

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	Staab Oil Co., a General Partnership
Well Name	HAINES WEST 1
Doc ID	1420805

Tops

Name	Top	Datum
anhydrite	1378	591
base	1415	554
topeka	2890	-921
heebner	3097	-1128
toronto	3120	-1151
lansing	3138	-1169
bkc	3360	-1391
arbuckle	3392	-1423
td	3479	-1510

GLOBAL OIL FIELD SERVICES, LLC

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell

DATE <u>5-11-12</u>	SEC. <u>7</u>	TWP. <u>8</u>	RANGE <u>18</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Haines West</u>	WELL #. <u>1</u>		LOCATION <u>P.O. # 4022N</u>		COUNTY <u>ROCKS</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE) _____							

CONTRACTOR Shields

TYPE OF JOB Long string

HOLE SIZE _____ T.D. _____

CASING SIZE 5 1/2 14" DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 20.27

PERFS _____

DISPLACEMENT 84.3 bbls

EQUIPMENT _____

PUMP TRUCK # _____ CEMENTER Bill

HELPER Jason

BULK TRUCK # _____ DRIVER Bolet

BULK TRUCK # _____ DRIVER Chris

OWNER _____

CEMENT AMOUNT ORDERED 1505X CC 300 608 40 pos

300 cc

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

TOTAL _____

REMARKS:

Ripped c 2426 shoe 5 20.73

2 cement 150 gun log 29.4

Following 450 ch by 14 2 1/2 cc

Pump plug w/ 4 1/2 bbls

Hand plug 1500 float held

Cement did circ.

CHARGE TO: Staab Oil Co.

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 _____

SIGNATURE Staab Oil Co. Todd Staab

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

9 Turbas @ _____

4 Baskets @ _____

Hydr. Jaws @ _____

Float Shoe @ _____

_____ @ _____

TOTAL _____

SALES TAX (if Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

GLOBAL OIL FIELD SERVICES, LLC

3330

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE <u>5-3-18</u>	SEC <u>7</u>	TWP. <u>S</u>	RANGE <u>18W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>12:30 AM</u>
LEASE <u>Hains</u>	WELL #. <u>H1 west</u>	LOCATION <u>west of Plainville KS 8 North</u>	COUNTY <u>ROCKE</u>			STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE)			<u>on 17 RD west into</u>				

CONTRACTOR Shields Drilling Rig #1
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4" T.D.
 CASING SIZE 5 7/8" DEPTH 21100'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX. MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS
 DISPLACEMENT

OWNER Staab Oil Company
 CEMENT AMOUNT ORDERED 1505x 3% CC 2% gel

COMMON	@		
POZMIX	@		
GEL	@		
CHLORIDE	@		
ASC	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
HANDLING	@		
MILEAGE	@		
			TOTAL

EQUIPMENT

PUMP TRUCK	CEMENTER <u>Cody</u>
# <u>409</u>	HELPER <u>Bond</u>
BULK TRUCK	
# <u>411</u>	DRIVER <u>Kris</u>
BULK TRUCK	
#	DRIVER

REMARKS:
Ran 5 hrs of 8 3/4 casing + 10' lit hooked to rig, broke circulation hooked to truck pumped 1505x of cement + displaced 12 hrs of H2O and shut in.
Cement did circulate to surface.

CHARGE TO: Staab Oil Company
 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 George Begler
 SIGNATURE George Begler

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE		
EXTRA FOOTAGE	@	
MILEAGE	@	
MANIFOLD	@	
	@	
	@	
TOTAL		

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
TOTAL		

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

Janel Staab
Consulting Petroleum Geologist

2428 Toulon Ave
Hays, KS 67601
Phone: 785-625-4311
Cell Phone: 785-635-1660
janel1969@gmail.com

GEOLOGIST'S WELL REPORT

COMPANY Staab Oil Company (6037)
WELL Haines West
FIELD Webster View Southeast
LOCATION (legal) E2-NE-SW-NE 1650 F NL 1630 FEL
Section 7 TWP 8 S RGE 18 W
(Map) Plainville - 9 North, West, 1/2 S, 2 1/4 W, 1/4 N
COUNTY Books STATE Kansas
ELEVATION: 1969 K.B., 1964 G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-163-24362-00
GEOLOGY BY Janel Staab

PERTINENT WELL DATA

CONTRACTOR Shields Drilling Company (5184)

RIG 1 HYDRAULICS Beth 225 6X14

DRILL PIPE 4 1/2" x H COLLARS 6 1/4" 232

CASING: SURFACE 8 5/8" @ 208' w/150 SX common

PRODUCTION 5 1/2" @ 3476' w/150 SX common

DRILLING FLUID: COMPANY Mud Co./Service Mud Inc

TYPE: Chemical

REMARKS: Full Service

DRILLSTEM TESTS: COMPANY Trilobite Testing Inc

NUMBER OF TESTS 3

ELECTIC LOGS: COMPANY ELI

DETAIL (5") 2800' - RTD

TYPE D.I. Comp N.D. Micro

DRILLING TIME FROM 2850' TO RTD

SAMPLE TIME FROM 2850 TO 3460

SUPERVISION FROM 2850 TO RTD

VERTICAL DEVIATION 1/2" @ 3090

PLUGGING REPORT _____

RESERVE PIT _____

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
05-03-2018		S.P.U.D.
05-04-2018	211'	W.O.C.
05-05-2018	1380'	Drilling shale + lime
05-06-2018	2239'	Drilling shale + sltsh
05-07-2018	2906'	Drilling Topeka ls
05-08-2018	3090'	Drilling Heebner shale
05-09-2018	3405'	DST #2 - Lzone - Simpson
05-10-2018	3480'	Logging
05-11-2018	3480'	Setting pipe

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	Bottom of Tupoka 3057- 3090	18.39 5	1083 60	47.238 60	1073 90	1507 1447	460' MW
2	L-Sump 3345- 3405	16-16 5	184 60	17-17 30	— —	1709 1649	5' OSM
3	Arbuckle 3398- 3429	42.77 5	1110 60	83-260 60	1085 90	1737 1684	677' G SMC 10% G 646' GIP
4							
5							
6							
7							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP	LCM
1	2239	9.4	29	NC	3200	—	Nil
2	2906	9.0	50	6.0	3000	26	2
3	3093	9.0	57	6.2	3300	25	2
4	3405	9.3	58	6.2	3300	29	2
5	3480	9.3	49	6.8	3200	21	1
6							
7							
8							
9							
10							
11							

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTH	FEET	HOURS
1	12 1/4	Reed	MJ1	211'	211'	8
2	7 7/8	Reed	S-52	3480'	3296'	9 6 3/4
3						
4						
5						
6						
7						

FORMATION TOPS & STRUCTURAL GEOLOGY

REFERRED TO:

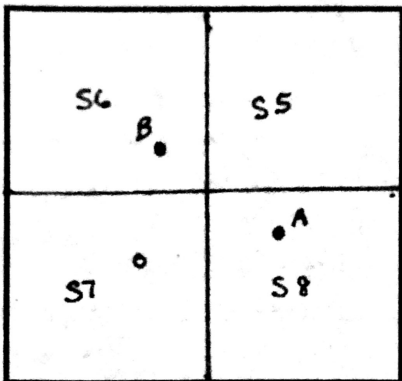
A: Haines #1 KB 1942

B: Hayes #1 KB 1965

C: _____

D: _____

E: _____



STRATIGRAPHIC

SUBJECT WELL

STRUCTURAL POSITION

<u>MARKERS</u>	<u>SAMPLE</u>	<u>E. LOG</u>	<u>DATUM</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
Anhydrite	1381'	1378	+591	+582	+595			
Base	1417'	1415	+554	+547	+562			
Topeka	2892'	2890'	-921	-927	-933			
Heeb Sh.	3099'	3097'	-1129	-1123	-1137			
Toronto	3124'	3120'	-1151	-1155	-1160			
LKC	3141'	3138'	-1169	-1174	-1178			
BKC	3361'	3360'	-1391	-1393	-1400			
Arbuckle	3392'	3392'	-1423	-1437	-1455			
TD	3480'	3479	-1510	-1502	-1514			

Strap 1.05' short

SUMMARY

The Haines West was drilled using Shields Rig.
Location was S7, T8S, R18W in Books Co, Kansas.
Drilling started May 3 2018 and pipe was set on May 11, 18.
3-D Seismic indicated that this location was on the
same structure as the Hayes #1 and was high compared
to that location. We ran 3 DST'S with #3 resulting
in a positive test. As a result production pipe were
run and focus area will be the Arbuckle

Paul Seal

DRILLING TIME (min/ft)

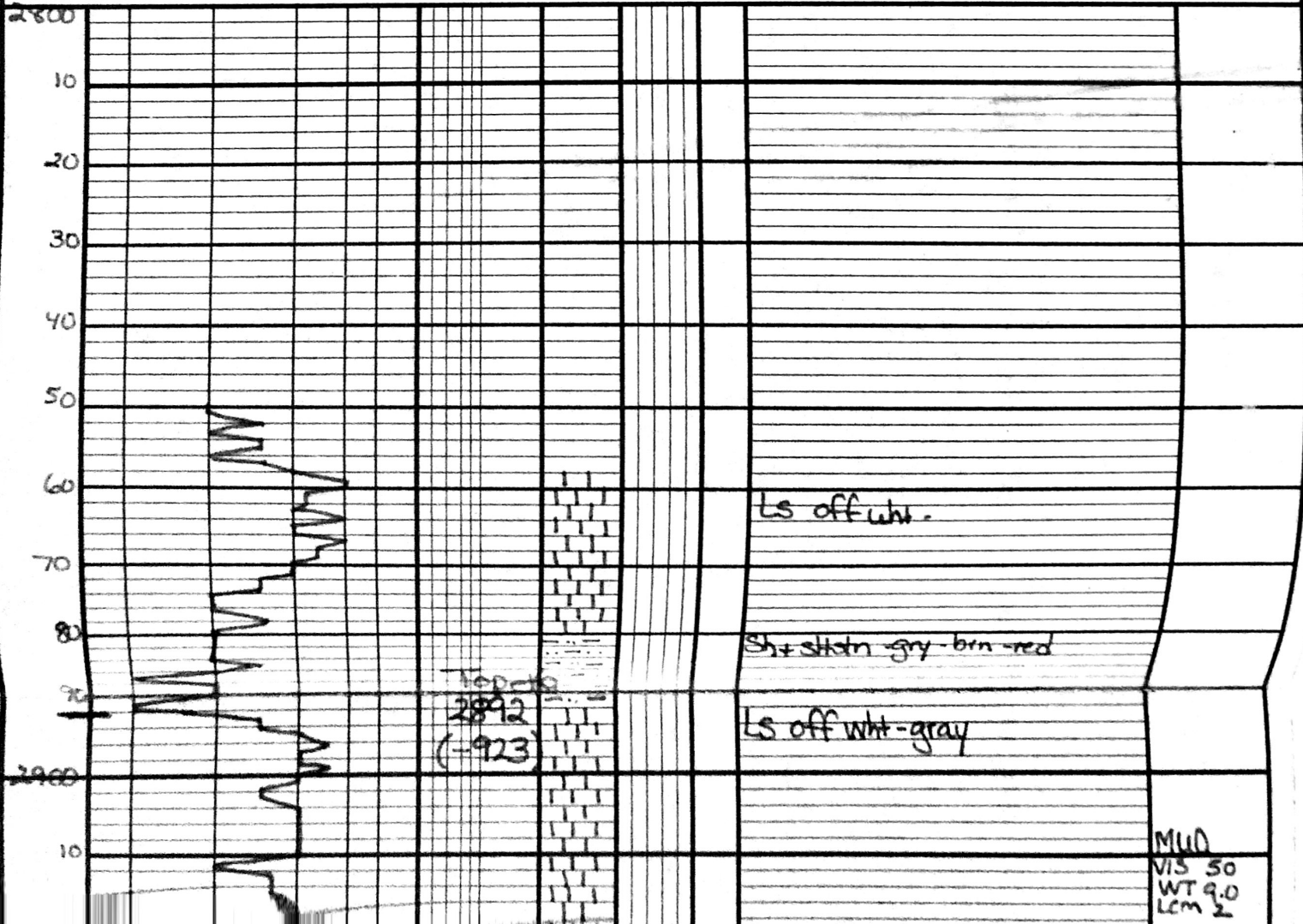
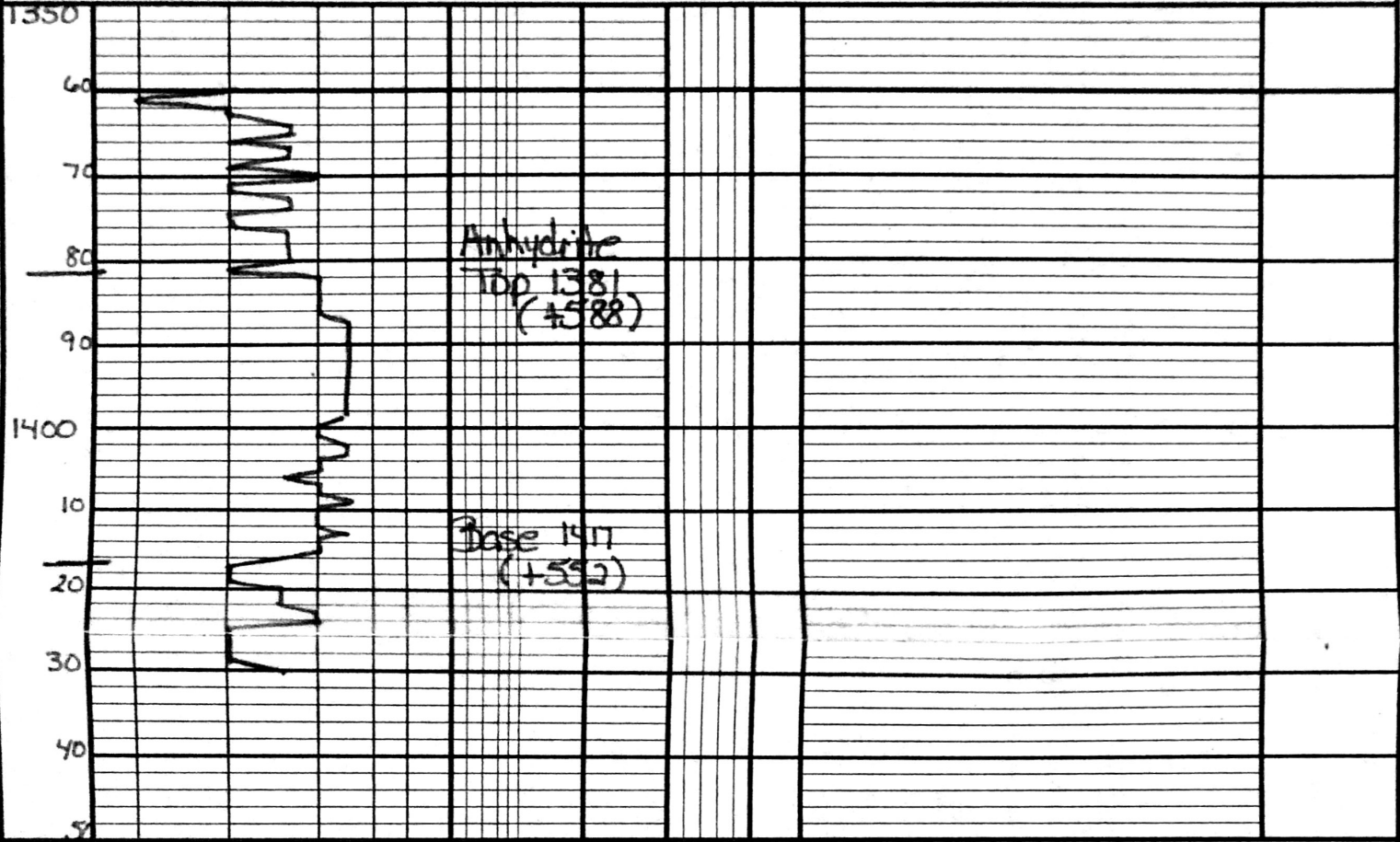
POROSITY

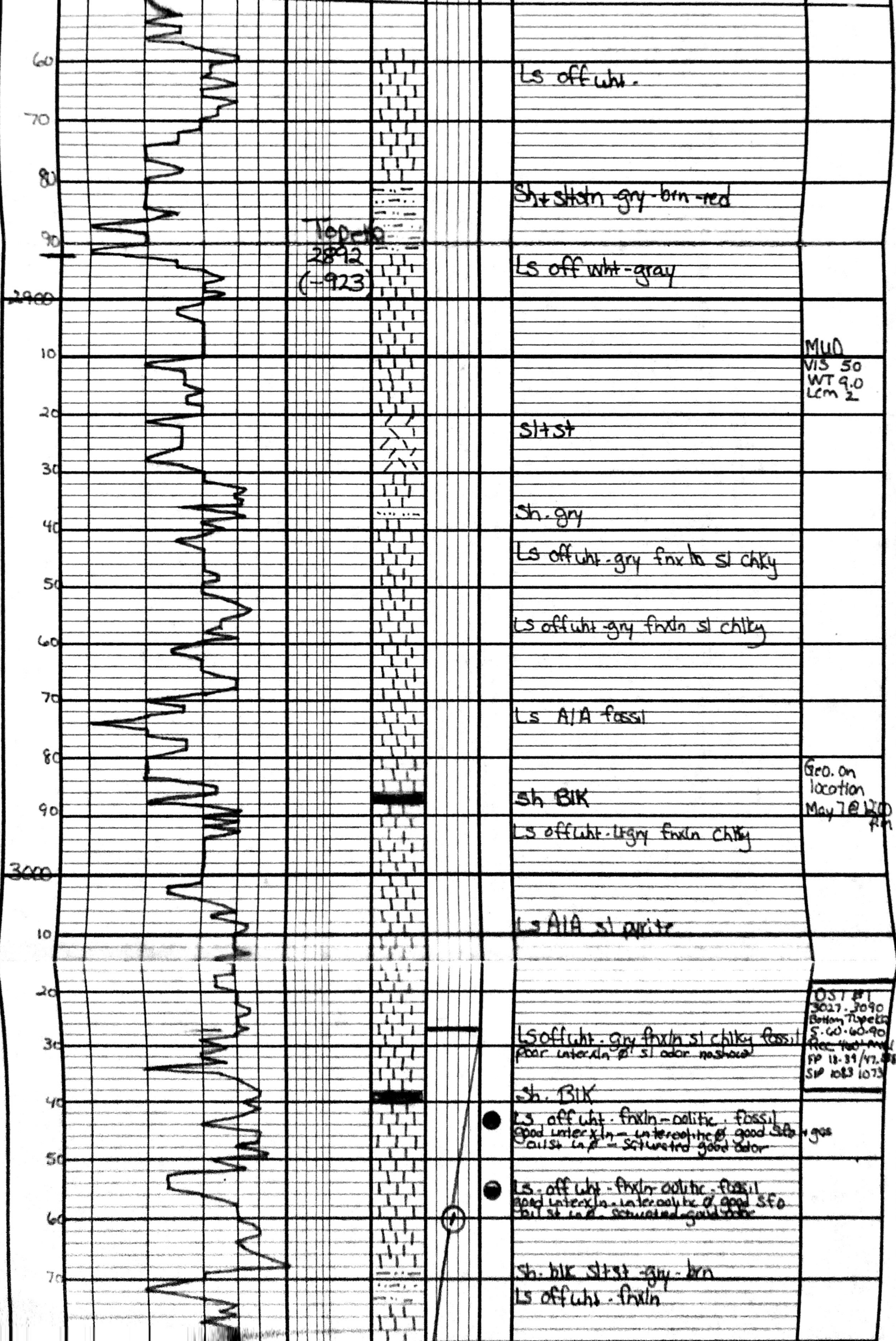
GEOLOGICAL DESCRIPTION

REMARKS

DEPTH 1/2 1 2 3 4 5 6 7 8 9 10

LITHOLOGY ST
 GOOD POOR OIL
 FAR SHOW





Top of
2892
(-923)

Ls off wht.

Sh + slt sh - gry - brn - red

Ls off wht - gray

MUD
VIS 50
WT 9.0
Lcm 2

slt slt

sh. gry

Ls off wht - gry fin in sl chky

Ls off wht - gry fin in sl chky

Ls A/A fossil

Geo. on
location
May 7 @ 1200
PM

sh BIK

Ls off wht - lgry fin in chky

Ls A/A sl white

OST #1
3027-3090
Bottom 70-90
S. 60-60-90
Rec. 100' and
SP 11-24/17.88
SP 1083 1073

Ls off wht - gry fin in sl chky fossil
floor intercal. w/ sl odor no show

sh. BIK

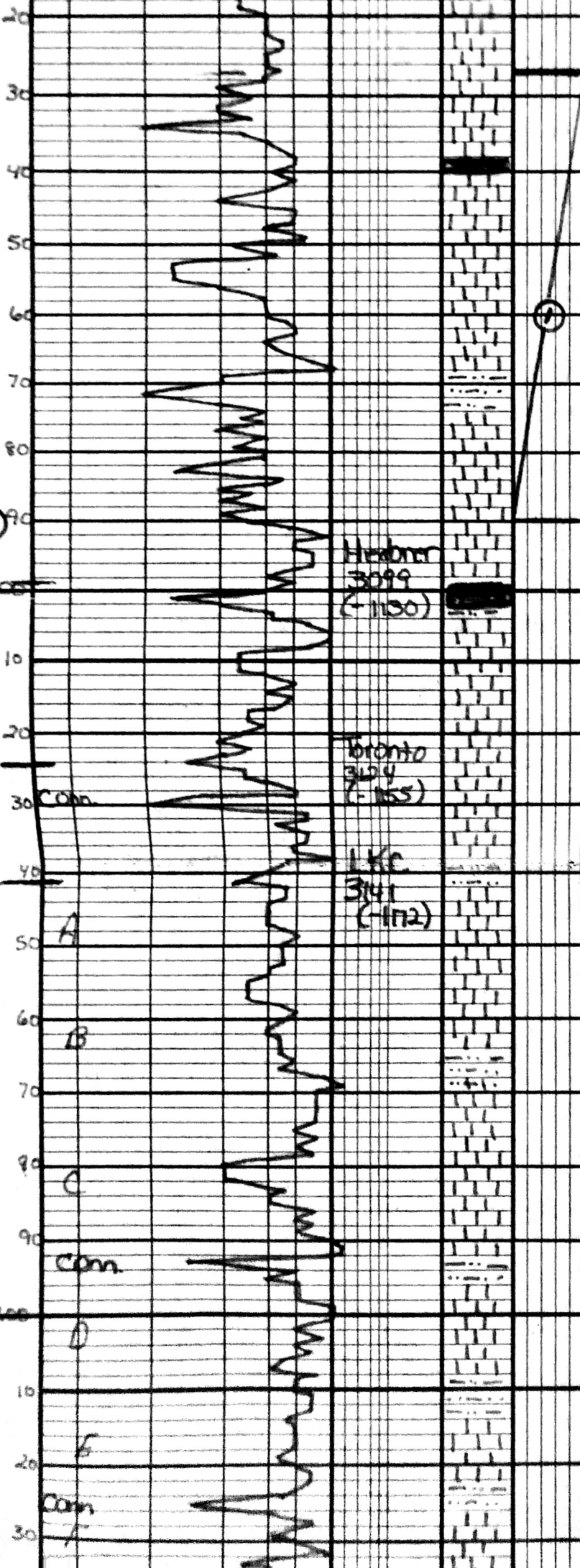
● Ls off wht - fin in - calcic - fossil
good intercal. - intercal. of good sh + gas
calcic cap - saturated good odor

● Ls. off wht - fin in - calcic - fossil
good intercal. - intercal. of good SFO
but sl cap - saturated - good odor

sh. blk slt slt - gry - brn

Ls off wht - fin in

OST #1
3027.309
Bottom Type
S. 60-60-9
Rec. 100
FP 11-31/77
SP 1023 107



LS off wht. gray fcnln sl chky fossil
poor interxln of sl odor no shale

sh. blk

● LS off wht. fcnln - oolitic - fossil
good interxln - interesting of good sh. gas
oilst in p - structured good odor

● LS off wht. fcnln - oolitic - fossil
good interxln - interesting of good SFO
oil st in p - structured good odor

sh. blk slst - gray - brn
LS off wht. fcnln

LS off wht fcnln.

MUD
VIS 57
WT 9.0
LCM 2

Hebron
3099
(-1100)

sh. blk carb - fossil
sh. slst - gray brn - green
LS tan. gray fcnln - sl chky
sl pyrite

Toronto
3124
(-1055)

● LS off wht - tan fcnln fossil
sl chky sl pyrite poor. light interxln
light stain in p good odor

LKC
3141
(-1172)

sh. slst gray brn

● LS off wht - fcnln - oolitic - interxln
to interxln of p - good fr - good oil
stain in p - set. light color stn good odor

● LS off wht. fcnln - oolitic - fossil fr - good
interxln - interesting of sl stain in p - light
color sl odor sl chky

sh. slst - gray brn

LS off wht fcnln chky

● LS off wht. fcn - fossil fr - interesting to
interxln of light st in p to set (2nd)
no odor sl pyrite

sh. slst. gray. brn. green

○ LS off wht - fcnln. poor interxln of
sl pyrite sl chky fossil, poor stain in p
sl odor

sh. slst - gray brn

○ LS off wht - fcnln fossil sl chky
sl pyrite poor interxln of poor stain in p
sl odor

○ LS off wht - fcnln fossil sl chky
poor interxln of poor stain in p
sl odor

○

3100

10

20

30 Conn

40

A

60

B

80

C

Conn

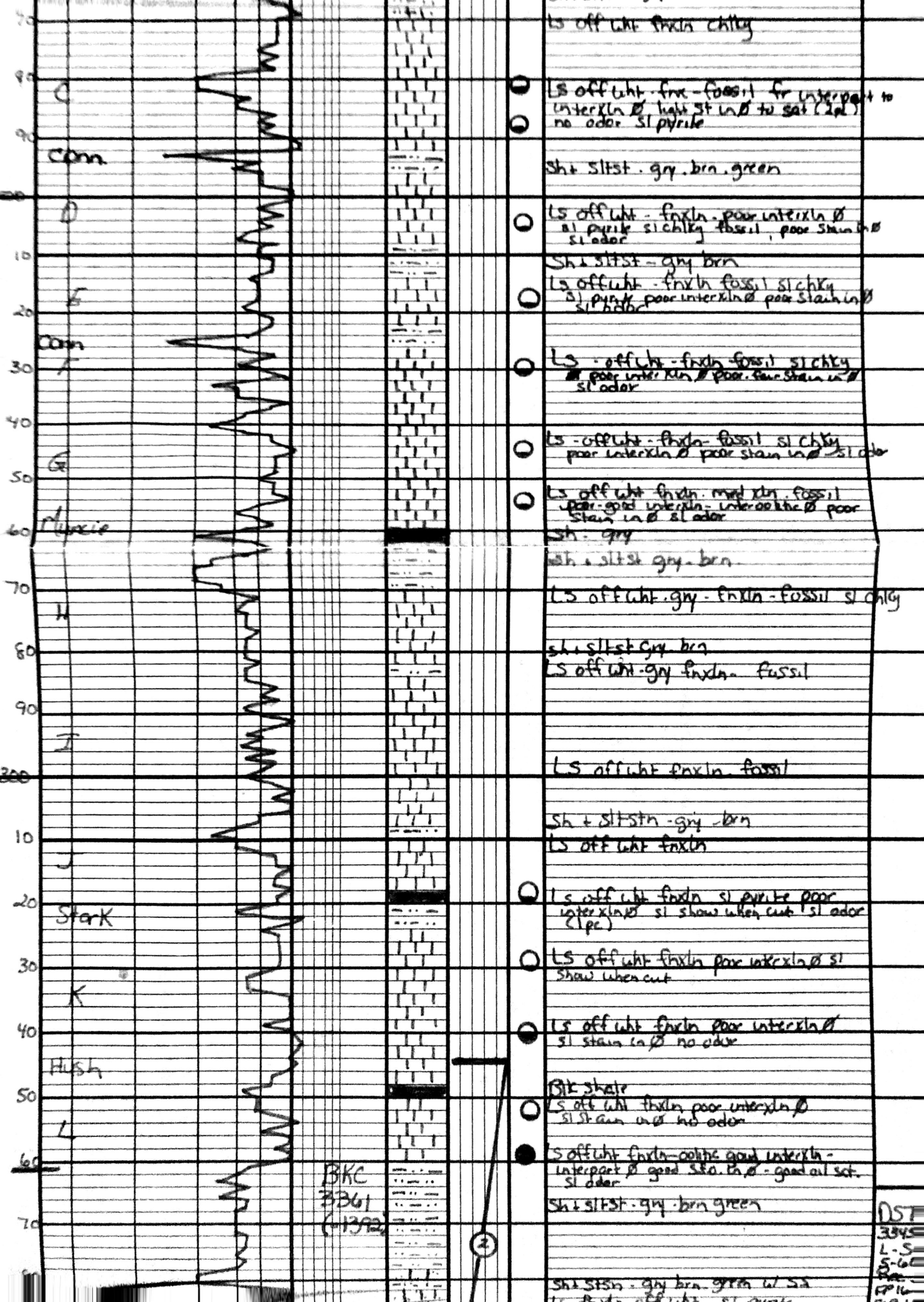
10

E

Conn

30

3100



ls off wht. fnxln chky

ls off wht. - fine - fossil fr interpart to interxln \emptyset light st in \emptyset to sat (2nd) no odor sl pyrite

sh + sltst. gry. brn. green

ls off wht. - fnxln. poor interxln \emptyset sl pyrite sl chky fossil, poor stain in \emptyset sl odor

sh + sltst - gry brn

ls off wht. - fnxln fossil sl chky sl pyrite poor interxln \emptyset poor stain in \emptyset sl odor

ls - off wht. - fnxln fossil sl chky poor interxln \emptyset poor stain in \emptyset sl odor

ls - off wht. - fnxln - fossil sl chky poor interxln \emptyset poor stain in \emptyset sl odor

ls off wht. - fnxln. med xln. fossil poor - good interxln - interpart \emptyset poor stain in \emptyset sl odor

sh - gry

sh + sltst gry - brn

ls off wht. gry - fnxln - fossil sl chky

sh + sltst gry brn

ls off wht. gry fnxln - fossil

ls off wht. fnxln. fossil

sh + sltstn - gry - brn

ls off wht. fnxln

ls off wht. fnxln sl pyrite poor interxln \emptyset sl show when cut sl odor (1pc)

ls off wht. fnxln poor interxln \emptyset sl show when cut

ls off wht. fnxln poor interxln \emptyset sl stain in \emptyset no odor

blk shale

ls off wht. fnxln poor interxln \emptyset sl stain in \emptyset no odor

ls off wht. fnxln - colln. good interxln - interpart \emptyset good sta. th. \emptyset - good oil sat. sl odor

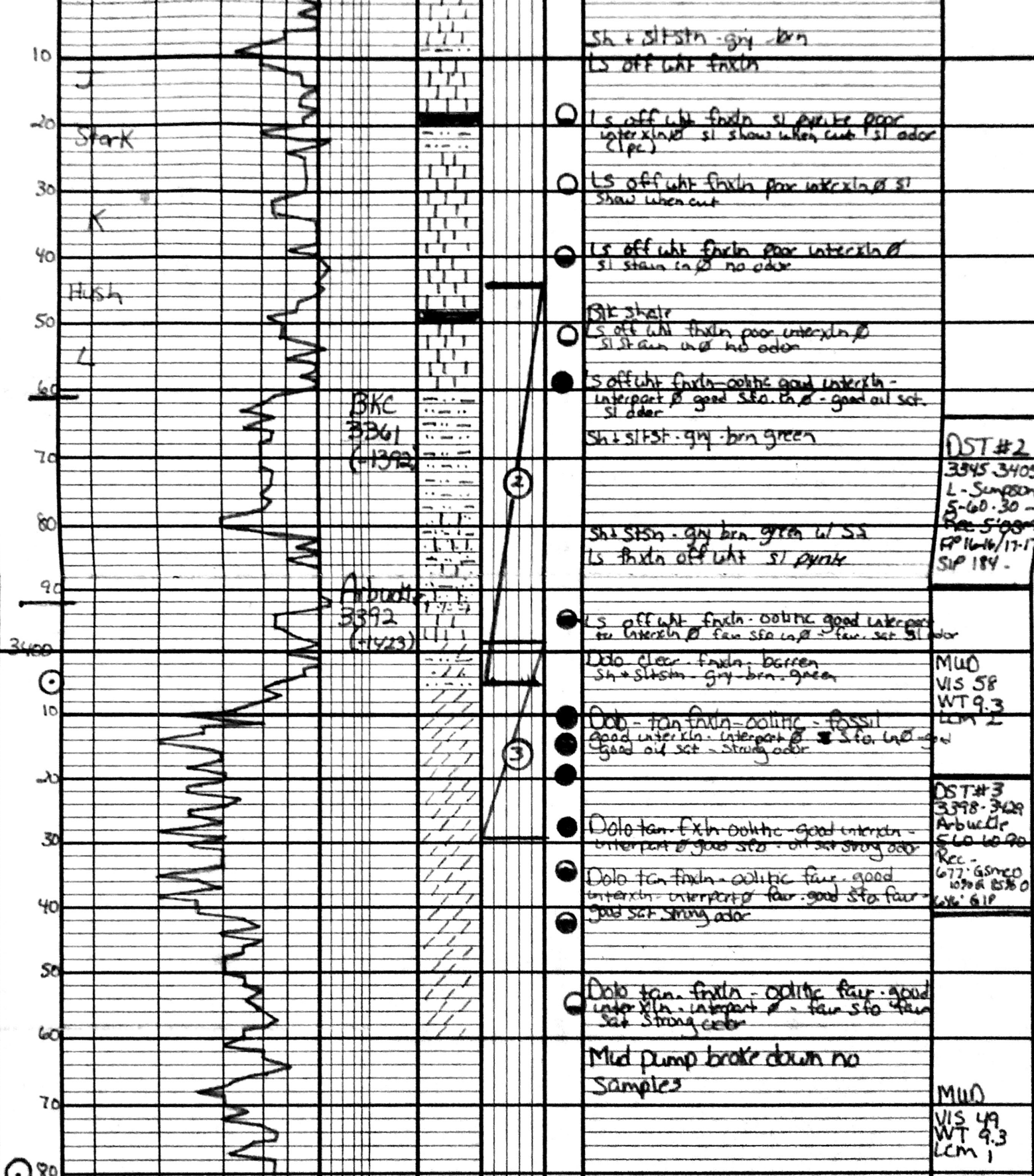
sh + sltst. gry. brn green

sh + sltstn - gry brn green w/ sat to bed off wht. sl pyrite

BKC
3361
(1372)

2

DST
3345
L-S
S-60
1716



Sh + siltstn - grey - brn
 LS off wht frxn

○ LS off wht frxn si purple poor interxln si show when cut si odor (1pc)

○ LS off wht frxn poor interxln si show when cut

● LS off wht frxn poor interxln si stain in p no odor

○ BKC shale
 LS off wht frxn poor interxln si stain in p no odor

● S off wht frxn - oolitic good interxln - interpart p good sta. in p - good oil set. si odor

Sh + siltst. - grey - brn green

DST #2
 3345 3405
 L. Simpson
 5-60.30 -
 Rec 5:00pm
 10/16/17-1
 SIP 184.

Sh + siltstn - grey brn green w/ ss
 LS frxn off wht si purple

● LS off wht frxn - oolitic good interpart to interxln p fair sta. in p - fair set si odor

Dolo clear - frxn - barren
 Sh + siltstn - grey - brn - green

MUD
 VIS 58
 WT 9.3
 LCM 2

● Dolo - tan frxn - oolitic - fossil
 good interxln - interpart p - fair sta. in p
 good oil set - strong odor

DST #3
 3398 - 3429
 Arbuckle
 5-60 to 70
 Rec -
 6:77 Gsmco
 10/20/18 5:30
 6/10

● Dolo tan frxn oolitic - good interxln - interpart p good sta. in p - oil set strong odor

● Dolo tan frxn - oolitic fair - good interxln - interpart p fair - good sta. in p - good set strong odor

● Dolo tan frxn - oolitic fair - good interxln - interpart p - fair sta. in p - set strong odor

Mud pump broke down no samples

MUD
 VIS 49
 WT 9.3
 LCM 1

T.O. 5-10-18 2:00 AM.



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Staab Oil Company
1607 Hopewell RD
Hays Kansas 76701
ATTN: Janel Staab

7-8s-18w Rooks, KS

Haines West #1

Job Ticket: 63435

DST#: 1

Test Start: 2018.05.07 @ 20:05:00

GENERAL INFORMATION:

Formation: **Base of Topeka**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:28:00
 Time Test Ended: 05:00:30
 Interval: **3027.00 ft (KB) To 3090.00 ft (KB) (TVD)**
 Total Depth: 3090.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brannan Lonsdale/Cad
 Unit No: 73
 Reference Elevations: 1969.00 ft (KB)
 1964.00 ft (CF)
 KB to GR/CF: 5.00 ft

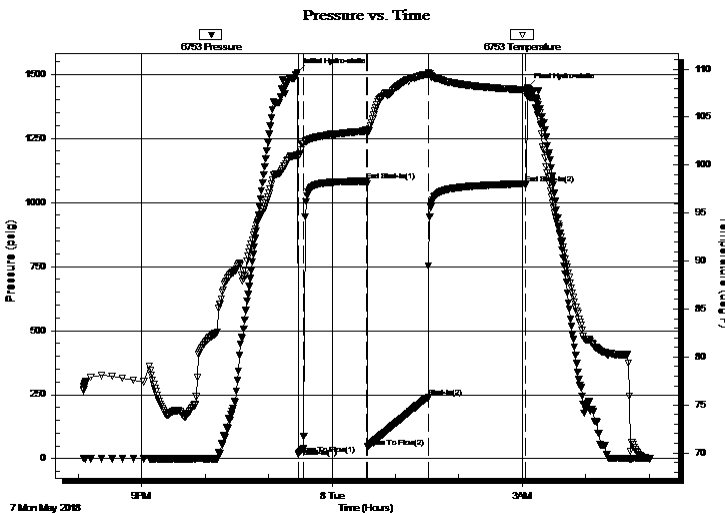
Serial #: 6753

Outside

Press@RunDepth: 238.32 psig @ 3028.00 ft (KB)
 Start Date: 2018.05.07 End Date: 2018.05.08
 Start Time: 20:05:05 End Time: 05:00:30
 Capacity: 8000.00 psig
 Last Calib.: 2018.05.08
 Time On Btm: 2018.05.07 @ 23:27:30
 Time Off Btm: 2018.05.08 @ 03:05:00

TEST COMMENT: IF-5- Weak blow ; built to 4"
 ISI-60- No blow back
 FF-60- BOB in 16min
 FSI-90- No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1506.96	101.09	Initial Hydro-static
1	17.99	100.84	Open To Flow (1)
6	39.15	102.19	Shut-In(1)
65	1082.64	103.56	End Shut-In(1)
67	46.82	103.37	Open To Flow (2)
124	238.32	109.48	Shut-In(2)
216	1073.11	107.84	End Shut-In(2)
218	1447.21	107.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
460.00	Muddy Water 20%M 80%W	3.38

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Staab Oil Company
1607 Hopewell RD
Hays Kansas 76701
ATTN: Janel Staab

7-8s-18w Rooks, KS

Haines West #1

Job Ticket: 63435

DST#: 1

Test Start: 2018.05.07 @ 20:05:00

GENERAL INFORMATION:

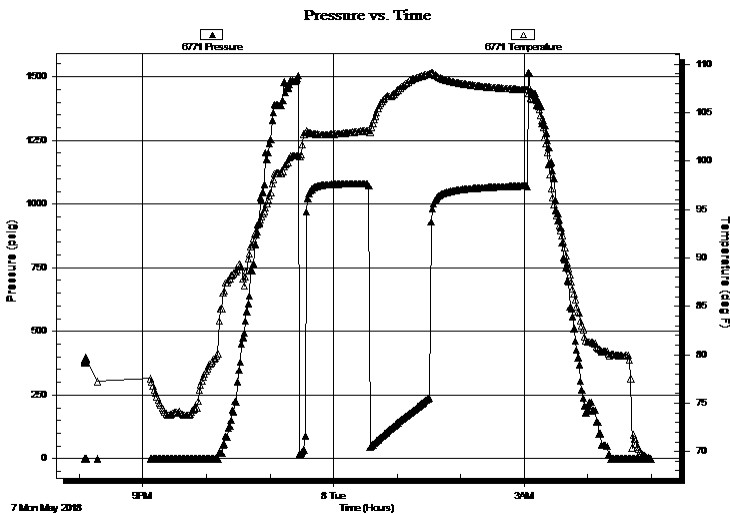
Formation: **Base of Topeka**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:28:00
 Time Test Ended: 05:00:30
 Interval: **3027.00 ft (KB) To 3090.00 ft (KB) (TVD)**
 Total Depth: 3090.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)
 Tester: Brannan Lonsdale/Cad
 Unit No: 73
 Reference Elevations: 1969.00 ft (KB)
 1964.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 3028.00 ft (KB)
 Start Date: 2018.05.07 End Date: 2018.05.08
 Start Time: 20:05:01 End Time: 05:00:20
 Capacity: 8000.00 psig
 Last Calib.: 2018.05.08
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-5- Weak blow ; built to 4"
 ISI-60- No blow back
 FF-60- BOB in 16min
 FSI-90- No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
460.00	Muddy Water 20%M 80%W	3.38

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Company

7-8s-18w Rooks, KS

1607 Hopewell RD
Hays Kansas 76701

Haines West #1

Job Ticket: 63435

DST#: 1

ATTN: Janel Staab

Test Start: 2018.05.07 @ 20:05:00

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:

95000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
460.00	Muddy Water 20%M 80%W	3.379

Total Length: 460.00 ft Total Volume: 3.379 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

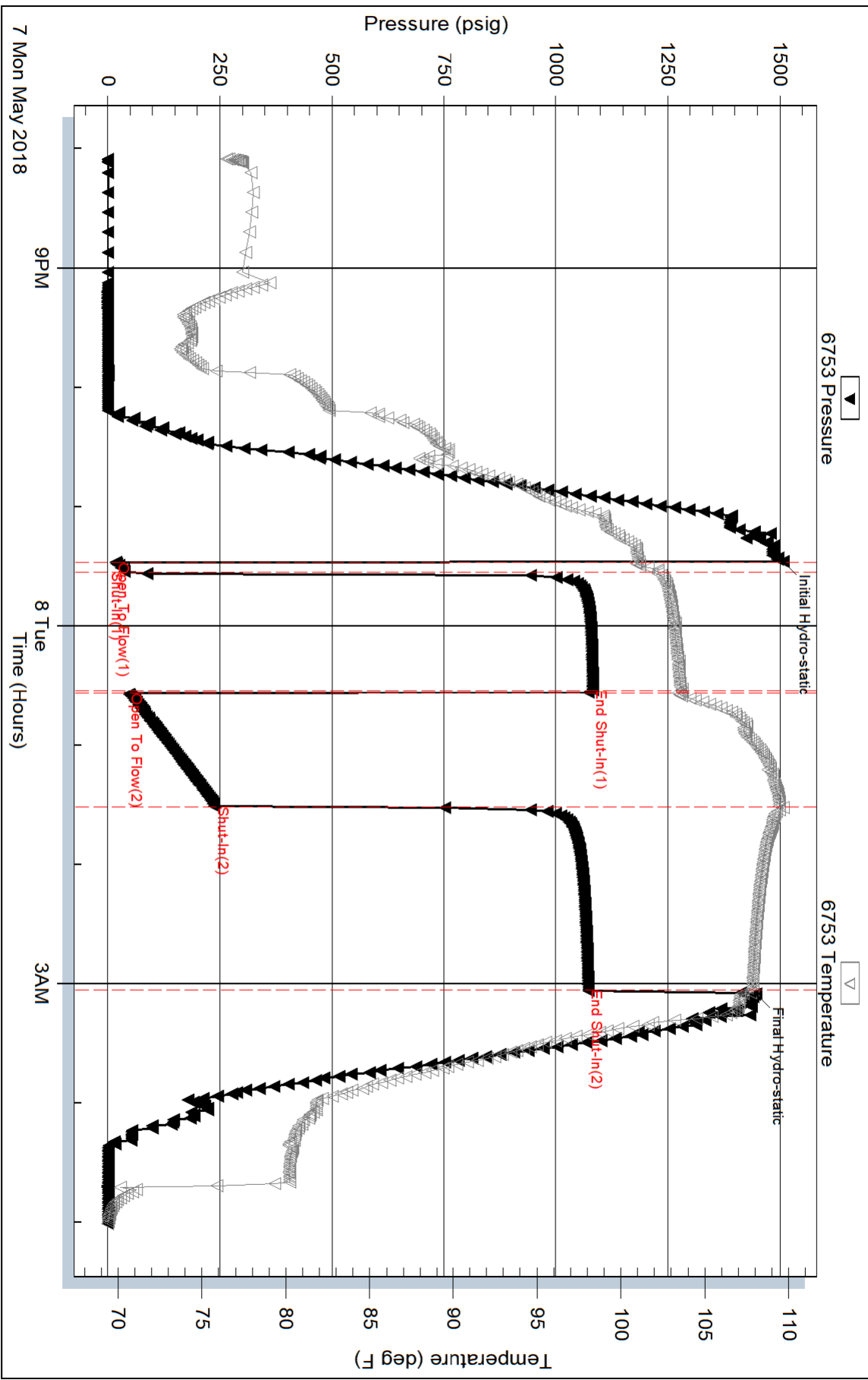
Laboratory Name:

Laboratory Location:

Recovery Comments: LCM 2#

RW: .07 @ 69 deg

Pressure vs. Time



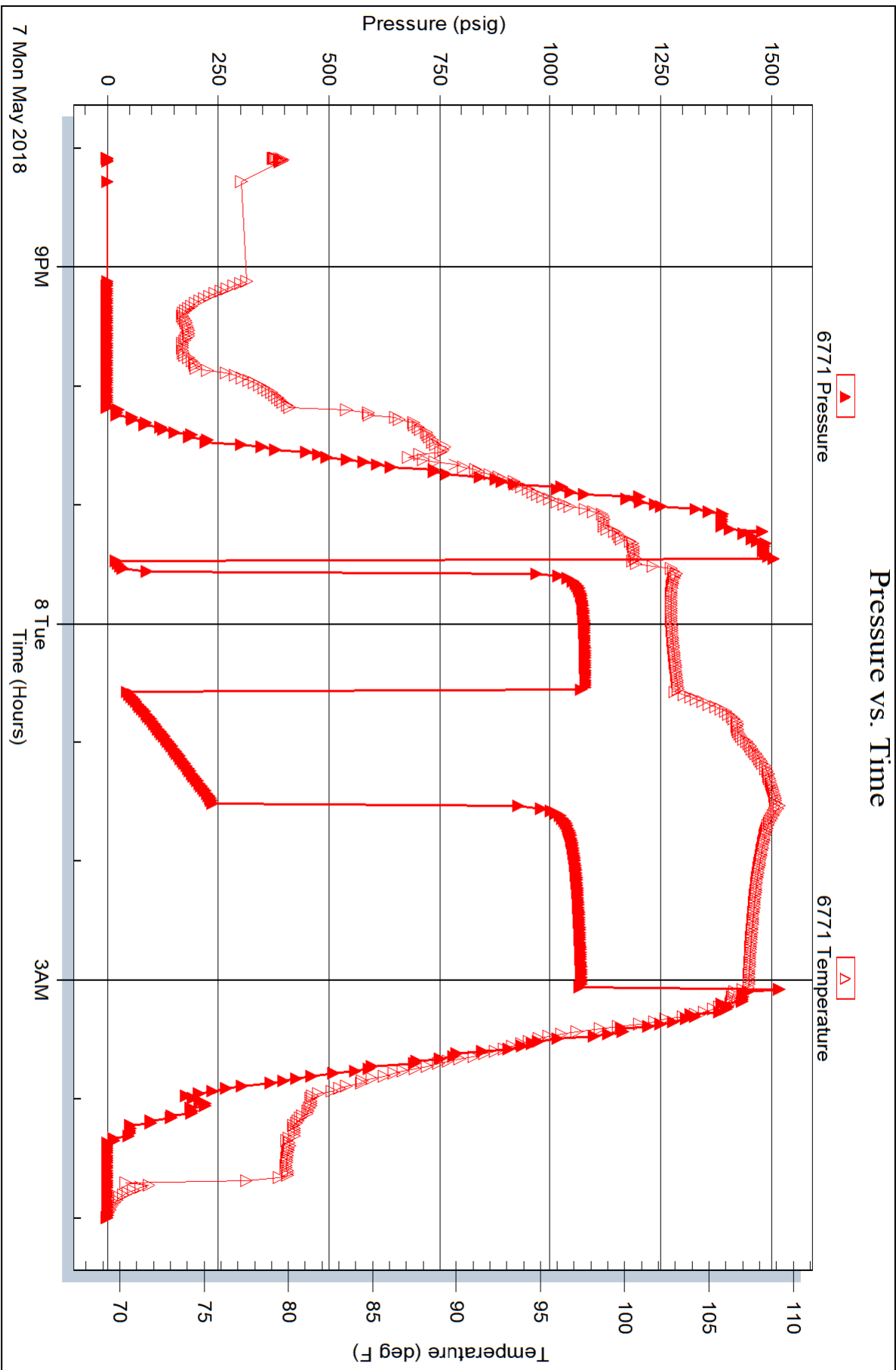
Serial #: 6771

Inside

Staab Oil Company

Haines West#1

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Company

7-8s-18w Rooks, KS

1607 Hopewell RD
Hays Kansas 76701

Haines West #1

ATTN: Janel Staab

Job Ticket: 63436

DST#: 2

Test Start: 2018.05.09 @ 11:04:32

GENERAL INFORMATION:

Formation: **L Zone- Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:42:02

Time Test Ended: 15:37:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard/Brannan

Unit No: 73

Interval: 3345.00 ft (KB) To 3405.00 ft (KB) (TVD)

Reference Elevations: 1969.00 ft (KB)

Total Depth: 3405.00 ft (KB) (TVD)

1964.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6753 Outside

Press@RunDepth: 16.11 psig @ 3346.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.09

End Date:

2018.05.09

Last Calib.: 2018.05.09

Start Time: 11:04:37

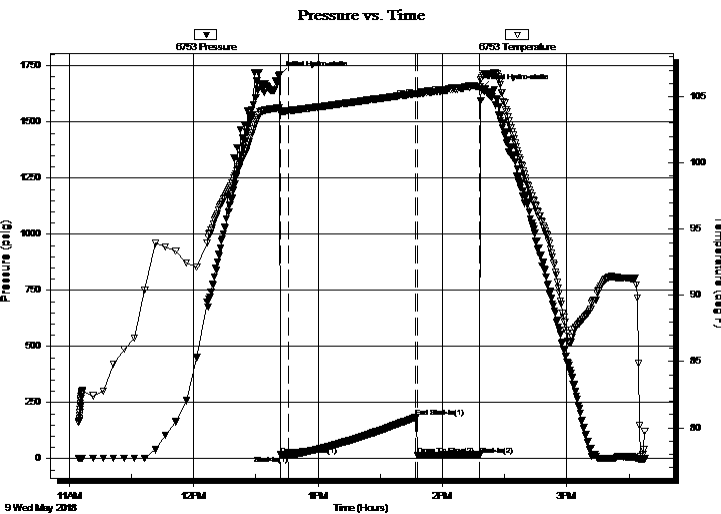
End Time:

15:37:31

Time On Btm: 2018.05.09 @ 12:41:32

Time Off Btm: 2018.05.09 @ 14:19:02

TEST COMMENT: IF-05- Weak surface blow
ISI-60-No blow
FF-30-No blow ; Pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.63	104.16	Initial Hydro-static
1	16.82	103.78	Open To Flow (1)
5	16.11	103.94	Shut-In(1)
66	184.25	105.23	End Shut-In(1)
67	16.73	105.14	Open To Flow (2)
97	17.41	105.79	Shut-In(2)
98	1649.16	106.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Staab Oil Company
1607 Hopewell RD
Hays Kansas 76701
ATTN: Janel Staab

7-8s-18w Rooks, KS

Haines West #1

Job Ticket: 63436

DST#: 2

Test Start: 2018.05.09 @ 11:04:32

GENERAL INFORMATION:

Formation: **L Zone- Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:42:02

Time Test Ended: 15:37:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard/Brannan

Unit No: 73

Interval: **3345.00 ft (KB) To 3405.00 ft (KB) (TVD)**

Total Depth: 3405.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1969.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3346.00 ft (KB)

Start Date: 2018.05.09

End Date:

2018.05.09

Capacity: 8000.00 psig

Last Calib.:

2018.05.09

Start Time:

11:04:12

End Time:

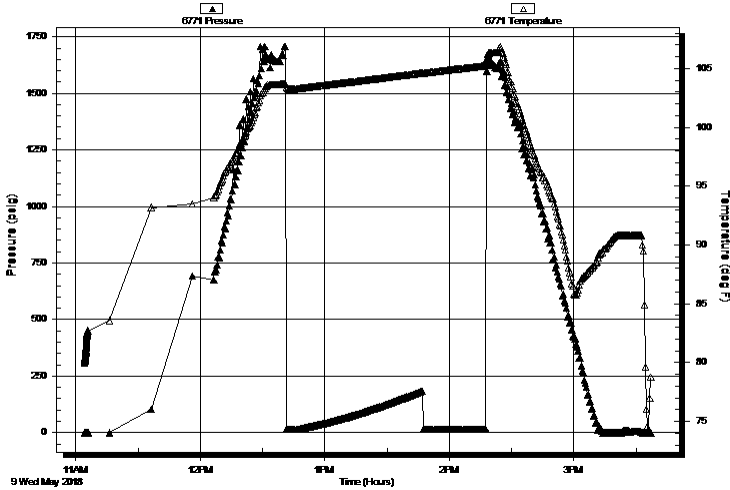
15:37:17

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-05- Weak surface blow
ISI-60-No blow
FF-30-No blow ; Pulled tool

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Company

7-8s-18w Rooks, KS

1607 Hopewell RD
Hays Kansas 76701

Haines West #1

Job Ticket: 63436

DST#: 2

ATTN: Janel Staab

Test Start: 2018.05.09 @ 11:04:32

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: 6.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM	0.037

Total Length: 5.00 ft Total Volume: 0.037 bbl

Num Fluid Samples: 0

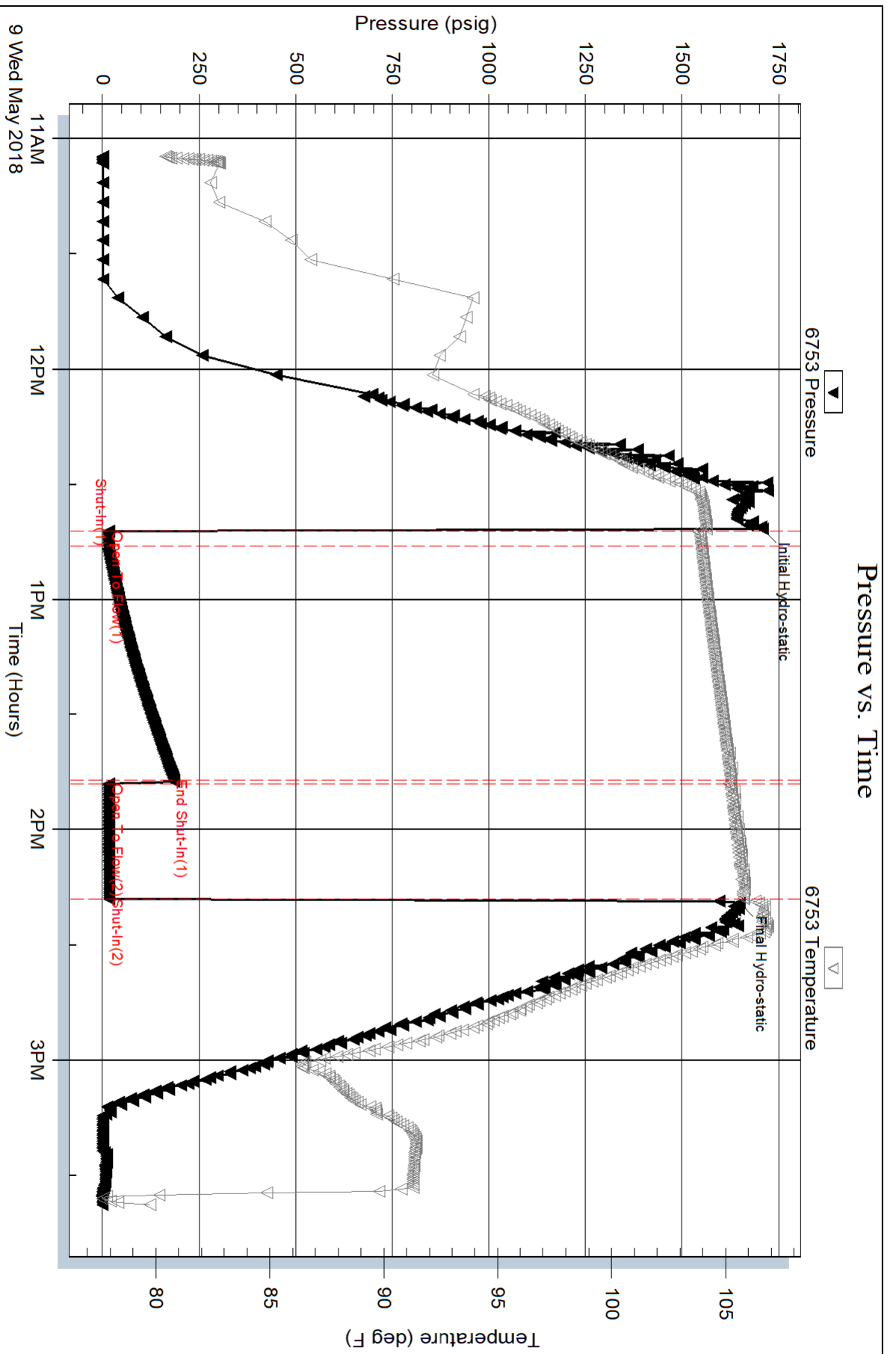
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#



Serial #: 6771

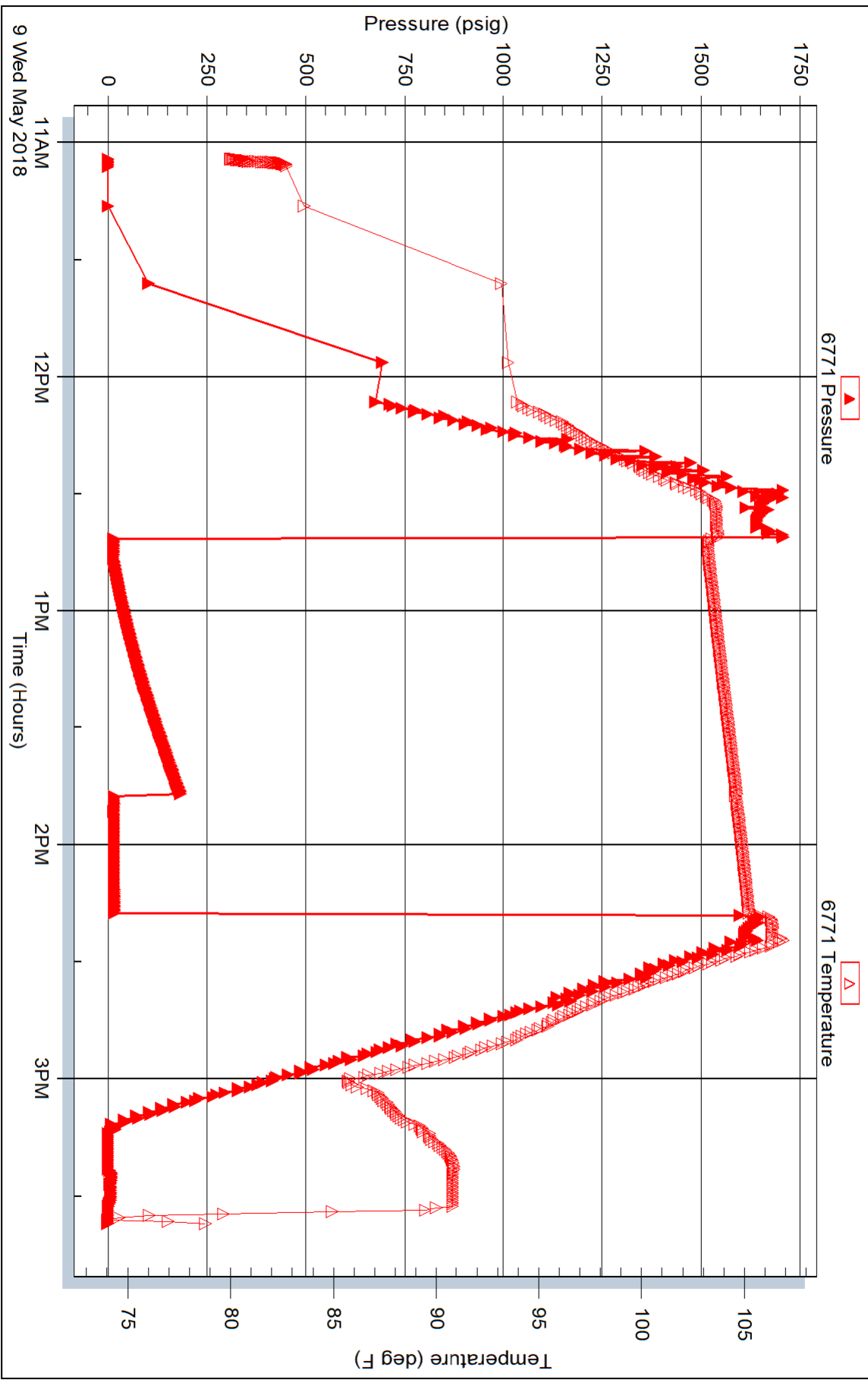
Inside

Staab Oil Company

Haines West#1

DST Test Number: 2

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Staab Oil Company
1607 Hopewell RD
Hays Kansas 76701
ATTN: Janel Staab

7-8s-18w Rooks, KS

Haines West #1

Job Ticket: 63437

DST#: 3

Test Start: 2018.05.10 @ 13:37:39

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:36:15

Time Test Ended: 22:10:29

Test Type: Conventional Straddle (Initial)

Tester: Brannan Lonsdale/Cad

Unit No: 73

Interval: 3398.00 ft (KB) To 3429.00 ft (KB) (TVD)

Total Depth: 3479.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1969.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 260.98 psig @ 3399.00 ft (KB)

Start Date: 2018.05.10

End Date:

2018.05.10

Start Time: 13:37:40

End Time:

22:10:29

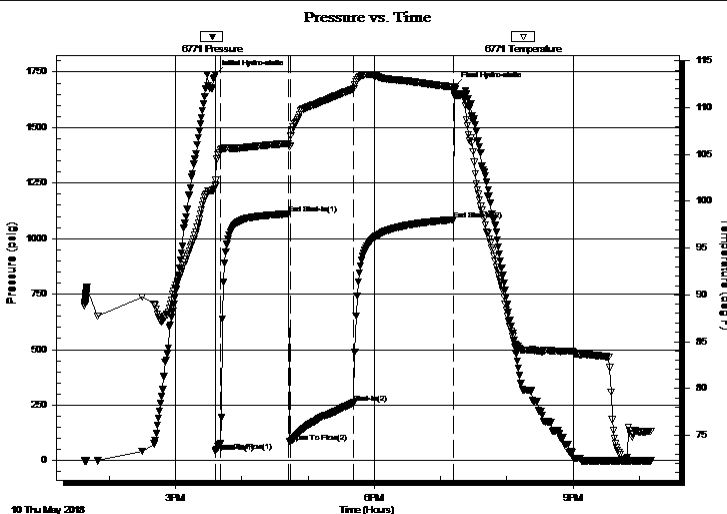
Capacity: 8000.00 psig

Last Calib.: 2018.05.10

Time On Btm: 2018.05.10 @ 15:36:00

Time Off Btm: 2018.05.10 @ 19:13:00

TEST COMMENT: IF-5- Strong blow ; BOB in 4 min
ISI-60- No blow back
FF-60- Strong blow ; BOB in 4 min
FSI- BOB in 22 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.10	101.75	Initial Hydro-static
1	42.51	101.60	Open To Flow (1)
5	77.02	105.49	Shut-In(1)
67	1110.85	106.18	End Shut-In(1)
68	83.34	105.95	Open To Flow (2)
126	260.98	112.02	Shut-In(2)
216	1085.09	112.20	End Shut-In(2)
217	1684.11	111.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
677.00	GSMCO 10%G 85%O 5%M	6.63
0.00	646' GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Company

7-8s-18w Rooks, KS

1607 Hopewell RD
Hays Kansas 76701

Haines West #1

Job Ticket: 63437

DST#: 3

ATTN: Janel Staab

Test Start: 2018.05.10 @ 13:37:39

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:36:15

Time Test Ended: 22:10:29

Test Type: Conventional Straddle (Initial)

Tester: Brannan Lonsdale/Cad

Unit No: 73

Interval: **3398.00 ft (KB) To 3429.00 ft (KB) (TVD)**

Total Depth: 3479.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1969.00 ft (KB)

1964.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6753 Outside

Press@RunDepth: psig @ 3399.00 ft (KB)

Start Date: 2018.05.10

End Date:

2018.05.10

Start Time: 13:37:07

End Time:

22:10:02

Capacity: 8000.00 psig

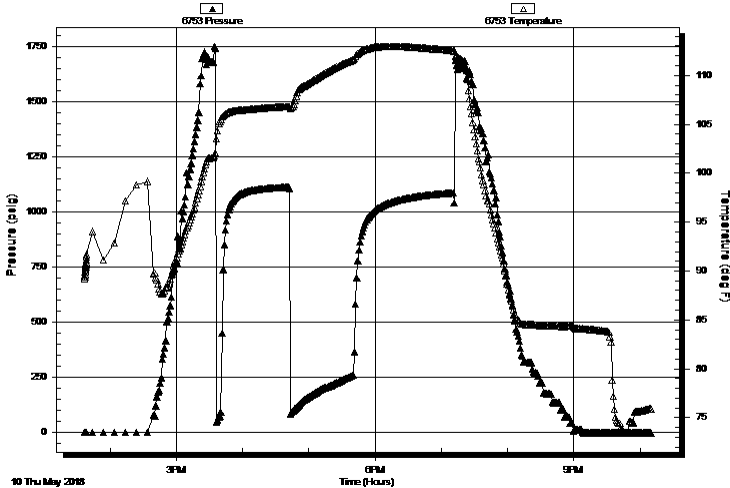
Last Calib.: 2018.05.10

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-5- Strong blow ; BOB in 4 min
ISI-60- No blow back
FF-60- Strong blow ; BOB in 4 min
FSI- BOB in 22 min

Pressure vs. Time



PRESSURE SUMMARY

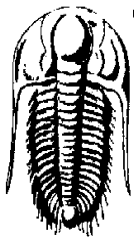
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
677.00	GSMCO 10%G 85%O 5%M	6.63
0.00	646' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Staab Oil Company
 1607 Hopewell RD
 Hays Kansas 76701
 ATTN: Janel Staab

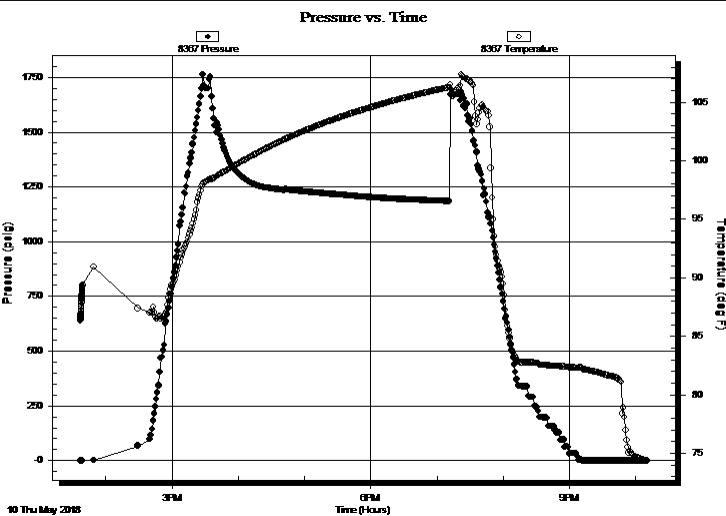
7-8s-18w Rooks, KS
Haines West #1
 Job Ticket: 63437 **DST#: 3**
 Test Start: 2018.05.10 @ 13:37:39

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Straddle (Initial)
 Time Tool Opened: 15:36:15 Tester: Brannan Lonsdale/Cad
 Time Test Ended: 22:10:29 Unit No: 73
 Interval: **3398.00 ft (KB) To 3429.00 ft (KB) (TVD)** Reference Elevations: 1969.00 ft (KB)
 Total Depth: 3479.00 ft (KB) (TVD) 1964.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8367 Below (Straddle)
 Press@RunDepth: psig @ 3431.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.05.10 End Date: 2018.05.10 Last Calib.: 2018.05.10
 Start Time: 13:37:08 End Time: 22:09:57 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-5- Strong blow ; BOB in 4 min
 IS-60- No blow back
 FF-60- Strong blow ; BOB in 4 min
 FS- BOB in 22 min



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
677.00	GSMCO 10%G 85%O 5%M	6.63
0.00	646' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Staab Oil Company

7-8s-18w Rooks, KS

1607 Hopewell RD
Hays Kansas 76701

Haines West #1

Job Ticket: 63437

DST#: 3

ATTN: Janel Staab

Test Start: 2018.05.10 @ 13:37:39

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
677.00	GSMCO 10%G 85%O 5%M	6.626
0.00	646' GIP	0.000

Total Length: 677.00 ft

Total Volume: 6.626 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 1#

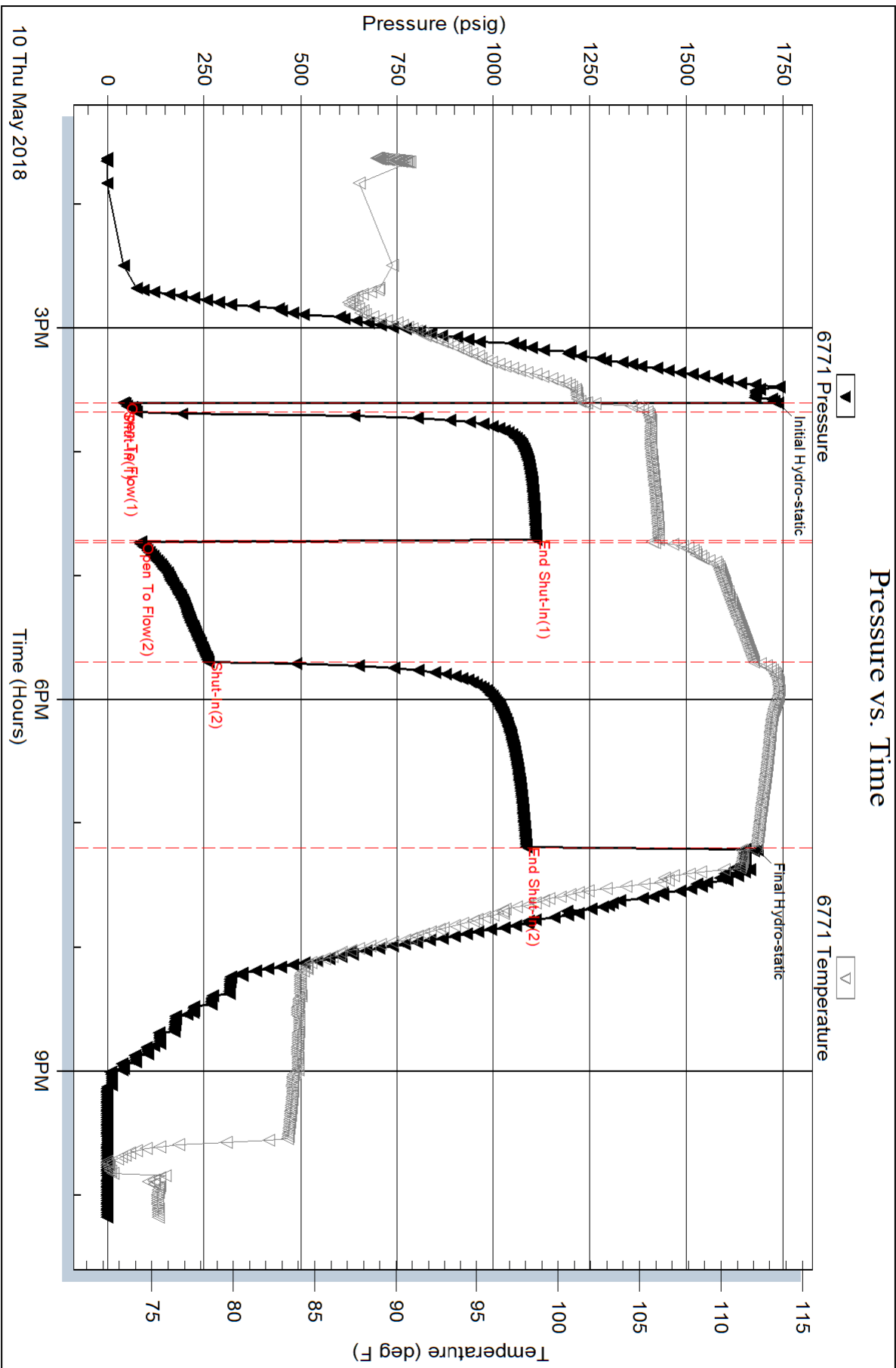
Serial #: 6771

Inside

Staab Oil Company

Haines West #1

DST Test Number: 3



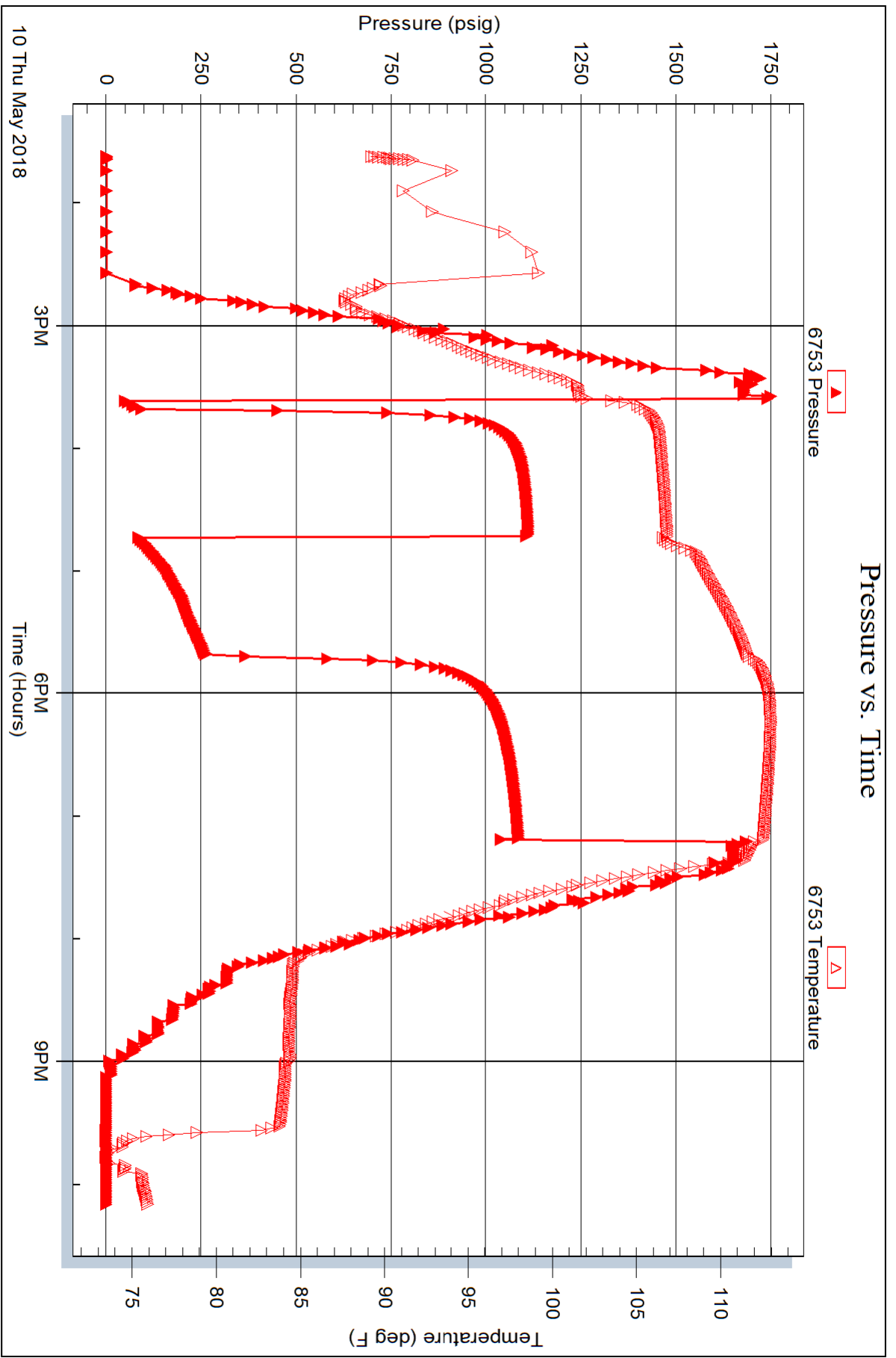
Serial #: 6753

Outside

Staab Oil Company

Haines West#1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63437

Printed: 2018.05.11 @ 08:11:44

Serial #: 8367

Below (Stratata) Oil Company

Haines West #1

DST Test Number: 3

