KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1065697

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33235
Name: Chieftain Oil Co., Inc.
Address 1: 605 S. 6th; PO Box 124
Address 2:
City: KIOWA State: KS Zip: 67070 + 1912
Contact Person: Ron Molz
Phone: (620) 825-4030
CONTRACTOR: License # 33902
Name: Hardt Drilling LLC
Wellsite Geologist: Robert Stolzle
Purchaser:

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [ ] Oil
- [ ] WSW
- [ ] SWD
- [ ] SIOW
- [x] 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 #:

02/11/2011	02/24/2011	03/14/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-007-23645-00-00
Spot Description:
NE - SW - NW - NW Sec. 18 Twp. 33 S. R. 10 [ ] East [x] West
700 Feet from [x] North / [ ] South Line of Section
630 Feet from [ ] East / [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [x] NW [ ] SE [ ] SW
County: Barber
Lease Name: Newton Well #: 2
Field Name: Traffas
Producing Formation: Mississippi
Elevation: Ground: 1601 Kelly Bushing: 1611
Total Depth: 5173 Plug Back Total Depth: 5142
Amount of Surface Pipe Set and Cemented at: 336 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 10000 ppm Fluid volume: 1200 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Molz Oil Co., Inc.
Lease Name: Garner SWD License #: 6006
Quarter NE Sec. 11 Twp. 33 S. R. 10 [ ] East [x] West
County: Barber Permit #: D-28-060

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:**
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [x] **I** [ ] **II** [ ] **III** **Approved by:** Deanna Garrisor **Date:** 10/21/2011

Side Two

1065697

Operator Name: Chieftain Oil Co., Inc. Lease Name: Newton Well #: 2

Sec. 18 Twp. 33 S. R. 10 ☐ East ☑ West County: Barber

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:
Attached

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

Name	Top	Datum
Attached	Attached	Attached

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	10.75	8.625	24	336	60/40 Poz	300	2% Salt
Production	7.875	5.5	15.5	5170	Common	225	Gas Block 2% Salt

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	-			
	-			

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
4	4630-4660	1000 Gal 7-1/2% Acid	4630-4670
		1500 Gal 15 % Acid	4630-4670
		Frac 300,000# Sand	4630-4670
		17,500 BBLS Slick Water	

TUBING RECORD: Size: 2-7/8 Set At: 4680 Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 06/01/2011

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	10	100	200		

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	Chieftain Oil Co., Inc.
Well Name	Newton 2
Doc ID	1065697

All Electric Logs Run

Cement Bond Log
Dual Induction Log
Compensated Density / Neutron PE Log
Geological Log

Form	ACO1 - Well Completion
Operator	Chieftain Oil Co., Inc.
Well Name	Newton 2
Doc ID	1065697

Tops

Name	Top	Datum
Heebner	3734	-2123
Lansing Group	3954	-2343
Kansas City	4226	-2615
Base Kansas City	4448	-2837
Pawnee	4563	-2952
Mississippi	4627	-3016
Viola	4960	-3349
Simpson	5052	-3441
Simpson Ss.	5068	-3457
Total Depth	5173	

BASIC ENERGY SERVICES

PAGE	CUST NO	INVOICE DATE
1 of 1	1000719	02/15/2011

INVOICE NUMBER

1718 - 90523540

Pratt (620) 672-1201

BILL TO
CHIEFTAIN OIL COMPANY
PO Box: 124
KIOWA
KS US. 67070
ATTN:

JOB SITE
LEASE NAME: Newton 2
LOCATION:
COUNTY: Barber
STATE: KS
JOB DESCRIPTION: Cement-New Well Casing/Pi
JOB CONTACT:

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40284364	27463		Net - 30 days	03/17/2011

For Service Dates: 02/12/2011 to 02/12/2011

0040284364

171803473A Cement-New Well Casing/Pi 02/12/2011
Top Off Hole

ENTERED
FEB 23 2011
9121 BC

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
Common	50.00	EA	11.20	559.93 T
Calcium Chloride	129.00	EA	0.73	94.80 T
Cement Pumper, Addtl hrs on location	1.00	HR	349.95	349.95
Unit Mileage Charge-Pickups, Vans & Cars	45.00	HR	2.97	133.85
Heavy Equipment Mileage	90.00	MI	4.90	440.93
Proppant and Bulk Delivery Charges	97.00	MI	1.12	108.62
Blending & Mixing Service Charge	50.00	MI	0.98	48.99
Supervisor	1.00	HR	122.48	122.48

PLEASE REMIT TO:
BASIC ENERGY SERVICES, LP
PO BOX 841903
DALLAS, TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES, LP
PO BOX 10460
MIDLAND, TX 79702

SUB TOTAL	1,859.55
TAX	47.80
INVOICE TOTAL	1,907.35

BASIC ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 03473 A

DATE TICKET NO.

DATE OF JOB 2-12-11 DISTRICT Pratt	NEW WELL ☑ OLD WELL ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:
CUSTOMER Chieftain Oil Co. Inc	LEASE Newton WELL NO. 2
ADDRESS	COUNTY Barber STATE KS
CITY STATE	SERVICE CREW Orlando, Fenwick
AUTHORIZED BY	JOB TYPE: CNW- Top off Hole

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS
27283	½				
29463	½				
19832-19862	½				

	DATE	AM/PM	TIME
TRUCK CALLED	2-12-11	AM PM	9:00
ARRIVED AT JOB		AM PM	11:00
START OPERATION		AM PM	11:30
FINISH OPERATION		AM PM	12:00
RELEASED		AM PM	1:00
MILES FROM STATION TO WELL			45

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).
The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Steven Myers
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	$ AMOUNT
CP100	Common	SK	50		800 00
CC109	Calcium Chloride	Lb	129		135 45
CE403	Cement pumper Additional hours	hr	1		500 00
E100	Pickup mileage	mi	45		191 25
E101	Heavy Equipment Mileage	mi	90		630 00
E113	Bulk Delivery	Tm	97		154 80
CE200	Depth Charge 0-500	ea	1		1000 00
CE240	Cement Service Charge	SK	50		70 00
5003	Service Supervisor	ea	1		175 00

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON $	
MATERIALS	%TAX ON $	

TOTAL DLS 1859 55

SERVICE REPRESENTATIVE Steve Orlando

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Steve Myers
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

BASiC energy services, L.P.

TREATMENT REPORT

Customer Chieftain Oil	Lease No.	Date 2-13-11
Lease Newton	Well # 2	

Field Order # 34[illegible]	Station Pratt	Casing	Depth	County Barber	State Ks

Type Job CNW - Top off Cement	Formation	Legal Description 13-3[illegible]

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft	50 sks	~~Acid~~ [illegible] Common	RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad 3% CC	Max		5 Min.
Volume	Volume	From	To 2	Pad ¼# [illegible]	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager [illegible]	Treater [illegible]

Service Units	37322	3796	19831	19862							
Driver Names											

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
11:00A					On location - Safety Meeting
	0		12	2	Mix 50 sks Common 10.[illegible] 3%C
12:00	0		6	2	Mix 2[illegible] [illegible] ¼# [illegible]
12:30					Cement To Surface
					Wash Pump truck
					Cement Stayed In Cellar
					Wash Pump truck
					Job Complete
					Thanks Steve

BASIC ENERGY SERVICES

PAGE	CUST NO	INVOICE DATE
1 of 1	1000719	02/15/2011

INVOICE NUMBER
1718 - 90523539

Pratt (620) 672-1201

BILL TO
CHIEFTAIN OIL COMPANY
PO Box: 124
KIOWA
KS US 67070
ATTN:

JOB SITE
LEASE NAME: Newton 2
LOCATION:
COUNTY: Barber
STATE: KS
JOB DESCRIPTION: Cement-New Well Casing/Pi
JOB CONTACT:

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40284343	27463	-	Net - 30 days	03/17/2011

For Service Dates: 02/12/2011 to 02/12/2011

0040284343

171803472A Cement-New Well Casing/Pi 02/12/2011
8 5/8" Surface

ENTERED
FEB 23 2011
9121 BC

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
60/40 POZ	300.00	EA	8.40	2,519.77 T
Cello-flake	75.00	EA	2.59	194.23 T
Calcium Chloride	774.00	EA	0.73	568.84 T
Wooden Cement Plug 8 5/8"	1.00	EA	111.99	111.99
Unit Mileage Charge-Pickups, Vans & Cars	45.00	HR	2.97	133.86
Heavy Equipment Mileage	90.00	MI	4.90	440.96
Proppant and Bulk Delivery Charges	581.00	MI	1.12	650.66
Depth Charge; 0-500'	1.00	HR	699.93	699.93
Blending & Mixing Service Charge	300.00	MI	0.98	293.97
Plug Container Utilization Charge	1.00	EA	174.98	174.98
Supervisor	1.00	HR	122.49	122.49

PLEASE REMIT TO:
BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES,LP
PO BOX 10460
MIDLAND,TX 79702

SUB TOTAL	5,911.68
TAX	239.65
INVOICE TOTAL	6,151.33

BASIC ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 03472 A

DATE TICKET NO.

DATE OF JOB 2-12-11 DISTRICT Pratt	NEW WELL ☑ OLD WELL ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:
CUSTOMER Chieftain Oil Co. Inc.	LEASE Newton WELL NO. 2
ADDRESS	COUNTY Barber STATE KS
CITY STATE	SERVICE CREW Orlando, Heath, Wiser
AUTHORIZED BY	JOB TYPE: CNW-Surface 8 5/8

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS
27285	1/2				
27463	1/2				
19832-19862	1/2				

	DATE	TIME
TRUCK CALLED	2-11-11	AM/PM 12:30
ARRIVED AT JOB	2-12-11	AM/PM 1:00
START OPERATION		AM/PM 5:30
FINISH OPERATION		AM/PM 6:00
RELEASED		AM/PM 6:30
MILES FROM STATION TO WELL		45

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).
The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Scott Adelhardt
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	$ AMOUNT
CP103	60/40 POZ	SK	300		3600 00
CC102	Cellflake	LB	75		277 50
CC109	Calcium Chloride	LB	774		812 70
CF153	Wooden Cement Plug 8 5/8"	EA	1		160 00
E100	Pickup Mileage	MI	45		191 25
E101	Heavy Equipment Mileage	MI	90		630 00
E113	Bulk Delivery	TM	581		928 80
CE200	Depth Charge 0-500	EA	1		1000 00
CE240	Cement Service Charge	SK	300		420 00
CE504	Plug Container	EA	1		250 00
S003	Service Supervisor	EA	1		175 00

SUB TOTAL DLS 5911 68

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON $	
MATERIALS	%TAX ON $	
	TOTAL	

SERVICE REPRESENTATIVE Steve Orlando	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Scott Adelhardt (WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

[redacted]

Field Order # [redacted] | Station [redacted] | Casing 8 5/8 | Depth 333 | County [redacted] | State [redacted]

Type Job CNW - 8 5/8 Surface | Formation | Legal Description 13-33-

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME			
Casing Size 8 5/8	Tubing Size	Shots/Ft		Acid 300 sks 60/40 Poz		RATE	PRESS	ISIP
Depth 333	Depth	From	To	Pre Pad 6%	Max			5 Min.
Volume	Volume	From	To	Pad 3% CC	Min			10 Min.
Max Press 500	Max Press	From	To	Frac 1/4# Cel Flake	Avg			15 Min.
Well Connection P.C.	Annulus Vol.	From	To		HHP Used			Annulus Pressure
Plug Depth 313	Packer Depth	From	To	Flush 20	Gas Volume			Total Load

Customer Representative Scott | Station Manager Dave Scott | Treater Steve Orlando

Service Units	27283	27463	19833	19862						
Driver Names	Orlando	Vickers	Wissler							

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1:00AM					On location Safety Meeting
					Run 371' 8 5/8 24# Casing
					Casing On Bottom
					Break Circ w/ Rig
5:35	200		3	5	H2O Ahead
5:36	160		64.6	5	Mix 300 sks 60/40 poz @ 14.5#/Gal
					Shut Down
					Release plug
5:5?	0		0	4	Start H2O Displacement
5:58	200		12	4	Cement To Surface
6:00AM	250		20	4	Plug Down
					Circulation Thru Job
					Circulated 8 bbl To pit
					Job Complete
					Thanks, Steve

BASIC ENERGY SERVICES

PAGE	T NO	INVOICE DATE
1 of 1	1000719	02/25/2011

INVOICE NUMBER
1718 - 90532373

Pratt (620) 672-1201

BILL TO
CHIEFTAIN OIL COMPANY
PO Box: 124
KIOWA
KS US 67070
ATTN:

JOB SITE
LEASE NAME: Newton 2
LOCATION:
COUNTY: Barber
STATE: KS
JOB DESCRIPTION: Cement-New Well Casing/Pi
JOB CONTACT:

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40288835	27463		Net - 30 days	03/27/2011

For Service Dates: 02/24/2011 to 02/24/2011

ENTERED
MAR 08 2011

0040288835

171803705A Cement-New Well Casing/Pi 02/24/2011 9121 BC
5 1/2" Longstring

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
AA2 Cement	255.00	EA	12.75	3,251.24 T
De-foamer (Powder)	48.00	EA	3.00	144.00 T
Salt (Fine)	1,264.00	EA	0.38	474.00 T
Gas-Blok	240.00	EA	3.86	927.00 T
FLA-322	192.00	EA	5.63	1,080.00 T
Gilsonite	1,275.00	EA	0.50	640.69 T
CS-1 L KCL Substitute	5.00	EA	26.25	131.25 T
Mud Flush	500.00	EA	0.65	322.50 T
Super Flush II	500.00	EA	1.15	573.75 T
Latch Down Plug & Baffle 5 1/2" (Blue)	1.00	EA	300.00	300.00
Auto Fill Float Shoe 5 1/2" (Blue)	1.00	EA	270.00	270.00
Turbolizer 5 1/2" (Blue)	7.00	EA	82.50	577.50
5 1/2" Basket (Blue)	2.00	EA	217.50	435.00
Unit Mileage Charge-Pickups, Vans & Cars	50.00	HR	3.19	159.38
Heavy Equipment Mileage	100.00	MI	5.25	525.00
Proppant and Bulk Delivery Charges	600.00	MI	1.20	720.00
Depth Charge; 5001-6000'	1.00	HR	2,160.00	2,160.00
Blending & Mixing Service Charge	255.00	MI	1.05	267.75
Plug Container Utilization Charge	1.00	EA	187.50	187.50
Supervisor	1.00	HR	131.25	131.25

PLEASE REMIT TO:
BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES,LP
PO BOX 10460
MIDLAND,TX 79702

SUB TOTAL	13,277.81
TAX	550.74
INVOICE TOTAL	13,828.55

BASIC ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 03705 A

DATE TICKET NO.

DATE OF JOB 2-24-11 DISTRICT Pratt	NEW WELL ☑ OLD WELL ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:
CUSTOMER Christian Oil	LEASE Newton WELL NO. 2
ADDRESS	COUNTY Barber STATE KS
CITY STATE	SERVICE CREW Orlando, Mitchell, Fenwick
AUTHORIZED BY	JOB TYPE: CNW-5½ L.S.

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS
27283	1				
27463	1				
19959/21010	1				

	DATE		TIME
TRUCK CALLED	2-23-11	AM/PM	7:00
ARRIVED AT JOB	2-23-11	AM/PM	9:30
START OPERATION	2-24-11	AM/PM	5:15
FINISH OPERATION	?	AM/PM	6:15
RELEASED	?	AM/PM	6:45
MILES FROM STATION TO WELL			50

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).
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SIGNED:
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	$ AMOUNT
CP105	AA2 Cement	SK	255		4335 00
CC105	Defoamer	Lb	48		192 00
CC111	Salt	Lb	1264		632 00
CC115	Gas-Blok	Lb	240		1236 00
CC129	FLA 322	Lb	192		1440 00
CC701	Gilsonite	Lb	1275		854 25
CF1607	Latch Down Plug + Baffle 5½"	ea	1		400 00
CF1251	Auto Fill Float Shoe 5½"	ea	1		360 00
CF1651	Turbolizers 5½"	ea	7		770 00
CF1901	Basket 5½"	ea	2		580 00
C704	KCL Substitute	Gal	5		175 00
CC151	Mud Flush	Gal	500		430 00
CC155	Super Flush II	Gal	500		765 00
E100	Pickup Mileage	Mi.	50		212 50
E101	Heavy Equipment Mileage	Mi.	100		200 00
E113	Bulk Delivery	TM	600		960 00
CE206	Depth Charge 5001-6000'	ea	1		2880 00
CE240	Cement Service Charge	Sk	255		357 00
CE504	Plug Container	ea	1		250 00
5003	Service Supervisor	ea	1		175 00
				SUB TOTAL	13277 81
				DLS	

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON $	
MATERIALS	%TAX ON $	
	TOTAL	

SERVICE REPRESENTATIVE Steve Orlando

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

BASIC energy services, L.P.

TREATMENT REPORT

Customer	Lease No.	Date
Lease	Well # 2	2-23-11

Field Order # 3705	Station	Casing	Depth	County	State
Type Job	Formation	Legal Description
---	---	---

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad	Max		5 Min.
Volume	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

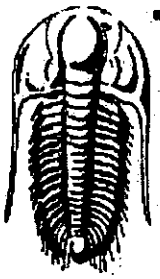
Customer Representative	Station Manager	Treater

Service Units											
Driver Names											

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
			12		
			5		
			12		
			5		
			57		
	0		0	6	
			15	6	
			95	7	
			122	4	

10244 NE Hiway 61 • P.O. Box 8613 • Pratt, KS 67124-8613 • (620) 672-1201 • Fax (620) 672-5383

Taylor Printing, Inc. 620-672-3656



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Chieftain Oil Co. Inc.**

605 S.6th,P.O.Box 124
Kiowa KS 67070

ATTN: Bob Stolzle

18-33s-10w Barber KS

Newton #2

Start Date: 2011.02.21 @ 21:37:22
End Date: 2011.02.22 @ 05:23:22
Job Ticket #: 041608 DST #: 1

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

DRILL STEM TEST REPORT

Chieftain Oil Co. Inc.

605 S.6th,P.O.Box 124
Kiow a KS 67070

ATTN: Bob Stolzle

Newton #2

18-33s-10w Barber KS

Job Ticket: 041608 DST#: 1

Test Start: 2011.02.21 @ 21:37:22

GENERAL INFORMATION:

Formation: **Misener**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:59:22
Time Test Ended: 05:23:22

Test Type: Conventional Bottom Hole
Tester: Gary Pevoteaux
Unit No: 56

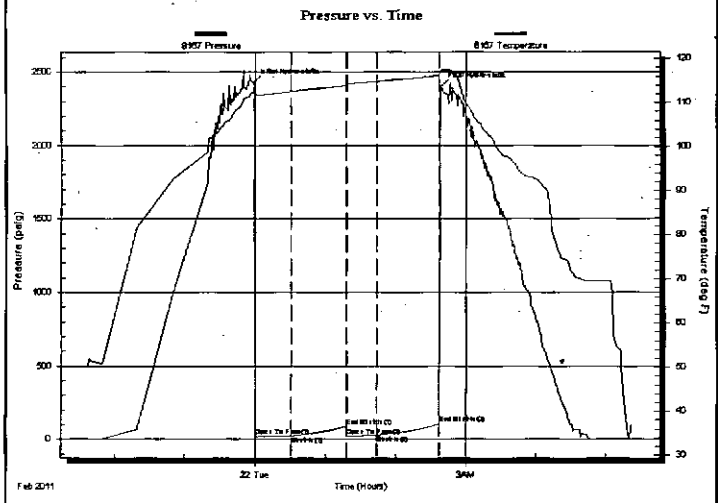
Interval: 4936.00 ft (KB) To 4965.00 ft (KB) (TVD)
Total Depth: 4965.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1611.00 ft (KB)
1601.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8167 Inside
Press@RunDepth: 30.39 psig @ 4937.00 ft (KB)
Start Date: 2011.02.21 End Date: 2011.02.22
Start Time: 21:37:27 End Time: 05:23:21

Capacity: 8000.00 psig
Last Calib.: 2011.02.22
Time On Btm: 2011.02.21 @ 23:58:22
Time Off Btm: 2011.02.22 @ 02:38:22

TEST COMMENT: IF:Weak blow . 1/2 2 1/2".
ISI:No blow .
FF:Weak blow . 1/2 - 1 1/2".
FSI:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2427.08	112.41	Initial Hydro-static
1	19.90	111.69	Open To Flow (1)
32	23.00	112.60	Shut-In(1)
79	89.36	113.96	End Shut-In(1)
80	20.07	114.00	Open To Flow (2)
105	30.39	114.90	Shut-In(2)
159	106.78	116.18	End Shut-In(2)
160	2401.55	117.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	GCMw few o specs 15%g 85%m	0.10
0.00	105 ft.of GIP	0.00

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Chieftain Oil Co. Inc.

605 S.6th,P.O.Box 124
Kiowa KS 67070

ATTN: Bob Stolzle

Newton #2

18-33s-10w Barber KS

Job Ticket: 041608 **DST#: 1**

Test Start: 2011.02.21 @ 21:37:22

Tool Information

Drill Pipe:	Length:	4769.00 ft	Diameter:	3.80 inches	Volume:	66.90 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	150.00 ft	Diameter:	2.25 inches	Volume:	0.74 bbl	
					Total Volume:	67.64 bbl	

Drill Pipe Above KB:	11.00 ft
Depth to Top Packer:	4936.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	29.00 ft
Tool Length:	57.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2400.00 lb
Weight set on Packer:		24000.00 lb
Weight to Pull Loose:		73000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	64000.00 lb
	Final	65000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			4909.00		
Shut in tool	5.00			4914.00		
HMV	5.00			4919.00		
Jars	5.00			4924.00		
Safety Joint	3.00			4927.00		
Packer	4.00			4931.00	28.00	Bottom Of Top Packer
Packer	5.00			4936.00		
Stubb	1.00			4937.00		
Recorder	0.00	8167	Inside	4937.00		
Recorder	0.00	8370	Outside	4937.00		
Perforations	23.00			4960.00		
Bullnose	5.00			4965.00	29.00	Bottom Packers & Anchor
Total Tool Length:	**57.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Chieftain Oil Co. Inc.

605 S.6th,P.O.Box 124
Kiowa KS 67070

ATTN: Bob Stolzle

Newton #2

18-33s-10w Barber KS

Job Ticket: 041608 **DST#: 1**

Test Start: 2011.02.21 @ 21:37:22

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:	3100 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.59 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3100.00 ppm				
Filter Cake:	0.20 inches				

Recovery Information

Recovery Table

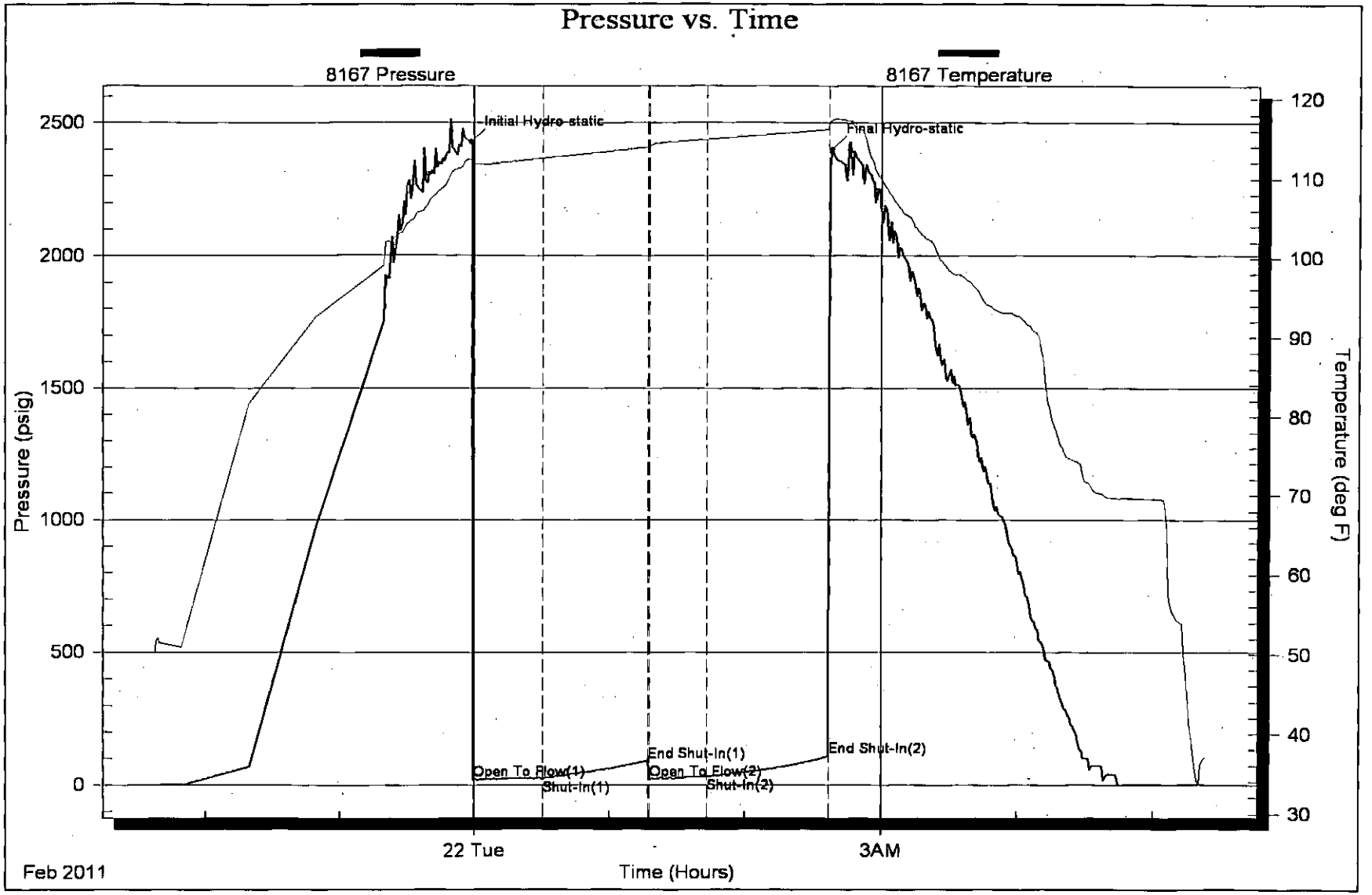
Length ft	Description	Volume bbl
20.00	GCMw few o specs 15%g 85%m	0.098
0.00	105 ft.of GIP	0.000

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8167 Pressure
8167 Temperature
Initial Hydro-static
Final Hydro-static
Open To Flow(1)
Shut-In(1)
End Shut-In(1)
Open To Flow(2)
Shut-In(2)
End Shut-In(2)
Pressure (psig)
Temperature (deg F)
2500
2000
1500
1000
500
0
120
110
100
90
80
70
60
50
40
30
22 Tue
3AM
Feb 2011
Time (Hours)

ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST

AAPG Cert # 3244

5211 S. 231st ST.W. Goddard, KS 67052 - 9249 (316) 794 - 3400

DRILLING TIME AND SAMPLE LOG

OPERATOR: Chieftain Oil Co., Inc.
LEASE: Newton WELL NO.: 2
FIELD: Trapp
LOCATION: 700'FNL, 630'FWL
SEC.: 18 TWP.: 33S RANGE: 10W
COUNTY: Barber STATE: KS
API NO.: 15-007-23645

CONTRACTOR: Hardt Drilling LLC
COMMENCED: Feb 11, 2011 COMPLETED: 2/24/11
ROTARY TOTAL DEPTH: 5170' LOG TOTAL DEPTH: 5173'
GEOLOGICAL SUPERVISION FROM: 3500' to: T.D.
MUD UP DEPTH: 3200' MUD TYPE: Chemical/Polymer

ELEVATIONS
KB 1611
GL 1601
Measurements are all From KB

CASING RECORD
SURFACE: 8 5/8" @ 336' circ
PRODUCTION: 5 1/2" @ 5170' w/ 225 sx

WIRELINE SURVEYS
Superior Well Services: Dual Induction and Compensated Density/Neutron Porosity Logs w/ Caliper

FORMATION	SAMPLE TOP	SAMPLE SUBSEA	LOG TOP	LOG SUBSEA	STRUCTURAL COMPARISON
Heebner Shale	3733	(-2122)	3734	(-2123)	-2'
Douglas Shale	3763	(-2152)	3766	(-2155)	-4'
Lansing Group	3954	(-2343)	3954	(-2343)	-5'
Kansas City Grp.	4226	(-2615)	4226	(-2615)	-2'
Stark Shale	4389	(-2778)	4390	(-2779)	-1'
Base Kansas City	4447	(-2836)	4446	(-2835)	-0-
Pawnee Ls.	4561	(-2950)	4563	(-2952)	-0-
Miss. Osage Fm.	4624	(-3013)	4627	(-3016)	+1'
Kinderhook Sh.	4846	(-3235)	4850	(-3239)	-0-
Chattanooga Sh.	4918	(-3307)	4918	(-3307)	-0-
Viola Fm.	4962	(-3351)	4960	(-3349)	-2'
Simpson Fm.	5051	(-3440)	5052	(-3441)	-0-
Simpson Ss.	5066	(-3455)	5068	(-3457)	-2'
Total Depth	5170		5173		

Reference Well for Structural Comparison: Chieftain #1 Sikes SE NE NE 13-33S-11W
Comments and Recommendations: Recommend Niss Completion

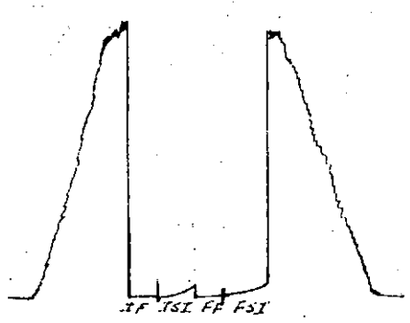
LOCATION MAP

DST # 1 ZONE: Misener Sandstone
INTERVAL: 4936'-4965'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	2427 psi	105' Gas
2. Initial Flow: Start	0	20 psi	20' Gas cut
3. Initial Flow: End	30	23 psi	Mud w/ Oil Specks
4. Initial Shut-in: End	45	89 psi	(15% gas)
5. Final Flow: Start	0	20 psi	____
6. Final Flow: End	30	30 psi	Strap 5.07
7. Final Shut-in: End	45	107 psi	long to board
8. Final Hydrostatic	____	2402 psi	Deviation 1/4°

BHT: 116°F
Rw: ____

DST # 1 8167 Chart
Interval: 4936-65' Depth: 4937



DST # ____ ZONE: ____
INTERVAL: ____

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	____ psi	____
2. Initial Flow: Start	____	____ psi	____
3. Initial Flow: End	____	____ psi	____
4. Initial Shut-in: End	____	____ psi	____
5. Final Flow: Start	____	____ psi	____

DST # ____ ____ Chart
Interval: ____ Depth: ____

7. Final Shut-in: End	____	____ psi	____
8. Final Hydrostatic	____	____ psi	____

BHT: ____

Rw: ____

DST # ____ ZONE: ____

INTERVAL: ____

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	____ psi	____
2. Initial Flow: Start	____	____ psi	____
3. Initial Flow: End	____	____ psi	____
4. Initial Shut-in: End	____	____ psi	____
5. Final Flow: Start	____	____ psi	____
6. Final Flow: End	____	____ psi	____
7. Final Shut-in: End	____	____ psi	____
8. Final Hydrostatic	____	____ psi	____

BHT: ____

Rw: ____

DST # ____ ____ Chart

Interval: ____ Depth: ____

ABBREVIATIONS USED

ROCK TYPES:

Le - Limestone
Sh - Shale
Ss - Sandstone
Silts - Siltstone
Cgl - Conglomerate
Cht - Chert
Qtz - Quartzite
Gran - Granite
Dol - Dolomite
Chlk - chalky

COLOR:

Wh - White
Crm - Cream
Clr - Clear
Rd - Red
Grn - Green
Gry - Grey
Blk - Black
Mot - Mottled

HARDNESS:

Sft - Soft
M.Sft - Moderately soft
Hrd - Hard
V.Hrd - Very hard

FABRIC:

Fn.grn - finegrained
VFG - Very fine grained
Med - Medium
Cse - Coarse
Det - Detrital
Foss - Fossiliferous
Xln - Crystalline
Mxln - Microcrystalline
Ool - Oolitic
Oom - Oomoldic
Mat - Matrix

OTHER TERMS:

fl - Fluorescence (of oil)
min fl - mineral fluorescence
pyr - pyritic
glau - glauconitic
carb - carbonaceous
stn - stain (of oil)
cut - oil cut
AA - as above
Ø - porosity
NSFOC - no stain, fluorescence, odor, or cut (of oil)
smpl - sample
perm - permiability
F.O. - free oil
vug - vugular
tr - trace
w/ - with

MODIFIERS:

gd - Good
fr - Fair
pr - Poor
ex - excellent
v - very
w - well
tr - trace
occ - occasional
vis - visible
N - no
gran - granular
intgran - intergranular
BB - pinpoint
dd - dead
gsy - gassy

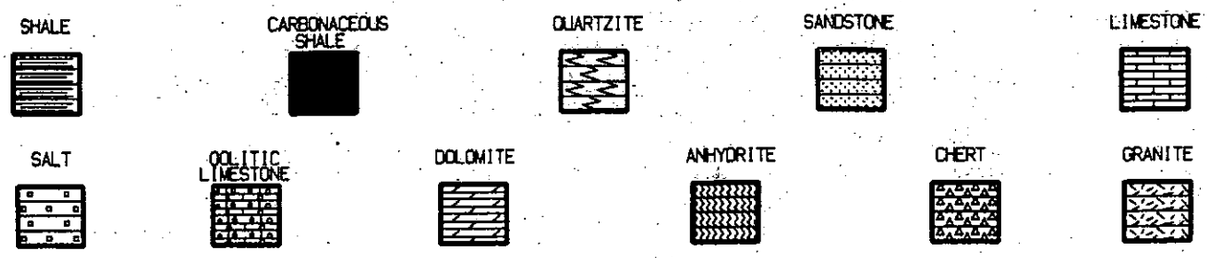
TEXTURE:

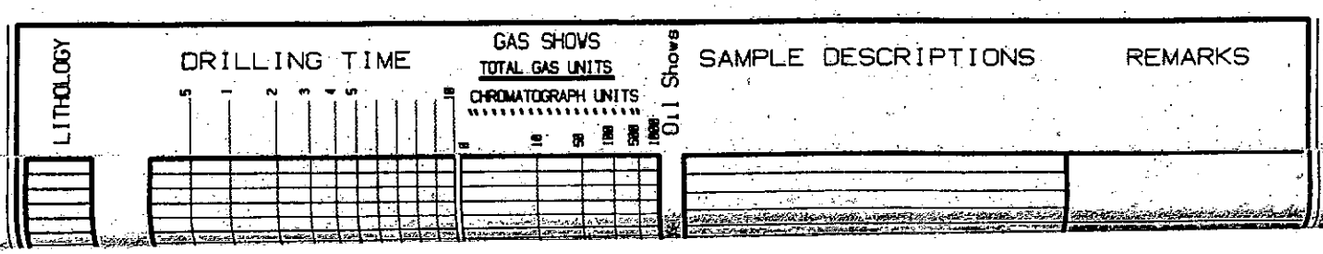
One - Dense
Cly - Clayey
Fri - Friable
Earth - Earthy
Hack - Hackly
Fiss - Fissile
Vit - Vitreous
Vug - Vugular
Mic - Micritic

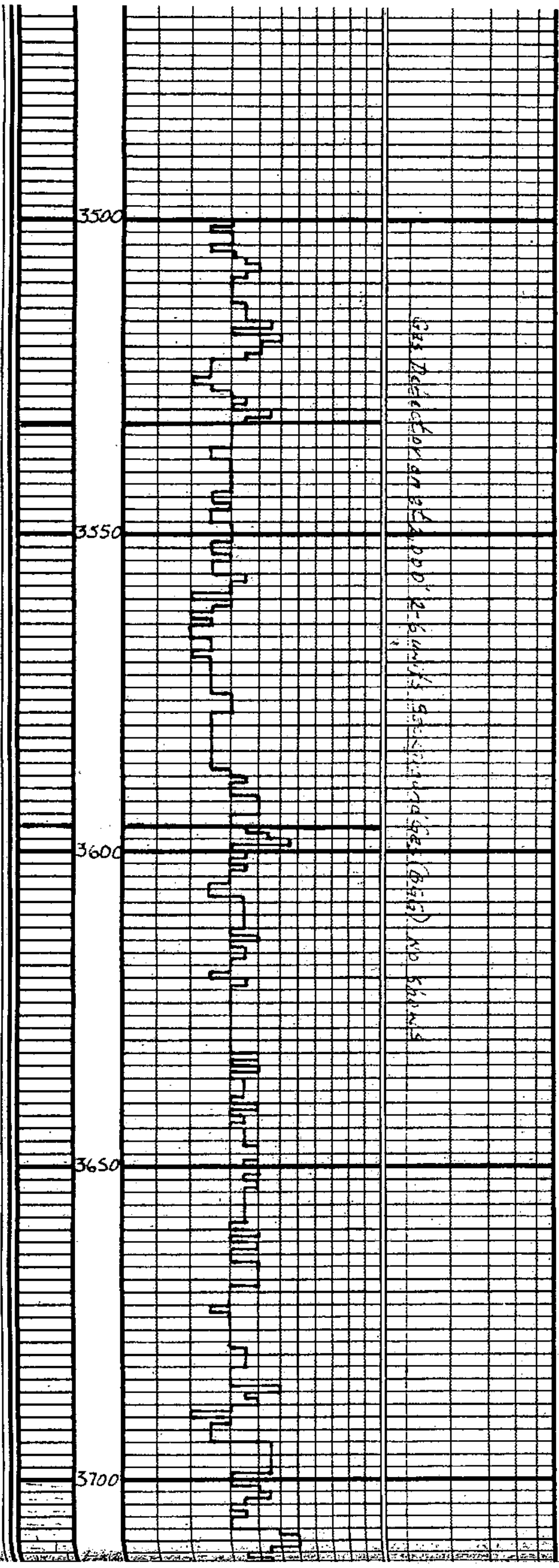
OIL SHOWS

- ○ Weak Oil Show
- ◔ Fair Oil Show
- ◑ Good Oil Show
- ● Excellent Oil Show

ROCK TYPE SYMBOLS







Complete displacing native Mud at 3200'

Start 1' Drilling Time at 3500' 4:20 A.M. 2/17/11

WOB - 35,000#
RPM - 85
Press. 825 psi (56 stks.)

Kanwaka Sh. (-1921')

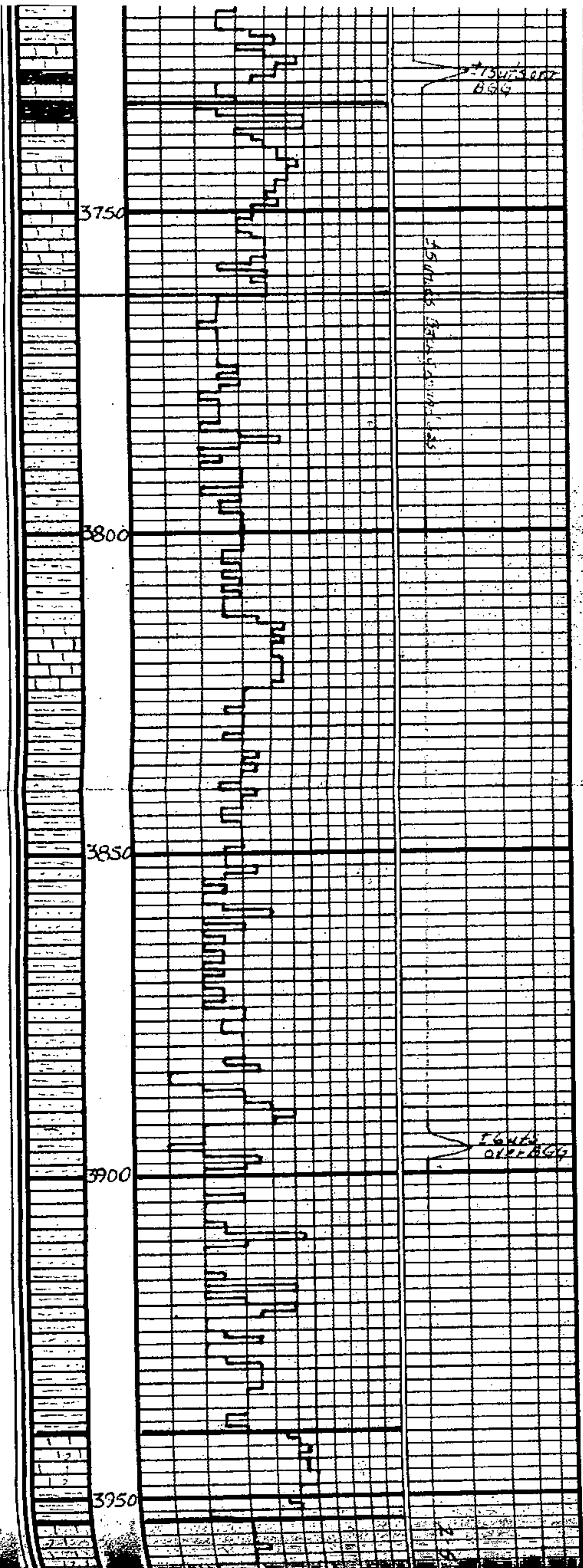
Elgin Sandstone (-1985')

Mud Check @ 3654'
M.W. 8.9 lb./gal.
Vis. 48 sec./qt.
W.L. 8 ml./30 min.
chl. 3900 ppm
solids 4.3%
LCM - 0 lbs./bbl

Start 20' Wet + Dry Samples at 3720'

Samples are lagged to correct depth

Sh: Rndx. gy., m.sft., dns., slty.-sndy., occ. mica., earthy



Sh: A.A. w/ Sh: blk, hrd, dns., carb. earthy
tr. Ls. crm-tan, hrd, dns, VFG-mxln, alg. NØ NSFOC

Haebner Sh. (-2122')

Sh: A.A., occ. carb.
Ls: crm-tan-lt. gry, hrd, dns, VFG xln, tr. foss. NØ NSFOC

Ls: A.A., NØ NSFOC, Sh: A.A.
Ss: gry, hrd, dns, fn grnd, mod-w. srtd, v.w. cmtd. NØ NSFOC

Douglas Sh. (-2152')

Sh: lt-dk gry, m. sft-m. hrd, dns, earthy, occ. slty, mica
tr. Ss. A.A. NØ NSFOC
tr. Ls. A.A NØ NSFOC

Sh: A.A.
Ss: wh-lt gry, hrd-m. sft, fria., fn-VFG, mod-w. srtd, mod-w. cmtd, tr. pr. vis. Φ NSFOC

Sh+Ss. A.A. NØ NSFOC
Ls: crm-tan-brn, hrd, dns, VFG-mxln, tr. foss. NØ NSFOC

Sh: lt. gry-gry, m. sft, dns, slty.
Ls: crm-brn, hrd, dns, VFG-mxln, foss. NØ NSFOC

Sh: gry-dk gry, m. sft, dns, hack.
Ss: wh-lt. gry, hrd, dns-m. sft, fria., mod-w. srtd, mod-w. cmtd, fn-VFG, rnd-ang. tr. mica, pr. vis. Φ NSFOC

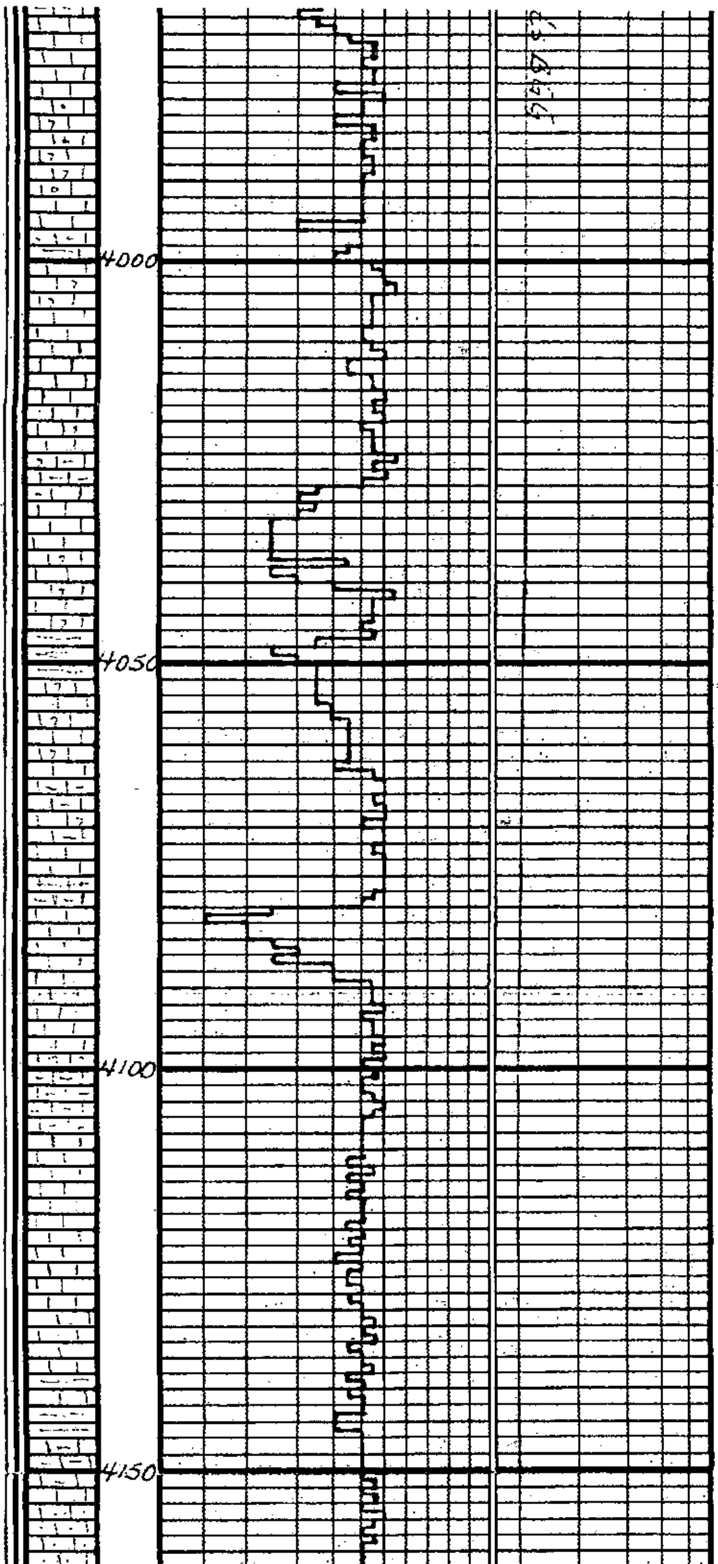
Ss: A.A., pr-v. pr. vis. Φ NSFOC
Sh: gry-dk gry, m. sft, dns, hack
Ls: tan, hrd, dns, mxln, mic. NØ NSFOC

Ss: wh-gry, hrd-m. sft, dns, w-mod. w. cmtd, fn-VFG, mod-w. srtd, sub ang, pr-no vis. Φ NSFOC
Sh: dk gry, m. hrd, dns, hack
tr. Ls. crm-tan, hrd, dns, VFG-mxln, mic., tr. foss NØ NSFOC

Ss. A.A., moretria, pr. Φ NSFOC
Ls: crm-tan, hrd, dns, VFG xln, rare foss. NØ NSFOC
Sh: dk gry, m. sft, dns, hack.

Iatan Ls. (-2349')

Lansing Group
(-2318')



Ls: crm.-tan, hrd.-m.stf., dns., VFG-mxln., tr. mic., tr. chlk., tr. foss, & ool. w/ v. pr. int. part. Φ NSFOC

Ls: crm., hrd.-m.stf., dns., VFG-mxln., occ. m.stf. & chlk., tr. foss. NØ NSFOC
V. fine grained sample

Ls: crm., m.hrd.-m.stf., dns., VFG xln., tr. foss., tr. pyr., occ. stf. & chlky NØ NSFOC

Mud Check @ 4031
M.W. 9.25
Vis. 45
W.L. 8.4
chl. 4900
Solids 6.9
LCM 0

Ls: crm.-tan, stf. & chlky.-hrd., dns., VFG-mxln., occ. foss. [illegible] No Vis. Φ NSFOC
tr. Sh: dk. gry.-blk., m.hrd., wk. hackly

Ls: crm.-tan, hrd., dns., fn.-VFG xln., occ. foss., tr. sh. stnd. NØ NSFOC
Sh: dk. gry.-blk., m.hrd., dns., hack.
tr. Ss. [illegible] sl. hrd., dns. NØ NSFOC

Ls: crm.-lt. gry., stf. & chlk.-hrd., dns., VFG-fn. xln., occ. foss. & sh. stnd. NØ NSFOC
tr. Sh: dk. gry.-blk., hrd., dns., hack.

Ls: crm.-lt. gry., hrd., dns.-m.hrd., foss., ABUN. sh. stnd., tr. pr.-v. pr. mod. pr. Φ NSFOC

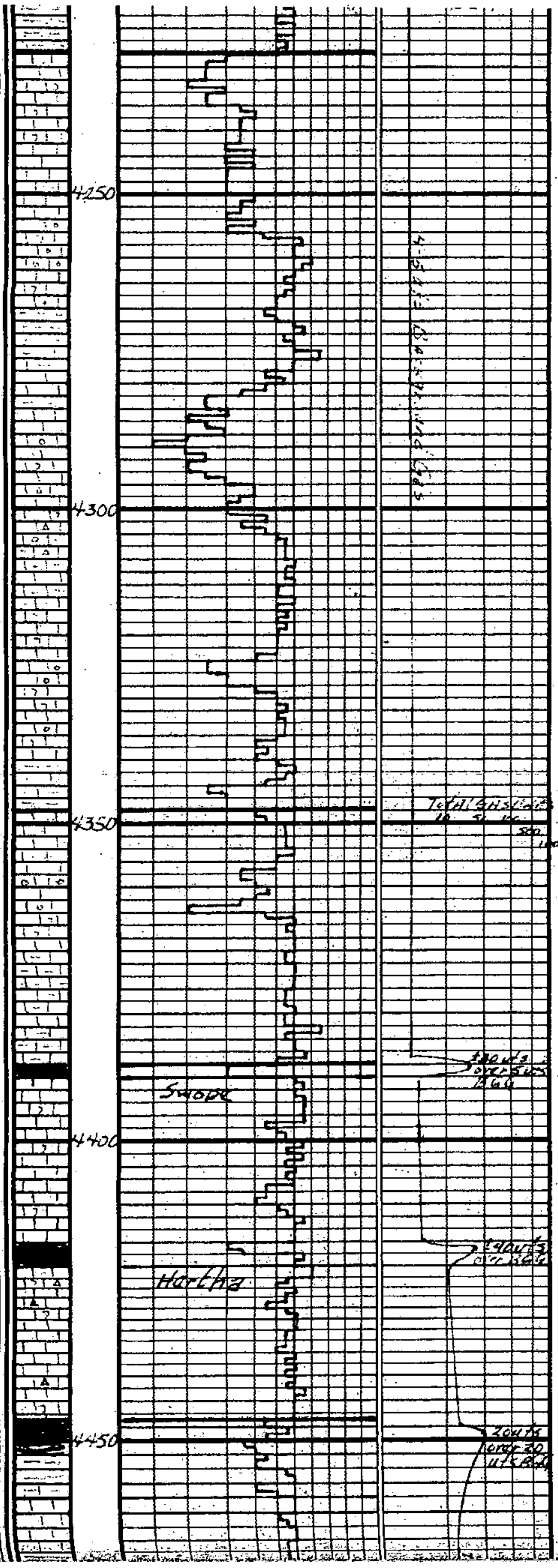
Ls: crm.-tan-lt. gry., hrd.-m.stf., dns., fngrnd.-mxln., & mic., occ. foss. & sh. stnd. NØ NSFOC
Sh: dk. gry., m.hrd., dns., hack.

Sh: dk. gry., m.hrd.-m.stf., dns., occ. slty., mica., hackly
Ls: crm.-gry., hrd., dns., VFG-mxln., tr. foss. & sh. stnd. NØ NSFOC

Sh: gry.-dk. gry., m.stf.-m.hrd., tr. slty.-sndy., hackly
Ls: crm.-gry., hrd., dns., fn.-VFG xln., tr. sndy., tr. foss. NØ NSFOC
tr. Ss: gry., m.stf., dns., VFG, mod. pr. srtd., mod. cmtd. NØ NSFOC

Sh: dk. gry.-blk., m.hrd., dns., tr. slty., hackly, tr. sndy.
Ls: crm.-gry., hrd., dns., fn.-VFG xln., sh. stnd., tr. foss. NØ NSFOC

Sh: lt.-dk. gry., stf.-m.hrd., dns., occ. slty. & mica., [illegible] hackly
Ls: crm.-gry., hrd., dns., VFG-mxln., tr. foss., sh. stnd. NØ NSFOC



Sh: lt.-dk. gry, m.sft.-m.hrd, dns, tr. slty, tr. carb, earthy-hkly

Ls: g.y.-crm.-tan, hrd, dns, VFG xln-mxln, tr. chky. NØ NSFOC

Kansas City Group (-2617')

Ls: crm.-gry, sft. & chlk.-hrd, dns., VFG-mxln, tr. tr.-pr. vug. moldic Ø, tr. foss. NSFOC

Ls: crm.-gry.-tan, hrd, dns, occ. sft. & chlk, occ. tr.-pr. vug moldic-oomoldic Ø, tr. chlk., tr. cht. NSFOC

Sh: lt.gry.-blk, m.sft., occ. slty.-sndy, tr. pyr. tr. carb, hkly

Ls: A.A., tr. moldic. vug Ø A.A. NSFOC

Ls: crm, sft. & chlk.-hrd, dns, VFG-mxln, tr. foss, tr. ool. w/ tr.-pr. oom. Ø, tr. cht. tr. pyr. NSFOC

Ls: crm-tan, hrd, dns, VFG-mxln, tr. sft. & chlk, tr. foss. & ool., tr. pr. moldic Ø NSFOC

Sh: dk. gry, m.hrd, dns. - cavings?

Ls: crm, hrd, m.sft., dns, [illegible] tr. pr. [illegible] Ø, tr. pyr. NSFOC

Abdn. Sh: [illegible] gry-dk gry, m.hrd, dns, hkly

Dennis Ls. (-2737')

Ls: crm-tan, hrd, dns, sft. & chlk, occ. [illegible], VFG-mxln, tr. pr. oom. Ø NSFOC

Abun. Sh: A.A., tr. [illegible] brn?

Mud Check @ 4400'
M.W. 9.35 Solids 7.[illegible]
Vis. 57 LCM. 0
WL 7.2
Chl. 4100

Ls: crm-tan, m.sft.-hrd, dns, VFG-mxln, mic, tr. cht. NØ NSFOC

Sh: blk, m.sft.-m.hrd, dns, pyr, carb, earthy-hackly

Stark Shale (-2777')

Sh: A.A.

Ls: crm-tan, m.sft.-hrd, dns, VFG-mxln, occ. foss, tr. pyr. NØ NSFOC

Sh: blk, m.sft, carb, coaly, earthy-hackly

Ls: crm-tan-gry, hrd-m.sft. & chlk, tr. foss, tr. pyr, tr. rexlzd, fnxln-mxln, mic, tr. cht. NØ NSFOC

Ls: crm-tan, hrd, dns, VFG-mxln, mic, tr. foss NØ NSFOC

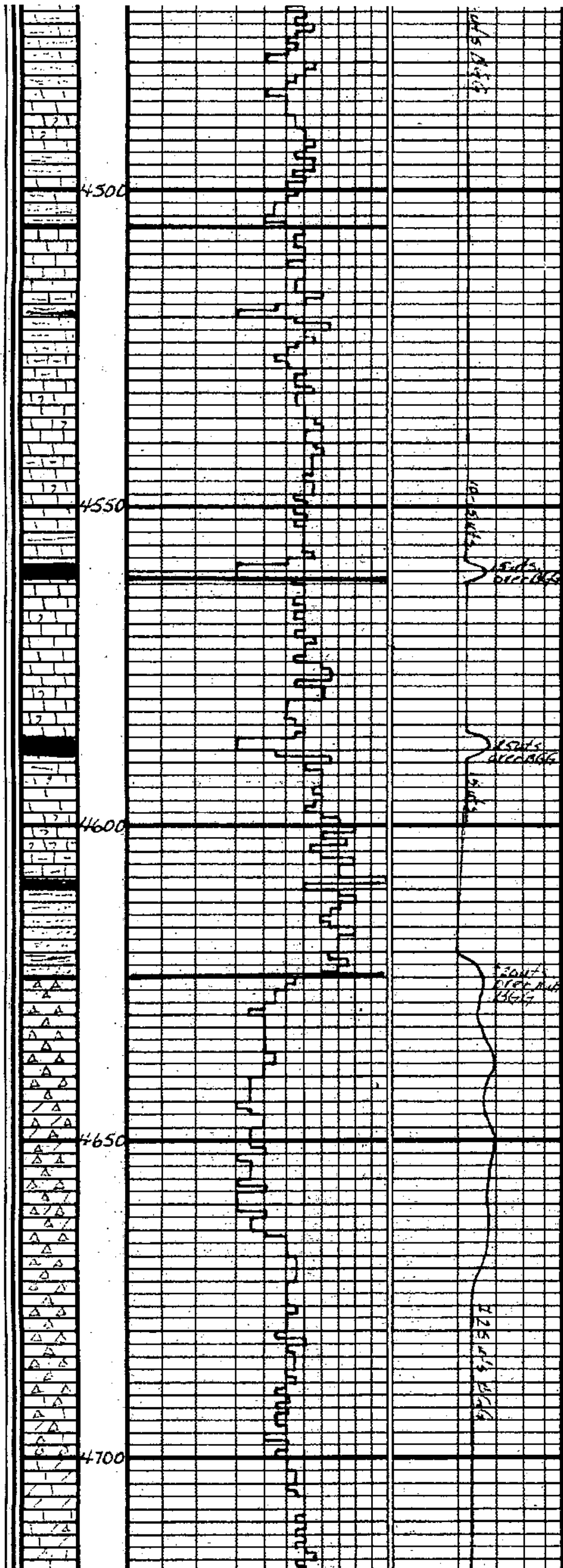
Sh: gry-blk, m.sft-m.hrd, dns, carb, earthy-hackly

Base of Kansas City Group (-2836')

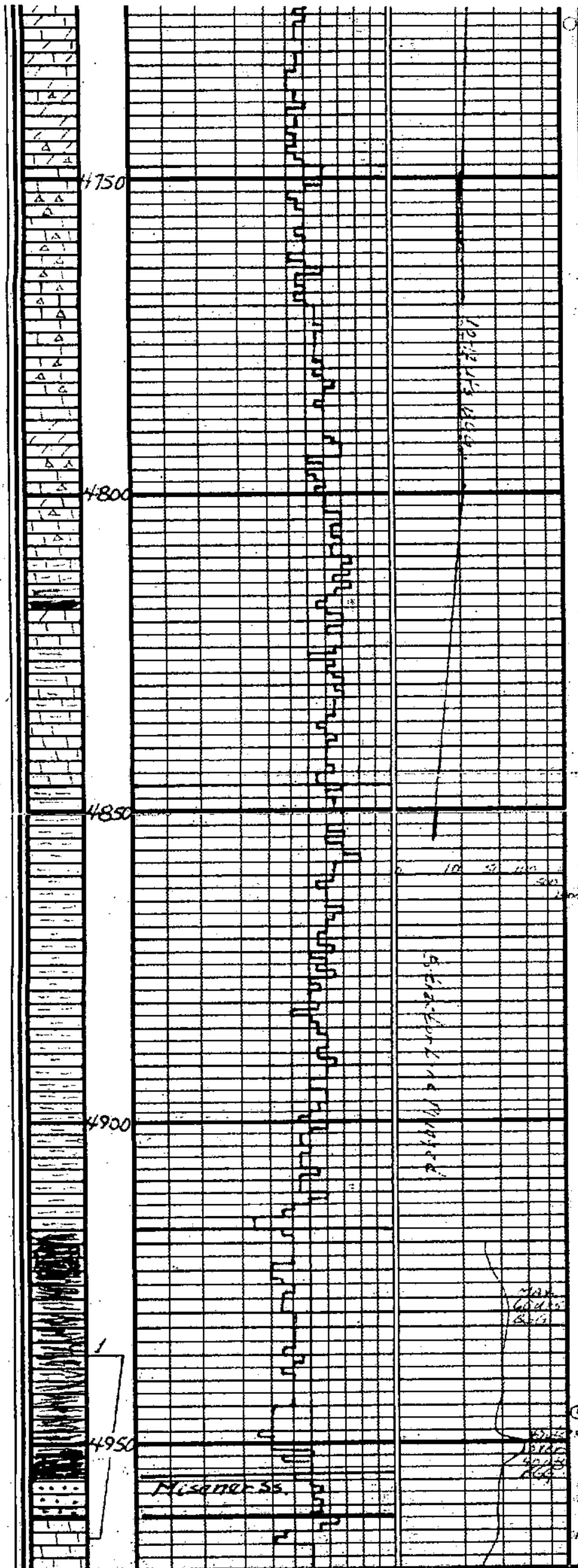
Sh: A.A., less carb.

Ls: crm-brn, hrd, dns, fnxln-mxln, [illegible] mic, tr. foss, sh

Marmaton GP. (-2847')



Lithology description	Formation / remarks
Ls: grey - tan - crm, hrd, dns, VFG - mxln + mic, tr. foss NØNSFOC	
Sh: grey - blk, m. sft, dns, slty - sndy, tr. carb, earthy	
Sh: A.A.	
Ls: crm - tan - grey, hrd, dns, VFG - mxln, tr. foss, tr. cht. NØNSFOC	Altamont Ls. (-2895')
Sh: grey - blk, m. hrd - m. sft, dns, tr. pyr, carb, earthy - hackly	
Ls: crm - tan, hrd, dns, VFG - mxln mic, tr. foss, tr. cht. NØNSFOC	
Ls: crm - lt. grey, hrd, dns, VFG - mxln + mic, occ. m. sft + chlky, rare foss. NØNSFOC	
tr. Sh: A.A.	
Sh: grey - blk, sft, flaky - "coaly" - m. hrd, dns, carb, earthy - hack	Pawnee Ls. (-2950')
Ls: crm - tan, hrd, dns, VFG - mxln mic, occ. sft + chlky, rare foss. NØNSFOC	
Ls: crm - brn - grey, hrd, dns, VFG - mxln, mic, tr. foss, tr. ch. stnd, tr. chlky. NØNSFOC	
Sh: dk. grey - blk, m. sft, carb, earthy - hackly	
Ls: crm - tan - grey, hrd, dns, fxln - mxln, mic, occ. sft + chlky, foss, tr. ool. NØNSFOC	
tr. Sh: A.A.	
Ls: A.A., more foss. NØ NSFOC	
Sh: dk. grey - blk, m. hrd, dns, hack.	
tr. SS: qtzite - cht, hrd, dns, v.f. - v.w. cmtd, wk. stn, wk. cut + fl, gas odor.	Mississippian
Cht: wh, hrd - m. sft, vit - dent, tr. trip, pr. intpart + vug Ø, tr. gd. cut + fl, mott. stn, gd. odor, wk. show F.O., ? perm.	Osage Fm. Good Show (-3013')
Cht: A.A., sli. more sat. stn, fr - pr. vug Ø, fr. intpart Ø, gd. odor, gd. cut + fl, poss. f. lc. SFO	
Cht: wh - crm, hrd, dns, vit - dent, occ. dolomitic, fr - gd. unif. stn, gd. odor, gd. cut + fl, occ. gd. vug Ø, tr. blk stn, No F.O.	Good Show
Cht: wh - crm, hrd, dns, vit - dent, rare vug Ø, occ. dolo. w/ VFG intxln Ø, gd. odor, brn - blk oil stn, gd. cut + fl, ? perm.	Fair Show
Cht: A.A., occ. dolo, occ. ls, VFG xln, tr. fr. vug Ø, wk. odor, brn - blk stn, tr. F.O., fr - wk. cut + fl, some barren Ø, ? perm.	Weak Show
	Mud Check @ 4688' M.W. 9.3 Solids 7.3% Vis. 51 LCM 2# W.L. 6.8 Chl. 3600
Cht: wh, hrd, dns, vit, white, pr. vug, spicular, Ø, dk. blk stn, wk. cut + fl, no perm. V. WK Show	
Dol / Ls: crm, hrd, dns, VFG xln, brn - blk, oil stn, wk. odor, wk - fr. cut + fl, VFG intxln Ø, ? perm.	Weak Show



tr. pr. vug. Φ w/ ok. oil stn.

Dol. lt. crm. hrd. dns. VFG xln. pr. vis. VFG intxln Φ. brn-blk. stn. wk. cut & fl. v. wk. odor. ? perm.

Weak Show

Dol. crm-tan-gry. hrd. dns. VFG xln. occ. VFG intxln Φ. lt. brn. stn. wk. cut & fl. v. ? perm. Very Weak Show

Cht. wh. hrd. dns. vit. NONSFOC

Miss. Osage Ls. (-3137')

Ls. wh-crm. hrd. dns. VFG xln. NONSFOC

occ. Dol. A.A. VFG xln. pr. VFG intxln Φ. occ. wk. brn. stn. wk. cut & fl. V. WK. Show

Cht. wh. hrd. dns. vit. NO NSFOC

Cht. wh-gry. hrd. dns. vit. occ. spic. NONSFOC

Ls. wh-crm. hrd. dns. VFG xln. No Vis. Φ NSFOC

Dol. gry-tan. hrd. dns. VFG xln. tr. lt. mott. stn. v. wk. cut & fl. v. ? perm. V. WK. Show

Ls. wh-crm. hrd. dns. fn. xln-VFG xln. NO NSFOC

tr. Dol. A.A. NSFOC

tr. Cht. A.A.

Sh. gry-gry-grn. m. sft-m. hrd. dns. hack-earthy. v. slty. tr. Cht. wh. hrd. dns. vit. NO NSFOC

Ls. crm-gry. hrd. dns. med. xln-[illegible] NONSFOC

Sh. gry-gry-grn. m. hrd. dns. hack.

Kinderhook Sh. (-3235')

Sh. gry-grn-dk. gry. m. sft-m. hrd. dns. earthy-hackly

Mud Check @ 4923'
M.W. 9.3 Solids 7.3%
V.S. 53 LCM 4#
W.L. 6.6
Chl. 3100

Sh. lt-dk. gry. m. sft-m. hrd. dns. earthy-hackly. tr. sndy.

Sh. lt-dk. gry-grn-dk. gry. sft-m. hrd. dns. occ. slty-sndy. earthy-hackly

Sh. gry-dk. gry. m. hrd-sft. flaky. 'coaly' occ. fluor. red 'specks' earthy. carb.

Chattanooga shale (-3307')

Sh. gry-dk. gry-brn. m. hrd-sft. earthy. tr. 'coaly-flaky' occ. hackly. tr. slty

Sh. A.A.

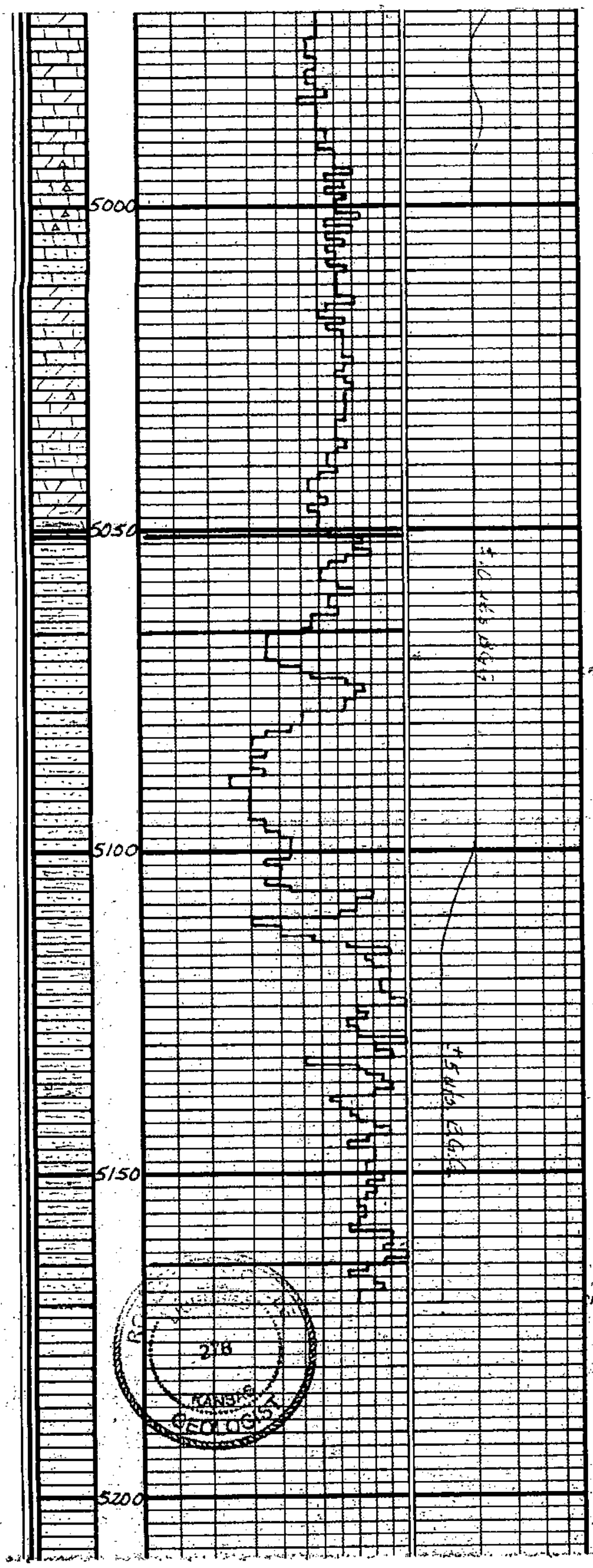
Sh. dk. gry. m. sft-m. hrd. dns. hack-earthy. tr. carb.

Ss. wh-clr. hrd. dns. v. w. cmtd-sli. fri. & mod. sft. med-fn-fn. grnd. w. srtd. sub ang-sub rnd. tr. dk. gry. sh. part. pr. vis. intpart. Φ. 1-2%. tr. Φ. v. lt. brn. stn. tr. odor. wk-tr. cut & fl. lt. blue fl. tr. gas. bubb. No F.O.

Fair Show

Viola Fm. (-3351')

DST #1 4936-45



Ls: crm-hrd, dns, fn-VFG xln. NØ NSFOC
abun. sh. cavings ±90% smpl.

Ls: crm-gry, hrd, dns, fn grnd-mxln, tr. sft. chlk, occ. sli. dolomitic NØ NSFOC
Abun. cavings

Ls: crm-tan-lt gry, hrd, dns, fnxln-mxln & mic, tr. cht., tr. chlk, occ. sndy-v. sndy. NØ NSFOC

Ls: crm-brn, hrd, dns, VFG-mxln, mic, occ. cht., occ. sli. dolomitic, tr. sndy, tr. chky NØ NSFOC
Ls: A.A., occ. pyr, tr. fos., chty. NØ NSFO
Sh: gry-maroon, m. sft-m. hrd, dns, earthy, cavings
Ls: tan, hrd, dns, dolomitic, sandy NØ NSFOC
Sh: gry-gry grn, m. hrd, dns, occ. sndy, hack.
Sh: dk gry-gry grn, m. hrd, dns, occ. sndy, occ. waxy, hackly
Sh: A.A., tr. mar., tr. pyr, hackly
Ss: wh-clr, sft-v. sft, fria, abun. loose sd in unsieved smpl, fn-VFG, med-w. rnd, pr. cmt., 2-3 clusters, No odor, No SH, No FI.
Ss: wh-clr, sft, fria, fn-VFG, abun. loose sd., rare cluster fr-pr. Ø NSFOC
Ss: wh-clr, hrd, dns, w. cmtd-sft, v. fria, abun. loose sd., clusters, fr-pr. Ø, fn. grnd, med-w. rnd. NSFOC
Ss: clr-tan, sft, fria-m. hrd, med-w. cmtd, fn. grnd, med-w. rnd, w. srtd, occ. fr-gd. Ø-f. sm. clusters NSFOC
Ss: A.A., occ. mod. srtd. w/med sd grns, most w. cmtd, fr-pr Ø NSFOC
Sh: gry-blu-grn, m. hrd, dns, waxy
Ss: wh-tan, hrd, dns, w. cmtd, fn. grnd, w. cmtd, w-med rd, pr. vis. Ø NSFOC
Ss: A.A., pr. Ø NSFOC
Sh: gry, dk gry-gry grn-rd. brn, m. hrd, dns, waxy-hack.
Sh: A.A.
Ss: wh-gry, m. sft, fria, occ. pr-fr. Ø NSFOC
Sh: gry grn-dk gry-rd. brn, m. sft, dns, waxy-hackly
occ. Ss: A.A., sli. harder, pr. Ø dolo., glauc. NSFOC
Sh: gry grn, tr. rd. brn, m. hrd, dns, tr. pyr, waxy-hackly
Ss: wh-tan, hrd-sft, fria, fn. grnd, pr. vis Ø NSFOC
Sh: A.A.
Ss: wh-tan-gry, hrd, dns, fn-VFG, dolomitic, glauc, pr-no vis Ø, mod-w. srtd NSFOC

Rec. 105 GIP
20' OSGCM
strap 5.07' long to board
Deviation 1/2°

Mud Check @ 4965'
M.W. 9.3 Solids 7.3%
Vis. 68 LCM 4#
W.L. 6.8
Chl. 3800

Start 10' Samples

Simpson Fm. Shale (-3440')

Simpson Ss. (-3455')

WOB 25,000#

WOB 35,000#

Bit Worn Out

Mud Check @ 5170
M.W. 9.3 solids 7.3%
Vis. 63 LCM 5#
W.L. 8.0
Chl. 4500

2nd Sandstone

D.T.D. 5170'
L.T.D. 5173'

Deviation 3/4°

Robert Stolz
2/23/11