

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)</i> <i>(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	CHERYL 1-17
Doc ID	1509781

All Electric Logs Run

Dual Comp Porosity
Gamma Ray
Dual Induction
Microlog



CHARGE TO: **Cobalt Energy**

ADDRESS

CITY, STATE, ZIP CODE

TICKET 032723

PAGE 1 OF 2

1. SERVICE LOCATIONS Hays, KS	WELL/PROJECT NO. 1-17	LEASE Cheryle	COUNTY/PARISH Graham	STATE KS	CITY	DATE 02/13/2020	OWNER Same
2. Ness City, KS	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR Murfin Drilling	RIG NAME/NO. Rig 8	SHIPPED VIA CT	DELIVERED TO Location	ORDER NO.	
3.	WELL TYPE Oil	WELL CATEGORY Development	JOB PURPOSE Top to Bottom Long String	WELL PERMIT NO.	WELL LOCATION		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF						
575		1			MILEAGE #110	90		mi	5.00	450.00
579		1			Pump Charge - Top to Bottom Long String	1		EA	1900.00	1900.00
290		1			D-Air	7		gal	42.00	294.00
281		1			Mud Flush	500		gal	1.50	750.00
221		1			Liquid KCl	2		gal	25.00	50.00
403		1			Cement Basket	4	5 1/2"	EA	275.00	1100.00
406		1			Latch Down Plug Baffle	1		EA	250.00	250.00
407		1			Insert Float shoe w/Auto fill	1		EA	325.00	325.00
409		1			Turbolizer	9		EA	90.00	810.00

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 *[Signature]*

DATE SIGNED TIME SIGNED A.M. P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UNDECIDED	DISAGREE		
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				Page 2	5,929.00
WE UNDERSTOOD AND MET YOUR NEEDS?				PAGE TOTAL	
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Page 2	11,281.00
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Subtotal	17,210.00
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		Graham	905.93
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	18,115.94

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

SWIFT OPERATOR *[Signature]* APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 032723

CUSTOMER			WELL				DATE	PAGE	OF					
Cobalt Energy			Cheryle 1-17				02/13/2020	2	2					
PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		U/M	QTY	U/M	UNIT PRICE	AMOUNT	
		LOC	ACCT	DF										
330		2				Swift Multi Density, Std	300	SKS				17.00	5100	00
325		2				Standard Cement	150	SKS				13.50	2025	00
284		2				Calseal	7	SKS				40.00	280	00
283		2				Salt	800	lbs				0.25	200	00
292		2				Halad 322	70	lbs				8.50	595	00
276		2				Flocele	100	lbs				3.00	300	00
581		2				SERVICE CHARGE Cement						1.25	832	50
583		2				MILEAGE CHARGE						0.95	1948	51
												CONTINUATION TOTAL		11,281.01

CHARGES FEET 450 SKS
TON MILES 2051.06

TOTAL WEIGHT 45579
LOADED MILES 90

JOB LOG

SWIFT Services, Inc.

DATE	PAGE NO.
02/13/2020	1
TICKET NO.	
032723	

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS	
Caball Energy		1-17		Cheryl		Long String			
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)			
				T	C	TUBING	CASING		
	1045								On location w/ Float Equipment
									RTD-3880'
									LTD-3884'
									90 Jts of 5 1/2" x 15.5# set @ 3878.30'
									Shoe JT - 42.77'
									Turbalizers - 1, 2, 3, 4, 93, 5, 6, 7, 90
									Baskets - 3, 41, 58, 65
	1140								Start Pipe w/ Float Equipment
	1330								Break Circulation on Bottom
	1445								Hook up to Swift
		2	8						Plug Rathole w/ 30 SKS SMD
		2	5						Plug Mousehole w/ 15 SKS SMD
		5	12				400		Pump Mud flush
		5	20				400		Pump KCL spacer
		5					400		Start SMD Cent @ 11.2 ppg
		6	145				300		Fin SMD, start EA 2 @ 15.5 ppg
		4	181				300		Fin EA 2 Cent
	1545								Drop Plug, Washout Pump + Lines
		7					350		Start Displacement
		7	50				500		Catch Pressure
		6	90				1100		Lift PSZ
	1600	6	91				1800		Land Plug, Circ 30 SKS to p.f.
									Release Truck, Dry
									Wash up
									Rack up
	1630								Job Complete

Thanks
 Jon, Austin, Kirby, Isaac

GLOBAL OIL FIELD SERVICES, LLC

13941

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE <u>2-7-20</u>	SEC. <u>17</u>	TWP. <u>6</u>	RANGE <u>24W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>4:30 PM</u>
LEASE <u>Cheryl</u>	WELL #. <u>1-17</u>	LOCATION <u>N. side of Swanton + 200 (N)</u>			COUNTY <u>Wichita</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE)			<u>1 1/2 Egg Side</u>				

CONTRACTOR Mittie Drilling Rig #8

TYPE OF JOB 220'

HOLE SIZE _____ T.D. 220'

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 25'

PERFS _____

DISPLACEMENT _____

OWNER Cohalt

CEMENT AMOUNT ORDERED 150 5/8 60/90 3/4"

2200'

EQUIPMENT

PUMP TRUCK CEMENTER Clady

400 HELPER Tom

BULK TRUCK

399 DRIVER Eddie

BULK TRUCK

_____ DRIVER _____

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

REMARKS:

Run 220' of 2 1/2" casing + 60' 90' 3/4" cement
Run + 220' casing + 60' 90' 3/4" cement
+ 150 5/8 60/90 3/4" cement + displaced
120' 5/8 60/90 3/4" + 60' 90' 3/4"

TOTAL _____

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

CHARGE TO: Cohalt

STREET _____

CITY _____ STATE _____ ZIP _____

Global Oil Field 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.

PRINTED NAME Jason Galt

SIGNATURE Jason Galt

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS



COBALT ENERGY
OIL & NATURAL GAS

GEOLOGIST'S REPORT
DRILL TIME &
SAMPLE LOG

COMPANY **COBALT ENERGY, LLC**

LEASE **Cheryl #1-17**

FIELD **Wildcat**

LOCATION **1718' FSL & 2080' FWL**

SEC **17** TWP **6S** RGE **25W**

COUNTY **Graham** STATE **KS**

CONTRACTOR **Murfin Drilling Co., Rig #8**

SPUD **02/07/20** COMP **02/13/20**

RTD **3880'** LTD **3884'**

MUD UP **3318'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3400' to RTD**

DRILLING TIME KEPT FROM **3400' to RTD**

SAMPLES EXAMINED FROM **3400' to RTD**

GEOLOGICAL SUPERVISION FROM **3370' to RTD**

GEOLOGIST ON WELL **Corey N. Baker**

FORMATION TOPS

Base of Anhydrite **2162 (+382)**

Topoka **3440 (-894)**

Heebner **3593 (-1047)**

Lansing **3635 (-1089)**

Stark **3778 (-1232)**

BKC **3819 (-1273)**

LTD/RTD **3884 (-1338)**

ELEVATIONS
KB **2546'**

DF _____

GL **2544'**

Measurements Are All From **KB**

CASING

Conductor **NA**

Surface **8 5/8" @ 220'**

Production **5.5" @ 3878'**

Electrical Surveys

Dual Induction, Neutron-Density & Microlog

Pioneer Energy Services

Section

2131 (+415)

2129 (+417)

2162 (+384)

3440 (-894)

3433 (-887)

3593 (-1047)

3635 (-1089)

3778 (-1232)

3819 (-1273)

3884 (-1338)

3880 (-1334)

LITHOLOGY

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DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Corey Baker

Cheryl #1-17

17-6S-25W Graham,KS

Start Date: 2020.02.10 @ 14:49:04

End Date: 2020.02.10 @ 22:11:10

Job Ticket #: 66209 DST #: 1

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

Printed: 2020.02.12 @ 16:51:26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66209

DST#: 1

ATTN: Corey Baker

Test Start: 2020.02.10 @ 14:49:04

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:51:40

Time Test Ended: 22:11:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3640.00 ft (KB) To 3670.00 ft (KB) (TVD)

Reference Elevations: 2546.00 ft (KB)

Total Depth: 3670.00 ft (KB) (TVD)

2541.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 136.35 psig @ 3641.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.10 End Date: 2020.02.10

Last Calib.: 2020.02.10

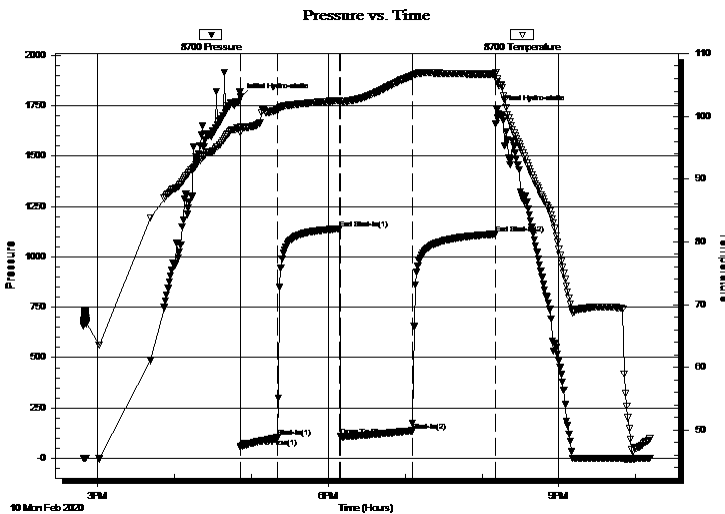
Start Time: 14:49:05 End Time: 22:11:10

Time On Btm: 2020.02.10 @ 16:51:25

Time Off Btm: 2020.02.10 @ 20:11:40

TEST COMMENT: 30- IF- Slow ly built to 2.77"
45- IS- No blow
60- FF- Slow ly built to 8.15"
60- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1792.96	98.32	Initial Hydro-static
1	55.15	97.34	Open To Flow (1)
29	102.63	101.07	Shut-In(1)
78	1140.04	102.53	End Shut-In(1)
79	107.25	102.31	Open To Flow (2)
135	136.35	106.45	Shut-In(2)
199	1113.82	106.69	End Shut-In(2)
201	1731.32	105.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	MW, 10%M 90%W	0.91
75.00	M	1.06

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66209

DST#: 1

ATTN: Corey Baker

Test Start: 2020.02.10 @ 14:49:04

Tool Information

Drill Pipe:	Length: 3434.00 ft	Diameter: 3.82 inches	Volume: 48.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3640.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3615.00	
Shut In Tool	5.00			3620.00	
Hydraulic tool	5.00			3625.00	
Gap Sub	3.00			3628.00	
Safety Joint	3.00			3631.00	
Packer	5.00			3636.00	26.00 Bottom Of Top Packer
Packer	4.00			3640.00	
Stubb	1.00			3641.00	
Recorder	0.00	6771	Inside	3641.00	
Recorder	0.00	8700	Outside	3641.00	
Perforations	26.00			3667.00	
Bullnose	3.00			3670.00	30.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66209

DST#: 1

ATTN: Corey Baker

Test Start: 2020.02.10 @ 14:49:04

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:

27000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	MW, 10%M 90%W	0.910
75.00	M	1.063

Total Length: 260.00 ft Total Volume: 1.973 bbl

Num Fluid Samples: 0

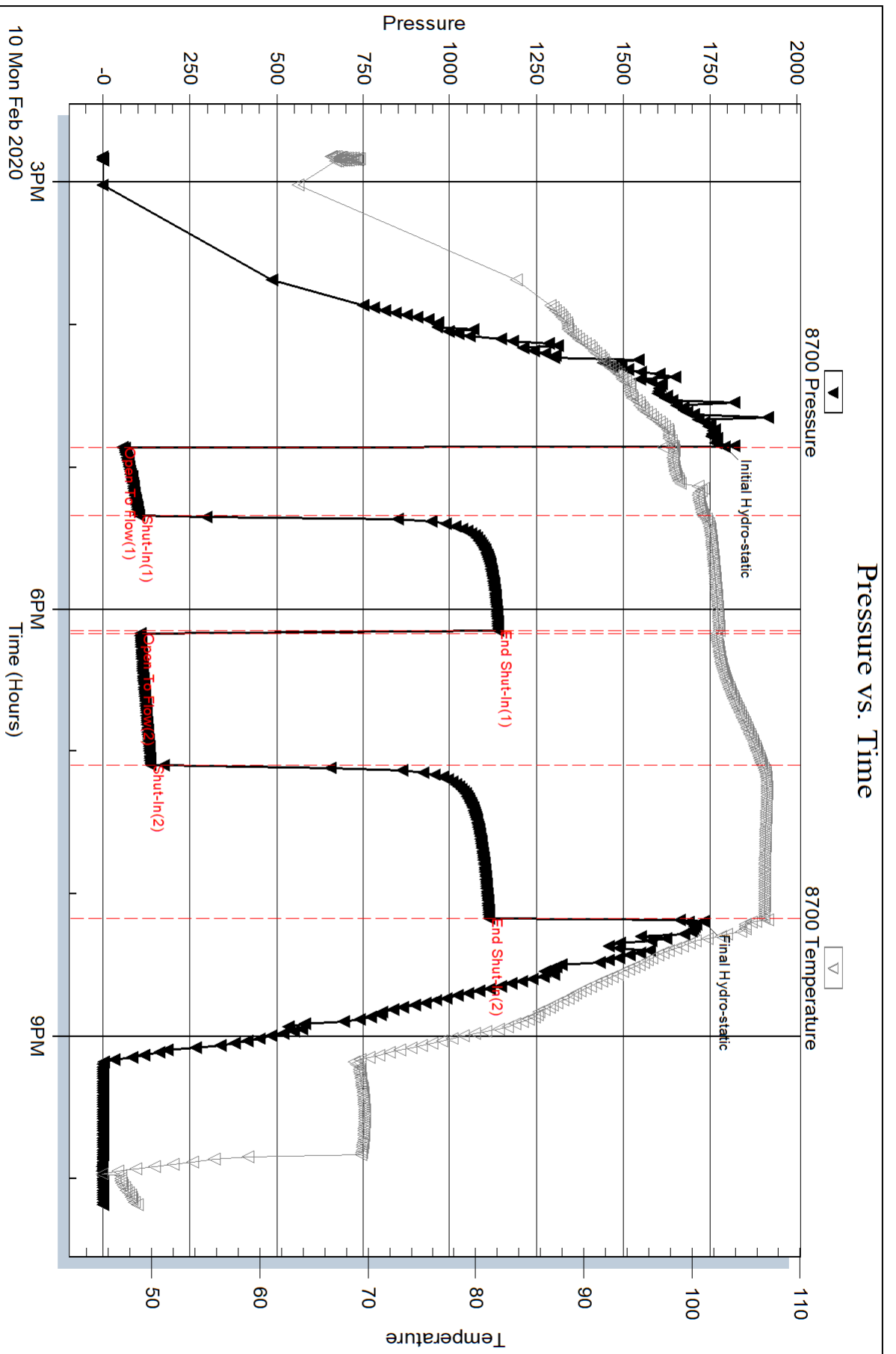
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .33@51deg





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Corey Baker

Cheryl #1-17

17-6S-25W Graham,KS

Start Date: 2020.02.11 @ 05:43:45

End Date: 2020.02.11 @ 13:18:06

Job Ticket #: 66210 DST #: 2

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

Printed: 2020.02.12 @ 16:50:45



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

17-6S-25W Graham, KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66210

DST#: 2

ATTN: Corey Baker

Test Start: 2020.02.11 @ 05:43:45

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:59:21

Time Test Ended: 13:18:06

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3676.00 ft (KB) To 3710.00 ft (KB) (TVD)

Reference Elevations: 2546.00 ft (KB)

Total Depth: 3710.00 ft (KB) (TVD)

2541.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 65.30 psig @ 3677.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.11 End Date: 2020.02.11

Last Calib.: 2020.02.11

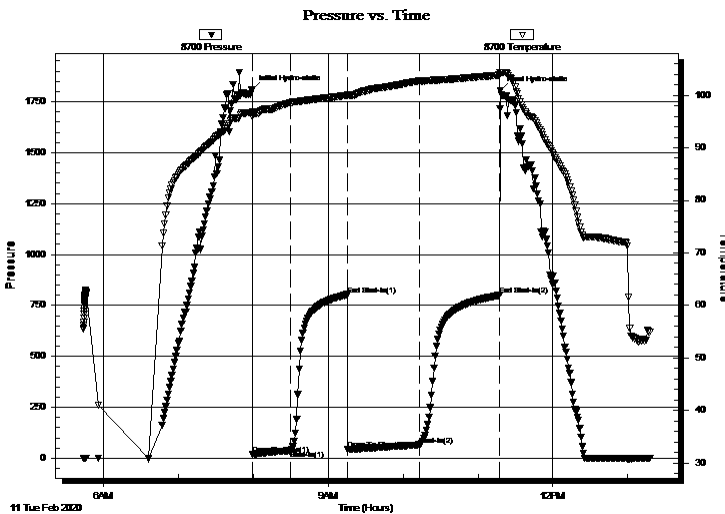
Start Time: 05:43:46 End Time: 13:18:06

Time On Btm: 2020.02.11 @ 07:59:06

Time Off Btm: 2020.02.11 @ 11:17:51

TEST COMMENT: 30- IF- Slow ly built to 2.49"
45- IS- No blow
60- FF- Slow ly built to 1.76"
60- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1809.32	96.78	Initial Hydro-static
1	19.55	95.86	Open To Flow (1)
31	37.16	98.59	Shut-In(1)
76	802.90	99.98	End Shut-In(1)
77	42.64	99.86	Open To Flow (2)
135	65.30	102.68	Shut-In(2)
198	799.80	103.80	End Shut-In(2)
199	1804.55	104.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	OCM, 10%O 90%M	0.37
15.00	CO	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66210

DST#: 2

ATTN: Corey Baker

Test Start: 2020.02.11 @ 05:43:45

Tool Information

Drill Pipe:	Length: 3497.00 ft	Diameter: 3.82 inches	Volume: 49.57 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3676.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3651.00	
Shut In Tool	5.00			3656.00	
Hydraulic tool	5.00			3661.00	
Gap Sub	3.00			3664.00	
Safety Joint	3.00			3667.00	
Packer	5.00			3672.00	26.00 Bottom Of Top Packer
Packer	4.00			3676.00	
Stubb	1.00			3677.00	
Recorder	0.00	6771	Inside	3677.00	
Recorder	0.00	8700	Outside	3677.00	
Perforations	30.00			3707.00	
Bullnose	3.00			3710.00	34.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66210

DST#: 2

ATTN: Corey Baker

Test Start: 2020.02.11 @ 05:43:45

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	OCM, 10%O 90%M	0.369
15.00	CO	0.074

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

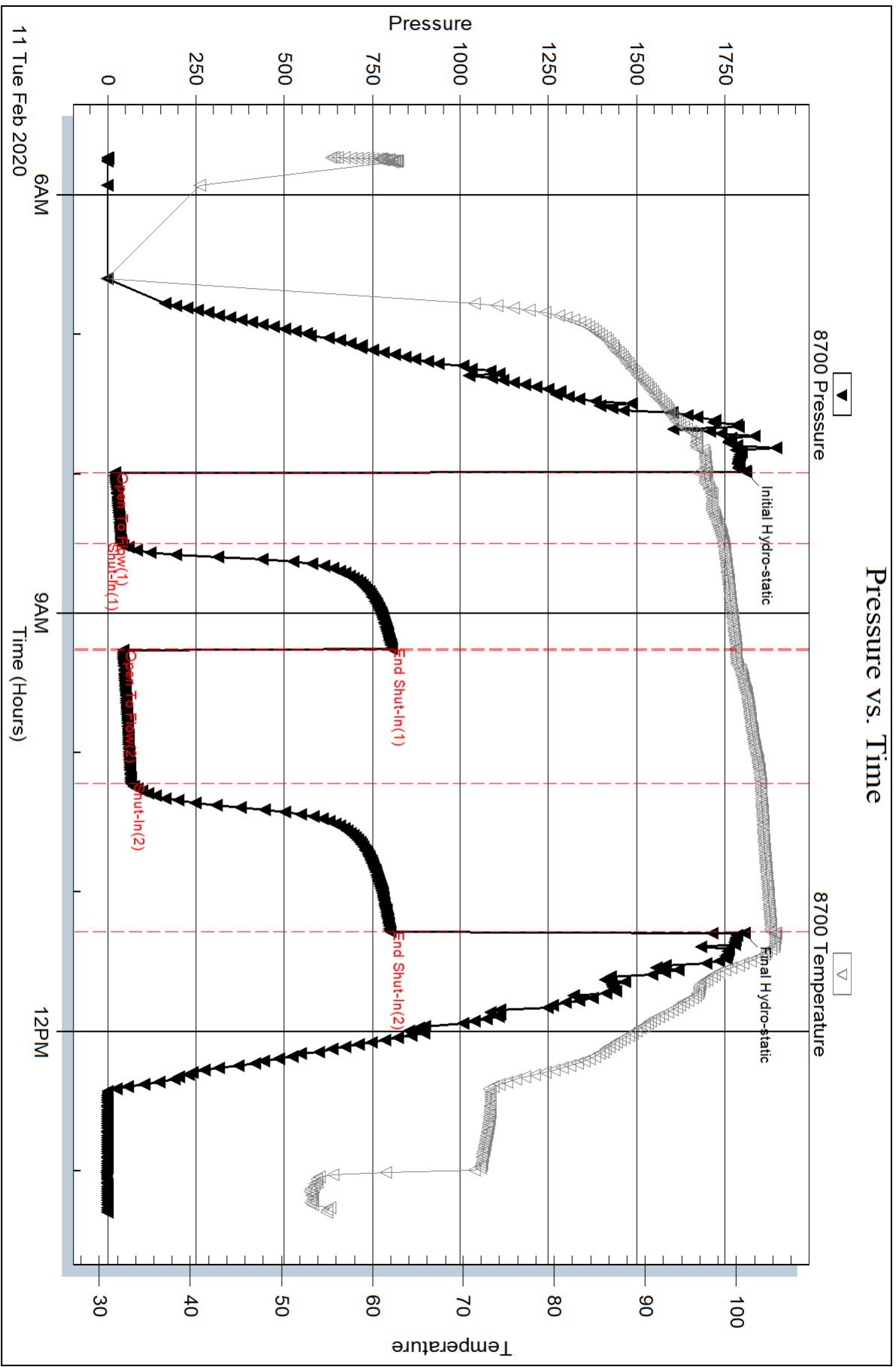
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



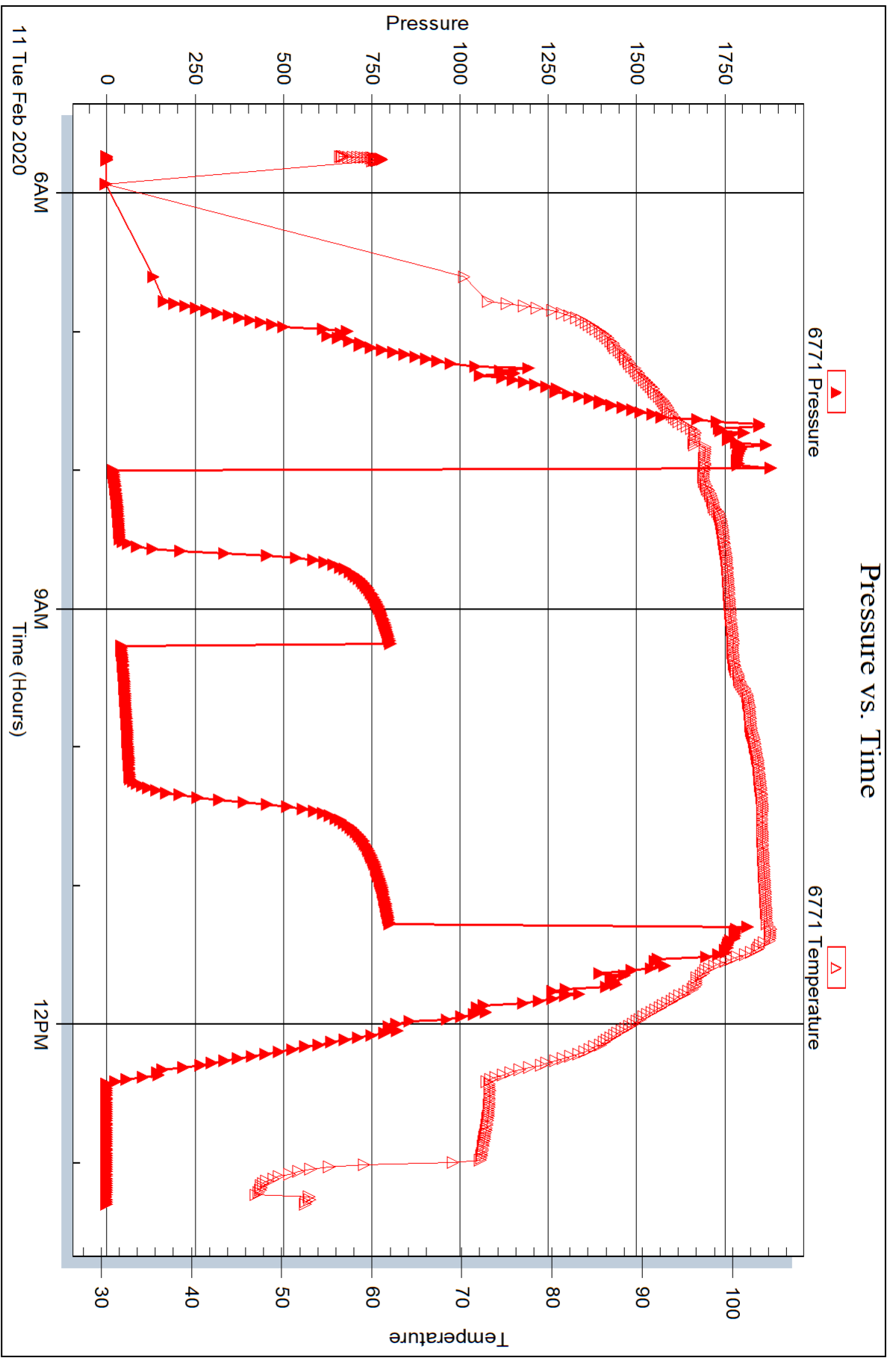
Serial #: 6771

Inside

Cobalt Energy, LLC

Cheryl#1-17

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Corey Baker

Cheryl #1-17

17-6S-25W Graham,KS

Start Date: 2020.02.12 @ 02:25:28

End Date: 2020.02.12 @ 11:37:48

Job Ticket #: 66211 DST #: 3

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

Printed: 2020.02.12 @ 16:47:31



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

17-6S-25W Graham, KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66211

DST#: 3

ATTN: Corey Baker

Test Start: 2020.02.12 @ 02:25:28

GENERAL INFORMATION:

Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 05:29:49
 Tester: Brannan Lonsdale
 Time Test Ended: 11:37:48
 Unit No: 73
 Interval: **3720.00 ft (KB) To 3800.00 ft (KB) (TVD)**
 Reference Elevations: 2546.00 ft (KB)
 Total Depth: 3800.00 ft (KB) (TVD)
 2541.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

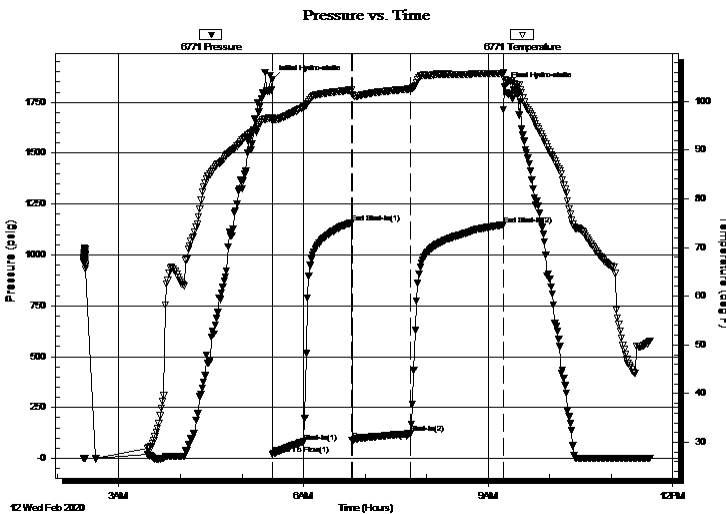
Serial #: 6771

Inside

Press@RunDepth: 120.97 psig @ 3721.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2020.02.12 End Date: 2020.02.12 Last Calib.: 2020.02.12
 Start Time: 02:25:29 End Time: 11:37:48 Time On Btm: 2020.02.12 @ 05:29:34
 Time Off Btm: 2020.02.12 @ 09:16:19

TEST COMMENT: 30- IF- Slow ly built to 8.62"
 45- IS- Slow ly built to 0.70"
 60- FF- Slow ly built to 10.74"
 90- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1860.73	96.67	Initial Hydro-static
1	18.76	95.97	Open To Flow (1)
31	79.19	98.79	Shut-In(1)
77	1157.37	102.36	End Shut-In(1)
78	87.45	101.42	Open To Flow (2)
135	120.97	102.57	Shut-In(2)
226	1147.55	105.71	End Shut-In(2)
227	1828.02	104.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	OCM, 25%O 75%M	1.41
15.00	CO	0.21
0.00	15' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66211

DST#: 3

ATTN: Corey Baker

Test Start: 2020.02.12 @ 02:25:28

Tool Information

Drill Pipe:	Length: 3528.00 ft	Diameter: 3.82 inches	Volume: 50.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3720.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3695.00	
Shut In Tool	5.00			3700.00	
Hydraulic tool	5.00			3705.00	
Gap Sub	3.00			3708.00	
Safety Joint	3.00			3711.00	
Packer	5.00			3716.00	26.00 Bottom Of Top Packer
Packer	4.00			3720.00	
Stubb	1.00			3721.00	
Recorder	0.00	6771	Inside	3721.00	
Recorder	0.00	8700	Outside	3721.00	
Perforations	1.00			3722.00	
Change Over Sub	1.00			3723.00	
Drill Pipe	63.00			3786.00	
Change Over Sub	1.00			3787.00	
Perforations	10.00			3797.00	
Bullnose	3.00			3800.00	80.00 Bottom Packers & Anchor
Total Tool Length:	106.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

17-6S-25W Graham,KS

PO Box 8037
Wichita, KS 67208

Cheryl #1-17

Job Ticket: 66211

DST#: 3

ATTN: Corey Baker

Test Start: 2020.02.12 @ 02:25:28

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

25 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
220.00	OCM, 25%O 75%M	1.406
15.00	CO	0.213
0.00	15' GIP	0.000

Total Length: 235.00 ft Total Volume: 1.619 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

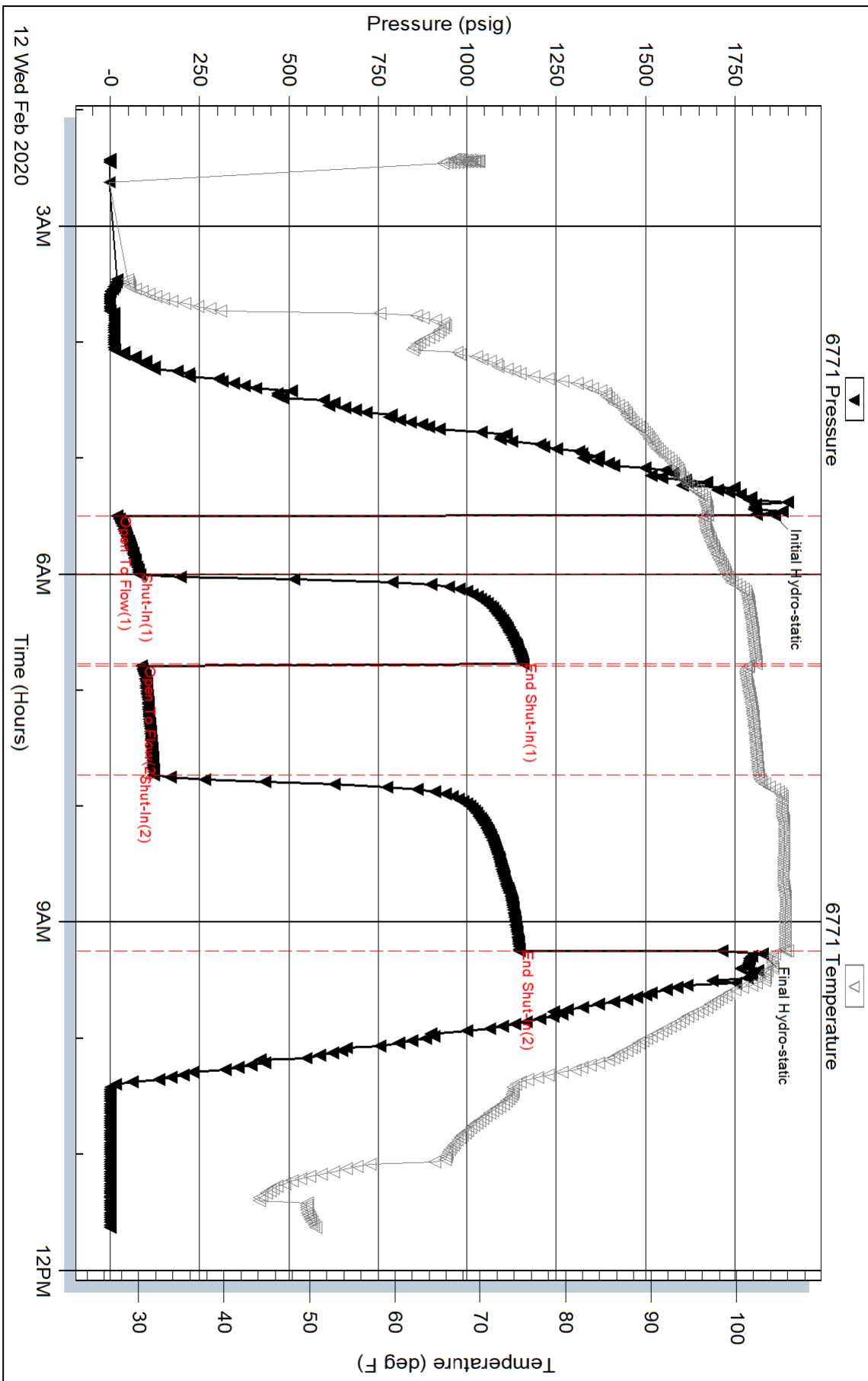
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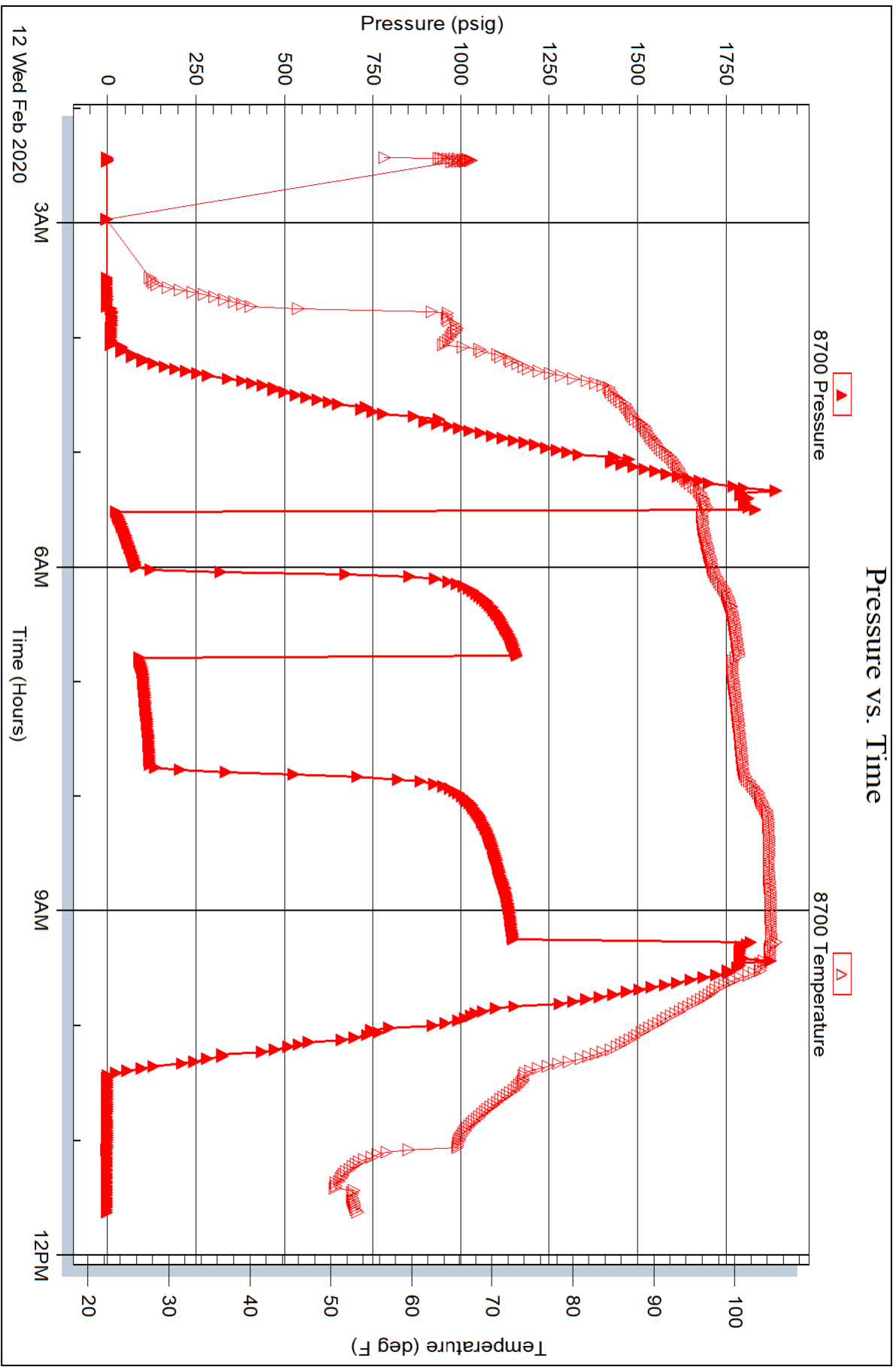
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66209

NO.

Well Name & No. Cheryl #1-17 Test No. 1 Date 2/10/20
 Company Cobalt Energy, LLC Elevation 2546 KB 2541 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Corey Baker Rig Murfin 8
 Location: Sec. 17 Twp 6 S Rge. 25 W Co. Graham State KS

Interval Tested 3640-3670 Zone Tested LKC "C"
 Anchor Length 30' Drill Pipe Run 3434 Mud Wt. 8.7
 Top Packer Depth 3635 Drill Collars Run 185 Vls 63
 Bottom Packer Depth 3640 Wt. Pipe Run WL 60
 Total Depth 3670 Chlorides 800 ppm System LCM 2^{II}

Blow Description IF - slowly built to 2.77"
ISI - No blow
FF - slowly built to 8.15"
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>185</u>	<u>MW</u>			<u>90%</u>	<u>10%</u>
<u>75</u>	<u>M</u>				

Rec Total 260' BHT 107° Gravity API RW .33 @ 51 °F Chlorides 27,000 ppm
 (A) Initial Hydrostatic 1793 Test 1200 T-On Location 1400
 (B) First Initial Flow 55 Jars T-Started 1449
 (C) First Final Flow 103 Safety Joint 75 T-Open 1651
 (D) Initial Shut-In 1140 Circ Sub T-Pulled 2006
 (E) Second Initial Flow 107 Hourly Standby T-Out 2212
 (F) Second Final Flow 136 Mileage 186 RT 90rt Comments
 (G) Final Shut-In 1114 Sampler
 (H) Final Hydrostatic 1731 Straddle EM Tool 350
 Shale Packer Ruined Shale Packer
 Extra Packer Ruined Packer
 Extra Recorder Extra Copies
 Day Standby Sub Total 350
 Accessibility Total 1715
 Sub Total 1365 MP/DST Disc't

Initial Open 30
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 60

Approved By _____ Our Representative Brammer Lonsdale

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 66210

NO.

Well Name & No. Charlyl #1-17 Test No. 2 Date 2/11/20
 Company Cohalt Energy, LLC Elevation 2546 KB 2541 GL
 Address 115 S. Belmont #12, PO Box 8237 Wichita, KS 67208
 Co. Rep / Geo. Corey Baker Rig Mudm 8
 Location: Sec. 17 Twp 6 S Rge. 25 W Co. Graham State KS

Interval Tested 3676-3710 Zone Tested LKC "F"
 Anchor Length 34' Drill Pipe Run 3497 Mud Wt. 8.7
 Top Packer Depth 3671 Drill Collars Run 185 Vls 63
 Bottom Packer Depth 3676 Wt. Pipe Run WL 6.0
 Total Depth 3710 Chlorides 870 ppm System LCM 2^{II}

Blow Description IF - Slowly built to 2.49"
ISF - No blow
FF - Slowly built to 1.76"
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>OCM</u>		<u>10</u>		<u>90</u>
<u>15</u>	<u>CO</u>				

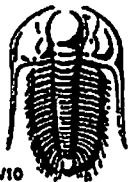
Rec Total 90' BHT 104° Gravity 31 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1809 Test 1200 T-On Location 0523
 (B) First Initial Flow 20 Jars T-Started 0543
 (C) First Final Flow 37 Safety Joint 75 T-Open 0758
 (D) Initial Shut-In 803 Circ Sub T-Pulled 1113
 (E) Second Initial Flow 43 Hourly Standby T-Out 1318
 (F) Second Final Flow 65 Mileage 186 RT 90 Comments
 (G) Final Shut-In 800 Sampler
 (H) Final Hydrostatic 1805 Straddle EM Tool 350
 Shale Packer Ruined Shale Packer
 Extra Packer Ruined Packer
 Extra Recorder Extra Copies
 Day Standby Sub Total 350
 Accessibility Total 1715

Sub Total 1365 MP/DST Disc't

Approved By Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 66211

NO.

Well Name & No. Cheryl #1-17 Test No. 3 Date 2/12/20
 Company Cobalt Energy, LLC Elevation 2546 KB 2541 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Corey Baker Rig Mudm 8
 Location: Sec. 17 Twp 6 S Rge. 25 W Co. Graham State KS

Interval Tested 3720-3800 Zone Tested LKC "H-K"
 Anchor Length 80' Drill Pipe Run 3528 Mud Wt. 9.0
 Top Packer Depth 3715 Drill Collars Run 18.5 Vis 60+
 Bottom Packer Depth 3720 Wt. Pipe Run WL 6.0
 Total Depth 3800 Chlorides 700 ppm System LCM 2⁺
 Blow Description IF - slowly built to 8.62"
ISI - slowly built to 0.70"
FF - slowly built to 10.74"
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>220</u>	<u>OCM</u>	<u>25</u>	<u> </u>	<u>75</u>	<u> </u>
<u>15</u>	<u>CO</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u>15' GTP</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>	<u> </u>

Rec Total 235' BHT 106° Gravity 25 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>1861</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>0204</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u> </u>	T-Started <u>0225</u>
(C) First Final Flow <u>79</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0529</u>
(D) Initial Shut-In <u>1157</u>	<input type="checkbox"/> Circ Sub <u> </u>	T-Pulled <u>0914</u>
(E) Second Initial Flow <u>87</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>1138</u>
(F) Second Final Flow <u>121</u>	<input checked="" type="checkbox"/> Mileage <u>186 RT</u> 90	Comments <u> </u>
(G) Final Shut-In <u>1148</u>	<input type="checkbox"/> Sampler <u> </u>	<u> </u>
(H) Final Hydrostatic <u>1828</u>	<input type="checkbox"/> Straddle <u> </u>	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u> </u>	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility <u> </u>	Total <u>1715</u>
	Sub Total <u>1365</u>	MP/DST Disc't <u> </u>

Approved By Our Representative Bannon Lansdale

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