



**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       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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

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

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report 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 and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  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				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	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
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	Ottley 2-16
Doc ID	1054228

All Electric Logs Run

Dual Ind/SP/GR
CN/CD/GR/CAL
ML
Sonic

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	Ottley 2-16
Doc ID	1054228

Tops

Name	Top	Datum
Anhydrite	2254	+549
B/Anhydrite	2274	+529
Heebner SH.	3756	-953
Toronto	3772	-969
Lansing	3794	-991
Muncie Creek SH.	3955	-1152
Stark SH.	4040	-1237
B/Kansas City	4120	-1317
Marmaton	4154	-1351
Pawnee	4245	-1442
Myric Station	4286	-1483
Ft. Scott	4299	-1496
Cherokee SH.	4325	-1522
Johnson Zone	4370	-1567
Mississippi	4428	-1625

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



phone: 316-337-6200  
fax: 316-337-6211  
<http://kcc.ks.gov/>

Thomas E. Wright, Chairman  
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

April 19, 2011

Donald R. Williams  
Shakespeare Oil Co., Inc.  
202 W MAIN ST  
SALEM, IL 62881-1519

Re: ACO1  
API 15-109-20978-00-00  
Ottley 2-16  
SE/4 Sec.16-14S-32W  
Logan County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Donald R. Williams



24 S. Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906  
 Voice: (785) 483-3887  
 Fax: (785) 483-5566

# INVOICE

Invoice Number: 126484  
 Invoice Date: Mar 12, 2011  
 Page: 1

**Bill To:**  
 Shakespere Oil Co., Inc.  
 202 West Main St.  
 Salem, IL 62881

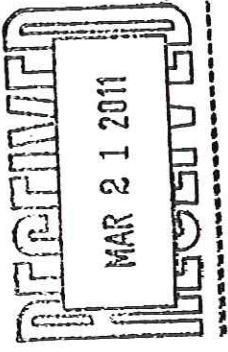
Federal Tax I.D.#: 20-5975804

*File*

Customer ID	Well Name# or Customer P.O.	Payment Terms
Shak	Ottley #2-16	Net 30 Days
Job Location	Camp Location	Service Date
KS1-01	Oakley	Mar 12, 2011
		Due Date
		4/11/11

Quantity	Item	Description	Unit Price	Amount
175.00	MAT	Class A Common	15.45	2,703.75
3.00	MAT	Gel	20.80	62.40
6.00	MAT	Chloride	58.20	349.20
184.00	SER	Handling	2.40	441.60
20.00	SER	Mileage 184 sx @.10 per sk per mi	18.40	368.00
1.00	SER	Surface	1,018.00	1,018.00
20.00	SER	Pump Truck Mileage	7.00	140.00

*INT*



Subtotal	5,082.95
Sales Tax	227.42
Total Invoice Amount	5,310.37
Payment/Credit Applied	
<b>TOTAL</b>	<b>5,310.37</b>

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

**\$ 1016.59**

ONLY IF PAID ON OR BEFORE  
**Apr 6, 2011**

*DW*

# ALLIED CEMENTING CO., LLC.

039789

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Oakley

DATE	3-12-11	SEC.	76	TWP.	145	RANGE	15-109-20978	CALLED OUT	3:00	ON LOCATION	6:00	JOB START	8:00	JOB FINISH	7:00
LEASE	OTley	WELL #	2-16	LOCATION	20s /w N Winto										
OLD OR NEW (Circle one)															

CONTRACTOR: HD Drilling Rig 2 OWNER: same

TYPE OF JOB: surface  
 HOLE SIZE: 12 1/4 T.D.: 228  
 CASING SIZE: 8 7/8 DEPTH: 213

TUBING SIZE: \_\_\_\_\_ DEPTH: \_\_\_\_\_  
 DRILL PIPE: \_\_\_\_\_ DEPTH: \_\_\_\_\_  
 TOOL: \_\_\_\_\_ DEPTH: \_\_\_\_\_  
 PRES. MAX: \_\_\_\_\_ MINIMUM: \_\_\_\_\_  
 MEAS. LINE: \_\_\_\_\_ SHOE JOINT: \_\_\_\_\_  
 CEMENT LEFT IN CSG.: 15 Feet  
 PERFS: \_\_\_\_\_

DISPLACEMENT	EQUIPMENT
PUMP TRUCK # <u>431</u>	CEMENTER <u>Danny Miller</u> HELPER <u>Daron</u>
BULK TRUCK # <u>394</u>	DRIVER <u>MIKE</u>
BULK TRUCK # _____	DRIVER _____

REMARKS: Cement died CIRC.  
Mud sealed cement  
Thank you  
plug down 9:15

SERVICE	DEPTH OF JOB	PLUG & FLOAT EQUIPMENT
PUMP TRUCK CHARGE	<u>0-300</u>	<u>213'</u>
EXTRA FOOTAGE	<u>20</u>	<u>1018'</u>
MILEAGE	<u>HV</u>	<u>20</u>
MANIFOLD	<u>7 1/2</u>	<u>140'</u>
TOTAL	<u>4158'</u>	<u>1158'</u>

CHARGE TO: Shakespeare oil & Gas

STREET \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To Allied Cementing Co., LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME: Doug Roberts  
 SIGNATURE: Doug Roberts

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



PO BOX 31 Russell, KS 67665

Voice: (785) 483-3887  
Fax: (785) 483-5566

# INVOICE

Invoice Number: 126648  
Invoice Date: Mar 23, 2011  
Page: 1

<b>Bill To:</b> Shakespeare Oil Co., Inc. 202 West Main St. Salem, IL 62881
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Federal Tax I.D.#: 20-5975804

*INT*  
*well file*

Customer ID	Well Name# or Customer P.O.	Payment Terms
Shak	Ottley #2-16	Net 30 Days
Job Location	Camp Location	Service Date
KS1-02	Oakley	Mar 23, 2011
		Due Date
		4/22/11

Quantity	Item	Description	Unit Price	Amount
225.00	MAT	ASC Class A	19.00	4,275.00
1,125.00	MAT	Gilsonite	0.89	1,001.25
168.00	MAT	CD-31	9.35	1,570.80
500.00	MAT	WFR-2	1.27	635.00
251.00	SER	Handling	2.25	564.75
20.00	SER	Mileage 251 sx @.11 per sk per mi	27.61	552.20
1.00	SER	Production Casing	2,405.00	2,405.00
40.00	SER	Pump Truck Mileage	7.00	280.00
40.00	SER	Light Vehicle Mileage	4.00	160.00
1.00	SER	Head & Rotator Rental	200.00	200.00
1.00	CEMENTER	Andrew Forslund		
1.00	EQUIP OPER	Larene Wentz		
1.00	OPER ASSIST	Earl Rebarchek		

**PAID**  
APR 04 2011  
REGULATORY

Subtotal	11,644.00
Sales Tax	546.19
Total Invoice Amount	12,190.19
Payment/Credit Applied	
<b>TOTAL</b>	<b>12,190.19</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$ 2328.89

ONLY IF PAID ON OR BEFORE

Apr 17, 2011

DW



# ALLIED CEMENTING CO., LLC.

043275

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Oakley

DATE <u>3-23-11</u>	SEC. <u>14</u>	TWP. <u>14</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Oakley</u>	WELL # <u>2-16</u>	LOCATION <u>Oakley 205 LW</u>				COUNTY <u>Logan</u>	STATE <u>KS</u>
OLD OR (NEW) (Circle one)				OWNER <u>SQM E</u>			

CONTRACTOR H O Drilling  
 TYPE OF JOB Production  
 HOLE SIZE 7 7/8 T.D. 4510'  
 CASING SIZE 5 1/2 DEPTH 4510.92  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL Port collar DEPTH 2237'  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT 42.45  
 CEMENT LEFT IN CSG. 42.45  
 PERFS.  
 DISPLACEMENT 1061.34

### EQUIPMENT

PUMP TRUCK CEMENTER Andrew  
 # 423-281 HELPER Larone  
 BULK TRUCK DRIVER Earl  
 # 394  
 BULK TRUCK DRIVER

### REMARKS:

Pump 5 Bbl water ahead  
500 gal WFR-2 15 Bbl water  
Plug Rat Hole 30 sbs, mix BS  
sbs Asc down 5 1/2 casing.  
Wash pump and lines clean  
Displace plug 200# lift  
1500# lads plug. Plug  
Landed float held.  
Thank you

CEMENT  
 AMOUNT ORDERED 225 sbs Asc  
5 1/2 gal/sbsite 3/4 of 100 cc-31  
500 gal WFR-2  
 COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 ASC 225 sbs @ 18.00 4225.00  
Gr/sbsite 1125# @ .89 1001.25  
CO-31 168# @ 9.35 1570.80  
WFR-2 500gal @ 1.20 635.00  
 HANDLING 251 sbs @ 2.25 564.75  
 MILEAGE 118 sbs/mile @ 5.39 639.20  
 TOTAL 8599.00

SERVICE  
 DEPTH OF JOB 4510.92'  
 PUMP TRUCK CHARGE 2405.00  
 EXTRA FOOTAGE @  
 MILEAGE 40 miles @ 7.00 280.00  
 MANIFOLD @  
LV 40 @ 4.00 160.00  
Head + Refector @ 200.00  
 TOTAL 3045.00

CHARGE TO: Shakespeare  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
 PLUG & FLOAT EQUIPMENT  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_  
 SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

To Allied Cementing Co., LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Doug Roberts  
 SIGNATURE Doug Robert



PO BOX 31 Russell, KS 67665

Voice: (785) 483-3887  
 Fax: (785) 483-5566

# INVOICE

Invoice Number: 126706  
 Invoice Date: Mar 28, 2011  
 Page: 1

**Bill To:**  
 Shakespeare Oil Co., Inc.  
 202 West Main St.  
 Salem, IL 62881

Federal Tax I.D.#: 20-5975804

*INT*  
*Pile*

Customer ID	Well Name# or Customer P.O.	Payment Terms
Shak	Ottley #2-16	Net 30 Days
Job Location	Camp Location	Service Date
KS1-04	Oakley	Mar 28, 2011
		Due Date
		4/27/11

Quantity	Item	Description	Unit Price	Amount
276.00	MAT	Class A Common	16.25	4,485.00
149.00	MAT	Pozmix	8.50	1,266.50
30.00	MAT	Gel	21.25	637.50
106.00	MAT	Flo Seal	2.70	286.20
460.00	SER	Handling	2.25	1,035.00
20.00	SER	Mileage 460 sx @.11 per sk per mi	50.60	1,012.00
1.00	SER	Port Collar	2,125.00	2,125.00
40.00	SER	Pump Truck Mileage	7.00	280.00
40.00	SER	Light Vehicle Mileage	4.00	160.00
1.00	CEMENTER	Danny Miller		
1.00	CEMENTER	Terry Heinrich		
1.00	OPER ASSIST	Darren Racette		

**PAID**  
 APR 11 2011

Subtotal	11,287.20
Sales Tax	487.29
Total Invoice Amount	11,774.49
Payment/Credit Applied	
<b>TOTAL</b>	<b>11,774.49</b>

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$ 2257.44

ONLY IF PAID ON OR BEFORE  
Apr 22, 2011

*DW*  
*WM*

# ALLIED CEMENTING CO., LLC. 039795

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665.

SERVICE POINT:

Oakley

DATE <u>3-28-11</u>	SEC <u>76</u>	TWP <u>74</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30</u>	JOB FINISH <u>3:00</u>
LEASE <u>Ottley</u>	WELL # <u>2-16</u>	LOCATION <u>Oakley 205 1W</u>		COUNTY <u>Logan</u>	STATE <u>KS</u>		
OLD OR <u>NEW</u> (Circle one)	N Winto						

CONTRACTOR wild west OWNER sam

TYPE OF JOB port collar

CEMENT  
AMOUNT ORDERED 425 sks  
65/35 8% Gel 19 Flo Seal

HOLE SIZE T.D.  
CASING SIZE 5 1/2 DEPTH  
TUBING SIZE DEPTH  
DRILL PIPE DEPTH  
TOOL DEPTH  
PRES. MAX MINIMUM  
MEAS. LINE SHOE JOINT  
CEMENT LEFT IN CSG.  
PERFS.

DISPLACEMENT  
EQUIPMENT  
PUMP TRUCK CEMENTER Darryl Miller  
# 431 HELPER Terry, Karen  
BULK TRUCK DRIVER Darryl Terry  
# 4 DRIVER  
BULK TRUCK DRIVER  
#

REMARKS:

Circulated cen to surface

Thank you

CHARGE TO: shakespeare

STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Darryl Terry  
SIGNATURE Darryl Terry

HANDLING 460  
MILEAGE 44 5/4 mile  
TOTAL 872.20

SERVICE

DEPTH OF JOB 2237  
PUMP TRUCK CHARGE 2125.00  
EXTRA FOOTAGE 20x2 @ 7.00 = 280.00  
MILEAGE 20x4 @ 4.00 = 160.00  
MANIFOLD 20x4 @ 4.00 = 160.00  
TOTAL 2565.00

PLUG & FLOAT EQUIPMENT

TOTAL \_\_\_\_\_  
SALES TAX (if Any) \_\_\_\_\_  
TOTAL CHARGES \_\_\_\_\_  
DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil

**Ottley #2-16**

202 W Main  
Salem, IL 62881

**16-14-32 Logan, Ks**

ATTN: Brad Rien

Job Ticket: 040724

**DST#: 1**

Test Start: 2011.03.17 @ 20:40:44

## GENERAL INFORMATION:

Formation: **B,C,D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:55:59

Time Test Ended: 04:45:59

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 55

**Interval: 3817.00 ft (KB) To 3890.00 ft (KB) (TVD)**

Reference Elevations: 2803.00 ft (KB)

Total Depth: 3890.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6667**

**Inside**

Press @ Run Depth: 236.06 psig @ 3818.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.03.17

End Date: 2011.03.18

Last Calib.: 2011.03.18

Start Time: 20:40:44

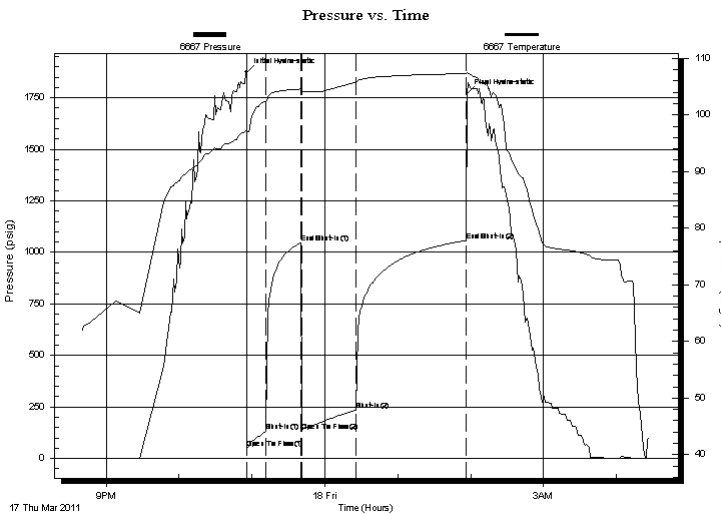
End Time: 04:27:59

Time On Btm: 2011.03.17 @ 22:55:44

Time Off Btm: 2011.03.18 @ 01:56:59

**TEST COMMENT:** B.O.B. in 7 min  
No return  
B.O.B. in 7 min  
2" in return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.87	97.25	Initial Hydro-static
1	47.26	96.94	Open To Flow (1)
16	132.36	102.40	Shut-In(1)
45	104.64	104.56	End Shut-In(1)
45	236.06	104.27	Open To Flow (2)
90	1057.46	107.30	Shut-In(2)
181	1057.46	107.30	End Shut-In(2)
182	1772.10	107.42	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	g w & mc o 10g 20w 25m 45o	0.59
300.00	g w & mc o 10g 15w 25m 50o	4.20
130.00	s g o c m 3g 22o 75m	1.82
0.00	110' weak gas in pipe	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil

**Ottley #2-16**

202 W Main  
Salem, IL 62881

**16-14-32 Logan, Ks**

Job Ticket: 040724

**DST#: 1**

ATTN: Brad Rien

Test Start: 2011.03.17 @ 20:40:44

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	g w & m c o 10g 20w 25m 45o	0.590
300.00	g w & m c o 10g 15w 25m 50o	4.199
130.00	s g o c m 3g 22o 75m	1.824
0.00	110' weak gas in pipe	0.000

Total Length: 550.00 ft      Total Volume: 6.613 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

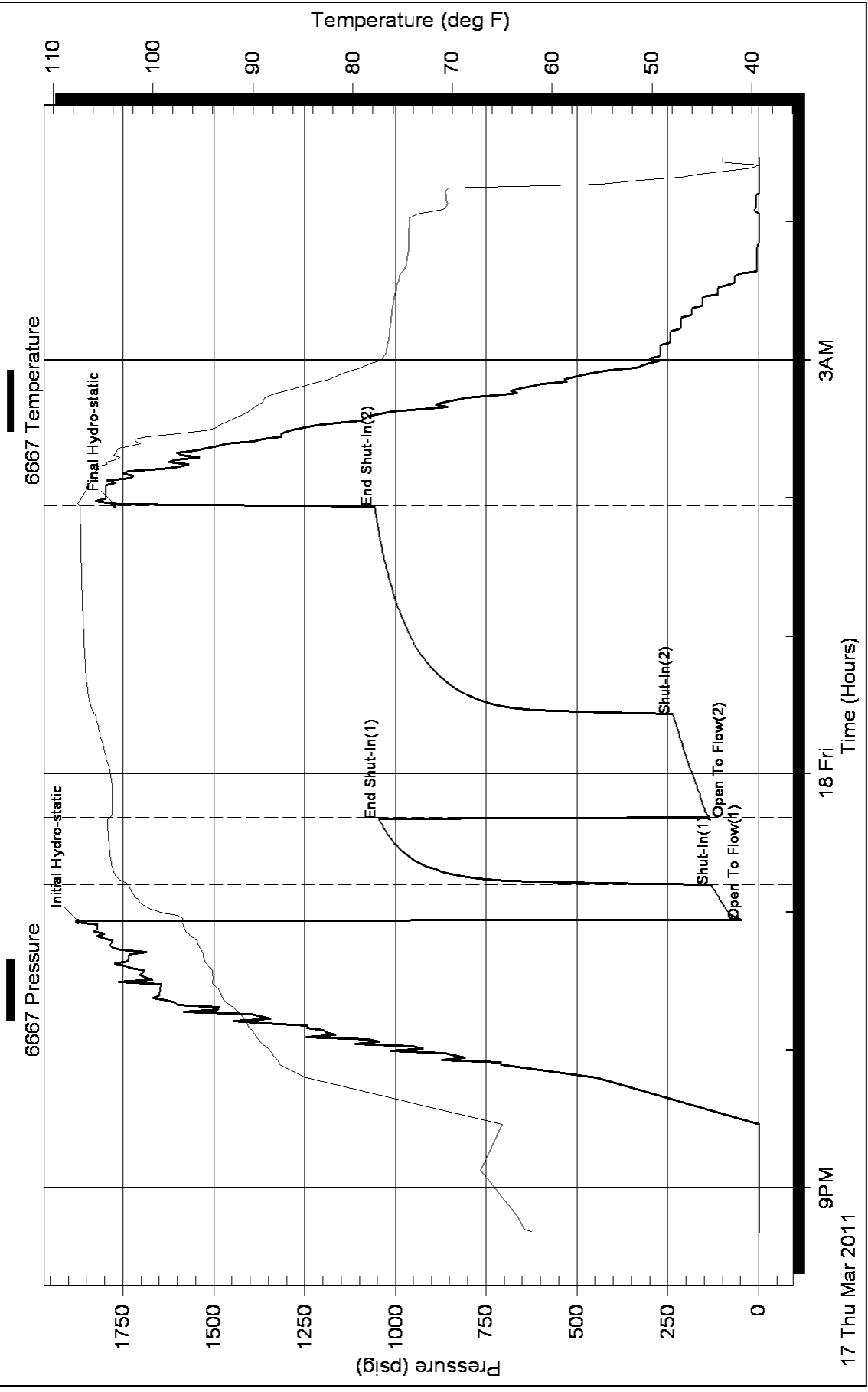
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil  
202 W Main  
Salem, IL  
62881  
ATTN: Brad Rien

**Ottley #2-16**  
**16-14-32 Logan, Ks**  
Job Ticket: 040725 **DST#: 2**  
Test Start: 2011.03.18 @ 22:45:56

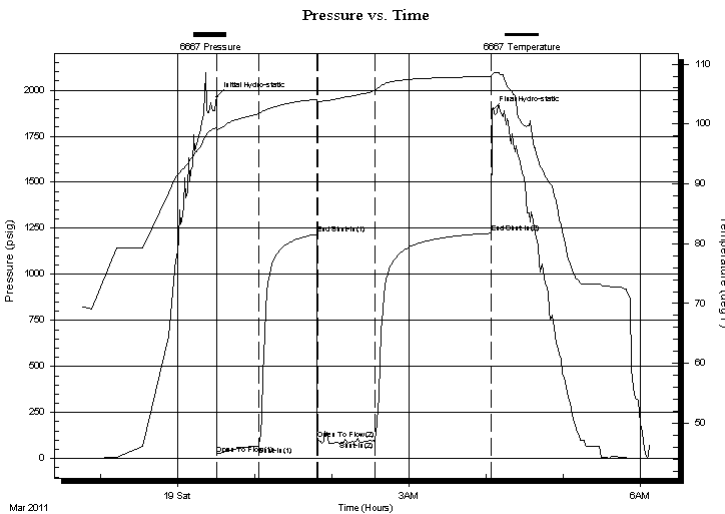
## GENERAL INFORMATION:

Formation: **H-I**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 00:30:41  
Time Test Ended: 06:35:26  
Interval: **3952.00 ft (KB) To 4025.00 ft (KB) (TVD)**  
Total Depth: 4025.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Shane McBride  
Unit No: 55  
Reference Elevations: 2803.00 ft (KB)  
2795.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 6667 Inside**  
Press @ Run Depth: 96.00 psig @ 3953.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.03.18 End Date: 2011.03.19 Last Calib.: 2011.03.19  
Start Time: 22:45:56 End Time: 06:07:26 Time On Btm: 2011.03.19 @ 00:30:26  
Time Off Btm: 2011.03.19 @ 04:04:56

TEST COMMENT: 9" in blow  
No return  
B.O.B. in 43 min.  
No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1964.09	99.38	Initial Hydro-static
1	25.07	99.01	Open To Flow (1)
33	68.10	101.70	Shut-In(1)
78	1217.31	104.12	End Shut-In(1)
79	103.05	103.83	Open To Flow (2)
123	96.00	105.65	Shut-In(2)
214	1223.65	108.01	End Shut-In(2)
215	1889.84	108.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	s m c o 10% m 90% o	0.59
90.00	m c o 50% m 50% o	1.25

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil  
202 W Main  
Salem, IL  
62881  
ATTN: Brad Rien

**Ottley #2-16**  
**16-14-32 Logan, Ks**  
Job Ticket: 040725      **DST#: 2**  
Test Start: 2011.03.18 @ 22:45:56

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3400.00 ppm			
Filter Cake: 1.00 inches			

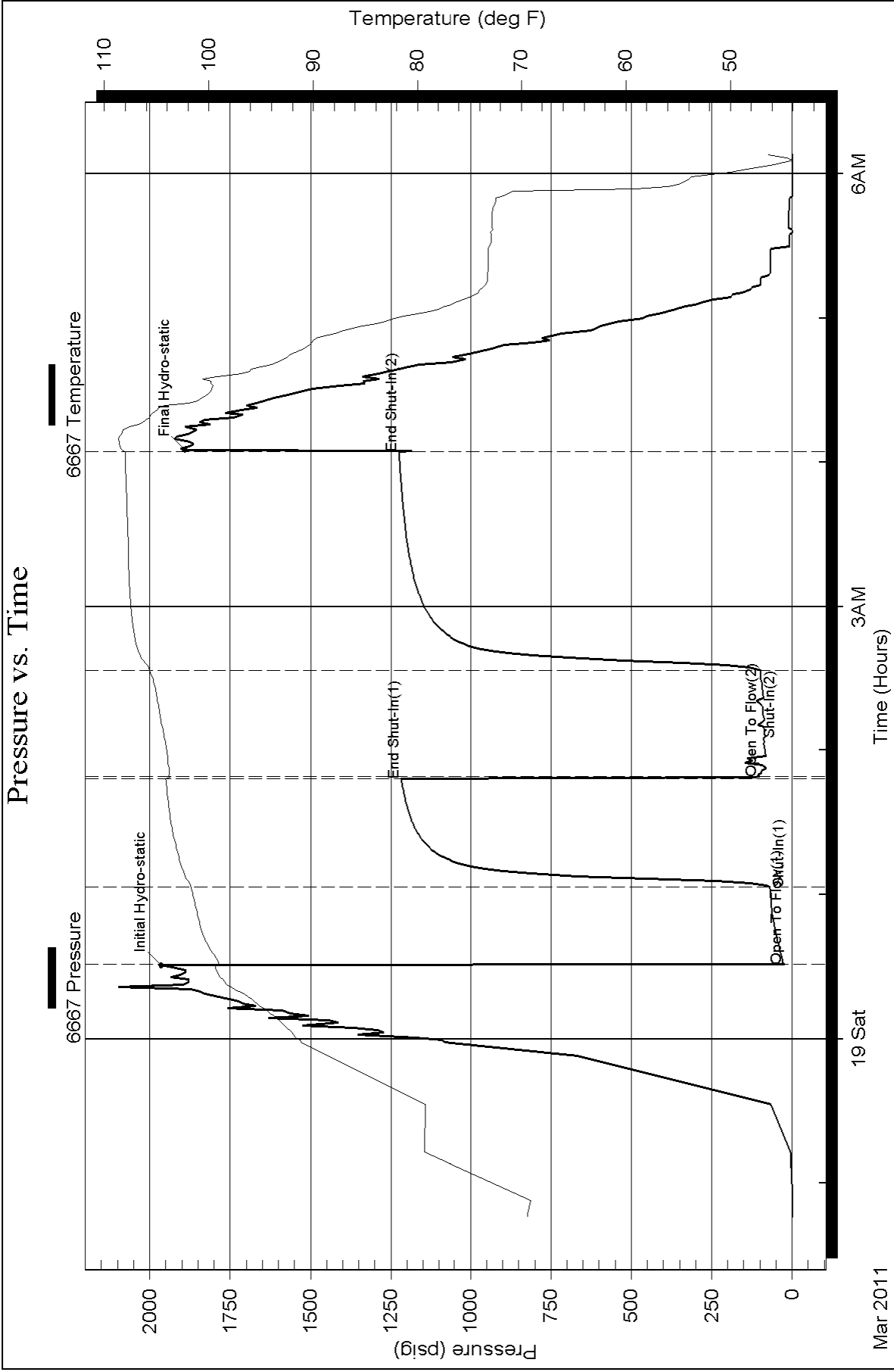
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	s m c o 10% m 90% o	0.590
90.00	m c o 50% m 50% o	1.253

Total Length: 210.00 ft      Total Volume: 1.843 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil  
 202 W Main  
 Salem, IL  
 62881  
 ATTN: Brad Rien

**Ottley #2-16**  
**16-14-32 Logan, Ks**  
 Job Ticket: 042176 **DST#: 3**  
 Test Start: 2011.03.19 @ 15:45:49

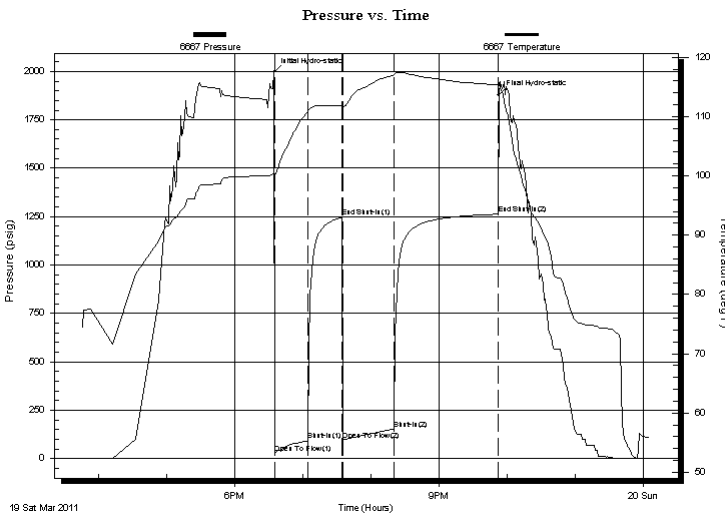
## GENERAL INFORMATION:

Formation: **J-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:34:49  
 Time Test Ended: 00:25:49  
**Interval: 4024.00 ft (KB) To 4070.00 ft (KB) (TVD)**  
 Total Depth: 4070.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2803.00 ft (KB)  
 2795.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6667 Inside**  
 Press @ Run Depth: 153.12 psig @ 4025.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.03.19 End Date: 2011.03.20 Last Calib.: 2011.03.19  
 Start Time: 15:45:49 End Time: 00:05:49 Time On Btm: 2011.03.19 @ 18:34:19  
 Time Off Btm: 2011.03.19 @ 21:52:34

**TEST COMMENT:** 8" in blow  
 No return  
 8 1/2" in blow  
 No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1995.23	100.40	Initial Hydro-static
1	24.45	100.07	Open To Flow (1)
31	92.87	110.85	Shut-In(1)
61	1246.88	111.83	End Shut-In(1)
61	95.32	111.52	Open To Flow (2)
106	153.12	117.04	Shut-In(2)
198	1262.66	115.39	End Shut-In(2)
199	1880.43	115.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	s m c w 10% m 90% w	2.26
60.00	m c w 30% m 70% w	0.84

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil  
202 W Main  
Salem, IL  
62881  
ATTN: Brad Rien

**Ottley #2-16**  
**16-14-32 Logan, Ks**  
Job Ticket: 042176      **DST#: 3**  
Test Start: 2011.03.19 @ 15:45:49

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 28500 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3500.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

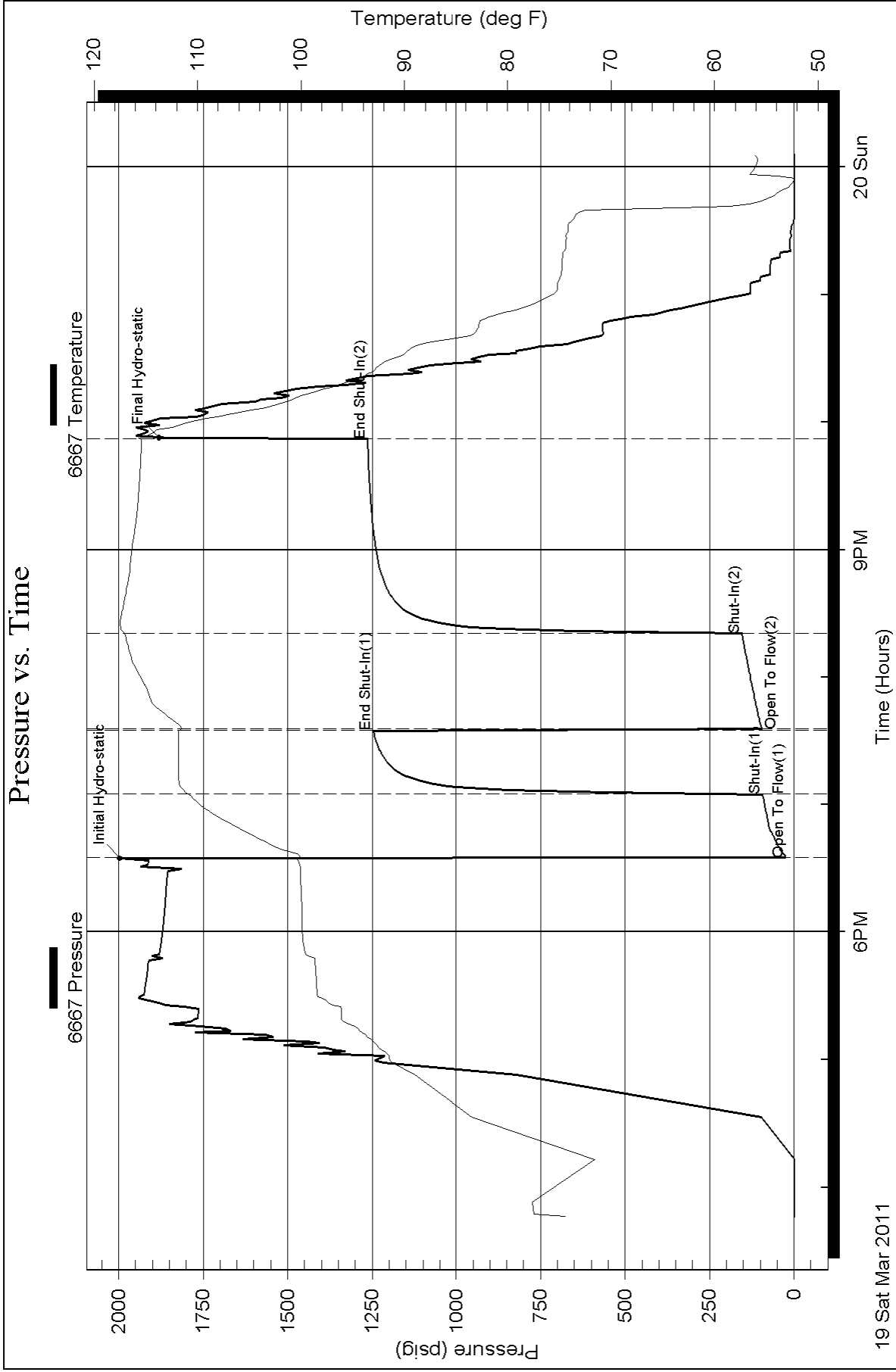
Length ft	Description	Volume bbl
240.00	s m c w 10%m 90%w	2.264
60.00	m c w 30%m 70%w	0.842

Total Length: 300.00 ft      Total Volume: 3.106 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: 1 hr down time due to driller hitting gurt with head joint breaking head off of manifold, had to wait for new head to be brought out





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil

**Ottley #2-16**

202 W Main  
Salem, IL 62881

**16-14-32 Logan KS**

ATTN: Brad Rien

Job Ticket: 042177

**DST#: 4**

Test Start: 2011.03.20 @ 07:28:00

## GENERAL INFORMATION:

Formation: **LKC "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:56:30

Time Test Ended: 16:59:15

Test Type: Conventional Bottom Hole

Tester: Kevin Mack

Unit No: 55

**Interval: 4074.00 ft (KB) To 4100.00 ft (KB) (TVD)**

Reference Elevations: 2803.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6771 Outside**

Press @ Run Depth: 889.83 psig @ 4075.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.03.20

End Date: 2011.03.20

Last Calib.: 2011.03.20

Start Time: 07:28:15

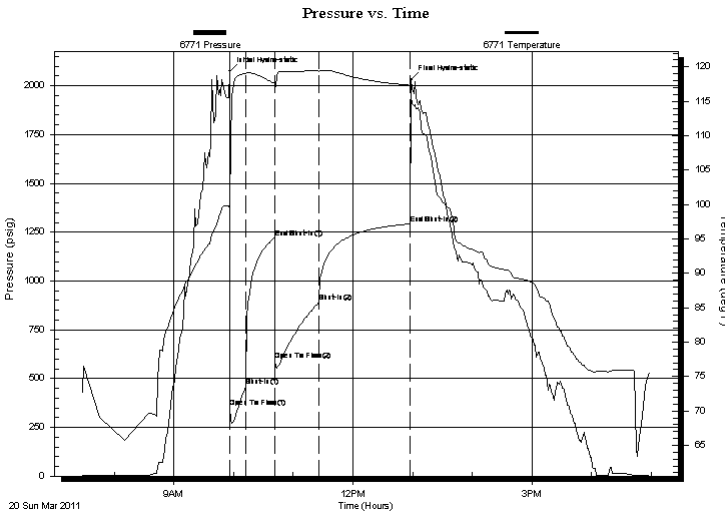
End Time: 16:59:15

Time On Btm: 2011.03.20 @ 09:56:15

Time Off Btm: 2011.03.20 @ 12:58:45

**TEST COMMENT:** IF: BoB in 1 1/2 Mintes  
IS: Return Built to 9 1/4"  
FF: BoB in 1 1/2 minutes  
FS: Return built to 7"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2074.01	100.11	Initial Hydro-static
1	355.39	100.06	Open To Flow (1)
16	459.36	119.04	Shut-In(1)
46	1218.91	117.55	End Shut-In(1)
46	594.17	117.20	Open To Flow (2)
90	889.83	119.38	Shut-In(2)
182	1292.33	117.32	End Shut-In(2)
183	2029.27	115.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 50o 50M	0.05
174.00	GMCO 70o 10M 20G	1.43
992.00	GMCO 73o 2M 25G	13.92
1242.00	Free oil 95o 5M	17.42
0.00	500' GIP	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil

**Ottley #2-16**

202 W Main  
Salem, IL 62881

**16-14-32 Logan KS**

Job Ticket: 042177

**DST#: 4**

ATTN: Brad Rien

Test Start: 2011.03.20 @ 07:28:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 50o 50M	0.049
174.00	GMCO 70o 10M 20G	1.430
992.00	GMCO 73o 2M 25G	13.915
1242.00	Free oil 95o 5M	17.422
0.00	500' GIP	0.000

Total Length: 2418.00 ft      Total Volume: 32.816 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

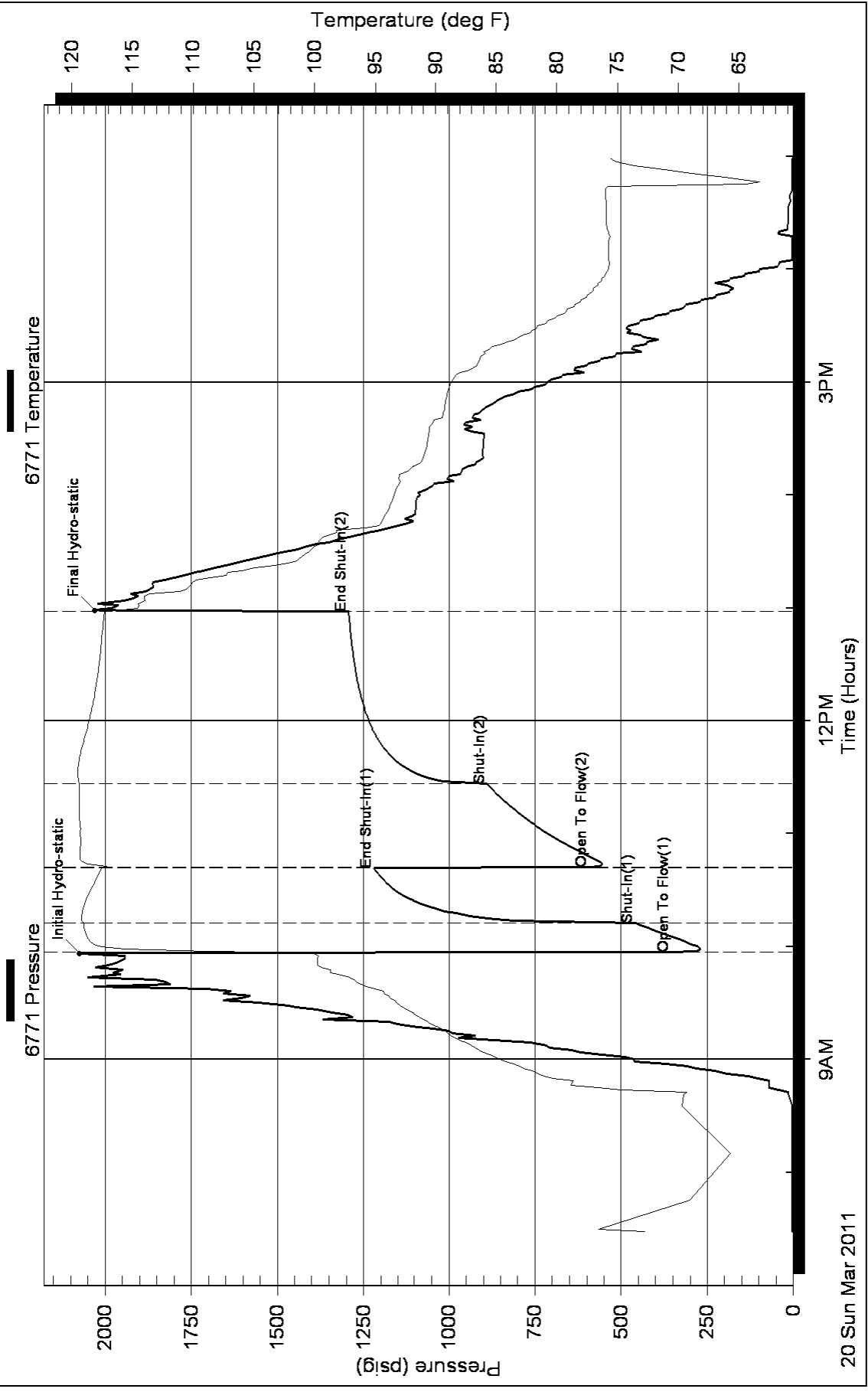
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 30 @ 80 degrees = 28

### Pressure vs. Time



**M. BRADFORD RINE**

*Certified Professional Geologist - A.G.S.G. 61647*

100 S. Main Suite 415

Wichita, Ks 67202

(316)262-5418

**GEOLOGIST'S REPORT**

COMPANY SHAKESPEARE OIL COMPANY, INC.

LEASE OTTLEY #2-16

FIELD CHALK BUTTES

LOCATION 1630'FSL & 2225'FEL

SECTION 16 TOWNSHIP 14S RANGE 32W

COUNTY LOGAN STATE KANSAS

CONTRACTOR HD DRILLING COMPANY

COMMENCED DRILLING MARCH 12, 2011

COMPLETED DRILLING MARCH 22, 2011

RTD 4510 FEET LTD 4506 FEET

MUD UP AT 3480 FEET MUD TYPE CHEM

API: 15-109-20978

ELEVATIONS

KB 2803 FEET

DF 2801 FEET

GL 2793 FEET

MEASUREMENTS ARE ALL FROM: KB

CASING

8-5/8"23# @ 225'

5-1/2" CSG SET

ELECTRICAL SURVEYS

IND SUITE

D/N SUITE

SONIC, MICRO

SAMPLES SAVED FROM 3600 FEET TO 4510 FEET

DRILLING TIME KEPT FROM 3600 FEET TO 4510 FEET

SAMPLES EXAMINED FROM 3600 FEET TO 4510 FEET

GEOLOGICAL SUPERVISION FROM 3600 FEET TO 4510 FEET

NOTES: PLEASE NOTE ADDITIONAL DRILLING AND GEOLOGICAL INFORMATION ON THE FOLLOWING "HEADER" PAGES.



REMARKS: Based on sample observations, DST results, and electric log evaluation, it was decision of the Operator to set 5 1/2" casing in the "Ottley #2-16", on March 22, 2011.

Respectfully submitted,  
M. Bradford Rine

M. Bradford Rine, Lic 204  
03/22/11

DAILY PENETRATION

DATE	DEPTH
03-12-11	MRT, Ru, Spud 0'
03-13-11	Drlg 438'
03-14-11	Drlg 1860'
03-15-11	Drlg 2580'
03-16-11	Drlg 3250'
03-17-11	Drlg 3785'
03-18-11	Drlg 3895'
03-19-11	T.I.H. Water DST 4025'
03-20-11	T.O.O.H for DST 4100'
03-21-11	Drlg 4278'
03-22-11	RTD 4:35am 4510'

BIT RECORD

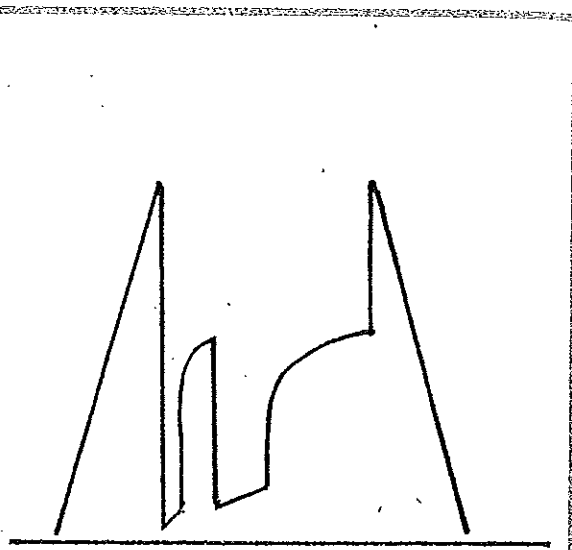
NUMBER	SIZE	MARK	TYPE	DEPTH OUT	FEET	FOUR
1	12 1/4	Jz	RR	224	224	2
2	7 7/8	Jz	GX1	2259	2031	26 1/2
3	7 7/8	Jz	GX1	4510	2251	97
Surveys:	3/4"	228'	1°	3890'		
	3/4"	2259'	1/2°	4510'		
Surf Csg:	5 1/2" 888'	23" x 1 1/2"	set @ 225'	(Allied) cement		
	175 SA	Class A, 3 1/2 CC	2 1/2 gal. c.d.c.			

GENERAL INFORMATION

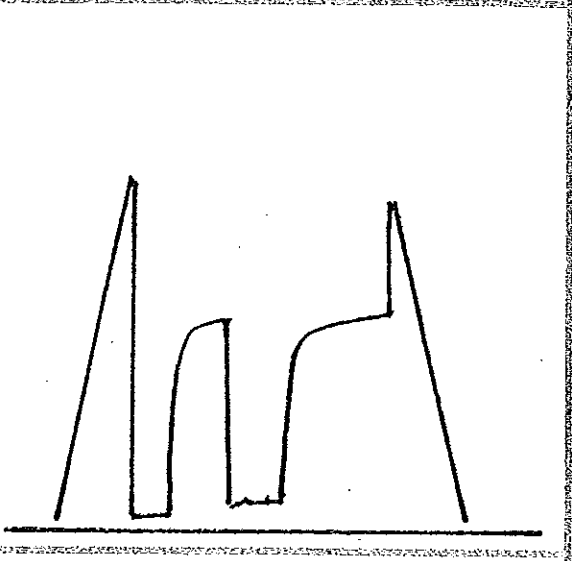
Rig: HD Drilling #2  
 Pump: National K-380 6x14  
 Drawworks: Unit U34  
 Collars: 487' 2 1/2 x 6 1/4  
 Drillpipe: 4 1/2" - 16.6" XH  
 Toolpusher: Doug Roberts  
 Mud: Mudco (Reid Atkins)  
 Gas Detector: None  
 DST's: Tribit (Shane, McBride, Kevin Mack)  
 E-logs: Log-Tech (K. Bange)  
 Water: water well - draw east of location  
 Co-Repres: office (Don Williams)



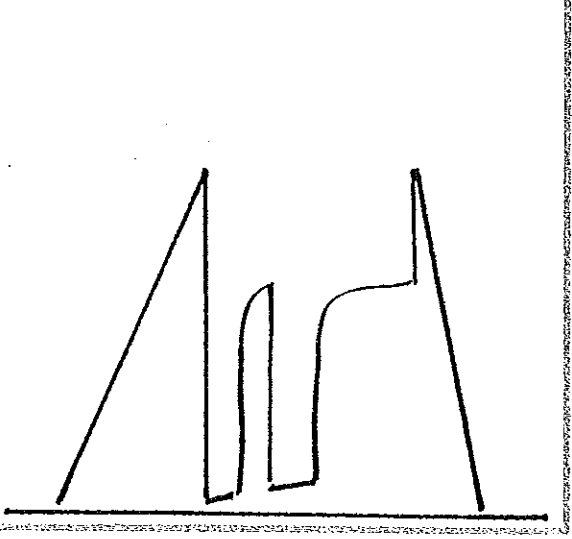
DST # 1 INTERVAL: 3817 - 3890  
 FORMATION: Lsg. B, C, D  
 TIME: 15-30-45-90  
 INITIAL BLOW: Sf: h.o.b. 7 min (no b.b.)  
 FINAL BLOW: Sf: b.o.b. 7 min (2" b.b.)  
 IWP 1872 FWP 1772  
 IFP 47-132 FIF 134-236  
 IWIP 1046 FWIP 1057  
 TEMPERATURE: 107° F  
 REC: 550' Total Fluid, 107' gas in pipe  
 130' g.o.c.m.: 90% oil, 10% mud  
 300' g.w.m.c.o.: 10% oil, 50% wtr, 15% gas, 25% mud  
 120' g.w.m.c.o.: 10% oil, 45% wtr, 20% gas, 25% mud



DST # 2 INTERVAL: 3952 - 4025  
 FORMATION: LKC H, I  
 TIME: 30-45-45-90  
 INITIAL BLOW: Fr: built to 9" i.d. (no b.b.)  
 FINAL BLOW: Sf: b.o.b. 4.7 min (no b.b.)  
 IWP 1964 FWP 1889  
 IFP 25-68 FIF 102-96.4  
 IWIP 1217 FWIP 1223  
 TEMPERATURE: 108  
 REC: 210' Total Fluid  
 90' m.c.o.: 50% oil, 50% mud  
 120' S.M.C.O.: 90% oil, 10% mud  
 \* Slight plugging on FFP

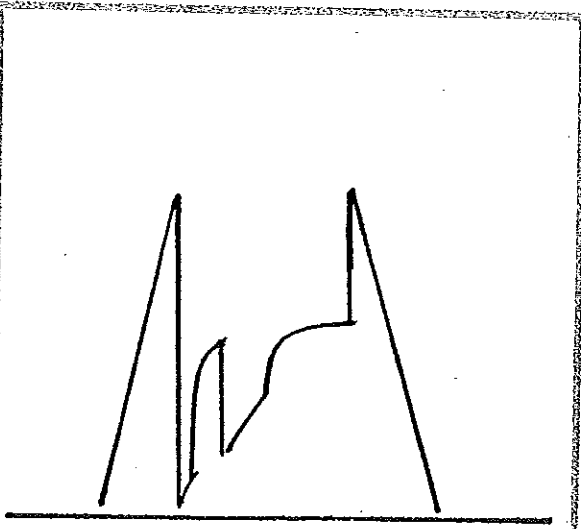


DST # 3 INTERVAL: 4024 - 4070  
 FORMATION: LKC J, K  
 TIME: 30-30-45-90  
 INITIAL BLOW: Fr: built to 8" (no b.b.)  
 FINAL BLOW: Fr: built to 8 1/2" (no b.b.)  
 IWP 1995 FWP 1880  
 IFP 24-92 FIF 95-153  
 IWIP 1246 FWIP 1262  
 TEMPERATURE: 115° F  
 REC: 300' Total Fluid  
 60' m.c.w.: 70% wtr, 30% mud  
 240' S.M.C.W.: 90% wtr, 10% mud  
 Chl/wtr: 28,500 ppm (Chl/mud) 3400 ppm



DST # 4 INTERVAL: 4074-4100  
 FORMATION: LKC "L"  
 TIMES: 15-30-45-90  
 INITIAL BLOW: Stg: b.o.b. 1/2 min. (8" b.b.)  
 FINAL BLOW: Stg: b.o.b. 1 1/2 min. (7" b.b.)  
 IHP 2074 NHP 2029  
 IEP 355-459 NEP 524-589  
 IBIP 1218 NBIP 1292  
 TEMPERATURE: 117°K  
 REC: 2418' Total Fluid, 500' gas in pipes  

1242' vs mcs:	gas	oil	wtr	slud
	-	25%	-	55%
992' smgas:	25%	73%	-	02%
172' mgcs:	20%	70%	-	10%
10' mcs:	-	50%	-	50%

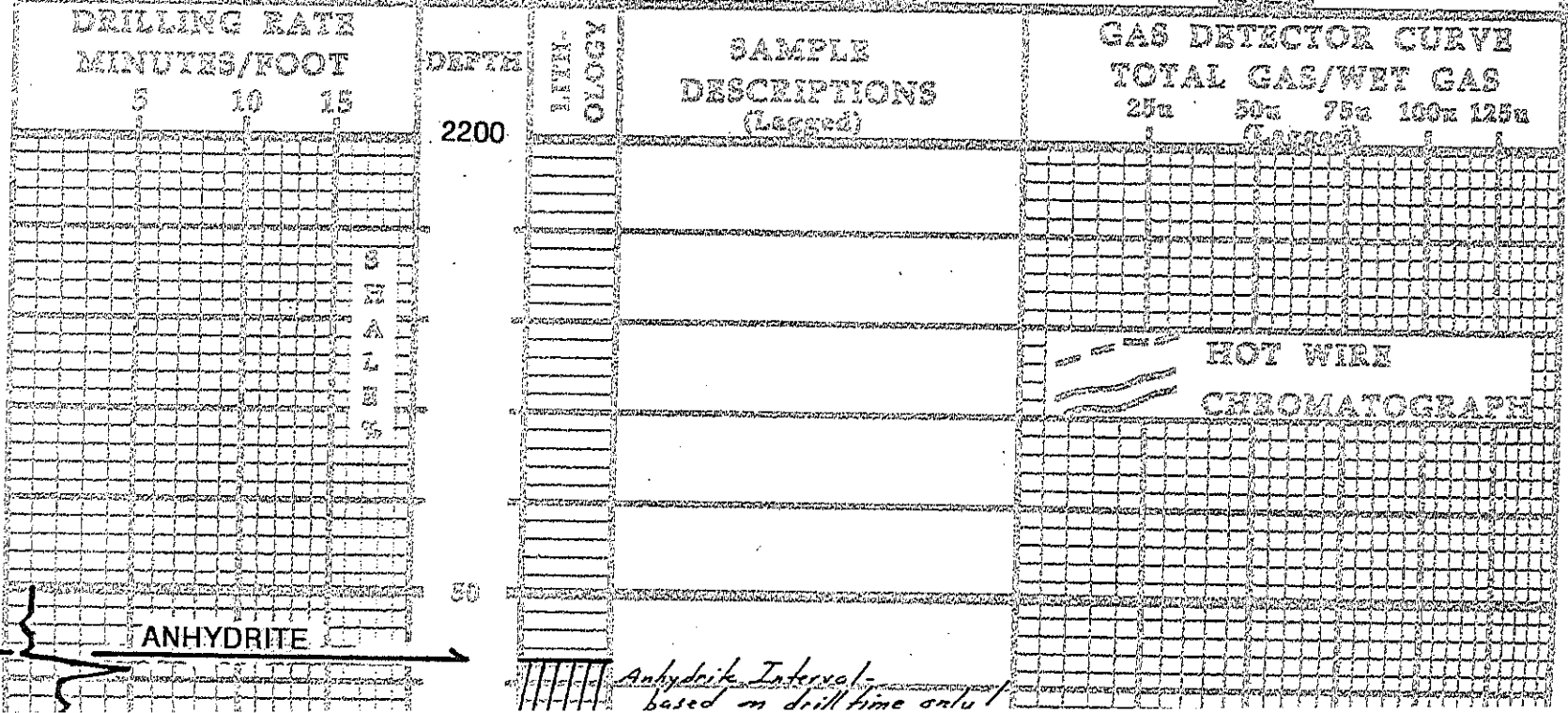


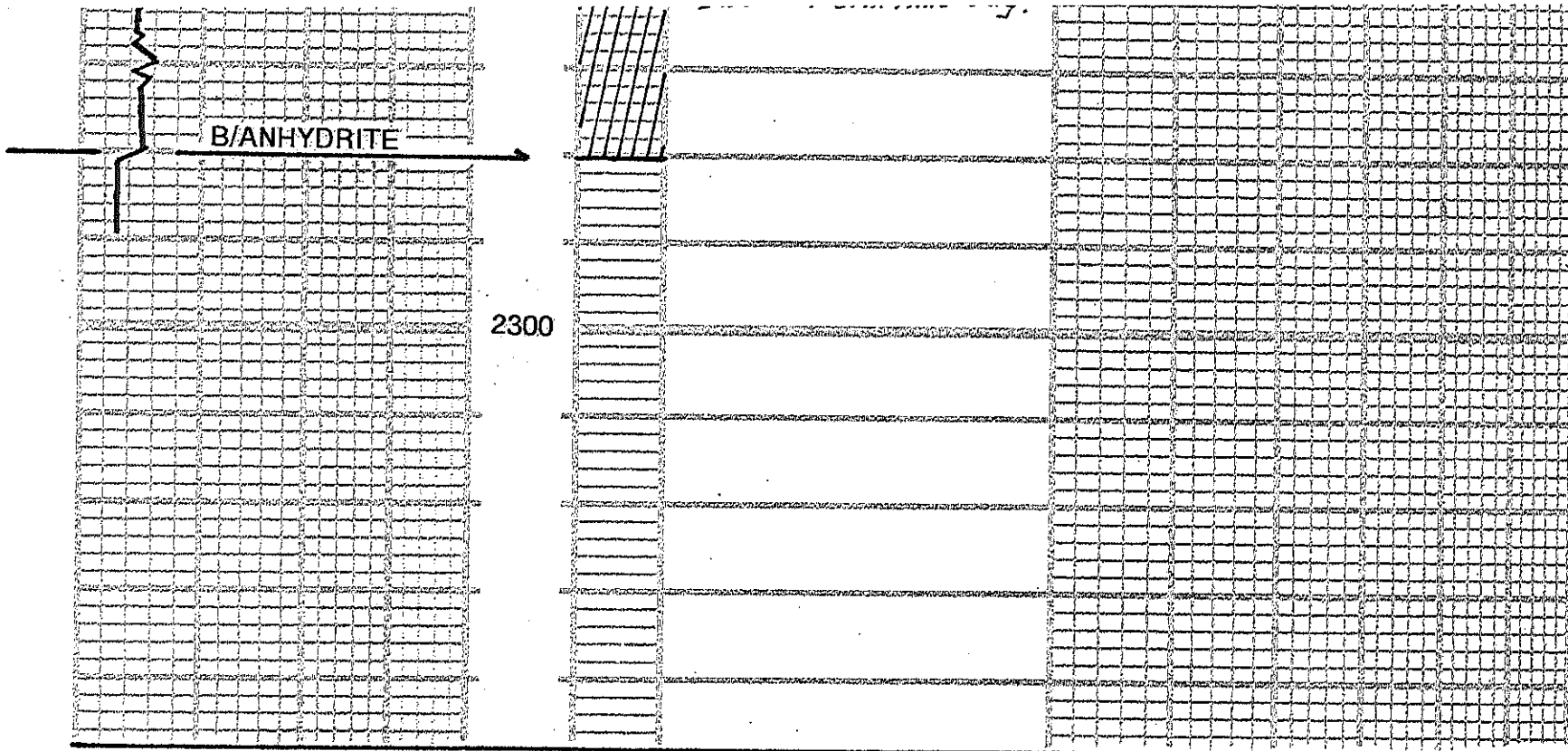
DST # \_\_\_\_\_ INTERVAL: \_\_\_\_\_  
 FORMATION: \_\_\_\_\_  
 TIMES: \_\_\_\_\_  
 INITIAL BLOW: \_\_\_\_\_  
 FINAL BLOW: \_\_\_\_\_  
 IHP \_\_\_\_\_ NHP \_\_\_\_\_  
 IEP \_\_\_\_\_ NEP \_\_\_\_\_  
 IBIP \_\_\_\_\_ NBIP \_\_\_\_\_  
 TEMPERATURE: \_\_\_\_\_  
 REC: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DST # \_\_\_\_\_ INTERVAL: \_\_\_\_\_  
 FORMATION: \_\_\_\_\_  
 TIMES: \_\_\_\_\_  
 INITIAL BLOW: \_\_\_\_\_  
 FINAL BLOW: \_\_\_\_\_  
 IHP \_\_\_\_\_ NHP \_\_\_\_\_  
 IEP \_\_\_\_\_ NEP \_\_\_\_\_  
 IBIP \_\_\_\_\_ NBIP \_\_\_\_\_  
 TEMPERATURE: \_\_\_\_\_  
 REC: \_\_\_\_\_  
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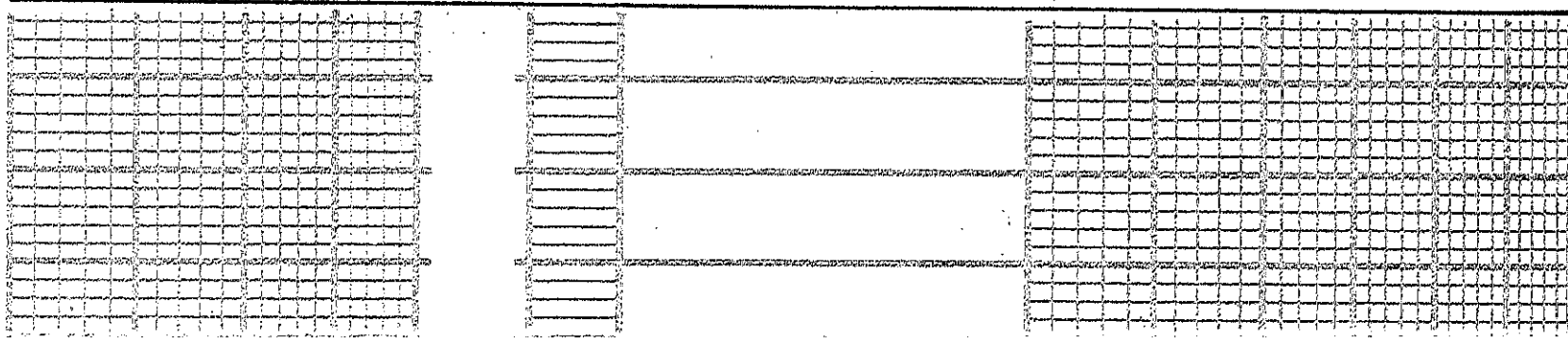
# LEGEND

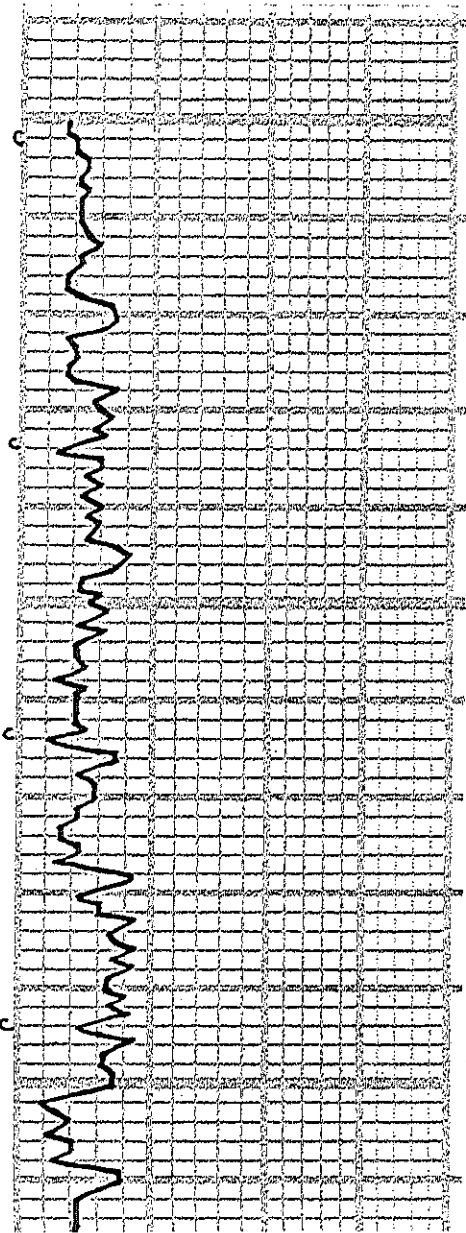
	SANDSTONE		LIMESTONE		CHERT		CARB. SH./ COAL
	SILTSTONE		DOLOMITE		GRANITE WASH		CONGLOM- BRATE
	SHALE		ANHYDRITE/ GYPSUM		GRANITE		OOLITIC/ OOLOIDIC





\*\*\* DEPTH-BREAK \*\*\*





3600

(much red shale & pyr  
in spl's)

ls wh-cr  
fnxln, pr x ln, g, foss  
foss to packed, foss with  
scatt fr. inter foss

ls cr  
fnxln, dss, foss  
some dolom text  
some gray-mealy bed

sh 24-dk gy

ls wh-cr-tan  
fnxln, dss, pr vis, g  
foss, subgrainy text  
in pt

sh 24-red

ls wh-cr-tan p  
fnxln, dss, pr vis, g  
pt, chaly in pt, foss

sh red-gy-granite

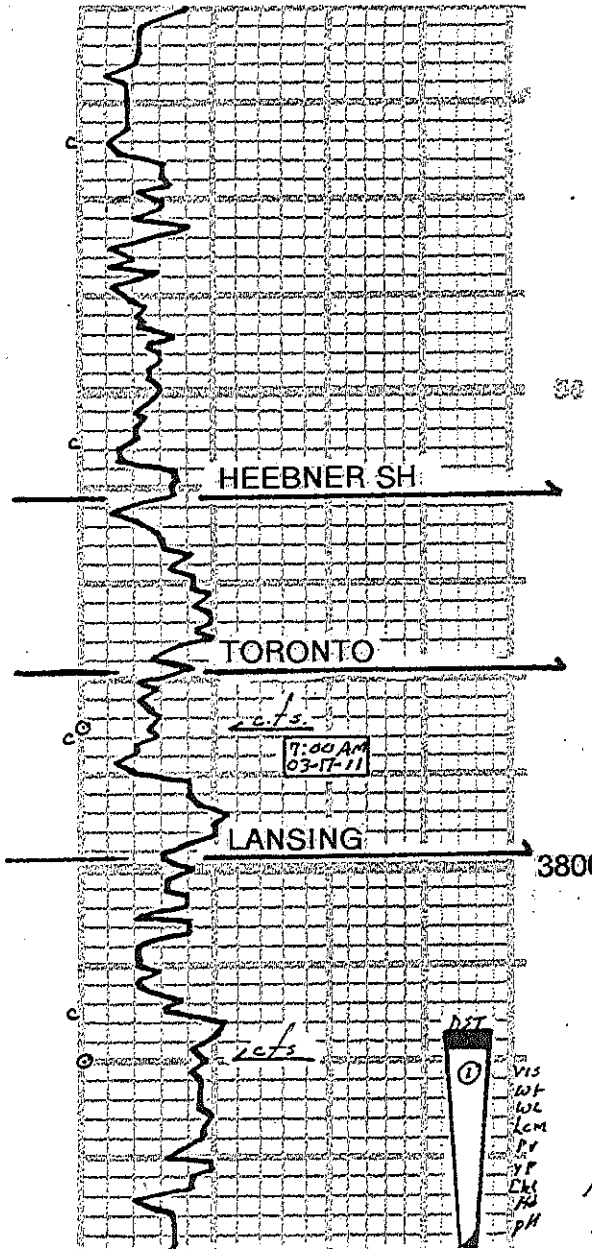
ls wh-cr  
fnxln, dss-pr vis.  
x ln g, foss

sh 24-blk, carb

3700

ls wh-cr  
fnxln, ool-packed ool  
fr-gd inter-ool

ls wh-cr-pl gy  
fnxln, pr x ln



Ls wh-cr-pl gy  
Fxnln, pr xln φ,  
some cherty  
foss

Sk 9y-med

Ls wh-cr  
Fxnln, dns - pr xln φ,  
foss  
Rr Chert: wh, grainy, foss  
n.s.

Ls wh-cr  
Fxnln, dns in pf  
pr xln φ in pf  
foss, some cherty pcs  
n.s.

Sk black, carb,  
(reptes in 3780's pl)

Sh 9y-green  
soft

Ls wh-cr  
Fxnln, pr xln φ to Rr  
Fxnln φ, foss  
dns with depth  
n.s.

Sk 9y

Ls wh-cr, dns to pr xln φ,  
foss, ool in pf, scatt  
pr inter-ool φ

Ls wh-cr tan  
Fxnln, pr xln φ - dns,  
foss

Sk 9y-greenish

Ls wh-cr  
Fxnln, dns in pf, scatt,  
pr xln φ, foss in pf,  
ool in pf

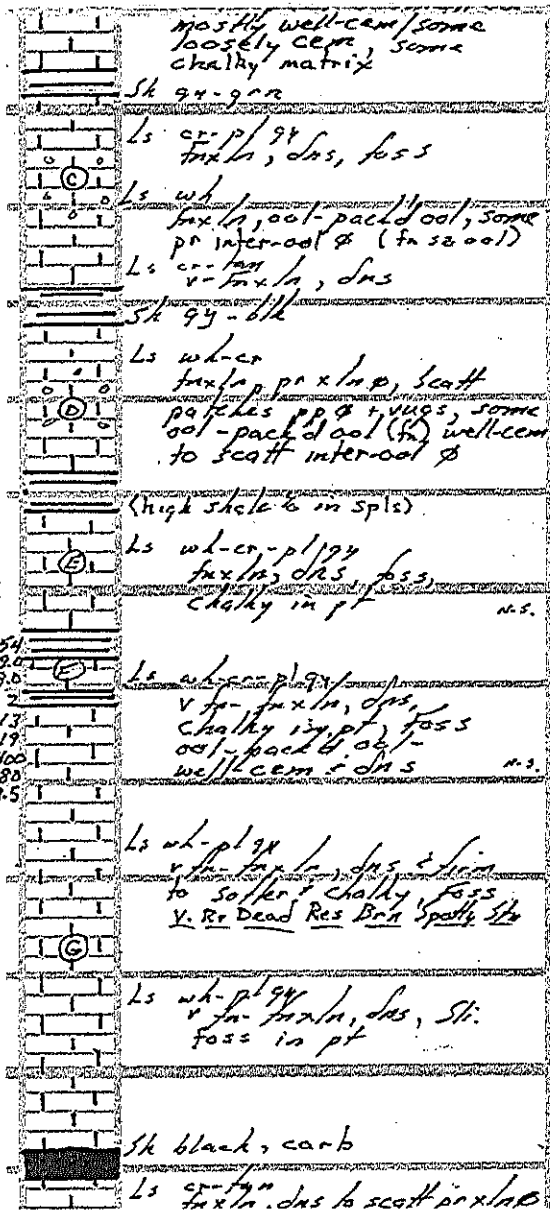
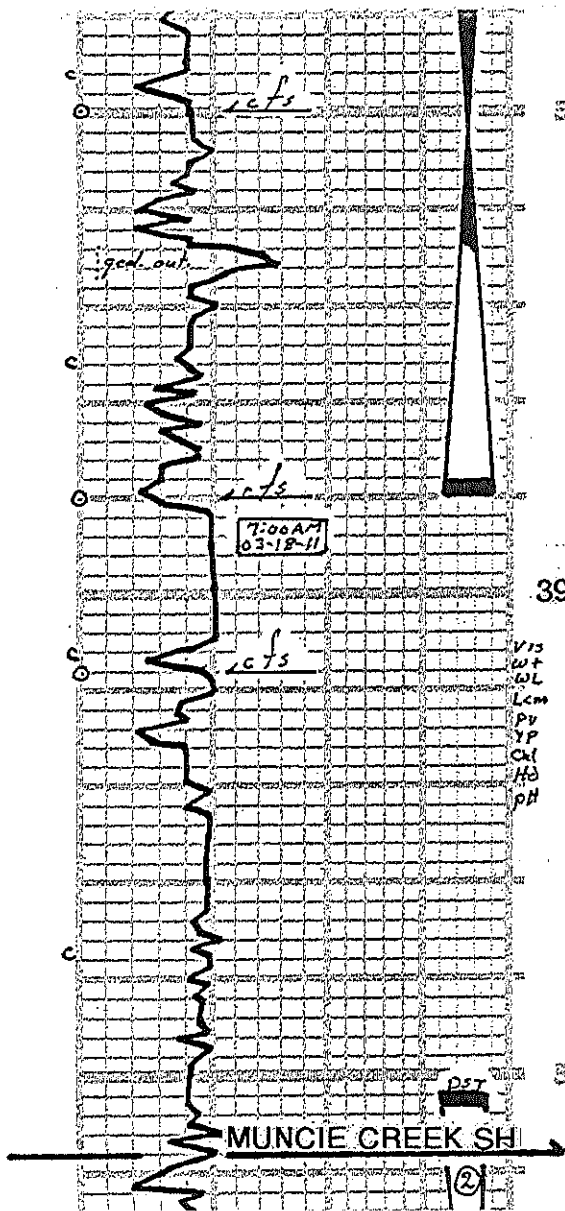
① DST 1: 3817-3890  
15-30-45-90  
Rec: 180, 590cm  
420 gumco  
IFP: 47-132  
ISIP: 1046  
FFP: 134-236  
FSIP: 1057

3807' +/-: Lss "R"  
No odor, few pcs with dull  
flour - bk spotty str of Hwy  
Dead oil, No show FO.

3835' +/-: Lss "B"  
V. fat odor, Rr Res/Med. Flour,  
few ool clusters with show  
Dk Rr. Str. 24 str. flour

55  
9.6  
6.4  
2  
15  
17  
1200  
40-0  
105  
②



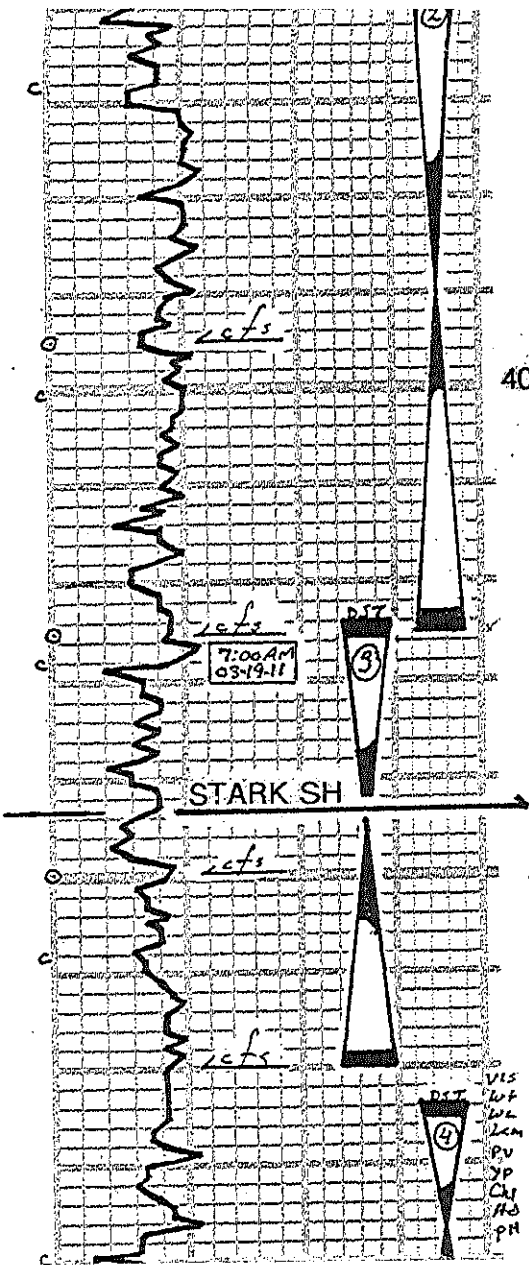


Brn F.O., some barren Por.

3860' H: Lsg C  
V. Fat odor, Scatt Mod Flour Brn sh in ool  $\phi$  with sh show Brn F.O.

3880' H: Lsg D  
Fat odor, Scatt Mod-Brd Flour, Fat Brn-Brn sh in  $\phi$  with sh shows F.O.

3965' H: M.C. Ls  
Fat odor, Scatt Mod Flour, Re Brn sh with sh show v. l. Dk Brn ool + Brn F.O.



Ls cr-tan  
fuxln, das to scatt pr xlap  
foss

Sh 94-grnch

Ls wh-cr  
fuxln - fuxln, das  
to widely scatt pr xlap  
to patchy pp & vug &  
foss in pt., some od pc

Sh 94-blk  
Ls wh-cr, fuxln, das  
Sh 94-grn

Ls wh-gr-tan  
fuxln, das in pt  
pr xlap in patches pcs,  
foss - scatt patchy foss  
scatt pp & vug &, few od pc

Sh 94-dkgr-grnch

Ls wh-cr  
fuxln, das in pt pr xlap  
in pt, scatt patchy pr pp &  
some subshaly pcs  
pr - fr crush

Sh black, carb

Sh 94

Ls wh-gr-tan  
fuxln, das in pt  
pr xlap in patches pcs,  
Rr pp &, foss

Ls wh-cr  
fuxln, das, foss

Sh black, carb  
(poorly repres. in 4100' sp)

Ls cr-tan  
fuxln - das in pt, scatt

3980' +/- LKC "H"  
Mod. Odor, Scatt Mod Flour  
Low % pcs with patchy to  
even It bin - brn stn with  
Sli Show Rr brn F.O., Rr dk  
Brn fat stn.

DST 2: 3952-4025  
30-45-45-90  
Rec: 90' mca  
120' smco  
IKP: 25-68  
ISIP: 1217  
FFP: 103-96  
ESIP: 1223

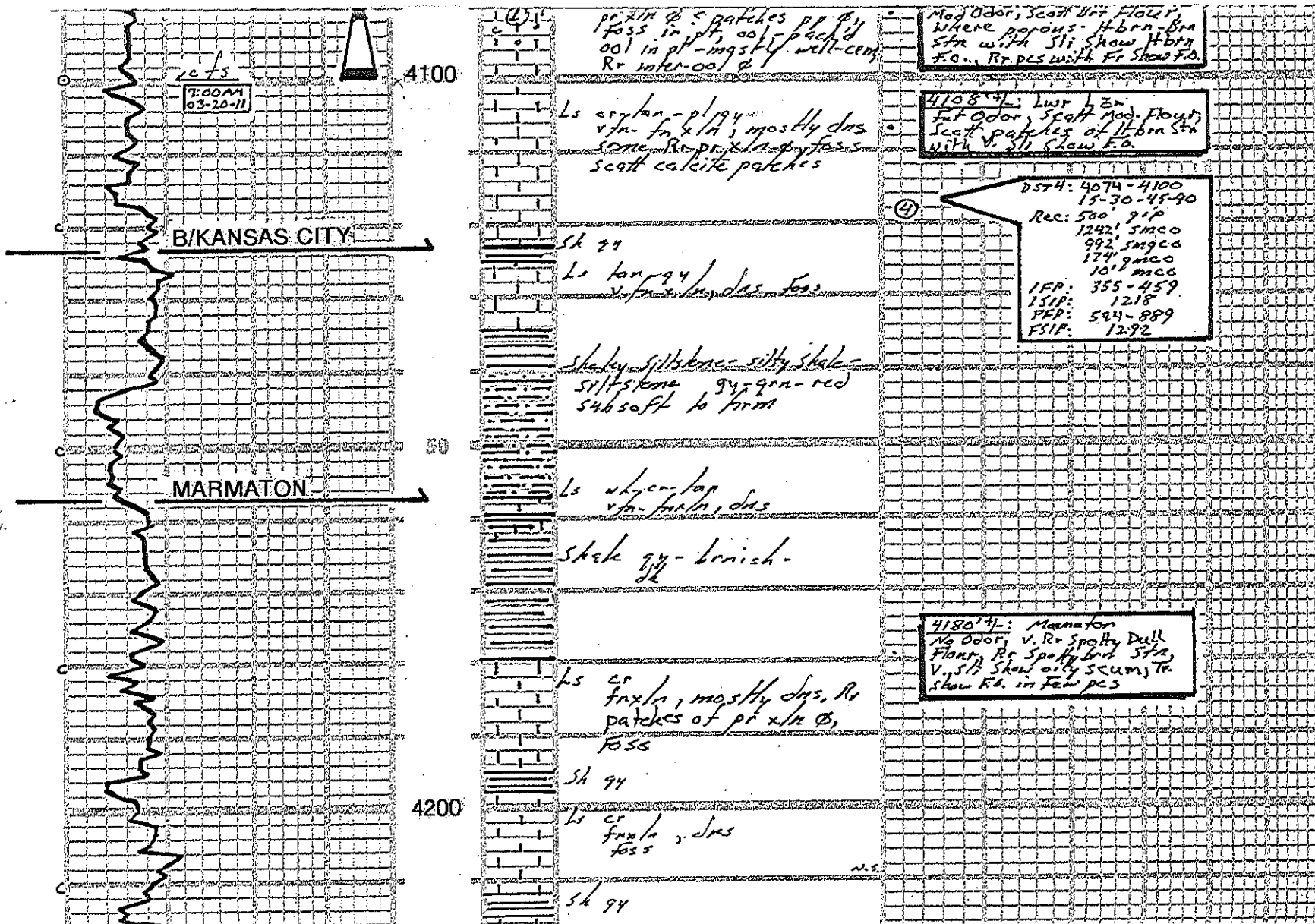
4015' +/- LKC "I"  
Stg Odor, Fr amt of Mod.  
Bkt Flour, Mix of Sli-Fr  
Show of brn gassy F.O.  
Patchy - Even It bin - brn stn

4035' +/- LKC "J"  
V. Fat Odor, Rr Mod Flour,  
Few pcs per tray with It-brn  
brn stn & v. Sli-Sli Show F.O.

4060' +/- LKC "K"  
Fat Odor, Rr Scatt Mod Flour,  
Scatt It-brn-brn Patchy to  
Rr even stn with Sli Sh. F.O.

DST 3: 4024-4070  
30-30-45-90  
Rec: 60' mcw  
240' smew  
IKP: 24-92  
ISIP: 1246  
FFP: 95-153  
ESIP: 1262

4090' +/- LKC "L"



PAWNEE

7:00 AM  
03-21-11

MYRIC STATION

FT. SCOTT

CHEROKEE SH.

50

4300

Ls cr-fan  
v. fine, dng, scatt  
calcite patches, foss

n.s.

Ls wh-cr-fan  
fine, dng, some fine in pt  
chalky in pt, calcite  
patches, sli foss

sh black-dk grn  
carb in pt

Ls wh-cr  
fine, mostly dng  
some subchalky

Ls wh-cr  
fine, mostly dng, to  
subchalky, scatt patches  
pr. r. r. q, ool in p

sh black, carb  
R.L. repres in cfs in 4290' (pld)

Ls cr, fine, dng

sh gy, subchalky in pt

Ls wh-cr-fan  
fine, dng, chalky in pt  
foss, ool in pt (well fem)  
pr. r. crush, Rr pr. in q

sh black, carb  
(Abund in cfs)

Ls cr-fan  
v. fine, dng, scatt  
scatt calc patches

Ls cr-fan  
fine, dng, some ool-  
packed ool - mostly well fem  
with v. Rr pr. inter-ool q

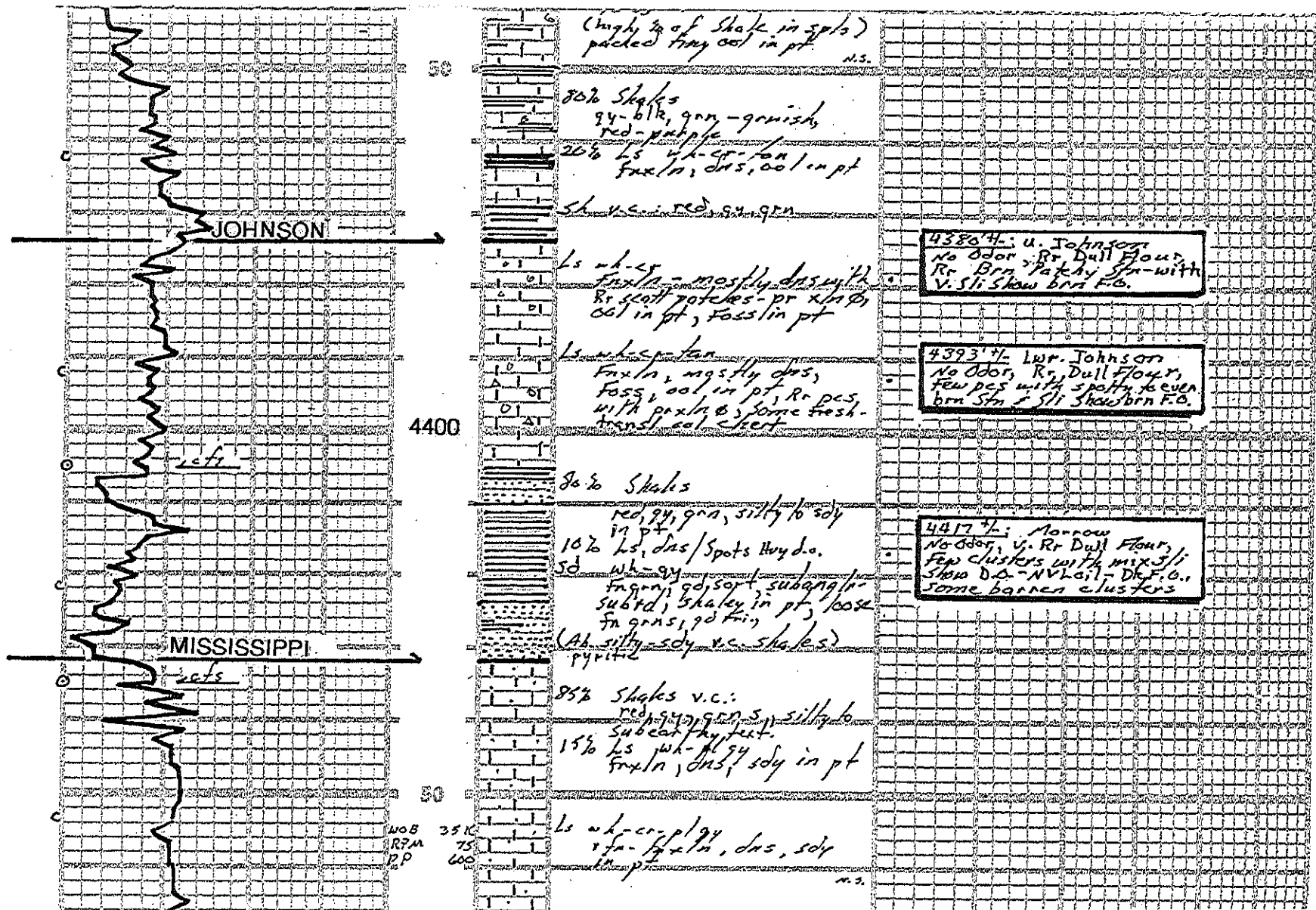
sh black, carb

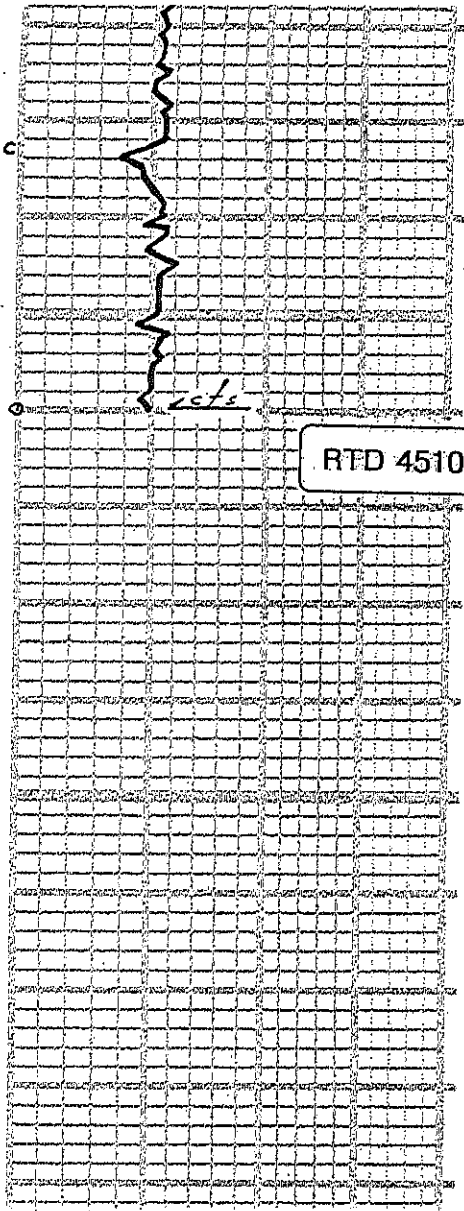
Ls cr-fan-94  
chalky in pt, dng in pt  
foss

4260' +/-: Pawnee  
No ool, Rr Dull-Med Spotty  
Flour, in Rr patches of pt  
fine, spotty, brn sfn with  
v. sli show oily scum - d.a.  
E v sli brn f.o. show

4294' +/-: Myric Station  
No ool, few pcs with Dull  
patchy flour - Rr patches  
brn sfn, no show f.o.

4317' +/-: Ft. Scott  
No ool, few pcs v. dull flour,  
v. Rr. Dull Patchy Brn sfn -  
Spotty, 2, pcs / sli show f.o.

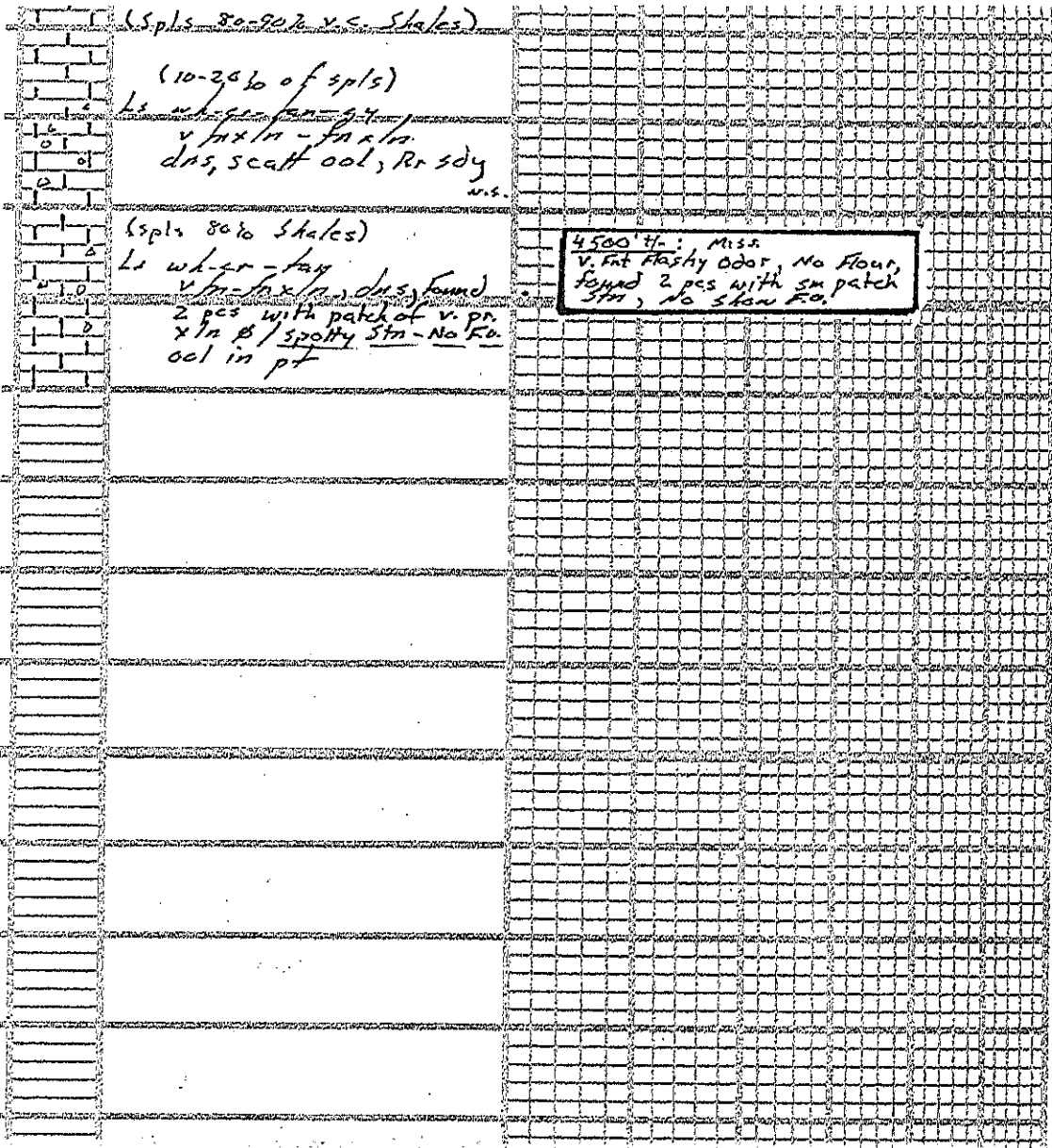




4500

RTD 4510 FT

50



(Spls 80-90% v.c. Shales)

(10-20% of spls)

ls wh-cr - tan - gray  
v. fin m - fine m.  
dms, scatt ool, Rr sdy  
w.s.

(spls 80% Shales)

ls wh-cr - tan  
v. fin - fine m. dms, found  
2 pcs with patch of v. pr.  
xln B / spotty str - No fo.  
ool in pt

4500' H.: Miss.  
v. fin flashy ool, No flour,  
found 2 pcs with sm patch  
str, No stain fo.