Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1196779

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5046
Name: Raymond Oil Company, Inc.
Address 1: PO BOX 48788
Address 2:
City: WICHITA State: KS Zip: 67201 + 8788
Contact Person: Clarke T. Sandberg
Phone: (316) 267-4214
CONTRACTOR: License # 6039
Name: L. D. Drilling, Inc.
Wellsite Geologist: Kim Shoemaker
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ 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 ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

1/25/2014	2/3/2014	2/4/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22488-00-00
Spot Description:
NW NE NE NW Sec. 26 Twp. 18 S. R. 27 ☐ East ☑ West
110 Feet from ☑ North / ☐ South Line of Section
2230 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: Lane
Lease Name: Hanks-MRLI Unit Well #: 1
Field Name:
Producing Formation: N/A
Elevation: Ground: 2606 Kelly Bushing: 2611
Total Vertical Depth: 4691 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 261 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: 3100 ppm Fluid volume: 400 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:
Operator Name: Barracuda Operating Company
Lease Name: MISHLER M 1-SWD License #: 33593
Quarter SW Sec. 32 Twp. 16 S. R. 23 ☐ East ☑ West
County: Ness Permit #: D24286.0

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: 04/01/2014
☑ **Confidential Release Date:** 03/31/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 04/02/2014

[redacted] 1196779

Operator Name: Raymond Oil Company, Inc. Lease Name: Hanks-MRLI Unit Well #: 1

Sec. 26 Twp. 18 S. R. 27 ☐ East ☑ West County: Lane

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

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

Name	Top	Datum
B/ANH	2002	609
LANS	3932	-1321
STARK SH	4196	-1585
CHER SH	4475	-1864
CHER SD	4525	-1914
MISS	4598	-1987

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	24	261	CLASS A	175	3%CC, 2% GEL

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	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 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: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Raymond Oil Company, Inc.
Well Name	Hanks-MRLI Unit 1
Doc ID	1196779

All Electric Logs Run

MICRO
DUAL INDUCTION
COMPENSATED DENSITY
SONIC

Form	ACO1 - Well Completion
Operator	Raymond Oil Company, Inc.
Well Name	Hanks-MRLI Unit 1
Doc ID	1196779

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	24	261	CLASS A	175	3%CC, 2% GEL

CONSOLIDATED
Oil Well Services, LLC

265622

TICKET NUMBER 44625
LOCATION Oakley KS
FOREMAN Dane Rotzloff, Jerry Yates

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-25-14	7138	Hanks-MRLI unit 1	26	18	27	Lane

CUSTOMER: Raymond Oil Co.
MAILING ADDRESS: Po Box 48788
CITY: Wichita | STATE: KS | ZIP CODE: 67201

Dighton East to Turkey Rock RD. South to Alamota RD. East 1 mile North

TRUCK #	DRIVER	TRUCK #	DRIVER
57	Travis		
466	Jeremy		

JOB TYPE Surface | HOLE SIZE 12¼ | HOLE DEPTH 264 | CASING SIZE & WEIGHT 8⅝ 24#
CASING DEPTH 241 | DRILL PIPE 4½ | TUBING | OTHER 80'
SLURRY WEIGHT 14.8 | SLURRY VOL 1.34 | WATER gal/sk 3.5 | CEMENT LEFT in CASING
DISPLACEMENT 15.3 | DISPLACEMENT PSI | MIX PSI | RATE

REMARKS: Safety meeting on LO. Rig up. Run casing Break circ. Hook up pump truck mix 175 sks of class A 3% cc 2% gel. Wash up pump and lines. Displace 13.9 BBLS of water and shut in. Cement did circulate

circulate 4 BBLs to pit.

Thanks Dane & Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	1150	1150.00
5406	25	MILEAGE	5.25	131.25
5407	8.2	Ton Mileage Delivery (min)	430	430.00
1104	175 sks	Class A cement	18.55	3246.25
1102	493	Calcium Chloride	.94	463.42
1118B	329	Bentonite	.27	88.83
1111	100	Salt	—	—
			Sub	5509.75
			less 10%	550.98
			Sub	4958.77
		7.15	SALES TAX	244.43
			ESTIMATED TOTAL	5203.20

completed

Ravin 3737

AUTHORIZTION RLH Walker TITLE DATE

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

CONSOLIDATED
Oil Well Services, LLC

265870

TICKET NUMBER 43123
LOCATION OAKLEY KS.
FOREMAN DAMON M.

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

KS.

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
2-4-14	7158	HANKS - MRLI UNIT #1	26	18	27W	LANE

CUSTOMER: RAYMOND OIL
MAILING ADDRESS: P.O. BOX 48788
CITY: WITCHITA | STATE: KS. | ZIP CODE: 67201

DIGHTON E TO TURKEY RD IS 1E 1/2 N E INTO

TRUCK #	DRIVER	TRUCK #	DRIVER
399	TIM W		
566	JEREMY R.		

JOB TYPE PTA. HOLE SIZE 7 7/8 HOLE DEPTH 4690 CASING SIZE & WEIGHT
CASING DEPTH DRILL PIPE 4 1/2 TUBING OTHER
SLURRY WEIGHT 13.8 SLURRY VOL WATER gal/sk CEMENT LEFT in CASING
DISPLACEMENT DISPLACEMENT PSI MIX PSI RATE

REMARKS: SAFTY MEETING RIG UP ON LD PLUG AS ORDERED WITH 280SKS 60/40 POZ 4% GEL #1/4 FLO.

50 SKS @ 2010
80 SKS @ 1200
50 SKS @ 600
50 SKS @ 300
20 SKS @ 60 W/ 8 5/8 WOODEN PLUG
30 SKS R.H.

THANK YOU DAMON & CREW

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5405N	1	PUMP CHARGE	1395.00	1395.00
5406	25	MILEAGE	5.25	131.25
5407A	12.04	TON MILEAGE	1.75	526.75
1131	280 SKS	60/40 POZ	15.86	4440.80
1118B	963#	BENTONITE	.27	260.01
1107	70#	FLOSEAL	2.97	207.90
4432	1	8 5/8 WOODEN PLUG	100.75	100.75
1111	280#	SALT	N/C	N/C
			SUBTOTAL	7062.46
			LESS 10%	706.25
			SUBTOTAL	6356.21
		7.15	SALES TAX	322.35
Ravin 3737			ESTIMATED TOTAL	6678.56

Completed

AUTHORIZTION [signature] TITLE DATE

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: Hanks-MRLIUnit1Dst1

TIME ON: 12:36
TIME OFF: 20:36

Company Raymond Oil Company Inc. Lease & Well No. Hanks-MRLI Unit #1
Contractor L.D Drilling Charge to Raymond Oil Company Inc
Elevation 2611 KB Formation Fort Scott/ Chero/ Johnson Effective Pay -- Ft. Ticket No. SO440
Date 02/01/2014 Sec. 26 Twp. 18 S Range 27 W County Lane State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Jacob McCallie

Formation Test No. 1 Interval Tested from 4435 ft. to 4520 ft. Total Depth 4520 ft.
Packer Depth 4430 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 4435 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4416 ft. Recorder Number 5155 Cap. 5,000 P.S.I.
Bottom Recorder Depth (Outside) 4505 ft. Recorder Number 5586 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type Chem Viscosity 54 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.3 Water Loss 6.8 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in
Chlorides 3,500 P.P.M. Drill Pipe Length 4402 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 85 (21.5p) ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WSB Built to 1" in 30 min NOBB
2nd Open: WSB Died in 15 mins NOBB

Recovered 8 ft. of OSM 1% O 99% M
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks: Diesel in bucket

Tool Sample: 1% O 99% M

Price Job	
Other Charges	
Insurance	
Total	

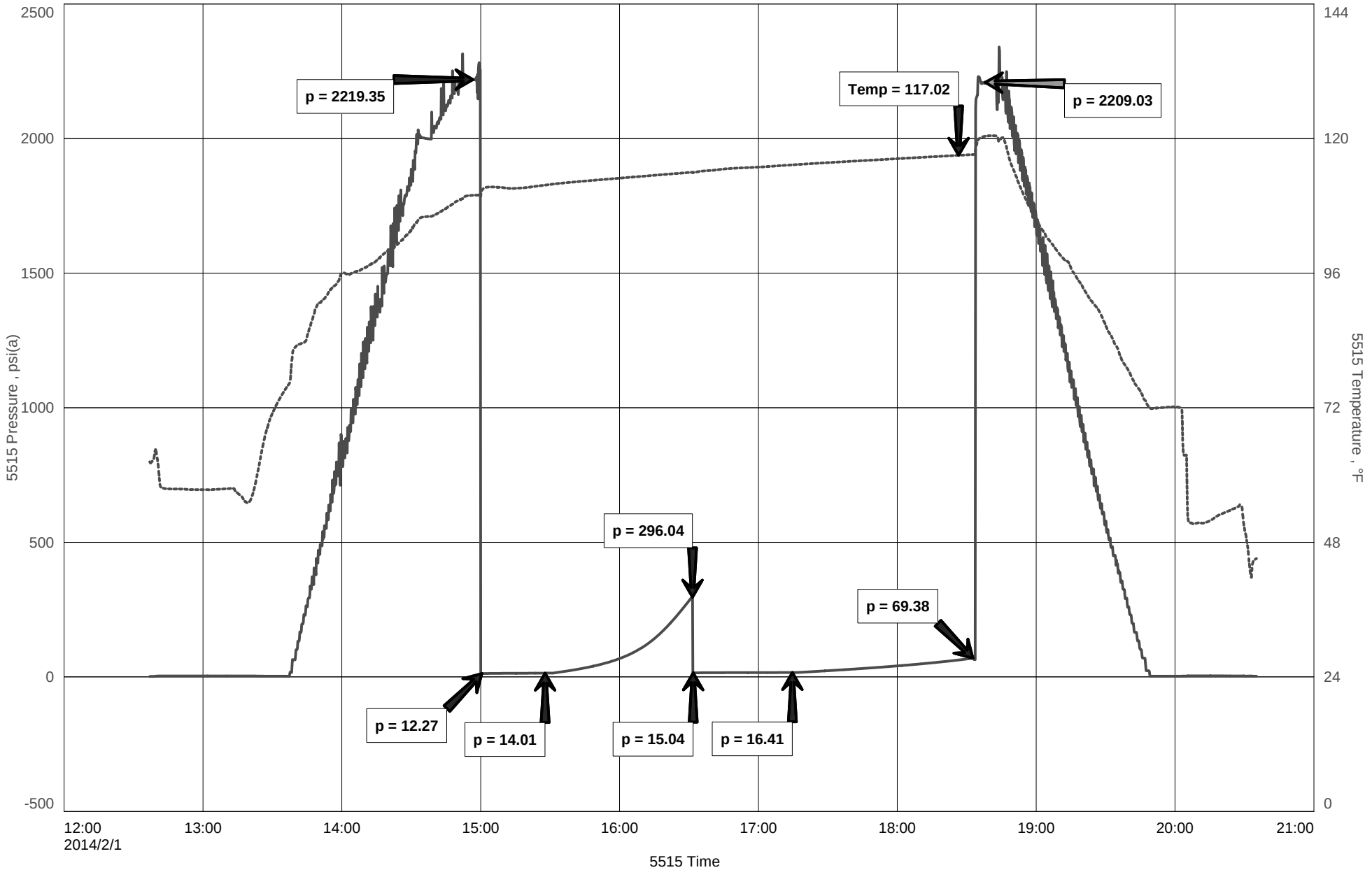
Time Set Packer(s) 3.05 pm A.M. P.M. Time Started Off Bottom 6.35pm A.M. P.M. Maximum Temperature

Initial Hydrostatic Pressure ..... (A) 2219 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 12 P.S.I. to (C) 14 P.S.I.
Initial Closed In Period ..... Minutes 60 (D) 296 P.S.I.
Final Flow Period ..... Minutes 45 (E) 15 P.S.I. to (F) 16 P.S.I.
Final Closed In Period ..... Minutes 75 (G) 69 P.S.I.
Final Hydrostatic Pressure ..... (H) 2209 P.S.I.

Raymond Oil Company Inc
Dst 1 (4435-4520) Fort Scott/Chero/Johnson
Start Test Date: 2014/02/01
Final Test Date: 2014/02/01

Hanks-MRLI Unit # 1
Formation: Dst 1 (4435-4520) Fort Scott/Chero/Johnson
Pool: WC
Job Number: SO440

Hanks-MRLI Unit # 1



Diamond Testing

General information Report

General Information

Company Name Raymond Oil Company Inc

Contact		**Ted McHenry**		
Well Name		**Hanks-MRLI Unit # 1**	**Job Number**	**SO440**
Unique Well ID	**Dst 1**	**(4435-4520) Fort Scott/Chero/Johnson**	**Representative**	**Ricky Ray**
Surface Location		**Sec: 26 18s 27w Lane County**	**Well Operator**	**L.D Drilling**
Well License Number			**Report Date**	**2014/02/01**
Field		**Wildcat**	**Prepared By**	**Ricky Ray**
Well Type		**Vertical**		

Test Type		**Drill Stem Test**		
Formation	**Dst 1**	**(4435-4520) Fort Scott/Chero/Johnson**		
Well Fluid Type		**01 Oil**	**Start Test Time**	**12:37:00**
			Final Test Time	**20:36:00**
Start Test Date		**2014/02/01**		
Final Test Date		**2014/02/01**		
Gauge Name		**5515**		
Gauge Serial Number				

Test Results

Recovery

8' OSM 1% O 99%M

Tool Sample

1 % O 99% M

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: Hanks-MRLIUnit1Dst2

TIME ON: 5:23
TIME OFF: 13:47

Company Raymond Oil Company Inc. Lease & Well No. Hanks-MRLI Unit #1
Contractor L.D Drilling Charge to Raymond Oil Company Inc
Elevation 2611 KB Formation Chero Snd Effective Pay -- Ft. Ticket No. SO441
Date 02/02/2014 Sec. 26 Twp. 18 S Range 27 W County Lane State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Jacob McCallie

Formation Test No. 2 Interval Tested from 4518 ft. to 4540 ft. Total Depth 4540 ft.
Packer Depth 4513 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 4518 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4499 ft. Recorder Number 5155 Cap. 5,000 P.S.I.
Bottom Recorder Depth (Outside) 4523 ft. Recorder Number 5586 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type Chem Viscosity 54 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.3 Water Loss 6.8 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in
Chlorides 3,500 P.P.M. Drill Pipe Length 4485 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 22 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WSB Built to 1 1/2" in 30 min NOBB
2nd Open: WSB Died in 10 mins NOBB

Recovered 9 ft. of OSM 100% M (few oil specks)
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks: Diesel in bucket

Tool Sample: 1% O 99% M

Price Job	
Other Charges	
Insurance	
Total	

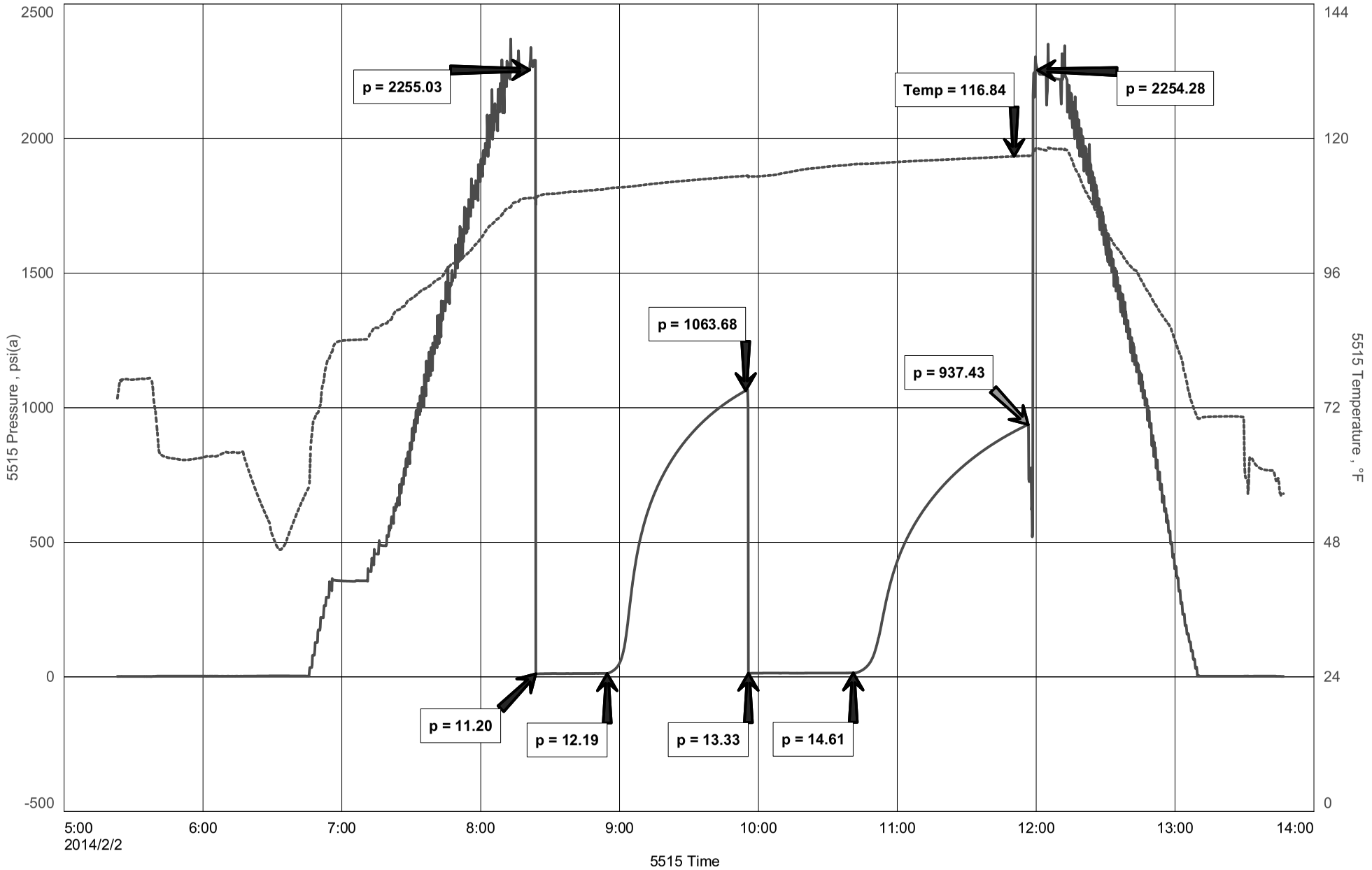
Time Set Packer(s) 8:30 am A.M. P.M. Time Started Off Bottom 12:00 pm A.M. P.M. Maximum Temperature

Initial Hydrostatic Pressure ..... (A) 2255 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 11 P.S.I. to (C) 12 P.S.I.
Initial Closed In Period ..... Minutes 60 (D) 1064 P.S.I.
Final Flow Period ..... Minutes 45 (E) 13 P.S.I. to (F) 15 P.S.I.
Final Closed In Period ..... Minutes 75 (G) 937 P.S.I.
Final Hydrostatic Pressure ..... (H) 2254 P.S.I.

Raymond Oil Company Inc
Dst 2 4518-4540 Chero Snd
Start Test Date: 2014/02/01
Final Test Date: 2014/02/01

Hanks-MRLI Unit # 1
Formation: Dst 2 4518-4540 Chero Snd
Pool: WC
Job Number: SO441

Hanks-MRLI Unit # 1



Diamond Testing

General information Report

General Information

Company Name Raymond Oil Company Inc

Contact	Clarke Sandberg		
Well Name	Hanks-MRLI Unit # 1	**Job Number**	SO441
Unique Well ID	Dst 2 4518-4540 Chero Snd	**Representative**	Ricky Ray
Surface Location	Sec: 26 18s 27w Lane County	**Well Operator**	L.D Drilling
Well License Number		**Report Date**	2014/02/01
Field	Wildcat	**Prepared By**	Ricky Ray
Well Type	Vertical		

Test Type	Drill Stem Test		
Formation	Dst 2 4518-4540 Chero Snd		
Well Fluid Type	01 Oil	**Start Test Time**	05:23:00
		Final Test Time	13:47:00
Start Test Date	2014/02/01		
Final Test Date	2014/02/01		
Gauge Name	5515		
Gauge Serial Number			

Test Results

RECOVERED:

9'	OSM	100% M (few oil specks)

TOOL SAMPLE:

1% O 99% M

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: Hanks-MRLIUnit1Dst3

TIME ON: 2-3 17:02
TIME OFF: 2-4 01:50

Company Raymond Oil Company Inc. Lease & Well No. Hanks-MRLI Unit #1
Contractor L.D Drilling Charge to Raymond Oil Company Inc
Elevation 2611 KB Formation Chero Snd Effective Pay -- Ft. Ticket No. SO442
Date 02/03/2014 Sec. 26 Twp. 18 S Range 27 W County Lane State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Jacob McCallie

Formation Test No. 3 Interval Tested from 4516 ft. to 4570 ft. Total Depth 4690 ft.
Packer Depth 4511 ft. Size 6 3/4 in. Packer depth 4570 ft. Size 6 3/4 in.
Packer Depth 4516 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4497 ft. Recorder Number 5155 Cap. 5,000 P.S.I.
Bottom Recorder Depth (Outside) 4548 ft. Recorder Number 5586 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth 4687 ft. Recorder Number 3851 Cap. 5,000 P.S.I.

Mud Type Chem Viscosity 54 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.3 Water Loss 6.8 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in
Chlorides 3,500 P.P.M. Drill Pipe Length 4483 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 54 (23A) ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. TP: 120' Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: 1/2" Blow- Built to 10" in 30 min NOBB
2nd Open: 1/4" Blow- Built to BB in 37 min NOBB

Recovered 78 ft. of SLWCM 13% W 87% M
Recovered 189 ft. of SLMCW 90% W 10% M
Recovered 267 ft. of TOTAL FLUID
Recovered ft. of
Recovered ft. of PH: 7 RW: .51 @ 42 degrees F
Recovered ft. of Chlorides: 22,000 ppm
Remarks: Diesel in bucket

Tool Sample: 40% W 60% M

Price Job	
Other Charges	
Insurance	
Total	

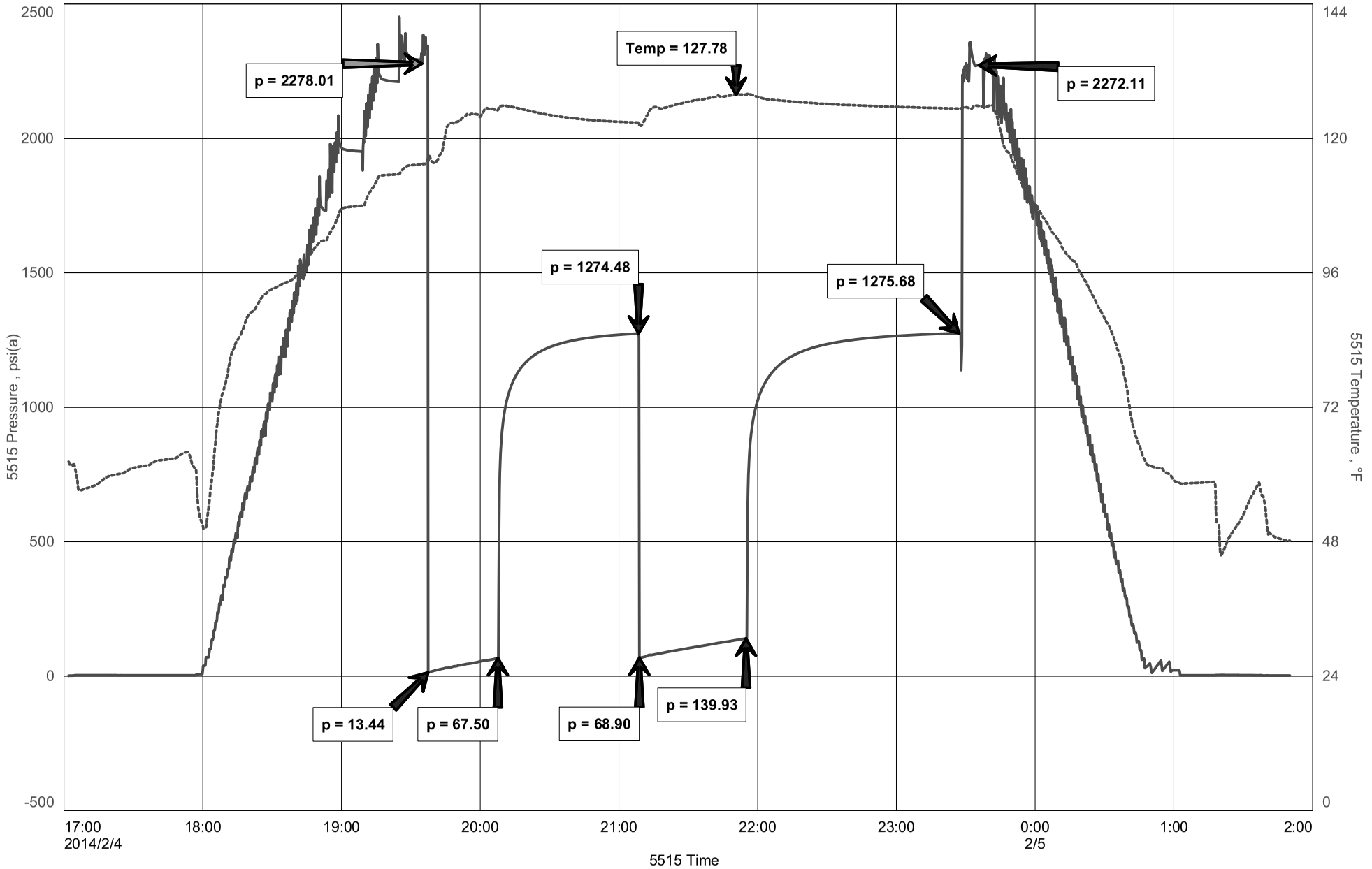
Time Set Packer(s) 7:42 PM A.M. P.M. Time Started Off Bottom 11:27 PM A.M. P.M. Maximum Temperature 128

Initial Hydrostatic Pressure ..... (A) 2278 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 13 P.S.I. to (C) 68 P.S.I.
Initial Closed In Period ..... Minutes 60 (D) 1274 P.S.I.
Final Flow Period ..... Minutes 45 (E) 69 P.S.I. to (F) 140 P.S.I.
Final Closed In Period ..... Minutes 90 (G) 1276 P.S.I.
Final Hydrostatic Pressure ..... (H) 2272 P.S.I.

Raymond Oil Company Inc
Dst 3 4516-4570 TD 4690 Chero Snd
Start Test Date: 2014/02/03
Final Test Date: 2014/02/04

Hanks-MRLI Unit # 1
Formation: Dst 3 4516-4570 TD 4690 Chero Snd
Pool: WC
Job Number: SO442

Hanks-MRLI Unit # 1



Diamond Testing

General information Report

General Information

Company Name Raymond Oil Company Inc

Contact	Clarke Sandberg		
Well Name	Hanks-MRLI Unit # 1	**Job Number**	SO442
Unique Well ID	Dst 3 4516-4570 TD 4690 Chero Snd	**Representative**	Jacob McCallie
Surface Location	Sec: 26 18s 27w Lane County	**Well Operator**	L.D Drilling
Well License Number		**Report Date**	2014/02/03
Field	Wildcat	**Prepared By**	Jacob McCallie
Well Type	Vertical		

Test Type	Drill Stem Test		
Formation	Dst 3 4516-4570 TD 4690 Chero Snd		
Well Fluid Type	06 Water	**Start Test Time**	17:02:00
		Final Test Time	01:50:00
Start Test Date	2014/02/03		
Final Test Date	2014/02/04		
Gauge Name	5515		
Gauge Serial Number			

Test Results

RECOVERED:

78'	SLWCM	13% W 87% M
189'	SLMCW	90% W 10% M
267'	TOTAL FLUID	

PH: 7
RW: .51 @ 42 degrees F
Chlorides: 22,000 ppm

TOOL SAMPLE:
40% W 60% M

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 * WICHITA, KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY RAYMOND OIL COMPANY, INC.

LEASE #1 HANKS-MRLI UNIT

FIELD WILDCAT

LOCATION 110' FNL & 2230' FWL

SEC 26 TWSP 18s RGE 27W

COUNTY LANE STATE KANSAS

CONTRACTOR L.D. DRILLING, INC.

SPUD 1-25-14 COMP 2-4-14

RTD 4690 LTD 4691

MUD UP 3516 TYPE MUD CHEMICAL

ELEVATIONS

KB 2611

DF

GL 2606

Measurements Are All From 2611 KB

CASING

SURFACE 8 5/8" @ 261'

PRODUCTION

ELECTRICAL SURVEYS

DUAL IND., DENS.-N. MICRO SONIC

SAMPLES SAVED FROM 3400 TO 4690

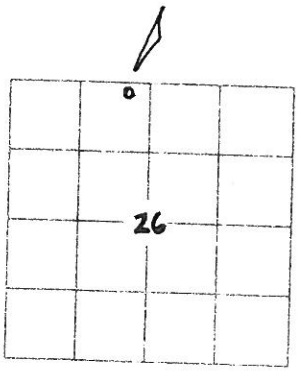
DRILLING TIME KEPT FROM 3400 TO 4690

SAMPLES EXAMINED FROM 3400 TO 4690

GEOLOGICAL SUPERVISION FROM 3700 TO 4690

GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	1974 + 637	1975 + 636
B/ANH.	2002 + 609	2002 + 609
STOTLER	3457 - 846	3458 - 847
HEEBNER	3893 - 1282	3897 - 1286
LANSING	3932 - 1321	3932 - 1321
HUSHPUCKNEY	4235 - 1624	4237 - 1626
MARMATON	4301 - 1690	4309 - 1693
FORT SCOTT	4450 - 1839	4450 - 1839
CHEROKEE	4474 - 1863	4474 - 1863
MISSISSIPPI	4598 - 1987	4597 - 1986



REMARKS

1-25-14 SPUD
1-26 @ 346'
1-27 @ 1831'
1-28 @ 2720'
1-29 @ 3300'
1-30 @ 3860'
1-31 @ 4260'
2-1 @ 4510'
2-2 @ 4540'
2-3 @ 4690'
2-4 @ 4690'

API: 15-101-22488

SHOE01-06

LEGEND

LITHOLOGY

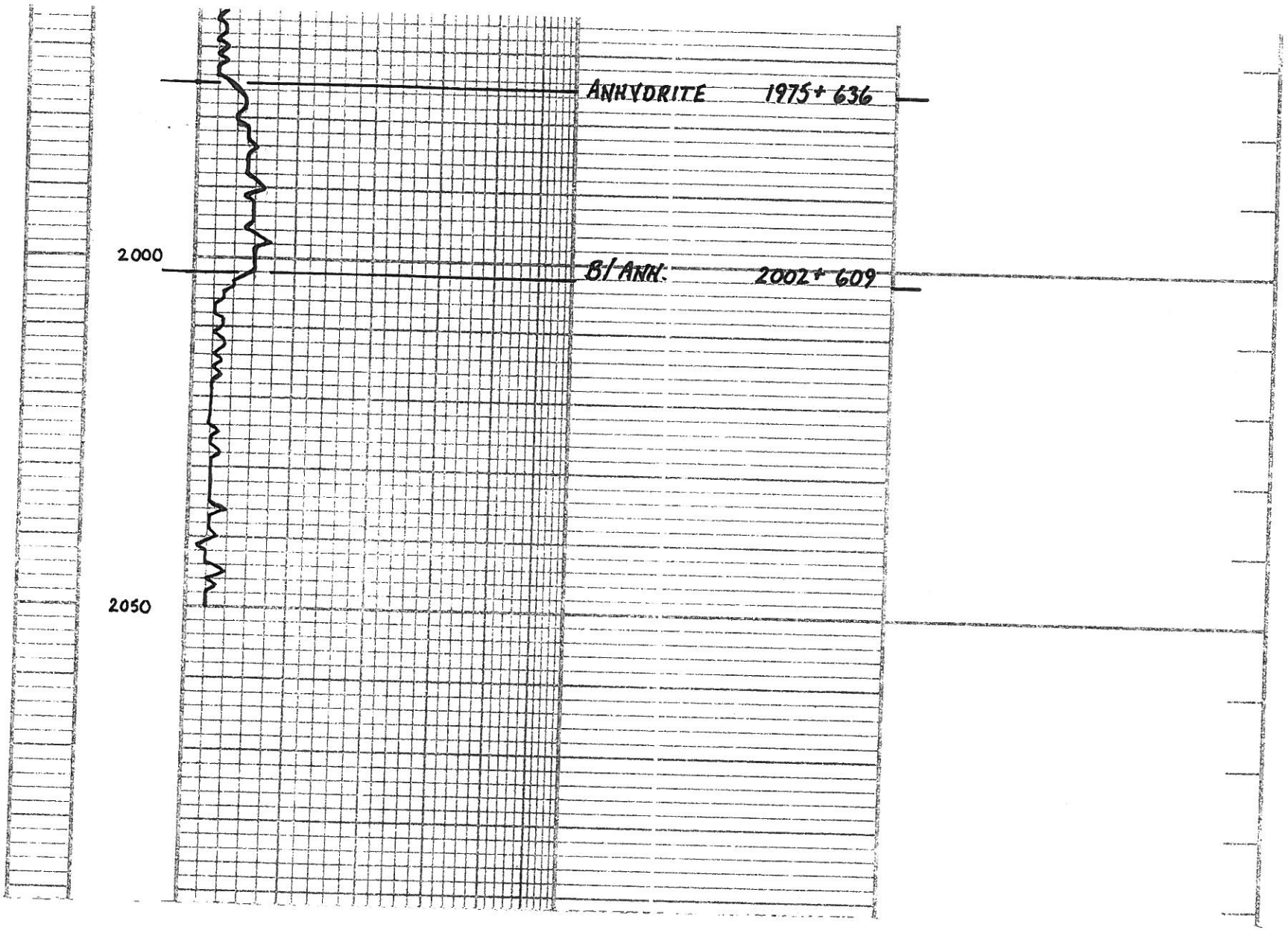
DEPTH
1950

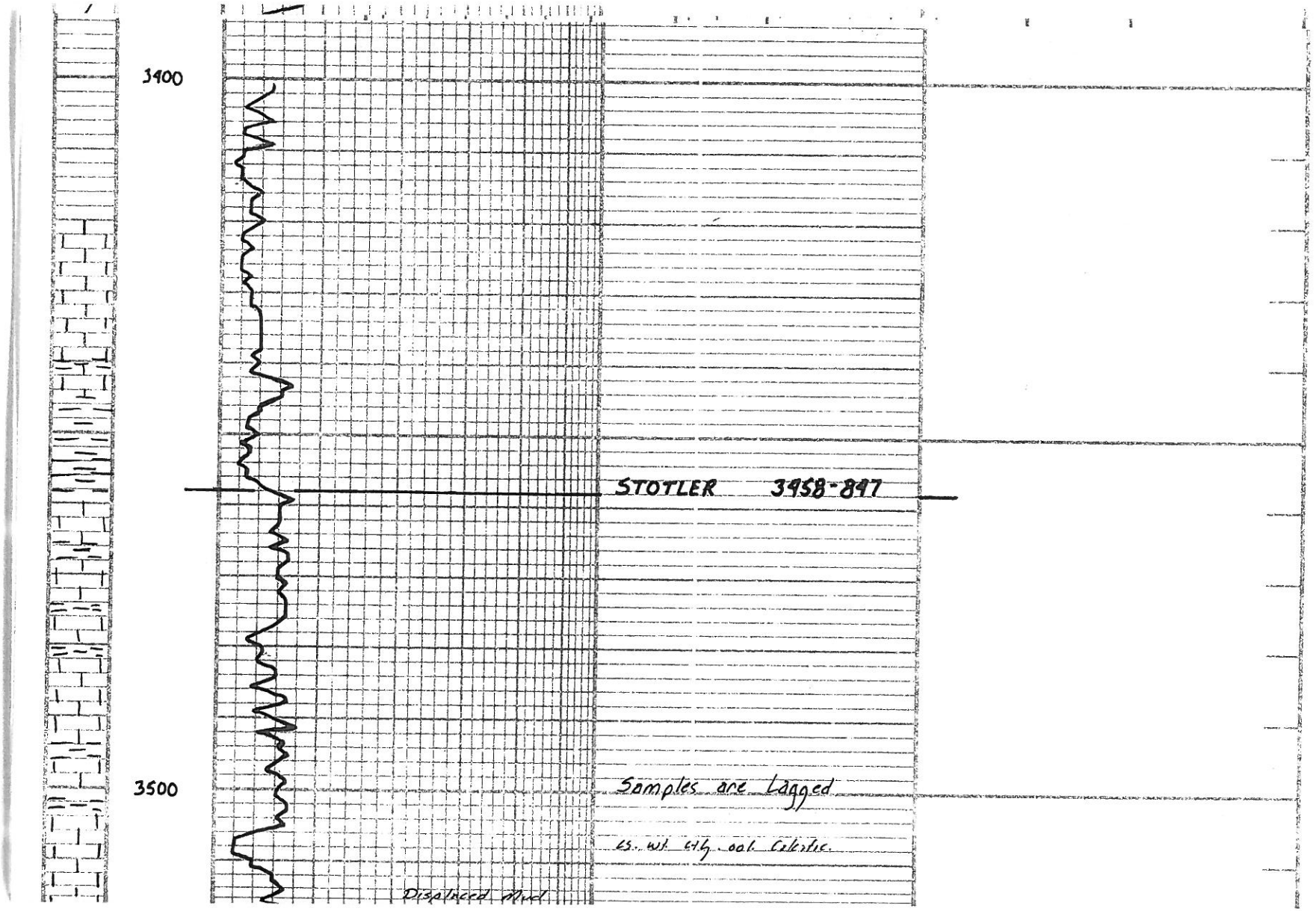
DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Increases

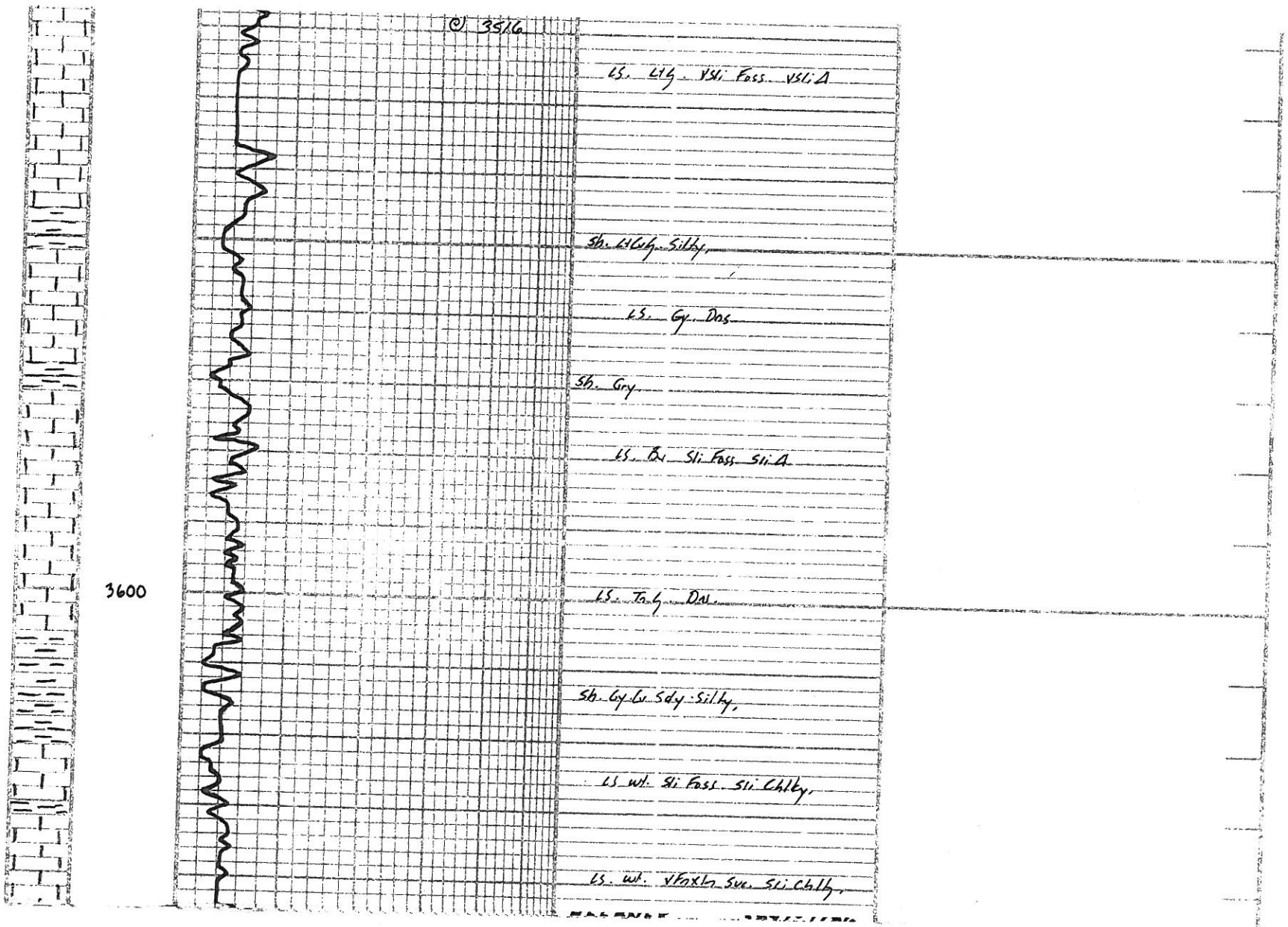
5" 10" 15" 20" 25"

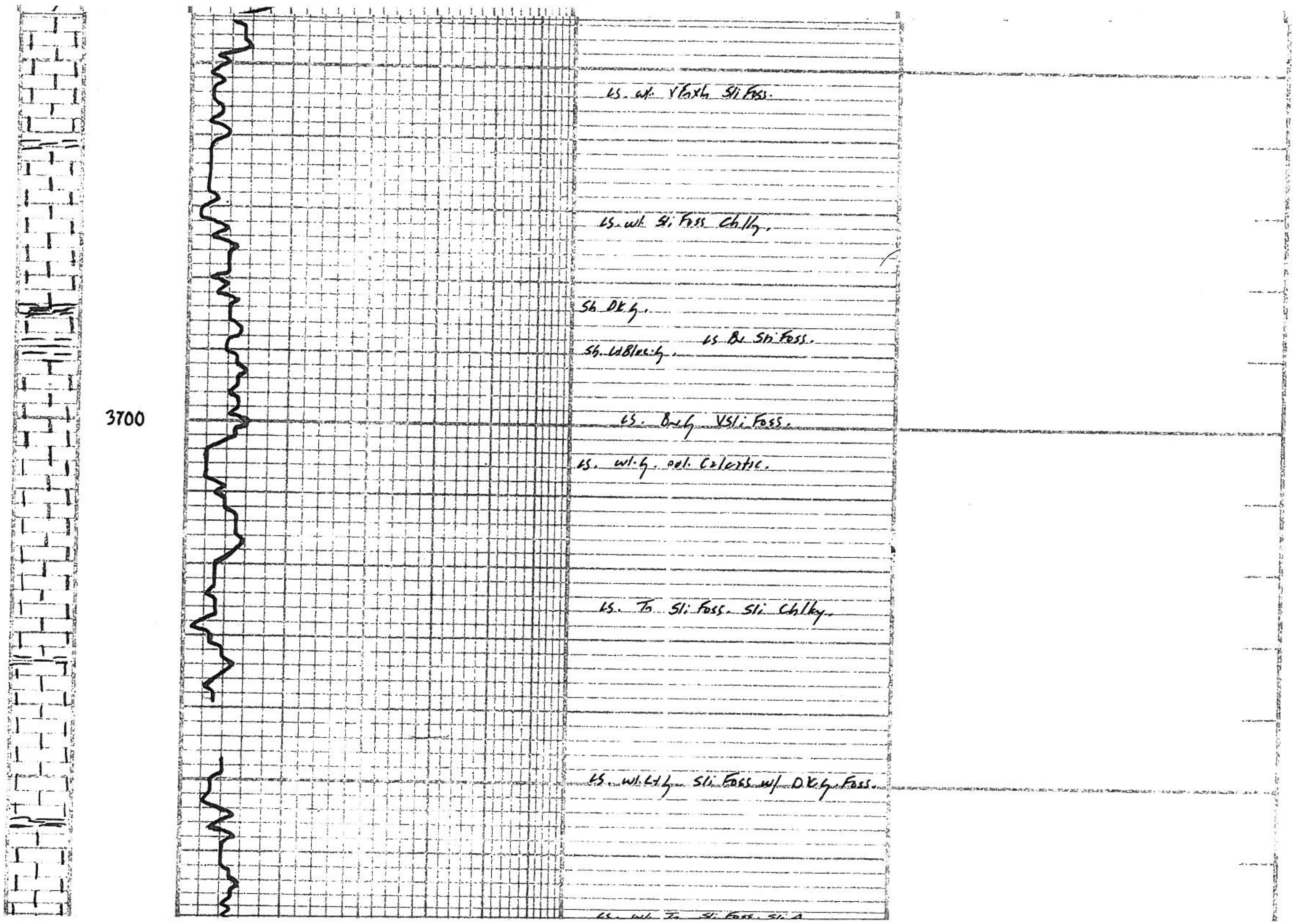
SAMPLE DESCRIPTIONS

REMARKS

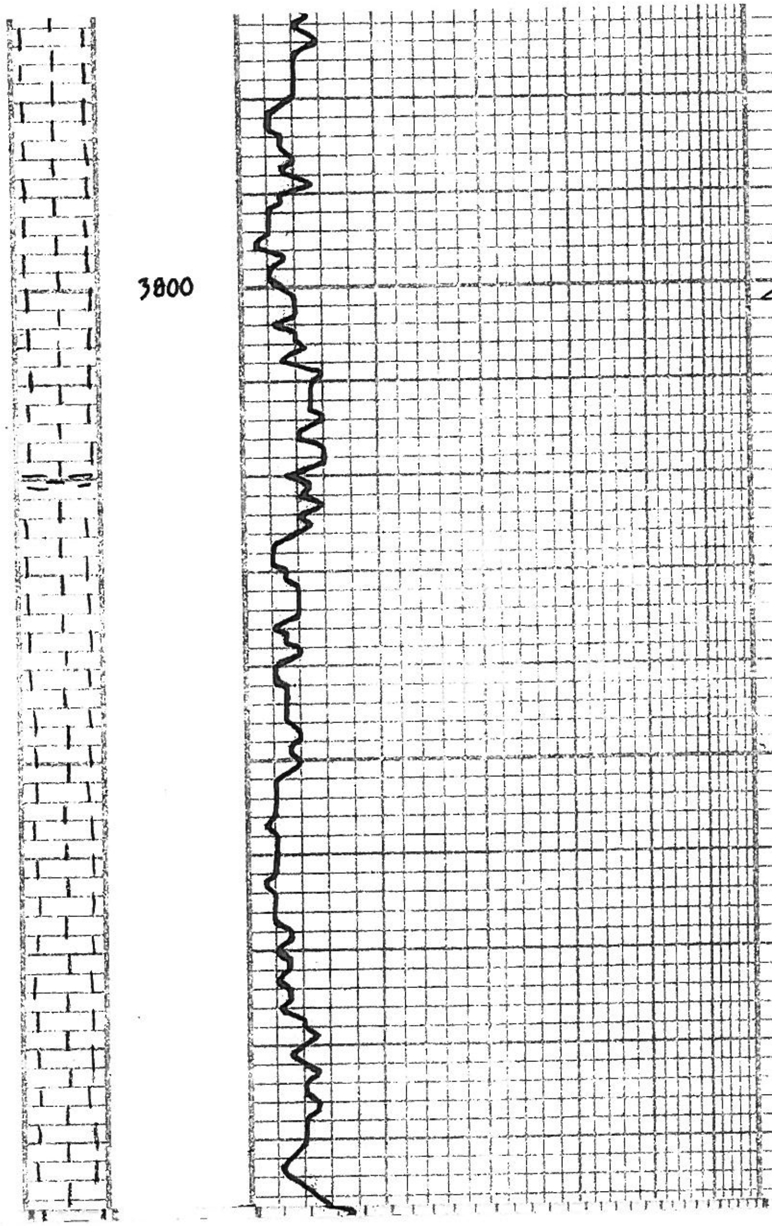

ANHYDRITE 1975+636
2000
B/ANH. 2002+609
2050


3400
3500
STOTLER 3958-847
Samples are Lagged
Displaced Mud


3600
3516
LS. Lt Gy. VSli Foss. VSli A
Sh. Lt Gy. Silty
LS. Gy. Dns
Sh. Gry
LS. Dk Sli Foss. Sli A
LS. Tn-Gy Dns.
Sh. Gy-Gn Sdy Silty,
LS wh. Sli Foss. Sli Chty,
LS. wh. VFoxln Sve. Sli Chty,



3700
Ls. w/. VFnXln. Sli Foss.
Ls. w/. Sli Foss. Chlky.
Sh. Dk. g.
Sh. LtBlu. g.
Ls. Br. Sli Foss.
Ls. Br. g. VSli Foss.
Ls. wh. g. ool. Celestic.
Ls. Tn. Sli Foss. Sli Chlky.
Ls. wh. Lt. g. Sli Foss w/ Dk. g. Foss.



LS. wt Tn Foss Calcitic.

LS. Ltg. Fn-xln Suc. Sli Foss.

Δ Gy.

LS. Tn Sli Foss. Sli Δ

LS. G. Fn-xln Suc.

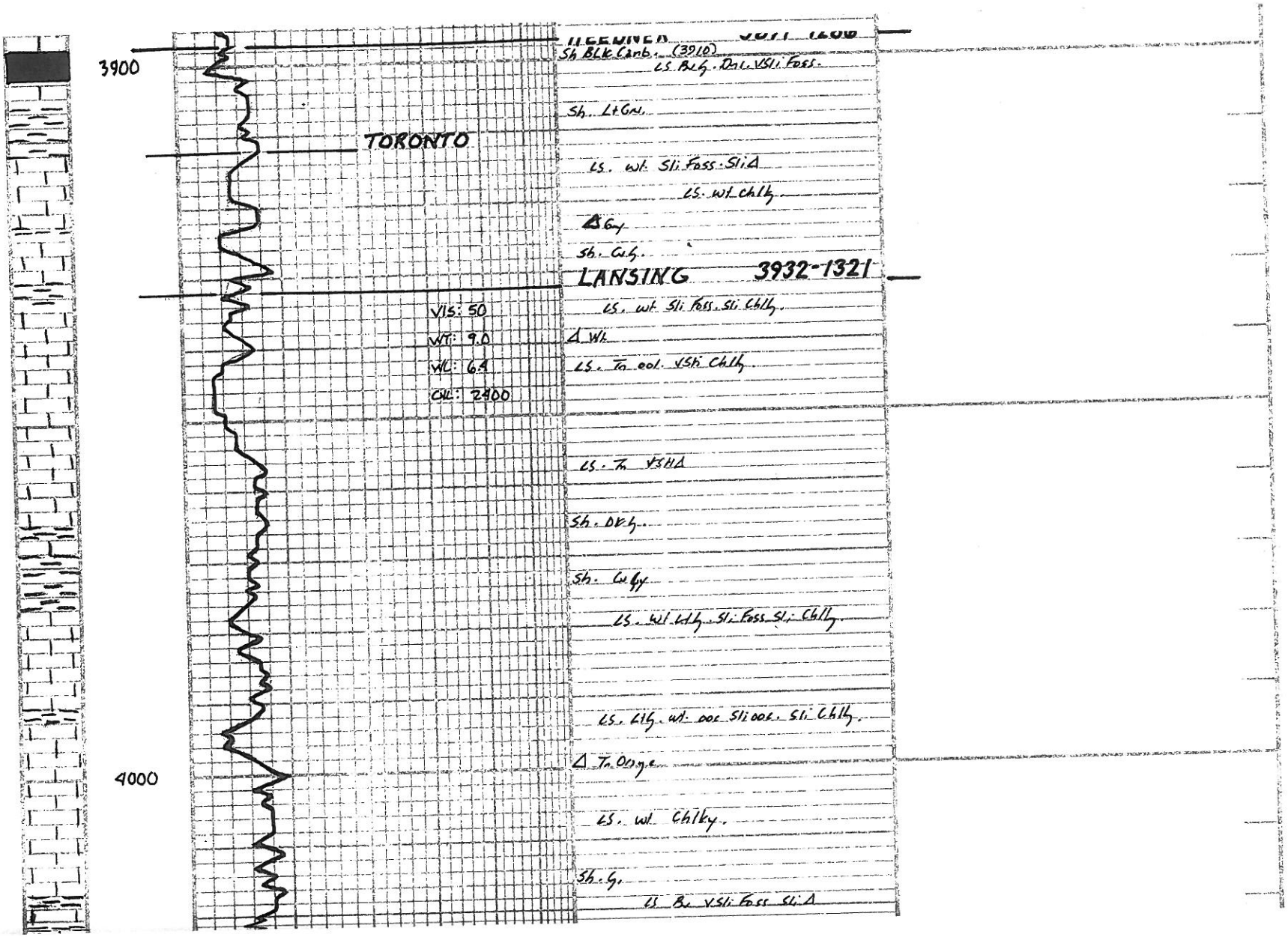
LS. wt Tn Micro-ool. Sli Δ

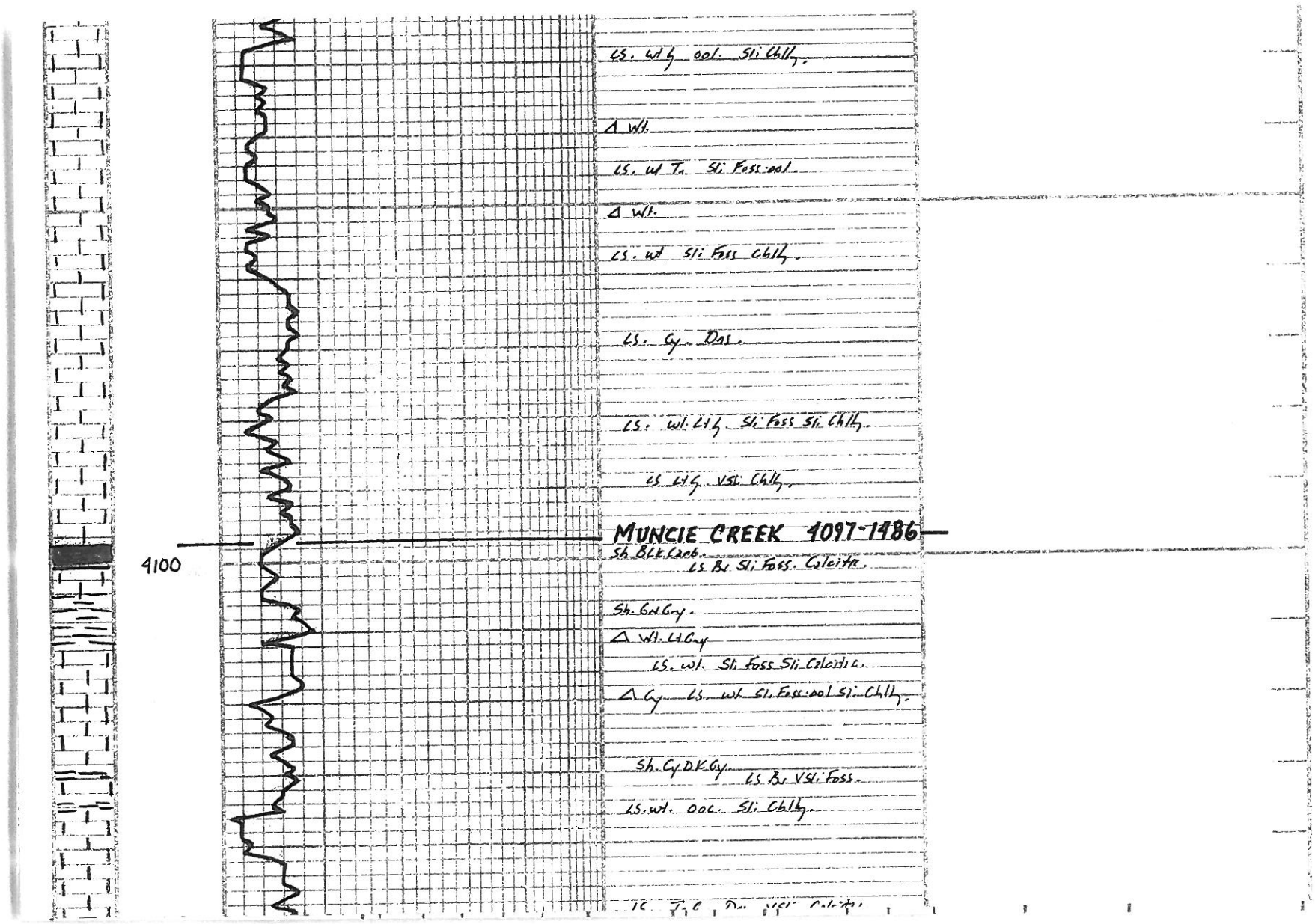
LS. wt Micro-ool. Sli Δ

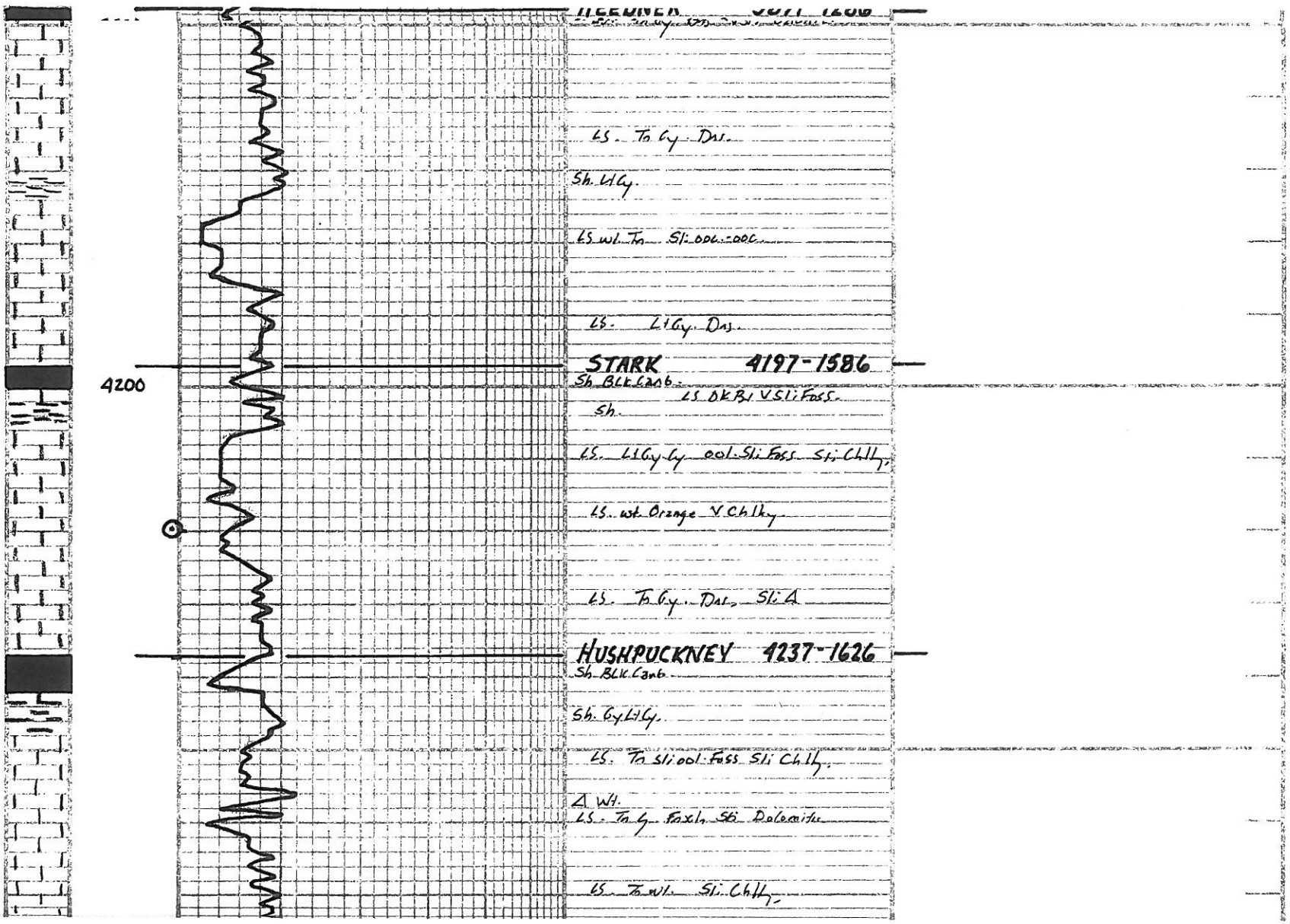
LS. wt Chlky.

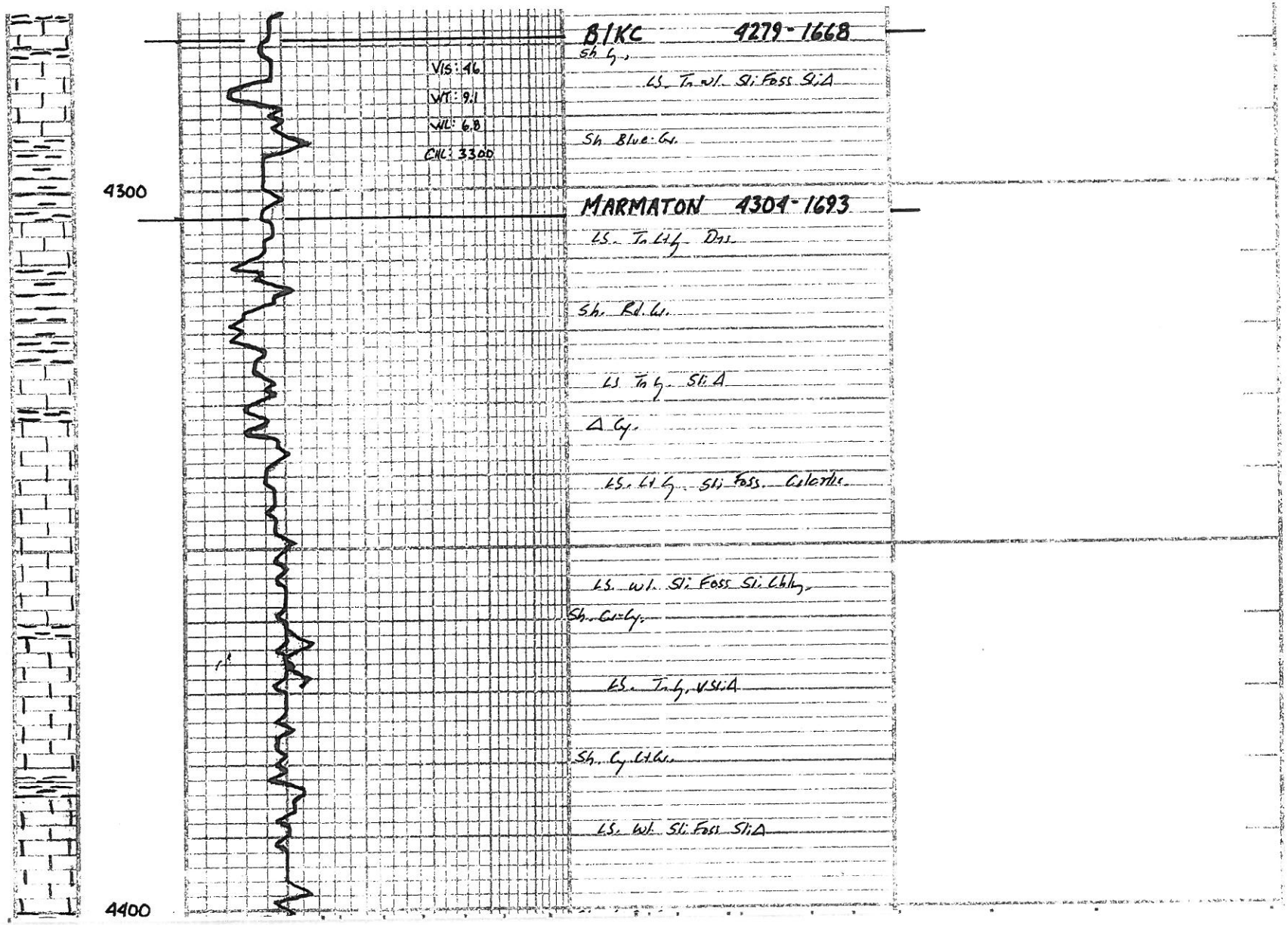
LS. wt Br Sli Foss Calcitic.

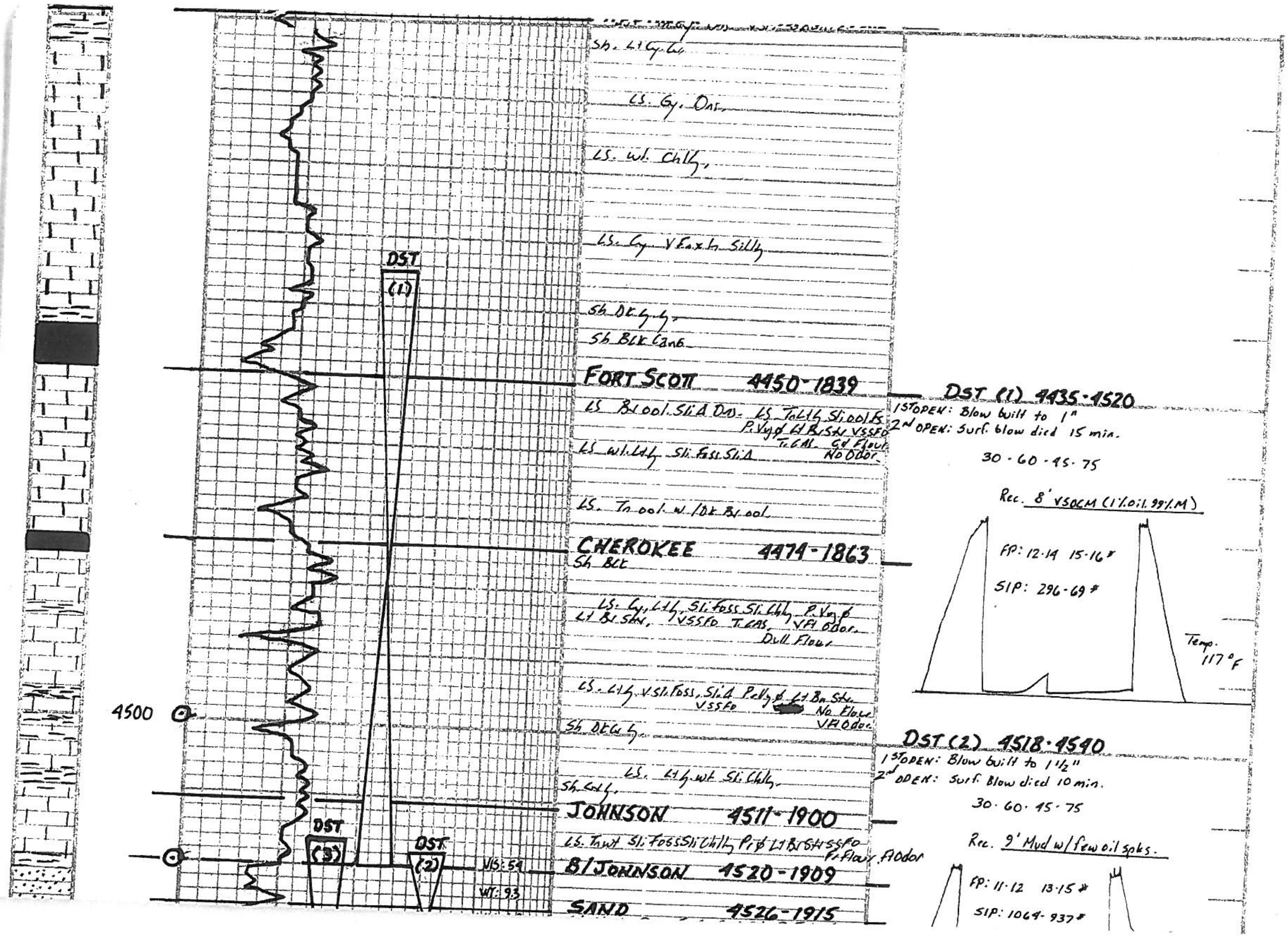
UECRAIEP 3897-1981

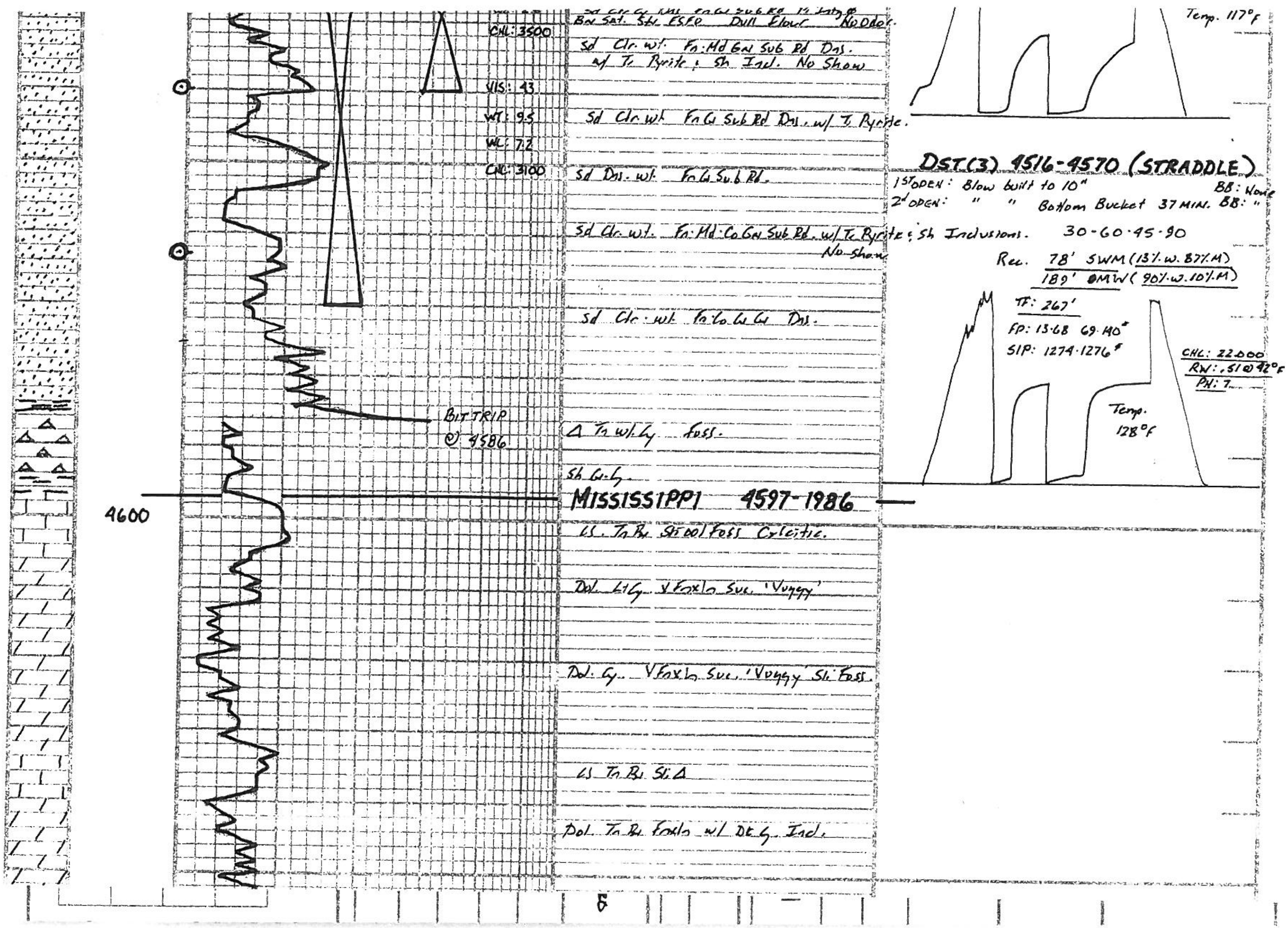

3900
4000
TORONTO
LANSING 3932-1321
VIS: 50
WT: 9.0
WL: 6.4
CHL: 2400
Sh BLK Carb.. (3910)
Sh. Lt Gy.
Sh. Gy.
Sh. Dk Gy
Sh. Gy


Ls. wh Gy ool. Sli Chlky.
Δ wh.
Ls. wh Tn. Sli Foss. ool.
Δ wh.
Ls. wh Sli Foss Chlky.
Ls. Gy. Das.
Ls. wh. Lt Gy. Sli Foss Sli Chlky.
Ls. Lt Gy. Vsl Chlky.
MUNCIE CREEK 1097-1486
Sh. Blk Carb.
Ls. Br. Sli Foss. Calcite.
Sh. Gn Gy.
Δ wh. Lt Gy
Ls. wh. Sli Foss Sli Calcitic.
Δ Gy Ls. wh. Sl. Foss. ool Sli. Chlky.
Sh. Gy. D.K. Gy.
Ls. Br. Vsl. Foss.
Ls. wh. ooc. Sli Chlky.
4100

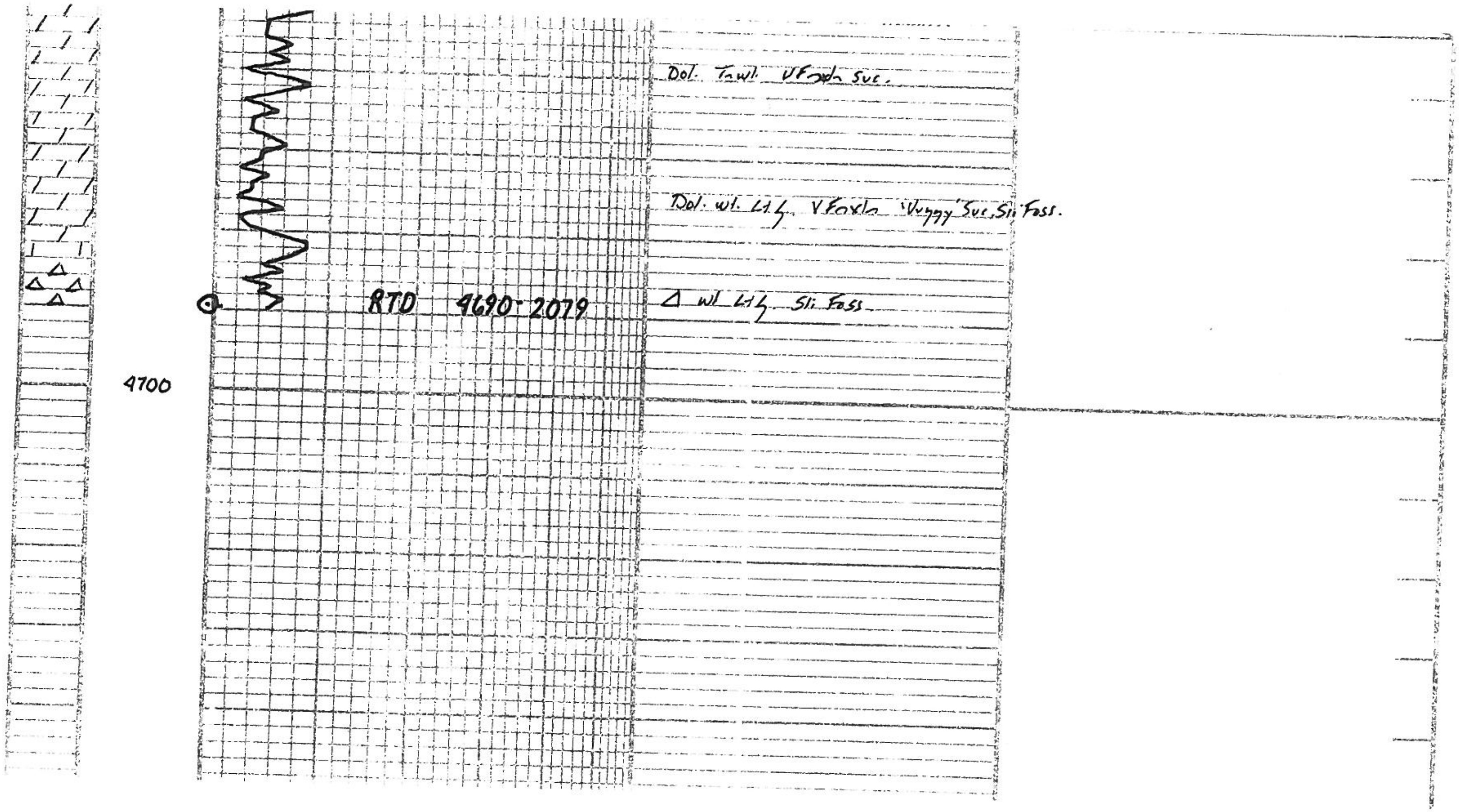

4200
LS. Tn Gy. Dns.
Sh. Lt Gy.
LS wl. Tn Sli. ool. ooc.
LS. Lt Gy. Dns.
STARK 4197-1586
Sh. Blk Carb.
LS. DK Bn V Sli Foss.
Sh.
LS. Lt Gy-Gy ool. Sli Foss. Sli Chty.
LS. wh. Orange V Chty
LS. Tn Gy. Dns, Sli A
HUSHPUCKNEY 4237-1626
Sh. Blk Carb.
Sh. Gy Lt Gy.
LS. Tn sli ool. Foss Sli Chty.
A WH.
LS. Tn Gy. Foxl, Sli Dolomitic
LS. Tn wl. Sli. Chty.


B/KC 9279 - 1668
Sh Gy.
LS. Tn wl. Sl. Foss Sl. Δ
Sh Blue Gy.
MARMATON 4304 - 1693
LS. Tn Lt Gy Dns.
Sh. Rd. Gy.
LS Tn Gy. Sl. Δ
Δ Gy.
LS. Lt Gy. Sli Foss. Celestite
LS. wl. Sl. Foss Sl. Chty.
Sh. Gy-Gy.
LS. Tn Gy. v Sl. Δ
Sh. Gy Lt Gy.
LS. wl. Sl. Foss. Sl. Δ
VIS: 46
WT: 9.1
WL: 6.8
CHL: 3300
4300
4400


Sh. Lt Gy. Lt.
LS. Gy. Dns.
LS. Wt. Chlky.
LS. Gy. VF.xln. Silty
Sh. Dk Gy.
Sh. Blk Carb.
DST (1)
FORT SCOTT 4450-1839
LS. Br. ool. Sli. Dns. LS. Tn. Lt Gy. Sli. ool. Fs. P. Vug ϕ Lt Br. Stn. VSSFO T. CAL. Gd Flour. No Odor.
LS. Wt. Lt Gy. Sli. Foss. Sli. D.
LS. Tn. ool. w/ Dk Br. ool.
CHEROKEE 4474-1863
Sh. Blk
LS. Gy. Lt Gy. Sli. Foss. Sli. Chlky. P. Vug ϕ Lt Br. Stn. VSSFO T. CAS. VFt Odor. Dull Flour.
LS. Lt Gy. V. Sli. Foss. Sli. D. Pelly ϕ Lt Br. Stn. VSSFO No Flour. VFt Odor.
4500
Sh. Dk Gy.
LS. Lt Gy. Wt. Sli. Chlky.
Sh. Gy.
JOHNSON 4511-1900
DST (3)
DST (2)
LS. Tn. Wt. Sli. Foss. Sli. Chlky. Pr ϕ Lt Br. Stn. SSFO Ft. Flour. Ft. Odor
VIS: 54
WT: 93
B/JOHNSON 4520-1909
SAND 4526-1915
DST (1) 4435-4520
1st OPEN: Blow built to 1"
2nd OPEN: Surf. blow died 15 min.
30 - 60 - 45 - 75
Rec. 8' VSOCM (1% oil, 99% M)
FP: 12-14 15-16#
SIP: 296-69#
Temp. 117°F
DST (2) 4518-4540
1st OPEN: Blow built to 1 1/2"
2nd OPEN: Surf. Blow died 10 min.
30 - 60 - 45 - 75
Rec. 9' Mud w/ few oil spks.
FP: 11-12 13-15#
SIP: 1064-937#



4600
CHL: 3500
VIS: 43
WT: 9.5
WL: 7.2
CHL: 3100
BIT TRIP @ 4586
Bn Sat. Stn ESFO Dull Flour. No Odor.
Sd Clr. w/ Fn:Md Gn Sub Rd Dns. w/ Tr Pyrite; Sh Ind. No Show
Sd Clr. w/ Fn Gr Sub Rd Dns. w/ Tr Pyrite.
Sd Dns. w/ Fn Gr Sub Rd.
Sd Clr. w/ Fn:Md:Co Gn Sub Rd. w/ Tr Pyrite; Sh Inclusions. No Show
Sd Clr. w/ Fn:Co Gr Gr Dns.
Δ Tn w/ Ly Foss.
Sh Gr Ly
MISSISSIPPI 4597-1986
LS Tn Bn Sl Dol Foss Crystic.
Dol Lt Gy V Fnxln Suc. 'Vuggy'
Dol Gy V Fnxln Suc. 'Vuggy' Sl Foss.
LS Tn Bn Sl Δ
Dol Tn Bn Fnxln w/ Dk Gy Ind.
Temp. 117°F
DST (3) 4516-4570 (STRADDLE)
1st OPEN: Blow built to 10" BB: None
2nd OPEN: " " Bottom Bucket 37 MIN. BB: "
30-60-45-90
Rec. 78' SWM (13% W. 87% M)
189' OMW (90% W. 10% M)
TF: 267'
FP: 13-68 69-140#
SIP: 1274-1276#
CHL: 22,000
RW: .51 @ 92°F
PH: 7
Temp. 128°F


Dol. Tan-wh. VFxln Suc.
Dol. wt. Lt Gy. VFxln 'Vuggy' Suc. Sli Foss.
Δ wt Lt Gy. Sli Foss.
RTD 4690 -2079
4700