	3,186,220.960	40.677464	-104.828614	
KOP 8/100										
7,400.00	22.87	182.13	6,874.26	-2,438.21	783.99	1,490,309.356	3,186,226.829	40.677358	-104.828594	
7,600.00	28.00	218.06	7,055.87	-2,514.50	753.41	1,490,232.831	3,186,196.820	40.677148	-104.828704	
7,800.00	39.10	239.26	7,222.86	-2,584.15	669.71	1,490,162.552	3,186,113.651	40.676957	-104.829006	
8,000.00	52.48	251.63	7,362.28	-2,641.76	539.39	1,490,103.964	3,185,983.766	40.676799	-104.829476	
8,200.00	66.74	260.08	7,463.33	-2,682.86	372.54	1,490,061.607	3,185,817.228	40.676686	-104.830077	
8,400.00	81.37	266.85	7,518.19	-2,704.27	182.08	1,490,038.762	3,185,626.939	40.676627	-104.830764	
8,518.78	90.12	270.57	7,527.00	-2,706.92	63.80	1,490,035.221	3,185,508.678	40.676620	-104.831190	
EP 90.12 Inc, 270.57 Az										
8,600.00	90.12	270.57	7,526.83	-2,706.12	-17.42	1,490,035.412	3,185,427.456	40.676622	-104.831483	
8,800.00	90.12	270.57	7,526.42	-2,704.14	-217.41	1,490,035.880	3,185,227.457	40.676628	-104.832204	
9,000.00	90.12	270.57	7,526.02	-2,702.16	-417.40	1,490,036.349	3,185,027.458	40.676633	-104.832925	



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well AKBARY 12-11-6H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5377.00usft (Original Well Elev)
Project:	Sec. 1-T8N-R67W	MD Reference:	WELL @ 5377.00usft (Original Well Elev)
Site:	Akbary 1B	North Reference:	True
Well:	AKBARY 12-11-6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jul18 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	270.57	7,525.61	-2,700.19	-617.39	1,490,036.818	3,184,827.459	40.676639	-104.833646
9,400.00	90.12	270.57	7,525.20	-2,698.21	-817.38	1,490,037.287	3,184,627.460	40.676644	-104.834367
9,600.00	90.12	270.57	7,524.79	-2,696.23	-1,017.37	1,490,037.756	3,184,427.461	40.676649	-104.835088
9,800.00	90.12	270.57	7,524.38	-2,694.26	-1,217.36	1,490,038.225	3,184,227.462	40.676655	-104.835809
10,000.00	90.12	270.57	7,523.97	-2,692.28	-1,417.35	1,490,038.693	3,184,027.463	40.676660	-104.836530
10,200.00	90.12	270.57	7,523.56	-2,690.30	-1,617.34	1,490,039.162	3,183,827.464	40.676666	-104.837251
10,400.00	90.12	270.57	7,523.15	-2,688.33	-1,817.33	1,490,039.631	3,183,627.465	40.676671	-104.837972
10,600.00	90.12	270.57	7,522.74	-2,686.35	-2,017.32	1,490,040.100	3,183,427.466	40.676676	-104.838693
10,800.00	90.12	270.57	7,522.33	-2,684.37	-2,217.31	1,490,040.569	3,183,227.467	40.676682	-104.839414
11,000.00	90.12	270.57	7,521.92	-2,682.40	-2,417.30	1,490,041.038	3,183,027.468	40.676687	-104.840135
11,200.00	90.12	270.57	7,521.52	-2,680.42	-2,617.29	1,490,041.507	3,182,827.469	40.676692	-104.840856
11,400.00	90.12	270.57	7,521.11	-2,678.44	-2,817.28	1,490,041.975	3,182,627.470	40.676698	-104.841577
11,600.00	90.12	270.57	7,520.70	-2,676.47	-3,017.27	1,490,042.444	3,182,427.471	40.676703	-104.842298
11,800.00	90.12	270.57	7,520.29	-2,674.49	-3,217.26	1,490,042.913	3,182,227.472	40.676709	-104.843019
12,000.00	90.12	270.57	7,519.88	-2,672.51	-3,417.25	1,490,043.382	3,182,027.473	40.676714	-104.843740
12,200.00	90.12	270.57	7,519.47	-2,670.54	-3,617.24	1,490,043.851	3,181,827.474	40.676719	-104.844461
12,400.00	90.12	270.57	7,519.06	-2,668.56	-3,817.23	1,490,044.320	3,181,627.475	40.676725	-104.845182
12,600.00	90.12	270.57	7,518.65	-2,666.58	-4,017.22	1,490,044.788	3,181,427.476	40.676730	-104.845903
12,800.00	90.12	270.57	7,518.24	-2,664.61	-4,217.21	1,490,045.257	3,181,227.477	40.676735	-104.846624
13,000.00	90.12	270.57	7,517.83	-2,662.63	-4,417.20	1,490,045.726	3,181,027.478	40.676741	-104.847345
13,200.00	90.12	270.57	7,517.43	-2,660.65	-4,617.19	1,490,046.195	3,180,827.479	40.676746	-104.848066
13,400.00	90.12	270.57	7,517.02	-2,658.68	-4,817.18	1,490,046.664	3,180,627.480	40.676751	-104.848787
13,600.00	90.12	270.57	7,516.61	-2,656.70	-5,017.17	1,490,047.133	3,180,427.481	40.676757	-104.849508
13,800.00	90.12	270.57	7,516.20	-2,654.72	-5,217.16	1,490,047.602	3,180,227.482	40.676762	-104.850229
14,000.00	90.12	270.57	7,515.79	-2,652.75	-5,417.15	1,490,048.070	3,180,027.483	40.676767	-104.850950
14,200.00	90.12	270.57	7,515.38	-2,650.77	-5,617.14	1,490,048.539	3,179,827.484	40.676772	-104.851671
14,400.00	90.12	270.57	7,514.97	-2,648.79	-5,817.13	1,490,049.008	3,179,627.485	40.676778	-104.852392
14,600.00	90.12	270.57	7,514.56	-2,646.82	-6,017.12	1,490,049.477	3,179,427.486	40.676783	-104.853113
14,800.00	90.12	270.57	7,514.15	-2,644.84	-6,217.11	1,490,049.946	3,179,227.487	40.676788	-104.853834
15,000.00	90.12	270.57	7,513.74	-2,642.86	-6,417.10	1,490,050.415	3,179,027.488	40.676794	-104.854556
15,200.00	90.12	270.57	7,513.33	-2,640.89	-6,617.09	1,490,050.883	3,178,827.489	40.676799	-104.855277
15,400.00	90.12	270.57	7,512.93	-2,638.91	-6,817.08	1,490,051.352	3,178,627.490	40.676804	-104.855998
15,600.00	90.12	270.57	7,512.52	-2,636.93	-7,017.07	1,490,051.821	3,178,427.491	40.676809	-104.856719
15,800.00	90.12	270.57	7,512.11	-2,634.95	-7,217.06	1,490,052.290	3,178,227.492	40.676815	-104.857440
16,000.00	90.12	270.57	7,511.70	-2,632.98	-7,417.05	1,490,052.759	3,178,027.493	40.676820	-104.858161
16,200.00	90.12	270.57	7,511.29	-2,631.00	-7,617.03	1,490,053.228	3,177,827.494	40.676825	-104.858882
16,400.00	90.12	270.57	7,510.88	-2,629.02	-7,817.02	1,490,053.697	3,177,627.495	40.676830	-104.859603
16,600.00	90.12	270.57	7,510.47	-2,627.05	-8,017.01	1,490,054.165	3,177,427.496	40.676836	-104.860324
16,800.00	90.12	270.57	7,510.06	-2,625.07	-8,217.00	1,490,054.634	3,177,227.497	40.676841	-104.861045
17,000.00	90.12	270.57	7,509.65	-2,623.09	-8,416.99	1,490,055.103	3,177,027.498	40.676846	-104.861766
17,200.00	90.12	270.57	7,509.24	-2,621.12	-8,616.98	1,490,055.572	3,176,827.499	40.676851	-104.862487
17,400.00	90.12	270.57	7,508.83	-2,619.14	-8,816.97	1,490,056.041	3,176,627.500	40.676857	-104.863208
17,600.00	90.12	270.57	7,508.43	-2,617.16	-9,016.96	1,490,056.510	3,176,427.500	40.676862	-104.863929
17,800.00	90.12	270.57	7,508.02	-2,615.19	-9,216.95	1,490,056.978	3,176,227.501	40.676867	-104.864650
18,000.00	90.12	270.57	7,507.61	-2,613.21	-9,416.94	1,490,057.447	3,176,027.502	40.676872	-104.865371
18,200.00	90.12	270.57	7,507.20	-2,611.23	-9,616.93	1,490,057.916	3,175,827.503	40.676878	-104.866092
18,296.67	90.12	270.57	7,507.00	-2,610.28	-9,713.60	1,490,058.143	3,175,730.836	40.676880	-104.866440
TD at 18296.67									



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well AKBARY 12-11-6H
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5377.00usft (Original Well Elev)
Project:	Sec. 1-T8N-R67W	MD Reference:	WELL @ 5377.00usft (Original Well Elev)
Site:	Akbary 1B	North Reference:	True
Well:	AKBARY 12-11-6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jul18 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 304' FSL, 450' FEL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,492,741.583	3,185,424.475	40.684050	-104.831420
BHL 2400' FNL, 300' FW - plan hits target center - Point	0.00	0.00	7,507.00	-2,610.28	-9,713.60	1,490,058.143	3,175,730.836	40.676880	-104.866440
EP 2400' FNL, 300' FEL - plan hits target center - Point	0.00	0.00	7,527.00	-2,706.92	63.80	1,490,035.221	3,185,508.678	40.676620	-104.831190

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
1,698.39	1,663.75	-234.96	76.23	Hold 23.97 Inc, 162.02 Az
7,299.65	6,782.03	-2,399.27	778.42	KOP 8/100
8,518.78	7,527.00	-2,706.92	63.80	EP 90.12 Inc, 270.57 Az
18,296.67	7,507.00	-2,610.28	-9,713.60	TD at 18296.67