



KANSAS CORPORATION COMMISSION 1086143  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

Form Must Be Typed

Form must be Signed

All blanks must be Filled

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

OPERATOR: License # 33019  
Name: Rosewood Resources, Inc.  
Address 1: 2101 CEDAR SPRINGS RD, STE 1500  
Address 2: \_\_\_\_\_  
City: DALLAS State: TX Zip: 75201 + \_\_\_\_\_  
Contact Person: Tom Roelfs  
Phone: (214) 849-9300  
CONTRACTOR: License # 33532  
Name: Advanced Drilling Technologies LLC  
Wellsite Geologist: Steven VonFeldt  
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 #: \_\_\_\_\_

<u>11/08/2011</u>	<u>01/25/2012</u>	<u>01/26/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-181-20579-01-00

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

NW SE SW NE Sec. 7 Twp. 7 S. R. 39  East  West  
2161 Feet from  North /  South Line of Section  
1956 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Sherman

Lease Name: Davis Well #: 32-07H

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

Producing Formation: Niobrara

Elevation: Ground: 3588 Kelly Bushing: 3600

Total Depth: 2300 Plug Back Total Depth: 1309

Amount of Surface Pipe Set and Cemented at: 365 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: 5000 ppm Fluid volume: 200 bbls

Dewatering method used: Evaporated

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: Deanna Gerber Date: 07/03/2012



1086143

Operator Name: Rosewood Resources, Inc. Lease Name: Davis Well #: 32-07H  
 Sec. 7 Twp. 7 S. R. 39  East  West County: Sherman

**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 checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:  Gamma Ray	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name <u>Niobrara</u> Top <u>2078</u> Datum <u>KB</u>
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CASING RECORD <input checked="" 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
Surface	12.25	9.625	32	365	Neat	125	
Intermediate	8.625	7	17	1353	Neat	80	

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 (Amount and Kind of Material Used)	Depth
4			

TUBING RECORD: Size: <u>2.875</u> Set At: <u>2278</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>02/07/2012</u>	Producing Method: <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. _____ Gas Mcf <u>4</u> Water Bbls. _____	Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input checked="" 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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## Directional Drilling Report

**Drilling Report Number:** DDR-0004

**Customer:** Advanced Drilling Technologies

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

**Well Name:** Davis 32-07H

**Date:** 26/01/2012

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)  
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[www.coiledtubingdrilling.com](http://www.coiledtubingdrilling.com)



# Summary

<b>Customer:</b>	Advanced Drilling Technologies	<b>Local Co-ordinate Reference:</b>	GPS
<b>Project:</b>	Polaris Operational Trials	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Site:</b>	Davis	<b>MD Reference:</b>	Pason Bit Depth
<b>Well:</b>	Davis 32-07H	<b>North Reference:</b>	Gyro True North
<b>Bit &amp; Nozzle Size:</b>	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 9/32")	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Drill Motor:</b>	Hunting 5", 7/8, 4.5, 0.46RPG	<b>Tool Used:</b>	Polaris
<b>Motor Bend Angle:</b>	2.77 & 1.15	<b>Tool Name:</b>	Yellow (1642ft), Green (658ft)

## Well

<b>Northing [ft]:</b>		<b>Deviation In Azimuth Direction [ft]:</b>	1451.604531
<b>Easting [ft]:</b>		<b>Maximum Inclination:</b>	90.4
<b>SHL Latitude:</b>	39°21'14.2"N	<b>Survey Inclination Error:</b>	±0.15
<b>SHL Longitude:</b>	101°42'50.2"W	<b>Survey Azimuth Error:</b>	±3
		<b>Deviation from Plan at Zone Entry [ft]:</b>	107.07
		<b>Deviation from Plan at TD [ft]:</b>	105.68

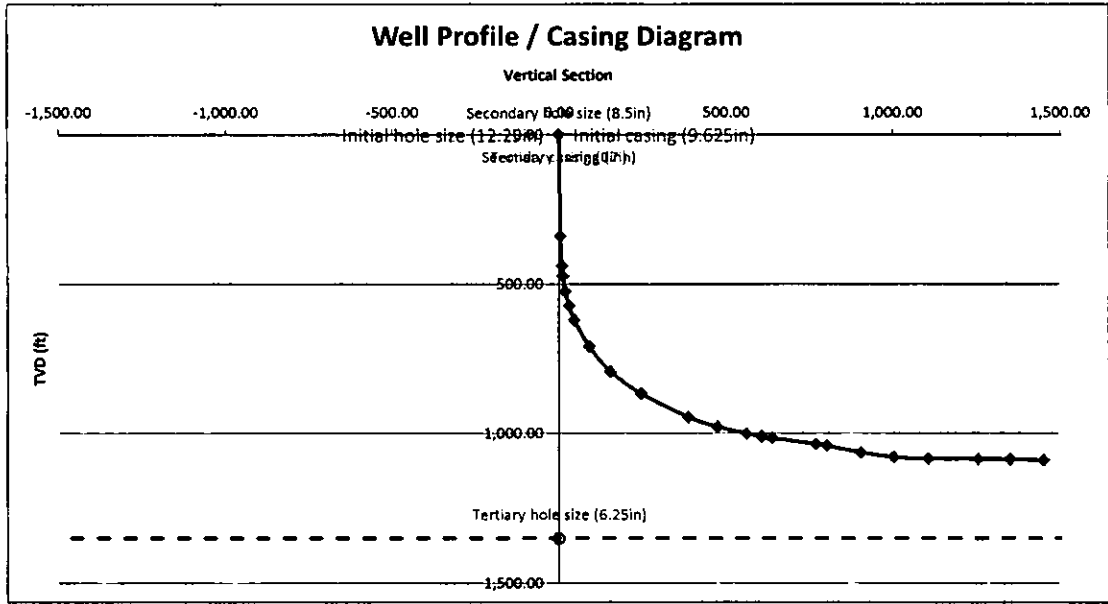


# Casing Diagram

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	2.77 & 1.15
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Davis	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Davis 32-07H	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 9/32")	<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		
365	12.25	9.625	29.3	J-55		Neat	
1350	8.5	7	6.538	J-55		Neat	

	Diameter (in)	Start Depth (TVD)	End Depth (TVD)
Initial hole size	12.250		365.0
Initial casing	9.625		365.0
Secondary hole size	8.500		1350.0
Secondary casing	7.000		1350.0
Tertiary hole size	6.250	1350.0	2300.0
Tertiary casing			





# Well Data

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<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	2.77 & 1.15
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Davis	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Davis 32-07H	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 9/32")	<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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### Formation Tops

Name	TVD [ft]	Data Points Direction	Distance [ft]	Dip distance (x) (Dip=1'/x)
TOP BIZ	1065		3000	337.25
BOTTOM BIZ	1093		3000	337.25

## Well Plan Data

Customer:	Advanced Drilling Technologies	Motor Bend Angle:	2.77 & 1.15
Project:	Polaris Operational Trials	Local Co-ordinate Reference:	GPS
Site:	Davis	TVD Reference:	Minimum Curvature Calculation
Well:	Davis 32-07H	MD Reference:	Pason Bit Depth
Bit & Nozzle Size:	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 9/32")	North Reference:	Gyro True North
Drill Motor:	Hunting 5", 7/8, 4.5, 0.46RPG	Survey Calculation Method:	Minimum Curvature

Final Bearing / Azimuth for section view (°)	347.64
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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
380.00	0.00	0.00	380.00	0.00	0.00	0.00	0.00	KOP	build	1
400.00	1.78	347.64	400.00	0.30	-0.07	0.31	8.89		build	1-2
500.00	10.67	347.64	499.31	10.88	-2.38	11.14	8.89		build	1-2
600.00	19.56	347.64	595.75	36.32	-7.96	37.19	8.89		build	1-2
700.00	28.45	347.64	687.01	76.02	-16.66	77.82	8.89		build	1-2
800.00	37.34	347.64	770.90	129.01	-28.27	132.08	8.89		build	1-2
900.00	46.23	347.64	845.39	194.04	-42.52	198.64	8.89		build	1-2
1000.00	55.12	347.64	908.70	269.52	-59.06	275.92	8.89		build	1-2
1100.00	64.01	347.64	959.31	353.66	-77.50	362.05	8.89		build	1-2
1200.00	72.90	347.64	996.00	444.42	-97.39	454.97	8.89		build	1-2
1223.64	75.00	347.64	1,002.54	466.62	-102.25	477.69	8.89	End Build	straight	2
1263.64	75.00	347.64	1,012.89	504.35	-110.52	516.32	0.00	Change Bit	build	3
1300.00	76.15	347.64	1,021.95	538.75	-118.06	551.53	3.16		build	3-4
1400.00	79.31	347.64	1,043.20	634.19	-138.97	649.24	3.16		build	3-4
1500.00	82.47	347.64	1,059.03	730.63	-160.10	747.96	3.16		build	3-4
1550.98	84.08	347.64	1,065.00	780.08	-170.94	798.59	3.16	Top of BIZ	build	3-4
1600.00	85.63	347.64	1,069.40	827.77	-181.39	847.41	3.16		build	3-4
1700.00	88.79	347.64	1,074.26	925.32	-202.77	947.28	3.16		build	3-4
1725.67	89.60	347.64	1,074.63	950.39	-208.26	972.94	3.16	End Build	straight	4
1800.00	89.60	347.64	1,075.14	1,023.00	-224.17	1,047.28	0.00		straight	4-5
1900.00	89.60	347.64	1,075.84	1,120.68	-245.58	1,147.27	0.00		straight	4-5
2000.00	89.60	347.64	1,076.54	1,218.36	-266.98	1,247.27	0.00		straight	4-5
2100.00	89.60	347.64	1,077.24	1,316.04	-288.39	1,347.27	0.00		straight	4-5
2200.00	89.60	347.64	1,077.94	1,413.72	-309.79	1,447.27	0.00		straight	4-5
2300.00	89.60	347.64	1,078.64	1,511.40	-331.20	1,547.26	0.00		straight	4-5
2400.00	89.60	347.64	1,079.33	1,609.08	-352.60	1,647.26	0.00		straight	4-5
2500.00	89.60	347.64	1,080.03	1,706.76	-374.01	1,747.26	0.00		straight	4-5
2600.00	89.60	347.64	1,080.73	1,804.44	-395.41	1,847.26	0.00		straight	4-5
2700.00	89.60	347.64	1,081.43	1,902.12	-416.82	1,947.25	0.00	TD	End straight	5

## Drilling Data

Customer:	Advanced Drilling Technologies	Motor Bend Angle:	2.77 & 1.15
Project:	Polaris Operational Trials	Local Co-ordinate Reference:	GPS
Site:	Davis	TYD Reference:	Minimum Curvature Calculation
Well:	Davis 32-07H	MD Reference:	Pason Bit Depth
Bit & Nozzle Size:	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 + 9/32")	North Reference:	Gyro True North
Drill Motor:	Hunting 5", 7/8, 4.5, 0.46RPG	Survey Calculation Method:	Minimum Curvature

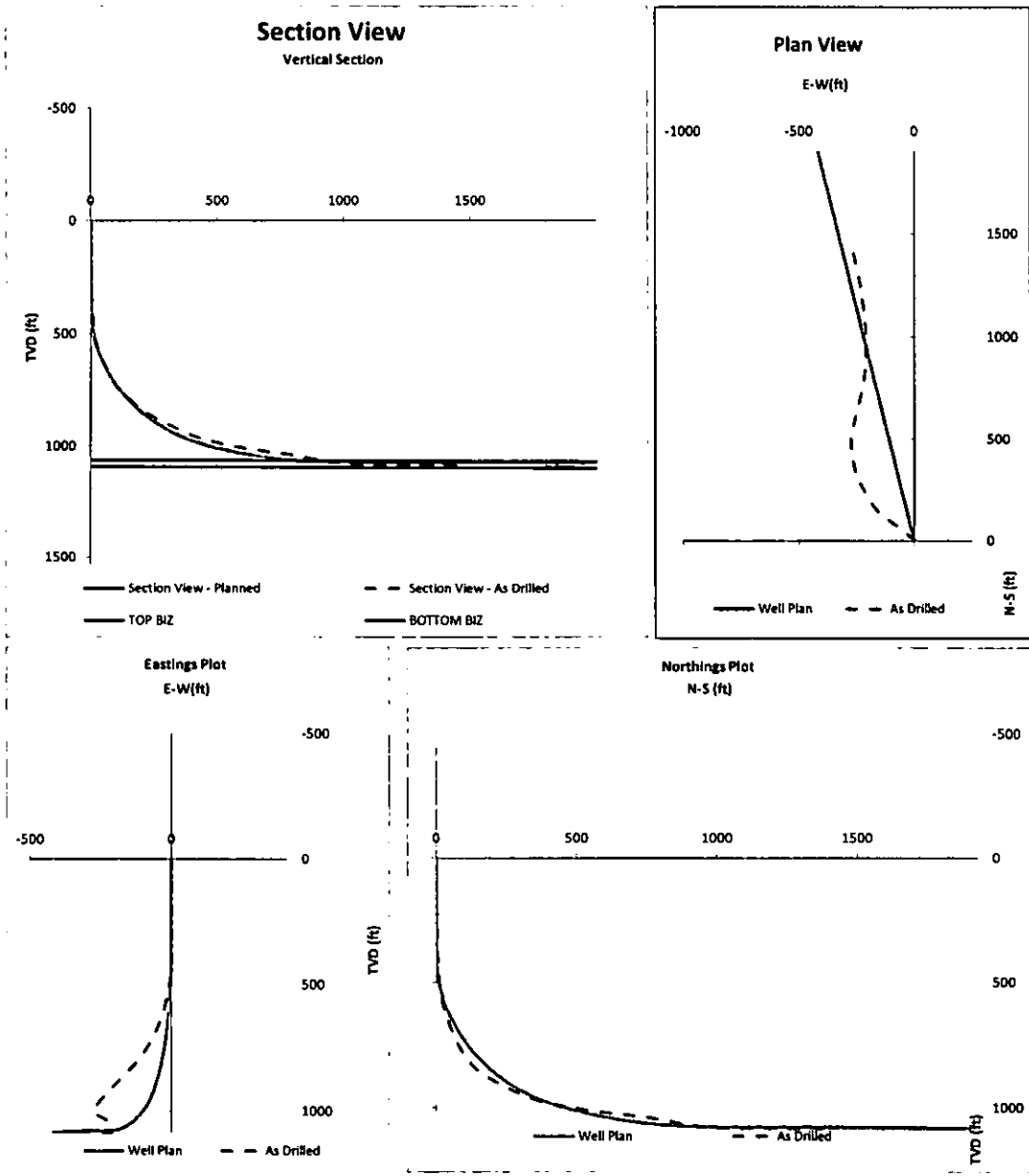
Final Bearing / Azimuth for section view (")	347.64
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Actual Survey Data													
Measured Depth ft	Bit Depth ft (MD +30 ft)	Inclination Angle degrees	Azimuth degrees	True Vertical Depth ft	North/South ft	East/West ft	Vertical Section ft	Dogleg Severity "/100ft	Reference	Description	Time	Date	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RH	R8	09:30	22/01/2012	
340.00	370.00	1.47	0.00	339.96	4.36	0.00	4.36	0.43	Out of Casing	vertical	10:17		
440.00	470.00	3.81	347.53	439.85	8.89	-0.72	8.92	2.40	Hole Bottom	vertical	10:49		
475.00	505.00	7.31	299.46	474.70	11.12	-2.91	11.50	15.82		build	11:19		
525.00	555.00	11.07	299.32	523.98	15.13	-10.21	18.25	9.13		build	12:08		
575.00	605.00	16.98	313.82	572.47	22.60	-19.98	30.17	12.55		build	12:56		
625.00	655.00	21.76	312.70	619.59	33.93	-32.05	46.67	9.83		build	13:25		
725.00	755.00	30.73	311.59	709.18	63.53	-64.86	90.79	8.96		build	14:44		
830.00	860.00	44.07	308.17	792.42	104.09	-113.85	154.26	12.85		build	15:59		
948.00	978.00	58.07	323.40	866.65	170.32	-176.37	245.18	15.57		build	17:15		
1119.00	1149.00	65.85	342.34	945.64	301.09	-242.04	386.31	10.94		build	20:46		
1219.00	1249.00	75.96	348.29	978.34	392.38	-265.78	473.92	11.55		build	22:14		
1319.00	1349.00	78.42	1.21	1,000.60	489.25	-274.63	561.06	12.83		build	23:30		
1372.00	1402.00	81.34	10.94	1,010.46	543.99	-268.78	606.77	17.88	Through Plug - Air switch	build	16:00	24/01/2012	
1412.00	1442.00	83.45	13.55	1,015.76	582.73	-260.37	638.25	8.35	First survey with air	Straight	19:17		
1570.00	1600.00	82.00	11.20	1,035.89	736.77	-226.57	770.82	1.73		Straight	22:41		
1686.00	1716.00	79.51	9.57	1,041.68	771.72	-220.16	802.51	8.23		walk	11:23	25/01/2012	
1718.00	1748.00	77.87	1.91	1,063.67	880.90	-209.17	905.39	6.87	In Zone	walk	13:00		
1823.00	1853.00	84.70	359.25	1,079.27	982.64	-208.17	1,004.44	7.10		build	14:15		
1925.00	1955.00	88.83	354.42	1,085.14	1,086.27	-213.73	1,107.10	5.96		Straight	17:09		
2074.00	2104.00	90.45	352.02	1,086.14	1,234.21	-231.32	1,255.70	2.15		Straight	19:31		
2169.00	2199.00	88.28	348.03	1,087.24	1,327.71	-247.94	1,350.66	4.58		Straight	02:54	26/01/2012	
2270.00	2300.00	88.32	348.94	1,090.23	1,426.63	-268.10	1,451.60	0.91	TD	TD	04:43		



## Summary Well Plots

<b>Customer:</b>	Advanced Drilling Technologies	<b>Motor Bend Angle:</b>	2.77 & 1.15
<b>Project:</b>	Polaris Operational Trials	<b>Local Co-ordinate Reference:</b>	GPS
<b>Site:</b>	Davis	<b>TVD Reference:</b>	Minimum Curvature Calculation
<b>Well:</b>	Davis 32-07H	<b>MD Reference:</b>	Pason Bit Depth
<b>Bit &amp; Nozzle Size:</b>	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 9/32")	<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

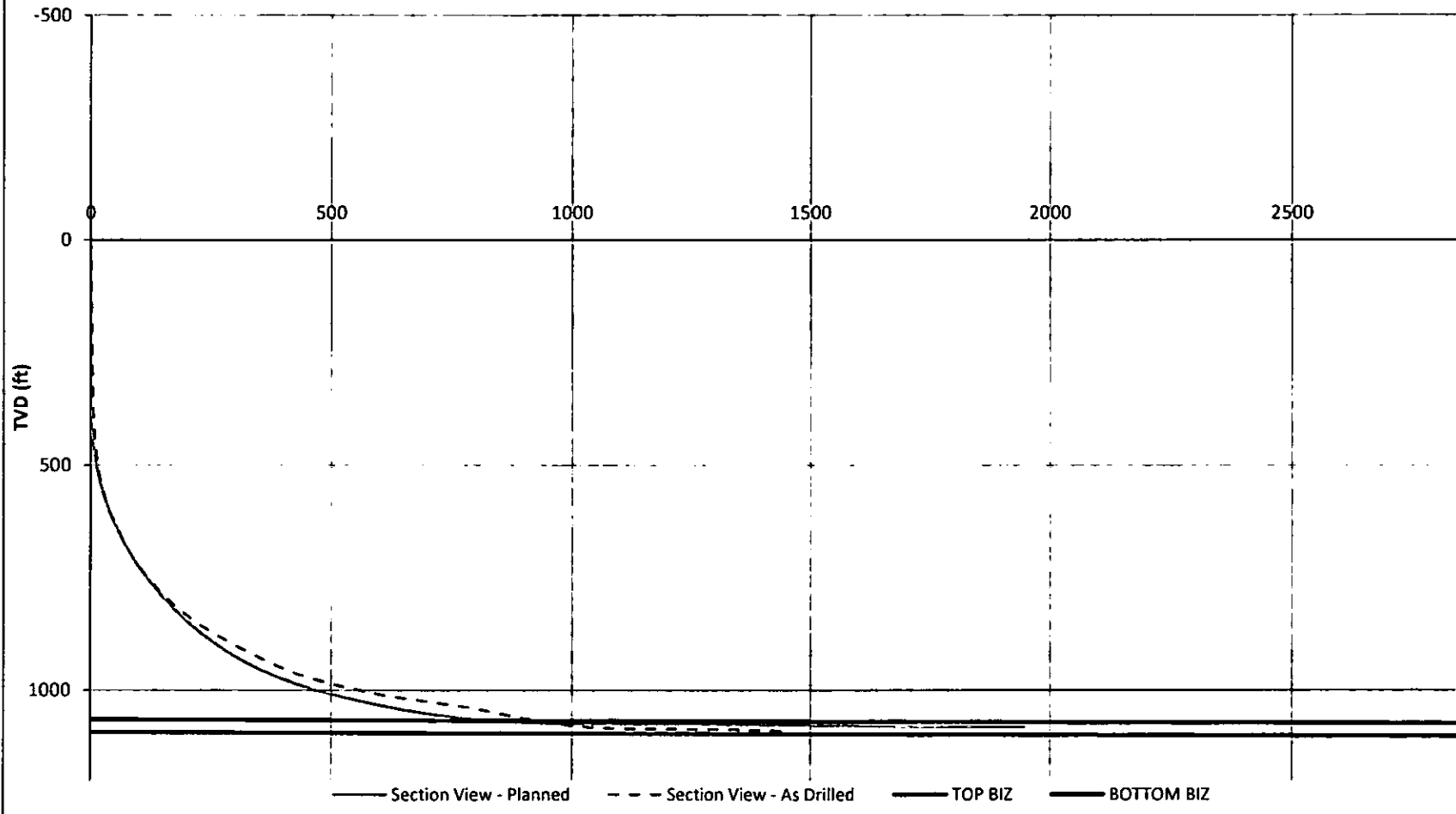




# Section View



Vertical Section

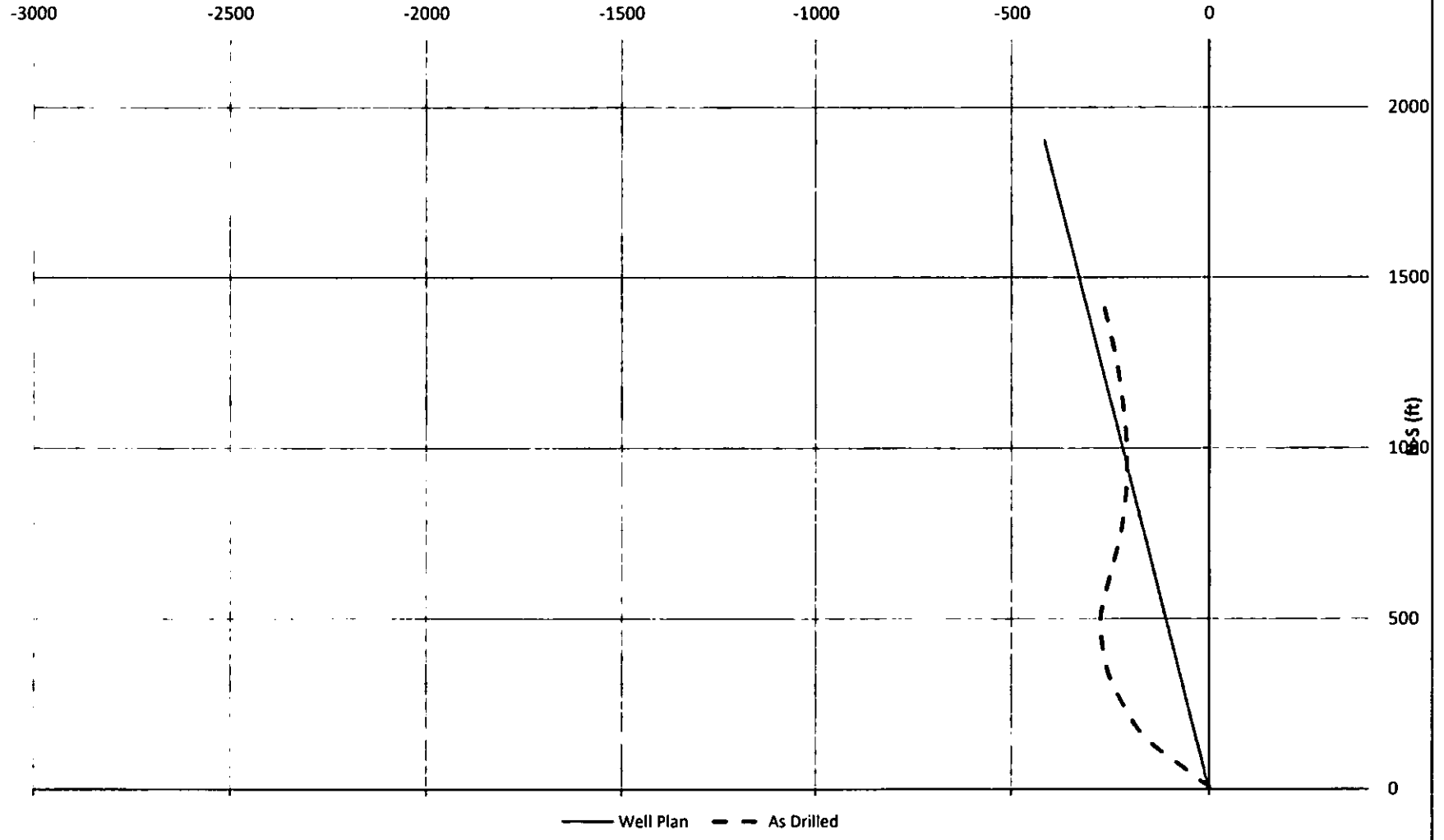


AnTech™

# Plan Plot

E-W(ft)

ADVANCED  
DRILLING

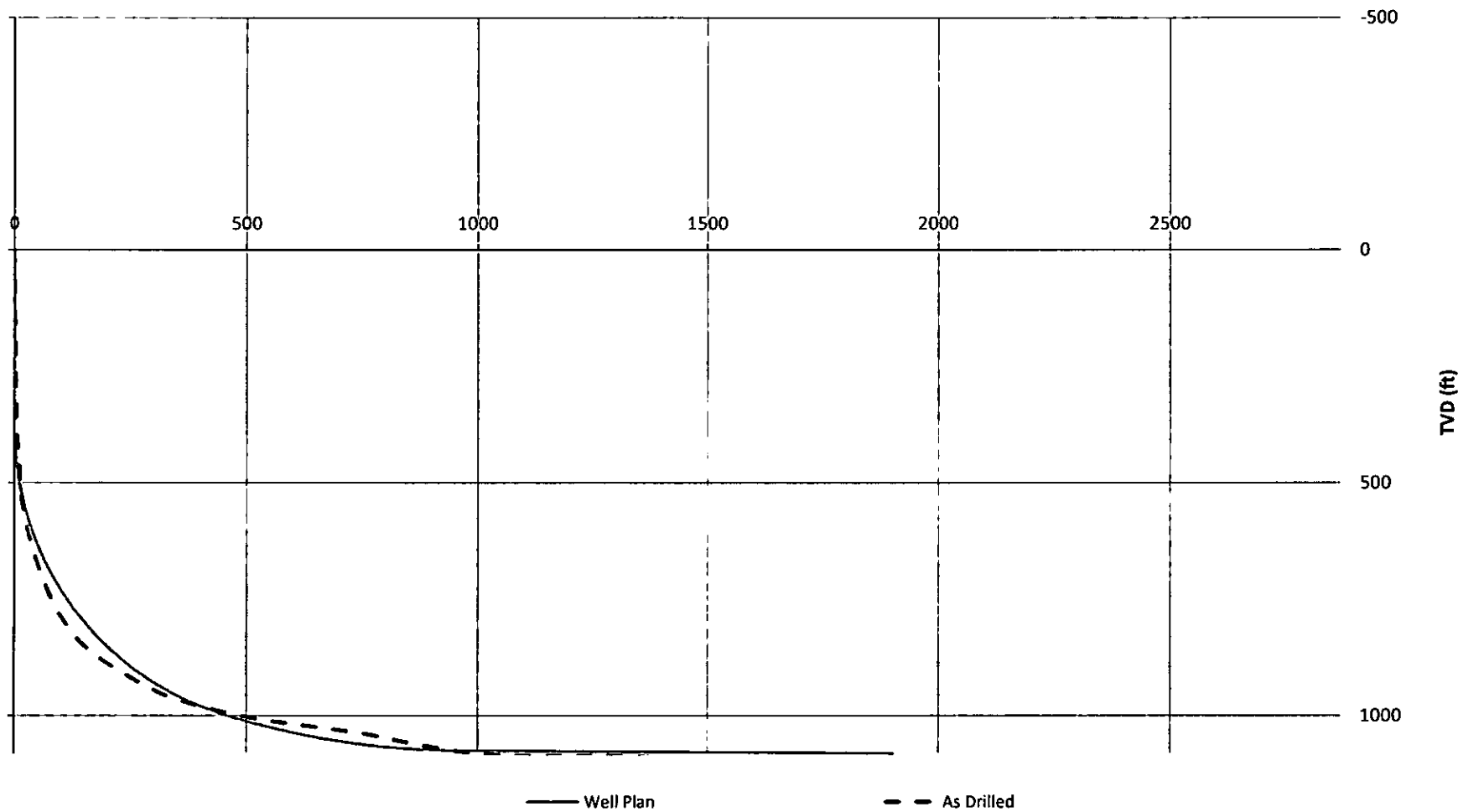


AnTech™

# Northings Plot

ADVANCED  
DRILLING

N-S (ft)

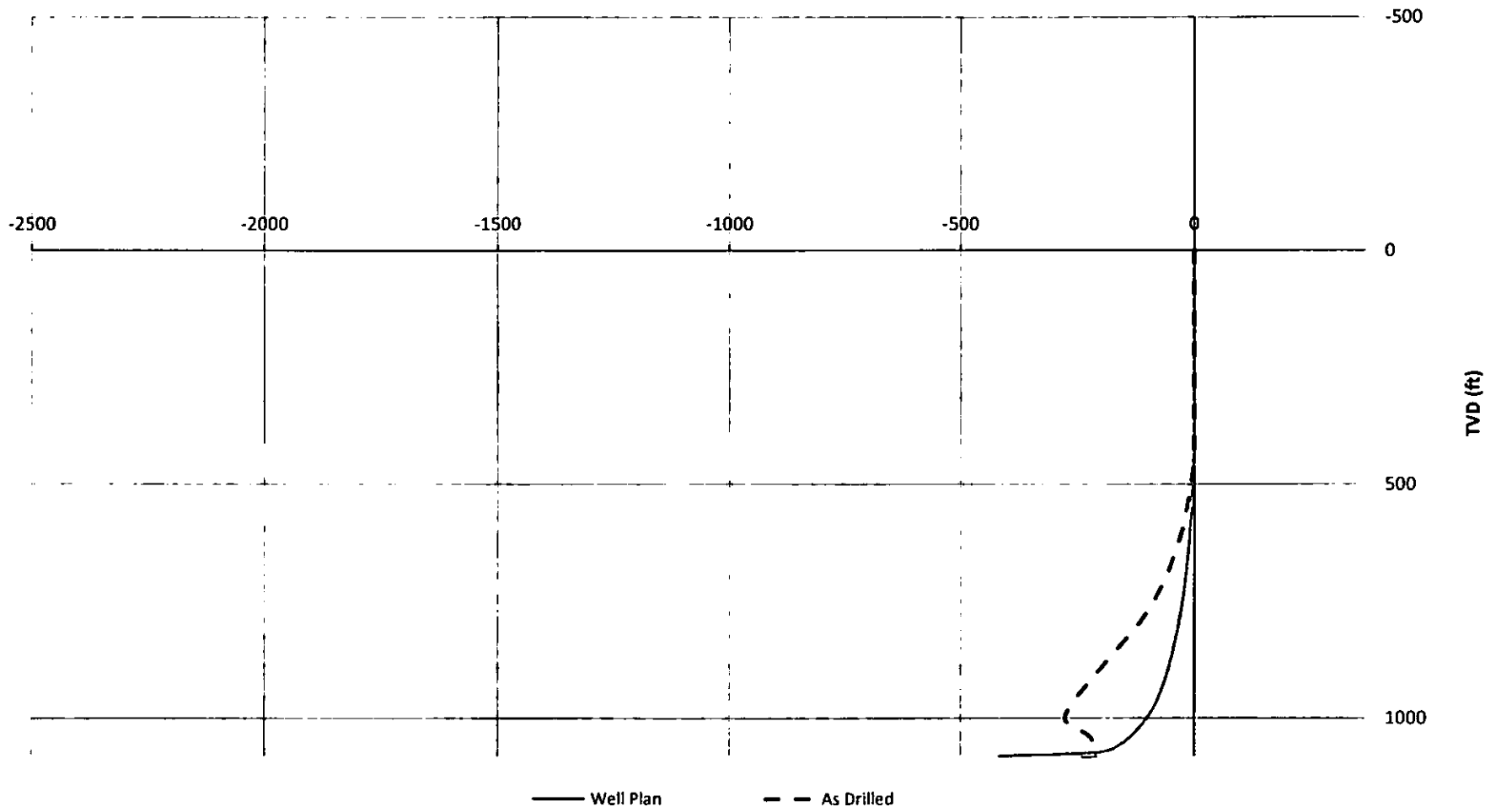


**AnTech**

# Eastings Plot

**ADVANCED  
DRILLING**

E-W(ft)

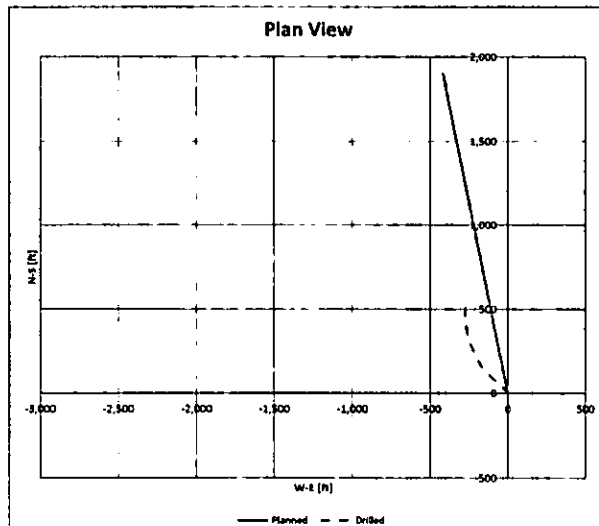
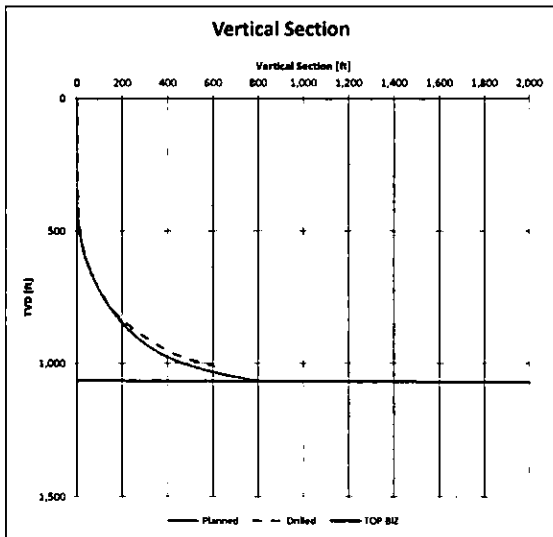


## Directional Drilling Morning Report

DATE: 23/01/2012  
TIME: 01:32

Customer:	Advanced Drilling Technologies	Motor Bend Angle:	2.77 & 1.15
Project:	Polaris Operational Trials	Local Co-ordinate Reference:	GPS
Site:	Davis	TVD Reference:	Minimum Curvature Calculation
Well:	Davis 32-07H	MD Reference:	Pason Bit Depth
Bit & Nozzle Size:	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32"), 6 x 1	North Reference:	Gyro True North
Drill Motor:	Hunting 5", 7/8, 4.5, 0.46RPG	Survey Calculation Method:	Minimum Curvature

Time	Date	Measured Depth [ft]	Description	Inclination	Azimuth	Pump Rate [GPM]	Mud Weight [PPG]
09:30	23/01/2012	0.00	RIH	0.00	0.00	137.00	
10:17		370.00	Out of casing survey	1.47	105.55	0.00	8.30
10:18		370.00	Continue to run in whilst circulating	N/A	N/A	274.00	8.30
10:42		470.00	Touch bottom, pull up 5 ft, survey to log hole and confirm azimuth rotate toolface and survey	3.81	102.09	0.00	8.30
10:49		470.00	Toolface at 347 deg, drill to 510, pull up 5ft and survey	3.50	88.56	0.00	8.30
11:19		505.00	Survey	7.31	299.48	0.00	8.30
11:20		505.00	Set toolface to around 45 deg, Drill on 50ft, twist CC @ KO, compensate to 30 deg	N/A	N/A	311.00	8.30
12:08		555.00	Survey - Short on build and azimuth, next stage 25ft at 45 deg, 25ft at 10 deg max	11.87	298.82	0.00	8.30
12:56		605.00	Survey	16.88	313.82	0.00	8.30
13:00		605.00	Build at 30 deg, massive CC kick off to 270 deg tool face, took 2-3 min to correct	N/A	N/A	312.00	8.30
13:37		655.00	Pull up 5ft and survey	21.78	312.70	0.00	8.60
13:38		655.00	Build at around 5-10 deg. Massive CC kick off again	N/A	N/A	312.00	8.60
14:44		755.00	Survey	30.73	311.59		
14:45		755.00	Build at 55 deg for 50ft, then build at 30 deg max for 50ft				
15:59		860.00	Survey	44.07	308.17	314.00	8.60
16:05		860.00	Build at 55 deg for 75ft, then build at 30 deg for 65ft				
17:09		978.00	Drilling stopped. No diff. Pull up to survey and try to clean bit				
17:15		978.00	Survey	58.07	323.60	317.00	8.80
17:27		978.00	Correct for azimuth at around 75 deg toolface while maintaining build as per plan to 1150ft				
18:45		1101.00	Wiper trip to 900ft. Stop 5ft off bottom for survey			318.00	8.80
20:47		1150.00	Touch bottom and pull up post wiper trip. Survey	65.86	342.38		
22:14		1245.00	Survey	75.96	348.29		8.70
22:16		1245.00	Correct for azimuth, build to aim for 80 deg at 1450ft			314.00	8.70
23:30		1345.00	Survey	78.42	1.21	314.00	8.80
23:40		1345.00	Build to 80 deg and rotate to intermediate TD			296.00	8.80
00:58	23/01/2012	1444.00	Survey	82.80	1.16		
01:03		1444.00	Intermediate TD. PDOH: Change Bit to 6.25". Change Motor Bend to 1.15. Case +Cement				



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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		RD	09:30	22/01/2012
140.00	170.00	1.47	0.00	339.94	4.36	0.00	4.36	0.43		Out of Casing	vertical	10:17
440.00	470.00	3.81	347.52	439.85	6.89	-0.72	8.92	2.40		Hole Bottom	vertical	10:49
475.00	505.00	7.31	299.48	474.70	11.32	-2.91	11.50	18.82			Build	11:29
525.00	555.00	11.07	298.32	523.89	15.13	-10.21	18.25	9.13			Build	12:08
575.00	605.00	16.88	313.82	572.42	22.60	-19.98	30.17	12.55			Build	12:56
625.00	655.00	21.78	312.70	619.59	33.93	-32.05	46.67	9.83			Build	13:29
725.00	755.00	30.73	311.59	709.18	63.53	-64.84	90.79	6.94			Build	14:44
820.00	840.00	44.07	308.17	792.42	104.09	-113.85	194.24	12.85			Build	15:59
940.00	970.00	58.07	323.60	844.65	170.32	-174.37	245.18	19.57			Build	17:19
1115.00	1145.00	69.85	342.18	945.64	301.09	-242.64	386.31	10.94			Build	20:46
1215.00	1245.00	75.96	348.29	978.34	392.38	-265.78	473.92	11.55			Build	22:14
1315.00	1345.00	78.42	1.21	1000.60	489.25	-274.63	561.06	12.83			Build	23:30
1371.00	1401.00	81.34	10.94	1010.46	543.99	-268.78	606.77	17.83	Through P11g - All ewitch	Build	16:00	24/01/2012



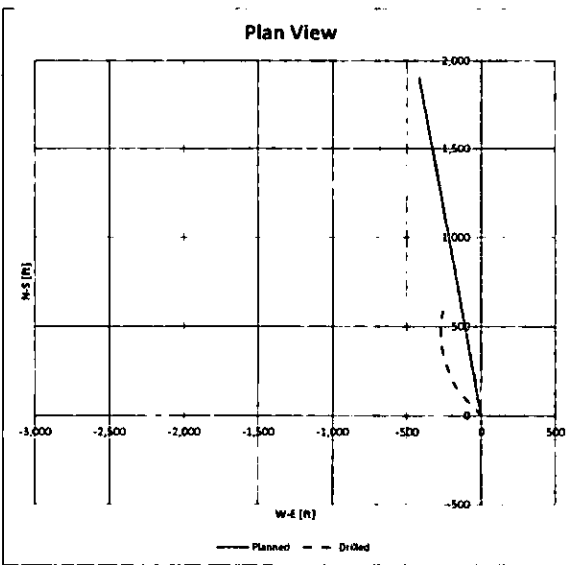
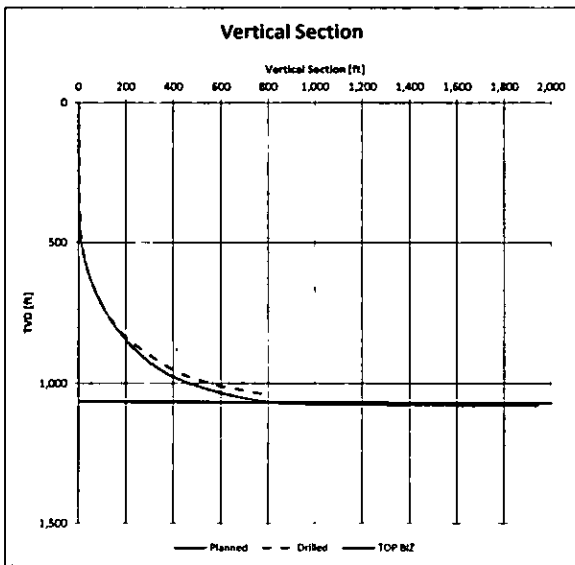
# Directional Drilling Morning Report

DATE: 25/01/2012  
TIME: 07:44

Customer:	Advanced Drilling Technologies	Motor Bend Angle:	2.77 & 1.15
Project:	Polaris Operational Trials	Local Co-ordinate Reference:	GPS
Site:	Davis	TVD Reference:	Minimum Curvature Calculation
Well:	Davis 32-07H	MD Reference:	Pason Bit Depth
Bit & Nozzle Size:	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32", 6 x 1	North Reference:	Gyro True North
Drill Motor:	Hunting 5", 7/8, 4.5, 0.46RPG	Survey Calculation Method:	Minimum Curvature

**Event Log**

Time	Date	Measured Depth [ft]	Description	Inclination	Azimuth	Pump Rate [GPM]	Mud Weight [PPG]
12:45	24/01/2012	51.00	RIH	N/A	N/A		
15:30		1351.00	Clear casing, build to pull azimuth towards 347			228.00	
16:04		1401.00	Survey	81.34	10.94	N/A	N/A
16:09		1401.00	Unable to unload fluid, trip back to 800 before switching to mist	N/A	N/A		
17:30		800.00	Blow out fluid column using mist mix - 1 compressor used (900 cfm) equivalent mud weight 0.01 -	N/A	N/A	N/A	N/A
18:00		800.00	RIH Using air (1 compressor) to blow out remaining fluid column	N/A	N/A	N/A	N/A
18:20		960.00	Rotate orienter whilst RIH to prevent mud motor stall				
19:00		1400.00	Continue to rotate orienter to go straight 50 ft				
19:37		1441.00	Clear hole and survey	83.45	13.55		
20:17		1450.00	Rotate orienter to drill straight 150 ft	N/A	N/A		
21:53		1500.00	Trip back to 1500 to release pressure and clean hole, back on bottom @ 22:11				
22:41		1600.00	Survey	82.00	11.20		
22:50		1600.00	Drop to get closer to zone and turn into planned lateral				
23:10		1642.00	Loss of power and comms to tool. POOH				
07:30	25/01/2012	0.00	Second Tool rigged up ready to RIH				







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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KB		
140.00	370.00	1.47	0.00	339.96	4.36	0.00	4.36	0.43	Out of Casing	vertical		
440.00	470.00	3.81	347.52	439.85	8.89	-0.72	8.92	2.40	Hole Bottom	vertical		
475.00	505.00	7.31	299.48	474.70	11.12	-2.91	11.50	15.82		build	11:19	
525.00	555.00	11.87	298.32	523.98	15.13	-10.21	18.25	9.13		build	12:08	
575.00	605.00	16.88	313.82	572.42	22.60	-19.98	30.17	12.55		build	12:16	
625.00	655.00	21.78	312.70	619.59	33.93	-32.05	46.67	9.83		build	13:25	
725.00	755.00	30.73	311.59	709.18	63.53	-64.86	80.78	8.86		build	14:44	
830.00	860.00	44.07	308.17	792.42	104.09	-113.85	154.26	12.85		build	18:59	
848.00	878.00	58.07	323.40	866.65	170.32	-176.37	245.18	15.57		build	17:28	
1115.00	1145.00	65.85	342.38	945.44	301.09	-242.04	384.31	10.54		build	20:46	
1215.00	1245.00	75.96	348.29	978.34	392.38	-265.78	473.92	11.55		build	22:14	
1315.00	1345.00	78.42	1.21	1000.60	489.25	-274.63	563.06	12.81		build	23:30	
1371.00	1401.00	81.34	10.94	1010.46	543.99	-268.78	606.77	17.88	Through Plug Air switch	build	14:00	
1421.00	1441.00	83.45	13.55	1016.76	582.73	-260.37	638.25	8.35	First survey with air	Straight	19:37	
1870.00	1600.00	82.80	11.20	1035.89	736.77	-226.57	770.82	1.73		Straight	22:41	



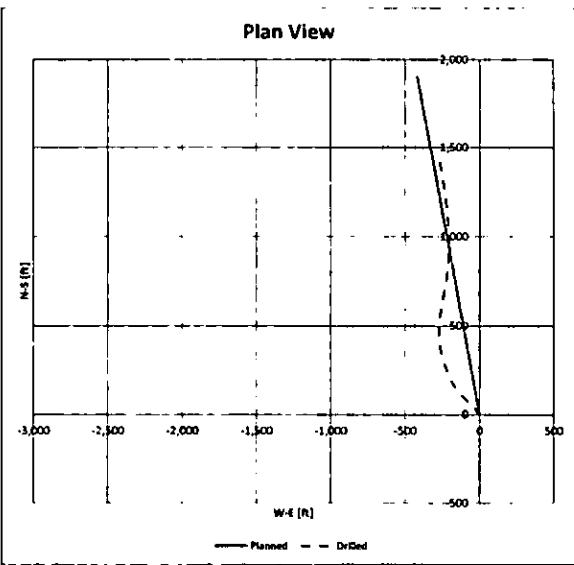
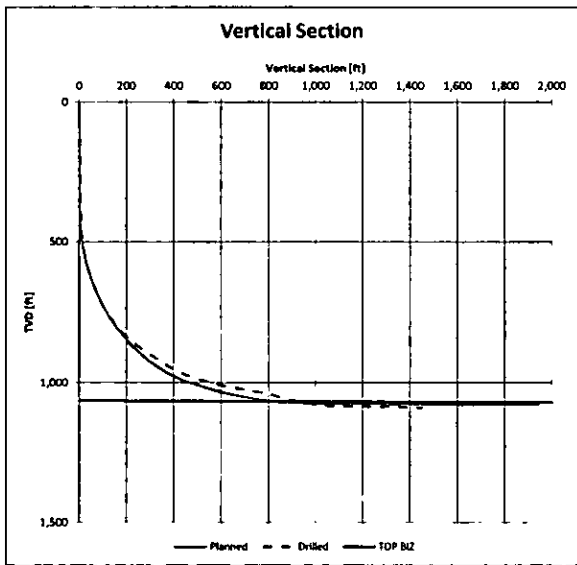
# Directional Drilling Morning Report

DATE: 26/01/2012  
TIME: 04:48

Customer:	Advanced Drilling Technologies	Motor Bend Angle:	2.77 & 1.15
Project:	Polaris Operational Trials	Local Co-ordinate Reference:	GPS
Site:	Davis	TVD Reference:	Minimum Curvature Calculation
Well:	Davis 32-07H	MD Reference:	Pason Bit Depth
Bit & Nozzle Size:	8.5" PDC (6 x 10/32"), 6.25" PDC (3 x 12/32"), 6 x 1	North Reference:	Gyro True North
Drill Motor:	Hunting S*, 7/8, 4.5, D.46RPG	Survey Calculation Method:	Minimum Curvature

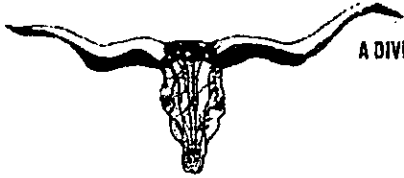
**Event Log**

Time	Date	Measured Depth [ft]	Description	Inclination	Azimuth	Pump Rate [GPM]	Mud Weight [PPG]
07:50	25/01/2012		RH				
11:23		1636.00	Back on bottom. Survey	79.51	9.57		
11:45		1636.00	Drill to 1750ft. Aim to be in zone at end of leg				
13:00		1748.00	Survey	77.87	1.90		
13:09		1748.00	Build to 89.6 degrees to enter straight lateral				
14:14		1851.00	Survey	84.70	359.25		
14:35		1851.00	Continue build to 89.6 degrees and hold while correcting azimuth				
15:30		1955.00	Wiper trip to 1760ft				
17:07		1955.00	Survey	88.83	354.62		
17:17		1955.00	Walk 50ft west @ 270 deg then rotate straight for 100 ft				
19:31		2104.00	Survey	90.40	351.82		
19:46		2104.00	Walk 50 ft West @ 220 deg then rotate straight for 50 ft				
20:17		2130.00	Wiper trip to 1351ft				
02:51	26/01/2012	2199.00	Survey	88.28	348.02		
02:55		2199.00	Build for 50ft then rotate 50ft				
04:43		2300.00	Survey at TD	88.32	348.94		
04:45			PDOH, 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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	R1X	RD	09:30	22/01/2012
140.00	170.00	1.47	0.00	329.96	4.36	0.00	4.36	0.43	Out of Casing	vertical	10:17	
440.00	470.00	3.83	347.52	439.85	8.89	-0.72	8.92	2.40	Hole Bottom	vertical	10:49	
475.00	505.00	7.31	299.48	474.70	11.12	-2.91	11.50	15.02		build	11:19	
525.00	555.00	11.87	298.32	523.94	15.13	-10.21	16.25	9.13		build	12:08	
575.00	605.00	16.88	313.82	572.42	22.60	-19.98	30.17	12.58		build	12:56	
625.00	655.00	21.78	312.70	619.59	33.93	-32.05	46.67	9.83		build	13:25	
725.00	755.00	30.73	311.59	709.18	63.53	-54.86	90.79	3.96		build	14:44	
830.00	860.00	44.07	309.17	792.42	104.09	-113.85	154.26	12.85		build	15:58	
948.00	978.00	58.07	323.60	866.65	170.32	-176.37	245.18	15.57		build	17:15	
1118.00	1148.00	65.85	342.38	945.64	301.09	-242.04	386.31	10.94		build	20:46	
1215.00	1245.00	75.94	348.29	978.34	392.38	-265.78	473.92	11.85		build	22:14	
1315.00	1345.00	78.42	1.21	1000.60	489.25	-274.63	561.06	12.83		build	23:30	
1371.00	1401.00	81.34	10.94	1010.46	543.99	-268.78	606.77	17.88	Through Plug Air switch	build	16:00	24/01/2012
1411.00	1441.00	83.45	13.55	1015.76	582.73	-260.37	638.25	8.35	First survey with air	Straight	19:17	
1570.00	1600.00	82.00	11.20	1035.89	736.77	-226.57	770.82	1.73		Straight	22:41	
1606.00	1636.00	79.51	9.57	1041.68	771.72	-220.16	802.81	8.23		walk	11:23	25/01/2012
1718.00	1748.00	77.87	1.90	1063.67	880.90	-209.17	908.39	6.87	In Zone	walk	13:00	
1821.00	1851.00	84.70	359.25	1079.27	982.64	-208.17	1004.44	7.10		build	14:15	
1925.00	1955.00	88.83	354.62	1085.14	1086.27	-213.73	1107.10	5.96		Straight	17:09	
2074.00	2104.00	90.40	351.82	1086.14	1234.21	-231.32	1255.70	2.15		Straight	19:31	
2169.00	2199.00	88.28	348.02	1087.24	1327.71	-247.94	1350.66	4.58		Straight	02:56	26/01/2012
2270.00	2300.00	83.32	348.94	1090.23	1426.63	-268.10	1451.60	0.91	TD	TD	04:43	



A DIVISION OF ADVANCED DRILLING TECHNOLOGIES, LLC.  
**LONGHORN CEMENTING CO.**

P.O. BOX 203 YUMA, COLORADO 80759  
 Phone: 970-848-0799 Fax: 970-848-0788

**FIELD SERVICE TICKET  
 AND INVOICE**

DATE 1-23-12 TICKET NO. 2538

DATE OF JOB	DISTRICT	NEW WELL <input type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WOW <input type="checkbox"/>	CUSTOMER ORDER NO.:
CUSTOMER <del>RRI</del> <u>RRI</u>	LEASE <u>Davis 32-07H</u>						WELL NO.
ADDRESS	COUNTY						STATE
CITY	STATE	SERVICE CREW <u>Mike E. Robs</u>					
AUTHORIZED BY	EQUIPMENT <u>UNIT #110</u>						
TYPE JOB: <u>Intermed</u>	DEPTH FT.	CEMENT DATA: BULK <input checked="" type="checkbox"/>	SAND DATA: SACKS <input type="checkbox"/>		TRUCK CALLED		DATE AM PM
SIZE HOLE: <u>8 1/2"</u>	DEPTH FT.	SACKS	BRAND	TYPE	% GEL	ADDRES	ARRIVED AT JOB AM PM
SIZE & WT. CASTING <u>3 1/2"</u>	DEPTH FT.						START OPERATION AM PM
SIZE & WT. D PIPE OR TUBING	DEPTH FT.						FINISH OPERATION AM PM
TOP PLUGS	TYPE	WEIGHT OF SLURRY: <u>12.5 GPM</u> LBS. / GAL	LBS. / GAL				RELEASED AM PM
<u>1278</u>		VOLUME OF SLURRY: <u>1352</u> GALS					MILES FROM STATION TO WELL
<u>PK11</u>	MAX DEPTH FT.	SACKS CEMENT TREATED WITH		% OF			
		MAX PRESSURE		PSI			

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).  
 The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only these terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without written consent of an officer of Advanced Drilling Technologies, LLC.

SIGNED: \_\_\_\_\_  
 (WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM / PRICE REF. NUMBER	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
<u>501-2</u>	<u>Depth charge - Cement - 11000</u> <u>Mileage</u>				<u>2000.00</u>
	<u>Cement</u>		<u>300</u>	<u>3.95</u>	<u>1190.00</u>
			<u>80</u>	<u>17.50</u>	<u>1400.00</u>
<u>300-12</u>	<u>7" Cementless</u>	<u>9</u>			<u>337.50</u>
	<u>Freshwater 10 BBS</u>				
	<u>Cement 18.8 BBS</u>				
	<u>Displacement 52.8 BBS</u>				
	<u>Sumped plug 5 BBS</u>				

ACID DATA:		
GALLONS	%	ADDITIVES
HCL		
HCL		

SUB TOTAL		
SERVICE & EQUIPMENT	% TAX ON \$	
MATERIALS	% TAX ON \$	
<b>TOTAL</b>		<u>4527.50</u>

SERVICE REPRESENTATIVE [Signature] THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: \_\_\_\_\_  
 FIELD SERVICE ORDER NO. \_\_\_\_\_ (WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)