



Departure

Energy Services (US) LP

PeakView Operating Company, LLC

**Routt County, CO
Sec 26 T6N R87W
Grassy Creek 13-26**

Wellbore #1

Plan: Plan #1(1.5 deg)

Standard Planning Report

27 February, 2013

Company Name: PeakView Operating Company, LLC



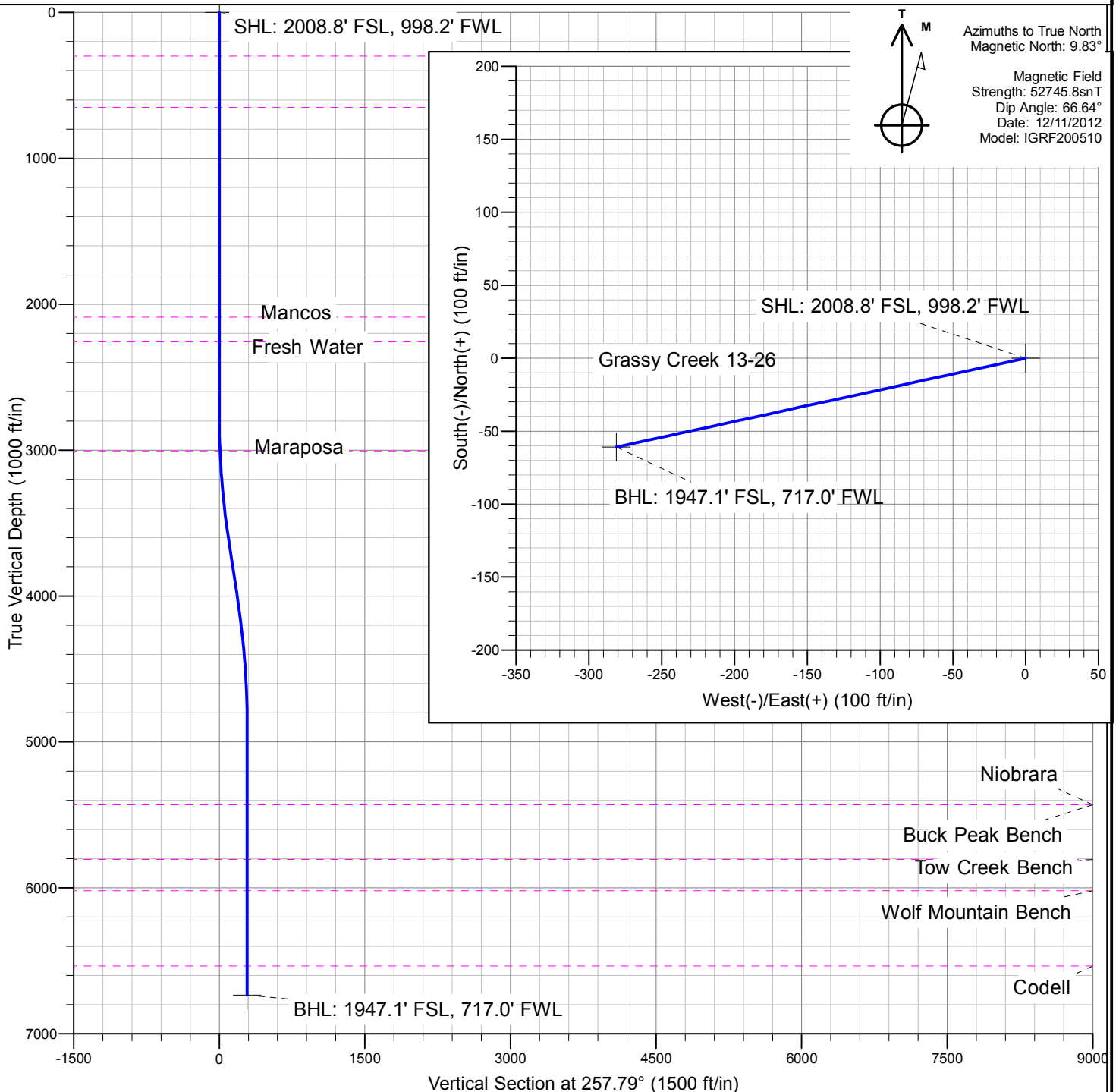
Departure
Energy Services (US) LP

Project: Routt County, CO
Site: Sec 26 T6N R87W
Well: Grassy Creek 13-26
Wellbore: Wellbore #1
Design: Plan #1(1.5 deg)

Grassy Creek 13-26
North American Datum 1983
GRS 1980
Colorado Northern Zone
North Ref: True
WELL @ 7096.90ft (RKB @ 20')
40.446943°N
107.121919°W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2758.00	0.00	0.00	2758.00	0.00	0.00	0.00	0.00	0.00	KOP
3	3603.53	12.68	257.79	3596.65	-19.72	-91.09	1.50	257.79	93.20	End Build #1
4	4064.49	12.68	257.79	4046.35	-41.12	-190.01	0.00	0.00	194.41	Begin Build #2
5	4910.02	0.00	0.00	4885.00	-60.84	-281.10	1.50	180.00	287.61	End Build - Hold to TD
6	6760.02	0.00	0.00	6735.00	-60.84	-281.10	0.00	0.00	287.61	TD





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Grassy Creek 13-26
Company:	PeakView Operating Company, LLC	TVD Reference:	WELL @ 7096.90ft (RKB @ 20')
Project:	Routt County, CO	MD Reference:	WELL @ 7096.90ft (RKB @ 20')
Site:	Sec 26 T6N R87W	North Reference:	True
Well:	Grassy Creek 13-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1(1.5 deg)		

Project	Routt 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		Sec 26 T6N R87W			
Site Position:		Northing:	1,409,792.65 ft	Latitude:	40.446943°N
From:	Lat/Long	Easting:	2,548,621.82 ft	Longitude:	107.121919°W
Position Uncertainty:	0.00 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.05 °

Well	Grassy Creek 13-26					
Well Position	+N/-S	0.00 ft	Northing:	1,409,792.65 ft	Latitude:	40.446943°N
	+E/-W	0.00 ft	Easting:	2,548,621.82 ft	Longitude:	107.121919°W
Position Uncertainty		0.00 ft	Wellhead Elevation:	7,096.90 ft	Ground Level:	7,076.90 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/11/2012	9.83	66.64	52,746

Design	Plan #1(1.5 deg)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	257.79

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,758.00	0.00	0.00	2,758.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,603.53	12.68	257.79	3,596.65	-19.72	-91.09	1.50	1.50	0.00	257.79	
4,064.49	12.68	257.79	4,046.35	-41.12	-190.01	0.00	0.00	0.00	0.00	
4,910.02	0.00	0.00	4,885.00	-60.84	-281.10	1.50	-1.50	0.00	180.00	
6,760.02	0.00	0.00	6,735.00	-60.84	-281.10	0.00	0.00	0.00	0.00	BHL: 1947.1' FSL, 71



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Grassy Creek 13-26
Company:	PeakView Operating Company, LLC	TVD Reference:	WELL @ 7096.90ft (RKB @ 20')
Project:	Routt County, CO	MD Reference:	WELL @ 7096.90ft (RKB @ 20')
Site:	Sec 26 T6N R87W	North Reference:	True
Well:	Grassy Creek 13-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1(1.5 deg)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL: 2008.8' FSL, 998.2' FWL									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
BWF									
400.00	0.00	0.00	400.00	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
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
Trout Creek									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,088.00	0.00	0.00	2,088.00	0.00	0.00	0.00	0.00	0.00	0.00
Mancos									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,258.00	0.00	0.00	2,258.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresh Water									
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,658.00	0.00	0.00	2,658.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8" Casing									
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,758.00	0.00	0.00	2,758.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP									
2,800.00	0.63	257.79	2,800.00	-0.05	-0.23	0.23	1.50	1.50	0.00
2,900.00	2.13	257.79	2,899.97	-0.56	-2.58	2.64	1.50	1.50	0.00
3,000.00	3.63	257.79	2,999.84	-1.62	-7.49	7.66	1.50	1.50	0.00
3,005.17	3.71	257.79	3,005.00	-1.69	-7.81	7.99	1.50	1.50	0.00
Maraposa									
3,100.00	5.13	257.79	3,099.54	-3.24	-14.95	15.30	1.50	1.50	0.00
3,200.00	6.63	257.79	3,199.01	-5.40	-24.97	25.54	1.50	1.50	0.00
3,300.00	8.13	257.79	3,298.18	-8.12	-37.52	38.39	1.50	1.50	0.00
3,400.00	9.63	257.79	3,396.98	-11.39	-52.61	53.83	1.50	1.50	0.00
3,500.00	11.13	257.79	3,495.34	-15.20	-70.22	71.84	1.50	1.50	0.00
3,600.00	12.63	257.79	3,593.20	-19.55	-90.34	92.43	1.50	1.50	0.00
3,603.53	12.68	257.79	3,596.64	-19.72	-91.09	93.20	1.50	1.50	0.00
End Build #1									



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Project:	Routt County, CO	MD Reference:	WELL @ 7096.90ft (RKB @ 20')
Site:	Sec 26 T6N R87W	North Reference:	True
Well:	Grassy Creek 13-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1(1.5 deg)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,700.00	12.68	257.79	3,690.76	-24.20	-111.79	114.38	0.00	0.00	0.00
3,800.00	12.68	257.79	3,788.32	-28.84	-133.25	136.34	0.00	0.00	0.00
3,900.00	12.68	257.79	3,885.88	-33.49	-154.71	158.29	0.00	0.00	0.00
4,000.00	12.68	257.79	3,983.44	-38.13	-176.17	180.25	0.00	0.00	0.00
4,064.49	12.68	257.79	4,046.35	-41.12	-190.01	194.41	0.00	0.00	0.00
Begin Build #2									
4,100.00	12.15	257.79	4,081.03	-42.74	-197.47	202.04	1.50	-1.50	0.00
4,200.00	10.65	257.79	4,179.06	-46.92	-216.79	221.81	1.50	-1.50	0.00
4,300.00	9.15	257.79	4,277.57	-50.56	-233.59	239.00	1.50	-1.50	0.00
4,400.00	7.65	257.79	4,376.49	-53.65	-247.87	253.61	1.50	-1.50	0.00
4,500.00	6.15	257.79	4,475.76	-56.19	-259.61	265.62	1.50	-1.50	0.00
4,600.00	4.65	257.79	4,575.32	-58.18	-268.81	275.04	1.50	-1.50	0.00
4,700.00	3.15	257.79	4,675.08	-59.62	-275.46	281.84	1.50	-1.50	0.00
4,800.00	1.65	257.79	4,774.99	-60.51	-279.55	286.03	1.50	-1.50	0.00
4,900.00	0.15	257.79	4,874.98	-60.84	-281.09	287.60	1.50	-1.50	0.00
4,910.02	0.00	257.79	4,885.00	-60.84	-281.10	287.61	1.50	-1.50	0.00
End Build - Hold to TD									
5,000.00	0.00	0.00	4,974.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,100.00	0.00	0.00	5,074.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,200.00	0.00	0.00	5,174.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,300.00	0.00	0.00	5,274.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,400.00	0.00	0.00	5,374.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,455.02	0.00	0.00	5,430.00	-60.84	-281.10	287.61	0.00	0.00	0.00
Niobrara - Buck Peak Bench									
5,500.00	0.00	0.00	5,474.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,600.00	0.00	0.00	5,574.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,700.00	0.00	0.00	5,674.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,800.00	0.00	0.00	5,774.98	-60.84	-281.10	287.61	0.00	0.00	0.00
5,829.02	0.00	0.00	5,804.00	-60.84	-281.10	287.61	0.00	0.00	0.00
Tow Creek Bench									
5,900.00	0.00	0.00	5,874.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,000.00	0.00	0.00	5,974.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,044.02	0.00	0.00	6,019.00	-60.84	-281.10	287.61	0.00	0.00	0.00
Wolf Mountain Bench									
6,100.00	0.00	0.00	6,074.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,200.00	0.00	0.00	6,174.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,300.00	0.00	0.00	6,274.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,400.00	0.00	0.00	6,374.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,500.00	0.00	0.00	6,474.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,560.02	0.00	0.00	6,535.00	-60.84	-281.10	287.61	0.00	0.00	0.00
Codell									
6,600.00	0.00	0.00	6,574.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,700.00	0.00	0.00	6,674.98	-60.84	-281.10	287.61	0.00	0.00	0.00
6,760.02	0.00	0.00	6,735.00	-60.84	-281.10	287.61	0.00	0.00	0.00
TD - BHL: 1947.1' FSL, 717.0' FWL									



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Company:	PeakView Operating Company, LLC	TVD Reference:	WELL @ 7096.90ft (RKB @ 20')
Project:	Routt County, CO	MD Reference:	WELL @ 7096.90ft (RKB @ 20')
Site:	Sec 26 T6N R87W	North Reference:	True
Well:	Grassy Creek 13-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1(1.5 deg)		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL: 2008.8' FSL, 998.2	0.00	0.00	0.00	0.00	0.00	1,409,792.65	2,548,621.82	40.446943°N	107.121919°W
- plan hits target center									
- Point									
BHL: 1947.1' FSL, 717.0	0.00	0.00	6,735.00	-60.84	-281.10	1,409,736.96	2,548,339.65	40.446776°N	107.122929°W
- plan hits target center									
- Point									

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,658.00	2,658.00	9 5/8" Casing	9.625	14.750

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
300.00	300.00	BWF		0.00	
650.00	650.00	Trout Creek		0.00	
2,088.00	2,088.00	Mancos		0.00	
2,258.00	2,258.00	Fresh Water		0.00	
3,005.17	3,005.00	Maraposa		0.00	
5,455.02	5,430.00	Niobrara		0.00	
5,455.02	5,430.00	Buck Peak Bench		0.00	
5,829.02	5,804.00	Tow Creek Bench		0.00	
6,044.02	6,019.00	Wolf Mountain Bench		0.00	
6,560.02	6,535.00	Codell		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,758.00	2,758.00	0.00	0.00	KOP
3,603.53	3,596.64	-19.72	-91.09	End Build #1
4,064.49	4,046.35	-41.12	-190.01	Begin Build #2
4,910.02	4,885.00	-60.84	-281.10	End Build - Hold to TD
6,760.02	6,735.00	-60.84	-281.10	TD