



**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_- Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1082841

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing    Pumping    Gas Lift    Other (Explain) \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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# Directional Drilling Report

Customer: Advanced Drilling Technologies

Address: Advanced Drilling Technologies, LLC  
529 North Albany Street  
Suite 1250  
Yuma, CO 80759

Well Name: Zimbleman 43-13D  
Survey Name: AnTech Zimbleman Gyro Survey  
Date: 09/11/2011

AnTech Ltd  
Unit 7, Newbery Centre  
Airport Business Park  
Exeter. EX5 2UL. UK

Tel: +44 (0)1392 440300  
Email: [antech@antech.co.uk](mailto:antech@antech.co.uk)  
[www.antech.co.uk](http://www.antech.co.uk)  
[www.coiledtubingdrilling.com](http://www.coiledtubingdrilling.com)



# Summary

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<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

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## Well

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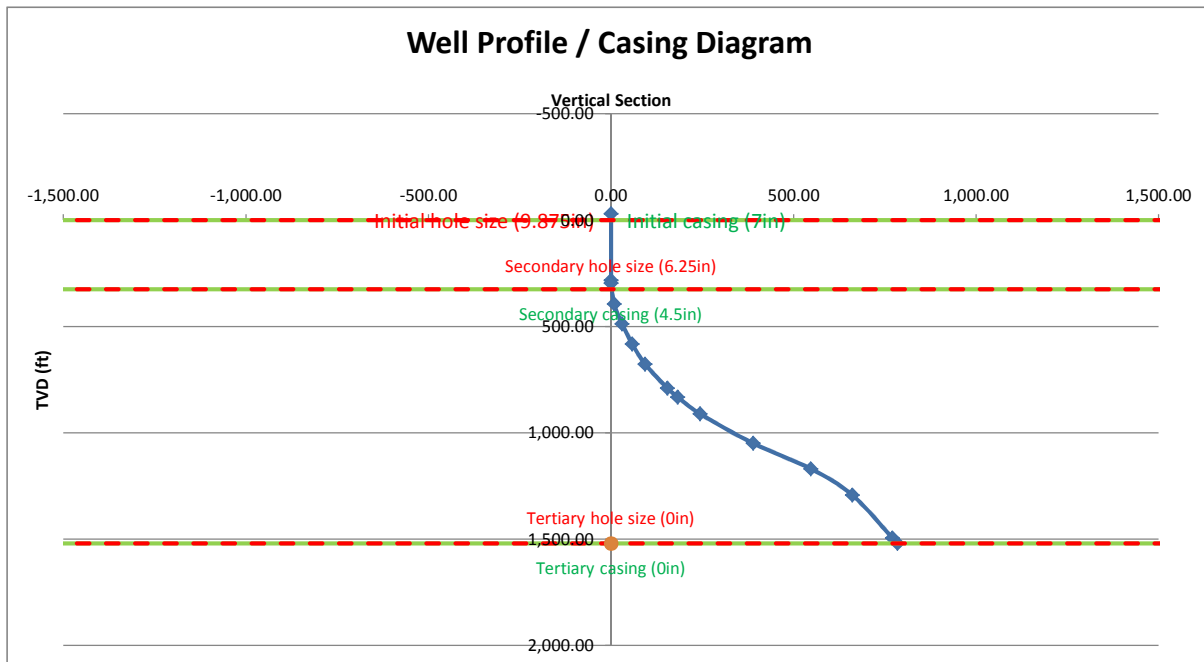
Northing [ft]:	-483.16	Deviation In Azimuth Direction [ft]:	784.56
Easting [ft]:	618.95	Maximum Inclination:	54.13
SHL Latitude:	39°47'26"N	Survey Inclination Error:	±0.15
SHL Longitude:	101°51'53"W	Survey Azimuth Error:	±3
		Deviation from Plan at Zone Entry [ft]:	135.75
		Deviation from Plan at TD [ft]:	79.79

# Casing Diagram

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

Depth (ft)	Hole Size (in)	Casing				Cement	Completion Comments
		Size (in)	Weight (ppf)	Grade	Thread		
325	9.875	7	17	J-55		Neat	8hrs to work
1800	6.25	4.5	10.5	J-55		Neat	

	Diameter (in)	Start Depth (TVD)	End Depth (TVD)
Initial hole size	9.88		325.0
Initial casing	7.00		325.0
Secondary hole size	6.25	325.0	1520.0
Secondary casing	4.50	325.0	1520.0
Tertiary hole size		1520.0	1520.0
Tertiary casing		1520.0	1520.0





# Well Data

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
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<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

## Formation Tops

Name	TVD [ft]	Data Points Direction	Distance [ft]	Dip distance ( $\chi$ ) (Dip=1'/ $\chi$ )
TOP BIZ	1290	N-S	3000	5000



# Well Plan Data

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

<b>Final Bearing / Azimuth for section view (°)</b>	125.67
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## Projected TD Survey

Measured Depth ft	Inclination Angle degrees	Azimuth degrees	True Vertical Depth ft	North/South ft	East/West ft	Vertical Section ft	Dogleg Severity %/100ft	Reference	Description	Section
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RKB	tie point	0
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00		vertical	0-1
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00		vertical	0-1
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00		vertical	0-1
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	KOP	End vertical	1
400.00	5.26	125.67	399.89	-2.14	2.98	3.67	6.58		vertical	1-2
500.00	11.84	125.67	498.72	-10.81	15.06	18.54	6.58		build	1-2
600.00	18.42	125.67	595.20	-26.02	36.26	44.63	6.58		build	1-2
700.00	25.00	125.67	688.05	-47.58	66.30	81.61	6.58		build	1-2
800.00	31.58	125.67	776.06	-75.20	104.79	128.98	6.58		build	1-2
900.00	38.16	125.67	858.05	-108.52	151.22	186.13	6.58	TOP OF STRAIGHT	End build	2
1000.00	38.16	125.67	936.68	-144.55	201.42	247.92	0.00		straight	2-3
1100.00	38.16	125.67	1,015.31	-180.57	251.61	309.70	0.00		straight	2-3
1200.00	38.16	125.67	1,093.94	-216.60	301.81	371.49	0.00		straight	2-3
1300.00	38.16	125.67	1,172.57	-252.62	352.01	433.27	0.00		straight	2-3
1400.00	38.16	125.67	1,251.20	-288.65	402.20	495.06	0.00		straight	2-3
1449.35	38.16	125.67	1,290.00	-306.43	426.98	525.55	0.00	TOP OF BIZ	straight	2-3
1500.00	38.16	125.67	1,329.82	-324.67	452.40	556.85	0.00		straight	2-3
1546.65	38.16	125.67	1,366.50	-341.48	475.81	585.67	0.00		straight	2-3
1600.00	38.16	125.67	1,408.45	-360.70	502.60	618.63	0.00		straight	2-3
1700.00	38.16	125.67	1,487.08	-396.72	552.79	680.42	0.00		straight	2-3
1750.00	38.16	125.67	1,526.40	-414.74	577.89	711.31	0.00	TD	End straight	3



## Drilling Data

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
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<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

<b>Final Bearing / Azimuth for section view (*)</b>	125.67
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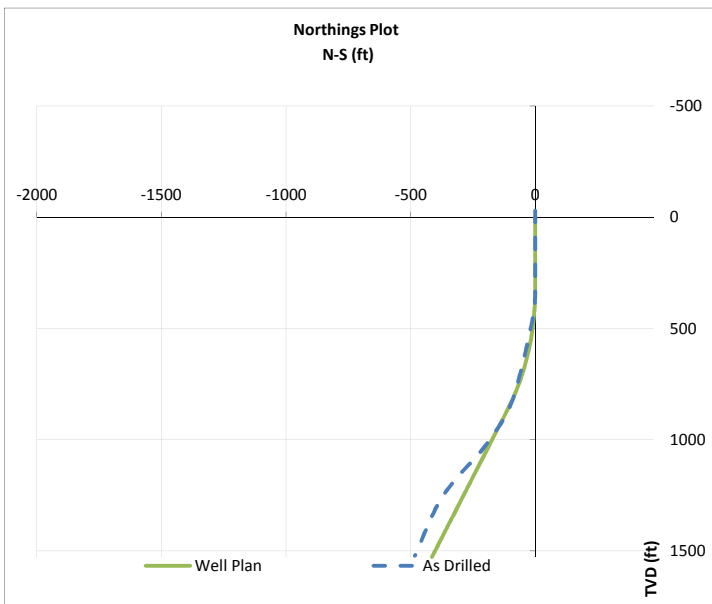
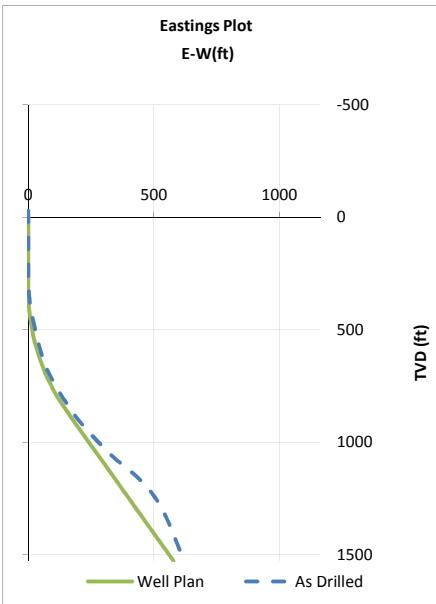
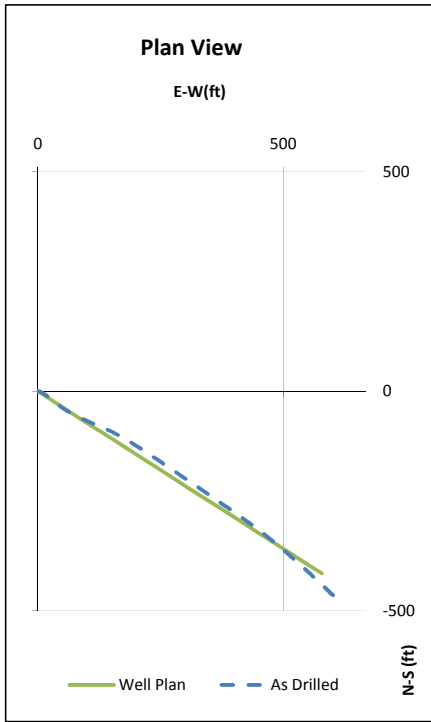
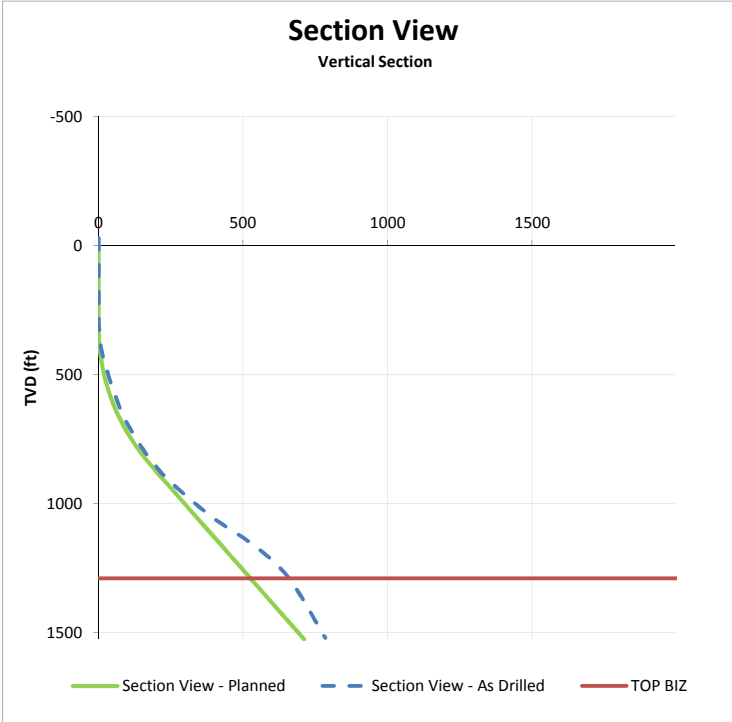
**Actual Survey Data**

Measured Depth ft	Bit Depth ft (MD +30 ft)	Inclination Angle degrees	Azimuth degrees	True Vertical Depth ft	North/South ft	East/West ft	Vertical Section ft	Dogleg Severity */100ft	Reference	Description	Time	Date
-30.00	0.00	0.00	0.00	-30.00	0.00	0.00	0.00	0.00	KB	RH	16.00	08/11/2011
282.00	312.00	0.00	0.00	282.00	0.00	0.00	0.00	0.00	Tag Cement	vertical	16.45	
296.00	326.00	2.74	0.00	295.99	0.33	0.00	0.33	19.57	KOP	build	17.10	
395.00	425.00	11.71	121.82	394.35	-2.61	8.58	8.49	13.49		straight	18.00	
490.00	520.00	14.90	135.14	486.81	-16.36	25.39	30.16	4.64		straight	19.15	
590.00	620.00	17.88	127.69	582.75	-34.86	46.61	58.20	3.64	build 40, straight	straight	20.40	
690.00	720.00	22.90	121.56	676.46	-54.45	75.36	92.97	5.45	build 60, straight	build	21.55	
820.00	850.00	34.55	113.51	790.31	-82.50	130.93	154.47	9.42		build	22.55	
870.00	900.00	34.55	119.70	831.51	-95.18	156.25	182.44	7.02		straight	23:38	
970.00	1000.00	41.25	126.64	910.41	-128.96	207.42	243.70	7.93		build	00:00	09/11/2011
1171.00	1201.00	51.35	127.32	1,049.09	-216.31	323.31	388.79	5.03		build	01:00	
1370.00	1400.00	54.13	128.98	1,169.57	-314.17	447.82	547.00	1.55		build	03:53	
1540.00	1570.00	31.95	139.49	1,293.20	-392.78	531.73	661.01	13.68	Back survey during POOH	drop	10:02	
1770.00	1800.00	25.97	131.83	1,494.42	-472.73	608.88	770.31	3.05		TD	09:40	
1800.00	N/A	25.97	131.83	1,520.66	-483.16	618.95	784.56	2.70	Extrapolated as a straight line			



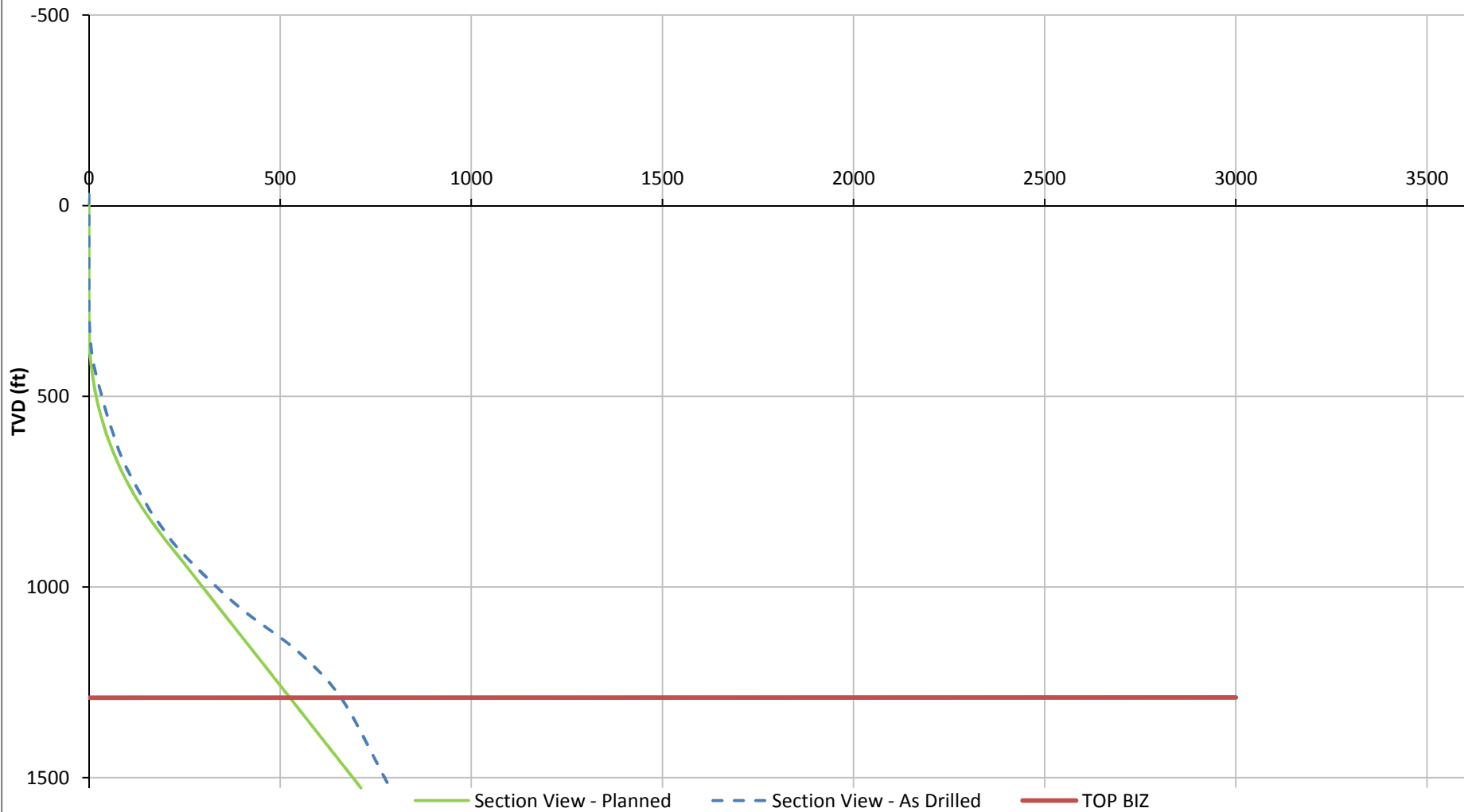
# Summary Well Plots

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature



# Section View

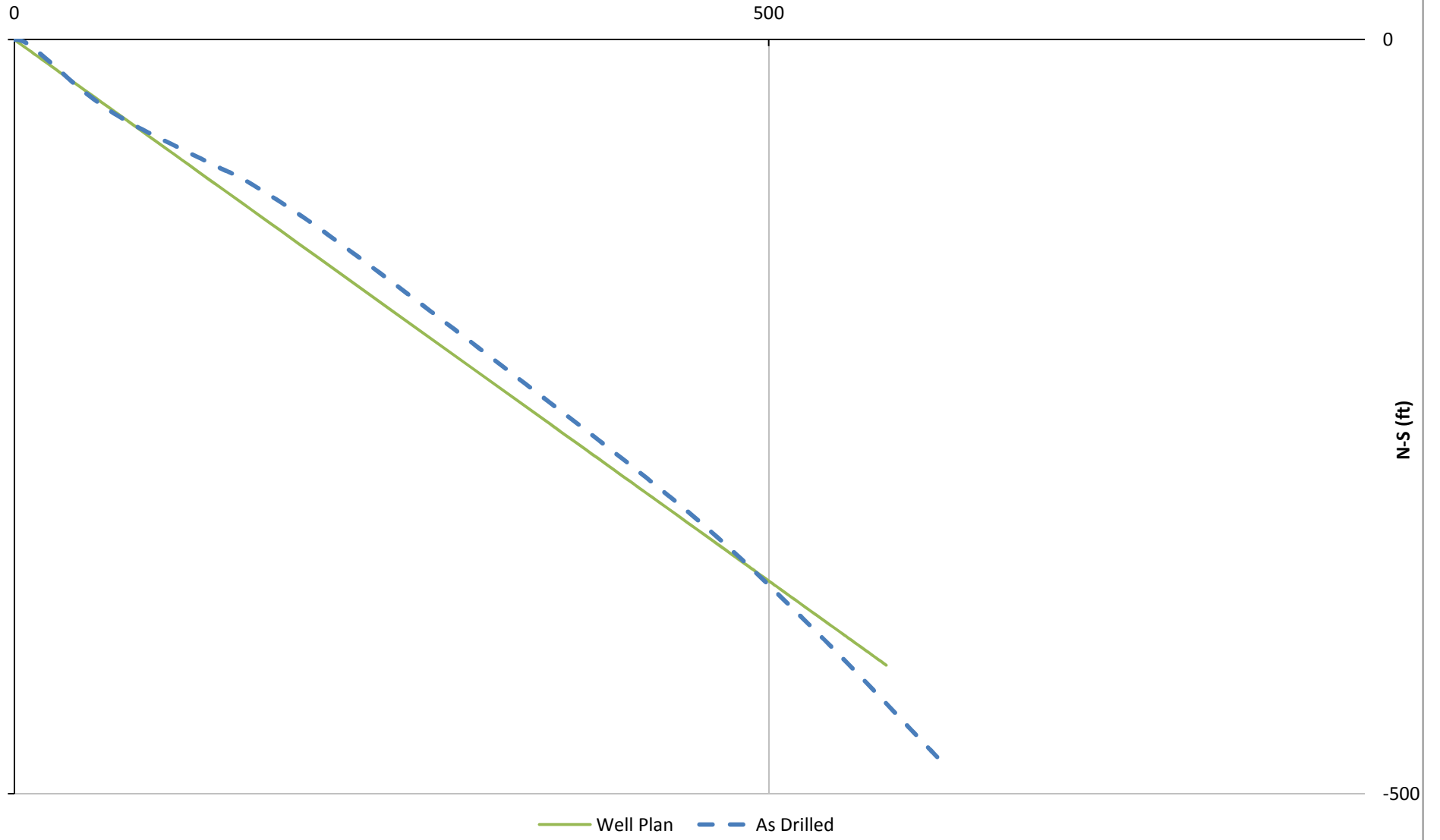
Vertical Section





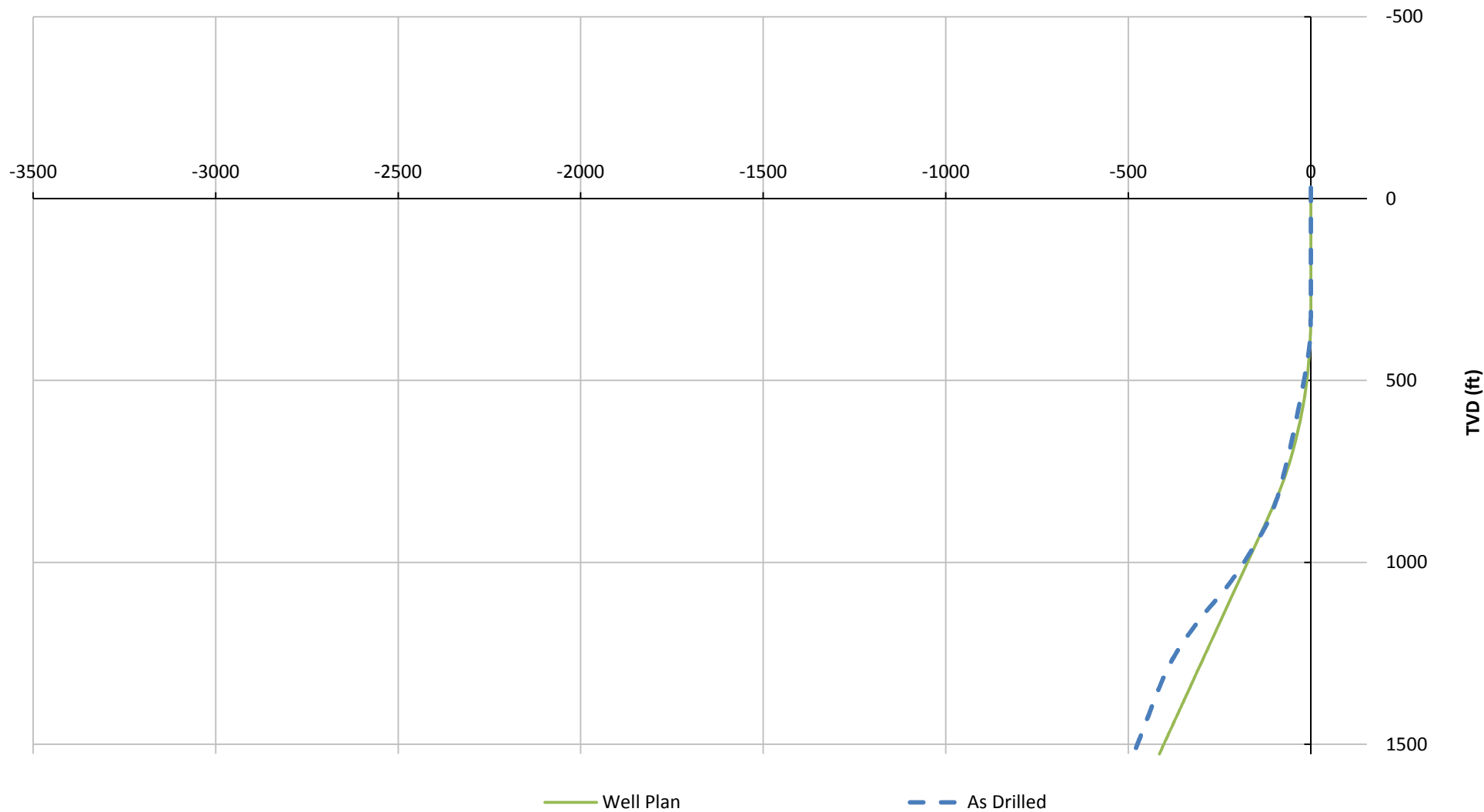
# Plan Plot

E-W(ft)



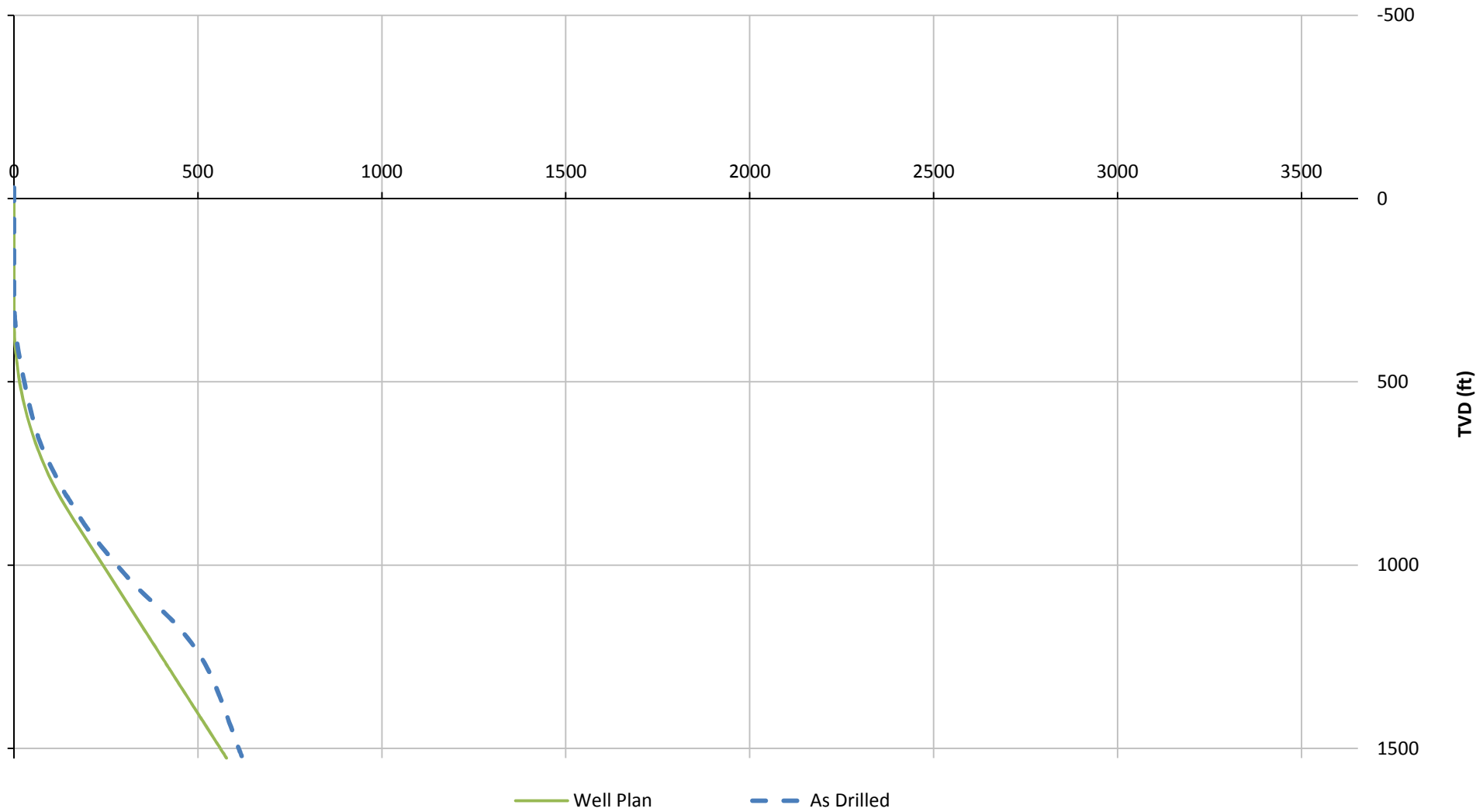
# Northings Plot

N-S (ft)



# Eastings Plot

E-W(ft)





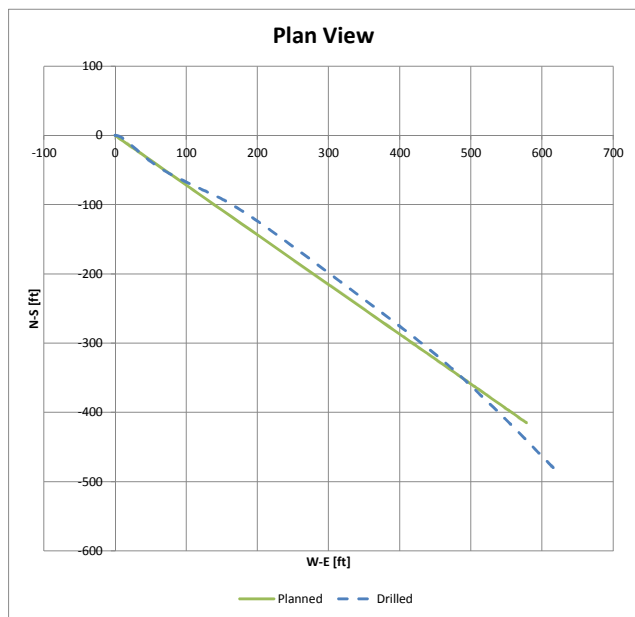
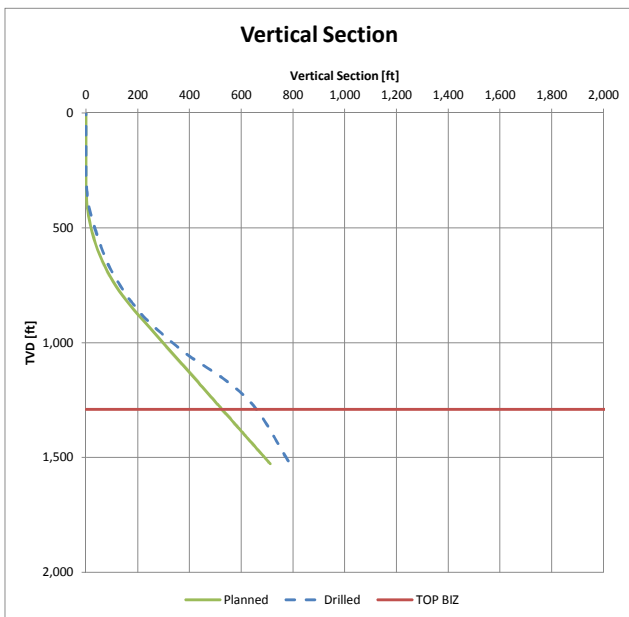
# Directional Drilling Morning Report

DATE: 09/11/2011  
TIME: 10:31

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	1.5
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Zimbleman	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Zimbleman 43-13D	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	6 1/4"	<b>North Reference:</b>	Gyro True North
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Survey Calculation Method:</b>	Minimum Curvature

## Event Log

Time	Date	Measured Depth [ft]	Description	Inclination	Azimuth	Pump Rate [GPM]	Mud Weight [PPG]
16:00	08/11/2011		Run in hole				
17:10		296.00	KOP				
19:15		520.00	Pull up 5ft, Circulate, Survey.	14.90	135.14	0.00	
20:40		620.00	Pull up 5ft, Circulate, Survey.	17.88	127.69	0.00	
21:18			Build curve for 65ft, then rotate for 35ft			300.00	
21:54		720.00	Pull up 5ft, Circulate, Survey	22.90	121.56	0.00	
22:00			Build curve for 100ft @ 0deg tool face, then rotate for 30ft			300.00	
23:00		850.00	Pull up 5ft, Circulate, Survey	34.55	113.51	0.00	
23:05			Build 20ft @ 35deg tool face, then rotate 30ft			300.00	
23:40		900.00	Pull up 5ft, Circulate, Survey	34.55	119.70	0.00	
23:52			Build curve for 60ft @ 30 deg tool face, then @0 deg tool face for 40 ft			300.00	
00:00	09/11/2011	1000.00	Pull up 5ft, Circulate, Survey	41.25	126.64	0.00	
00:30			build to 50 Inc and drill straight			300.00	
01:00		1200.00	Pull up 5ft, Circulate, Survey	51.35	127.32	0.00	
03:53		1400.00	Pull up 5ft, Circulate, Survey	54.13	128.98	0.00	
05:50			Slow penetration, beginning to stick, Pull out of zone				
06:00			Drill to TD and survey on POOH			300.00	
08:10		1800.00	TD				
09:40		1770.00	Survey on POOH	25.97	131.83		
10:02		1570.00	Survey on POOH	31.95	139.49		
10:10		0.00	POOH for Rig Down				





**Drilling Log**

Measured Depth ft	Bit Depth ft (MD +30 ft)	Inclination Angle degrees	Azimuth degrees	True Vertical Depth ft	North/South ft	East/West ft	Vertical Section ft	Dogleg Severity °/100ft	Reference	Description	Time	Date
-30.00	0.00	0.00	0.00	-30.00	0.00	0.00	0.00	0.00	KB	RIH		08/11/2011
282.00	312.00	0.00	0.00	282.00	0.00	0.00	0.00	0.00	Tag Cement	vertical	10:48	
296.00	326.00	2.74	0.00	295.99	0.33	0.00	0.33	19.57	KOP	build	02:24	
395.00	425.00	11.71	121.82	394.35	-2.61	8.58	8.49	13.49		straight	00:00	
490.00	520.00	14.90	135.14	486.81	-16.36	25.39	30.16	4.64		straight	03:36	
590.00	620.00	17.88	127.69	582.75	-34.86	46.61	58.20	3.64	build 40, straight	straight	09:36	
690.00	720.00	22.90	121.56	676.46	-54.45	75.36	92.97	5.45	build 60, straight	build	13:12	
820.00	850.00	34.55	113.51	790.31	-82.50	130.93	154.47	9.42		build	13:12	
870.00	900.00	34.55	119.70	831.51	-95.18	156.25	182.44	7.02		straight	23:38	
970.00	1000.00	41.25	126.64	910.41	-128.96	207.42	243.70	7.93		build	00:00	09/11/2011
1171.00	1201.00	51.35	127.32	1049.09	-216.31	323.31	388.79	5.03		build	01:00	
1370.00	1400.00	54.13	128.98	1169.57	-314.17	447.82	547.00	1.55		build	03:53	
1540.00	1570.00	31.95	139.49	1293.20	-392.78	531.73	661.01	13.68	Back survey during POOH	drop	10:02	
1770.00	1800.00	25.97	131.83	1494.42	-472.73	608.88	770.31	3.05		TD	09:40	
1800.00	N/A	25.97	131.83	1520.66	-483.16	618.95	784.56	2.70	Extrapolated as a straight line	0.00		