KOLAR Document ID: 1480431

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 # 6030
Name: Ainsworth Operating Co.
Address 1: 4676 COMMERCIAL ST. SE, STE #412
Address 2:
City: SALEM State: OR Zip: 97302 + 1902
Contact Person: Al Ainsworth
Phone: (503) 881-4357
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Randall Kilian
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 #:

9/16/2019	9/21/2019	9/22/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-065-24168-00-00
Spot Description:
NE - NW - SW - NE Sec. 33 Twp. 6 S. R. 22 ☐ East ☑ West
1485 Feet from ☑ North / ☐ South Line of Section
2120 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Graham
Lease Name: STINEMETZ Well #: 1
Field Name:
Producing Formation: none
Elevation: Ground: 2313 Kelly Bushing: 2321
Total Vertical Depth: 3770 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 264 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: 14500 ppm Fluid volume: 320 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: CFMI, LLC
Lease Name: Plainville Airport SWD License #: 34828
Quarter NE Sec. 11 Twp. 10 S. R. 18 ☐ East ☑ West
County: Rooks Permit #: D-32,000

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: 10/31/2019
☐ **Confidential Release Date:** 10/30/2021
☐ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 11/01/2019

Operator Name: Ainsworth Operating Co. Lease Name: STINEMETZ Well #: 1

Sec. 33 Twp. 6 S. R. 22 ☐ East ☑ West County: Graham

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☐ Yes	☑ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☐ Yes	☑ No
Geologist Report / Mud Logs	☑ Yes	☐ No
List All E. Logs Run:		

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Anhydrite	343	338
Topeka	3334	-1013
Heeb. Shale	3533	-1212
Lansing	3575	-1254
BKc.	3762	-1441

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	23	264	80/20Poz	200	2%Gel&3%CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Ainsworth Operating Co.
Well Name	STINEMETZ 1
Doc ID	1480431

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	264	80/20Poz	200	2%Gel&3 %CC

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1535

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-16-19	33	6	22	Graham	KS		10:45p

Location Bogue 4 1/2W 3 1/2N 7 1/2W Winto

Lease Stinemetz Well No. 1

Contractor Discovery #4

Type Job Surface

Hole Size 12 1/4 T.D. 264

Csg. 8 5/8 Depth 263

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 10 Shoe Joint

Meas Line Displace 16 BC

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

Charge To Ainsworth Operating

Street

City State

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

Cement Amount Ordered 200 80/20 3%cc 2%gel

EQUIPMENT

Pumptrk 20	No.	Cementer	Craig
		Helper	Tony F.
Bulktrk	No.	Driver	
		Driver	
Bulktrk 9	No.	Driver	
		Driver	Doug

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8 5/8 on bottom. Est Circulation. Mix 200sx 80/20 3%cc 2%gel. Cement Circulated

Thank You

Common	160
Poz. Mix	40
Gel.	4
Calcium	7
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	211
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	46
Tax	
Discount	
Total Charge	

X Signature Dan Carlson

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071 Home Office P.O. Box 32 Russell, KS 67665 No. 1541

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-22-19	33	6	22	Graham	KS		9:30AM

Location Rogue + 24 Hwy 4 1/2W 3 1/2N 7 1/2W

Lease Stine Metz Well No. 1

Contractor Discovery #4

Type Job Rotary Plug

Hole Size 7 7/8 T.D. 3750

Csg. Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

Owner

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

Charge To Ainsworth Operating Co.

Street

City State

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

Cement Amount Ordered 255 60/40 4% Gel 1/4# flo

EQUIPMENT

Pumptrk 17 No. Cementer Travis
Helper

Bulktrk No. Driver Tony L
Driver

Bulktrk 9 No. Driver
Driver Michael

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30SK

Mouse Hole 15SK

Centralizers

Baskets

D/V or Port Collar

1st 2000 50SK

2nd 1175 100SK

3rd 325 50SK

4th 40' 10SK

Thanks

X
Signature

Common	153
Poz. Mix	102
Gel.	9
Calcium	
Hulls	
Salt	
Flowseal	50 lb
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	264
Mileage	
FLOAT EQUIPMENT	8 5/8 D.V Hole plug
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	plug
Mileage	46 1 way
Tax	
Discount	
Total Charge	

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ainsworth Operating Co.**

4676 Commercial St. SE
STE # 412
Salem OR 97302

ATTN: Randy Killian

Stinemetz #1

33-6s-22w Graham,KS

Start Date: 2019.09.20 @ 21:06:00
End Date: 2019.09.21 @ 04:42:09
Job Ticket #: 65613 DST #: 1

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

Printed: 2019.09.23 @ 15:58:03

DRILL STEM TEST REPORT

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65613 **DST#: 1**

Test Start: 2019.09.20 @ 21:06:00

GENERAL INFORMATION:

Formation: **LKC " C - D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:21:30
Time Test Ended: 04:42:09

Test Type: Bottom Hole (Initial)
Tester: Ryan Nichols
Unit No: 71

Interval: 3591.00 ft (KB) To 3630.00 ft (KB) (TVD)
Total Depth: 3630.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

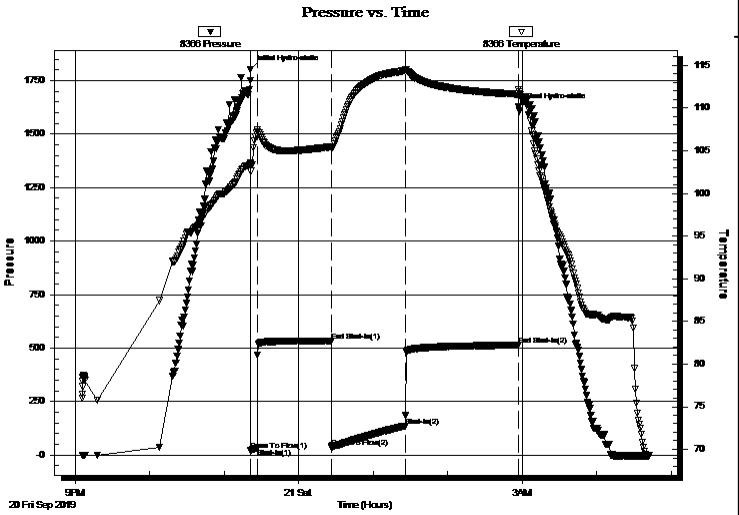
Reference Elevations: 2321.00 ft (KB)
2317.00 ft (CF)
KB to GR/CF: 4.00 ft

Serial #: 8366 **Outside**

Press@RunDepth: 136.48 psig @ 3592.00 ft (KB)
Start Date: 2019.09.20 End Date: 2019.09.21
Start Time: 21:06:01 End Time: 04:42:10

Capacity: 8000.00 psig
Last Calib.: 2019.09.21
Time On Btm: 2019.09.20 @ 23:21:20
Time Off Btm: 2019.09.21 @ 02:57:20

TEST COMMENT: 5 IF - Slide 4', blow built to 3 1/4"
60 ISI - No return
60 FF - BoB @ 33 mins
90 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1801.78	103.59	Initial Hydro-static
1	20.29	102.60	Open To Flow (1)
6	33.89	107.23	Shut-In(1)
65	533.18	105.47	End Shut-In(1)
66	35.50	105.29	Open To Flow (2)
125	136.48	114.49	Shut-In(2)
216	513.71	111.63	End Shut-In(2)
216	1624.82	112.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
190.00	MCW - 5%M - 95%W	2.38
60.00	MCW 20%M - 80%W	0.84
19.00	OMCW - 10%o - 40%M - 50%W	0.27
1.00	Free Oil 100%o	0.01

Gas Rates

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

DRILL STEM TEST REPORT

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65613 **DST#: 1**

Test Start: 2019.09.20 @ 21:06:00

GENERAL INFORMATION:

Formation: **LKC " C - D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:21:30
Time Test Ended: 04:42:09

Test Type: Bottom Hole (Initial)
Tester: Ryan Nichols
Unit No: 71

Interval: 3591.00 ft (KB) To 3630.00 ft (KB) (TVD)
Total Depth: 3630.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

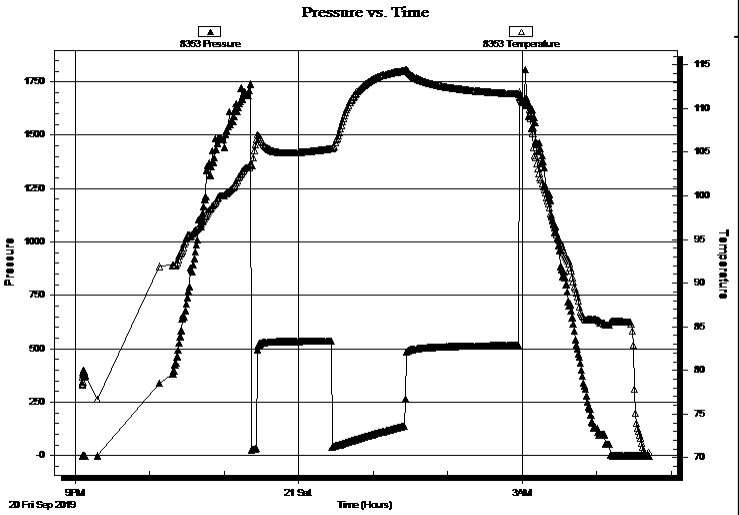
Reference Elevations: 2321.00 ft (KB)
2317.00 ft (CF)
KB to GR/CF: 4.00 ft

Serial #: 8353 **Inside**

Press@RunDepth: psig @ 3592.00 ft (KB)
Start Date: 2019.09.20 End Date: 2019.09.21
Start Time: 21:06:01 End Time: 04:42:00

Capacity: 8000.00 psig
Last Calib.: 2019.09.21
Time On Btm:
Time Off Btm:

TEST COMMENT: 5 IF - Slide 4', blow built to 3 1/4"
60 ISI - No return
60 FF - BoB @ 33 mins
90 FSI - No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
190.00	MCW - 5%M - 95%W	2.38
60.00	MCW 20%M - 80%W	0.84
19.00	OMCW - 10%o - 40%M - 50%W	0.27
1.00	Free Oil 100%o	0.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65613 **DST#: 1**

Test Start: 2019.09.20 @ 21:06:00

Tool Information

Drill Pipe:	Length:	3552.00 ft	Diameter:	3.80	inches	Volume:	49.83	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	31.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	
						Total Volume:	49.98	bbl	

Drill Pipe Above KB:	20.00 ft
Depth to Top Packer:	3591.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	39.00 ft
Tool Length:	67.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		1500.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		65000.00 lb
Tool Chased		4.00 ft
String Weight:	Initial	50000.00 lb
	Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3568.00		
Hydraulic tool	5.00			3573.00		
Jars	5.00			3578.00		
Safety Joint	3.00			3581.00		
Packer	5.00			3586.00	28.00	Bottom Of Top Packer
Packer	5.00			3591.00		
Stubb	1.00			3592.00		
Recorder	0.00	8353	Inside	3592.00		
Recorder	0.00	8366	Outside	3592.00		
Perforations	35.00			3627.00		
Bullnose	3.00			3630.00	39.00	Bottom Packers & Anchor
Total Tool Length:	**67.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65613 **DST#: 1**

Test Start: 2019.09.20 @ 21:06:00

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:	61.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	750.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	MCW - 5%M - 95%W	2.383
60.00	MCW 20%M - 80%W	0.842
19.00	OMCW - 10%o - 40%M - 50%W	0.267
1.00	Free Oil 100%o	0.014

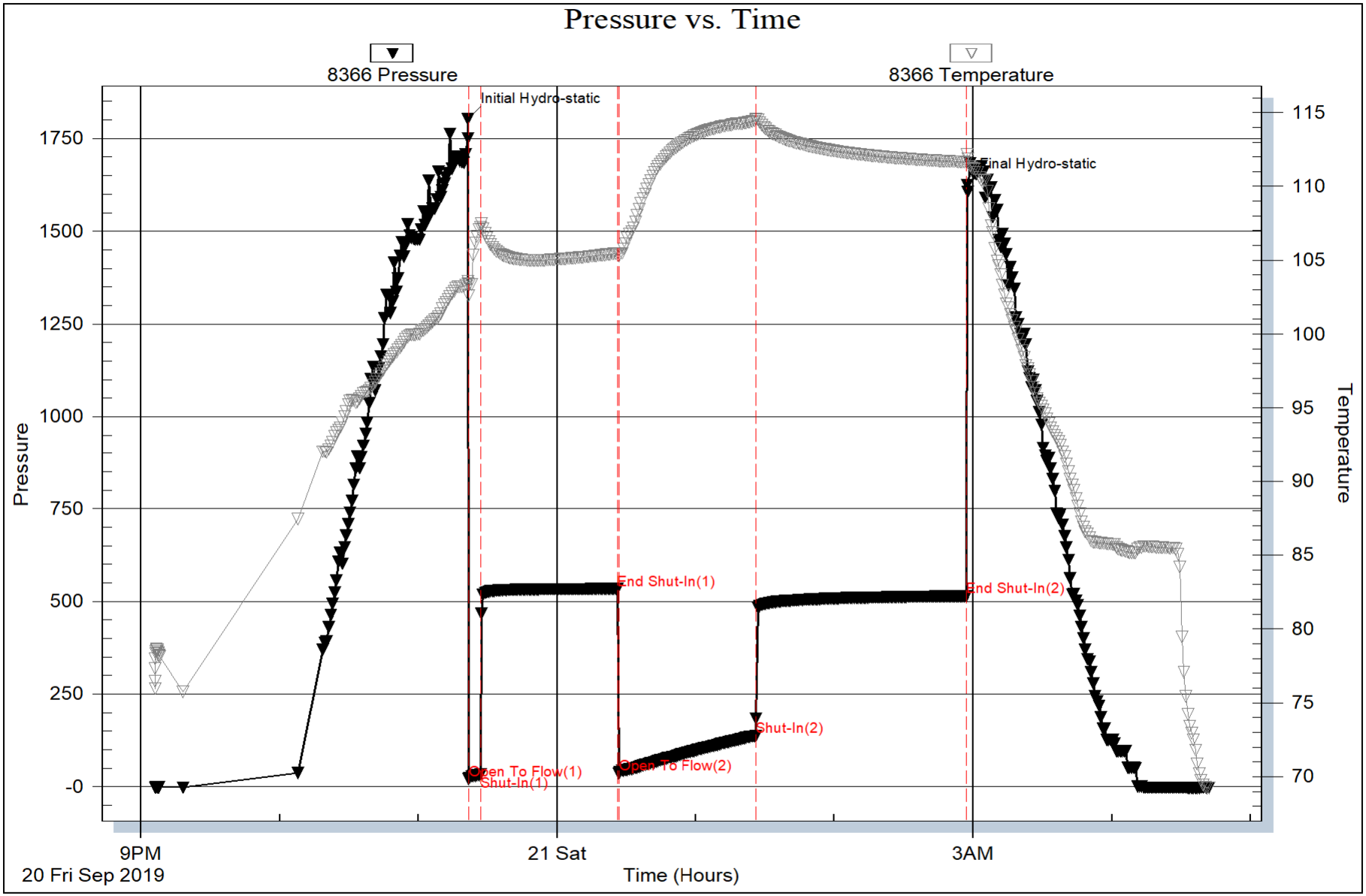
Total Length: 270.00 ft Total Volume: 3.506 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

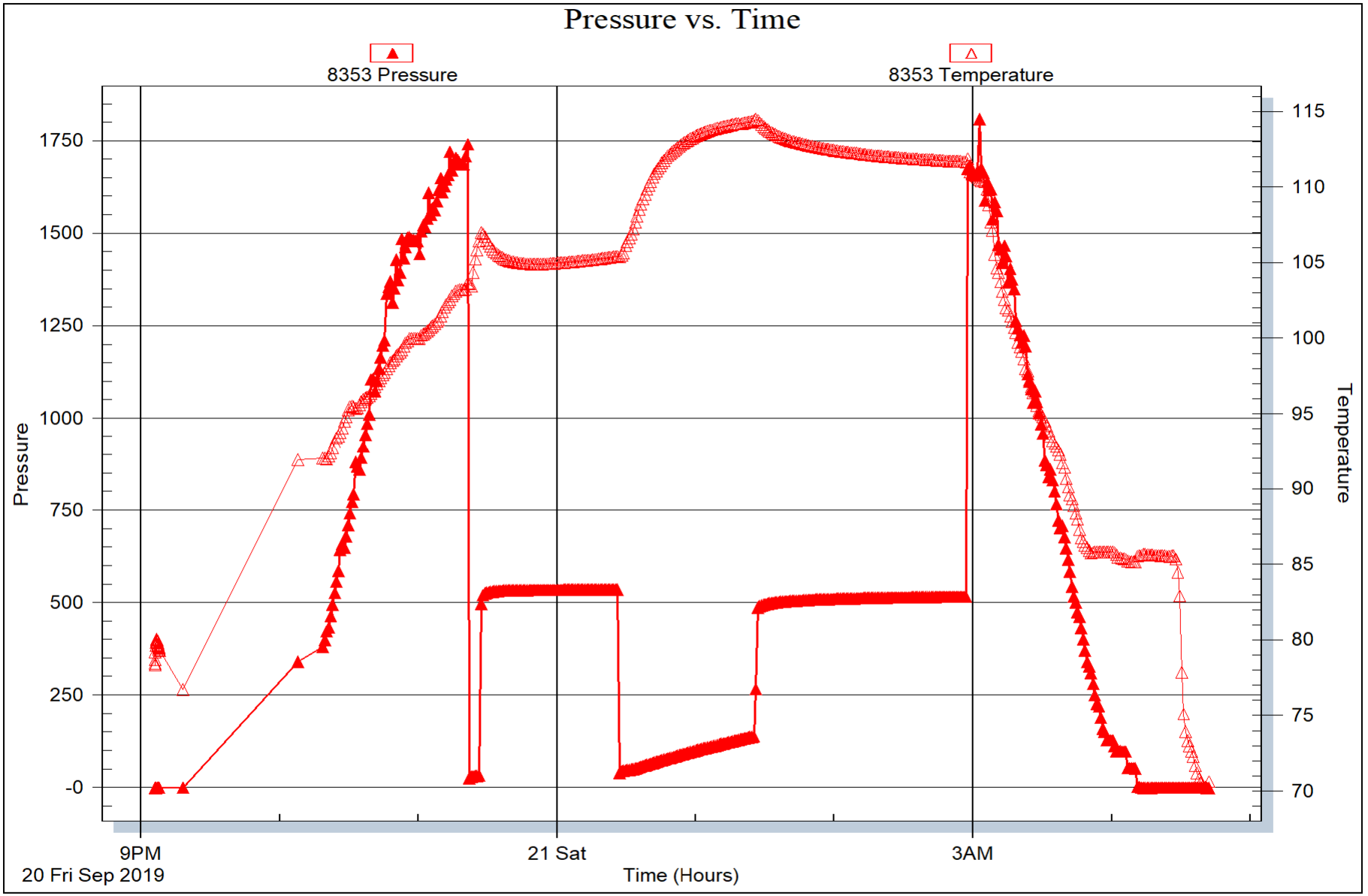
Recovery Comments: RW = .126 @ 63 DEG F
Chlorides = 64,000 ppm

Serial #: 8366 **Outside** Ainsworth Operating Co. Stinemetz #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65613 Printed: 2019.09.23 @ 15:58:04

Serial #: 8353 **Inside** Ainsw orth Operating Co. Stinemetz #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65613 Printed: 2019.09.23 @ 15:58:04

DRILL STEM TEST REPORT

Prepared For: **Ainsworth Operating Co.**

4676 Commercial St. SE
STE # 412
Salem OR 97302

ATTN: Randy Killian

Stinemetz #1

33-6s-22w Graham,KS

Start Date: 2019.09.21 @ 19:06:00
End Date: 2019.09.22 @ 00:06:00
Job Ticket #: 65614 DST #: 2

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

Printed: 2019.09.23 @ 15:54:59

DRILL STEM TEST REPORT

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65614 **DST#: 2**

Test Start: 2019.09.21 @ 19:06:00

GENERAL INFORMATION:

Formation: **LKC " H - L "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:02:20
Time Test Ended: 00:06:00

Test Type: Bottom Hole (Reset)
Tester: Ryan Nichols
Unit No: 71

Interval: 3677.00 ft (KB) To 3770.00 ft (KB) (TVD)
Total Depth: 3770.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

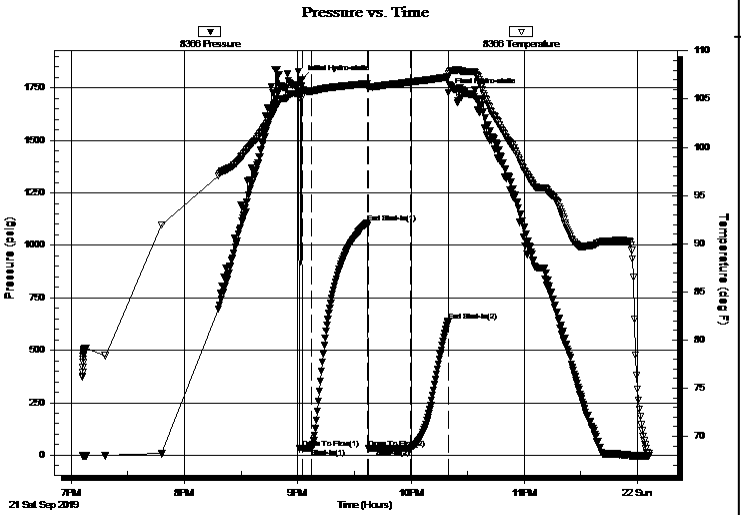
Reference Elevations: 2321.00 ft (KB)
2317.00 ft (CF)
KB to GR/CF: 4.00 ft

Serial #: 8366 **Outside**

Press@RunDepth: 33.86 psig @ 3678.00 ft (KB)
Start Date: 2019.09.21 End Date: 2019.09.22
Start Time: 19:06:01 End Time: 00:06:00

Capacity: 8000.00 psig
Last Calib.: 2019.09.22
Time On Btm: 2019.09.21 @ 21:02:10
Time Off Btm: 2019.09.21 @ 22:20:00

TEST COMMENT: 5 IF - Blow built to 1/4"
30 ISI - No return
20 FF - No blow
20 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1788.65	106.34	Initial Hydro-static
1	30.68	105.27	Open To Flow (1)
5	32.62	105.80	Shut-In(1)
35	1106.41	106.60	End Shut-In(1)
36	33.87	106.07	Open To Flow (2)
58	33.86	106.77	Shut-In(2)
78	639.87	107.28	End Shut-In(2)
78	1727.72	107.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
14.00	OCM - 5%o - 95%M	0.07
1.00	OCM - 50%o - 50%M	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65614 **DST#: 2**

Test Start: 2019.09.21 @ 19:06:00

GENERAL INFORMATION:

Formation: **LKC " H - L "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:02:20
Time Test Ended: 00:06:00

Test Type: Bottom Hole (Reset)
Tester: Ryan Nichols
Unit No: 71

Interval: 3677.00 ft (KB) To 3770.00 ft (KB) (TVD)
Total Depth: 3770.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

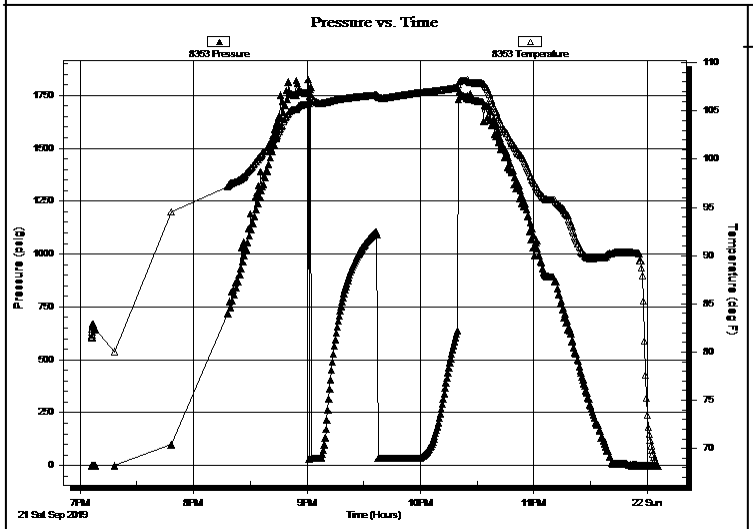
Reference Elevations: 2321.00 ft (KB)
2317.00 ft (CF)
KB to GR/CF: 4.00 ft

Serial #: 8353 **Inside**

Press@RunDepth: psig @ 3678.00 ft (KB)
Start Date: 2019.09.21 End Date: 2019.09.22
Start Time: 19:06:01 End Time: 00:05:50

Capacity: 8000.00 psig
Last Calib.: 2019.09.22
Time On Btm:
Time Off Btm:

TEST COMMENT: 5 IF - Blow built to 1/4"
30 ISI - No return
20 FF - No blow
20 FSI - No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
14.00	OCM - 5%o - 95%M	0.07
1.00	OCM - 50%o - 50%M	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65614 **DST#: 2**

Test Start: 2019.09.21 @ 19:06:00

Tool Information

Drill Pipe:	Length:	3642.00 ft	Diameter:	3.80 inches	Volume:	51.09 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	
					Total Volume:	51.24 bbl	

Drill Pipe Above KB:	24.00 ft
Depth to Top Packer:	3677.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	93.00 ft
Tool Length:	121.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		1500.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		65000.00 lb
Tool Chased		8.00 ft
String Weight:	Initial	60000.00 lb
	Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3654.00		
Hydraulic tool	5.00			3659.00		
Jars	5.00			3664.00		
Safety Joint	3.00			3667.00		
Packer	5.00			3672.00	28.00	Bottom Of Top Packer
Packer	5.00			3677.00		
Stubb	1.00			3678.00		
Recorder	0.00	8353	Inside	3678.00		
Recorder	0.00	8366	Outside	3678.00		
Perforations	24.00			3702.00		
Blank Spacing	65.00			3767.00		
Bullnose	3.00			3770.00	93.00	Bottom Packers & Anchor
Total Tool Length:	**121.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ainsworth Operating Co.

4676 Commercial St. SE
STE # 412
Salem OR 97302
ATTN: Randy Killian

33-6s-22w Graham,KS

Stinemetz #1

Job Ticket: 65614 **DST#: 2**

Test Start: 2019.09.21 @ 19:06:00

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:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	750.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

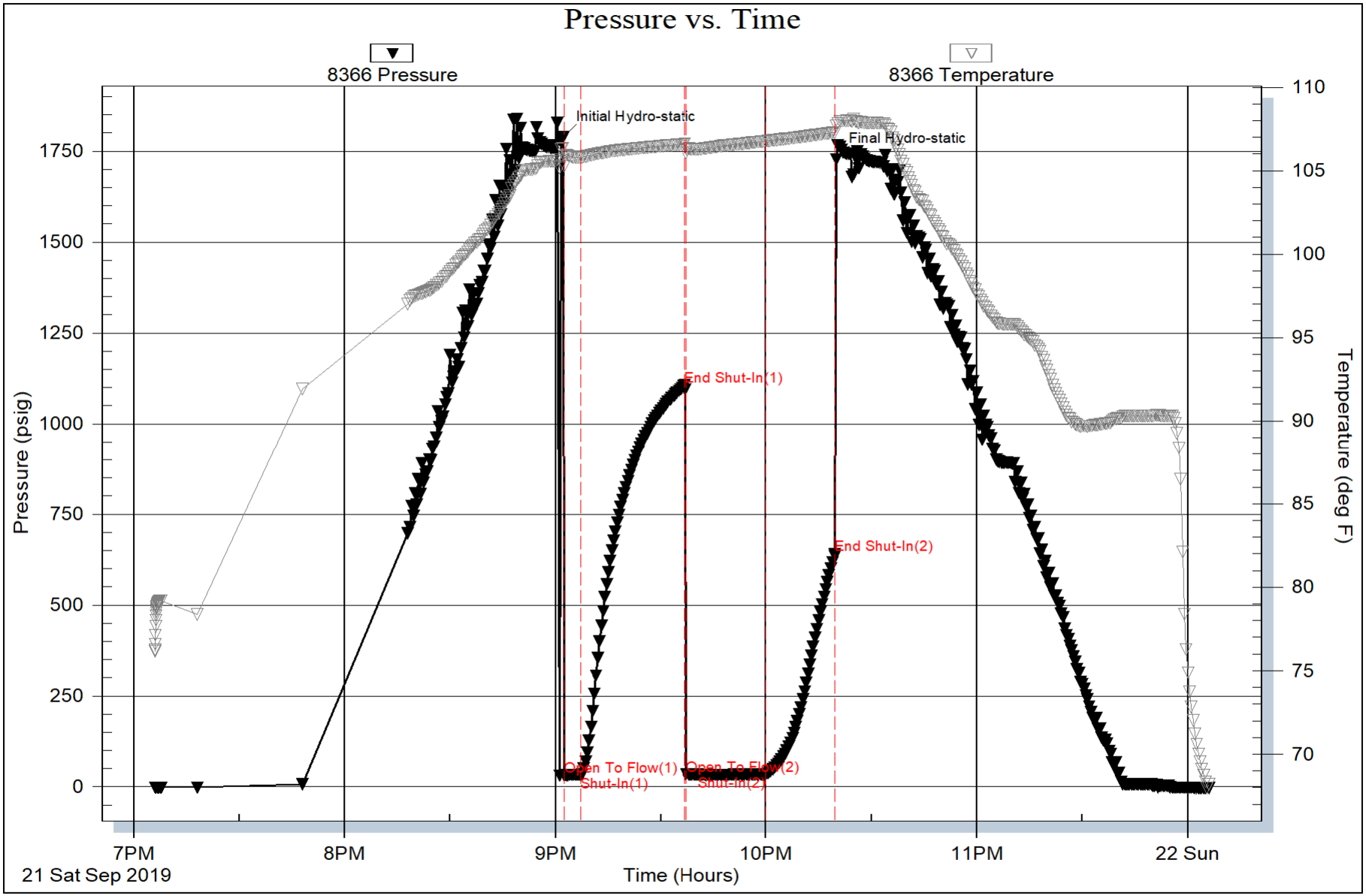
Recovery Table

Length ft	Description	Volume bbl
14.00	OCM - 5%o - 95%M	0.069
1.00	OCM - 50%o - 50%M	0.005

Total Length: 15.00 ft Total Volume: 0.074 bbl

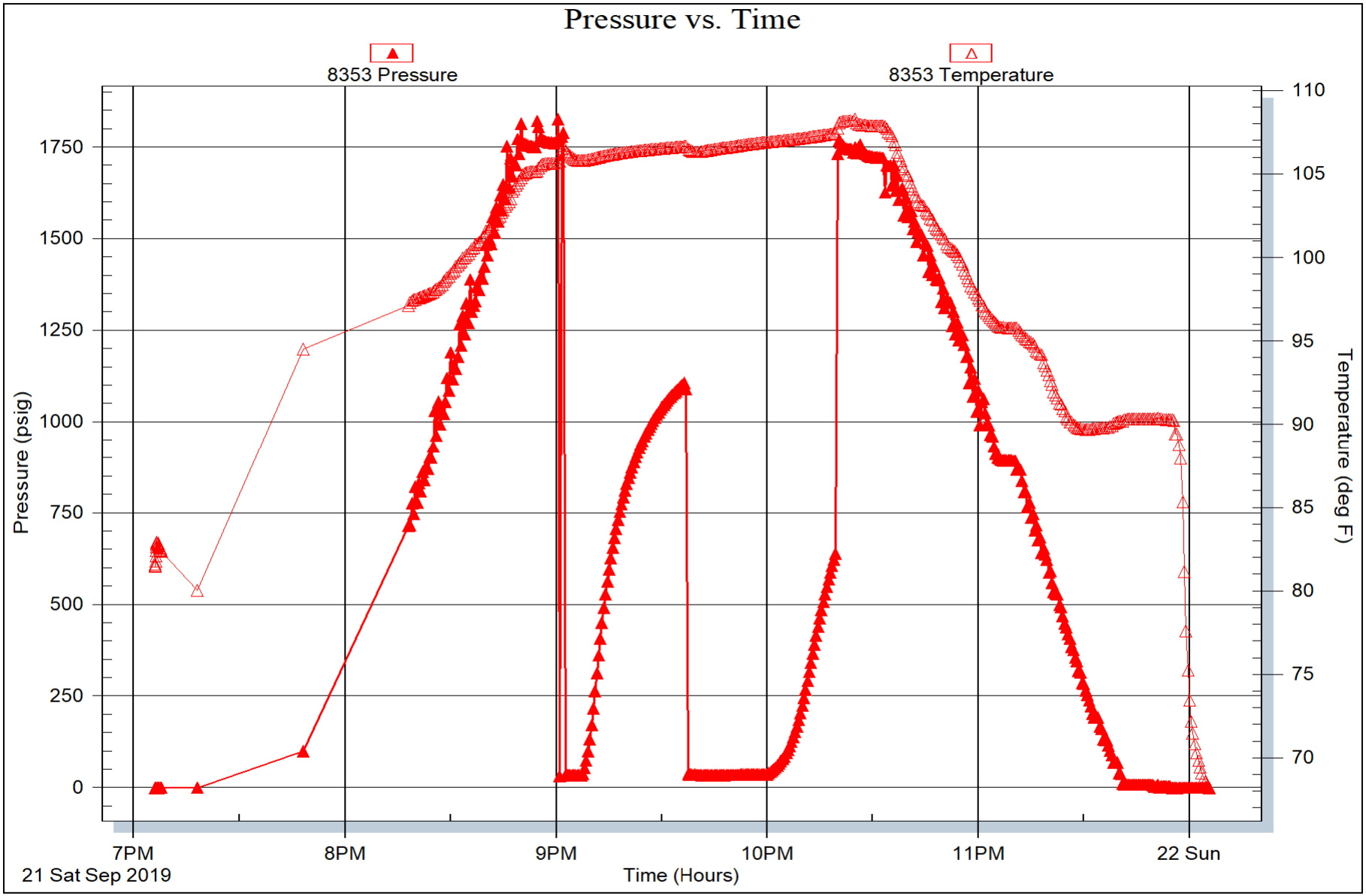
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Outside** Ainsworth Operating Co. Stinemetz #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65614 Printed: 2019.09.23 @ 15:55:00

Serial #: 8353 **Inside** Ainsw orth Operating Co. Stinemetz #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65614 Printed: 2019.09.23 @ 15:55:00

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 65613

Well Name & No. Stinemetz # 1 Test No. 1 Date 9/20/19

Company Ainsworth Operating Co. Elevation 2321' KB 2317' GL

Address 4676 Commercial St. SE STE # 412 Salem OR 97302

Co. Rep / Geo. Randy Killian Rig Discovery # 4

Location: Sec. 33 Twp 6S Rge. 22W Co. Graham State KS

Interval Tested 3591 - 3630 Zone Tested LKC "C-D"

Anchor Length 39' Drill Pipe Run 3552' Mud Wt. 8.8

Top Packer Depth 3586 Drill Collars Run 31 Vis 61

Bottom Packer Depth 3591 Wt. Pipe Run 0' WL 7.6

Total Depth 3630 Chlorides 750 ppm System LCM 2

Blow Description 5 IF - Slide 4", Blow built to 3½"

60 ISI - No return

60 FF - Blow built to BoB @ 33 mins

90 FSI - No return

Rec 1	Feet of Free Oil	%gas 100	%oil	%water	%mud	
Rec 19	Feet of VSOCMCW	%gas 10	%oil 50	%water 40	%mud	
Rec 60	Feet of MCW	%gas	%oil 80	%water [redacted]	%mud 20	
Rec 190	Feet of MCW	%gas	%oil 95	%water 5	%mud	
Rec c	Feet of	%gas	%oil	%water	%mud	

Rec Total 270' BHT 112° Gravity — API RW .126 @ 63 °F Chlorides 64,000 ppm

(A) Initial Hydrostatic 1802	☑ Test 1200	T-On Location 22:30	
(B) First Initial Flow 20	☐ Jars	T-Started 21:06	
(C) First Final Flow 34	☑ Safety Joint 75	T-Open 23:21	
(D) Initial Shut-In 533	☐ Circ Sub	T-Pulled 02:57	
(E) Second Initial Flow 36	☐ Hourly Standby	T-Out 04:30	
(F) Second Final Flow 136	☑ Mileage 130 RT 130	Comments	
(G) Final Shut-In 514	☐ Sampler		
(H) Final Hydrostatic 1625	☐ Straddle	☐ EM Tool	
	☐ Shale Packer	☐ Ruined Shale Packer	
Initial Open 5	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In 60	☐ Extra Recorder	☐ Extra Copies	
Final Flow 60	☐ Day Standby	Sub Total 0	
Final Shut-In 90	☐ Accessibility	Total 1405	
	Sub Total 1405	MP/DST Disc't	

Approved By Our Representative Ryan Nichols

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 65614

Well Name & No. Steinmetz #1 Test No. 2 Date 9/21/19

Company Ainsworth Operating Co. Elevation 2321' KB 2317' GL

Address 4676 Commercial St. SE STE #412 Salem OR 97302

Co. Rep / Geo. Randy Killian Rig Discovery #4

Location: Sec. 33 Twp 6S Rge. 22W Co. Graham State KS

Interval Tested 3677 - 3770 Zone Tested LKC "H - L"

Anchor Length 93' Drill Pipe Run 3642' Mud Wt. 8.9

Top Packer Depth 3672 Drill Collars Run 31' Vis 55

Bottom Packer Depth 3677 Wt. Pipe Run 0' WL 7.6

Total Depth 3770 Chlorides 750 ppm System LCM 2

Blow Description 5 IF - Blow built to 1/4"

30 ISI - No return

20 FF - No blow

20 FSI - No return

Rec 1	Feet of OCM	%gas 50	%oil	%water 50	%mud
Rec 14	Feet of OCM	%gas 5	%oil	%water 95	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 107° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1789

(B) First Initial Flow 31

(C) First Final Flow 33

(D) Initial Shut-In 1106

(E) Second Initial Flow 34

(F) Second Final Flow 34

(G) Final Shut-In 640

(H) Final Hydrostatic 1728

Initial Open 5

Initial Shut-In 30

Final Flow 20

Final Shut-In 20

☑ Test 1200

☐ Jars

☑ Safety Joint 75

☐ Circ Sub

☐ Hourly Standby

☑ Mileage 130 RT 130

☐ Sampler

☐ Straddle

☐ Shale Packer

☐ Extra Packer

☐ Extra Recorder

☐ Day Standby

☐ Accessibility

Sub Total 1405

T-On Location 18:45

T-Started 19:06

T-Open 21:02

T-Pulled 22:19

T-Out 23:55

Comments

☐ EM Tool

☐ Ruined Shale Packer

☐ Ruined Packer

☐ Extra Copies

Sub Total 0

Total 1405

MP/DST Disc't

Approved By Our Representative Ryan Nichols

Randall Kilian Corporation
Geologist

Certified Petroleum
Geologist #3351
License #224

3951 Eveningglow Way
Castle Rock, CO 80104
Phone: 720-733-0420
Cell: 785-635-1349
E-mail: rkgeo53@hotmail.com

GEOLOGIST'S WELL REPORT

COMPANY AINSWORTH OPERATING CO. (6030)

WELL Stinemetz #1

FIELD Red Sun West

LOCATION (legal) NE NW SW NE

(footages) 1485' FNL & 2120' FEL

Section 33 TWP 6S RGE 22W

(Map) 3 mi E & 7½ mi N of Hill City

COUNTY Graham STATE Kansas

ELEVATION: 2321' K.B., 2313' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-065-24168

GEOLOGY BY Randall Kilian

PERTINENT WELL DATA

CONTRACTOR Discovery Drilling (31548)

RIG #4 HYDRAULICS D-375 6x14x60
(Galen Gaschler TP)

DRILL PIPE 4 ½" X-H COLLARS 6¼ x 2¼ 17 (555')

CASING: SURFACE 8 5/8" @ 263.5' w/ 200 sx 80/20 Poz

PRODUCTION

DRILLING FLUID. COMPANY Andy's Mud & Chemical Co.
(Aaron Blew)

TYPE: Chemical-Pac

REMARKS: Full service

DRILL STEM TESTS: COMPANY Trilobite Testing, Inc.
(Ryan Nichols)

NUMBER OF TESTS Two (2)

ELECTIC LOGS: COMPANY None

DETAIL (5")

TYPE

DRILLING TIME FROM 3300' TO RTD

SAMPLE TIME FROM 3300' TO RTD

SUPERVISION FROM 3300' TO RTD

VERTICAL DEVIATION ½°@ 264', 3/4°@ 3630',

PLUGGING REPORT 50 sx @ 2000', 100 sx @ 1175', 50 Sx @ 325', 10 sx @ 40', Rat 30 Sx, MH 15 Sx: 255 Sx

RESERVE PIT 750 bbls, Chl. 14,500 Ca. 460

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
9-16-19		MIRU, Spud
9-17-19	280'	DUS
9-18-19	1895'	Drilling sand & shale
9-19-19	2860'	Drilling shale & lime
9-20-19	3450'	Drilling Topeka lime
9-21-19	3640'	Drilling LKc lime
9-22-19	3770'	TD, Plugged

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	LKc C-D 3591- 3630'	20# 34# 5"	533# 60"	35# 136# 60"	514# 90"	1802# 1625#	1' Oil 19' O&M,C,Wtr 250' M,Wtr Chl 64k
2	LKc H-I 3677- 3770'	31# 33# 5"	1106# 30"	34# 34# 20"	640# 20"	1789# 1728#	15' O,C,Mud 45% Oil
3							
4							
5							
6							
7							
8							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	3150'					
2	3340'	8.5	60			
3	3410'	8.6	57			
4	3504'	8.8	61	7.6	750	14
5	3661'	8.9	55	7.6	750	12
6	3730'	9.2	52			
7						
8						
9						
10						
11						

Displaced

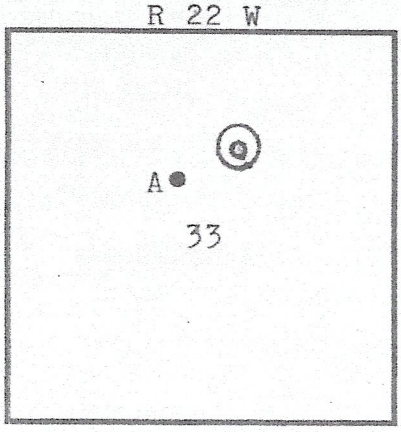
LCM 2#

LCM 2#

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 ¼"	JZ	HA10TC	264'	264'	3 3/4
2	7 7/8"	HTCo	GX20C	3630'	3366'	62 3/4
3	7 7/8"	HTCo	GX20C	3770'	140'	8
4						
5						
6						
7						
8						

FORMATION TOPS & STRUCTURAL GEOLOGY



REFERRED TO:

A: AINSWORTH OPERATING CO.
Nelson #1 E½ SE NW 33

B:

C:

D:

E:

STRATIGRAPHIC MARKERS	SUBJECT WELL SAMPLES	SUBJECT WELL E. LOGS	SUBJECT WELL DATUM	STRUCTURAL POSITION A	B	C	D	E
Anhydrite	1978'		+ 343	+ 338				
Base	2013'		+ 308	+ 307				
Topeka	3334'		-1013	-1011				
Heeb. Sh.	3533'		-1212	-1208				
Toronto	3556'		-1235	-1233				
Lansing	3575'		-1254	-1252				
BKc.	3762'		-1441	-1439				
Arbuckle				-1560				
TD	3770'		-1449	-1627				

*Structural position of subject well as compared to referred well.

SUMMARY

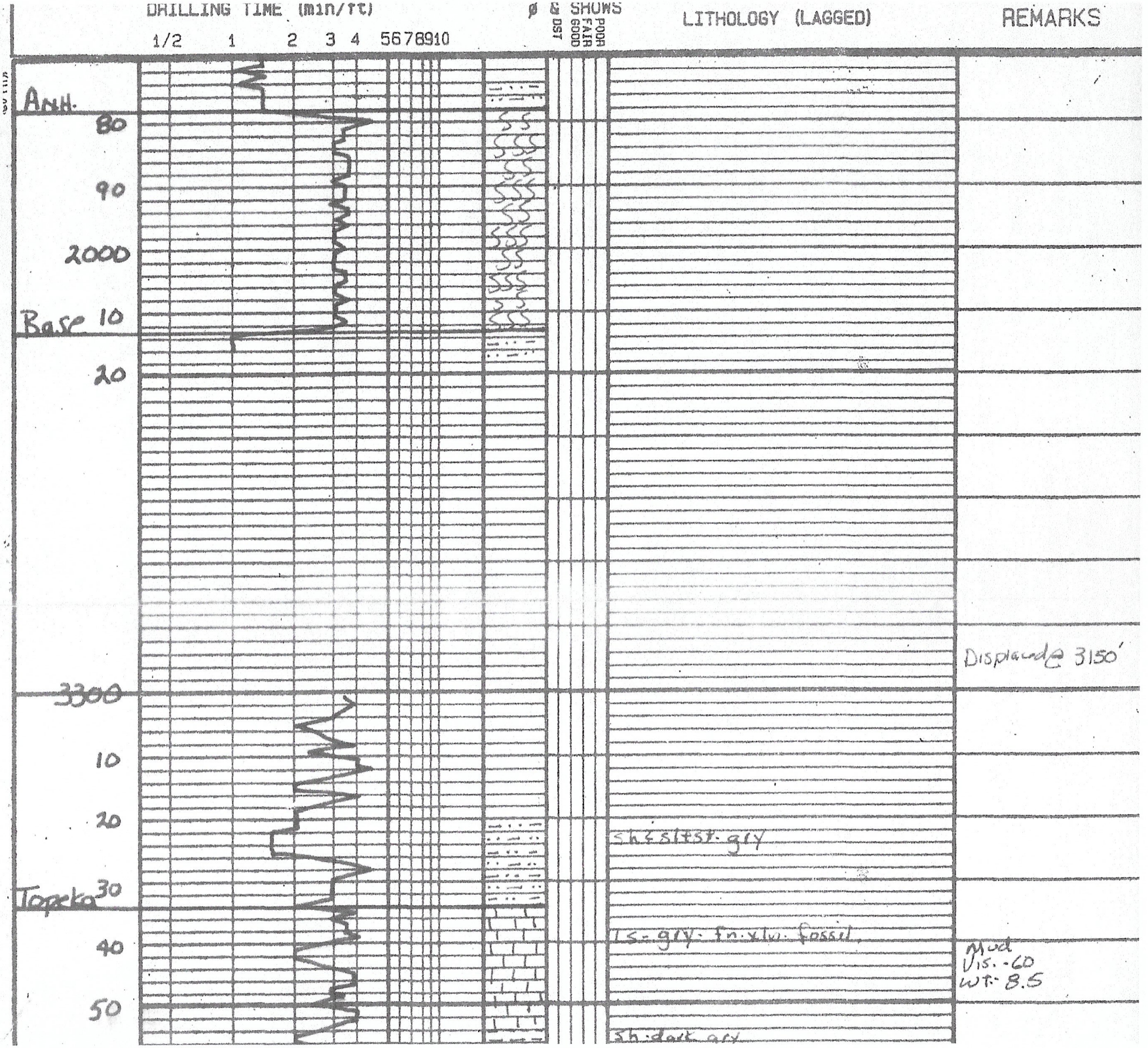
The Stinemetz #1 well was drilled with Discovery Drilling tools rig #4 beginning September 16, 2019 and drilling was completed September 22, 2019.

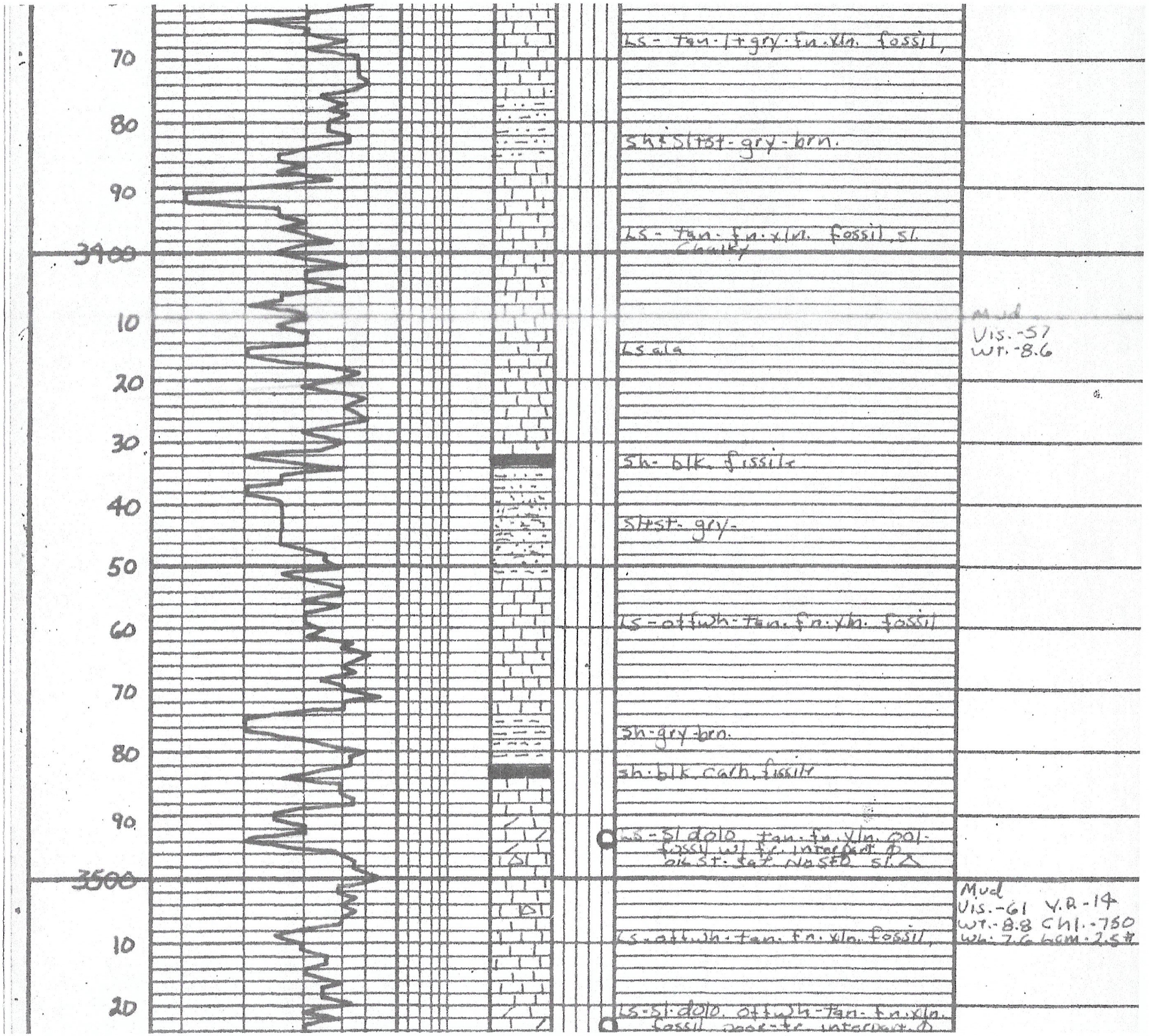
The drill site was a long NE offset to the discovery well on the same 3-D seismic closure. The well ran 2' low structurally and therefore, tested mainly water on DST #1. The lower LKc was covered on DST #2 with negative results also.

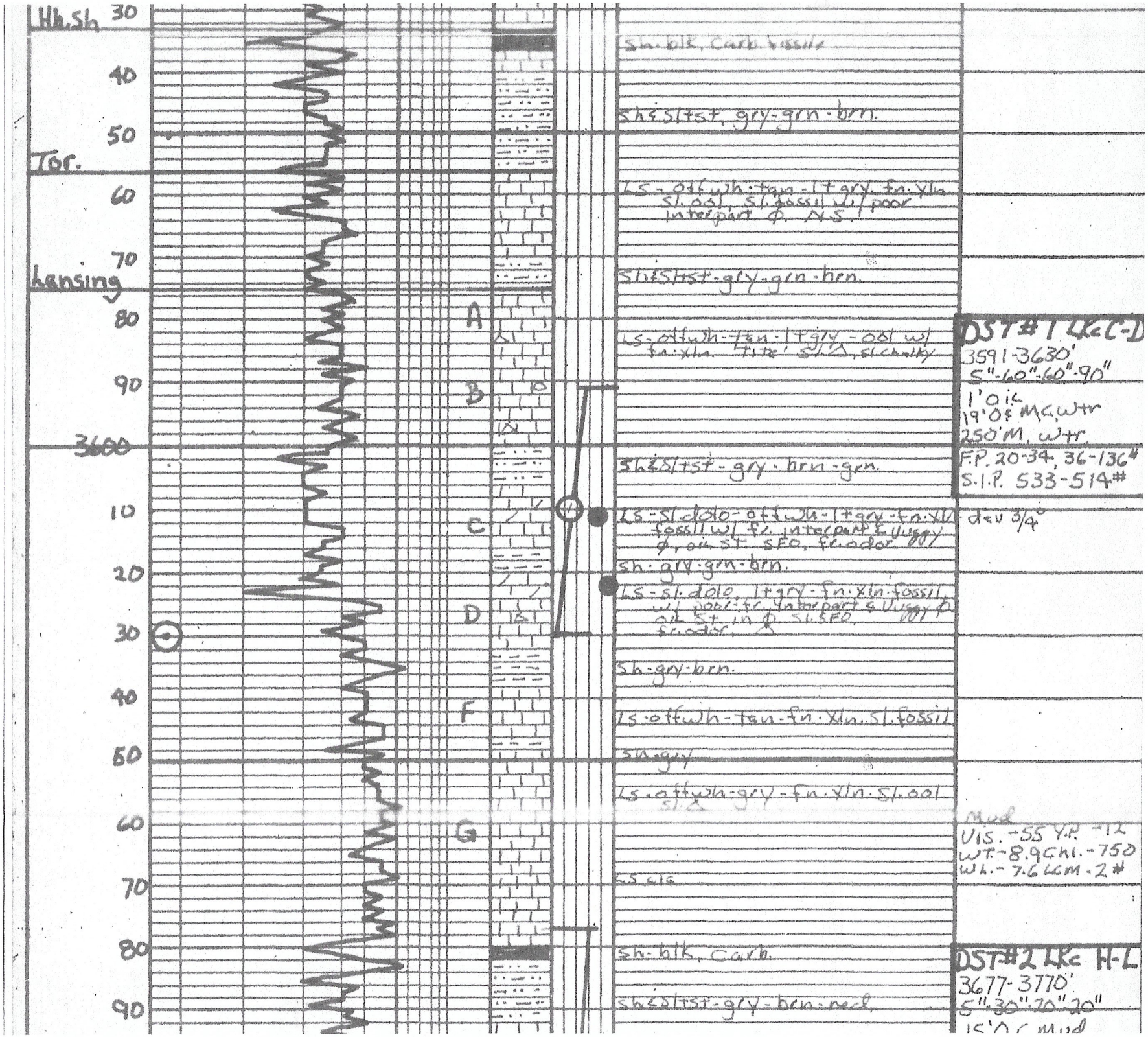
Based upon all data, no electric log was run and the well plugged as a dry hole.

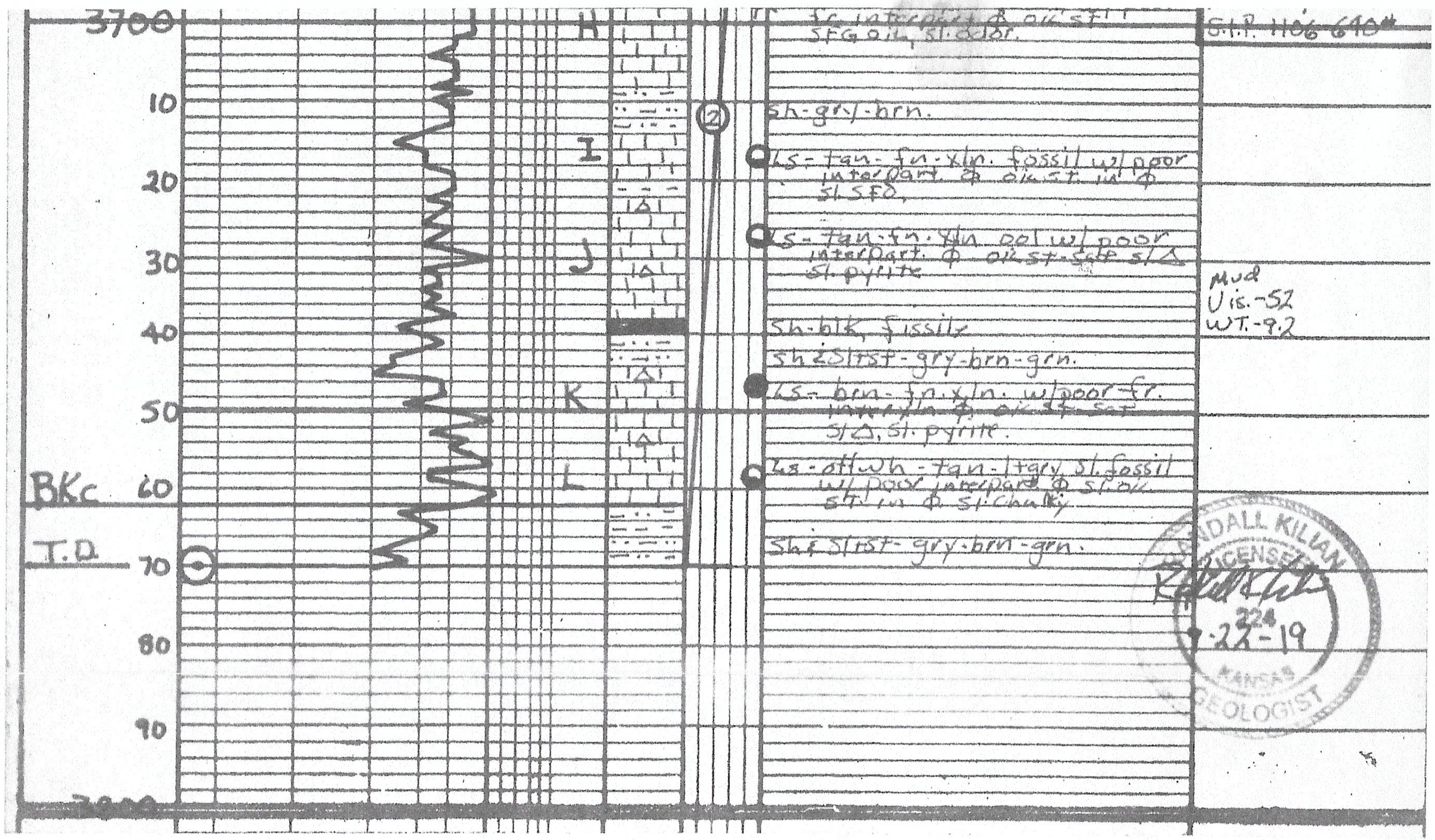
Respectfully,

Randall Kilian


DRILLING TIME (min/ft)
1/2 1 2 3 4 5 6 7 8 9 10
ø & DST
SHOWS
POOR
FAIR
GOOD
LITHOLOGY (LAGGED)
REMARKS
ANH.
80
90
2000
Base 10
20
Displaced 3150'
3300
10
20
Topeka 30
sh & slt st. gry
40
ls - gry - fn. x lw. fossil
Mud
Vis. - 60
Wt. - 8.5
50
sh - dark gry


70
80
90
3400
10
20
30
40
50
60
70
80
90
3500
10
20
Ls - tan-lt gry-fn.xln. fossil,
sh & slst-gry-brn.
Ls - tan-fn.xln. fossil, sl. cherty
Mud
Vis.-57
Wt.-8.6
Ls sla
sh- blk. fissile
slst- gry-
Ls-aft wh-tan. fn.xln. fossil
sh-gry-brn.
sh-blk. carb. fissile
ss-sl dolo tan-fn.xln. sil-fossil w/ fr. interbed of slst-gry wash sl.
Mud
Vis.-61 Y.P.-14
Wt.-8.8 Chl.-750
Wtr.-7.6 Calc.-2.5#
Ls-aft wh-tan. fn.xln. fossil,
Ls-sl dolo. aft wh-tan. fn.xln. fossil poor-fr. interbed


Hb.Sh
30
40
50
Tor.
60
70
Lansing
80
90
3600
10
20
30
40
50
60
70
80
90
A
B
C
D
F
G
Sh. blk, Carb. fossils
sh & slt-st, gry-grn-brn.
LS - off wh-tan-lt gry. fn. xln. sl. ool, sl. fossil w/ poor interpart. Φ. N.S.
sh & slt-st-gry-grn-brn.
LS-off wh-tan-lt gry-ool w/ fn. xln. tite' sl Δ, sl chalky
sh & slt-st - gry-brn-grn.
LS-sl dolo-off wh-lt gry-fn. xln fossil w/ fr. interpart & vuggy Φ, oil st. sl FO, fr odor
sh-gry-grn-brn.
LS-sl. dolo. lt gry-fn. xln fossil w/ poor-fr, interpart & vuggy Φ oil st. in Φ sl. FO, fr odor.
sh-gry-brn.
LS-off wh-tan-fn. xln. sl. fossil
sh-gry
LS-off wh-gry-fn. xln. sl. ool
LS clg
sh-blk, Carb.
sh & slt-st-gry-brn-red
DST #1 LKC-D
3591-3630'
5"-60"-60"-90"
1' oil
19' OCM & wtr
250' M. wtr.
F.P. 20-34, 36-136#
S.I.P. 533-514#
dev 3/4°
Mud
Vis. -55 Y.P. -12
wt.-8.9 Chl.-750
WL-7.6 LCM-2#
DST #2 LKC H-L
3677-3770'
5"-30"-20"-20"
15' OCM Mud


3700
10
20
30
40
50
60
70
80
90
BKc
T.D.
H
I
J
K
L
SFG oil, sl. odor.
S.I.P. 1106-640#
Sh-gry-brn.
Ls-tan-fn-xln. fossil w/poor interpart. Φ oil st. in Φ sl. SFO,
Ls-tan-fn-xln ool w/poor interpart. Φ oil st. sl. pyrite
Mud
Vis.-52
WT.-9.2
Sh-blk, fissile
Sh&Sltst-gry-brn-grn.
Ls-brn-fn-xln. w/poor-fr. interxln Φ
sl. pyrite.
Ls-off wh-tan-lt gry sl. fossil w/poor interpart Φ sl. oil st. in Φ sl. chalky
Sh&Sltst-gry-brn-grn.
RANDALL KILIAN
LICENSED
224
KANSAS
GEOLOGIST
2-22-19