

Well Planning Proposal FOR

Axia Energy
Bulldog #1-22H-791
Moffat Co., CO

Well File: Design #1 (4/10/12)

Presented By:

Pat Rasmussen
Regional Manager

Bret Wolford
Well Planner



Sharewell
Energy Services, LP

Axia Energy
Project: Moffat Co., CO
Site: Sec.1-T7N-R91W
Well: Bulldog #1-22H-791
Wellbore: Wellbore #1
Design: Design #1
Lat: 40° 35' 41.741 N
Long: 107° 33' 11.070 W
GL: 6535.00
KB: WELL @ 6555.00usft



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11423.54	0.00	0.00	11423.54	0.00	0.00	0.00	0.00	0.00	KOP / Start Build 12.00°
12173.54	90.00	190.24	11901.00	-469.87	-84.85	12.00	190.24	477.46	EOC / Start 7343.47° hold at 12173.54 MD
19517.01	90.00	190.24	11901.00	-7696.46	-1389.79	0.00	0.00	7820.93	TD at 19517.01

WELL DETAILS: Bulldog #1-22H-791

+N/-S	+E/-W	Northing	Ground Level: Easting	6535.00 Latitude	Longitude	Slot
0.00	0.00	1466173.804	2429892.450	40° 35' 41.741 N	107° 33' 11.070 W	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Bulldog 1-22H-791 PBHL	11901.00	-7696.46	-1389.79	1458511.582	2428324.854	40° 34' 25.687 N	107° 33' 29.080 W	Point

CASING DETAILS

No casing data is available

SITE DETAILS: Sec.1-T7N-R91W

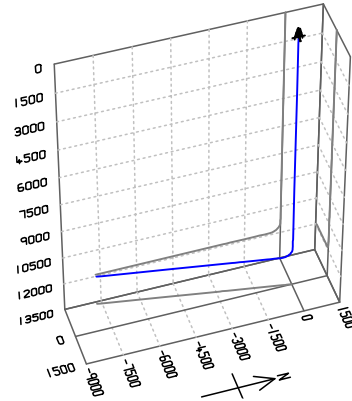
Site Centre Latitude: 40° 35' 41.741 N
Longitude: 107° 33' 11.070 W

Positional Uncertainty: 0.00
Convergence: -1.33
Local North: True

PROJECT DETAILS: Moffat Co., CO

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



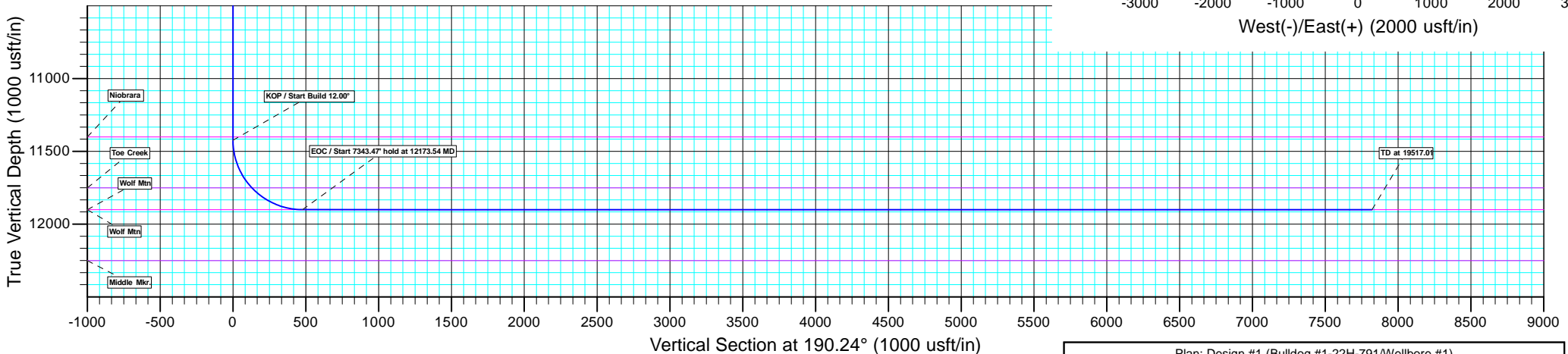
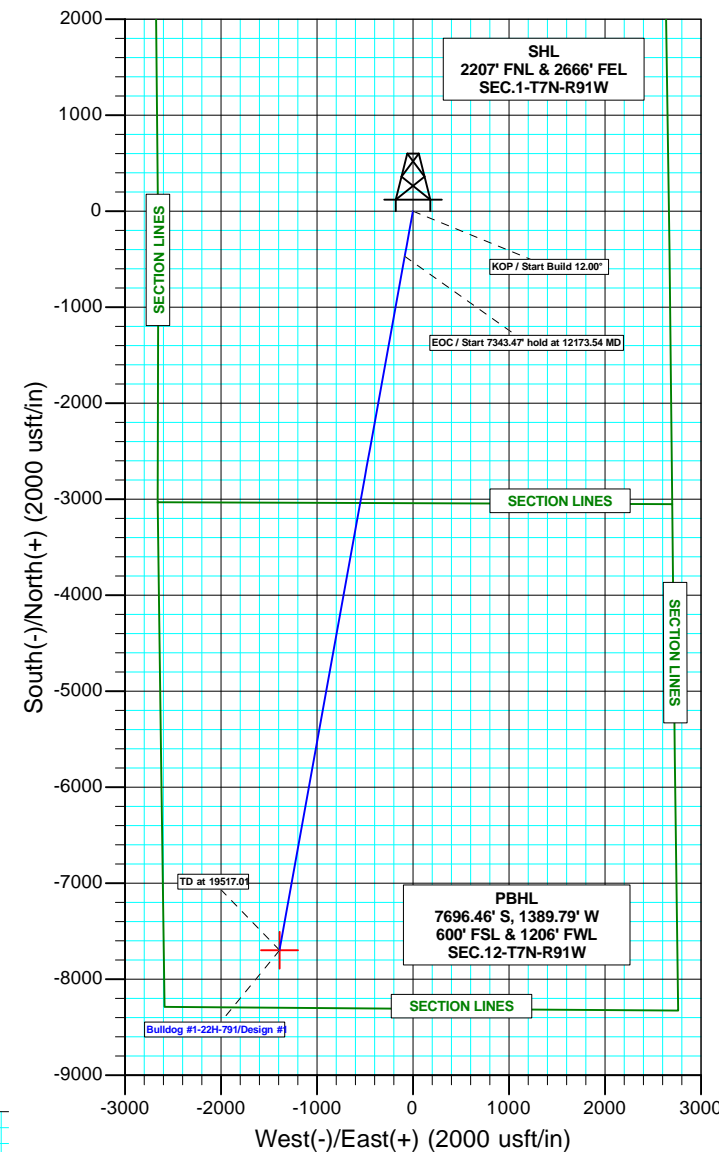
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2826.00	2826.00	Fox Hills
3151.00	3151.00	Lewis
5251.00	5251.00	Mesaverde
9351.00	9351.00	Mancos Mkr
11401.00	11401.00	Niobrara
11751.00	11784.38	Toe Creek
11901.00	12171.39	Wolf Mtn



Azimuths to True North
Magnetic North: 10.18°

Magnetic Field
Strength: 52809.8snT
Dip Angle: 66.70°
Date: 2012/04/09
Model: IGRF2010



Plan: Design #1 (Bulldog #1-22H-791/Wellbore #1)

Created By: BRET WOLFORD Date: 13:52, April 10 2012

Axia Energy

Moffat Co., CO

Sec.1-T7N-R91W

Bulldog #1-22H-791

Wellbore #1

Plan: Design #1

Standard Planning Report

10 April, 2012



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bulldog #1-22H-791
Company:	Axia Energy	TVD Reference:	WELL @ 6555.00usft
Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Moffat Co., 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.1-T7N-R91W			
Site Position:		Northing:	1,466,173.808 usft	Latitude:	40° 35' 41.741 N
From:	Lat/Long	Easting:	2,429,892.450 usft	Longitude:	107° 33' 11.070 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-1.33 °

Well	Bulldog #1-22H-791					
Well Position	+N/-S	0.00 usft	Northing:	1,466,173.804 usft	Latitude:	40° 35' 41.741 N
	+E/-W	0.00 usft	Easting:	2,429,892.450 usft	Longitude:	107° 33' 11.070 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,535.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/09/12	10.18	66.70	52,810

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	11,901.00	0.00	0.00	190.24

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	
11,423.54	0.00	0.00	11,423.54	0.00	0.00	0.00	0.00	0.00	0.00	
12,173.54	90.00	190.24	11,901.00	-469.87	-84.85	12.00	12.00	0.00	190.24	Bulldog 1-22H-791 PE
19,517.01	90.00	190.24	11,901.00	-7,696.46	-1,389.79	0.00	0.00	0.00	0.00	Bulldog 1-22H-791 PE

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Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
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
2,100.00	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
2,300.00	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
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills									
2,826.00	0.00	0.00	2,826.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
Lewis									
3,151.00	0.00	0.00	3,151.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00

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Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
Mesaverde									
5,251.00	0.00	0.00	5,251.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Mancos Mkr									
9,351.00	0.00	0.00	9,351.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00

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Company:	Axia Energy	TVD Reference:	WELL @ 6555.00usft
Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
Niobrara									
11,401.00	0.00	0.00	11,401.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP / Start Build 12.00°									
11,423.54	0.00	0.00	11,423.54	0.00	0.00	0.00	0.00	0.00	0.00
11,425.00	0.18	190.24	11,425.00	0.00	0.00	0.00	12.00	12.00	0.00
11,450.00	3.18	190.24	11,449.99	-0.72	-0.13	0.73	12.00	12.00	0.00
11,475.00	6.18	190.24	11,474.90	-2.73	-0.49	2.77	12.00	12.00	0.00
11,500.00	9.18	190.24	11,499.67	-6.01	-1.09	6.11	12.00	12.00	0.00
11,525.00	12.18	190.24	11,524.24	-10.57	-1.91	10.74	12.00	12.00	0.00
11,550.00	15.18	190.24	11,548.53	-16.38	-2.96	16.65	12.00	12.00	0.00
11,575.00	18.18	190.24	11,572.47	-23.44	-4.23	23.82	12.00	12.00	0.00
11,600.00	21.18	190.24	11,596.01	-31.73	-5.73	32.24	12.00	12.00	0.00
11,625.00	24.18	190.24	11,619.08	-41.21	-7.44	41.87	12.00	12.00	0.00
11,650.00	27.18	190.24	11,641.60	-51.87	-9.37	52.71	12.00	12.00	0.00
11,675.00	30.18	190.24	11,663.54	-63.67	-11.50	64.70	12.00	12.00	0.00
11,700.00	33.18	190.24	11,684.81	-76.59	-13.83	77.83	12.00	12.00	0.00
11,725.00	36.18	190.24	11,705.37	-90.58	-16.36	92.05	12.00	12.00	0.00
11,750.00	39.18	190.24	11,725.15	-105.62	-19.07	107.33	12.00	12.00	0.00
11,775.00	42.18	190.24	11,744.11	-121.65	-21.97	123.62	12.00	12.00	0.00
Toe Creek									
11,784.38	43.30	190.24	11,751.00	-127.92	-23.10	129.98	12.00	12.00	0.00
11,800.00	45.18	190.24	11,762.19	-138.64	-25.03	140.88	12.00	12.00	0.00
11,825.00	48.18	190.24	11,779.34	-156.53	-28.27	159.06	12.00	12.00	0.00
11,850.00	51.18	190.24	11,795.52	-175.29	-31.65	178.12	12.00	12.00	0.00
11,875.00	54.18	190.24	11,810.67	-194.85	-35.18	198.00	12.00	12.00	0.00
11,900.00	57.18	190.24	11,824.77	-215.16	-38.85	218.64	12.00	12.00	0.00
11,925.00	60.18	190.24	11,837.76	-236.18	-42.65	240.00	12.00	12.00	0.00
11,950.00	63.18	190.24	11,849.63	-257.83	-46.56	262.00	12.00	12.00	0.00
11,975.00	66.18	190.24	11,860.32	-280.07	-50.57	284.60	12.00	12.00	0.00
12,000.00	69.18	190.24	11,869.81	-302.82	-54.68	307.72	12.00	12.00	0.00
12,025.00	72.18	190.24	11,878.09	-326.04	-58.87	331.31	12.00	12.00	0.00
12,050.00	75.18	190.24	11,885.11	-349.64	-63.14	355.30	12.00	12.00	0.00
12,075.00	78.18	190.24	11,890.87	-373.58	-67.46	379.62	12.00	12.00	0.00
12,100.00	81.18	190.24	11,895.35	-397.78	-71.83	404.22	12.00	12.00	0.00
12,125.00	84.18	190.24	11,898.54	-422.18	-76.24	429.01	12.00	12.00	0.00
12,150.00	87.18	190.24	11,900.42	-446.71	-80.66	453.93	12.00	12.00	0.00
Wolf Mtn									
12,171.39	89.74	190.24	11,901.00	-467.75	-84.46	475.32	12.00	12.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bulldog #1-22H-791
Company:	Axia Energy	TVD Reference:	WELL @ 6555.00usft
Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
EOC / Start 7343.47' hold at 12173.54 MD									
12,173.54	90.00	190.24	11,901.00	-469.87	-84.85	477.46	12.00	12.00	0.00
12,200.00	90.00	190.24	11,901.00	-495.90	-89.55	503.92	0.00	0.00	0.00
12,300.00	90.00	190.24	11,901.00	-594.31	-107.32	603.92	0.00	0.00	0.00
12,400.00	90.00	190.24	11,901.00	-692.72	-125.09	703.92	0.00	0.00	0.00
12,500.00	90.00	190.24	11,901.00	-791.13	-142.86	803.92	0.00	0.00	0.00
12,600.00	90.00	190.24	11,901.00	-889.54	-160.63	903.92	0.00	0.00	0.00
12,700.00	90.00	190.24	11,901.00	-987.95	-178.40	1,003.92	0.00	0.00	0.00
12,800.00	90.00	190.24	11,901.00	-1,086.36	-196.17	1,103.92	0.00	0.00	0.00
12,900.00	90.00	190.24	11,901.00	-1,184.76	-213.94	1,203.92	0.00	0.00	0.00
13,000.00	90.00	190.24	11,901.00	-1,283.17	-231.71	1,303.92	0.00	0.00	0.00
13,100.00	90.00	190.24	11,901.00	-1,381.58	-249.48	1,403.92	0.00	0.00	0.00
13,200.00	90.00	190.24	11,901.00	-1,479.99	-267.25	1,503.92	0.00	0.00	0.00
13,300.00	90.00	190.24	11,901.00	-1,578.40	-285.02	1,603.92	0.00	0.00	0.00
13,400.00	90.00	190.24	11,901.00	-1,676.81	-302.79	1,703.92	0.00	0.00	0.00
13,500.00	90.00	190.24	11,901.00	-1,775.21	-320.56	1,803.92	0.00	0.00	0.00
13,600.00	90.00	190.24	11,901.00	-1,873.62	-338.33	1,903.92	0.00	0.00	0.00
13,700.00	90.00	190.24	11,901.00	-1,972.03	-356.10	2,003.92	0.00	0.00	0.00
13,800.00	90.00	190.24	11,901.00	-2,070.44	-373.87	2,103.92	0.00	0.00	0.00
13,900.00	90.00	190.24	11,901.00	-2,168.85	-391.64	2,203.92	0.00	0.00	0.00
14,000.00	90.00	190.24	11,901.00	-2,267.26	-409.41	2,303.92	0.00	0.00	0.00
14,100.00	90.00	190.24	11,901.00	-2,365.67	-427.18	2,403.92	0.00	0.00	0.00
14,200.00	90.00	190.24	11,901.00	-2,464.07	-444.95	2,503.92	0.00	0.00	0.00
14,300.00	90.00	190.24	11,901.00	-2,562.48	-462.72	2,603.92	0.00	0.00	0.00
14,400.00	90.00	190.24	11,901.00	-2,660.89	-480.49	2,703.92	0.00	0.00	0.00
14,500.00	90.00	190.24	11,901.00	-2,759.30	-498.26	2,803.92	0.00	0.00	0.00
14,600.00	90.00	190.24	11,901.00	-2,857.71	-516.03	2,903.92	0.00	0.00	0.00
14,700.00	90.00	190.24	11,901.00	-2,956.12	-533.80	3,003.92	0.00	0.00	0.00
14,800.00	90.00	190.24	11,901.00	-3,054.52	-551.57	3,103.92	0.00	0.00	0.00
14,900.00	90.00	190.24	11,901.00	-3,152.93	-569.34	3,203.92	0.00	0.00	0.00
15,000.00	90.00	190.24	11,901.00	-3,251.34	-587.11	3,303.92	0.00	0.00	0.00
15,100.00	90.00	190.24	11,901.00	-3,349.75	-604.88	3,403.92	0.00	0.00	0.00
15,200.00	90.00	190.24	11,901.00	-3,448.16	-622.65	3,503.92	0.00	0.00	0.00
15,300.00	90.00	190.24	11,901.00	-3,546.57	-640.42	3,603.92	0.00	0.00	0.00
15,400.00	90.00	190.24	11,901.00	-3,644.97	-658.19	3,703.92	0.00	0.00	0.00
15,500.00	90.00	190.24	11,901.00	-3,743.38	-675.96	3,803.92	0.00	0.00	0.00
15,600.00	90.00	190.24	11,901.00	-3,841.79	-693.73	3,903.92	0.00	0.00	0.00
15,700.00	90.00	190.24	11,901.00	-3,940.20	-711.50	4,003.92	0.00	0.00	0.00
15,800.00	90.00	190.24	11,901.00	-4,038.61	-729.27	4,103.92	0.00	0.00	0.00
15,900.00	90.00	190.24	11,901.00	-4,137.02	-747.04	4,203.92	0.00	0.00	0.00
16,000.00	90.00	190.24	11,901.00	-4,235.43	-764.81	4,303.92	0.00	0.00	0.00
16,100.00	90.00	190.24	11,901.00	-4,333.83	-782.58	4,403.92	0.00	0.00	0.00
16,200.00	90.00	190.24	11,901.00	-4,432.24	-800.35	4,503.92	0.00	0.00	0.00
16,300.00	90.00	190.24	11,901.00	-4,530.65	-818.12	4,603.92	0.00	0.00	0.00
16,400.00	90.00	190.24	11,901.00	-4,629.06	-835.89	4,703.92	0.00	0.00	0.00
16,500.00	90.00	190.24	11,901.00	-4,727.47	-853.66	4,803.92	0.00	0.00	0.00
16,600.00	90.00	190.24	11,901.00	-4,825.88	-871.43	4,903.92	0.00	0.00	0.00
16,700.00	90.00	190.24	11,901.00	-4,924.28	-889.20	5,003.92	0.00	0.00	0.00
16,800.00	90.00	190.24	11,901.00	-5,022.69	-906.97	5,103.92	0.00	0.00	0.00
16,900.00	90.00	190.24	11,901.00	-5,121.10	-924.74	5,203.92	0.00	0.00	0.00
17,000.00	90.00	190.24	11,901.00	-5,219.51	-942.51	5,303.92	0.00	0.00	0.00
17,100.00	90.00	190.24	11,901.00	-5,317.92	-960.28	5,403.92	0.00	0.00	0.00
17,200.00	90.00	190.24	11,901.00	-5,416.33	-978.05	5,503.92	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bulldog #1-22H-791
Company:	Axia Energy	TVD Reference:	WELL @ 6555.00usft
Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
17,300.00	90.00	190.24	11,901.00	-5,514.74	-995.82	5,603.92	0.00	0.00	0.00	
17,400.00	90.00	190.24	11,901.00	-5,613.14	-1,013.59	5,703.92	0.00	0.00	0.00	
17,500.00	90.00	190.24	11,901.00	-5,711.55	-1,031.36	5,803.92	0.00	0.00	0.00	
17,600.00	90.00	190.24	11,901.00	-5,809.96	-1,049.13	5,903.92	0.00	0.00	0.00	
17,700.00	90.00	190.24	11,901.00	-5,908.37	-1,066.91	6,003.92	0.00	0.00	0.00	
17,800.00	90.00	190.24	11,901.00	-6,006.78	-1,084.68	6,103.92	0.00	0.00	0.00	
17,900.00	90.00	190.24	11,901.00	-6,105.19	-1,102.45	6,203.92	0.00	0.00	0.00	
18,000.00	90.00	190.24	11,901.00	-6,203.59	-1,120.22	6,303.92	0.00	0.00	0.00	
18,100.00	90.00	190.24	11,901.00	-6,302.00	-1,137.99	6,403.92	0.00	0.00	0.00	
18,200.00	90.00	190.24	11,901.00	-6,400.41	-1,155.76	6,503.92	0.00	0.00	0.00	
18,300.00	90.00	190.24	11,901.00	-6,498.82	-1,173.53	6,603.92	0.00	0.00	0.00	
18,400.00	90.00	190.24	11,901.00	-6,597.23	-1,191.30	6,703.92	0.00	0.00	0.00	
18,500.00	90.00	190.24	11,901.00	-6,695.64	-1,209.07	6,803.92	0.00	0.00	0.00	
18,600.00	90.00	190.24	11,901.00	-6,794.05	-1,226.84	6,903.92	0.00	0.00	0.00	
18,700.00	90.00	190.24	11,901.00	-6,892.45	-1,244.61	7,003.92	0.00	0.00	0.00	
18,800.00	90.00	190.24	11,901.00	-6,990.86	-1,262.38	7,103.92	0.00	0.00	0.00	
18,900.00	90.00	190.24	11,901.00	-7,089.27	-1,280.15	7,203.92	0.00	0.00	0.00	
19,000.00	90.00	190.24	11,901.00	-7,187.68	-1,297.92	7,303.92	0.00	0.00	0.00	
19,100.00	90.00	190.24	11,901.00	-7,286.09	-1,315.69	7,403.92	0.00	0.00	0.00	
19,200.00	90.00	190.24	11,901.00	-7,384.50	-1,333.46	7,503.92	0.00	0.00	0.00	
19,300.00	90.00	190.24	11,901.00	-7,482.90	-1,351.23	7,603.92	0.00	0.00	0.00	
19,400.00	90.00	190.24	11,901.00	-7,581.31	-1,369.00	7,703.92	0.00	0.00	0.00	
19,500.00	90.00	190.24	11,901.00	-7,679.72	-1,386.77	7,803.92	0.00	0.00	0.00	
TD at 19517.01 - Bulldog 1-22H-791 PBHL										
19,517.01	90.00	190.24	11,901.00	-7,696.46	-1,389.79	7,820.93	0.00	0.00	0.00	

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Bulldog 1-22H-791 PBH	0.00	0.00	11,901.00	-7,696.46	-1,389.79	1,458,511.582	2,428,324.854	40° 34' 25.687 N	107° 33' 29.080 W
- plan hits target center									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,826.00	2,826.00	Fox Hills		0.00		
3,151.00	3,151.00	Lewis		0.00		
5,251.00	5,251.00	Mesaverde		0.00		
9,351.00	9,351.00	Mancos Mkr		0.00		
11,401.00	11,401.00	Niobrara		0.00		
11,784.38	11,751.00	Toe Creek		0.00		
12,171.39	11,901.00	Wolf Mtn		0.00		

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bulldog #1-22H-791
Company:	Axia Energy	TVD Reference:	WELL @ 6555.00usft
Project:	Moffat Co., CO	MD Reference:	WELL @ 6555.00usft
Site:	Sec.1-T7N-R91W	North Reference:	True
Well:	Bulldog #1-22H-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
11,423.54	11,423.54	0.00	0.00	KOP / Start Build 12.00°	
12,173.54	11,901.00	-469.87	-84.85	EOC / Start 7343.47' hold at 12173.54 MD	
19,517.01	11,901.00	-7,696.46	-1,389.79	TD at 19517.01	