

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top _____ Bottom _____
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Cobalt Energy LLC
Well Name	SHIRLEY A 1-30
Doc ID	1458616

All Electric Logs Run

DUAL INDUCTION
NEUTRON-DENSITY
MICRO
SONIC

Form	ACO1 - Well Completion
Operator	Cobalt Energy LLC
Well Name	SHIRLEY A 1-30
Doc ID	1458616

Tops

Name	Top	Datum
ANHY	2332	818
TOP	3432	-282
HEEB	3705	-555
LANS	3752	-602
STARK	4006	-856
BKC	4114	-964
MARM	4148	-998
PAWN	4227	-1077
CHER	4318	-1168
MORROW	4460	-1310
MISS	4572	-1422

250 N. Water St., Suite #200
Wichita, KS 67202



HURRICANE SERVICES INC

Customer: Coblat Energy LLC		Lease & Well #: Shirley A 1-30		Date: 2/8/2019	
Service District: Oakley Ks		County & State: Logan Ks		Legals S/T/R: 30-13-37	
Job Type: PTA		<input type="checkbox"/> PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	Job #: _____
		New Well?: <input type="checkbox"/> YES <input type="checkbox"/> No		Ticket #: ICT1779	

Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures			
230	Alan	<input type="checkbox"/> Hard hat	<input type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging
168/256	Kate	<input type="checkbox"/> H2S Monitor	<input type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection
26	Travis	<input type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations
	John	<input type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input type="checkbox"/> Overhead Hazards	<input type="checkbox"/> Muster Point/Medical Locations
		<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	

Comments
All cement and chemicals came from Oakley service yard

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
M015	Light Equipment Mileage	mi	45.00	\$68.00
M019	Heavy Equipment Mileage	mi	80.00	\$272.00
M020	Ton Mileage	tm	454.00	\$578.85
C010	Cement Pump	ea	1.00	\$637.50
CP031	H-Plug	sack	345.00	\$2,817.75
C035	Cement Data Acquisition	job	1.00	\$212.50
FE190	8 5/8" Wooden Plug	ea	1.00	\$127.50

Customer Section: On the following scale how would you rate Hurricane Services Inc? Net: \$4,714.10

Based on this job, how likely is it you would recommend HSI to a colleague?
 1 2 3 4 5 6 7 8 9 10
 Unlikely Extremely Likely

Total Taxable \$ - Tax Rate: Total: \$ 4,714.10

Slate tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.

HSI Representative: *Travis Williams*

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X *[Signature]*
 CUSTOMER AUTHORIZATION SIGNATURE



CEMENT TREATMENT REPORT

Customer:	Coblat Energy LLC	Well:	Shirley A 1-30	Ticket:	ICT1779
City, State:	Wichita Ks	County:	Logan	Date:	2/8/2019
Field Rep:	Andy Dinkle	S-T-R:	30-13-37	Service:	Cement

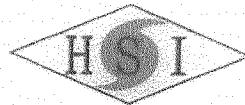
Downhole Information	
Hole Size:	7 7/8
Hole Depth:	4650
Casing Size:	in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbls

Slurry	
Weight:	13.8 # / sx
Water / Sx:	gal / sx
Yield:	1 2/5 ft³ / sx
Bbls / Ft.:	
Depth:	ft
Volume:	bbls
Excess:	%
Total Slurry:	64 bbls
Total Sacks:	255 sx

Cement Blend		
Product	%	#
Class A	60.0	14382
Gel	4.0	877
Poz/ Fly ash	40.0	7650

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS	Total	
1:30 PM				Arrive						22,909	
1:35 PM				Safety meeting							
1:40 PM				Rig up							
2:15 PM	4.6	200.0	8.0	Mix 50 sks @ 1.41 yeild @ 2345							
2:30 PM	3.6	200.0	33.0	Displace							
2:45 PM				Rig pulls pipe							
3:00 PM	4.6	200.0	16.0	Mix 100 sks @ 1495							
3:15 PM	3.6	250.0	21.0	Displace							
3:20 PM				Rig pulls pipe							
3:35 PM	4.6	150.0	8.0	Mix 50 sks @ 380							
3:45 PM	3.6	100.0	5.5	Displace							
3:50 PM				Rig pulls pipe							
4:30 PM	4.0	100.0	14.0	Mix 10 sks DC, 30 sks RH, 15 sks MH							
5:00 PM				Wash up							
5:30 PM				Rig down							
6:00 PM				Depart							

CREW			UNIT	SUMMARY		
Cementer:	Travis Williams		26.0	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Alan Ryan		230.0	4.08671 bpm	171.43 psi	105.50 bbls
Bulk #1:	Kale Ochs		165-256			
Bulk #2:	John Polly					



HURRICANE SERVICES INC

Customer	Cobalt Energy LLC	Lease & Well #	Shirley A 1-30	Date	1/30/2019
Service District	Oakley,KS	County & State	Logan KS	Legals S/T/R	30-13-37
Job Type	Surface	<input type="checkbox"/> PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	<input type="checkbox"/> New Well?
				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> No
Equipment #	Driver	Ticket #			
		ICT1758			

Job Safety Analysis - A Discussion of Hazards & Safety Procedures					
231	Alan	<input type="checkbox"/> Hard hat	<input type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging
181/254	Kale	<input type="checkbox"/> H2S Monitor	<input type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection
26	Travis	<input type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations
		<input type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input type="checkbox"/> Overhead Hazards	<input type="checkbox"/> Muster Point/Medical Locations
		<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	

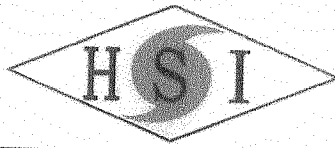
Comments

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
MG10	Heavy Equipment Mileage	mi	30.00	\$272.00
MG15	Light Equipment Mileage	mi	40.00	\$68.00
MG20	Ton Mileage	tm	395.00	\$504.65
CG10	Cement Pump	ea	1.00	\$637.50
CP015	H-325	sack	236.00	\$3,400.00
CG15	Cement Data Acquisition	job	1.00	\$212.50
FE250	8 5/8" Centralizer	ea	2.00	\$153.00

Customer Section: On the following scale how would you rate Hurricane Services Inc?		Net:	\$5,247.65
Based on this job, how likely is it you would recommend HSI to a colleague?		Total Taxable \$	-
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Tax Rate:	-
Unlikely	1 2 3 4 5 6 7 8 9 10	Sale Tax:	\$ -
	Extremely Likely	Total:	\$ 5,247.65
		HSI Representative:	Travis Williams

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X CUSTOMER AUTHORIZATION SIGNATURE



CEMENT TREATMENT REPORT

Customer: **Cobalt Energy LLC**
 City, State: **Wichita, KS**
 Field Rep: **Andy Dinkle**

Well: **Shirley A 1-30**
 County: **Logan, KS**
 S-T-R: **30-13-37**

Ticket: **ICT1758**
 Date: **1/30/2019**
 Service: **Cement**

Downhole Information	
Hole Size:	12.25
Hole Depth:	330
Casing Size:	8 5/8
Casing Depth:	329.7
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbbls

Slurry	
Weight:	14.8 # / sx
Water / Sx:	gal / sx
Yield:	1.41
Bbbls / Ft.:	
Depth:	330 ft
Volume:	bbbls
Excess:	%
Total Slurry:	63 bbbls
Total Sacks:	250 sx

Cement Blend		
Product	%	#
Class A		
Gel		
CaCl		
Metso		
KolSeal		
PhenoSeal		
Salt		

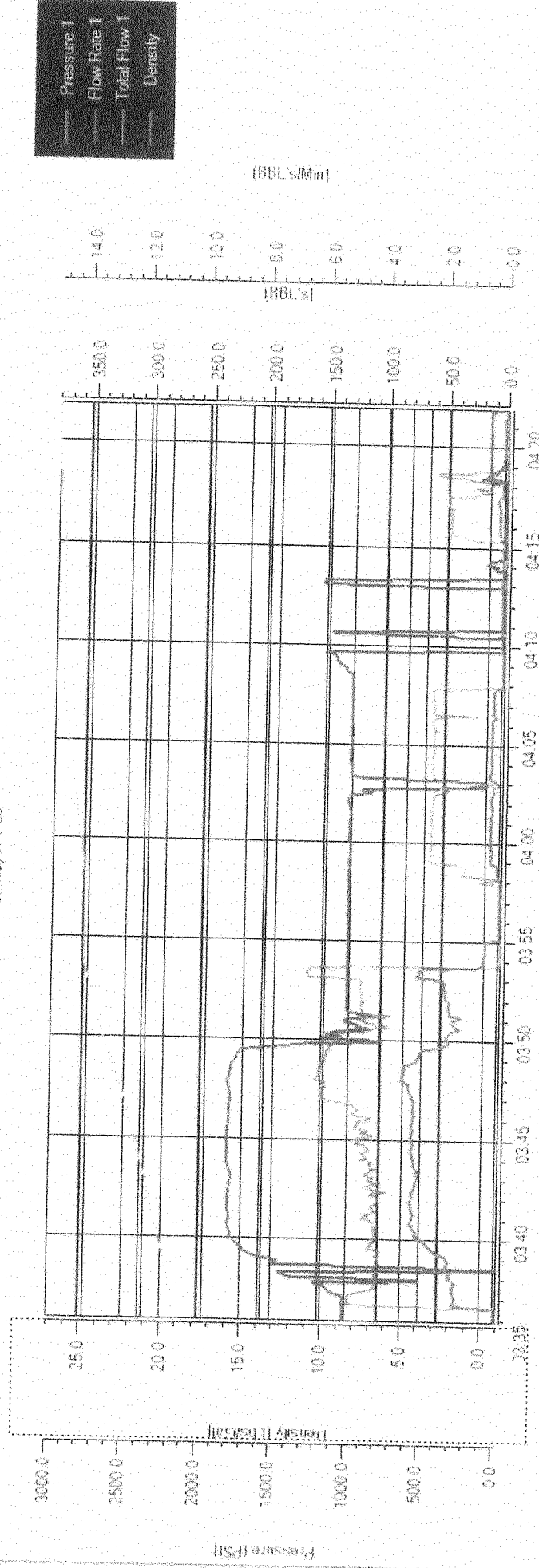
TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS	Total
11:30 PM				Arrive						-
11:35 PM				Safety meeting						
11:40 PM				Rig up						
1:30 AM				Rig runs casing						
2:30 AM				Casing on bottom/ Circulate						
3:50 AM	6.0	700.0	63.0	Mix 250 sks @ 1.41 yeild						
4:15 AM	5.0	500.0	19.5	Displace						
4:00 AM		300.0		End displacement/ shut in well						
4:15 AM				Wash up						
4:30 AM				Rig down						
4:45 AM				Depart						
				2 bbbls of cement in cellar						

Cementer:	Travis Williams	26-283
Pump Operator:	Alan Ryan	266.0
Bulk #/	Kale Ochs	181-254

SUMMARY		
Average Rate	Average Pressure	Total Fluid
5.5 bpm	500.00 psi	82.50 bbbls

23

Shirley A 1-30





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8067
Wichita KS 67208

ATTN: Tim Lauer

Shirley A 1#-30

30-13s-37w Logan,KS

Start Date: 2019.02.04 @ 16:27:15

End Date: 2019.02.04 @ 23:24:30

Job Ticket #: 64858 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.02.08 @ 09:24:07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy LLC

30-13s-37w Logan,KS

PO Box 8067
Wichita KS 67208

Shirley A 1#-30

Job Ticket: 64858

DST#: 1

ATTN: Tim Lauer

Test Start: 2019.02.04 @ 16:27:15

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:48:45

Time Test Ended: 23:24:30

Test Type: Conventional Straddle (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3766.00 ft (KB) To 3786.00 ft (KB) (TVD)

Reference Elevations: 3150.00 ft (KB)

Total Depth: 3825.00 ft (KB) (TVD)

3145.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8968 Outside

Press@RunDepth: 151.02 psig @ 3767.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.04

End Date:

2019.02.04

Last Calib.:

2019.02.04

Start Time:

16:27:15

End Time:

23:24:30

Time On Btm:

2019.02.04 @ 18:48:30

Time Off Btm:

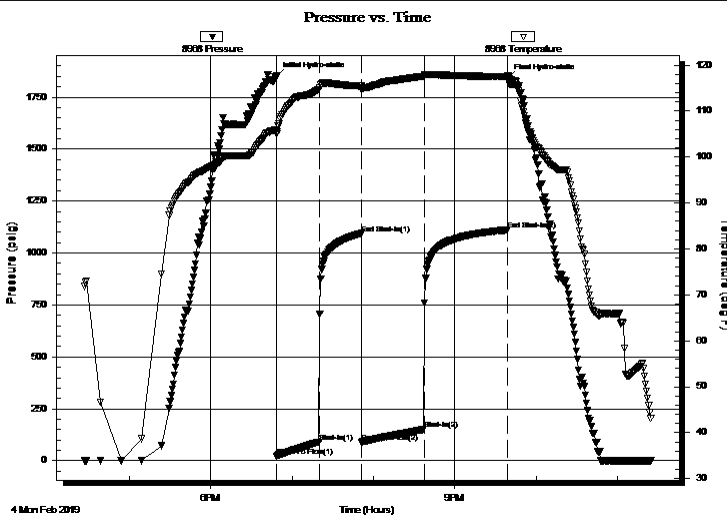
2019.02.04 @ 21:39:00

TEST COMMENT: IF:BOB in 21 min. Built to 15" blow

IS:No return blow

FF:Built to 9 1/2" blow

FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1850.56	105.85	Initial Hydro-static
1	20.79	105.06	Open To Flow (1)
32	90.07	114.63	Shut-In(1)
63	1093.90	115.42	End Shut-In(1)
63	90.62	114.67	Open To Flow (2)
109	151.02	117.56	Shut-In(2)
170	1111.35	117.46	End Shut-In(2)
171	1837.24	117.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	mud 100%m	2.34
62.00	mcw 20%m 80%w	0.87
62.00	mcw 6%m 94%w	0.87

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy LLC

30-13s-37w Logan,KS

PO Box 8067
Wichita KS 67208

Shirley A 1#-30

Job Ticket: 64858

DST#: 1

ATTN: Tim Lauer

Test Start: 2019.02.04 @ 16:27:15

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:48:45

Time Test Ended: 23:24:30

Test Type: Conventional Straddle (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3766.00 ft (KB) To 3786.00 ft (KB) (TVD)

Reference Elevations: 3150.00 ft (KB)

Total Depth: 3825.00 ft (KB) (TVD)

3145.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: 1112.18 psig @ 3767.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.04

End Date:

2019.02.04

Last Calib.:

2019.02.04

Start Time: 16:27:15

End Time:

23:24:45

Time On Btm:

2019.02.04 @ 18:48:30

Time Off Btm:

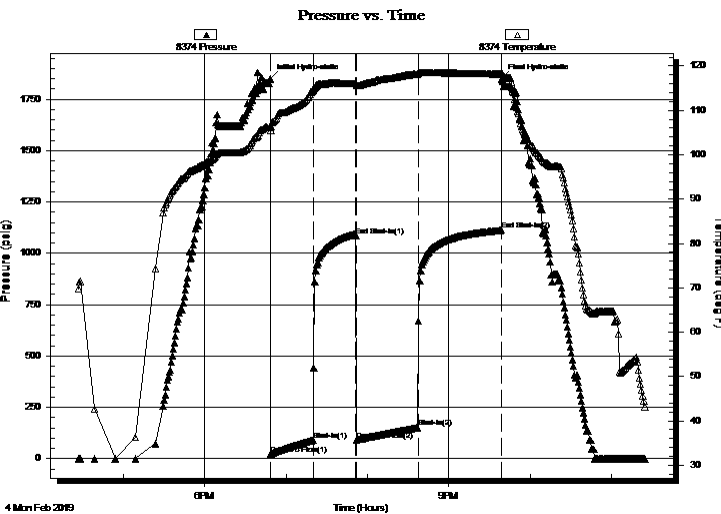
2019.02.04 @ 21:39:00

TEST COMMENT: IF:BOB in 21 min. Built to 15" blow

IS:No return blow

FF:Built to 9 1/2" blow

FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1848.12	106.42	Initial Hydro-static
1	19.97	105.50	Open To Flow (1)
32	90.78	114.72	Shut-In(1)
63	1082.97	116.04	End Shut-In(1)
64	92.02	115.67	Open To Flow (2)
109	151.30	118.18	Shut-In(2)
170	1112.18	118.21	End Shut-In(2)
171	1848.34	118.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	mud 100%m	2.34
62.00	mcw 20%m 80%w	0.87
62.00	mcw 6%m 94%w	0.87

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

30-13s-37w Logan,KS

PO Box 8067
Wichita KS 67208

Shirley A 1#-30

Job Ticket: 64858

DST#: 1

ATTN: Tim Lauer

Test Start: 2019.02.04 @ 16:27:15

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:48:45

Time Test Ended: 23:24:30

Test Type: Conventional Straddle (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3766.00 ft (KB) To 3786.00 ft (KB) (TVD)

Reference Elevations: 3150.00 ft (KB)

Total Depth: 3825.00 ft (KB) (TVD)

3145.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8288 Below (Straddle)

Press@RunDepth: psig @ 3788.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.04

End Date:

2019.02.04

Last Calib.:

2019.02.04

Start Time: 16:27:15

End Time:

23:24:15

Time On Btm:

2019.02.04 @ 18:48:00

Time Off Btm:

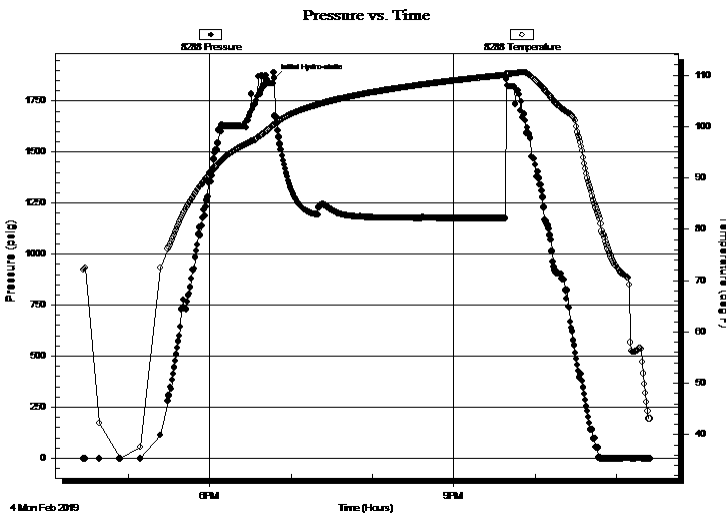
TEST COMMENT: IF:BOB in 21 min. Built to 15" blow

IS:No return blow

FF:Built to 9 1/2" blow

FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.77	100.25	Initial Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	mud 100%m	2.34
62.00	mcw 20%m 80%w	0.87
62.00	mcw 6%m 94%w	0.87

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

30-13s-37w Logan,KS

PO Box 8067
Wichita KS 67208

Shirley A 1#-30

Job Ticket: 64858

DST#: 1

ATTN: Tim Lauer

Test Start: 2019.02.04 @ 16:27:15

Tool Information

Drill Pipe:	Length: 3735.00 ft	Diameter: 3.80 inches	Volume: 52.39 bbl	Tool Weight: 1500.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3766.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	3825.00 ft			
Interval between Packers:	59.00 ft			
Tool Length:	90.00 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			3736.00	
Shut In Tool	5.00			3741.00	
Hydraulic tool	5.00			3746.00	
Jars	5.00			3751.00	
EM tool	3.00			3754.00	
Safety Joint	3.00			3757.00	
Packer	5.00			3762.00	31.00 Bottom Of Top Packer
Packer	4.00			3766.00	
Stubb	1.00			3767.00	
Recorder	0.00	8968	Outside	3767.00	
Recorder	0.00	8374	Inside	3767.00	
Perforations	15.00			3782.00	
Blank Off Sub	1.00			3783.00	
Packer - Shale	3.00			3786.00	
Stubb	1.00			3787.00	
Change Over Sub	1.00			3788.00	
Recorder	0.00	8288	Below	3788.00	
Drill Pipe	31.00			3819.00	
Change Over Sub	1.00			3820.00	
Bullnose	5.00			3825.00	59.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

30-13s-37w Logan,KS

PO Box 8067
Wichita KS 67208

Shirley A 1#-30

Job Ticket: 64858

DST#: 1

ATTN: Tim Lauer

Test Start: 2019.02.04 @ 16:27:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

10000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	mud 100%m	2.336
62.00	mcw 20%m 80%w	0.870
62.00	mcw 6%m 94%w	0.870

Total Length: 310.00 ft Total Volume: 4.076 bbl

Num Fluid Samples: 0

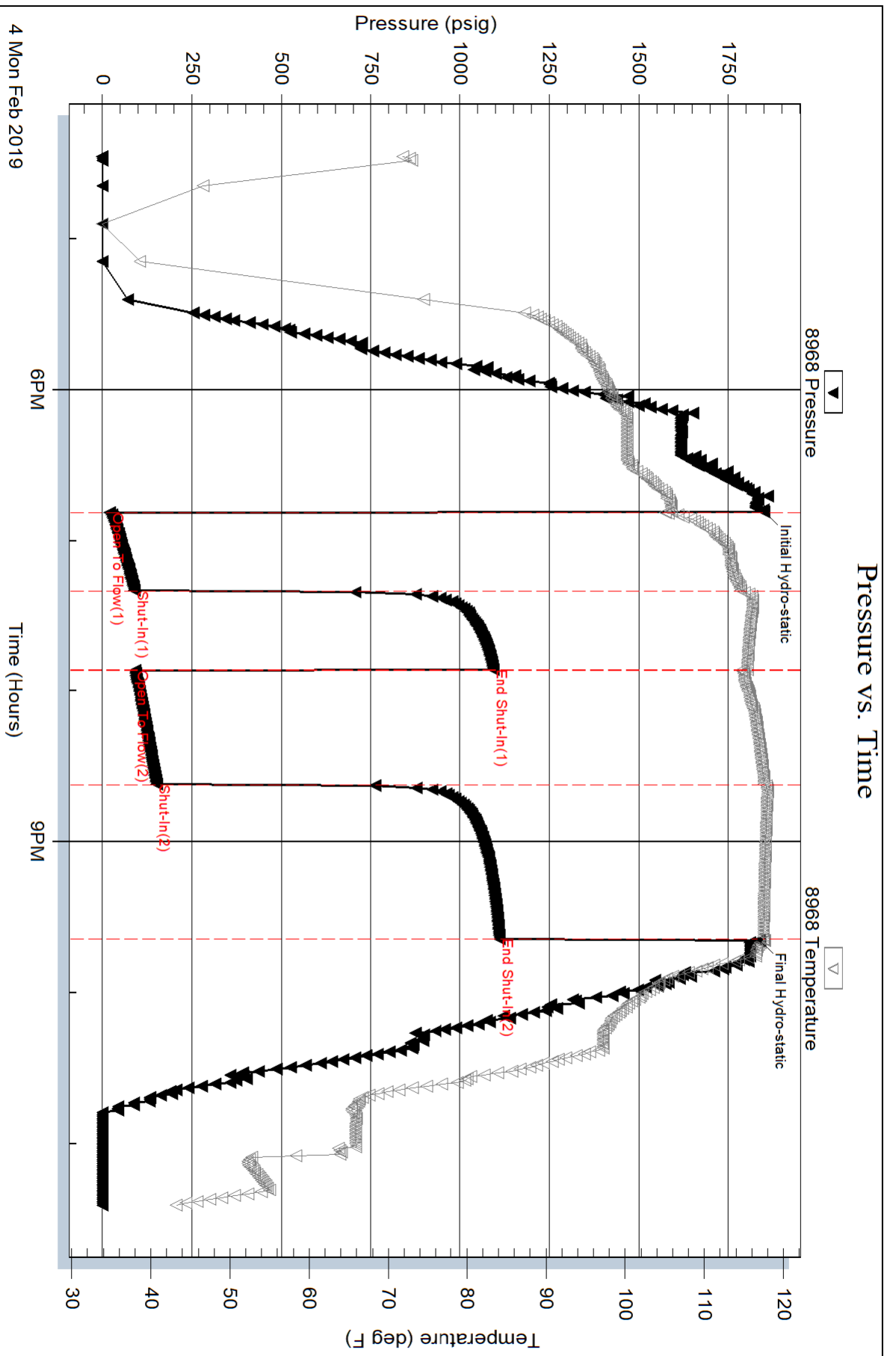
Num Gas Bombs: 0

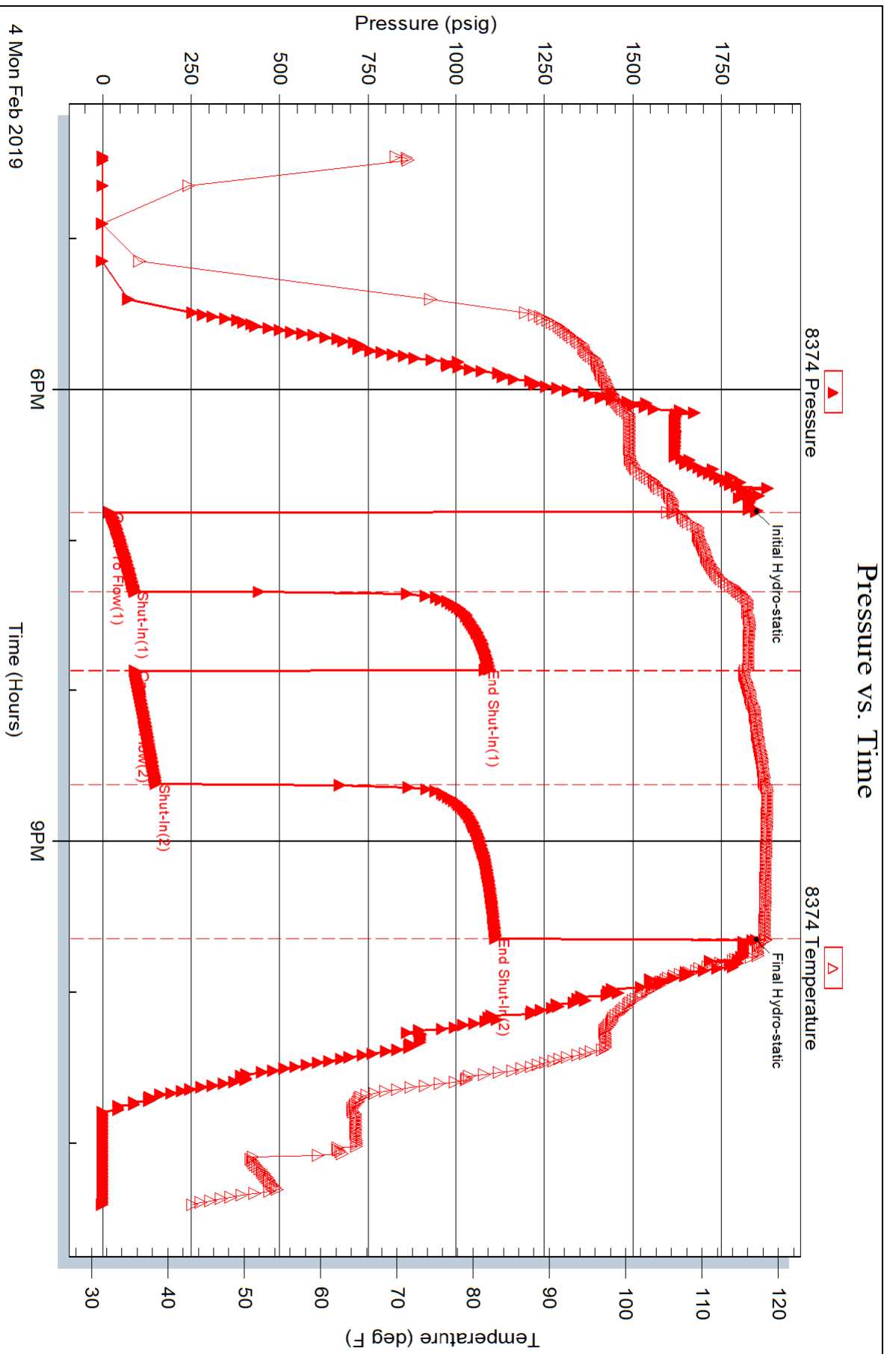
Serial #:

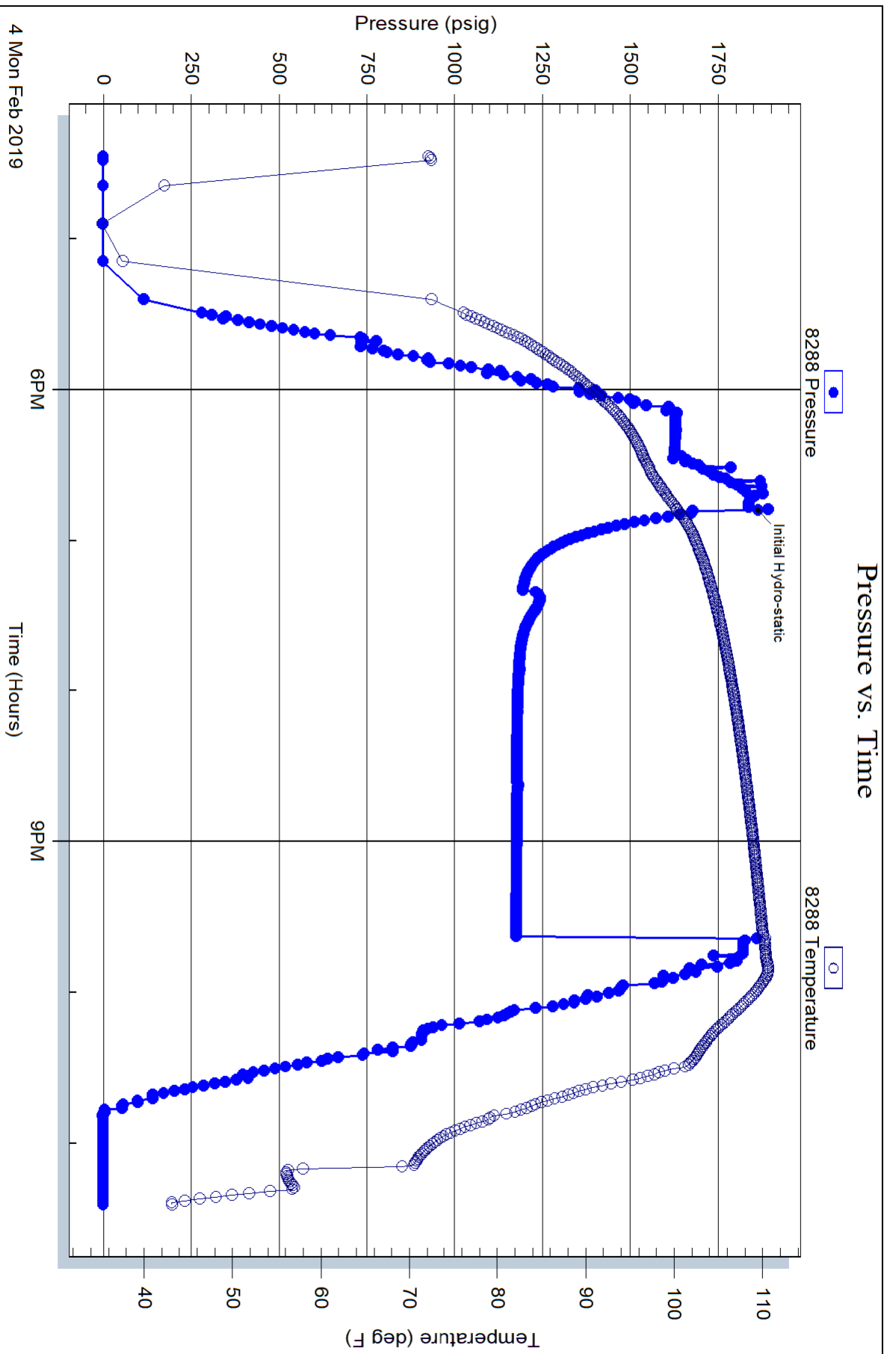
Laboratory Name:

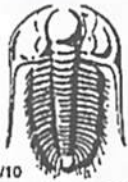
Laboratory Location:

Recovery Comments: RW= .624@69.4= 10,000 ppm









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64858

Well Name & No. Shirley A 1-30 Test No. 1 Date 2-4-19
 Company Cobalt Energy LLC Elevation 3150 KB ~~3145~~ 3145 GL
 Address 115 S Belmont #12 P.O. Box 8067 Wichita KS 67208
 Co. Rep / Geo. Tim Laver Rig Murfin 16
 Location: Sec. 30 Twp 13S Rge. 37W Co. Logan State KS

Interval Tested 3766-3786 TD Zone Tested D
 Anchor Length 20 Drill Pipe Run 3735 Mud Wt. 8.9
 Top Packer Depth 3761 Drill Collars Run 30 Vis 57
 Bottom Packer Depth 3766 Wt. Pipe Run 0 WL 6.4
 Total Depth 3825 Chlorides 3000 ppm System LCM 2

Blow Description IF: BOB in 21 Min Built to 15"
IS: No Return Blow
FF: Built to 9 1/2" Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>186</u>	<u>MUD</u>			<u>100</u>	
<u>62</u>	<u>MCW</u>		<u>80</u>	<u>20</u>	
<u>62</u>	<u>MCW</u>		<u>89</u>	<u>6</u>	

Rec Total 310 BHT 120 Gravity — API RW 624 @ 69.4° F Chlorides 10000 ppm

(A) Initial Hydrostatic <u>1848</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>15:09</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:27</u>
(C) First Final Flow <u>90</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>18:49</u>
(D) Initial Shut-In <u>1082</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>21:37</u>
(E) Second Initial Flow <u>92</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:24</u>
(F) Second Final Flow <u>151</u>	<input checked="" type="checkbox"/> Mileage <u>132 RT X 2</u> 132+132	Comments <u>EM Tool Loaded at 03:00</u>
(G) Final Shut-In <u>1112</u>	<input type="checkbox"/> Sampler	<u>2-8-19</u>
(H) Final Hydrostatic <u>1848</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> EM Tool <u>350</u>

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45 30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30 45</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Day Standby <u>3</u> 3.5d 3.5h	Sub Total <u>1950</u>
	<input type="checkbox"/> Accessibility	Total <u>4189</u>
	Sub Total <u>2239</u>	MP/DST Disc't <u>XXX</u>

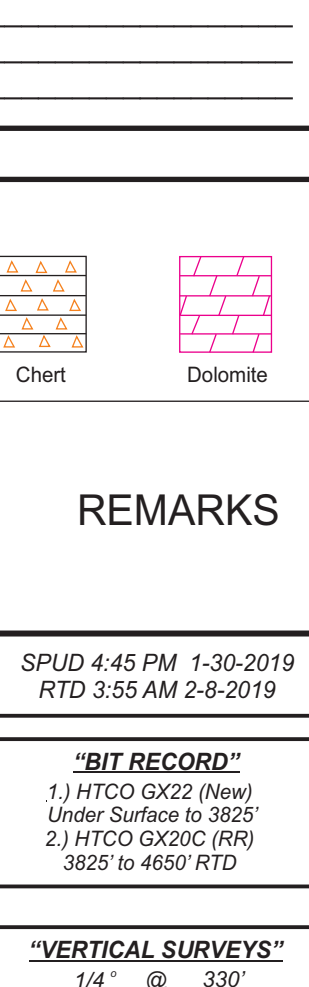
Approved By Tim J. Laver Our Representative Mike Roberts

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.

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY		Cobalt Energy, LLC		ELEVATIONS	KB 3150'
LEASE		#1-30 Shirley 'A'		DF	
FIELD		1736' FNL, 343' FWL, NW/4		GL	3145'
LOCATION	1736' FNL, 343' FWL, NW/4	SEC	30	TWSP	13s RGE 37w
CONTRACTOR	Murfin Drilling Rig #16	COUNTY	Logan	STATE	Kansas
SPUD	1-30-2019	COMPT	2-8-2019	Measurements Are All From Kelly Bushing	
RTD	4650'	LTD	4648'	CASING	
MUD UP	3387'	CHEMICAL		CONDUCTOR SURFACE 8-5/8" @ 329'	
SAMPLES SAVED FROM 3200' TO RTD				PRODUCTION none	
DRILLING TIME KEPT FROM 3200' TO RTD				ELECTRICAL SURVEYS	
GEOLOGICAL SUPERVISION FROM 3230' TO RTD				Pioneer OH Stacked Tools	
GEOLOGIST ON WELL		Tim J. Lauer		DCPL, DIL, ML, Sonic	

FORMATION TOPS	ELECTRIC LOG	SAMPLE LOG
Anhydrite	2332 (+818)	2336 (+814)
Heebner	3705 (-555)	3708 (-558)
Lansing	3752 (-602)	3752 (-602)
Stark	4004 (-854)	4008 (-858)
Marmaton	4149 (-999)	4151 (-1001)
Cherokee Shale	4318 (-1168)	4320 (-1170)
Morrow Shale	4460 (-1310)	4464 (-1314)
Mississippian	4572 (-1422)	4572 (-1422)
Total Depth	4648 (-1498)	4650 (-1500)

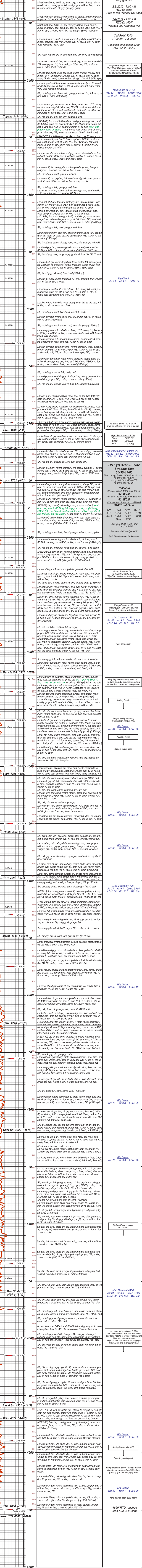


REMARKS
 Due to drill stem test results, and log evaluation, operator elected to plug and abandon the well.

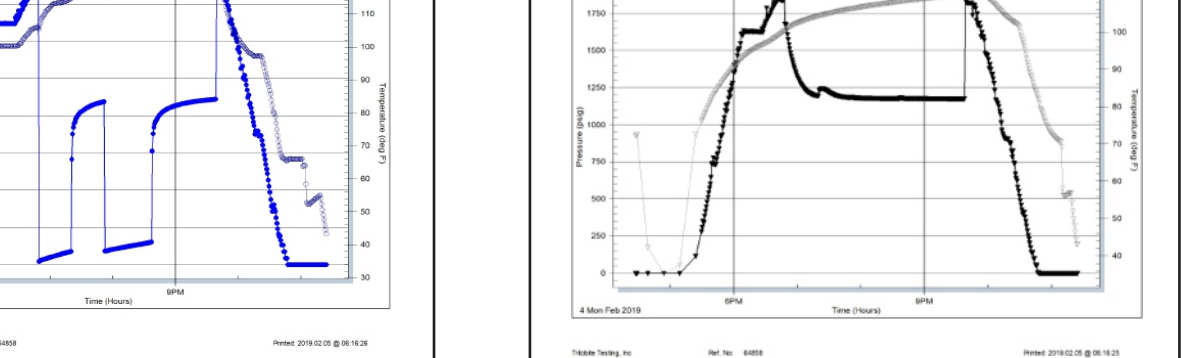
Respectfully submitted,

 Tim J. Lauer
 2/8/2019

DEPTH	SAMPLE DESCRIPTION	REMARKS
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COMPANY & WELL	Cobalt #1-30 Shirley 'A'	ELEVATIONS	KB 3150'
LOCATION	1736' FNL, 343' FWL, NW/4	GL	3145'
SEC	30	TWSP	13s RGE 37w
COUNTY	Logan	STATE	Kansas



Very Tight connection, took 120" working pipe & mudding mud, per water flow, add pump sacks to increase spl capture. Only minor improvements. High vis and hull content causing split in flow past and over sampling box.