

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 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	Downing-Nelson Oil Co Inc
Well Name	GEIST-TILLET UNIT B 1-22
Doc ID	1539787

Tops

Name	Top	Datum
Top Anhydrite	1895'	+460
Base Anhydrite	1933'	+422
Topeka	3397'	-1042
Heebner	3618'	-1263
Toronto	-	-
LKC	3657'	-1302
BKC	3876'	-1521
TD	3952'	-1597

SWIFT Services, Inc.

DATE: 11-18-20
PAGE NO.:

CUSTOMER: Downing-Nelson WELL NO.: 1-22 LEASE: Geist-Tillet Unit B JOB TYPE: Shallow Surf TICKET NO.: 33194

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2015							On location
								Rtd - 224 pipe - 223.57
	2030							BREAK Circ on Bottom
	2040	5	3			300		pump wtr spacer
		5	36			300		pump cmt - 150 sx @ 14.2 PPG
		5	0			300		Start Disp
		5	11			400		Circ cmt - 15 sx to pit
	2100	5	13			400		End Disp
								Job Complete
								Thanks
								DAVID, ZACH & ISAAC

SWIFT Services, Inc.

DATE 11-25-20 PAGE NO. 3

WELL NAME		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Downing-Nelson		1-22		Geist Tillet Unit B		2 stage L.S.		33200	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	1700							ON LOCATION	
								Csg- 5 1/2 x 14 #	
								RTD - 3950'	
								Set @ 3947.77	
								Shoe Jt. - 42.55	
								BAFFLE @ 3905.22	
								CENTRAUZERS - 1, 3, 5, 7, 9, 11, 50	
								Basket - 51	
								D.V. - 1865.21	
	1730							Start Running Csg	
	1900							Break Circ on Bottom	
	1930	5.5	12			300		pump mudflush - 500 gal	
		5.5	20			300		pump key spacer	
								pump cmt - 150 sx EA-2 @ 15.5 ^{PPG}	
								Drop plug - WASH P&L	
		6.5	0			300		Start Disp	
	2015	5	95			1500		Land plug - Lift psi 900	
								Release psi - Dry	
		2.5	8			0		Drop D.V. opening tool	
		2.5	4			0		plug rat hole - 30 sx	
						300		plug mouse hole 15 sx	
						300		open D.V. TOOL	
		6.5	99			360		pump cmt - 180 sx SMD @ 11.2 ^{PPG}	
								Drop plug	
		5	0			300		Start Disp	
		5	30			500		Circ cmt -	
	2100	5	45			1500		land plug - lift psi - 700 #	
								Job Complete	
								Thanks	
								David, Zach, & Isaac	



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

22-10S-23W Graham,KS

Geist Tillet Unit B #1-22

Start Date: 2020.11.22 @ 11:59:39

End Date: 2020.11.22 @ 19:07:15

Job Ticket #: 64501 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2020.11.25 @ 11:36:29



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 64501

DST#: 1

Test Start: 2020.11.22 @ 11:59:39

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:09:30

Time Test Ended: 19:07:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3672.00 ft (KB) To 3710.00 ft (KB) (TVD)

Reference Elevations: 2355.00 ft (KB)

Total Depth: 3710.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 8700 Outside

Press@RunDepth: 40.83 psig @ 3673.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.11.22 End Date: 2020.11.22

Last Calib.: 2020.11.22

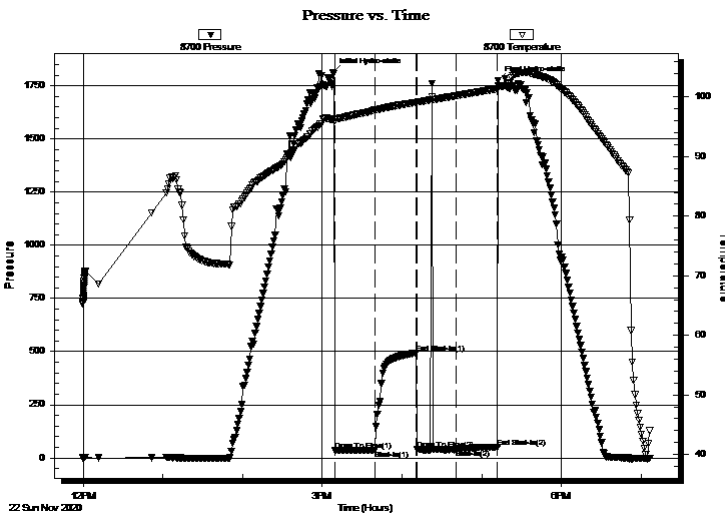
Start Time: 11:59:40 End Time: 19:07:15

Time On Btm: 2020.11.22 @ 15:08:15

Time Off Btm: 2020.11.22 @ 17:12:30

TEST COMMENT: 30- IF- Surface blow
30- IS- No blow
30- FF- No blow . Flushed tool. No blow
30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1813.02	96.22	Initial Hydro-static
2	34.17	96.11	Open To Flow (1)
32	36.73	97.81	Shut-In(1)
63	493.24	99.12	End Shut-In(1)
63	39.60	99.10	Open To Flow (2)
93	40.83	100.22	Shut-In(2)
124	50.99	101.36	End Shut-In(2)
125	1773.32	101.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	M	0.35

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 64501

DST#: 1

Test Start: 2020.11.22 @ 11:59:39

Tool Information

Drill Pipe:	Length: 3639.00 ft	Diameter: 3.82 inches	Volume: 51.58 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3672.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	38.00 ft			
Tool Length:	58.00 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			3653.00	
Shut In Tool	5.00			3658.00	
Hydraulic tool	5.00			3663.00	
Packer	5.00			3668.00	20.00 Bottom Of Top Packer
Packer	4.00			3672.00	
Stubb	1.00			3673.00	
Recorder	0.00	6771	Inside	3673.00	
Recorder	0.00	8700	Outside	3673.00	
Perforations	1.00			3674.00	
Change Over Sub	1.00			3675.00	
Drill Pipe	31.00			3706.00	
Change Over Sub	1.00			3707.00	
Bullnose	3.00			3710.00	38.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

Job Ticket: 64501

DST#: 1

ATTN: Marc Dow ning

Test Start: 2020.11.22 @ 11:59:39

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: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	M	0.351

Total Length: 45.00 ft Total Volume: 0.351 bbl

Num Fluid Samples: 0

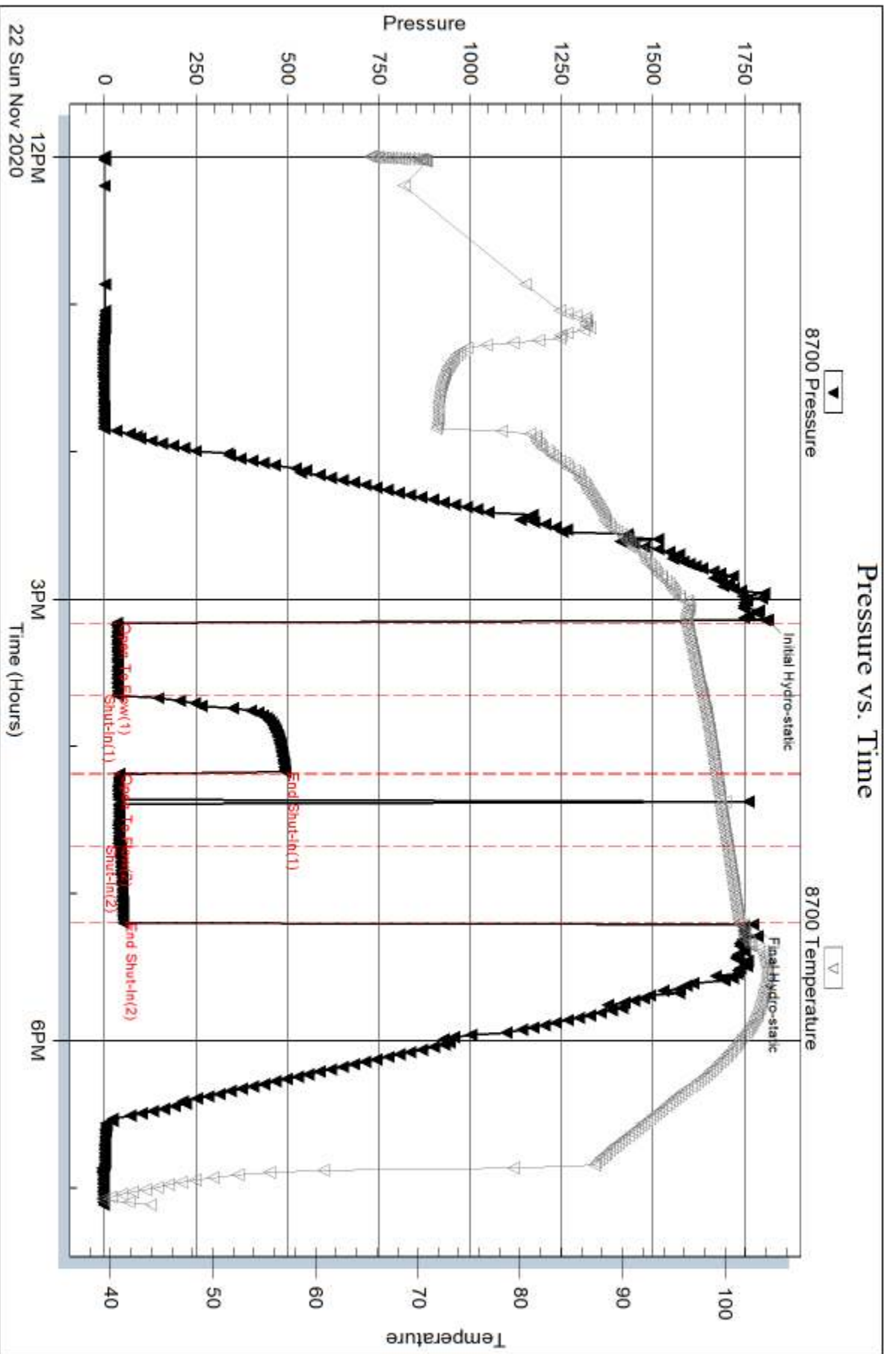
Num Gas Bombs: 0

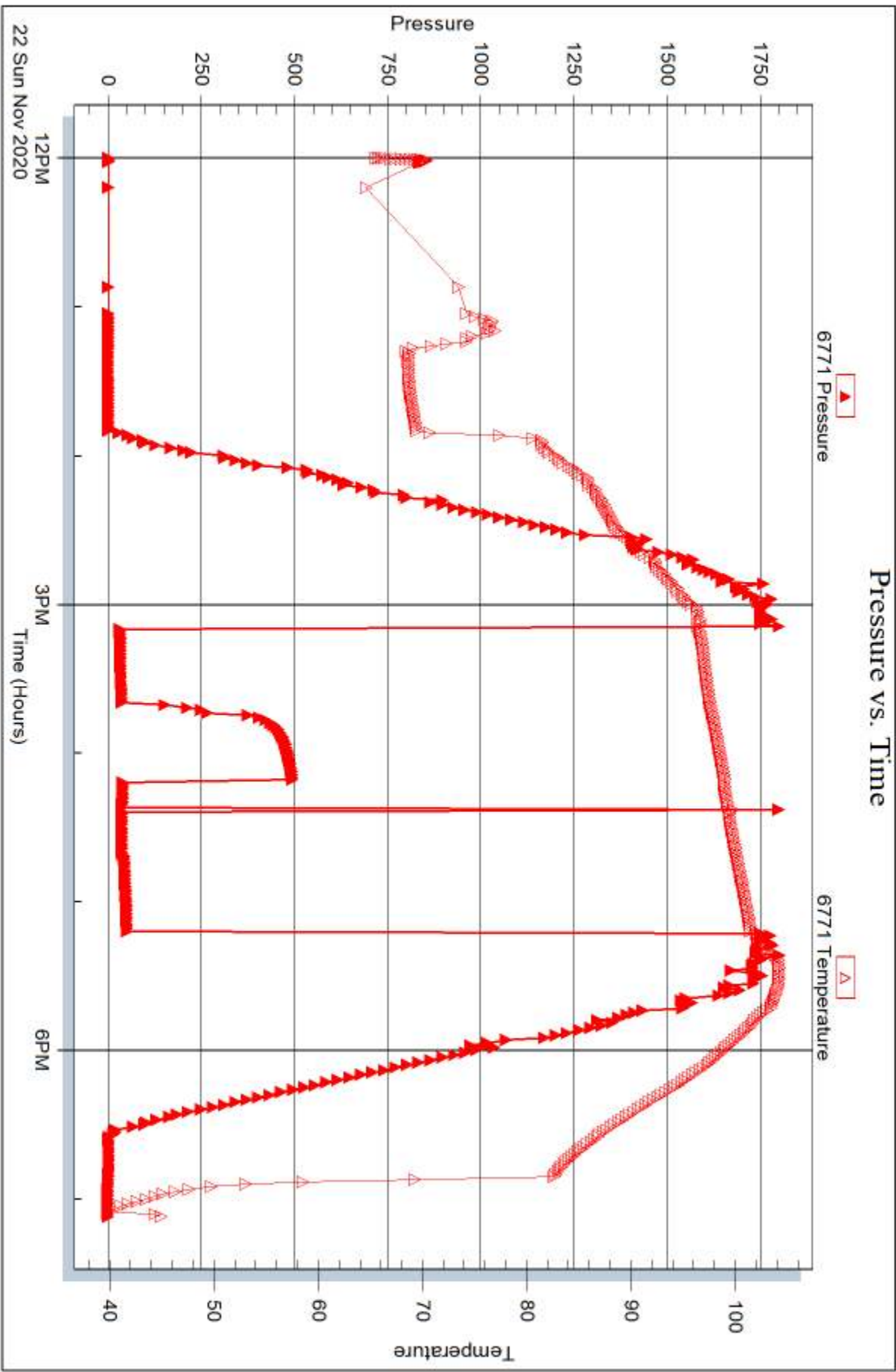
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

22-10S-23W Graham,KS

Geist Tillet Unit B #1-22

Start Date: 2020.11.23 @ 03:36:00

End Date: 2020.11.23 @ 09:57:06

Job Ticket #: 67422 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2020.11.25 @ 11:36:05

Downing-Nelson Oil Co

Geist Tillet Unit B #1-22

22-10S-23W Graham,KS

DST # 2

LKC E - F

2020.11.23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67422

DST#: 2

Test Start: 2020.11.23 @ 03:36:00

GENERAL INFORMATION:

Formation: **LKC E - F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:24:51

Time Test Ended: 09:57:06

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 73

Interval: 3713.00 ft (KB) To 3745.00 ft (KB) (TVD)

Reference Elevations: 2355.00 ft (KB)

Total Depth: 3745.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 6771

Inside

Press@RunDepth: 50.62 psig @ 3714.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.11.23

End Date: 2020.11.23

Last Calib.: 2020.11.23

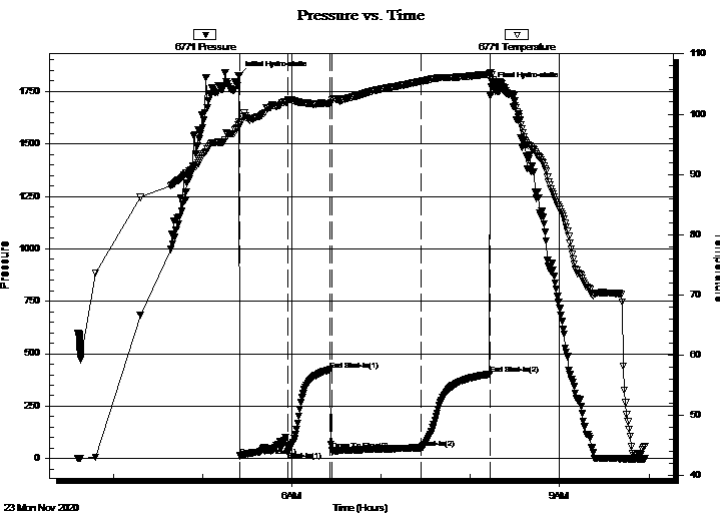
Start Time: 03:36:01

End Time: 09:57:06

Time On Btm: 2020.11.23 @ 05:24:36

Time Off Btm: 2020.11.23 @ 08:13:51

TEST COMMENT: 30 - IF - Faint surface blow for about 1 min and then died off
30 - ISI - No Return
45 - FF - Weak surface blow started right away and built up to 5"
45 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1825.76	98.66	Initial Hydro-static
1	12.76	98.29	Open To Flow (1)
33	32.95	102.38	Shut-In(1)
62	423.18	101.79	End Shut-In(1)
63	37.67	102.33	Open To Flow (2)
123	50.62	105.47	Shut-In(2)
169	402.36	106.64	End Shut-In(2)
170	1772.35	106.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
83.00	OCM - 20%o - 80%m	0.68
0.00	43' - GIP - 100%g	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67422

DST#: 2

Test Start: 2020.11.23 @ 03:36:00

Tool Information

Drill Pipe:	Length: 3675.82 ft	Diameter: 3.25 inches	Volume: 37.72 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.40 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	64000.00 lb
			<u>Total Volume: 37.87 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.22 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3713.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	32.00 ft				
Tool Length:	52.00 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			3694.00	
Shut In Tool	5.00			3699.00	
Hydraulic tool	5.00			3704.00	
Packer	5.00			3709.00	20.00 Bottom Of Top Packer
Packer	4.00			3713.00	
Stubb	1.00			3714.00	
Recorder	0.00	6771	Inside	3714.00	
Recorder	0.00	8700	Outside	3714.00	
Perforations	28.00			3742.00	
Bullnose	3.00			3745.00	32.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

Job Ticket: 67422

DST#: 2

ATTN: Marc Dow ning

Test Start: 2020.11.23 @ 03:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
83.00	OCM - 20%o - 80%m	0.684
0.00	43' - GIP - 100%g	0.000

Total Length: 83.00 ft Total Volume: 0.684 bbf

Num Fluid Samples: 0

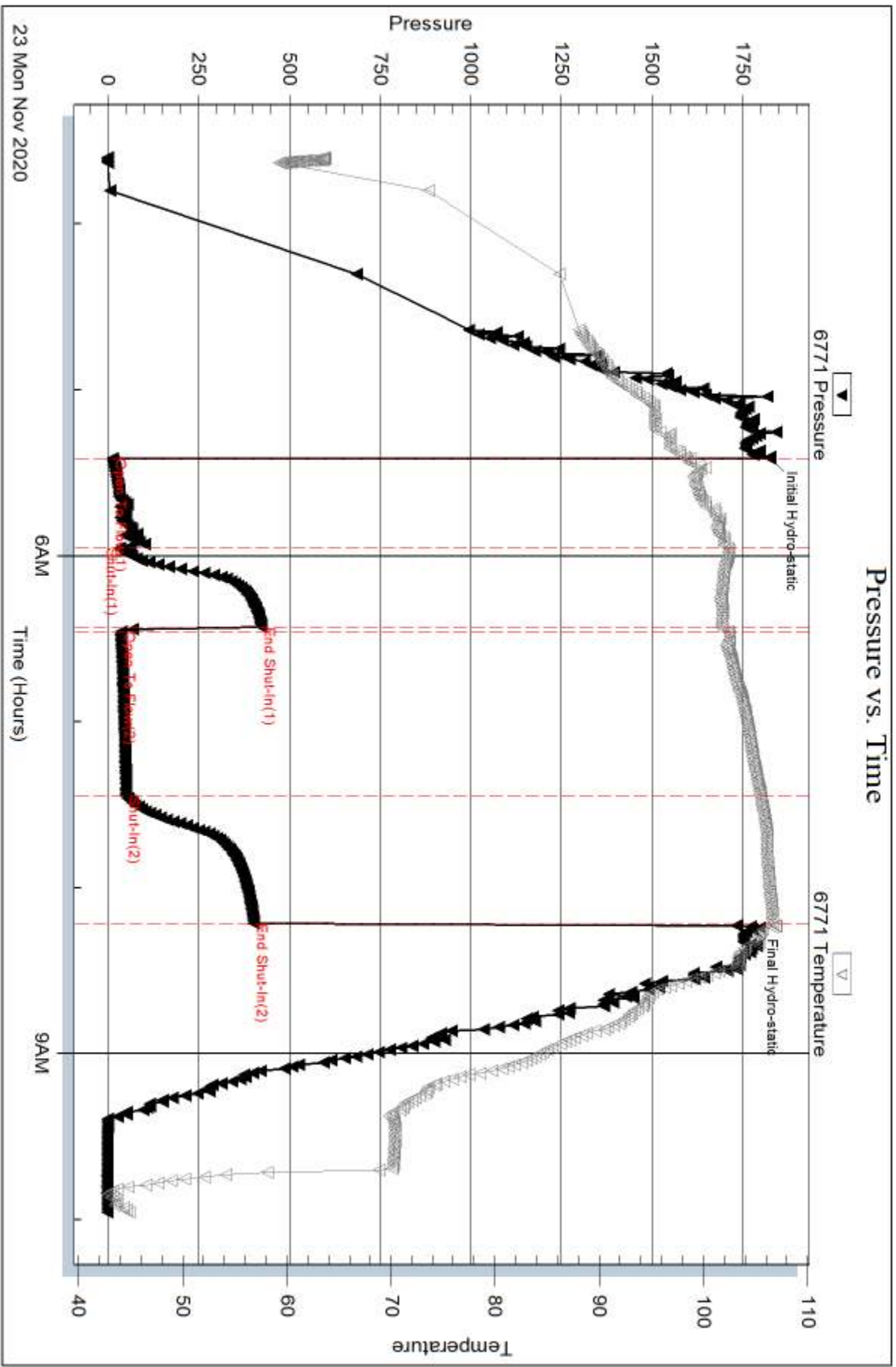
Num Gas Bombs: 0

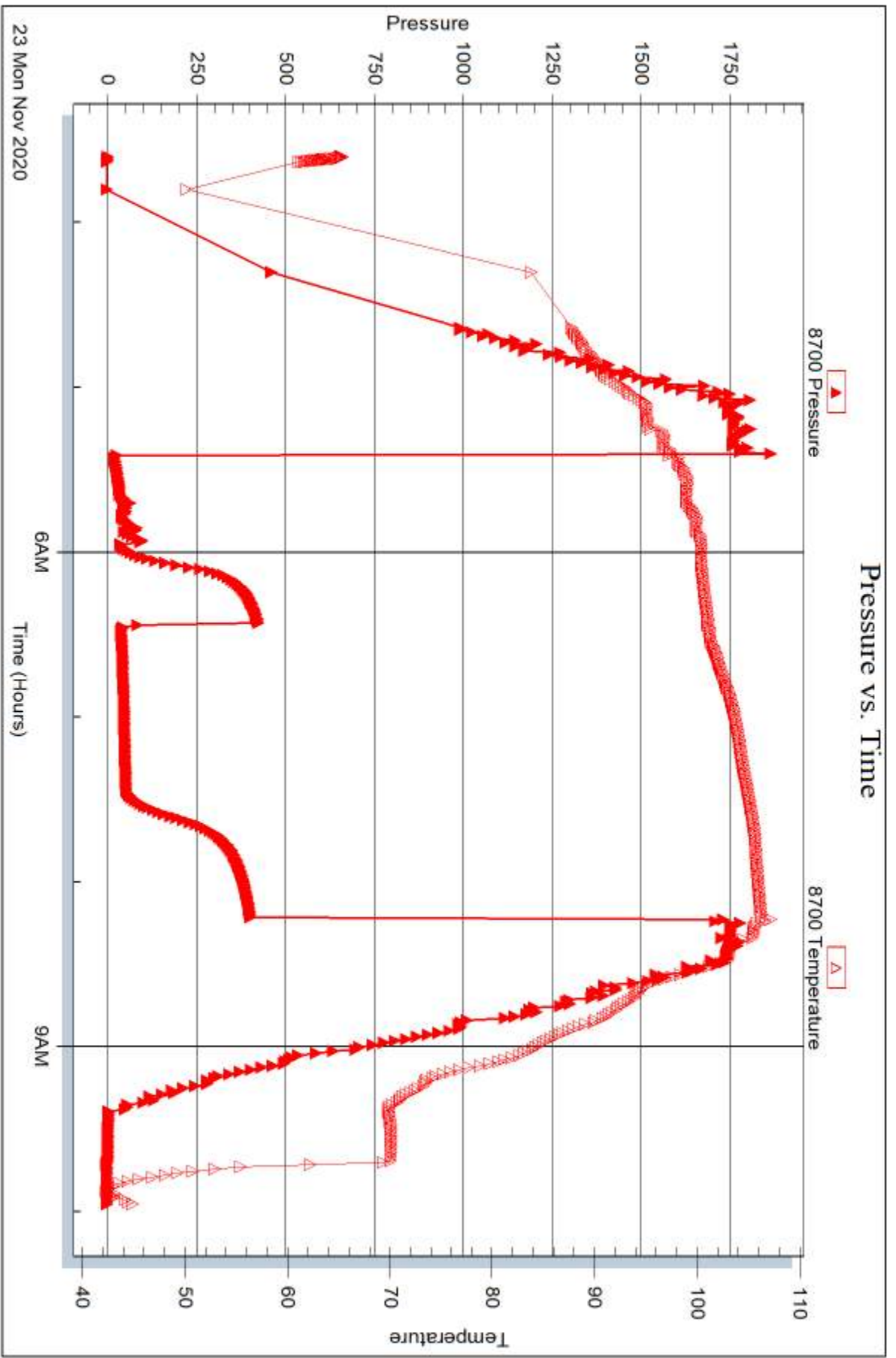
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





23 Mon Nov 2020



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

22-10S-23W Graham,KS

Geist Tillet Unit B #1-22

Start Date: 2020.11.23 @ 20:08:00

End Date: 2020.11.24 @ 01:54:36

Job Ticket #: 67423 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2020.11.25 @ 11:35:38

Downing-Nelson Oil Co

Geist Tillet Unit B #1-22

22-10S-23W Graham,KS

DST # 3

LKC H - I

2020.11.23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67423

DST#: 3

Test Start: 2020.11.23 @ 20:08:00

GENERAL INFORMATION:

Formation: **LKC H-1**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:58:36

Time Test Ended: 01:54:36

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 73

Interval: 3775.00 ft (KB) To 3819.00 ft (KB) (TVD)

Reference Elevations: 2355.00 ft (KB)

Total Depth: 3819.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 6771

Inside

Press@RunDepth: 27.40 psig @ 3776.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.11.23

End Date:

2020.11.24

Last Calib.:

2020.11.24

Start Time:

20:08:01

End Time:

01:54:36

Time On Btm:

2020.11.23 @ 21:58:21

Time Off Btm:

2020.11.24 @ 00:03:06

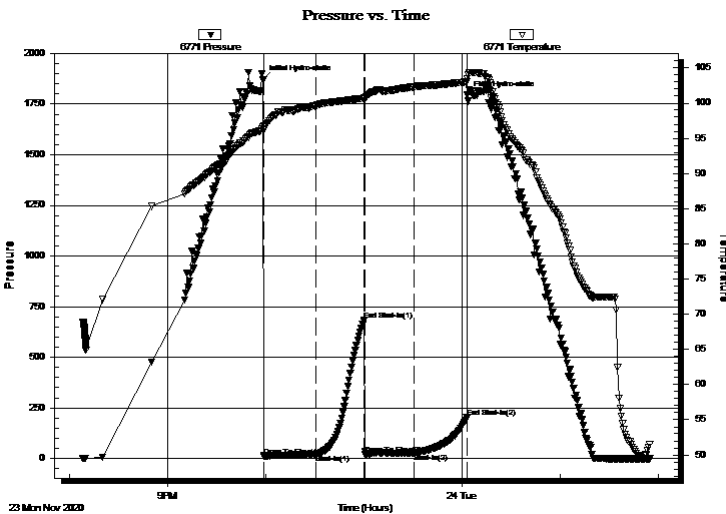
TEST COMMENT: 30 - IF - Surface blow started out at a weak blow and built up to 1"

30 - ISI - No Return

30 - FF - blow started out at a faint blow and gradually built up to 1/2"

30 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1868.58	96.64	Initial Hydro-static
1	12.38	96.17	Open To Flow (1)
32	20.21	99.60	Shut-In(1)
62	682.48	100.71	End Shut-In(1)
63	22.29	100.64	Open To Flow (2)
92	27.40	102.31	Shut-In(2)
125	201.79	103.01	End Shut-In(2)
125	1793.74	103.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
6.00	Mud - 100%m	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67423

DST#: 3

Test Start: 2020.11.23 @ 20:08:00

Tool Information

Drill Pipe:	Length: 3739.07 ft	Diameter: 3.25 inches	Volume: 38.37 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.40 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 38.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.47 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3775.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	44.00 ft			
Tool Length:	64.00 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			3756.00	
Shut In Tool	5.00			3761.00	
Hydraulic tool	5.00			3766.00	
Packer	5.00			3771.00	20.00 Bottom Of Top Packer
Packer	4.00			3775.00	
Stubb	1.00			3776.00	
Recorder	0.00	6771	Inside	3776.00	
Recorder	0.00	8700	Outside	3776.00	
Perforations	7.00			3783.00	
Change Over Sub	1.00			3784.00	
Drill Pipe	31.00			3815.00	
Change Over Sub	1.00			3816.00	
Bullnose	3.00			3819.00	44.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

Job Ticket: 67423

DST#: 3

ATTN: Marc Dow ning

Test Start: 2020.11.23 @ 20:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
6.00	Mud - 100%m	0.030

Total Length: 6.00 ft Total Volume: 0.030 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

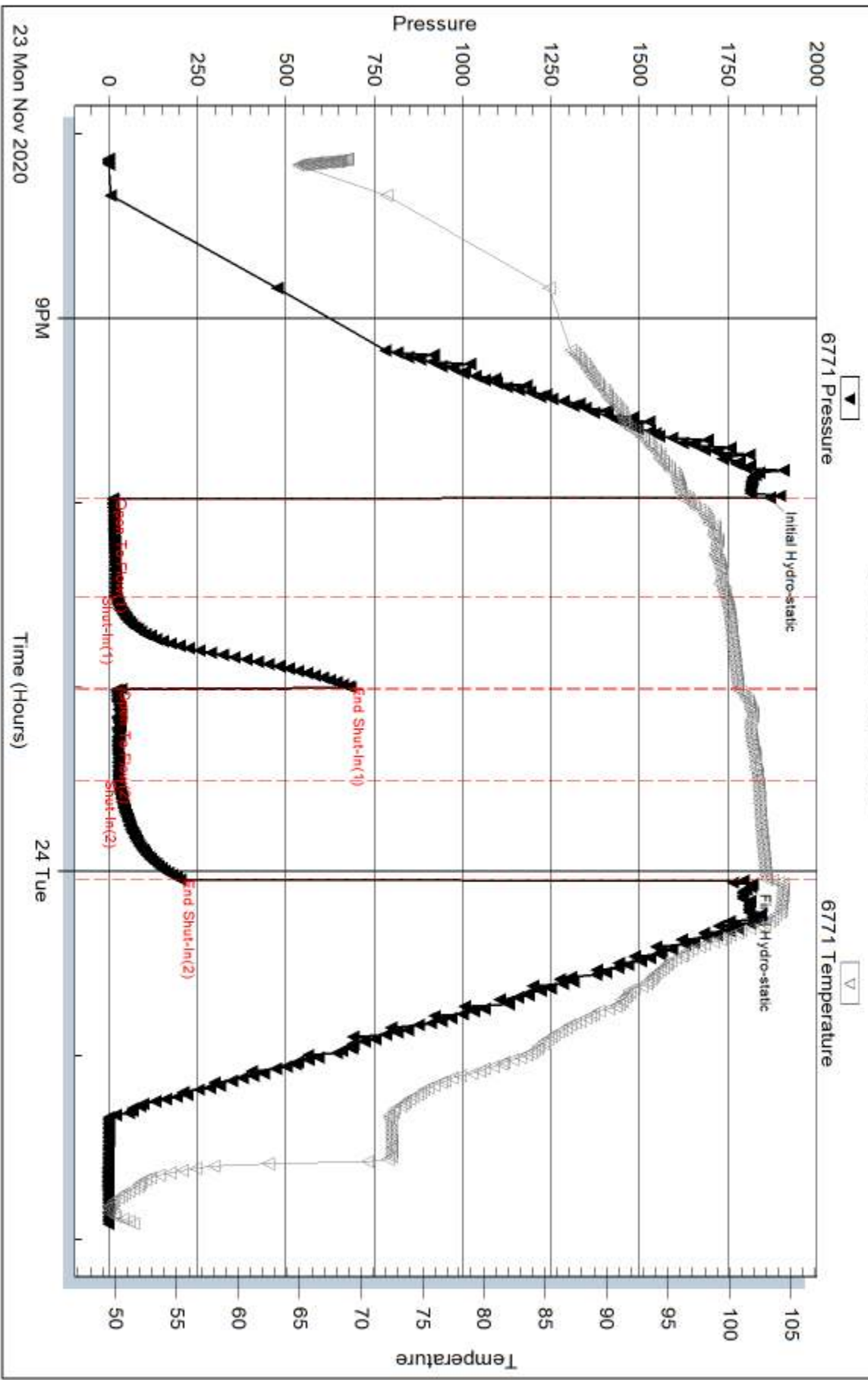
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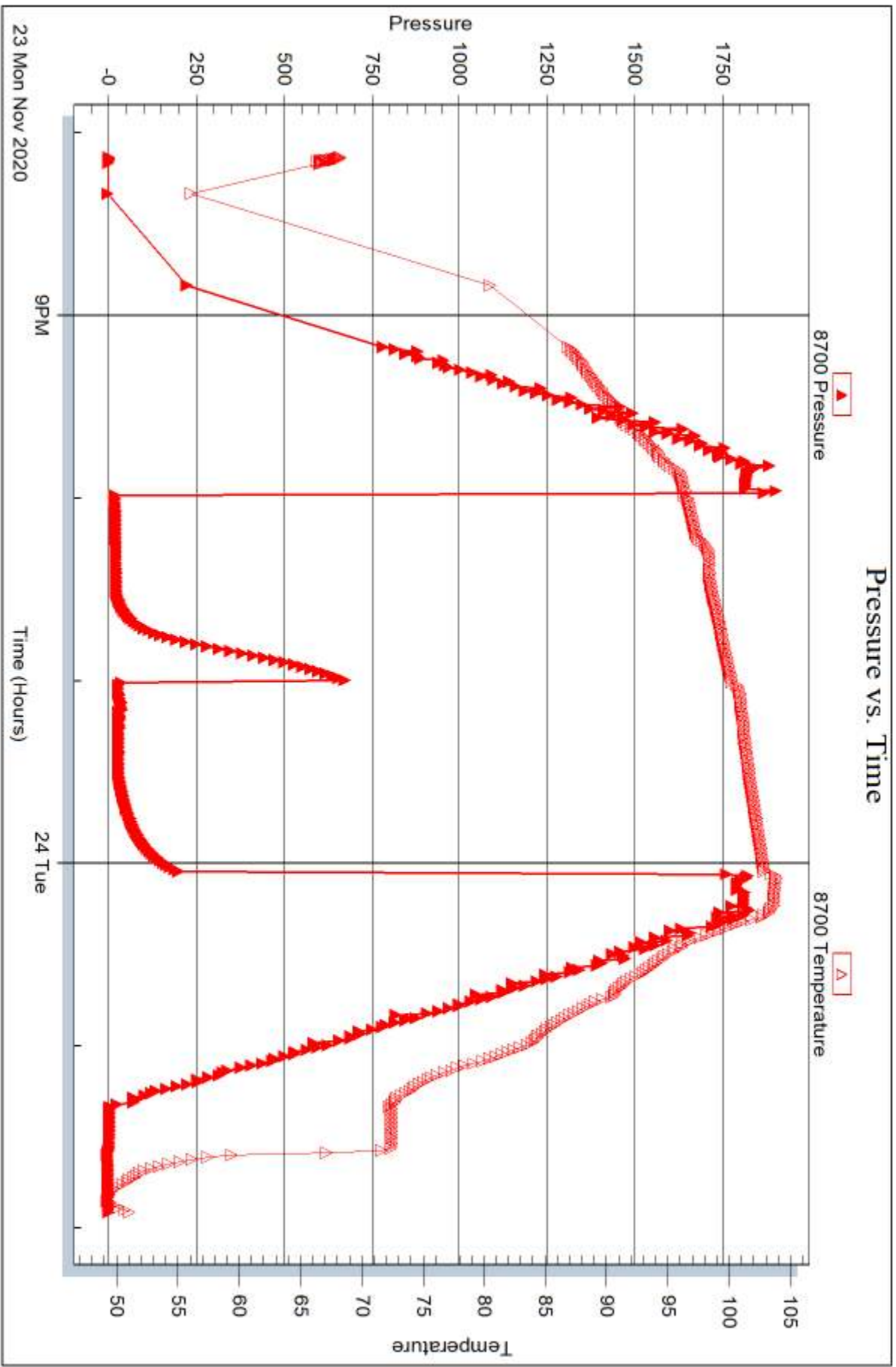
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

22-10S-23W Graham,KS

Geist Tillet Unit B #1-22

Start Date: 2020.11.24 @ 09:30:00

End Date: 2020.11.24 @ 16:24:06

Job Ticket #: 67424 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2020.11.25 @ 11:34:51

Downing-Nelson Oil Co

Geist Tillet Unit B #1-22

22-10S-23W Graham,KS

DST # 4

LKC J

2020.11.24



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67424

DST#: 4

Test Start: 2020.11.24 @ 09:30:00

GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:40:21

Time Test Ended: 16:24:06

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 73

Interval: 3817.00 ft (KB) To 3843.00 ft (KB) (TVD)

Reference Elevations: 2355.00 ft (KB)

Total Depth: 3843.00 ft (KB) (TVD)

2348.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 7.00 ft

Serial #: 6771

Inside

Press@RunDepth: 68.28 psig @ 3818.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.11.24

End Date: 2020.11.24

Last Calib.: 2020.11.24

Start Time: 09:30:01

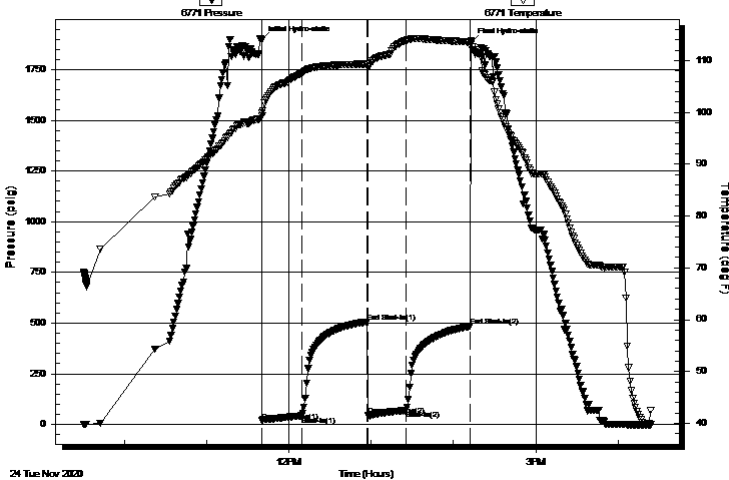
End Time: 16:24:06

Time On Btm: 2020.11.24 @ 11:40:06

Time Off Btm: 2020.11.24 @ 14:12:36

TEST COMMENT: 30 - IF - BOB in 10 mins and built up to 19"
45 - ISI - Return started 5 mins into and built up to about 1/2"
30 - FF - BOB in about 10 mins and built up to 52"
45 - FSI - Return started right away and built up to 1"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.50	99.84	Initial Hydro-static
1	18.20	99.33	Open To Flow (1)
30	42.28	107.57	Shut-In(1)
77	504.80	109.28	End Shut-In(1)
78	43.43	108.84	Open To Flow (2)
106	68.28	113.86	Shut-In(2)
152	483.88	113.53	End Shut-In(2)
153	1885.30	113.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
78.00	GMCO - 20%g - 25%m - 55%o	0.63
63.00	GO - 25%g - 75%o	0.65
0.00	1134 - GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

ATTN: Marc Dow ning

Job Ticket: 67424

DST#: 4

Test Start: 2020.11.24 @ 09:30:00

Tool Information

Drill Pipe:	Length: 3797.38 ft	Diameter: 3.25 inches	Volume: 38.96 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.40 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 39.11 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.78 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3817.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	26.00 ft				
Tool Length:	46.00 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			3798.00	
Shut In Tool	5.00			3803.00	
Hydraulic tool	5.00			3808.00	
Packer	5.00			3813.00	20.00 Bottom Of Top Packer
Packer	4.00			3817.00	
Stubb	1.00			3818.00	
Recorder	0.00	6771	Inside	3818.00	
Recorder	0.00	8700	Outside	3818.00	
Perforations	22.00			3840.00	
Bullnose	3.00			3843.00	26.00 Bottom Packers & Anchor
Total Tool Length:	46.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co

Geist Tillet Unit B #1-22

PO Box 1019
Hays, KS 67601

22-10S-23W Graham,KS

Job Ticket: 67424

DST#: 4

ATTN: Marc Dow ning

Test Start: 2020.11.24 @ 09:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
78.00	GMCO - 20%g - 25%m - 55%o	0.633
63.00	GO - 25%g - 75%o	0.646
0.00	1134 - GIP	0.000

Total Length: 141.00 ft

Total Volume: 1.279 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

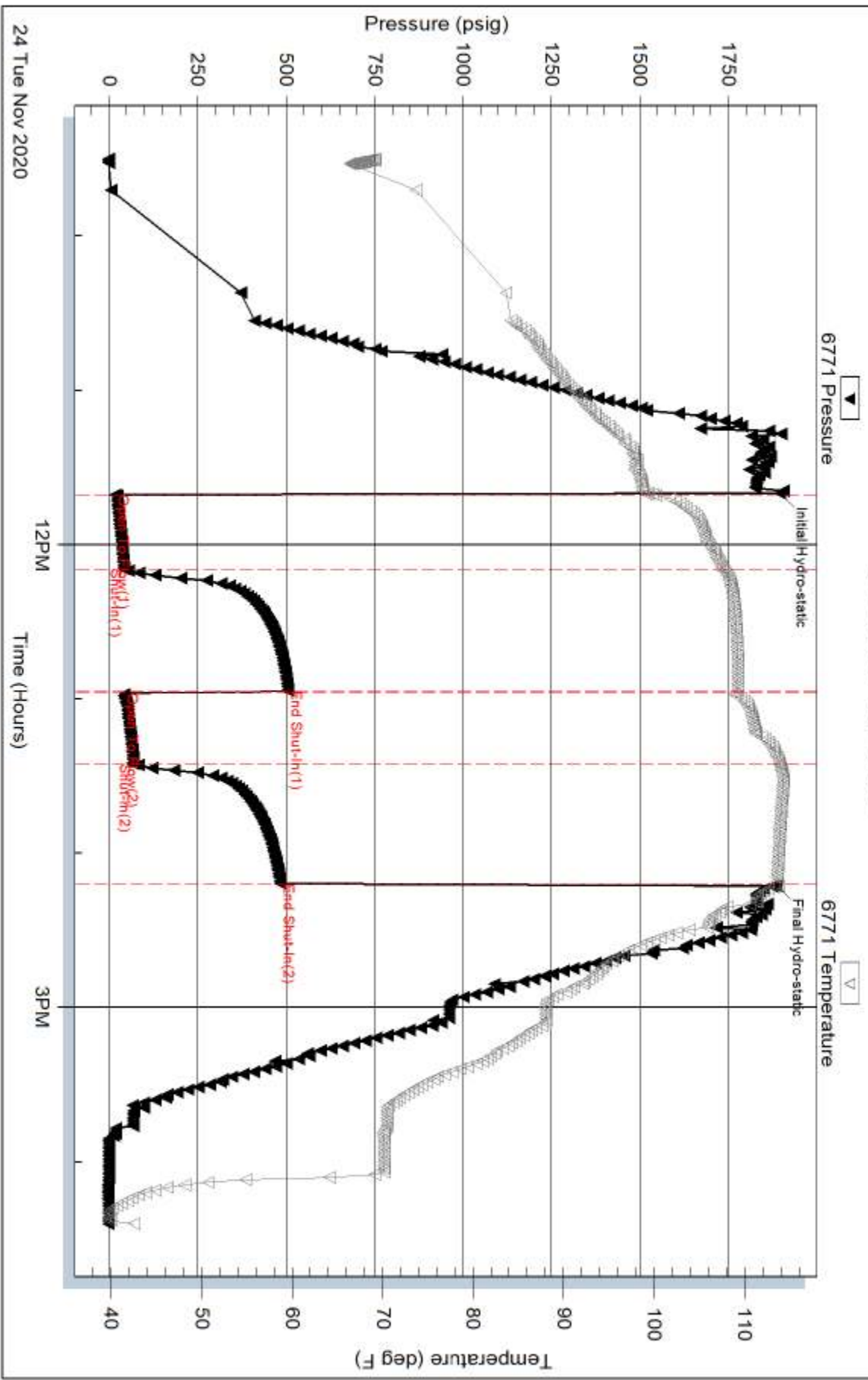
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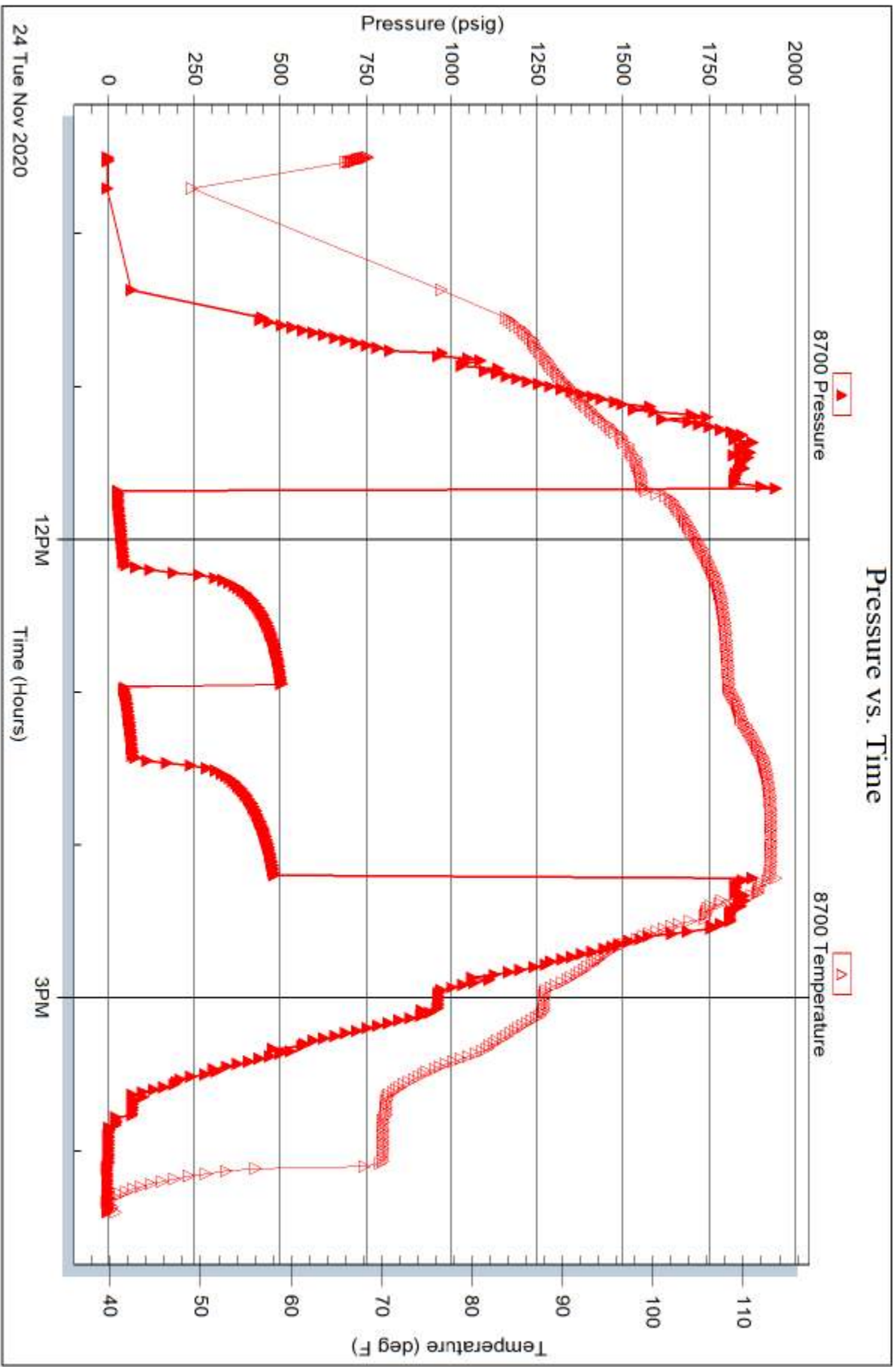
Laboratory Name:

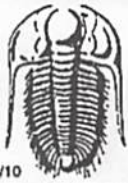
Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64501**

Well Name & No. West-Tillet Unit B #1-22 Test No. 1 Date 11/22/20
 Company DNO CJ Elevation 2355 KB 2348 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 4
 Location: Sec. 22 Twp 10 S Rge. 23 W Co. Graham State KS

Interval Tested 3672-3710 Zone Tested LKC "C"
 Anchor Length 38' Drill Pipe Run 3639 Mud Wt. 9.0
 Top Packer Depth 3667 Drill Collars Run 31 Vls 54
 Bottom Packer Depth 3672 Wt. Pipe Run WL 8.8
 Total Depth 3710 Chlorides 2,000 ppm System LCM 1/2"

Blow Description IF- Surface blow
ISI- No blow
FF- No blow. Flushed tool. No blow
FII- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>M</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45' BHT 101° Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1813 Test 1200 T-On Location 1136
 (B) First Initial Flow 34 Jars T-Started 1200
 (C) First Final Flow 37 Safety Joint T-Open 1510
 (D) Initial Shut-In 493 Circ Sub T-Pulled 1710
 (E) Second Initial Flow 40 Hourly Standby T-Out 1908
 (F) Second Final Flow 41 Mileage 98 RT 98 Comments
 (G) Final Shut-In 51 Sampler
 (H) Final Hydrostatic 1773 Straddle Ruined Shale Packer

Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1298
 Accessibility MP/DST Disc't
 Sub Total 1298

Approved By Our Representative Brannan 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

NO. **67422**

Well Name & No. Geist-Tillet Unit B #1-22 Test No. ~~10200~~ 2 Date 11-23-2020
 Company DNOCI # Elevation 2355 KB 2348 GL
 Address PO Box 1019 Hays Ks 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 22 Twp 10S Rge. 23 W Co. Graham State Ks

Interval Tested 3713' - 3745' Zone Tested LKC E4F
 Anchor Length 32' Drill Pipe Run ~~38.00~~ 3675.80' Mud Wt. 9
 Top Packer Depth 3708' Drill Collars Run ~~00~~ 31.40' Vis 54
 Bottom Packer Depth 3713' Wt. Pipe Run 0 WL 8.8
 Total Depth 3745' Chlorides 2000 ppm System LCM 1/2 #

Blow Description IF - Paint surface blow for about 1 min. then died
ISI - No Return
FF - Weak surface blow started right away and built up to 5"
FBI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>83'</u>	<u>OCM</u>	<u>20</u>		<u>80</u>	
Rec	Feet of <u>43 - GIP</u>	<u>100</u>			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 83' BHT 107°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1826 Test 1200 T-On Location 3:10am
 (B) First Initial Flow 13 Jars _____ T-Started 3:36am
 (C) First Final Flow 33 Safety Joint _____ T-Open 5:27am
 (D) Initial Shut-In 423 Circ Sub _____ T-Pulled 8:12
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 9:57
 (F) Second Final Flow 51 Mileage 98 R/T Comments _____
 (G) Final Shut-In 402 Sampler _____
 (H) Final Hydrostatic 1772 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 45 Day Standby _____
 Sub Total 1298 Accessibility _____
 Sub Total 1298 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1298
 MP/OST Disc't _____

Approved By _____ Our Representative Royal Foster

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Thanks



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67423

Well Name & No. Geist - Tillet Unit B #1-22 Test No. 3 Date 11-23-2020
 Company DNOC Elevation 2355 KB 2348 GL
 Address Po Box 1019 Hays Kansas 67601
 Co. Rep / Geo. Mac Dawning Rig Discovery #4
 Location: Sec. 22 Twp 10S Rge. 23W Co. Graham State Ks

Interval Tested 3775' - 3819' Zone Tested LKC H&I
 Anchor Length 44' Drill Pipe Run 3739.07' Mud Wt. 9.4
 Top Packer Depth 3770' Drill Collars Run 31.40' Vis 54
 Bottom Packer Depth 3775' Wt. Pipe Run 0 WL 9.6
 Total Depth 3819' Chlorides 2000 ppm System LCM 1/2#

Blow Description IF-Blow started with a weak surface and built to 1"
ISI - No Return
FF - Blow started as a faint blow & built up to 1/2"
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>6'</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 6' BHT 103°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1869 Test 1200 T-On Location 7:50 pm
 (B) First Initial Flow 12 Jars _____ T-Started 8:08 pm
 (C) First Final Flow 20 Safety Joint _____ T-Open 10:00 pm
 (D) Initial Shut-In 682 Circ Sub _____ T-Pulled 12:00 am
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 1:55 am
 (F) Second Final Flow 27 Mileage 98 R/T Comments _____
 (G) Final Shut-In 202 Sampler _____
 (H) Final Hydrostatic 1794 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 30 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 30 Day Standby _____ Extra Copies _____
 Sub Total 1298 Accessibility _____ Sub Total 0
 Sub Total 1298 MP/DST Disc't _____ Total 1298

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67424

Well Name & No. Geist-Tillet Unit B #122 Test No. 4 Date 11-24-2020
 Company DNOCT Elevation 2355 KB 2348 GL
 Address Po Box 1019 Hays ks 67601
 Co. Rep / Geo. more Dawning Rig Discovery #4
 Location: Sec. 22 Twp 10S Rge. 23W Co. Grant State ks

Interval Tested 3817'-3843' Zone Tested LKc-J
 Anchor Length 26' Drill Pipe Run 3797.38' Mud Wt. 9.5
 Top Packer Depth ~~3817~~ 3812' Drill Collars Run 31.40' Vis 52
 Bottom Packer Depth 3817' Wt. Pipe Run 0 WL 10.6
 Total Depth 3843' Chlorides 3000 ppm System LCM 1/4#

Blow Description IF-Blow built to bottom of the bucket in 10 mins. 19"
ISI-Return started about 5 mins in and built to about 12"
FF-Blow built to B.o.B. in about 10 mins again & built to 52"
FBI-Return started right away and built to 1"

Rec	Feet of	%gas	%oil	%water	%mud
78'	1134 <u>GRACO</u>	20	55		25
63'	1134 <u>GO</u>	25	75		
	<u>1134'-GIP</u>	100			
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud

Rec Total 141 BHT 1140°F Gravity 32@60 API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 1896 Test 1200 T-On Location 9:15am
 (B) First Initial Flow 18 Jars _____ T-Started 9:30am
 (C) First Final Flow 42 Safety Joint _____ T-Open 11:31am
 (D) Initial Shut-In 505 Circ Sub _____ T-Pulled 2:06pm
 (E) Second Initial Flow 43 Hourly Standby _____ T-Out 4:21pm
 (F) Second Final Flow 108 Mileage 98 RT Comments _____
 (G) Final Shut-In 484 Sampler _____
 (H) Final Hydrostatic 1885 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 45 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 45 Day Standby _____ Extra Copies _____
 Sub Total 0
 Total 1298
 Sub Total 1298

Approved By _____ MP/DST Disc't _____
 Our Representative Royal Smith
 Trilobite Testing Inc. shall not be liable for damaged or 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.

Marc A. Downing		Geologic Report	
Consulting Petroleum Geologist		Drilling Time and Sample Log	
Operator Downing-Nelson Oil Co., Inc.		Elevation KB 2355 DF 2353 GL 2347	
Lease Geist-Tillet Unit B No. 1-22		Casing Record Surface 8 5/8" @ 220' Production 5 1/2" @ 3949'	
API # 15-065-24187-0000		Electrical Surveys CNDL, DIL, MEL	
Field Conness			
Location 1645' FSL & 2420' FEL			
Sec. 22	Twsp. 10s	Rge. 23w	
County Graham		State Kansas	
Formation	Sample tops	Log Tops	Datum Struct Comp
Top Anhydrite	1894	1895	+460 -6
Base Anhydrite	1934	1933	+422 -3
Topeka	3396	3397	-1042 -5
Heebner	3616	3618	-1263 -7
Toronto	Absent		
LKC	3654	3657	-1302 -8
BKC	3873	3876	-1521 -1
Total Depth	3950	3952	-1597
Reference Well For Structural Comparison DNOCI			
Geist-Tillet Unit #1-24 2567' FNL & 2130' FEL Sec. 22-10s-23w			

Drilling Contractor **Discovery Drilling, Rig #4**

Commenced **11-18-20** Completed **11-25-20**

Samples Saved From **3400** To **RTD**

Drilling Time Kept From **3300** To **RTD**

Samples Examined From **3400** To **RTD**

Geological Supervision From **3400** 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 completion.

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

ACCESSORIES

OTHER SYMBOLS

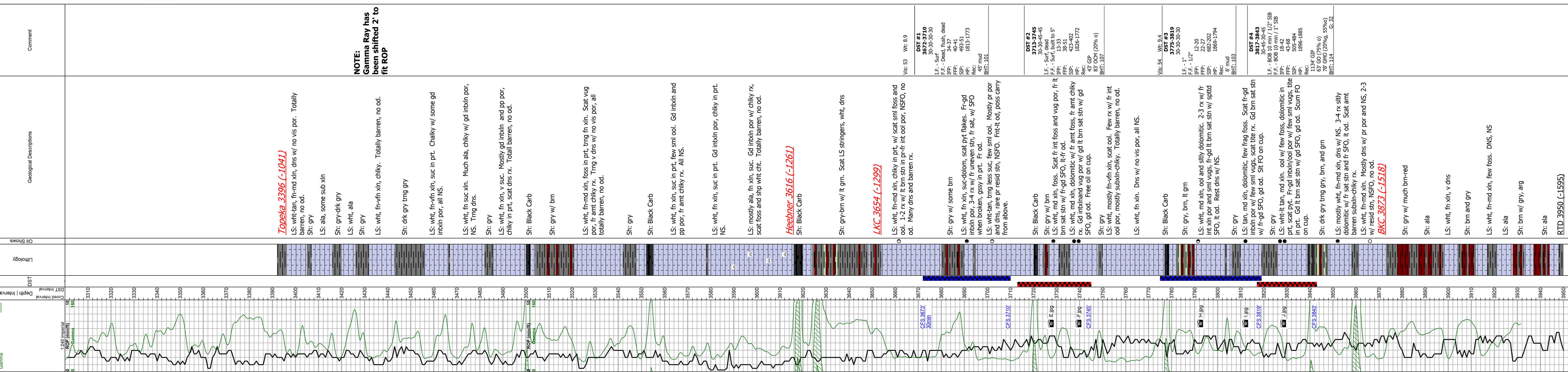
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 Core
 Tail pipe

MISC
 Daily Report
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 Spotted Stn 25 - 50 %
 Spotted Stn 10 - 25 %
 Dead Oil Stn
 Fluorescence

MINERAL
 Chert White

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Respectfully Submitted,

 Marc A. Downing