

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1356275  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

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
- Plug Back       Conv. to GSW       Conv. to Producer
- 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

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

Total Vertical 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

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

1356275

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

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

**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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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 <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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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 <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Cobalt Energy LLC
Well Name	HERRMANN UNIT "A" 1-36
Doc ID	1356275

All Electric Logs Run

Dual Induction
Neutron-Density
Micro
Sonic



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 103

Date	2-27-17	Sec.	36	Twp.	25	Range	21	County	Ford	State	KS	On Location		Finish	6:30 am
Location								<del>OFFICE</del> office 1w 4s into							

Lease	Herrmann Unit A	Well No.	1-36	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	Munich #16				
Type Job	Surface				
Hole Size	12 1/4	T.D.	207	Charge To	Cobalt Energy
Csg.	8 5/8	Depth	207	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	10'	Shoe Joint		Cement Amount Ordered	160 80/20 3/4 2-62L

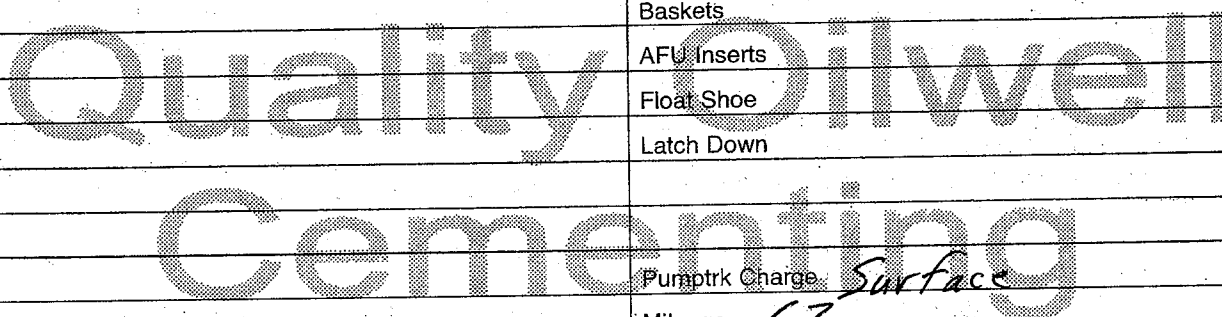
Meas Line	Displace	12 1/2 BCL	Common	130
<b>EQUIPMENT</b>			Poz. Mix	30
Pumptrk	5 No.	Cement Helper	Gel.	3
Bulktrk	No.	Driver	Calcium	6
Bulktrk	9 No.	Driver		

<b>JOB SERVICES &amp; REMARKS</b>		Hulls
Remarks:		Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
8 5/8 on bottom EST. Circulation		Handling
Mixed 160SK & Displaced		Mileage

<b>FLOAT EQUIPMENT</b>	
Guide Shoe	8 5/8 Swage
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	Surface
Mileage	67

X Signature	<i>[Signature]</i>	Tax	
		Discount	
		Total Charge	





CHARGE TO: Cobalt Energy  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

TICKET 30161

PAGE 1 OF 2

SERVICE LOCATIONS: 1. Ness City KS  
 WELL/PROJECT NO. 1-36 LEASE Herrmann Unit A COUNTY/PARISH FORD STATE KS CITY offeale DATE 7 MAR 17 OWNER  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR MURFIN RIG NAME/NO. 16 SHIPPED VIA CT DELIVERED TO location ORDER NO.  
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE Cement long string 2-stage WELL PERMIT NO. WELL LOCATION 36-25-21  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
575		1			MILEAGE TRK 114	60		m.		5.00	300.00	
579		1			Pump Charge	1		ea		1700.00	1700.00	
402		1			Centralizer	5 1/2		in	7 ea	60.00	420.00	
403		1			Cement Basket	5 1/2		in	2 ea	250.00	500.00	
407		1			INSERT float shoe w/ AUTO FILL	5 1/2		in	1 ea	300.00	300.00	
408		1			DV tool	5 1/2		in	1 ea	3250.00	3250.00	
417		1			DV latch down plug & baffle	5 1/2		in	1 ea	200.00	200.00	

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X Ruby Popp  
 DATE SIGNED TIME SIGNED 7:30  A.M.  P.M.

REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				10670.00
WE UNDERSTOOD AND MET YOUR NEEDS?				7493.26
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				4152.76
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				14143.26
ARE YOU SATISFIED WITH OUR SERVICE?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		Ford Co 8.15%
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				889.27
TOTAL				15032.53

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR APPROVAL BS111

Thank You!



PO Box 466  
Ness City, KS 67560  
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 30161

CUSTOMER **Cobalt Energy** WELL **Herrmann Unit A** DATE **7 MAR 17** PAGE **2** OF **2**

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY	U/M		
330		1				SMA cement	175	sk	15.75	2756.25
325		1				Standard cement (for EA-2)	150	sk	12.25	1837.50
284		1				calseal	700	lb	30.00	210.00
283		1				salt	750	lb	0.20	150.00
285		1				CFR	75	lb	4.50	337.50
276		1				flocule	<del>50</del> 100	lb	2.25	225.00
281		1				mud flush	500	gal	1.25	625.00
221		1				KCh liquid	4	gal	25.00	100.00
581						SERVICE CHARGE	325		1.50	487.50
583						MILEAGE CHARGE			0.75	744.51

CUBIC FEET 992.68  
TON MILES 60  
TOTAL WEIGHT 33089  
LOADED MILES 60

CONTINUATION TOTAL **7482.76**  
**7473.26**

JOB LOG

SWIFT Services, Inc.

DATE 7 MAR 17 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Colant Energy		i-36		Herrmann Unit A		Cement long string		30161	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
									150sk SA-2 w/1/4" Floccle 175sk SMD cement w/1/4" Floccle 5 1/2" x 15.5" casing 115 jts 4800' TD= 4800 Centralines 1,2,3,4,5,6,8,3 Basket= 81,82 DV tool #82 1377'
	1300								on loc TRX 110
	1505								start pipe 5 1/2" x 15.5"
	1715								Drop ball - circulate
	1815	5	12				300		Pump 500 gal mid flush
		5	20				300		Pump 20 bbl KCL flush
	1825	6	36				400		mix SA-2 cement 150sk @ 15.3 ppg Drop 1st stage plug wash out pump & lines
	1835	6					400		Displace plug
		6	105				700		
	1900	6	113				1500		Load 1st stage plug Release pressure to truck - dried up
	1902								Drop bomb
							1300		Open DV tool
									mix SMD Plug RH-MH 30sk - 20sk
	1921	6	98				400		mix SMD cement 125sk @ 11.2 ppg
									Drop 2nd stage plug Displace plug
	1945								(125sk mixed 20 top 4)
									→ cement to surface ←
	2000								Load plug - close DV tool Release pressure to truck. dried up
	2005								wash & ruck
	2030								Rack up job complete
									Thanks Phil, Blaine, & John





## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita, KS 67208

ATTN: Tim Lauer

### **Herrman Unit A #1-36**

### **36-25S-21W Ford,KS**

Start Date: 2017.03.05 @ 04:55:00

End Date: 2017.03.05 @ 13:39:30

Job Ticket #: 64802                      DST #: 1

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

Printed: 2017.03.07 @ 14:52:54



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC  
 PO Box 8037  
 Wichita, KS 67208  
 ATTN: Tim Lauer

**36-25S-21W Ford, KS**  
**Herrman Unit A #1-36**  
 Job Ticket: 64802 **DST#: 1**  
 Test Start: 2017.03.05 @ 04:55:00

## GENERAL INFORMATION:

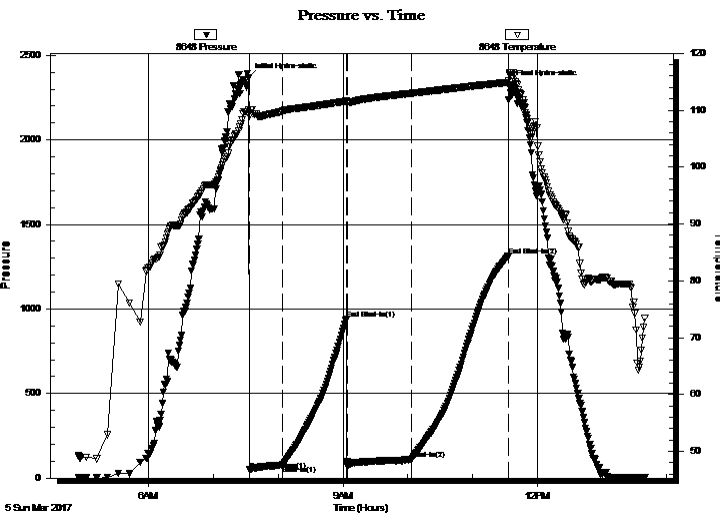
Formation: **Cherokee Lime & Miss**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:33:30  
 Time Test Ended: 13:39:30  
 Interval: **4644.00 ft (KB) To 4715.00 ft (KB) (TVD)**  
 Total Depth: 4715.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 2249.00 ft (KB)  
 2244.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8648

Inside

Press@RunDepth: 110.79 psig @ 4710.71 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.03.05 End Date: 2017.03.05 Last Calib.: 2017.03.05  
 Start Time: 04:55:05 End Time: 13:39:30 Time On Btm: 2017.03.05 @ 07:32:30  
 Time Off Btm: 2017.03.05 @ 11:34:00

TEST COMMENT: IFP 30 Minutes BOB in 10 minutes  
 ISI 60 Minutes Surface blow back for 15 minutes  
 FFP 60 Minutes BOB in 30 seconds then died back after 10 minutes  
 FSi 90 Minutes Blow back built to 1/2" then died after 25 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2365.35	110.10	Initial Hydro-static
1	48.34	108.95	Open To Flow (1)
31	76.84	109.80	Shut-In(1)
91	941.64	111.60	End Shut-In(1)
92	67.59	111.37	Open To Flow (2)
151	110.79	112.97	Shut-In(2)
241	1311.40	114.89	End Shut-In(2)
242	2324.73	116.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	GMCO Mud 20% Gas 30% Oil 50%	0.89
1.00	Clean Oil	0.00
0.00	1008' GIP	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC  
 PO Box 8037  
 Wichita, KS 67208  
 ATTN: Tim Lauer

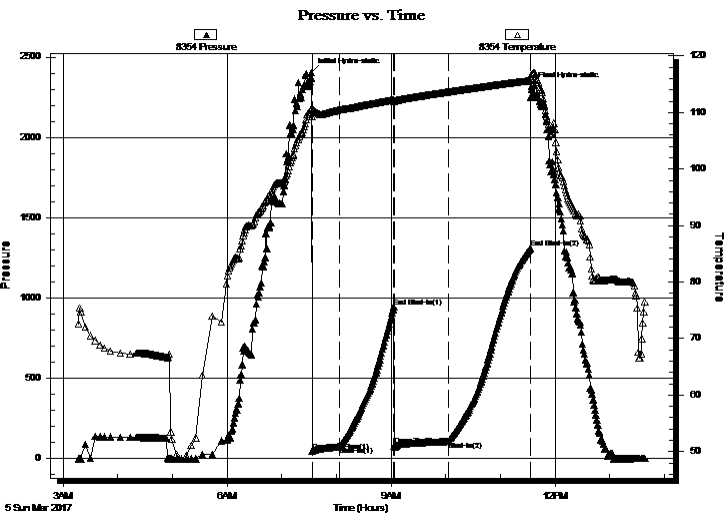
**36-25S-21W Ford, KS**  
**Herrman Unit A #1-36**  
 Job Ticket: 64802 **DST#: 1**  
 Test Start: 2017.03.05 @ 04:55:00

## GENERAL INFORMATION:

Formation: **Cherokee Lime & Miss**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:33:30  
 Time Test Ended: 13:39:30  
 Interval: **4644.00 ft (KB) To 4715.00 ft (KB) (TVD)**  
 Total Depth: 4715.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 2249.00 ft (KB)  
 2244.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8354 Outside**  
 Press@RunDepth: 1310.38 psig @ 4711.71 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.03.05 End Date: 2017.03.05 Last Calib.: 2017.03.05  
 Start Time: 03:17:01 End Time: 13:38:36 Time On Btm: 2017.03.05 @ 07:32:50  
 Time Off Btm: 2017.03.05 @ 11:34:08

**TEST COMMENT:** IFP 30 Minutes BOB in 10 minutes  
 ISI 60 Minutes Surface blow back for 15 minutes  
 FFP 60 Minutes BOB in 30 seconds then died back after 10 minutes  
 FSi 90 Minutes Blow back built to 1/2" then died after 25 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2402.85	110.63	Initial Hydro-static
1	45.52	109.26	Open To Flow (1)
31	73.96	110.48	Shut-In(1)
91	941.37	112.28	End Shut-In(1)
91	79.73	112.00	Open To Flow (2)
151	107.99	113.66	Shut-In(2)
241	1310.38	115.65	End Shut-In(2)
242	2315.28	116.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	GMCO Mud 20% Gas 30% Oil 50%	0.89
1.00	Clean Oil	0.00
0.00	1008' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC  
PO Box 8037  
Wichita, KS 67208  
ATTN: Tim Lauer

**36-25S-21W Ford, KS**  
**Herrman Unit A #1-36**  
Job Ticket: 64802      **DST#: 1**  
Test Start: 2017.03.05 @ 04:55:00

**Tool Information**

Drill Pipe:	Length: 4372.00 ft	Diameter: 3.80 inches	Volume: 61.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 267.00 ft	Diameter: 2.25 inches	Volume: 1.31 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 62.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4644.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.71 ft			
Tool Length:	90.71 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4629.00	
Hydraulic tool	5.00			4634.00	
Top Packer	5.00			4639.00	
Packer	5.00			4644.00	20.00      Bottom Of Top Packer
Anchor	5.00			4649.00	
Change Over Sub	1.00			4650.00	
Drill Pipe	31.71			4681.71	
Change Over Sub	1.00			4682.71	
Anchor	27.00			4709.71	
Recorder	1.00	8648	Inside	4710.71	
Recorder	1.00	8354	Outside	4711.71	
Bullnose	3.00			4714.71	70.71      Anchor Tool

**Total Tool Length: 90.71**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

Job Ticket: 64802

**DST#: 1**

ATTN: Tim Lauer

Test Start: 2017.03.05 @ 04:55:00

## 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4300.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	GMCO Mud 20% Gas 30% Oil 50%	0.885
1.00	Clean Oil	0.005
0.00	1008' GIP	0.000

Total Length: 181.00 ft      Total Volume: 0.890 bbl

Num Fluid Samples: 0

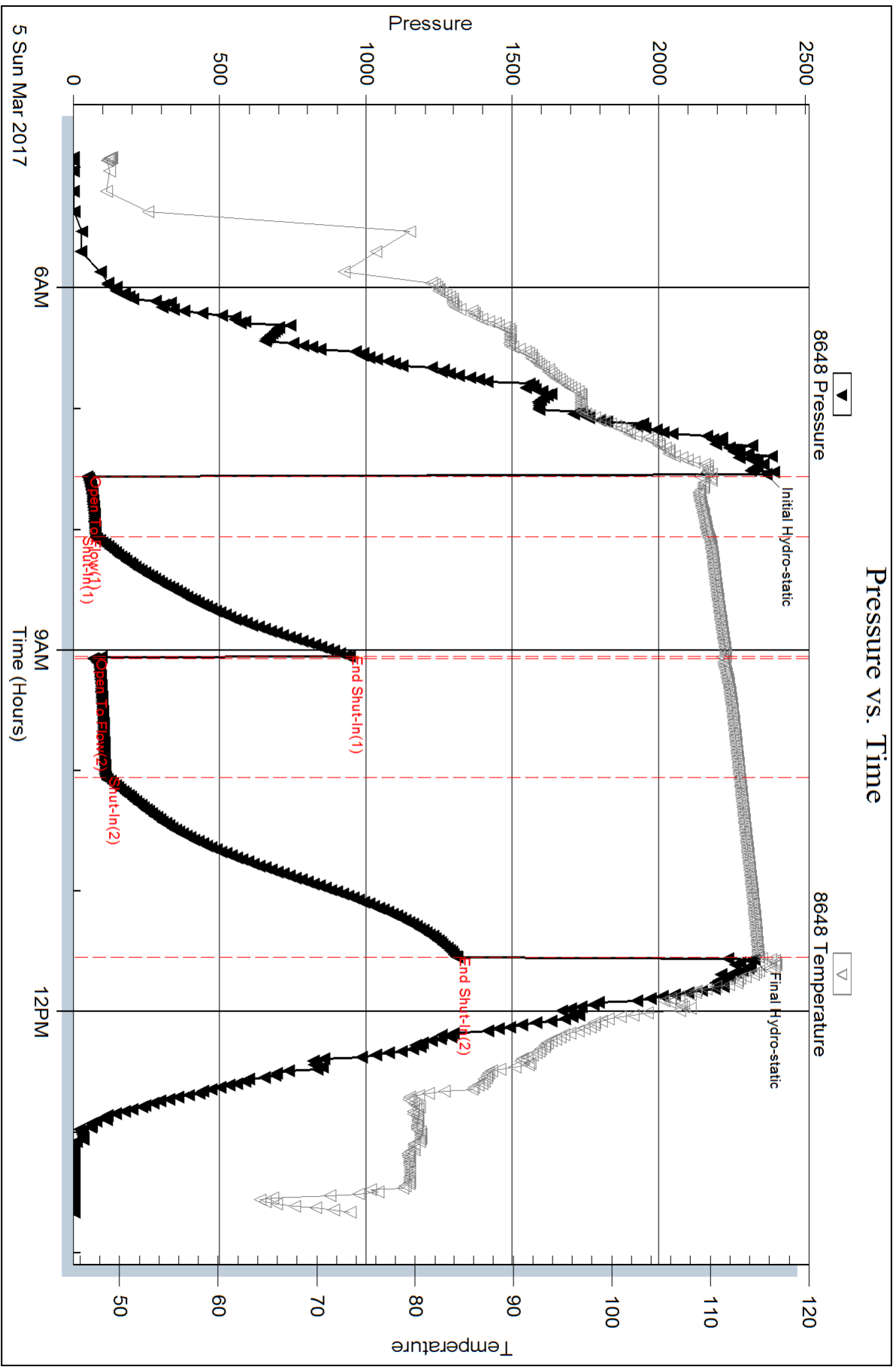
Num Gas Bombs: 0

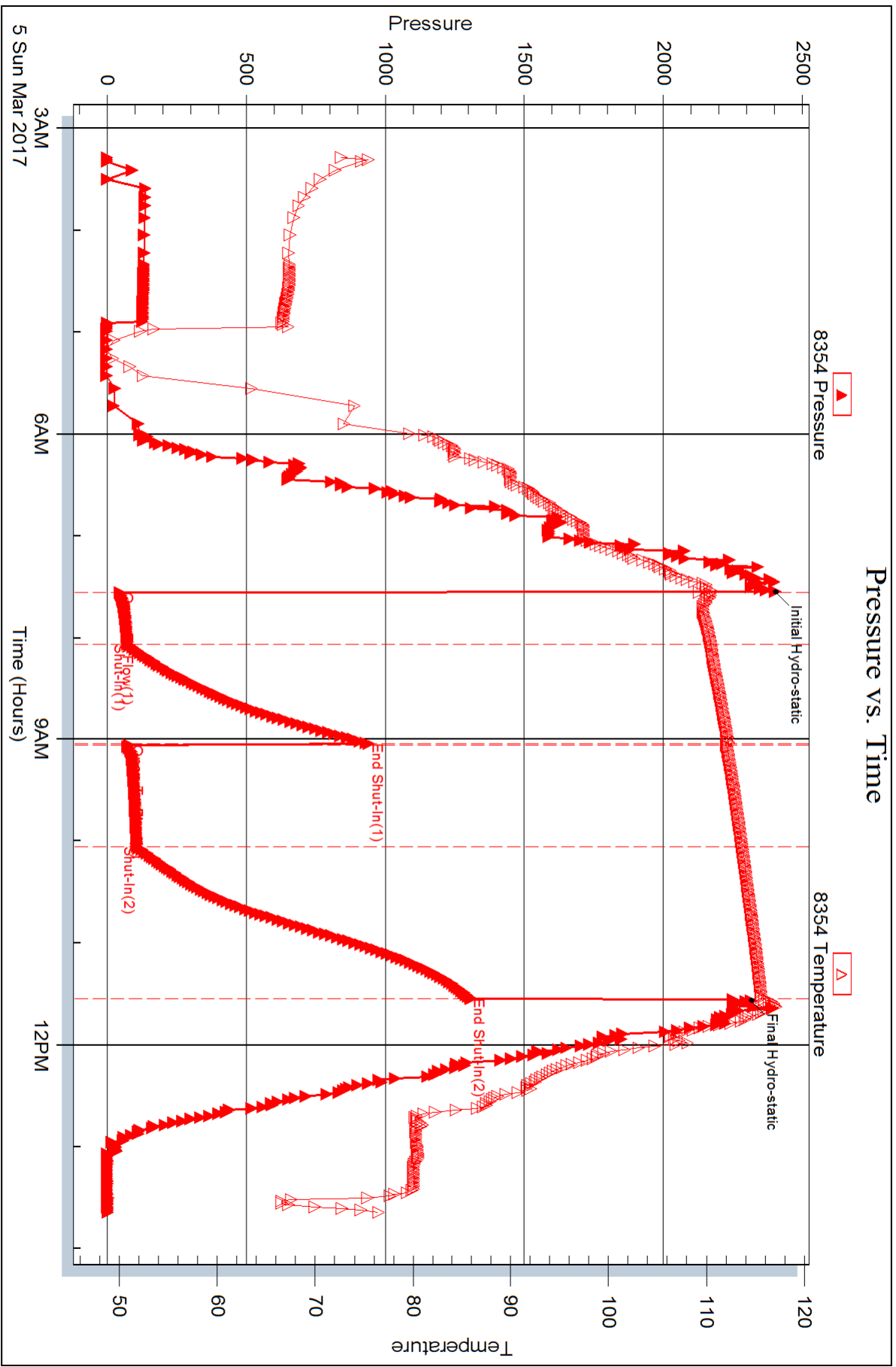
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita, KS 67208

ATTN: Tim Lauer

### **Herrman Unit A #1-36**

### **36-25S-21W Ford,KS**

Start Date: 2017.03.05 @ 19:55:00

End Date: 2017.03.06 @ 03:49:00

Job Ticket #: 64803                      DST #: 2

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

Printed: 2017.03.07 @ 14:52:24





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

ATTN: Tim Lauer

Job Ticket: 64803

**DST#: 2**

Test Start: 2017.03.05 @ 19:55:00

## GENERAL INFORMATION:

Formation: **Mississippi Dolomite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:41:30

Time Test Ended: 03:49:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

**Interval: 4715.00 ft (KB) To 4725.00 ft (KB) (TVD)**

Reference Elevations: 2249.00 ft (KB)

Total Depth: 4725.00 ft (KB) (TVD)

2244.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8648**

**Inside**

Press@RunDepth: 95.60 psig @ 4721.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.05

End Date:

2017.03.06

Last Calib.:

2017.03.06

Start Time:

19:55:05

End Time:

03:48:59

Time On Btm:

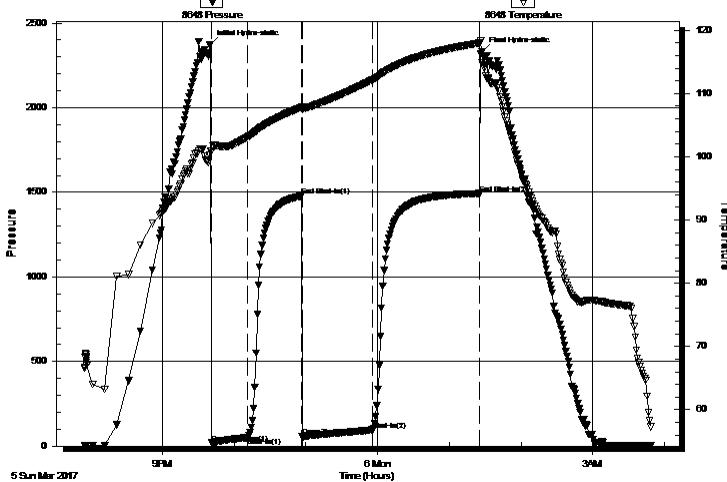
2017.03.05 @ 21:40:30

Time Off Btm:

2017.03.06 @ 01:27:30

**TEST COMMENT:** IFP 30 Minutes Blow built to 3"  
ISI 45 Minutes No blow back  
FFP 60 Minutes Blow built to 9"  
FSI 90 Minutes No blow back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2373.57	100.96	Initial Hydro-static
1	19.62	100.88	Open To Flow (1)
31	50.87	103.12	Shut-In(1)
76	1478.65	107.84	End Shut-In(1)
77	55.78	107.53	Open To Flow (2)
136	95.60	112.16	Shut-In(2)
225	1493.70	117.96	End Shut-In(2)
227	2331.94	114.92	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	SWMCO Water 20% Mud 30% Oil 50%	0.44
90.00	Clean Oil 100%	0.44
0.00	240' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC  
PO Box 8037  
Wichita, KS 67208  
ATTN: Tim Lauer

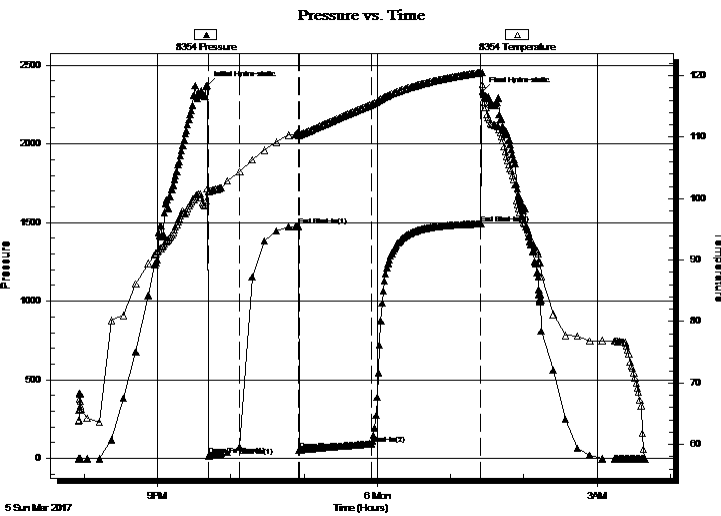
**36-25S-21W Ford, KS**  
**Herrman Unit A #1-36**  
Job Ticket: 64803 **DST#: 2**  
Test Start: 2017.03.05 @ 19:55:00

## GENERAL INFORMATION:

Formation: **Mississippi Dolomite**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 21:41:30  
Time Test Ended: 03:49:00  
Interval: **4715.00 ft (KB) To 4725.00 ft (KB) (TVD)**  
Total Depth: 4725.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Ken Swinney  
Unit No: 72  
Reference Elevations: 2249.00 ft (KB)  
2244.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8354 Outside**  
Press@RunDepth: 1491.55 psig @ 4722.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2017.03.05 End Date: 2017.03.06 Last Calib.: 2017.03.06  
Start Time: 19:55:05 End Time: 03:39:36 Time On Btm: 2017.03.05 @ 21:40:30  
Time Off Btm: 2017.03.06 @ 01:26:18

**TEST COMMENT:** IFP 30 Minutes Blow built to 3"  
ISI 45 Minutes No blow back  
FFP 60 Minutes Blow built to 9"  
FSI 90 Minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2371.83	101.54	Initial Hydro-static
1	17.53	101.08	Open To Flow (1)
27	70.34	104.39	Shut-In(1)
75	1476.52	110.68	End Shut-In(1)
76	54.89	110.32	Open To Flow (2)
135	93.29	115.29	Shut-In(2)
225	1491.55	120.49	End Shut-In(2)
226	2330.54	118.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	SWMCO Water 20% Mud 30% Oil 50%	0.44
90.00	Clean Oil 100%	0.44
0.00	240' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

ATTN: Tim Lauer

Job Ticket: 64803

**DST#: 2**

Test Start: 2017.03.05 @ 19:55:00

## Tool Information

Drill Pipe:	Length: 4402.00 ft	Diameter: 3.80 inches	Volume: 61.75 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 297.00 ft	Diameter: 2.25 inches	Volume: 1.46 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 63.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4715.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	30.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4700.00	
Hydraulic tool	5.00			4705.00	
Top Packer	5.00			4710.00	
Packer	5.00			4715.00	20.00 Bottom Of Top Packer
Anchor	5.00			4720.00	
Recorder	1.00	8648	Inside	4721.00	
Recorder	1.00	8354	Outside	4722.00	
Bullnose	3.00			4725.00	10.00 Anchor Tool

**Total Tool Length: 30.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

Job Ticket: 64803

**DST#: 2**

ATTN: Tim Lauer

Test Start: 2017.03.05 @ 19:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	SWMCO Water 20% Mud 30% Oil 50%	0.443
90.00	Clean Oil 100%	0.443
0.00	240' GIP	0.000

Total Length: 180.00 ft

Total Volume: 0.886 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

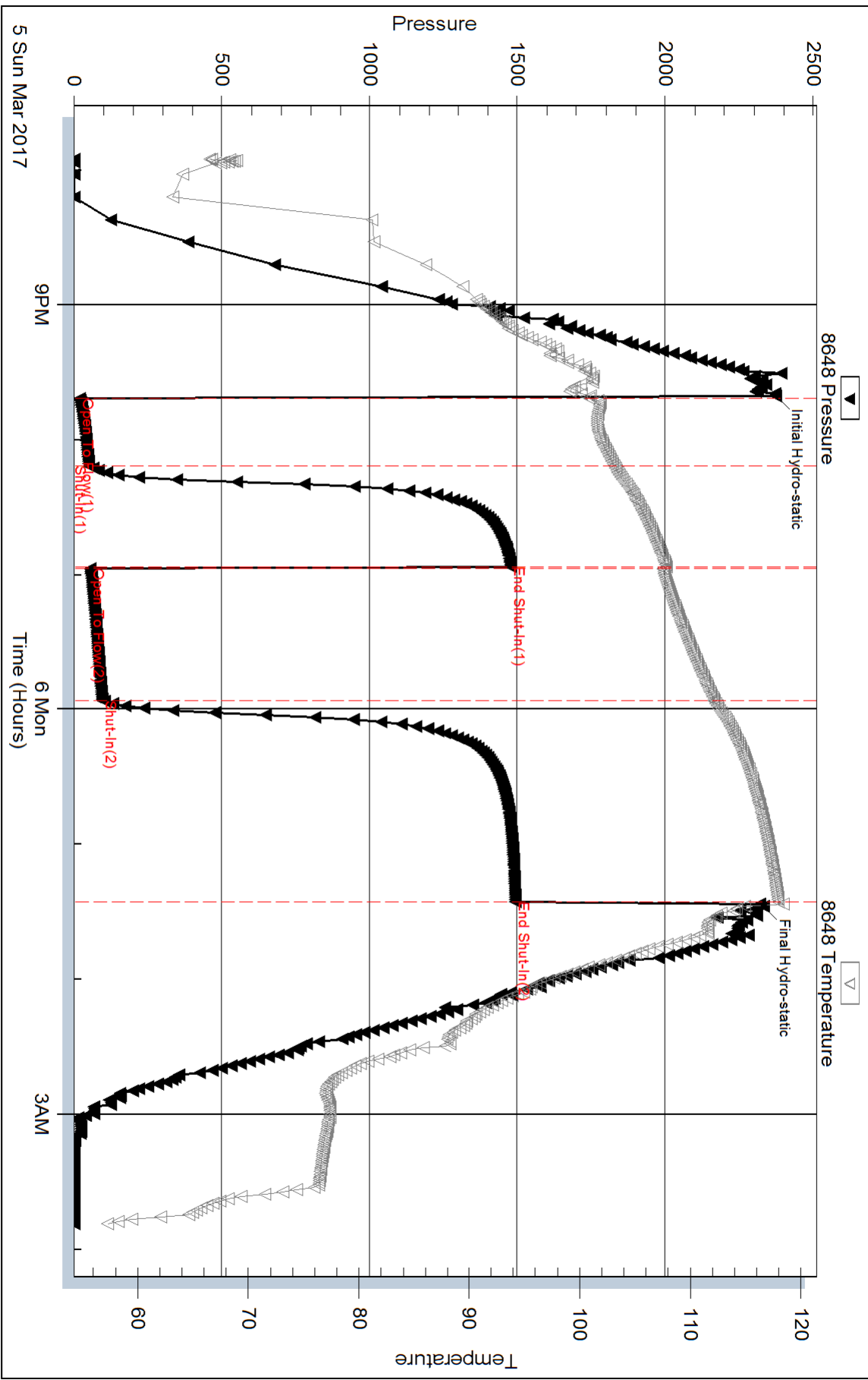
Serial #:

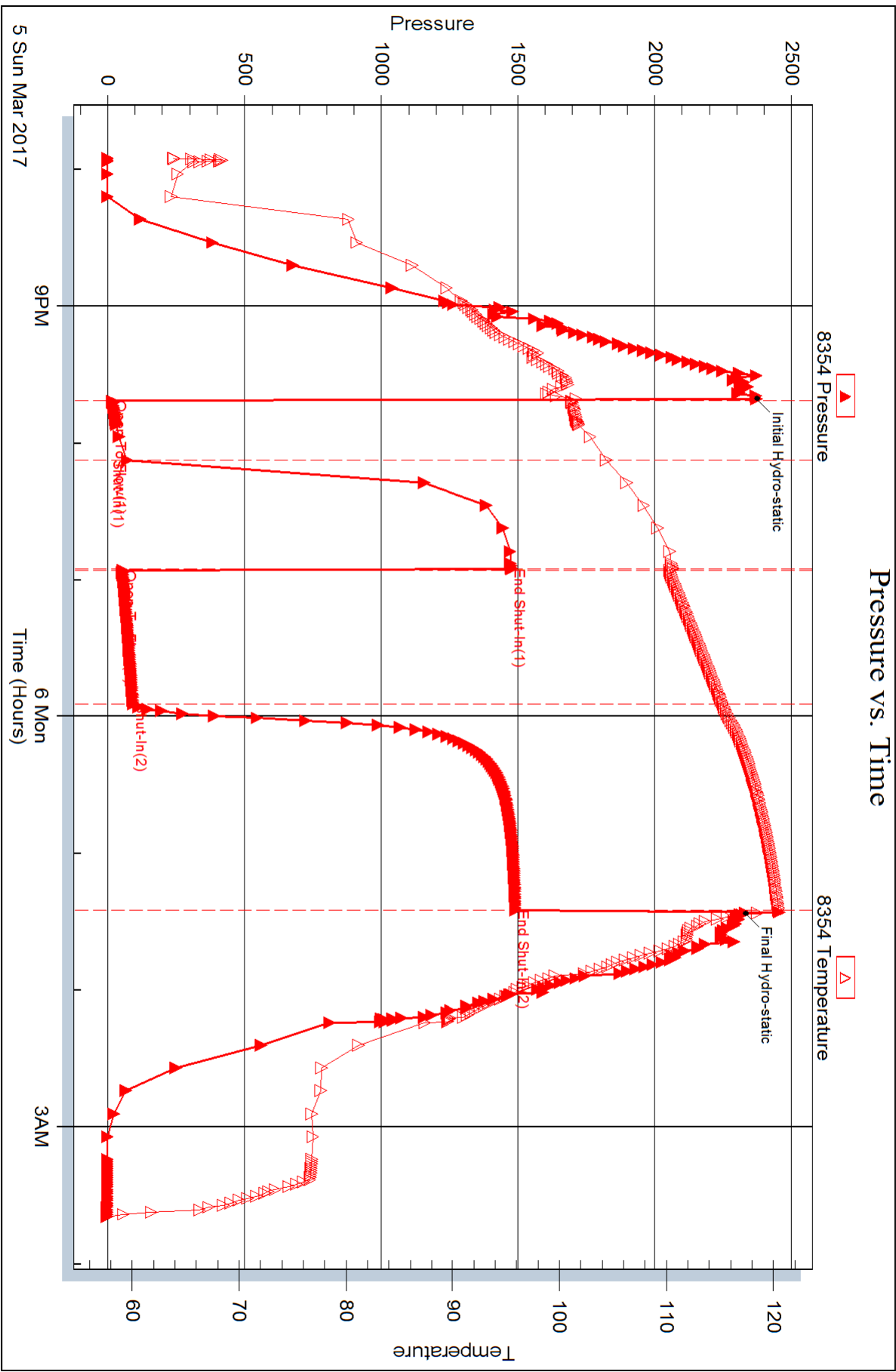
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita, KS 67208

ATTN: Tim Lauer

### **Herrman Unit A #1-36**

### **36-25S-21W Ford,KS**

Start Date: 2017.03.06 @ 09:52:00

End Date: 2017.03.06 @ 18:13:00

Job Ticket #: 64804                      DST #: 3

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

Printed: 2017.03.07 @ 14:51:44



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

ATTN: Tim Lauer

Job Ticket: 64804

**DST#: 3**

Test Start: 2017.03.06 @ 09:52:00

## GENERAL INFORMATION:

Formation: **Mississippi Dolomite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:40:30

Time Test Ended: 18:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

**Interval: 4725.00 ft (KB) To 4735.00 ft (KB) (TVD)**

Reference Elevations: 2249.00 ft (KB)

Total Depth: 4735.00 ft (KB) (TVD)

2244.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8648**

**Inside**

Press@RunDepth: 546.78 psig @ 4731.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.06

End Date:

2017.03.06

Last Calib.:

2017.03.06

Start Time:

09:52:05

End Time:

18:12:59

Time On Btm:

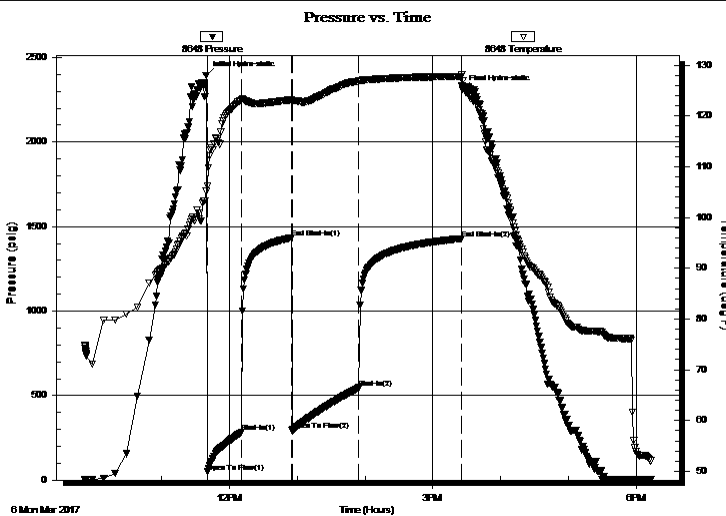
2017.03.06 @ 11:39:30

Time Off Btm:

2017.03.06 @ 15:26:30

**TEST COMMENT:** IFP 30 Minutes BOB in 8 1/2 minutes  
ISI 45 Minutes Light surface blow back  
FFP 60 Minutes BOB in 13 1/2 minutes  
FSI 90 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2395.08	105.14	Initial Hydro-static
1	49.36	106.17	Open To Flow (1)
31	282.71	123.23	Shut-In(1)
76	1433.59	123.19	End Shut-In(1)
76	292.43	122.82	Open To Flow (2)
135	546.78	126.86	Shut-In(2)
226	1428.90	127.81	End Shut-In(2)
227	2308.70	127.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1134.00	MW w / Skim of oil Mud 5% Water 95%	13.20
5.00	Clean Oil	0.07

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

ATTN: Tim Lauer

Job Ticket: 64804

**DST#: 3**

Test Start: 2017.03.06 @ 09:52:00

## GENERAL INFORMATION:

Formation: **Mississippi Dolomite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:40:30

Time Test Ended: 18:13:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: **4725.00 ft (KB) To 4735.00 ft (KB) (TVD)**

Reference Elevations: 2249.00 ft (KB)

Total Depth: 4735.00 ft (KB) (TVD)

2244.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8960 Outside**

Press@RunDepth: 1425.24 psig @ 4732.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.06

End Date:

2017.03.06

Last Calib.:

2017.03.06

Start Time:

09:52:05

End Time:

18:12:59

Time On Btm:

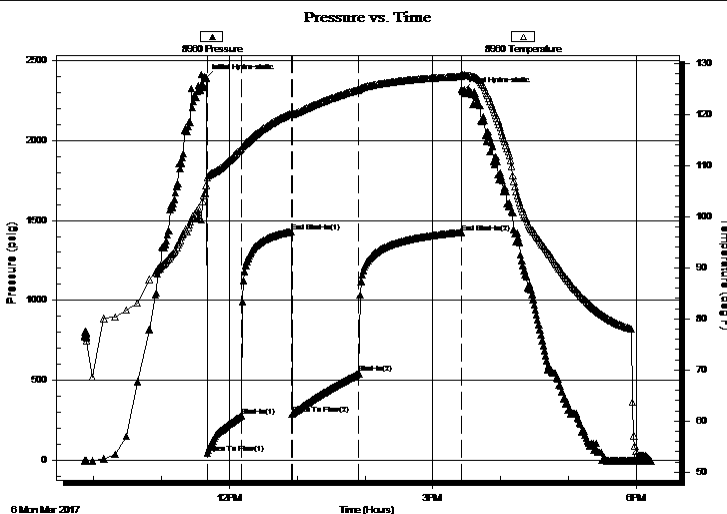
2017.03.06 @ 11:39:00

Time Off Btm:

2017.03.06 @ 15:26:30

**TEST COMMENT:** IFP 30 Minutes BOB in 8 1/2 minutes  
ISI 45 Minutes Light surface blow back  
FFP 60 Minutes BOB in 13 1/2 minutes  
FSI 90 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2389.42	104.68	Initial Hydro-static
2	45.72	107.64	Open To Flow (1)
32	279.15	113.29	Shut-In(1)
76	1430.70	120.25	End Shut-In(1)
77	289.27	119.93	Open To Flow (2)
136	543.28	124.88	Shut-In(2)
226	1425.24	127.46	End Shut-In(2)
228	2305.79	127.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1134.00	MW w / Skim of oil Mud 5% Water 95%	13.20
5.00	Clean Oil	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**36-25S-21W Ford,KS**

PO Box 8037  
Wichita, KS 67208

**Herrman Unit A #1-36**

ATTN: Tim Lauer

Job Ticket: 64804

**DST#: 3**

Test Start: 2017.03.06 @ 09:52:00

## Tool Information

Drill Pipe:	Length: 4434.00 ft	Diameter: 3.80 inches	Volume: 62.20 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 297.00 ft	Diameter: 2.25 inches	Volume: 1.46 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 63.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4725.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			4710.00	
Hydraulic tool	5.00			4715.00	
Top Packer	5.00			4720.00	
Packer	5.00			4725.00	20.00 Bottom Of Top Packer
Anchor	5.00			4730.00	
Recorder	1.00	8648	Inside	4731.00	
Recorder	1.00	8960	Outside	4732.00	
Bullnose	3.00			4735.00	10.00 Anchor Tool

**Total Tool Length: 30.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC  
PO Box 8037  
Wichita, KS 67208  
ATTN: Tim Lauer

**36-25S-21W Ford,KS**  
**Herrman Unit A #1-36**  
Job Ticket: 64804      **DST#: 3**  
Test Start: 2017.03.06 @ 09:52:00

## 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:	34000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6400.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

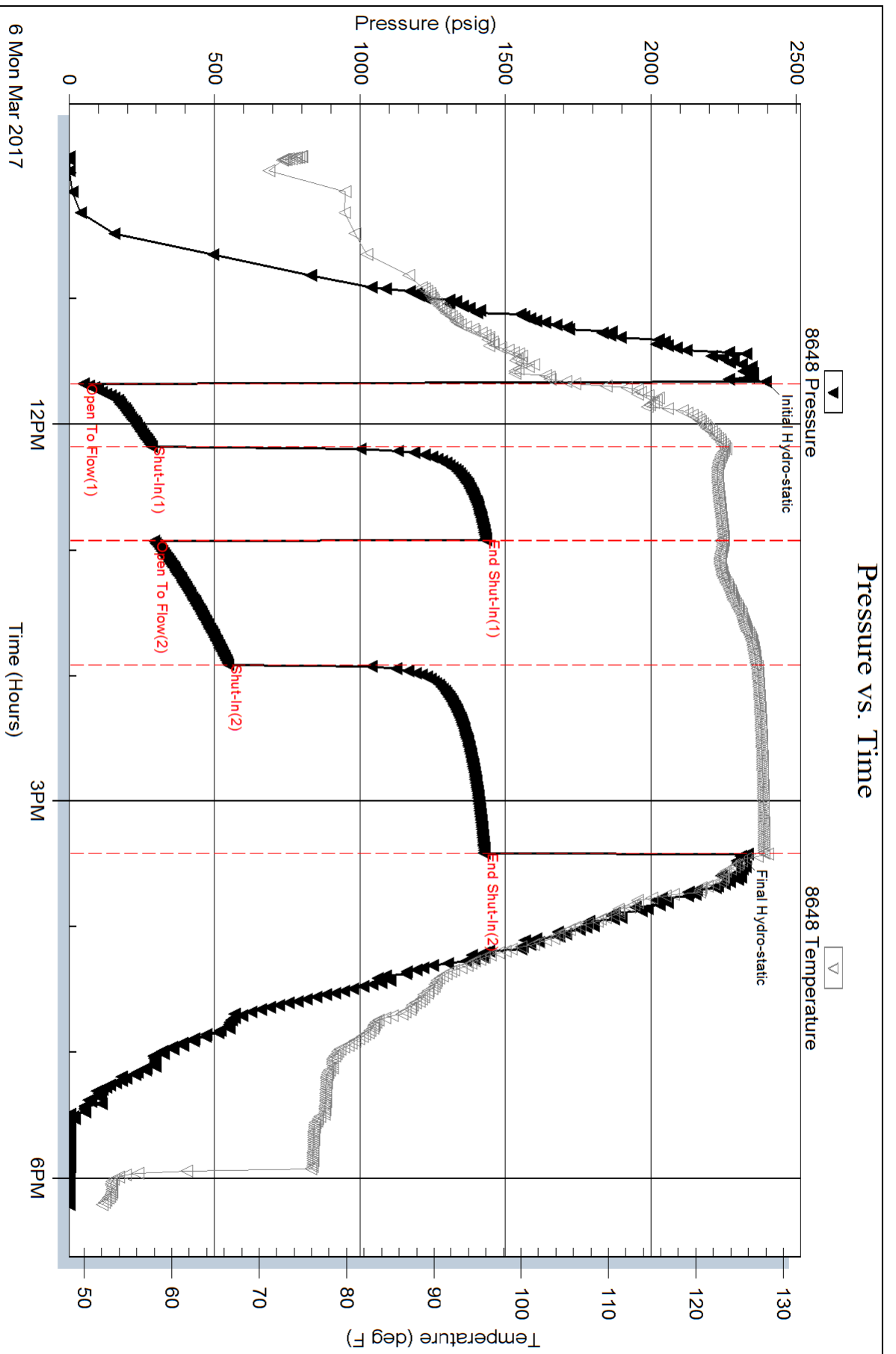
Length ft	Description	Volume bbl
1134.00	MW w / Skim of oil Mud 5% Water 95%	13.202
5.00	Clean Oil	0.070

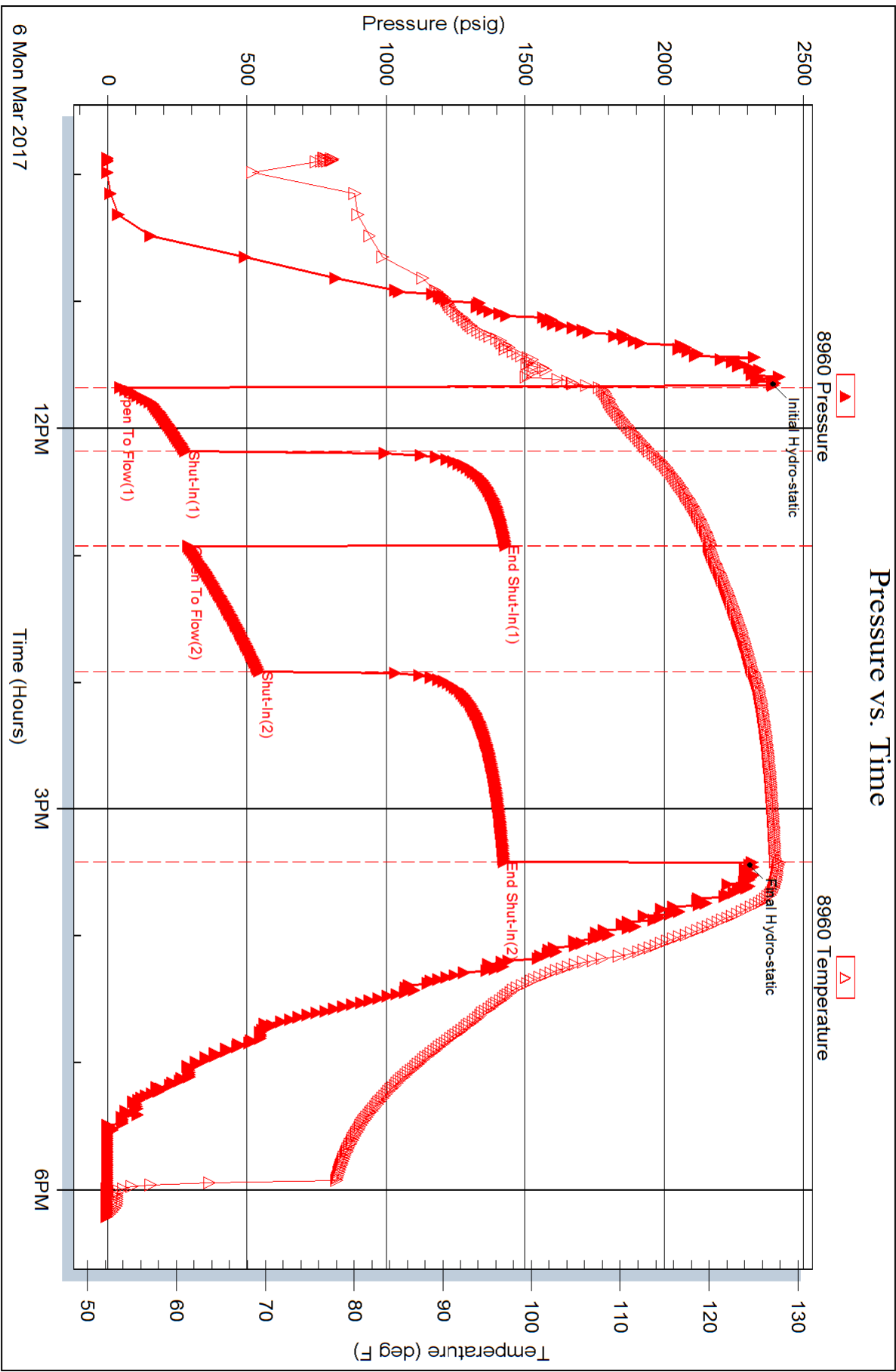
Total Length: 1139.00 ft      Total Volume: 13.272 bbl

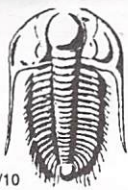
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Recovery Resistivity .23 ohms @ 60 deg.







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64802**

Well Name & No. Herrman Unit A #1-36 Test No. 2 Date 5 MAR 17  
 Company Cobalt Energy LLC Elevation 2249 KB 2244 GL  
 Address 115 S Belmont #12 PO Box 8037 Wichita, Kansas 67208  
 Co. Rep / Geo. Tim Lauer Rig WW Rig 16  
 Location: Sec. 36 Twp. 25S Rge. 21W Co. Ford State KS

Interval Tested 4644 - 4715 Zone Tested Cherokee Lime + Mississippian  
 Anchor Length 71 Drill Pipe Run 4372 Mud Wt. 9.25  
 Top Packer Depth 4639 Drill Collars Run 267.46 Vis 55  
 Bottom Packer Depth 4644 Wt. Pipe Run — WL 8.0  
 Total Depth 4715 Chlorides 4300 ppm System LCM 1#

Blow Description I.F. Blow built to B.O.B. in 10 minutes  
F.S.I. Light surface blowback for 15 minutes  
F.F. Blow built to B.O.B. in 30 seconds  
F.S.I. Blowback built to 1/2 inch then died after 25 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Clean O.I.</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>180</u>	<u>Muddy Gassy O.I.</u>	<u>30</u>	<u>50</u>	<u>0</u>	<u>20</u>
<u>1008</u>	<u>Gas in pipe</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Rec Total      BHT      Gravity      API RW      @      °F Chlorides      ppm

(A) Initial Hydrostatic 2365  Test 1150 T-On Location 3:45 am  
 (B) First Initial Flow 48  Jars      T-Started 4:55 am  
 (C) First Final Flow 26  Safety Joint      T-Open 7:34 am  
 (D) Initial Shut-In 941  Circ Sub      T-Pulled 11:34 am  
 (E) Second Initial Flow 67  Hourly Standby      T-Out 1:40 pm  
 (F) Second Final Flow 110  Mileage 94 70.50 Comments       
 (G) Final Shut-In 1311  Sampler       
 (H) Final Hydrostatic 2324  Straddle       Ruined Shale Packer       
 Shale Packer       Ruined Packer       
 Extra Packer       Extra Copies       
 Extra Recorder      Sub Total 0  
 Day Standby      Total 1220.50  
 Accessibility      MP/DST Disc't       
 Sub Total 1220.50

Approved By Tim J. Lauer Our Representative     

TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64803**

Well Name & No. Herrman Unit A #1-36 Test No. 2 Date 5 MAR 17  
 Company Cobalt Energy LLC Elevation 2249 KB 2244 GL  
 Address 115 S Belmont #12 PO Box 8037 Wichita, Kansas 67208  
 Co. Rep / Geo. Tim Lauer Rig WW Rig 16  
 Location: Sec. 36 Twp. 25S Rge. 21W Co. Ford State KS

Interval Tested 4715-4725 Zone Tested Mississippi Dolomite  
 Anchor Length 10 Drill Pipe Run 4402 Mud Wt. 9.45  
 Top Packer Depth 4710 Drill Collars Run 297.49 Vis 58  
 Bottom Packer Depth 4715 Wt. Pipe Run — WL 8.8  
 Total Depth 4725 Chlorides 4200 ppm System LCM 1#

Blow Description I.F. Blow built to 3 inches  
I.S.I No blow back  
F.F. Blow built to 9 inches  
F.S.I No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>Watery Muddy Oil</u>	<u>50</u>	<u>20</u>	<u>30</u>	<u>—</u>
<u>90</u>	<u>Clean Oil</u>	<u>100</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>240</u>	<u>Gas in pipe</u>	<u>100</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Rec Total — BHT 117 Gravity 34 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2373  Test 1150 T-On Location 7:20 pm  
 (B) First Initial Flow 19  Jars — T-Started 7:55 pm  
 (C) First Final Flow 50  Safety Joint — T-Open 9:41 pm  
 (D) Initial Shut-In 1478  Circ Sub — T-Pulled 1:26 am  
 (E) Second Initial Flow 55  Hourly Standby — T-Out 3:48 am  
 (F) Second Final Flow 95  Mileage 94 70.50 Comments —  
 (G) Final Shut-In 1493  Sampler —  
 (H) Final Hydrostatic 2331  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —

Initial Open 30  Extra Packer —  Extra Copies —  
 Initial Shut-In 45  Extra Recorder — Sub Total 0  
 Final Flow 60  Day Standby — Total 1220.50  
 Final Shut-In 90  Accessibility — MP/DST Disc't —  
 Sub Total 1220.50

Approved By Tim J. Lauer Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64804**

Well Name & No. Herrman Unit A #1-36 Test No. 3 Date 6 MAR 17  
 Company Cobalt Energy LLC Elevation 2249 KB 2244 GL  
 Address 115 S Belmont #12 PO Box 9037 Wichita Kansas 67208  
 Co. Rep / Geo. Tim Lauer Rig Murphy Rig 16  
 Location: Sec. 36 Twp. 25S Rge. 21W Co. Ford State KS

Interval Tested 4725-4735 Zone Tested Mississippi Dolomite  
 Anchor Length 10 Drill Pipe Run 4434 Mud Wt. 9.4  
 Top Packer Depth 4720 Drill Collars Run 297.49 Vis 60  
 Bottom Packer Depth 4725 Wt. Pipe Run — WL 9.2  
 Total Depth 4735 Chlorides 6400 ppm System LCM 1

Blow Description I.F. Blow built to bottom of bucket in 8 1/2 minutes  
I.S.I. Light surface blow back  
F.F. Blow built to bottom of bucket in 13 1/2 minutes

F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>0.1</u>	<u>100</u>			
<u>1134</u>	<u>Muddy water w/skin of oil</u>			<u>95</u>	<u>5</u>

Rec Total 1139 BHT 127 Gravity \_\_\_\_\_ API RW .23 @ 60 °F Chlorides 34000 ppm

(A) Initial Hydrostatic <u>239.5</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:30 am</u>
(B) First Initial Flow <u>49</u>	<input type="checkbox"/> Jars _____	T-Started <u>9:52 am</u>
(C) First Final Flow <u>282</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>11:40 am</u>
(D) Initial Shut-In <u>1433</u> <del>1433</del>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>3:25 pm</u>
(E) Second Initial Flow <u>292</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>6:14 pm</u>
(F) Second Final Flow <u>546</u>	<input checked="" type="checkbox"/> Mileage <u>94</u> 70.50	Comments _____
(G) Final Shut-In <u>1428</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2308</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1220.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1220.50</u>	

Approved By Tim Lauer Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# Tim J. Lauer

## Petroleum Geologist

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### GEOLOGIST'S REPORT

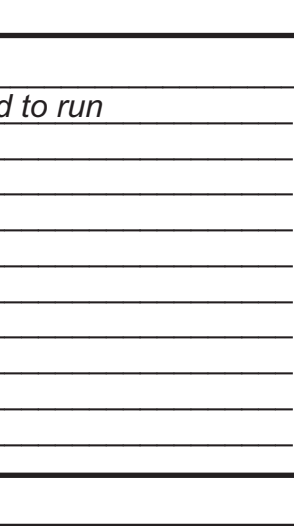
#### DRILLING TIME AND SAMPLE LOG

38.58654388  
-100.75953322

COMPANY	<b>Cobalt Energy LLC</b>
LEASE	<b>Herrmann Unit 'A' #1-36</b>
FIELD	<b>Wildcat</b>
LOCATION	<b>2611' FSL, 153' FEL</b>
SEC	<b>36 TWSP 25S RGE 21W</b>
COUNTY	<b>Ford STATE Kansas</b>
CONTRACTOR	<b>Murfin Drilling Rig #16</b>
SPUD	<b>2-27-2017 COMP 3-6-2017</b>
RTD	<b>4800 LTD 4800</b>
MUD UP	<b>3600 TYPE MUD Chemical</b>
SAMPLES SAVED FROM	<b>3900 TO RTD</b>
DRILLING TIME KEPT FROM	<b>3900 TO RTD</b>
SAMPLES EXAMINED FROM	<b>3900 TO RTD</b>
GEOLOGICAL SUPERVISION FROM	<b>4000 to RTD</b>
GEOLOGIST ON WELL	<b>Tim J. Lauer</b>

ELEVATIONS	KB 2249
DF	
GL	2244
Measurements Are All From	2249 KB
CASING	
CONDUCTOR	
SURFACE	8 5/8" @ 207'
PRODUCTION	5 1/2" @ 4799'
ELECTRICAL SURVEYS	
	Pioneer - DCP, L, ML, PE, Sonic - Engr: Justin Henrickson

FORMATION TOPS	ELECTRIC LOG	SAMPLE LOG
Anhydrite	1311 (+938)	1310 (+939)
Heebner	3974 (-1725)	3973 (-1724)
Br Lime	4083 (-1834)	4082 (-1833)
Lansing	4095 (-1846)	4094 (-1845)
Hushpuckney	4400 (-2151)	4404 (-2155)
Cherokee Shale	4623 (-2374)	4623 (-2374)
Mississippi	4703 (-2454)	4711 (-2462)
Miss Warsaw	4721 (-2472)	4720 (-2471)
Miss Osage	4752 (-2503)	4750 (-2501)
Total Depth	4800 (-2551)	4800 (-2551)



COMPANY & WELL **Cobalt Herrmann Unit 'A' #1-36**  
ELEVATIONS **KB 2249**  
LOCATION **2611' FSL, 153' FEL of section**  
SEC **36** TWSP **25S** RGE **21W**  
COUNTY **Ford** STATE **Ks**  
GL **2244**

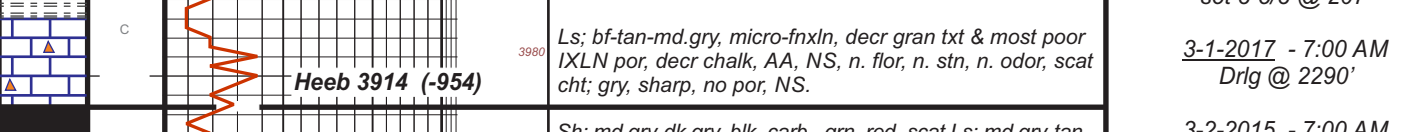
REMARKS  
*Due to drill stem test results, and log evaluation, operator elected to run production casing to further evaluate the location.*

Respectfully submitted,  
*Tim J. Lauer*  
3/8/2017

### LEGEND

Anhydrite	Sandstone	Limestone	Shale	Carb Sh	Cherty LS	Chert	Dolomite
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### DRILLING TIME IN MINUTES PER FOOT



### SAMPLE DESCRIPTION

3900-3905 Ls: tan-lt gry-bf, micro-fngrdxn, sli. foss, incr mly-gran txt 1/4 fr IXLN por, occ chalk, soft, NS, n. flor, n. stn, n. odor

3905-3910 Ls: crm-bf, some molt brn-gry, foss (fusil), rgh txt, scat pr vis por NS, n. flor, stn, n. odor

3910-3915 Ls: most gry-brn foss AA, rgh txt, pr por NS, no odor, incr shale, red-brn, some blk.

3915-3920 Ls: crm-bf, molt brn-gry, micro-mdgrdxn, most mealy-gran txt, fr-gd IG and IXLN por, NS, scat chalk, wht, soft, NS, n. detect, odor, (abund blk shale)

3920-3925 Ls: bf-tan-crm, micro-mxdn, foss IP, mostly mly-gran txt, fr-gd IG and IXLN por, NSFO, n. flor, stn, n. odor, scat chlk, wht, soft, fr IXLN por, NS.

3925-3930 Ls: bf-tan-gry, molt, micro-mxdn, foss IP, decr mealy-gran txt, fr-gd IG and IXLN por, NS, scat chlk, crm, soft, fr IXLN por, NS, occ drk-gry, blk, carb, and rd-brn shale.

3930-3935 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

3935-3940 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

3940-3945 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

3945-3950 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

3950-3955 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

3955-3960 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

3960-3965 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

3965-3970 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

3970-3975 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

3975-3980 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

3980-3985 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

3985-3990 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

3990-3995 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

3995-4000 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4000-4005 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4005-4010 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4010-4015 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4015-4020 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4020-4025 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4025-4030 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4030-4035 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4035-4040 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4040-4045 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4045-4050 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4050-4055 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4055-4060 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4060-4065 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4065-4070 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4070-4075 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4075-4080 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4080-4085 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4085-4090 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4090-4095 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4095-4100 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4100-4105 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4105-4110 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4110-4115 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4115-4120 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4120-4125 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4125-4130 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4130-4135 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4135-4140 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4140-4145 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4145-4150 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4150-4155 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4155-4160 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4160-4165 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4165-4170 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4170-4175 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4175-4180 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4180-4185 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4185-4190 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4190-4195 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4195-4200 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4200-4205 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4205-4210 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4210-4215 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4215-4220 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4220-4225 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4225-4230 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4230-4235 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4235-4240 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4240-4245 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4245-4250 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4250-4255 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4255-4260 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4260-4265 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4265-4270 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4270-4275 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4275-4280 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4280-4285 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4285-4290 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4290-4295 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4295-4300 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4300-4305 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4305-4310 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4310-4315 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4315-4320 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4320-4325 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4325-4330 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4330-4335 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4335-4340 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4340-4345 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4345-4350 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4350-4355 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4355-4360 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4360-4365 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4365-4370 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4370-4375 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4375-4380 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4380-4385 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4385-4390 Ls: most crm, some gry, tan, micro-fnxn, most dns, pr por, NS, 1/10 fr-mxdn, soft, chalky, scat fr IXLN por, NSFO, n. flor, n. stn, n. odor

4390-4395 Ls: bf-tan-md gry, micro-fnxn, decr gran txt & most poor IXLN por, decr chalk, AA, NS, n. flor, n. stn, n. odor, scat ch; gry, sharp, no por, NS.

4395-4400 Sh: md-gry-dk gry, blk, carb, gm, red, scat Ls; md-gry-tan, molt, micro-fnxn, mealy txt, pr IXLN por, NSFO, n. flor, n. stn, n. odor.

4400-4405 Sh: md-dk gry, rd-brn, occ blk, gritty, carb, abund Ls, AA, NS, n. flor, or odor.

4405-4410 Ls: most crm, some gry, tan, micro-fnxn, most

Conservation Division  
266 N. Main St., Ste. 220  
Wichita, KS 67202-1513



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

Pat Apple, Chairman  
Shari Feist Albrecht, Commissioner  
Jay Scott Emler, Commissioner

Sam Brownback, Governor

June 30, 2017

NICHOLAS HESS  
Cobalt Energy LLC  
115 S. BELMONT #12  
PO BOX 8037  
WICHITA, KS 67208

Re: ACO-1  
API 15-057-20977-00-00  
HERRMANN UNIT "A" 1-36  
NE/4 Sec.36-25S-21W  
Ford County, Kansas

Dear NICHOLAS HESS:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 02/27/2017 and the ACO-1 was received on June 29, 2017 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department