Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1100302

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34579
Name: Cobalt Energy LLC
Address 1: 115 S. BELMONT #12
Address 2: PO BOX 8037
City: WICHITA State: KS Zip: 67208 + __ __ __ __
Contact Person: Nicholas D. Hess
Phone: (316) 201-4101
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Robert Hendrix
Purchaser: NCRA

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
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

10/19/2012 Spud Date or Recompletion Date
10/27/2012 Date Reached TD
11/9/2012 Completion Date or Recompletion Date

API No. 15 - 15-135-25492-00-00
Spot Description:
NW NE NW SE Sec. 27 Twp. 18 S. R. 24 ☐ East ☑ West
2475 Feet from ☐ North / ☑ South Line of Section
1732 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ness
Lease Name: Miner Unit 'A' Well #: 1-27
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 2284 Kelly Bushing: 2289
Total Vertical Depth: 4366 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 218 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 1517 Feet
If Alternate II completion, cement circulated from: 4366
feet depth to: w/ 195 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 32000 ppm Fluid volume: 800 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: American Warrior
Lease Name: Billings License #: 4058
Quarter NE Sec. 35 Twp. 22 S. R. 23 ☐ East ☑ West
County: Hodgeman Permit #: 15-083-21453

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

☑ **Confidentiality Requested**
Date: 11/21/2012
☑ **Confidential Release Date:** 11/21/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 11/26/2012

1100302

Operator Name: Cobalt Energy LLC Lease Name: Miner Unit 'A' Well #: 1-27

Sec. 27 Twp. 18 S. R. 24 ☐ East ☑ West County: Ness

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction
Neutron Density

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ 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	8.625	23	218	common	165	3%CC, 2%gel
production	7.875	5.5	15.5	4359	ASC	520	

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	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

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	4304-4320	250gal 15%MCA	

TUBING RECORD: Size: 2.375 Set At: 4333 Packer At: NA Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR.: 11/16/2012

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	120	0	0		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
4304-4320

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Cobalt Energy LLC
Well Name	Miner Unit 'A' 1-27
Doc ID	1100302

Tops

Name	Top	Datum
Anhydrite	1557	+732
Base Anhydrite	1592	+697
Topeka	3367	-1078
Heebner	3664	-1375
Lansing	3710	-1421
BKC	4001	-1712
Ft Scott	4201	-1912
Cherokee	4226	-1937
Mississppian	4298	-2009

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

November 14, 2012

Nicholas D. Hess
Cobalt Energy LLC
115 S. BELMONT #12
PO BOX 8037
WICHITA, KS 67208

Re: ACO1
API 15-135-25492-00-00
Miner Unit 'A' 1-27
SE/4 Sec.27-18S-24W
Ness County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Nicholas D. Hess

CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 37287
LOCATION Oakley KS
FOREMAN Walt Dinkel

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
10-19-12	2180	Miner Unit "A" 1-27	27	18S	24W	Ness

CUSTOMER: Cobalt Energy, LLC
MAILING ADDRESS:
CITY: Ness City
STATE: 23/4 W
ZIP CODE: 1/2 N-WS

TRUCK #	DRIVER	TRUCK #	DRIVER
463	Cory Davis		
566	Travis	Williams	

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH ' CASING SIZE & WEIGHT 8 5/8 - 23#
CASING DEPTH DRILL PIPE TUBING OTHER
SLURRY WEIGHT 15.2 SLURRY VOL WATER gal/sk CEMENT LEFT in CASING 15-20'
DISPLACEMENT DISPLACEMENT PSI MIX PSI RATE 5 BPM

REMARKS: Safety Meeting, rig up on MurFin #8, circ casing on Bottom Mix 165 SKs Com, 3% CC - 2% Gel, Displace BBL, H2O, Shut in

Thank You
Walt & crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1,085.00	1,085.00
5406	20	MILEAGE	5.00	100.00
11045	165 SKs	Class A Cement	17.65	2,912.25
1102	465 #	Calcium Chloride	.89	413.85
1118B	310 #	Gel	.25	77.50
5407	7.76	Ton Mileage Delivery	1.67	410.00
				4,998.60
		Less 10% Disc		- 499.86
				4,498.74
			SALES TAX	192.98
			ESTIMATED TOTAL	4691.72

Completed

Ravin 3737

AUTHORIZTION Robert W Mockler TITLE DATE

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

253860

ALLIED OIL & GAS SERVICES, LLC 059068

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Great Bend Ks

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
10-26-12	27	18	24	5:00 PM	8:00 PM (10-26-12)	11:30 PM	12:30 AM (10-27-12)

LEASE	WELL #	LOCATION	COUNTY	STATE
Miner Unit A	1-27	Ness City - 2½ West ½ North Winto	Ness	Ks

OLD OR (NEW) (Circle one)

1-02 6.3

CONTRACTOR Murfin #2
TYPE OF JOB Two Stage - Bottom
HOLE SIZE 7 7/8" T.D. 4365'
CASING SIZE 5½" DEPTH 4359'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DV - 1517' DEPTH
PRES. MAX 1200# MINIMUM 600#
MEAS. LINE SHOE JOINT 30'
CEMENT LEFT IN CSG. 30'
PERFS.
DISPLACEMENT 68.61 H2O - 37.01 Mud w/ KCl 1st 10 bbls

OWNER Same

CEMENT

AMOUNT ORDERED 95 sks 65/35 10% gel, ¼# Floseal/sk - 100 sks ASC 5# Kolseal/sk 3/10 FL-160 - .15 Defoamer, 4 gal KCL 500 gal ASF

COMMON		@		
POZMIX		@		
GEL		@		
CHLORIDE		@		
ASC	100	@	20.90	2090.00
95 sx Lite wt		@	16.50	1567.50
flo seal	24	@	2.97	71.28
Fl-160	28	@	18.90	529.20
Gilsonite	500	@	.98	490.00
Defoamer	14	@	9.80	137.20
HANDLING	230.67	@	2.48	572.06
MILEAGE	9.86 x 3 x		2.60	76.90

TOTAL 5.534.14

EQUIPMENT

PUMP TRUCK #366	CEMENTER	Trevan Dickson 1
	HELPER	Trint Hall 2
BULK TRUCK #344-112	DRIVER	Dan Casper 2
BULK TRUCK #482-170	DRIVER	Joel Monahan 2

REMARKS:

Ran 4359' of 5½ csg. Dropped Ball for Insert. Broke circulation, circulated 1hr. Pumped 500 gal ASF - 10 bbls KCL Water. Mixed 95 sks 65/35 10% gel ¼# Floseal/sk followed by 100 sks ASC 5# Kolseal/sk with FL-160 & Defoamer. Washed up. Released Plug. Displaced with fresh H2O & Mud. Landed Plug at 1200#. Released & Float Held.

2958

SERVICE

DEPTH OF JOB	4359'			
PUMP TRUCK CHARGE				2.765.75
EXTRA FOOTAGE		@		
MILEAGE	Hum 3	@	7.70	23.10
MANIFOLD		@		
	Hum 3	@	4.40	13.20
		@		

TOTAL 2.802.05

CHARGE TO: Cobalt Energy Inc
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

1 - 5½ Stage Collar		5.335.26	5335.26
1 - 5½ Guide Shoe	@	280.20	280.20
1 - 5½ AFU Insert	@	334.62	334.62
5 - 5½ Turbo Centralizers	@	93.60	468.00
5 - 5½ Reg Centralizers	@	57.33	286.65
2 - 5½ Baskets	@	394.29	788.58

TOTAL 7.493.91

Thanks T

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) 779.88

TOTAL CHARGES 15.830.01/10

DISCOUNT 28% 4,432.40 IF PAID IN 30 DAYS

$11,397.61

PRINTED NAME X PAT GERSTNER

SIGNATURE X Pat Gerstner

ALLIED OIL & GAS SERVICES, LLC 059069

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Great Bend Ks

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
10-27-12	27	19	24			3:30 AM	5:00 AM
LEASE Miner Unit A	WELL # 1-27		LOCATION Ness city 2½ West ½ North W/into			COUNTY Ness	STATE Ks

OLD OR NEW (Circle one) [NEW circled]

6.3 1.02

CONTRACTOR Murfin 2
TYPE OF JOB Two Stage - Top
HOLE SIZE T.D. 4365'
CASING SIZE 5½ DEPTH 4359'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DV Tool DEPTH 1517'
PRES. MAX 1500# MINIMUM 300#
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT Fresh H_2O 36.10 bbls

OWNER Same

CEMENT

AMOUNT ORDERED 375 sks 65/35 6% gel ¼ # flo-seal/sk
500 Gallon ASF 4 Gal KCL

			@	
COMMON			@	
POZMIX			@	
GEL			@	
CHLORIDE			@	
ASC			@	
Lite wt	375		@ 16.50	6.187.50
			@	
500 Gallon			@ 1.27	635.00
flo seal		94	@ 2.97	279.18
KCL		4	@ 34.40	137.60
			@	
			@	
			@	
HANDLING	412.92		@ 2.48	1.024.04
MILEAGE	17.12 x 38		2.60	133.53
			TOTAL	8.397.31

EQUIPMENT

PUMP TRUCK # 366	CEMENTER	Tom Dickson
	HELPER	Trent Hall
BULK TRUCK # 344-112	DRIVER	Dan Casper - Joel Marsden
BULK TRUCK #	DRIVER	

REMARKS:

Dropped dart to open stage collar. Opened stage collar @ 800#, circulated 3 hours. Plugged Rathole w/30sks. Mousehole w/20sks. Hooked to csg. Mixed 325 sk. 65/35 6% gel ¼# flo-seal/sk. Washed up. Released plug. Displaced with fresh H_2O. Landed plug at 1500# & closed stage collar. Released & held. Cement did circulate

51.36

SERVICE

DEPTH OF JOB 1517'
PUMP TRUCK CHARGE ~~2000.50~~ 2406.25
EXTRA FOOTAGE @
MILEAGE @
MANIFOLD @
@
@

TOTAL ~~2000.50~~ 2406.25

CHARGE TO: Cobalt Energy Inc

STREET

CITY STATE ZIP

Thanks

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	@	

TOTAL

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) 456.07

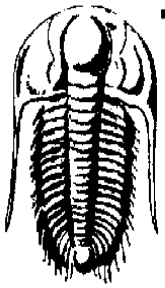
TOTAL CHARGES 10.803.46

DISCOUNT 28% 3,024.97 IF PAID IN 30 DAYS

$7,778.49

PRINTED NAME NATE GERSTNER

SIGNATURE X [signature]



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC.**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

Miner Unit "A" #1-27

27-18s-24w Ness,KS

Start Date: 2012.10.24 @ 19:22:30
End Date: 2012.10.25 @ 03:58:30
Job Ticket #: 47949 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.31 @ 13:24:40

DRILL STEM TEST REPORT

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47949 **DST#: 1**

Test Start: 2012.10.24 @ 19:22:30

GENERAL INFORMATION:

Formation: **Ft. Scott**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:25:30
Time Test Ended: 03:58:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38

Interval: 4183.00 ft (KB) To 4226.00 ft (KB) (TVD)
Total Depth: 4226.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

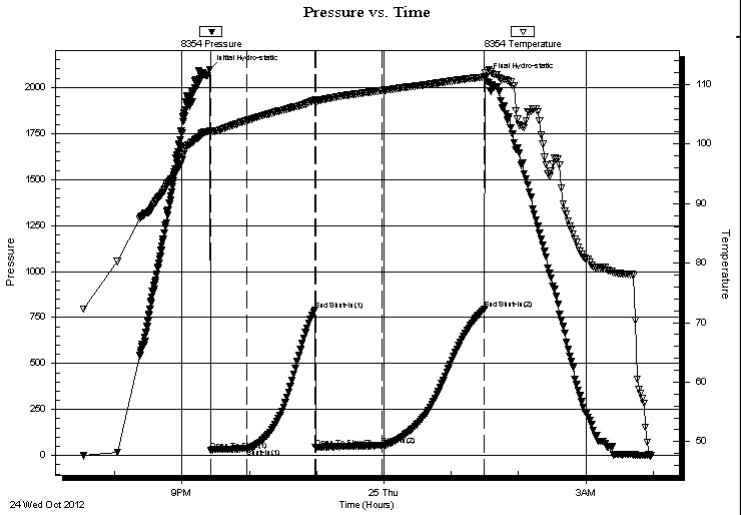
Reference Elevations: 2289.00 ft (KB)
2284.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8354 **Inside**

Press@RunDepth: 55.11 psig @ 4218.00 ft (KB)
Start Date: 2012.10.24 End Date: 2012.10.25
Start Time: 19:32:30 End Time: 03:58:30

Capacity: 8000.00 psig
Last Calib.: 2012.10.25
Time On Btm: 2012.10.24 @ 21:25:00
Time Off Btm: 2012.10.25 @ 01:30:30

TEST COMMENT: IF-Very weak building blow . Built to 3 inches.
ISI-No Return.
FF-Very weak building blow . Built to 7 inches.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2098.04	102.20	Initial Hydro-static
1	28.29	101.87	Open To Flow (1)
33	37.74	103.92	Shut-In(1)
94	791.93	107.34	End Shut-In(1)
94	42.86	107.05	Open To Flow (2)
154	55.11	108.98	Shut-In(2)
245	794.73	111.23	End Shut-In(2)
246	2052.43	112.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	10%Gas/5%Oil/85%Mud	0.30

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47949 **DST#: 1**

Test Start: 2012.10.24 @ 19:22:30

GENERAL INFORMATION:

Formation: **Ft. Scott**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:25:30
Time Test Ended: 03:58:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38

Interval: 4183.00 ft (KB) To 4226.00 ft (KB) (TVD)
Total Depth: 4226.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

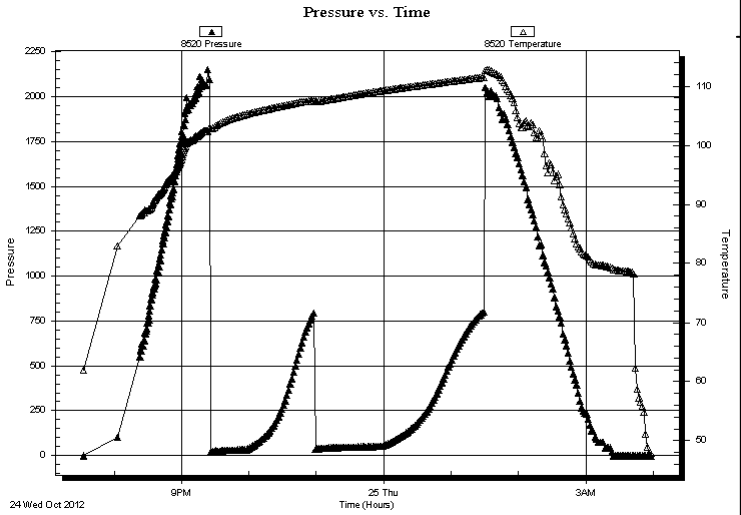
Reference Elevations: 2289.00 ft (KB)
2284.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8520 **Outside**

Press@RunDepth: psig @ 4218.00 ft (KB)
Start Date: 2012.10.24 End Date: 2012.10.25
Start Time: 19:32:45 End Time: 03:57:45

Capacity: 8000.00 psig
Last Calib.: 2012.10.25
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Very weak building blow. Built to 3 inches.
ISI-No Return.
FF-Very weak building blow. Built to 7 inches.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
60.00	10%Gas/5%Oil/85%Mud	0.30

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47949 **DST#: 1**

Test Start: 2012.10.24 @ 19:22:30

Tool Information

Drill Pipe:	Length:	3980.00 ft	Diameter:	3.80 inches	Volume:	55.83 bbl	Tool Weight:		3000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		22000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		5000.00 lb
					Total Volume:	56.74 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		11.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		4183.00 ft						Final	50000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		43.00 ft							
Tool Length:		71.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4156.00		
Shut In Tool	5.00			4161.00		
Hydraulic tool	5.00			4166.00		
Jars	5.00			4171.00		
Safety Joint	3.00			4174.00		
Packer	5.00			4179.00	28.00	Bottom Of Top Packer
Packer	4.00			4183.00		
Stubb	1.00			4184.00		
Perforations	1.00			4185.00		
Change Over Sub	1.00			4186.00		
Drill Pipe	31.00			4217.00		
Change Over Sub	1.00			4218.00		
Recorder	0.00	8354	Inside	4218.00		
Recorder	0.00	8520	Outside	4218.00		
Perforations	5.00			4223.00		
Bullnose	3.00			4226.00	43.00	Bottom Packers & Anchor
Total Tool Length:	**71.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47949 **DST#: 1**

Test Start: 2012.10.24 @ 19:22:30

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3700.00 ppm				
Filter Cake:	inches				

Recovery Information

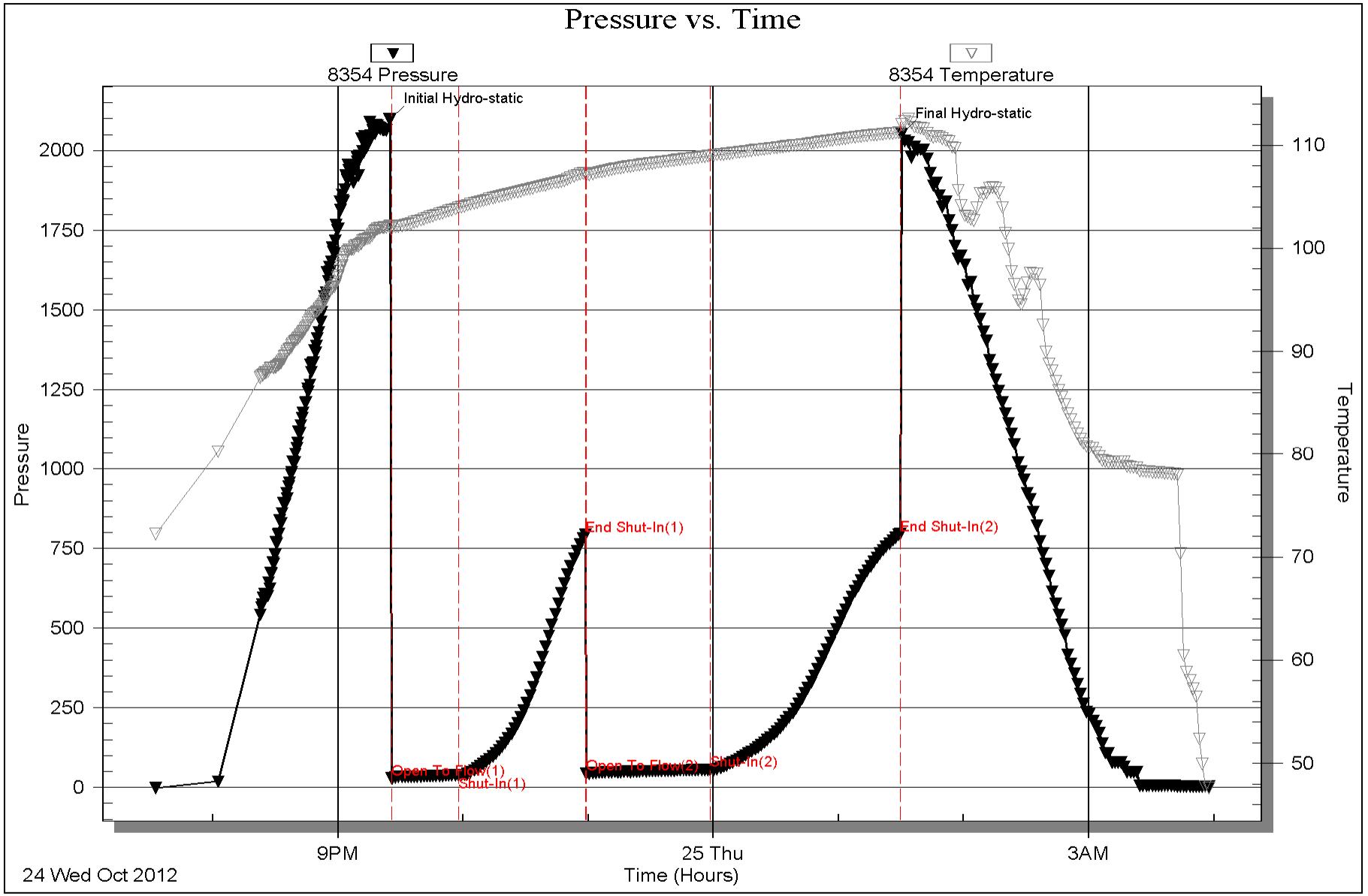
Recovery Table

Length ft	Description	Volume bbl
60.00	10%Gas/5%Oil/85%Mud	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

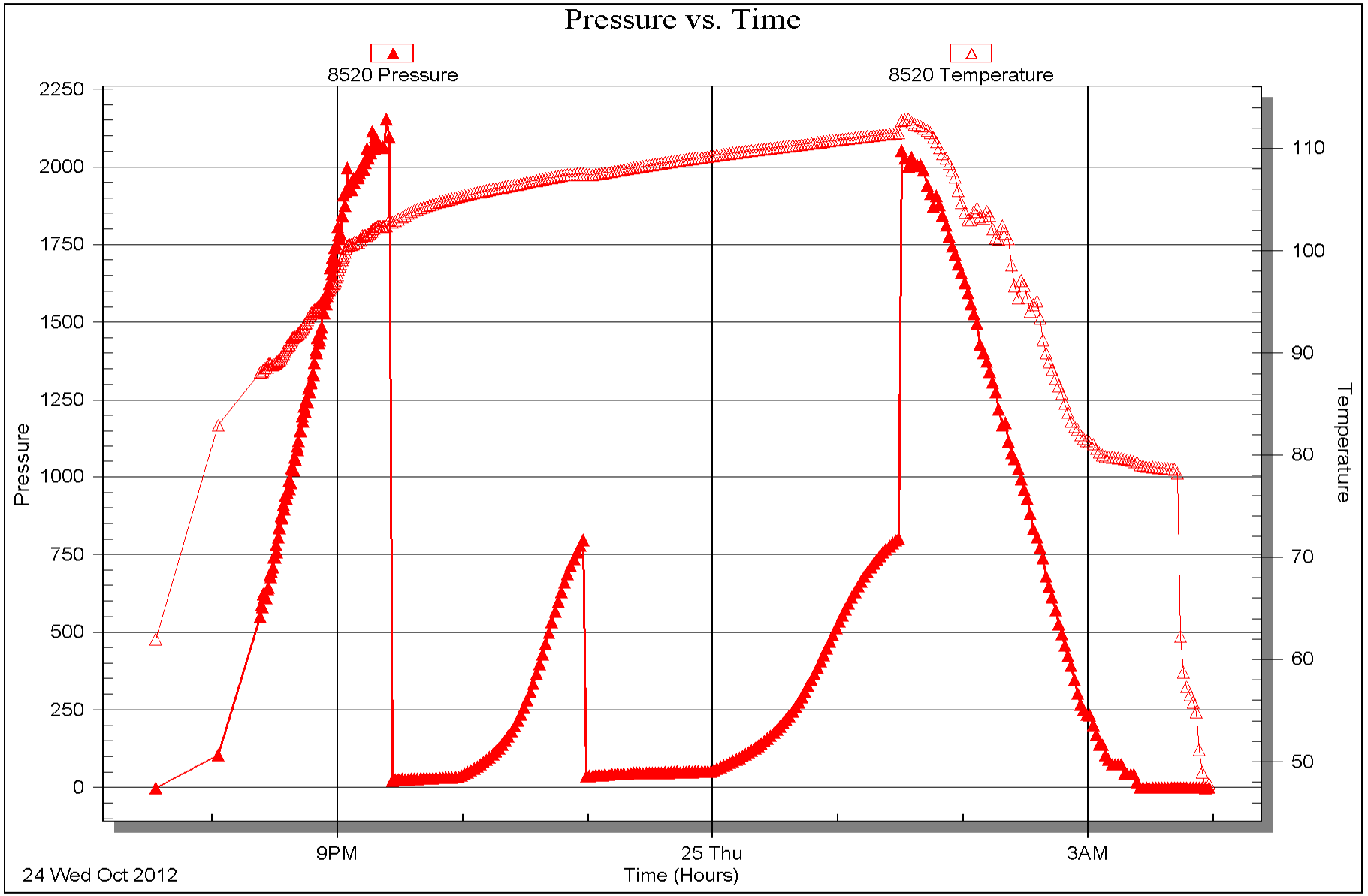
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8354 **Inside** Cobalt Energy, LLC. Miner Unit "A" #1-27 DST Test Number: 1

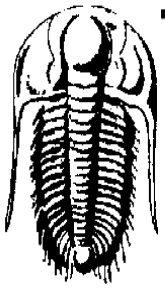


Trilobite Testing, Inc Ref. No: 47949 Printed: 2012.10.31 @ 13:24:44

Serial #: 8520 **Outside** Cobalt Energy, LLC. Miner Unit "A" #1-27 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 47949 Printed: 2012.10.31 @ 13:24:46



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC.**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

Miner Unit "A" #1-27

27-18s-24w Ness,KS

Start Date: 2012.10.25 @ 17:10:30
End Date: 2012.10.26 @ 03:02:30
Job Ticket #: 47950 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.31 @ 13:23:15

DRILL STEM TEST REPORT

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47950 **DST#: 2**

Test Start: 2012.10.25 @ 17:10:30

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:09:00
Time Test Ended: 03:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38

Interval: 4298.00 ft (KB) To 4323.00 ft (KB) (TVD)
Total Depth: 4323.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

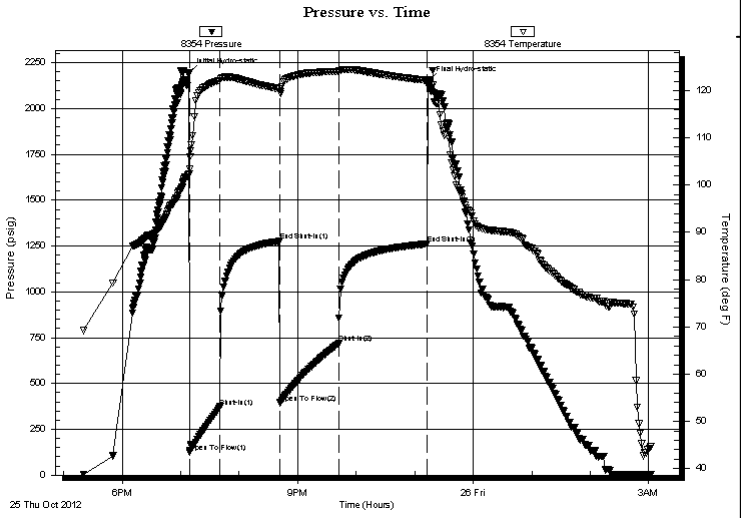
Reference Elevations: 2289.00 ft (KB)
2284.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8354 **Inside**

Press@RunDepth: 717.69 psig @ 4300.00 ft (KB)
Start Date: 2012.10.25 End Date: 2012.10.26
Start Time: 17:20:30 End Time: 03:02:30

Capacity: 8000.00 psig
Last Calib.: 2012.10.26
Time On Btm: 2012.10.25 @ 19:08:40
Time Off Btm: 2012.10.25 @ 23:14:30

TEST COMMENT: IF-Strong building blow . BOB in 2 minutes 30 seconds.
ISI-Return @ 30 seconds. Built to 3 inches.
FF-Strong building blow . BOB in 3 minutes.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2195.73	102.31	Initial Hydro-static
1	126.16	102.35	Open To Flow (1)
32	373.34	122.19	Shut-In(1)
93	1275.69	120.31	End Shut-In(1)
94	394.49	119.65	Open To Flow (2)
154	717.69	124.09	Shut-In(2)
245	1261.82	122.16	End Shut-In(2)
246	2150.13	121.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	20%Gas/60%Oil/20%Mud	0.61
1829.00	50%Gas/50%Oil	25.09

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47950 **DST#: 2**

Test Start: 2012.10.25 @ 17:10:30

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:09:00
Time Test Ended: 03:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38

Interval: 4298.00 ft (KB) To 4323.00 ft (KB) (TVD)
Total Depth: 4323.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

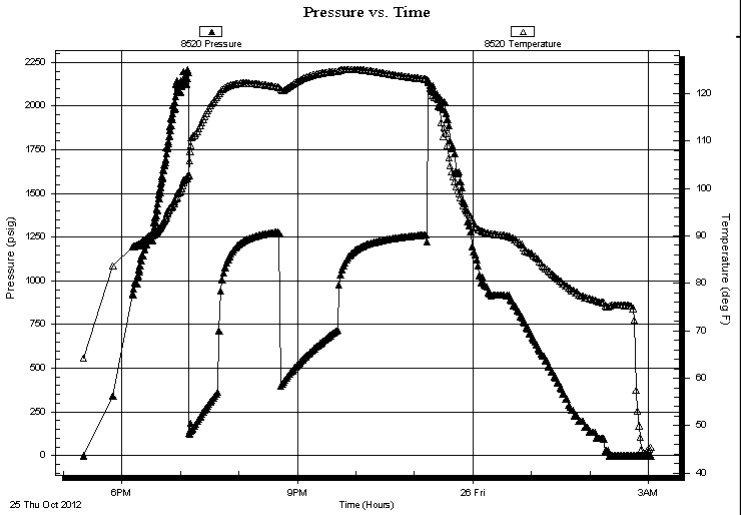
Reference Elevations: 2289.00 ft (KB)
2284.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8520 **Outside**

Press@RunDepth: psig @ 4300.00 ft (KB)
Start Date: 2012.10.25 End Date: 2012.10.26
Start Time: 17:20:45 End Time: 03:02:15

Capacity: 8000.00 psig
Last Calib.: 2012.10.26
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Strong building blow . BOB in 2 minutes 30 seconds.
ISI-Return @ 30 seconds. Built to 3 inches.
FF-Strong building blow . BOB in 3 minutes.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
124.00	20%Gas/60%Oil/20%Mud	0.61
1829.00	50%Gas/50%Oil	25.09

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47950 **DST#: 2**

Test Start: 2012.10.25 @ 17:10:30

Tool Information

Drill Pipe:	Length:	4102.00 ft	Diameter:	3.80 inches	Volume:	57.54 bbl	Tool Weight:		3000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		24000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		5000.00 lb
					Total Volume:	58.45 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		18.00 ft					String Weight:	Initial	52000.00 lb
Depth to Top Packer:		4298.00 ft						Final	lb
Depth to Bottom Packer:		ft							
Interval between Packers:		25.00 ft							
Tool Length:		53.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4271.00		
Shut In Tool	5.00			4276.00		
Hydraulic tool	5.00			4281.00		
Jars	5.00			4286.00		
Safety Joint	3.00			4289.00		
Packer	5.00			4294.00	28.00	Bottom Of Top Packer
Packer	4.00			4298.00		
Stubb	1.00			4299.00		
Perforations	1.00			4300.00		
Recorder	0.00	8354	Inside	4300.00		
Recorder	0.00	8520	Outside	4300.00		
Perforations	20.00			4320.00		
Bullnose	3.00			4323.00	25.00	Bottom Packers & Anchor
Total Tool Length:	**53.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC.

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

27-18s-24w Ness,KS

Miner Unit "A" #1-27

Job Ticket: 47950 **DST#: 2**

Test Start: 2012.10.25 @ 17:10:30

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	40 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.58 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3800.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	20%Gas/60%Oil/20%Mud	0.610
1829.00	50%Gas/50%Oil	25.091

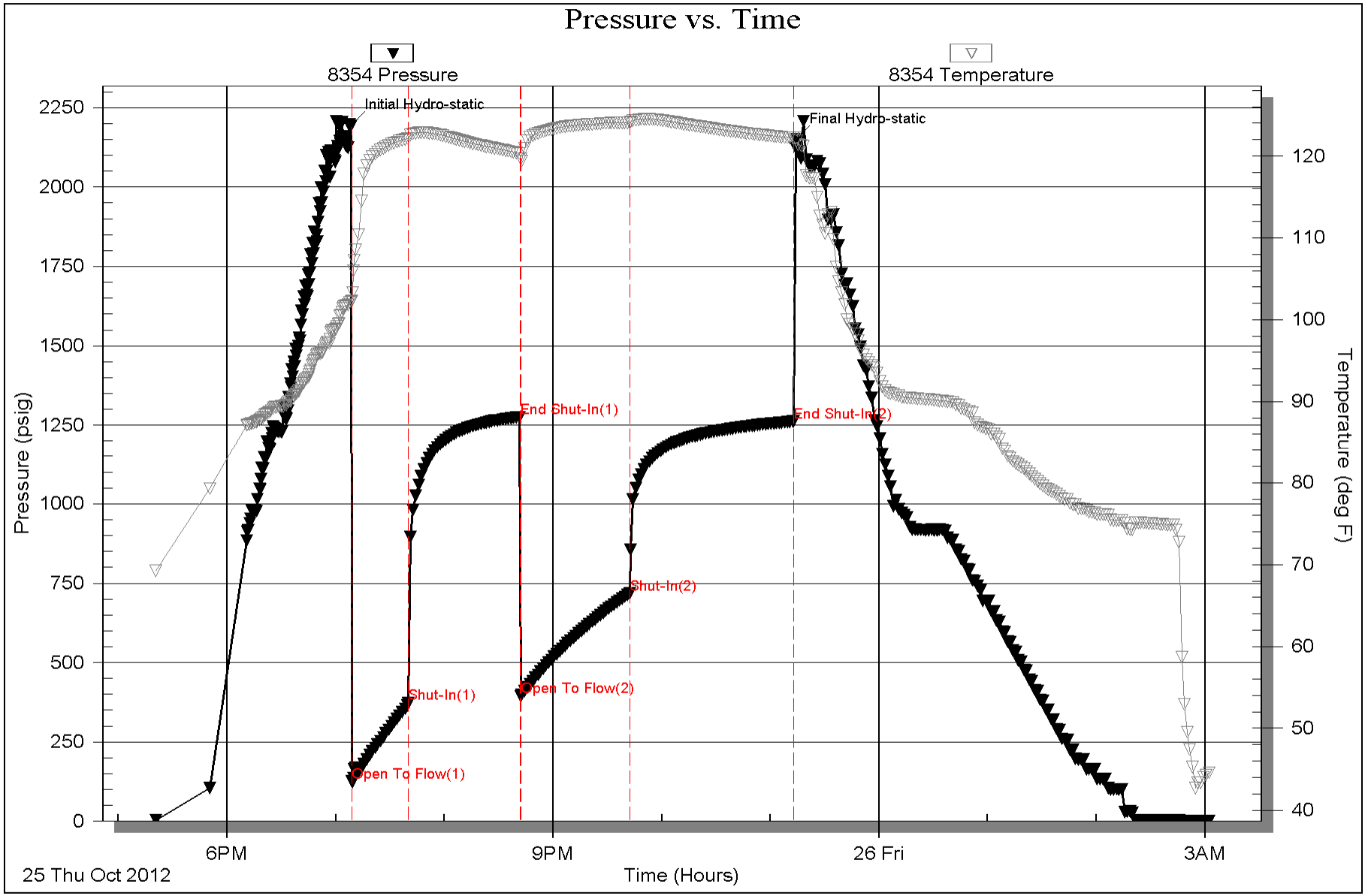
Total Length: 1953.00 ft Total Volume: 25.701 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

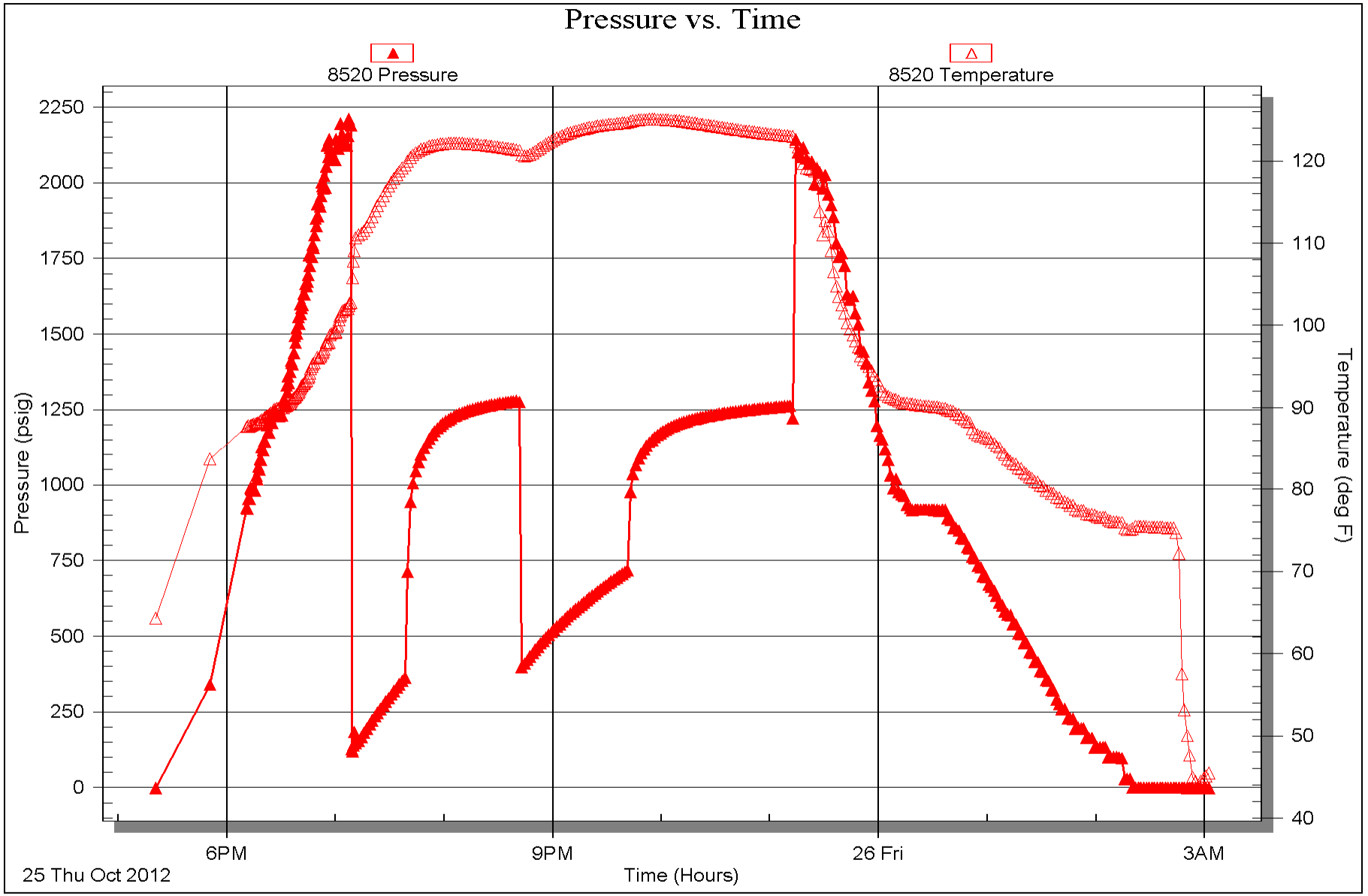
Recovery Comments:

Serial #: 8354 **Inside** Cobalt Energy, LLC. Miner Unit "A" #1-27 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 47950 Printed: 2012.10.31 @ 13:23:19

Serial #: 8520 **Outside** Cobalt Energy, LLC. Miner Unit "A" #1-27 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 47950 Printed: 2012.10.31 @ 13:23:20

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47949

Well Name & No. Miner Unit "A" #1-27 Test No. 1 Date 10-24-12

Company Cobalt Energy LLC. Elevation 2289 KB 2284 GL

Address P.O. Box 8037 Wichita, KS 67208

Co. Rep / Geo. Robert Hendrix Rig Mullin 8

Location: Sec. 27 Twp. 18S Rge. 24W Co. Ness State KS

Interval Tested 4183-4226 Zone Tested Ft. Scott

Anchor Length 43' Drill Pipe Run Mud Wt. 9.2

Top Packer Depth 4178 Drill Collars Run 186 Vis 50

Bottom Packer Depth 4183 Wt. Pipe Run -0- WL 7.6

Total Depth 4226 Chlorides 3700 ppm System LCM 3#

Blow Description IF- Very weak building blow. Built to 3 inches
ISI- No Return.
FF- Very weak building blow. Built to 7 inches.
FSI- No Return.

Rec 60	Feet of VSGOCM	10 %gas	5 %oil	%water	85 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 112 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic ____
(B) First Initial Flow ____
(C) First Final Flow ____
(D) Initial Shut-In ____
(E) Second Initial Flow ____
(F) Second Final Flow ____
(G) Final Shut-In ____
(H) Final Hydrostatic ____

Initial Open 30
Initial Shut-In 60
Final Flow 60
Final Shut-In 90

- ☑ Test 1250
- ☑ Jars 250
- ☑ Safety Joint 75
- ☐ Circ Sub
- ☐ Hourly Standby
- ☑ Mileage 66XZ 204.60
- ☐ Sampler
- ☐ Straddle
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total 1779.60

T-On Location 1715
T-Started 1930
T-Open 2125
T-Pulled 0130
T-Out 0400
Comments Boot - 1922

- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Extra Copies

Sub Total 0
Total 1779.60
MP/DST Disc't

Approved By ____ Our Representative D. Rath

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47950

Well Name & No. Miner Unit "A" #1-27 Test No. 2 Date 10-25-12

Company Cobalt Energy, LLC. Elevation 2289 KB 2284 GL

Address P.O. Box 8037 Wichita, KS 67208

Co. Rep / Geo. Robert Hendrix Rig Mullin 8

Location: Sec. 27 Twp. 18S Rge. 24W Co. Ness State KS

Interval Tested 4298-4323 Zone Tested Mississippian

Anchor Length 25' Drill Pipe Run 4102 Mud Wt. 9.3

Top Packer Depth 4293 Drill Collars Run 186.09 Vis 48

Bottom Packer Depth 4298 Wt. Pipe Run @ WL 9.6

Total Depth 4323 Chlorides 3800 ppm System LCM 2#

Blow Description IF- Strong building blow. BOB in 2minutes 30 seconds.
FST- Return @ 38 seconds. Built to 3 inches.
FF- Strong building blow. BOB in 3minutes.
FSI- No Return

Rec 1829	Feet of Gassy Oil	50 %gas	50 %oil	%water	%mud
Rec 124	Feet of Gassy MCO	20 %gas	60 %oil	%water	20 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1953 BHT 124 Gravity 40 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 2196	☑ Test 1250	T-On Location 1545
(B) First Initial Flow 126	☑ Jars 250	T-Started 1715
(C) First Final Flow 373	☑ Safety Joint 75	T-Open 1909
(D) Initial Shut-In 1276	☐ Circ Sub	T-Pulled 2315
(E) Second Initial Flow 394	☐ Hourly Standby	T-Out 0300
(F) Second Final Flow 718	☑ Mileage 66 X2 204.60	Comments Batt-1710
(G) Final Shut-In 1262	☐ Sampler	
(H) Final Hydrostatic 2150	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 60	☐ Extra Recorder	Sub Total 0
Final Flow 60	☐ Day Standby	Total 1779.60
Final Shut-In 90	☐ Accessibility	MP/DST Disc't
	Sub Total 1779.60	

Approved By ____ Our Representative D. Rose

Robert D. Hendrix
Petroleum Geologist

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY: Cobalt Energy LLC.
LEASE: Miner Unit A #1-27
FIELD: McDonald NE
LOCATION: 2428' fsl & 1756' fel
SEC: 27 TWSP: 18 s RGE: 24 w
COUNTY: Ness STATE: Kansas
CONTRACTOR: Murfin Drilling Co Inc Rig 8
SPUD: 10/19/2012 COMP: 10/26/2012
RTD: 4365 LTD: 4366
MUD UP: 3380 TYPE MUD: Chemical
SAMPLES SAVED FROM: 3350 TO: TD
DRILLING TIME KEPT FROM: 3300 TO: TD
SAMPLES EXAMINED FROM: 3350 TO: TD
GEOLOGICAL SUPERVISION FROM: 3367'
GEOLOGIST ON WELL: Robert D. Hendrix

ELEVATIONS
KB: 2289'
DF:
GL: 2284'
Measurements Are All From: Kelly Bushing

CASING
CONDUCTOR:
SURFACE: 8-5/8" at 218'
PRODUCTION: 5 1/2"

ELECTRICAL SURVEYS
Pioneer Energy
Induction/Neutron Density

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	1556 (+733)	1559 (+730)
Base Anhydrite	1594 (+695)	1594 (+695)
Topeka	3366 (-1077)	3366 (-1077)
Heebner Shale	3664 (-1375)	3665 (-1376)
Lansing	3710 (-1421)	3706 (-1417)
BKC	4001 (-1712)	4003 (-1714)
Pawnee	4123 (-1834)	4125 (-1836)
Ft Scott	4201 (-1912)	4203 (-1914)
Mississippi	4298 (-2009)	4299 (-2010)

API# 15-135-25492

REMARKS:

The samples contained an abundant amount of shale from the Lansing to the Pawnee making lithology identification very difficult. A favorable test in the Mississippian and relative high sub-sea position it is strongly recommended that production casing be ran on this well for production.

LEGEND

Anhydrite, Sandstone, Limestone, Shale, Carb Sh, Cherty LS, Chert, Dolomite

DRILLING TIME IN MINUTES PER FOOT (Rate of Penetration Decreases →) 5 10 15 | DEPTH | LITHOLOGY | Test & Show | SAMPLE DESCRIPTION | REMARKS

Anhydrite 1559(+730)

Base Anhydrite 1594 (+695)

Shale: gray, green, red, pyritic, silty

Limestone: white, fxln, v chalky, fossiliferous, sl pp-vug por

Shale: gray, dark gray

Limestone: gray, f-lxln, v-fossiliferous, no vis por

Topeka 3366 (-1077)

Geologist on location 3367' at 7:30 pm 10/22/2012

Limestone: brown to tan, f-mxln, sl chalky, fossiliferous, no vis por

Shale: gray, red

Circulated till mud up complete due to lack of samples fixed flow line as well
wt 8.5, vis. 48, lcm 2#
Mud-Co, Jason Whiting

Limestone: brown to gray, f-mxln, sl chalky, fossiliferous, no vis por

Limestone: brown to tan, fxln, sl chalky, sl fossiliferous, no vis por

Shale: gray, red

Limestone: tan, f-mxln, oolitic, sl chalky, fossiliferous, pr oolicastic por, ns

Shale: gray, red

Limestone: tan, f-mxln, oolitic, sl chalky, pr oolicastic por, fr sat dark stain, sl sfo on break, fain odor

Shale: gray black, red, silty

Limestone: tan to brown, fxln, oolitic, sl chalky, fossiliferous, pr oolicastic por, ns

Shale: gray black

Limestone: tan to brown, fxln, oolitic, sl chalky, fossiliferous, pr oolicastic por, ns

Shale: gray black, red

Shale: gray black, red

Limestone: tan, fxln, sl chalky, granular, sl oolitic, fossiliferous, pr pp por, ns

Limestone: tan to white, fxln, oolitic, sl chalky, fossiliferous, sl oolicastic por, 3% sample pr sat stain, sl sfo, faint odor

Limestone: tan to white, fxln, oolitic, sl chalky, fossiliferous, sl oolicastic por, 1 piece of show pr sat stain, sl sfo, faint odor

Shale: gray black, red

Limestone: tan to white, fxln, v chalky, fossiliferous, no vis por

Shale: gray black, red

Limestone: tan to white, fxln, v chalky, sl oolitic, fossiliferous, no vis por

Limestone: lt gray to white, fxln, v chalky, fossiliferous, pellatoidal, no vis por

Shale: black, gray, red

Limestone: tan to white, f-mxln, chalky, sl granular, fossiliferous, no vis por

Shale: gray black

Limestone: tan to white, f-mxln, chalky, sl granular, fossiliferous, no vis por

Shale: gray, red, black carbonaceous

Limestone: white, f-mxln, chalky, sl cherty, granular, sl fossiliferous, no vis por

Shale: gray black, red

Limestone: white, fxln, chalky, granular, sl fossiliferous, no vis por

Shale: gray, black, red

Limestone: white, fxln, chalky, granular, sl fossiliferous, no vis por

Limestone: tan to white, fxln, chalky, sl fossiliferous, no vis por

Shale: gray, black, red

Limestone: tan to white, fxln, chalky, sl fossiliferous, no vis por

Shale: gray, black, red

Limestone: tan to white, fxln, chalky, granular, fossiliferous, no vis por

Limestone: white to tan, fxln, chalky, sl fossiliferous, no vis por

Limestone: white to tan, fxln, chalky, sl cherty, granular, sl fossiliferous, no vis por

Limestone: white to tan, fxln, chalky, sl fossiliferous, no vis por

Heebner Shale 3665 (-1376)

Shale: black, carbonaceous, gray, red

Limestone: white to tan, fxln, chalky, granular, sl fossiliferous, no vis por

Shale: gray, red, black

Limestone: white to tan, f-mxln, chalky, sl cherty, oolitic, sl fossiliferous, no vis por

Shale: gray, red, green, black

Lansing 3706 (-1417)

Limestone: white, mxln, sl chalky, sl cherty, sl oolitic, sl interxln por, 3 pieces dark sat stain, pr sfo on break, faint odor

8:00am, 10/23/2012

Shale: gray, red, black

Limestone: white to tan, f-mxln, chalky, sl cherty, sl fossiliferous, no vis por

Shale: gray, red, black

Limestone: white, fxln, chalky, sl fossiliferous, no vis por

Shale: gray, red, black

Limestone: white to tan, fxln, granular, no vis por

Shale: gray, red, black

Limestone: tan, fxln, sl chalky, oolitic in part, sl cherty, sl oolicastic por, 2 pieces dark sat stain, slsfo on break, faint odor

Limestone: white, fxln, sl cherty, sl fossiliferous, no vis por

Shale: gray, red, black

Limestone: white to tan, fxln, sl chalky, sl cherty, sl fossiliferous, no vis por

Shale: gray, red, brown, black

Limestone: white to tan, fxln, sl chalky, sl fossiliferous, no vis por

Shale: gray, red, brown, black

Shale: gray, red black

Limestone: tan to white, fxln, sl chalky, granular, fossiliferous, no vis por

Limestone: tan to white, fxln, sl chalky, sl cherty, fossiliferous, no vis por

Limestone: tan to white, fxln, sl chalky, sl cherty, fossiliferous, no vis por

Limestone: white, fxln, sl cherty, granular, fossiliferous, no vis por, ns

Limestone: white, fxln, sl chalky, sl cherty, fossiliferous, no vis por

Shale: gray, red, black

Limestone: white, fxln, sl cherty, sl fossiliferous, no vis por, ns

Shale: gray, red, black

Limestone: white to tan, fxln, sl chalky, no vis por, ns

Shale: gray, red, black

Limestone: tan to white, fxln, dense, no vis por, ns

wt 8.9, vis. 49, lcm 2#
Mud-Co, Tyler Lang

Limestone: tan to white, fxln, dense, no vis por, ns

Shale: gray, red, black

Limestone: white, f-mxln, cherty, fossiliferous, 2 pieces dark sat stain, sl sfo (brown), no odor, fr interxln por

Limestone: white, fxln, sl cherty, dense, no vis por, ns

Shale: gray, red

Limestone: tan to white, fxln, sl chalky, oolitic in part, fossiliferous, no vis por

Limestone: tan to white, f-mxln, sl chalky, oolitic in part, fossiliferous, no vis por

Limestone: white to lt gray, fxln, sl chalky, sl fossiliferous, no vis por

Shale: black, gray, red

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

Shale: black, gray, red

Limestone: tan, fxln, sl glauconitic, sl fossiliferous, no vis por

BKC 4003 (-1714)

Shale: black, gray, red

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

Shale: black, gray, red

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

Shale: black, gray, red

Shale: black, gray, green

Limestone: tan, fxln, sl chalky, sl cherty, sl fossiliferous, no vis por

Limestone: tan, fxln, sl chalky, sl cherty, sl fossiliferous, no vis por

Shale: black, gray, green, red

8:00am, 10/24/2012

Limestone: tan to white, fxln, dense, no vis por

Shale: black, gray, green, red

Limestone: white to tan, fxln, dense, cherty, no vis por

Limestone: tan to gray, fxln, dense, sl chalky, no vis por

Limestone: tan, fxln, sl fossiliferous, no vis por

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

Shale: black, gray, green, red

Pawnee 4125 (-1836)

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

Limestone: tan to white, fxln, sl cherty, sl fossiliferous, no vis por,

Limestone: tan, fxln, sl cherty, sl fossiliferous, no vis por

DST #1
4183-4226
30-60-60-90
1st open: wk blow built to 3"
2nd open: wk blow built to 7"
Rec:
60' vsgocm 10/5/85
hydro: 2098-2052 psi
If: 28-37 psi
ff: 42-55 psi
sip: 791-794 psi
bht:112° F

Limestone: white, fxln, sl fossiliferous, no vis por,

Limestone: white to tan, fxln, sl cherty, no vis por,

Shale: black carbonaceous

Ft Scott 4203 (-1914)

Limestone: tan, fxln, sl cherty, granular, no vis por, 1% sample lt brown stain, slsfo on break, no odor

Limestone: tan, fxln, sl cherty, granular, pr pp por, 1% sample lt brown stain, slsfo on break, fair odor

Cherokee 4226 (-1937)

Shale: black carbonaceous

8:00am, 10/25/2012
strap 0.31' short
wt 9.2, vis. 50, lcm 3#
Mud-Co, Tyler Lang

Limestone: tan, fxln, sl chalky, cherty, no vis por,

Limestone: tan to brown, fxln, no vis por,

Limestone: white to tan, fxln, chalky, fossiliferous, no vis por,

Shale: gray, black carbonaceous

Limestone: white to tan, fxln, chalky, fossiliferous, no vis por, 2 pieces lt brown sat stain, slsfo on break, no odor

Limestone: white to tan, fxln, sl chalky, dense fossiliferous, no vis por, ns

Limestone: white to tan, fxln, sl chalky, dense fossiliferous, no vis por, ns

Shale: gray, black

Shale: gray, green, red, black

DST #2
4298-4323
30-60-60-90
1st open: bob 2 1/2 min
1st shut-in: 30 sec return built to 3" died back to 2"
2nd open: bob 3min
2nd shut-in: no return
Rec:
1829' GO 50/50
124' GMCO 20/20/60
hydro: 2196-2150 psi
If: 126-373 psi
ff: 394-718 psi
sip: 1276-1262 psi
bht:124°F
gravity: 40°

Mississippian 4299 (-2010)

Limestone (sl dolomitic): tan, fxln, sl chalky, no vis por, ns no fluorescence

Dolomite: tan, fxln, sl chalky, no vis por, 2 pieces, dark sat stain, slsfo, bright yellow fluorescence 10 % sample, no odor

wt 9.3, vis. 48, lcm 2#
Mud-Co, Tyler Lang

Dolomite: tan, fxln, sl chalky, sl cherty, fr pp to vug por,10 % sample, dark sat stain, slsfo, bright yellow fluorescence, good odor

wt 9.1, vis. 47, lcm 2#
Mud-Co, Tyler Lang

Dolomite: tan to white, f-mxln, hard, sl chalky, fr pp to vug por,10 % sample, dark sat stain, frsfo, bright yellow fluorescence, good odor

Dolomite: tan to white, f-mxln, hard, sl cherty, ex pp to vug por, 50 % sample, dark sat stain, gdsfo, bright yellow fluorescence, good odor

Dolomite: tan to white, f-mxln, hard, gd pp to vug por, 30 % sample, dark sat stain, gdsfo, bright yellow fluorescence, good odor

Dolomite: tan to white, f-mxln, hard, sl chalky fr pp to vug por, 30 % sample, dark sat stain, gdsfo, bright yellow fluorescence, good odor

8:00am, 10/26/2012

Dolomite: tan to white, f-mxln, hard, sl chalky, sl cherty, sl glauconitic, fr pp to sl vug por, 20 % sample, dark sat stain, frsfo, bright yellow fluorescence, good odor

RTD 4365 (-2076)

Geologist off location at 3:45pm, 10/26/2012

Cobolt Energy LLC
Miner Unit A #1-27
2428'fsl & 1756'fel
27-18-24w, Ness County, Kansas
KB=2289', GL=2284'
API: 15-135-25492