

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	H & C Oil Operating Inc.
Well Name	BAKEL UNIT 25-SIW
Doc ID	1419819

All Electric Logs Run

Dual Induction
Compensated Density Neutron
Micro
Sector Bond
Temperature Survey

QUALITY OILWELL CEMENTING, INC.

Federal Tax ID # 20-2886107

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

Home Office P.O. Box 92 Russell, KS 67665

No. 870

Date	2-18-18	25	9	25	County	Geary	State	KS	On Location	9:30 AM	Finish
------	---------	----	---	----	--------	-------	-------	----	-------------	---------	--------

Lease Baker 25 Well No. 5320

Contractor D. Swartz #1

Type Job Production Savings

Hole Size 7 7/8 TD 4185

Csg. 5 1/2 1550T Depth 4183

Tbg. Size _____ Depth _____

Tool _____ Depth _____

Cement Left in Csg. 18.12 Shoe Joint 18.12

Meas Line _____ Displace 998L

EQUIPMENT	
Pumptrk	No Cementing Helper <u>20</u>
Bulktrk	No Driver <u>15</u>
Bulktrk	No Driver <u>13</u>

JOB SERVICES & REMARKS

Remarks _____

Rat Hole 305L

Mouse Hole 152L

Centralizers _____

Baskets _____

BAV or Port Collar _____

5 1/2 size 4183 B. 1100 404 58

For Cementing Plus sand and clay

100 space plus 100 lbs cement

Cement 5 1/2 with 520K

Open hole Displace Plus

2 1/2 Pressure Foot

Phys Fluid 1000

Cement Cement

X Signature [Signature]

Tax _____
Discount _____
Total Charge _____

Owner
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
cement and helper to assist owner or contractor to do work as listed.

Charge To HVC

SI Steel _____

City _____ State _____

The above was done to satisfaction and supervisor of owner agent or contractor.

Cement Amount Ordered 120 BAC

495 lbs. Sand with 500 lbs. cement

Cement _____

For Mix _____

Gel _____

Calcium _____

Stills _____

Salt _____

Flow Seal _____

Kol Seal _____

Mud CLR 48 _____

GFL 417 or GFL 10 GAF 38 _____

Sand _____

Handling _____

Mileage _____

Guide Shoe _____

Centralizers 5

Baskets 5

AFU Insects _____

Float Shoe 1

Latch Down _____

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. 867

Date	7-11-18	Sec.	25	Twp.	9	Range	25	County	Caravan	State	KS	On Location	6:45 pm
Lease	Baker Unit												
Contractor	Disavery #1												
Type Job	Surface												
Hole Size	12 1/4	T.D.	259										
Csg.	8 7/8	Depth	258										
Tbg. Size		Depth											
Tool		Depth											
Cement Left in Csg.	10	Shoe Joint											
Meas Line		Displace	15 1/2 BBL										
EQUIPMENT													
Pumptrk	20	No. Cementer	Chris										
		Helper	Brett										
Bulktrk		No. Driver	Brett										
Bulktrk	15	No. Driver	Doug										
JOB SERVICES & REMARKS													
Remarks:													
Rat Hole													
Mouse Hole													
Centralizers													
Baskets													
DV or Port Collar													
	8 5/8 on bottom. Best Circulation.												
	Mix 1655K & Displace.												
	Cement Circulator												
	FLOAT EQUIPMENT												
	Guide Shoe												
	Centralizer												
	Baskets												
	AFU Inserts												
	Float Shoe												
	Latch Down												
	Pumptrk Charge Surface												
	Mileage 34												
	Tax												
	Discount												
	Total Charge												
X Signature	Charlie Bob												
	Coffey Mayfield												

Marc A. Downing
Consulting Petroleum Geologist

Geologic Report
Drilling Time and Sample Log

Operator H&C Oil Operating, Inc.		KB 2583	DF 2581	GL 2575
Lease Bakel Unit	No. 25-SIW	Casing Record Surface 8 5/8" @ 259' Production 5 1/2" @ 4185		
API # 15-065-24150-0000		Electrical Surveys CNDL, DIL MEL		
Field Dreil				
Location 1650' FNL & 380' FEL				
Sec. 25	Twp. 9s	Rge. 25w		
County Graham	State Kansas			
Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	2250	2253	+330	-11
Base Anhydrite	2293	2288	+295	-12
Topeka	3653	3656	-1073	-3
Heebner	3870	3872	-1289	-4
Toronto	3890	3894	-1311	-3
LKC	3906	3908	-1325	-2
BKC	4138	4141	-1558	-5
Total Depth	4185	4188	-1605	
Reference Well For Structural Comparison H&C Bakel #30-1 1650' FNL & 330' FWL Sec. 30-9s-24w				

Drilling Contractor	Discovery Drilling, Rig #1		
Commenced	7-12-18	Completed	7-17-18
Samples Saved From	3850	To	RTD
Drilling Time Kept From	3550	To	RTD
Samples Examined From	3850	To	RTD
Geological Supervision From	3550	To	RTD

Summary and Recommendations

Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for water injection into the LKC.

Perforate:

LKC "K": 4111-4115
 LKC "J": 4095-4099
 LKC "H": 4052-4054
 LKC "D": 3952-3956
 LKC "C": 3939-3945

Respectfully Submitted,
 Marc A. Downing

ROCK TYPES
 Carbon Sh shale, red
 shale, gry
 shale, fw7>

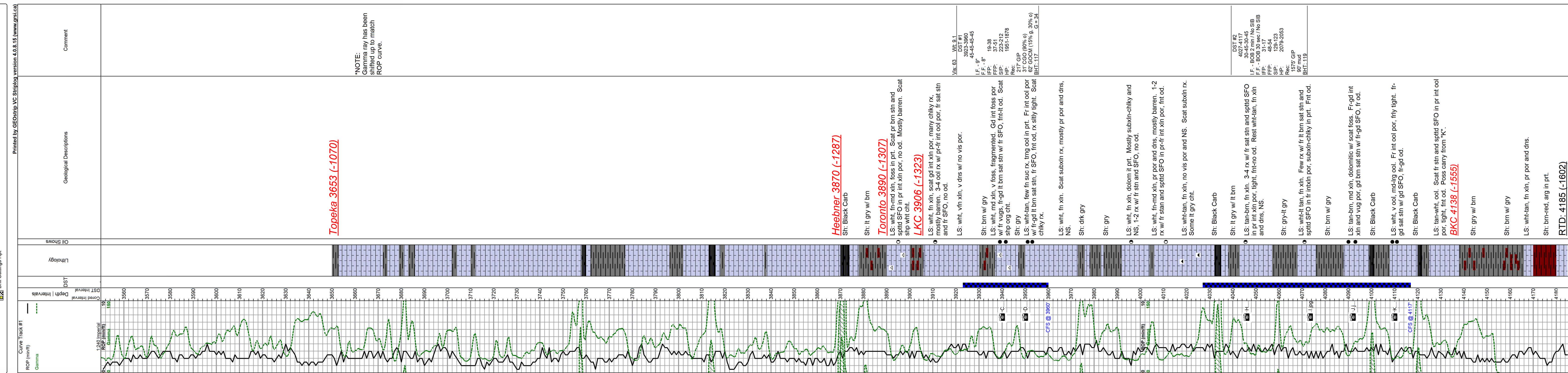
ACCESSORIES
 STRINGER
 Chert, dark
 Chert, White

OTHER SYMBOLS

DST
 DST Int
 DST alt
 Core
 Tail pipe

MISC
 Daily Report
 Digital Photo
 Document
 Folder
 Link
 Vertical Log File
 Horizontal Log File
 Core Log File
 Drill Cuttings Rpt

OIL SHOWS
 Even Sin
 Spotted Sin 50 - 75 %
 Spotted Sin 25 - 50 %
 Spotted Sin 1 - 25 %
 Questionable Sin
 Dead Oil Sin
 Fluorescence





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc.**

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bakel Unit #25-SIW

25-9S-25W Graham,KS

Start Date: 2018.07.15 @ 23:15:43

End Date: 2018.07.16 @ 08:34:43

Job Ticket #: 63130 DST #: 1

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

Printed: 2018.07.17 @ 11:27:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

25-9S-25W Graham, KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

ATTN: Marc Downing

Job Ticket: 63130

DST#: 1

Test Start: 2018.07.15 @ 23:15:43

GENERAL INFORMATION:

Formation: **LKC "C - D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:18:13

Time Test Ended: 08:34:43

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3923.00 ft (KB) To 3960.00 ft (KB) (TVD)

Reference Elevations: 2583.00 ft (KB)

Total Depth: 3960.00 ft (KB) (TVD)

2575.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6753 Outside

Press@RunDepth: 51.35 psig @ 3924.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.07.15

End Date:

2018.07.16

Last Calib.:

2018.07.16

Start Time: 23:15:48

End Time:

08:34:43

Time On Btm:

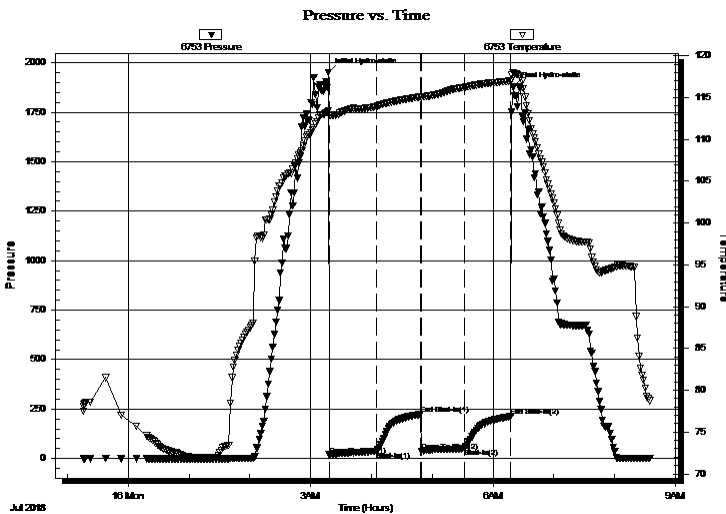
2018.07.16 @ 03:17:43

Time Off Btm:

2018.07.16 @ 06:19:43

TEST COMMENT: 45- IF- Slow ly built to 9"
45- IS- No blow
45- FF- Slow ly built to 8"
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.13	113.41	Initial Hydro-static
1	18.55	112.92	Open To Flow (1)
48	38.25	113.95	Shut-In(1)
91	222.53	115.10	End Shut-In(1)
92	37.48	115.06	Open To Flow (2)
134	51.35	116.23	Shut-In(2)
180	212.20	117.00	End Shut-In(2)
182	1877.82	118.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM, 15%G 30%O 55%M	0.46
31.00	CGO, 10%G 90%O	0.23
0.00	217' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

25-9S-25W Graham,KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

Job Ticket: 63130

DST#: 1

ATTN: Marc Downing

Test Start: 2018.07.15 @ 23:15:43

Tool Information

Drill Pipe:	Length: 3595.00 ft	Diameter: 3.82 inches	Volume: 50.96 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3923.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	57.00 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			3904.00	
Shut In Tool	5.00			3909.00	
Hydraulic tool	5.00			3914.00	
Packer	5.00			3919.00	20.00 Bottom Of Top Packer
Packer	4.00			3923.00	
Stubb	1.00			3924.00	
Recorder	0.00	6771	Inside	3924.00	
Recorder	0.00	6753	Outside	3924.00	
Perforations	1.00			3925.00	
Change Over Sub	1.00			3926.00	
Drill Pipe	31.00			3957.00	
Change Over Sub	1.00			3958.00	
Bullnose	2.00			3960.00	37.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

25-9S-25W Graham,KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

Job Ticket: 63130

DST#: 1

ATTN: Marc Downing

Test Start: 2018.07.15 @ 23:15:43

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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	GOCM, 15%G 30%O 55%M	0.455
31.00	CGO, 10%G 90%O	0.228
0.00	217' GIP	0.000

Total Length: 93.00 ft Total Volume: 0.683 bbl

Num Fluid Samples: 0

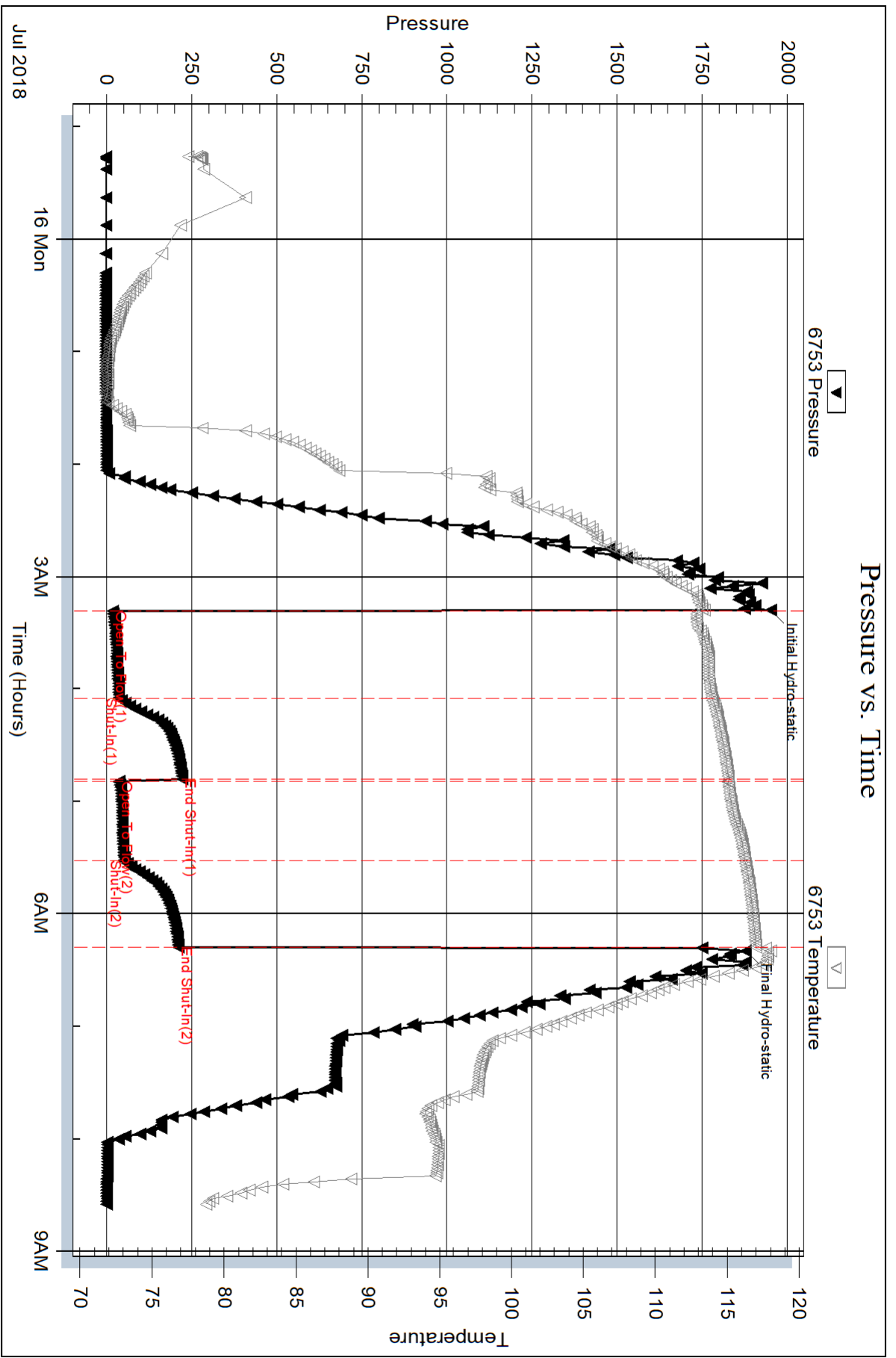
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



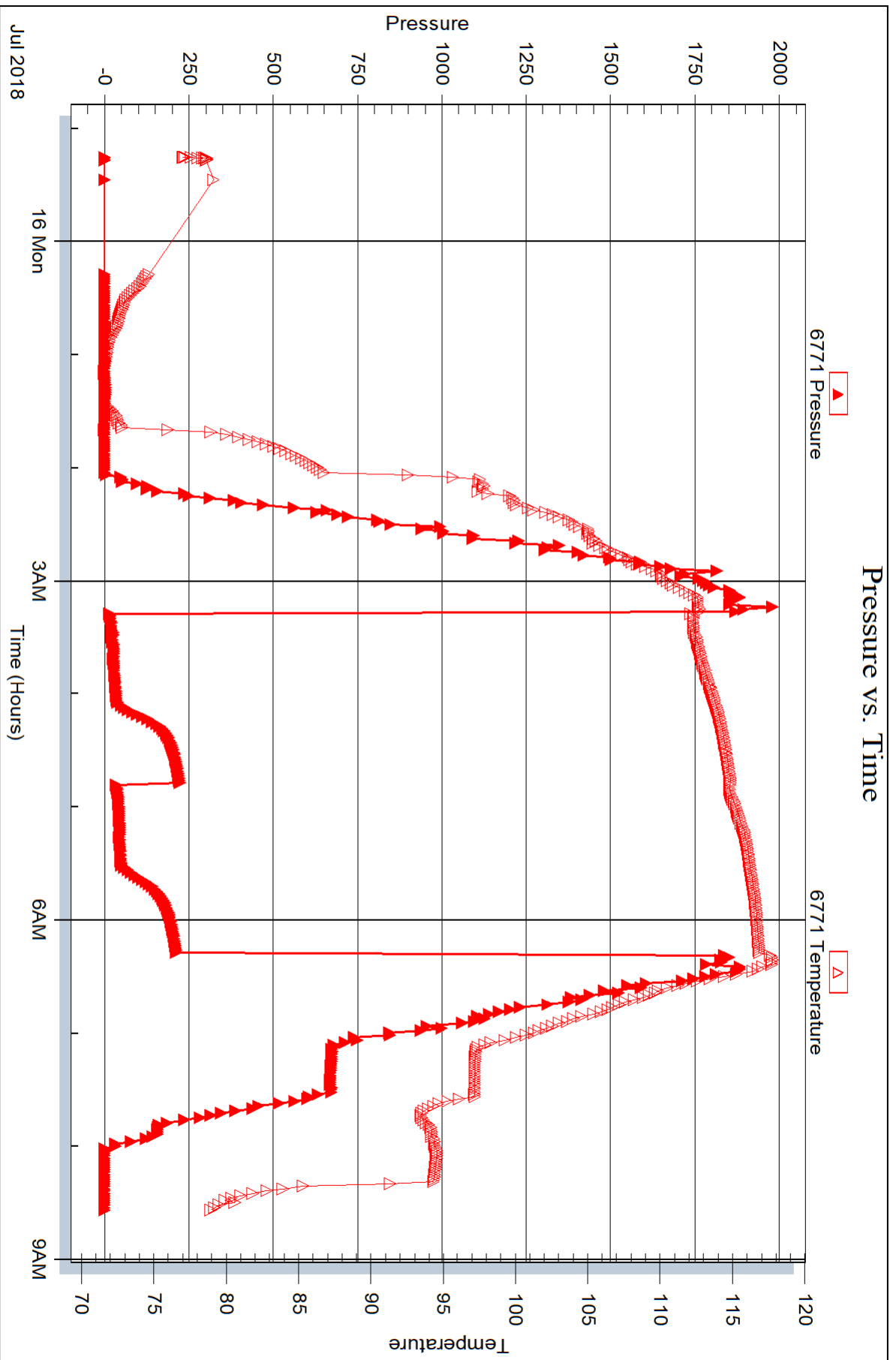
Serial #: 6771

Inside

H&C Oil Operating, Inc.

Bakel Unit #25-SIW

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating, Inc.**

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bakel Unit #25-SIW

25-9S-25W Graham,KS

Start Date: 2018.07.16 @ 23:16:01

End Date: 2018.07.17 @ 07:03:01

Job Ticket #: 63131 DST #: 2

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

Printed: 2018.07.17 @ 11:26:49

H&C Oil Operating, Inc.
25-9S-25W Graham,KS
Bakel Unit #25-SIW
DST # 2
LKC "H-K"
2018.07.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

25-9S-25W Graham, KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

ATTN: Marc Downing

Job Ticket: 63131

DST#: 2

Test Start: 2018.07.16 @ 23:16:01

GENERAL INFORMATION:

Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:20:31
 Time Test Ended: 07:03:01
 Interval: **4027.00 ft (KB) To 4117.00 ft (KB) (TVD)**
 Total Depth: 4117.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2583.00 ft (KB)
 2575.00 ft (CF)
 KB to GR/CF: 8.00 ft

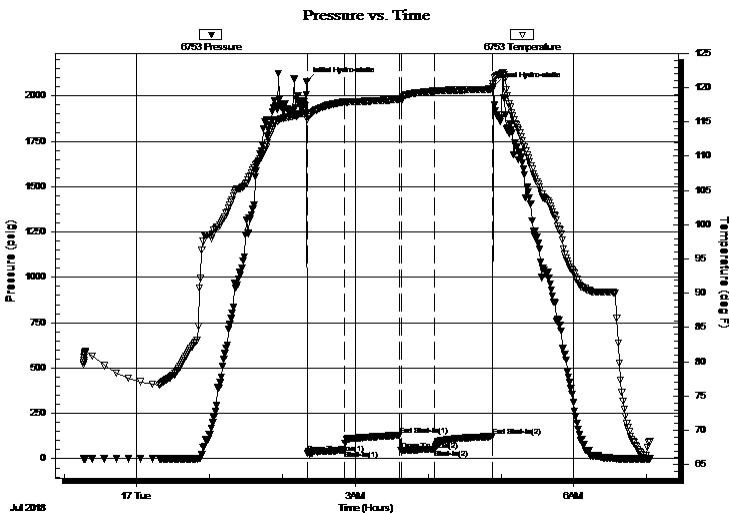
Serial #: 6753

Outside

Press@RunDepth: 54.19 psig @ 4028.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.07.16 End Date: 2018.07.17 Last Calib.: 2018.07.17
 Start Time: 23:16:06 End Time: 07:03:00 Time On Btm: 2018.07.17 @ 02:20:01
 Time Off Btm: 2018.07.17 @ 04:53:31

TEST COMMENT: 30- IF- BOB 2 mins
 45- IS- No blow
 30- FF- BOB 30 secs
 45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.97	116.29	Initial Hydro-static
1	30.96	115.31	Open To Flow (1)
31	46.63	117.94	Shut-In(1)
77	129.00	118.30	End Shut-In(1)
78	47.80	118.31	Open To Flow (2)
106	54.19	119.52	Shut-In(2)
153	123.15	119.79	End Shut-In(2)
154	2052.79	120.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	M	0.66
0.00	1575' 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

H&C Oil Operating, Inc.

25-9S-25W Graham,KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

Job Ticket: 63131

DST#: 2

ATTN: Marc Downing

Test Start: 2018.07.16 @ 23:16:01

Tool Information

Drill Pipe:	Length: 3722.00 ft	Diameter: 3.82 inches	Volume: 52.76 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 310.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 55.04 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4027.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	90.00 ft				
Tool Length:	116.00 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			4002.00	
Shut In Tool	5.00			4007.00	
Hydraulic tool	5.00			4012.00	
Gap Sub	4.00			4016.00	
Safety Joint	2.00			4018.00	
Packer	5.00			4023.00	26.00 Bottom Of Top Packer
Packer	4.00			4027.00	
Stubb	1.00			4028.00	
Recorder	0.00	6771	Inside	4028.00	
Recorder	0.00	6753	Outside	4028.00	
Perforations	10.00			4038.00	
Change Over Sub	1.00			4039.00	
Drill Pipe	64.00			4103.00	
Change Over Sub	1.00			4104.00	
Perforations	10.00			4114.00	
Bullnose	3.00			4117.00	90.00 Bottom Packers & Anchor
Total Tool Length:	116.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

25-9S-25W Graham,KS

PO Box 86
Plainville, KS 67663

Bakel Unit #25-SIW

Job Ticket: 63131

DST#: 2

ATTN: Marc Downing

Test Start: 2018.07.16 @ 23:16:01

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	M	0.661
0.00	1575' GIP	0.000

Total Length: 90.00 ft Total Volume: 0.661 bbl

Num Fluid Samples: 0

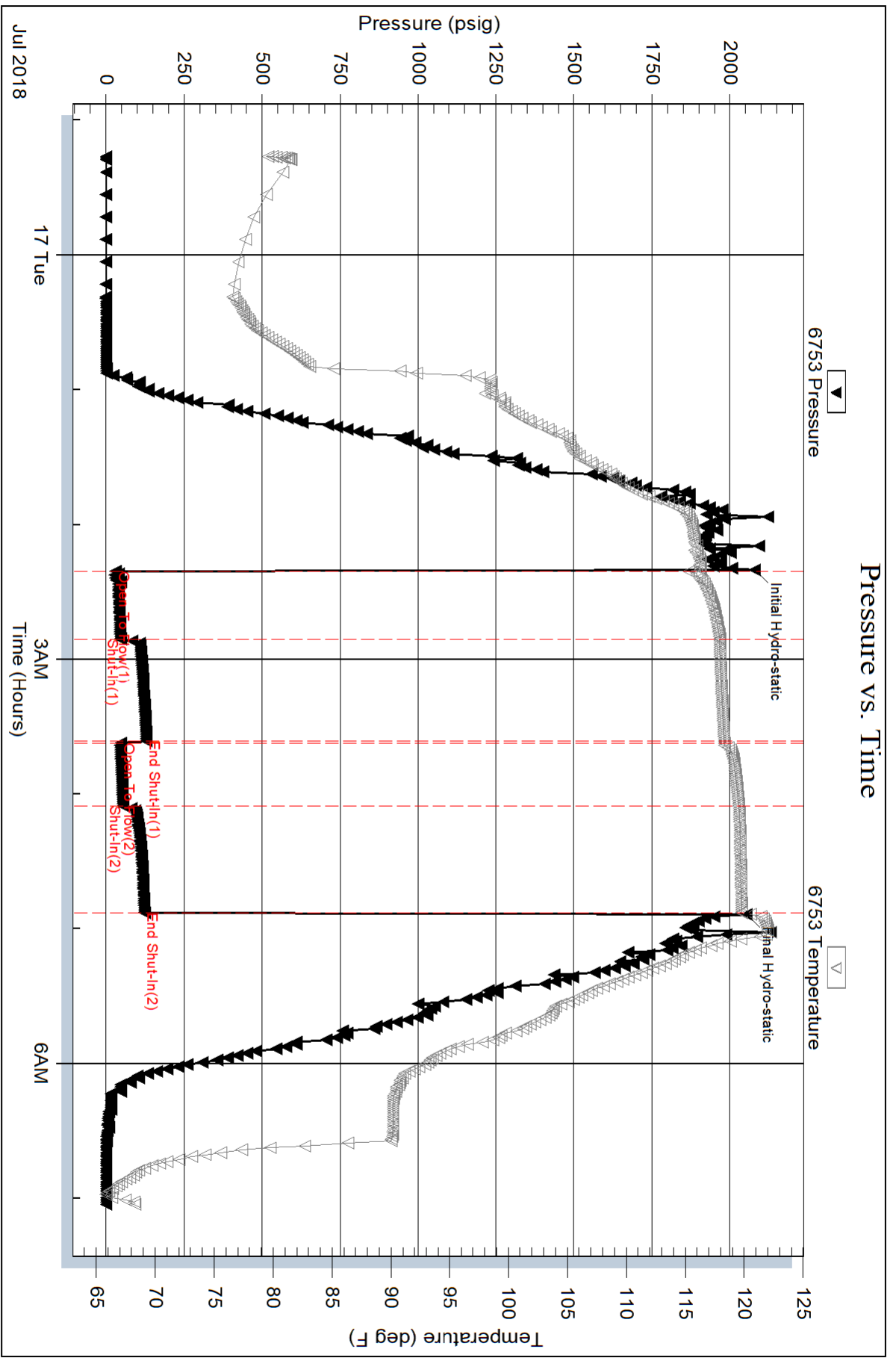
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



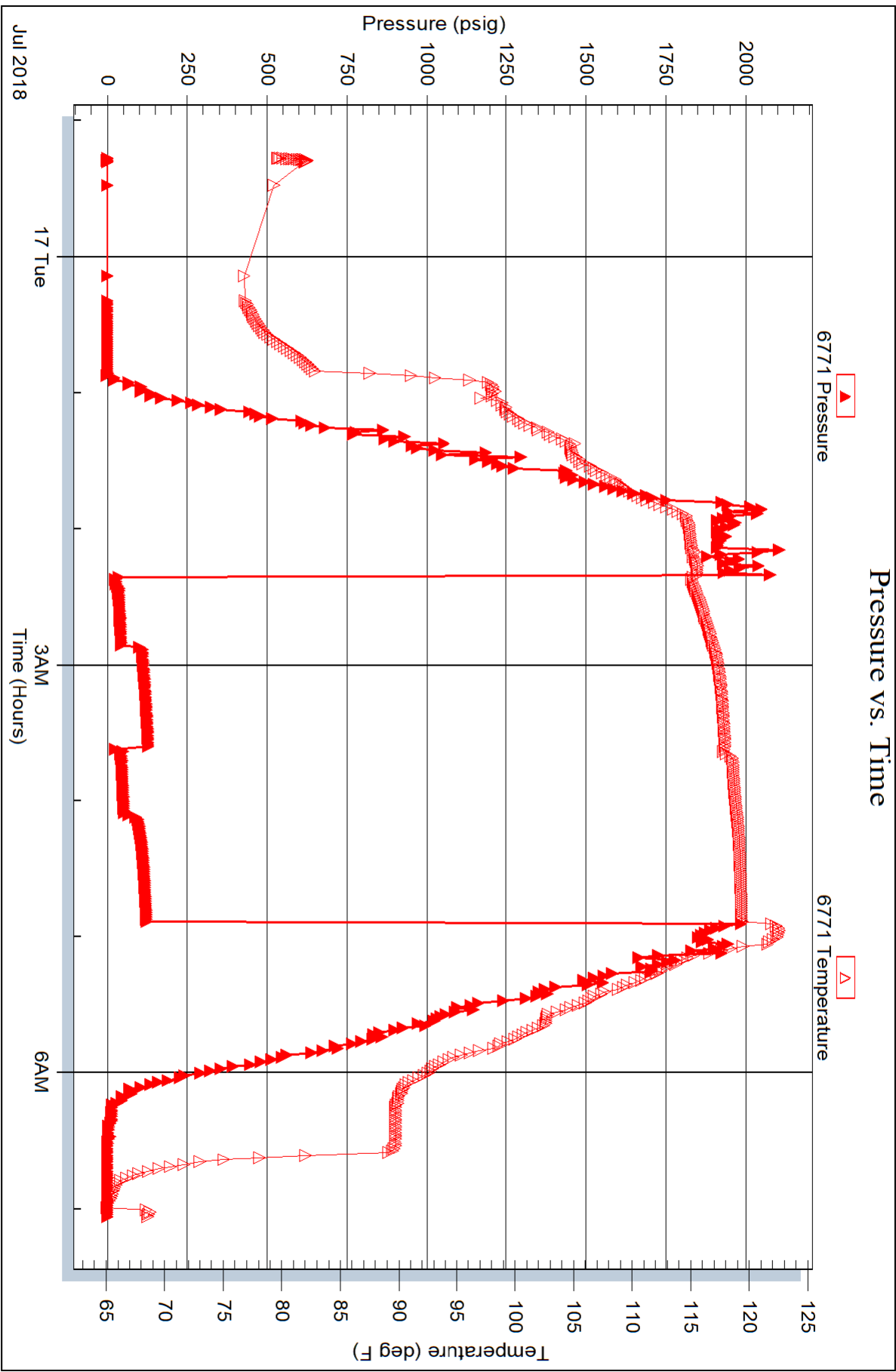
Serial #: 6771

Inside

H&C Oil Operating, Inc.

Bakel Unit #25-SIW

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63130**

Well Name & No. Bakel Unit #25-SIW Test No. 1 Date 7/16/18
 Company H+C Oil Operating, Inc. Elevation 2583 KB 2575 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 25 Twp. 9 S Rge. 25 W Co. Graham State KS

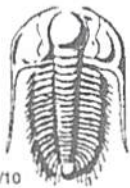
Interval Tested 3923-3960 Zone Tested LKC "C+B"
 Anchor Length 37' Drill Pipe Run 3595 Mud Wt. 8.8
 Top Packer Depth 3918 Drill Collars Run — Vis 45
 Bottom Packer Depth 3923 Wt. Pipe Run 310 WL 6.2
 Total Depth 3960 Chlorides 1,100 ppm System LCM 1#

Blow Description IF - slowly built to 9"
ISI - No blow
PF - slowly built to 8"
PSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>GOCM</u>	<u>15</u>	<u>30</u>		<u>55</u>
<u>31</u>	<u>CGO</u>	<u>10</u>	<u>90</u>		
	<u>217' GIP</u>				

Rec Total 93' BHT 117° Gravity 34 API RW —@ —° F Chlorides — ppm
 (A) Initial Hydrostatic 1951 Test 1050 T-On Location 7/15 2302
 (B) First Initial Flow 19 Jars — T-Started 2315
 (C) First Final Flow 38 Safety Joint — T-Open 0317
 (D) Initial Shut-In 223 Circ Sub — T-Pulled 0617
 (E) Second Initial Flow 37 Hourly Standby — T-Out 0834
 (F) Second Final Flow 51 Mileage 122 RT Comments —
 (G) Final Shut-In 212 Sampler —
 (H) Final Hydrostatic 1878 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 45 Extra Recorder — Sub Total 0
 Initial Shut-In 45 Day Standby — Total 1172
 Final Flow 45 Accessibility — MP/DST Disc't —
 Final Shut-In 45 Sub Total 1172

Approved By _____ Our Representative Brennan Longdale



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63131**

Well Name & No. Bakel Unit #25-SIW Test No. 2 Date 7/16/18
 Company H&C Oil Operating, Inc. Elevation 2583 KB 2575 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Bowring Rig Discovery #1
 Location: Sec. 25 Twp. 9 Rge. 3 W Co. Graham State K.S.

Interval Tested 4027-4117 Zone Tested LKC "H-K"
 Anchor Length 90' Drill Pipe Run 3722 Mud Wt. 9.1
 Top Packer Depth 4022 Drill Collars Run — Vis 58
 Bottom Packer Depth 4027 Wt. Pipe Run 360 WL 6.4
 Total Depth 4117 Chlorides 1,400 ppm System LCM 1#

Blow Description IF- BOB 2 mins
IF- No blow
FF- BOB 30 secs
FSI- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>M</u>				
	<u>1575' LIP</u>				

Rec Total 90' BHT 120° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2079 Test 1150 T-On Location 2237
 (B) First Initial Flow 31 Jars — T-Started 2316
 (C) First Final Flow 47 Safety Joint 75 T-Open 0221
 (D) Initial Shut-In 129 Circ Sub — T-Pulled 0451
 (E) Second Initial Flow 48 Hourly Standby — T-Out 0703
 (F) Second Final Flow 54 Mileage 122 RT Comments EM Tool
 (G) Final Shut-In 123 Sampler —
 (H) Final Hydrostatic 2053 Straddle —
 Shale Packer —
 Ruined Shale Packer —
 Ruined Packer —
 Extra Packer —
 Extra Copies —
 Extra Recorder —
 Day Standby —
 Accessibility —
 Sub Total 1347 Total 1347 MP/DST Disc't —

Approved By _____

Our Representative
Brennan Lonsdale