Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1138123

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 # 4767
Name: Ritchie Exploration, Inc.
Address 1: 8100 E 22ND ST N # 700
Address 2: BOX 783188
City: WICHITA State: KS Zip: 67278 + 3188
Contact Person: John Niernberger
Phone: ( 316 ) 691-9500
CONTRACTOR: License # 5822
Name: Val Energy, Inc.
Wellsite Geologist: Adam Eldani
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 #:

| 01/09/2013 | 02/08/2013 | 02/08/2013 |
|---|---|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |

API No. 15 - 15-173-21016-00-00
Spot Description: 130' S & 40' W of N2NENE
SE - NW - NE - NE Sec. 25 Twp. 29 S. R. 4 ☐ East ☑ West
460 Feet from ☑ North / ☐ South Line of Section
700 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: Sedgwick
Lease Name: Farmer 25A Well #: 1
Field Name:
Producing Formation: None
Elevation: Ground: 1352 Kelly Bushing: 1362
Total Vertical Depth: 4466 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 264 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

**Drilling Fluid Management Plan**
*(Data must be collected from the Reserve Pit)*
Chloride content: 24000 ppm Fluid volume: 1500 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

**AFFIDAVIT**
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**
☑ **Confidentiality Requested**
Date: 05/06/2013
☑ **Confidential Release Date:** 05/06/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
**ALT** ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 05/07/2013

1138123

Operator Name: Ritchie Exploration, Inc. Lease Name: Farmer 25A Well #: 1

Sec. 25 Twp. 29 S. R. 4 ☐ East ☑ West County: Sedgwick

**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:

Dual Induction Log
Compensated Density/Neutron Log

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

| Name | Top | Datum |
|---|---|---|
| See 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 | 12.25 | 8.625 | 24 | 264 | 60/40 Poz | 185 | 3% cc, 2% gel |
| | | | | | | | |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|
| ____ Perforate<br>____ Protect Casing<br>____ Plug Back TD<br>____ 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<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br>*(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**

RITCHIE
EXPLORATION, INC.
Wichita, Kansas

**#1 Farmer 25A**
460' FNL & 700' FEL
130' S & 40' W of N/2 NE NE Section 25-29S-4W
Sedgwick County, Kansas
API# 15-173-21016-00-00
Elevation: 1352' GL, 1362' KB

| Sample Tops | | | Ref. Well |
|---|---|---|---|
| Topeka | 2240' | -878 | +6 |
| Heebner | 2639' | -1277 | +1 |
| Iatan | 2886' | -1624 | -4 |
| Kansas City | 3221' | -1859 | -2 |
| Stark | 3336' | -1973 | +1 |
| Hush | 3361' | -1999 | +1 |
| Marmaton | 3481' | -2119 | -9 |
| Pawnee | 3573' | -2211 | +5 |
| Labette | 3620' | -2258 | +4 |
| Fort Scott | 3630' | -2268 | +4 |
| Cherokee | 3638' | -2276 | +4 |
| Mississippian | 3861' | -2499 | +3 |
| Kinderhook | 4189' | -2827 | +9 |
| Simpson | 4323' | -2961 | -32 |
| Arbuckle | 4430' | -3068 | -34 |
| RTD | 4466' | -3104 | |

P.O. Box 783188
Wichita, Kansas 67278-3188

(316) 691-9500
Fax (316) 691-9550
rei@ritchie-exp.com

8100 E. 22nd St. N., Bldg. 700
Wichita, Kansas 67226-2328

FARMER 25A-1

# ALLIED OIL & GAS SERVICES, LLC 059717

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Medicine Lodge KS

| DATE 01/30/13 | SEC. 25 | TWP. 29s | RANGE 4w | CALLED OUT | ON LOCATION | JOB START | JOB FINISH 4:30AM |
|---|---|---|---|---|---|---|---|
| LEASE Farmer | WELL # 1 25A | | LOCATION 3 west of Viola KS, 2¼ North on Bluff Rd, west into | | | COUNTY Sedgwick | STATE KS |
| OLD OR NEW (Circle one) | | | | | | 2.01 | 7.3 |

CONTRACTOR Val #3
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 264
CASING SIZE 8⅝ DEPTH 264
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 300 MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 20 ft
PERFS.
DISPLACEMENT 15½ BBL Fresh $H_2O$

OWNER Ritchie Exploration

CEMENT
AMOUNT ORDERED ~~185sx~~ 185sx Class A + 3% cc + 2% Gel

| | | | |
|---|---|---|---|
| COMMON Class A | 185sx | @ 17.90 | 3311.50 |
| POZMIX | | @ | |
| GEL | 4 sx | @ 23.40 | 93.60 |
| CHLORIDE | 7 sx | @ 64 | 448.00 |
| ASC | | @ | |
| HANDLING | 200.02 cuft | @ 2.48 | 496.05 |
| MILEAGE | 9.13 ton x 50 mix | 2.60 | 1186.90 |

TOTAL ~~5509.05~~ 5536.05
456.50

EQUIPMENT

| | | |
|---|---|---|
| PUMP TRUCK #548/545 | CEMENTER Jason Thieneh | 1 |
| | HELPER Jake Heard | 3 |
| BULK TRUCK #421/252 | DRIVER Justin Beaver | 2 |
| ~~BULK TRUCK~~ # | DRIVER | |

REMARKS:
Did circ cement

SERVICE

| | | | |
|---|---|---|---|
| DEPTH OF JOB 264 | | | |
| PUMP TRUCK CHARGE | | | 1512.25 |
| EXTRA FOOTAGE | | @ | |
| MILEAGE | 50 mi | @ 7.70 | 385.00 |
| MANIFOLD | | @ | |
| I.V | 50 mi | @ 4.40 | 220.00 |

TOTAL 2117.25

CHARGE TO: Ritchie Expl
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT
N/A

TOTAL

To: Allied Oil & Gas Services, 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.

SALES TAX (If Any) 281.27
TOTAL CHARGES ~~7626.30~~ 7653.30
DISCOUNT ~~20%~~ ~~1525.26~~ IF PAID IN 30 DAYS
Net ~~6101.04~~ 1530.66 disc
6122.64

PRINTED NAME

SIGNATURE B Davidson

# ALLIED CEMENTING CO., LLC. 32723

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Medicine Lodge KS

| DATE 02-08-13 | SEC. 25 | TWP. 29s | RANGE 04w | CALLED OUT | ON LOCATION | JOB START 1:30 AM | JOB FINISH |
|---|---|---|---|---|---|---|---|
| LEASE Farmer | WELL# 1-25A | LOCATION Viola, KS, 3w, 2½n, w/s to | | | | COUNTY Sedgewick | STATE KS |
| OLD OR NEW (Circle one) | | | | | | | |

2:03 7:30 AM

CONTRACTOR Val #3
OWNER Ritchie

TYPE OF JOB Rotary Plug
HOLE SIZE 7⅞" T.D. 4436'
CASING SIZE 8 5/8" DEPTH 264'
TUBING SIZE DEPTH
DRILL PIPE 4½" DEPTH 4430'
TOOL DEPTH
PRES. MAX 400 MINIMUM —
MEAS. LINE SHOE JOINT —
CEMENT LEFT IN CSG. —
PERFS.
DISPLACEMENT Fresh H2O & Drilling mud

CEMENT
AMOUNT ORDERED 190sx 60:40:4% gel

| | | | |
|---|---|---|---|
| COMMON Class A | 114sx | @ 17.90 | 2040.60 |
| POZMIX | 76sx | @ 9.35 | 710.60 |
| GEL | 7sx | @ 23.40 | 163.80 |
| CHLORIDE | | @ | |
| ASC | | @ | |
| HANDLING 200.9 ~~4.3~~ | | @ 2.48 | 498.23 |
| MILEAGE 8.5x50x2.60 | | | 1105.00 |
| | | TOTAL | 4518.23 |

EQUIPMENT

PUMP TRUCK #558-555 CEMENTER D. Felio 1
HELPER Pratt 2
BULK TRUCK # 421-252 DRIVER R. Gilley 1
BULK TRUCK # DRIVER

425

REMARKS:

See Job log.

Cement Did Circ. to Surface

THX ☺

SERVICE

DEPTH OF JOB 4436'
PUMP TRUCK CHARGE 2870.24
EXTRA FOOTAGE @
MILEAGE 50 @ 7.70 385.00
MANIFOLD N/A @
light vehicle 50 @ 4.40 220.00
@
TOTAL 3415.04

CHARGE TO: Ritchie
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

none

TOTAL

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.

SALES TAX (If Any) 579.18
TOTAL CHARGES 7934.07
DISCOUNT 1983.52 IF PAID IN 30 DAYS
Net 5950.55

PRINTED NAME
SIGNATURE Greg Davidson

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

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/



May 06, 2013

John Niernberger
Ritchie Exploration, Inc.
8100 E 22ND ST N # 700
BOX 783188
WICHITA, KS 67278-3188

Re: ACO1
API 15-173-21016-00-00
Farmer 25A 1
NE/4 Sec.25-29S-04W
Sedgwick 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,
John Niernberger

25-29S-4W


# PATRICK J. DEENIHAN

Licensed Geologist No. 234

P.O. Box 781929 316-640-5611 Wichita, KS 67278


## GEOLOGIST'S REPORT
### DRILLING TIME AND SAMPLE LOG

OPERATOR: RITCHIE EXPLORATION, INC.

LEASE: #1 FARMER 25A

FIELD: WILDCAT

LOCATION: 460' FNL - 700' FEL

SEC. 25 TWP. 29S RGE. 4W

COUNTY: SEDGWICK STATE: KANSAS

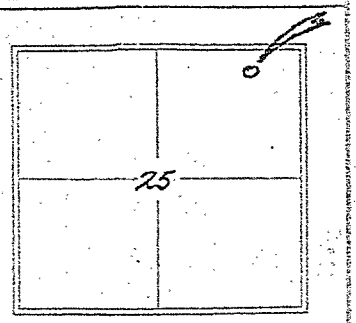
ELEVATION
KB 1362'
DF
GL 1352'
Measurements Are All From K.B

CONTRACTOR: VAL ENERGY, INC. RIG #3
COMM: 1-28-13 COMP: 2-08-13
RTD 4466' LOG TD 4469'
SAMPLES SAVED FROM 2200 TO T.D.
DRILLING TIME KEPT FROM 1900' TO T.D
SAMPLES EXAMINED FROM 2200 TO T.D
GEOLOGICAL SUPERVISION FROM 1900 TO T.D
MUD UP 2622' TYPE MUD CHEMICAL
API # 15-173-21016-00-00

CASING RECORD
SURFACE 8 5/8" @ 266'
PRODUCTION N/A

WELL LOG SURVEYS
PANA BORS
COMP.-NEUT.-DENS.
DUAL INDUCTION

| FORMATION | LOG TOP | LOG DATUM | SAMPLE TOP | SAMPLE DATUM | STRUCT. COMP. |
|---|---|---|---|---|---|
| TOPEKA | 2290 | (-922) | 2287 | (-925) | -38' |
| QUEEN HILL | 2444 | (-1100) | 2441 | (-1097) | -63' |
| HEEBNER | 2683 | (-1339) | 2680 | (-1380) | -105' |
| DOUGLAS | 2650 | (-1388) | 2748 | (-1386) | -51' |
| KANSAS CITY | 3258 | (-1896) | 3255 | (-1893) | -39' |
| STARK SHALE | 3359 | (-1997) | 3356 | (-1994) | -23' |
| HUSHPUCKNEY | 3408 | (-2046) | 3405 | (-2093) | -46' |
| MARMATON | 3518 | (-2156) | 3515 | (-2153) | -22' |
| PAWNEE | 3610 | (-2248) | 3606 | (-2244) | -32' |
| CHEROKEE | 3685 | (-2323) | 3684 | (-2322) | -43' |
| MISSISSIPPIAN | 3906 | (-2544) | 3903 | (-2541) | -42' |
| KINDERHOOK | 4193 | (-2831) | 4190 | (-2828) | -1 |
| SIMPSON | 4322 | (-2960) | 4321 | (-2959) | -31' |
| ARBUCKLE | 4420 | (-3058) | 4417 | (-3055) | -24' |




REFERENCE WELL FOR STRUCTURAL COMPARISON: HAZELWOOD PRODUCTION #1-19 FARMER (19-29S-3W) NE-SE-NE, SEDGWICK CO., KANSAS

REMARKS: IT WAS RECOMMENDED THAT THIS WELL (#1 FARMER 25A) BE PLUGGED AND ABANDONED ON 2-08-13. POOR STRUCTURAL POSITION, LACK OF ZONE DEVELOPMENT AND X-LOG EVALUATION WERE THE PRIMARY REASONS FOR THIS RECOMMENDATION.

RESPECTFULLY SUBMITTED

BY: PATRICK J. DEENIHAN, PETROLEUM GEOLOGIST

| Depth | Drilling Time Minutes/Foot (0, 5", 10", 15") | Gas Curve | LITH | Sample Descriptions | Remarks |
|---|---|---|---|---|---|
| 2200 | | | | T.D.O A.M. PENETRATION (1-28-13=MIRU/SPUD 9:30 P.M.) | 27.2 BACKGROUND GAS |
| | | | | 1-29-13 - 84' | |
| | | | | 1-30-13 - 266' | |
| | | | | 1-31-13 - 952' | |
| | | | | 2-01-13 - 1742' | |

2-02 -13 - 2841'
2-03 -13 - 3080'
2-04 -13 - 3443'
2-05 -13 - 3780'
2-06 -13 - 4219'
2-07 -13 - 4326'
2-08 -13 - 4426' RTD

50

SH., BLACK, GRY-ARGIL

SH., A/A SLI-VARI-COLOR

CLOCK STOPPED
REWOUND

SH., BLACK & GRYS-ARGIL

TOPEKA
2287 (-925)

LS., WHT, CRM-SING-FN-XLN
SLI-FSSL, SUB CHALKY

2300

SH., GRYS, SLI-VARI-COLOR

29.2 BACKGROUND GAS

SAMPLES VERY SHALEY

LS-CRM, TAN-SING-FSSL & FN-XLN
SUB-CHALKY -NO SHOW

LS., WHT, CRM-SING-MICRO-XLN
FSSL-TIGHT-NO SHOW

LS., CRM, TAN-SING FN-XLN-SLI-
FSSL

SH. GRY-ARGIL

LS., LT. TAN-WHT-V-FN-XLN
SLI-FSSL

50

SAMPLES VERY SHALEY

LS. A/A
SH., VARI-COLOR

LS., WHT, CRM-SING-FSSL
P-FN-XLN-SUB CHALKY

LS., A/A INCR. IN WHT CHALKY
LIME.

2400

32.2 BACKGROUND GAS

SH., GRY-BLACK, BRN-ARGIL

LECOMPTON
2414 (-1052)

QUEEN HILL
2441 (-1079)

SH., BLACK CARB

50

SAMPLES VERY SHALEY

SH., VARI-COLOR

SH., VARI-COLOR

O READ

2470 (-1108)

LS. WHT, LT GRY-SING-FSSL MICRO-XLN TO FN-XLN W/ PP-TO SHALLOW VUG, ϕ-NO SHOW

2500

35.8 BACKGROUND GAS

LS., WHT-SING-P-FN-XLN TRC OF FSSL, SUB-CHALK-NO SHOW

50

SAMPLES VERY SHALEY

LS., WHT CRM & LT. GRY-SING-TO SU-MOTT-MICRO FN-XLN TRC OF P-FSSL-SUB-CHALKY

LS., A/A-INCR IN SHALE

LS., A/A W/ GRY SH.

SH., GRY, BRN, GRN-ARGIL

2600

38.9 BACKGROUND GAS

LS. LT GRY, CRM-SING/MOTT FSSL, SU-OOL TO P-FN-XLN NO SHOW

DISPLACE MUD @ 2622'

VIS: 50 WT: 8.8 WL: 9.4 CHL: 1500 ppm LCM: 0

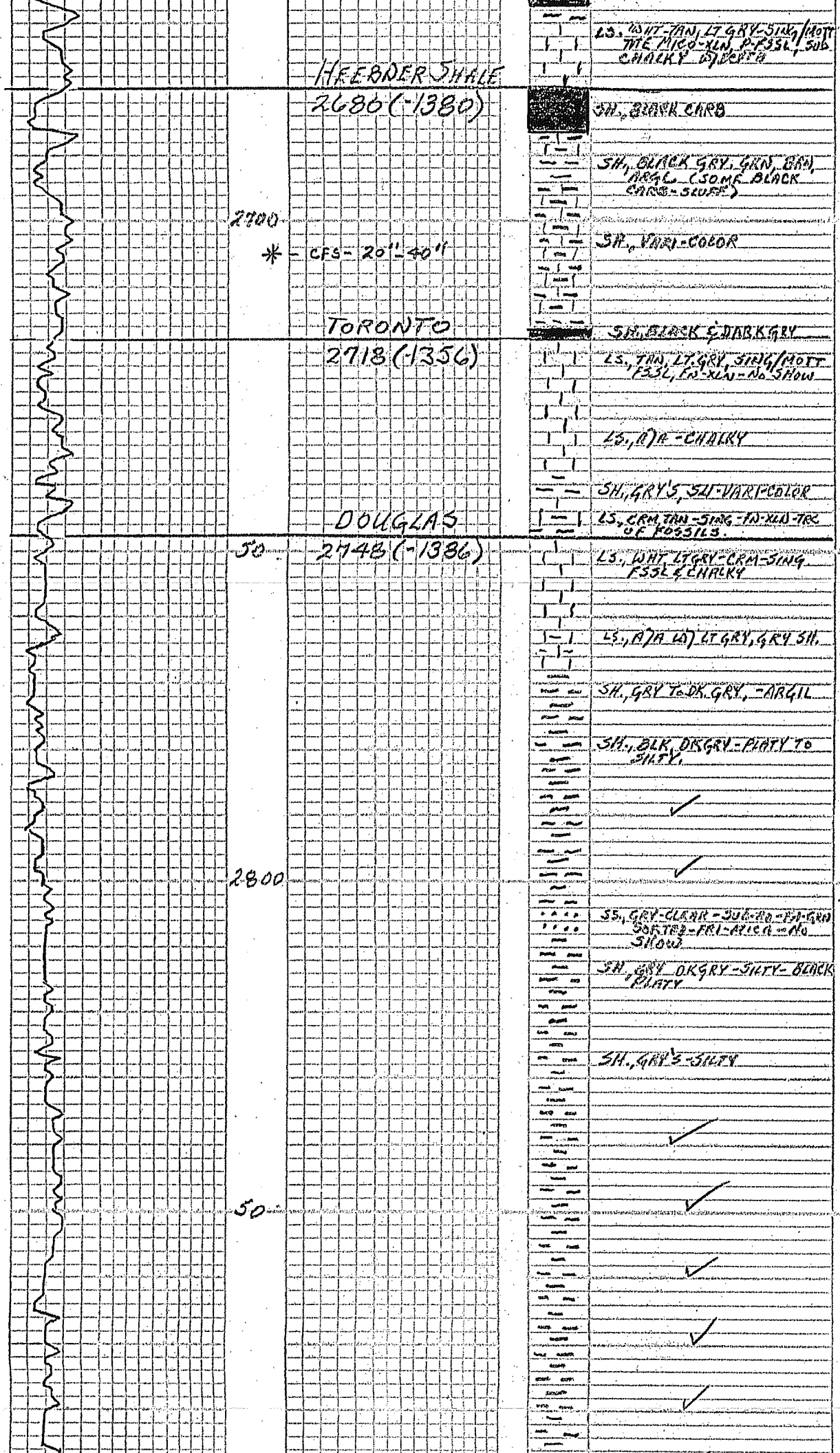
LS, WHT, CRM, LT GRY-SING P-FN-XLN, TRC OF FOSSILS SUB-CHALKY W/ DEPTH NO SHOW

50

SAMPLES VERY SHALEY

SH., VARI-COLOR

SH., BLACK CARB


LS., WHT-TAN, LT GRY-SLNG/MOTT
TNE MICO-XLN, P-FSSL, SUB
CHALKY DJ DOLO
HEEBNER SHALE
2686 (-1380)
SH., BLACK CARB
SH., BLACK GRY, GRN, BRN,
ARGL (SOME BLACK
CARB-SLUFF)
2700
40.3 BACKGROUND
GAS
* - CFS - 20'-40'
SH., VARI-COLOR
TORONTO
2718 (-1356)
SH. BLACK & DARK GRY
LS., TAN, LT. GRY, SLNG/MOTT
FSSL, FN-XLN - NO SHOW
LS., A)A - CHALKY
SH., GRY'S, SLI-VARI-COLOR
DOUGLAS
LS., CRM, TAN - SLNG - FN-XLN - TRC
OF FOSSILS.
SAMPLES VERY SHALEY
50
2748 (-1386)
LS., WHT, LT GRY - CRM - SLNG.
FSSL & CHALKY
LS., A)A W) LT GRY, GRY SH.
SH., GRY TO DK. GRY, - ARGIL
SH., BLK, DKGRY - PLATY TO
SILTY.
2800
41.0 BACKGROUND
GAS
SS., GRY-CLEAR - SUB-RO - F-M-GRN
SORTED - FRI - ARGIL - NO
SHOW
SH., GRY DKGRY - SILTY - BLACK
PLATY
SH., GRY'S - SILTY
50

2900

42.2 BACKGROUND GAS

LS., CRM-FN-XLN, SLT-FSSL

SH., GRY-ARGIL

IATAN

2931 (-1569)

LS., CRM, LT. GRY, TAN-FN-XLN
NO SHOW

SH., BLACK, GRY-DK GRY-BLK
ARGIL

50

SH. N/A-SILTY

SS., WHT, GRY, SING/MOTT-V-FN GRN
MICA & SH. INCLUSIONS

3000

SH., GRY, DK GRY-SILTY

SS., WHT, LT GRY-FN-GRN-SORTED
SOME FRRR GRN-SUB-RO-
NO STAIN-POUND GRY-SH
& SILTSTONE

43.6 BACK GROUND GAS

LS.

50

SAMPLES VERY SHALEY

WESTON

3075 (-1713)

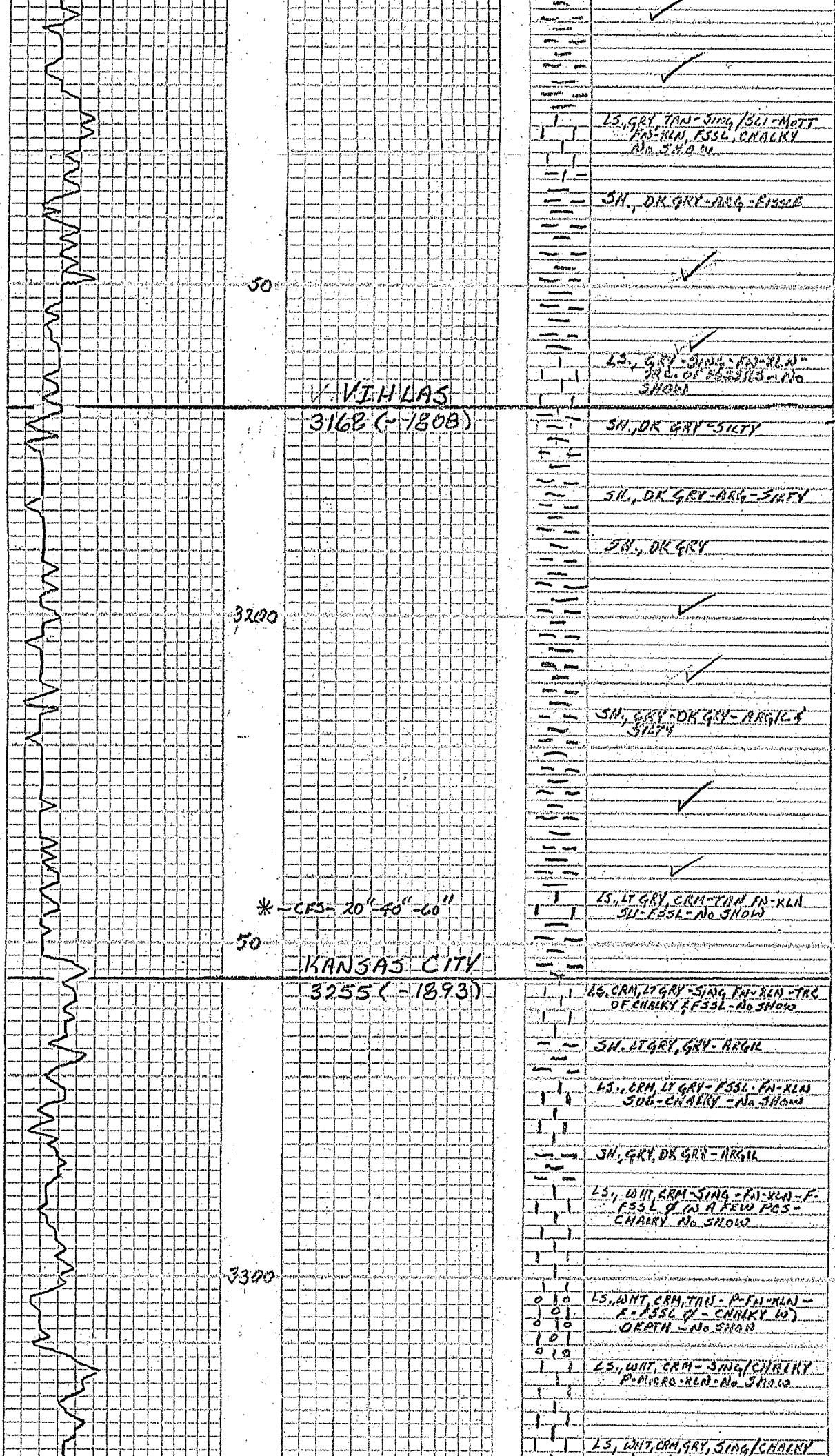
SH., GRY-DK GRY & BLACK

*-CFS-20"-40"

*-CFS-20"-40"-60"

3100

46.2 BACKGROUND GAS


LS., GRY, TAN - SING / SLI - MOTT
FN - XLN, FSSL, CHALKY
NO SHOW
SH., DK GRY - ARG - FISSILE
50
LS., GRY - SING - FN - XLN -
TRC. OF FSSLS - NO
SHOW
V. VIH LAS
3168 (-1808)
SH., DK GRY - SILTY
VIS: 31 WT: 9.2 WL: 6.4
CHL: 6,000 ppm LCM: 0#
SH., DK GRY - ARG - SILTY
SH., DK GRY
3200
49.5 BACKGROUND
GAS
SH., GRY - DK GRY - ARGIL &
SILTY
LS., LT GRY, CRM - TAN FN - XLN
SU - FSSL - NO SHOW
* - CFS - 20" - 40" - 60"
50
KANSAS CITY
3255 (-1893)
LS. CRM, LT GRY - SING FN - XLN - TRC
OF CHALKY & FSSL - NO SHOW
SH. LT GRY, GRY - ARGIL
LS., CRM LT GRY - FSSL - FN - XLN
SUB - CHALKY - NO SHOW
SH., GRY, DK GRY - ARGIL
LS., WHT, CRM - SING - FN - XLN - F.
FSSL & IN A FEW PCS -
CHALKY NO SHOW
SAMPLES VERY SHALEY
3300
LS., WHT, CRM, TAN - P - FN - XLN -
F - FSSL & - CHALKY W/
DEPTH - NO SHOW
58.4 BACKGROUND
GAS
LS., WHT, CRM - SING / CHALKY
P - MICRO - XLN - NO SHOW
LS., WHT, CRM, GRY, SING / CHALKY

NO SHOW

LS., A)A SLI-FSSL-NO SHOW

50

* - CFS - 20" - 40" - 60"

LS. WHT, TAN, BRN / SING / MICRO & FN-XLN, SLI FSSL SUB-CALCY - NO SHOW

LS., CRM, GRY-SING/MOTT-FN-XLN MICRO-XLN-CHART-TRANS.% OPAQUE-FRESH OTTRC OF FSSLS - NO SHOW

STARK SHALE

3372 (-2010)

SH., BLACK CARB.

SH., BLACK & GRY

LS., CRM-SING-FSSL-OOCL, OOL

* - MOVED DOWN FOR CONN.

* - CFS - 20" - 40" - 60"

LS., TAN-SING/MOTT-FN-XLN-TO OOL & OOC - 1 PCS. W/ BRN LFO - EDGE STN ON FRW PCS NO ODOR - NO FLUOR - NO GAS KICK

LS., CRM, GRY-SING-MICRO-XLN-SUB-CHALKY-NO SHOW

3400

61.2 BACKGROUND GAS

HUSH PUCKNEY

3405 (-2043)

SH., BLCK. CARB

LS., CRM, - TAN / SING / P-FN-XLN - SUB CHALKY - NO SHOW

SH., GRY, SLI-VARI-COLOR

SH., BLACK, GRY-ARGIL

LS., WHT, CRM, GRY, BRN-SING / MOTT-FN-XLN - FSSL-SLI OOL, - NO SHOW

50

SH., GRY, DK. GRY & BLACK PLATY & ARGIL

3500

65.0 BACKGROUND GAS

SH., VARI-COLOR-ARGIL-FISSILE.

MARMATON

3515 (-2153)

SH., BLACK CARB

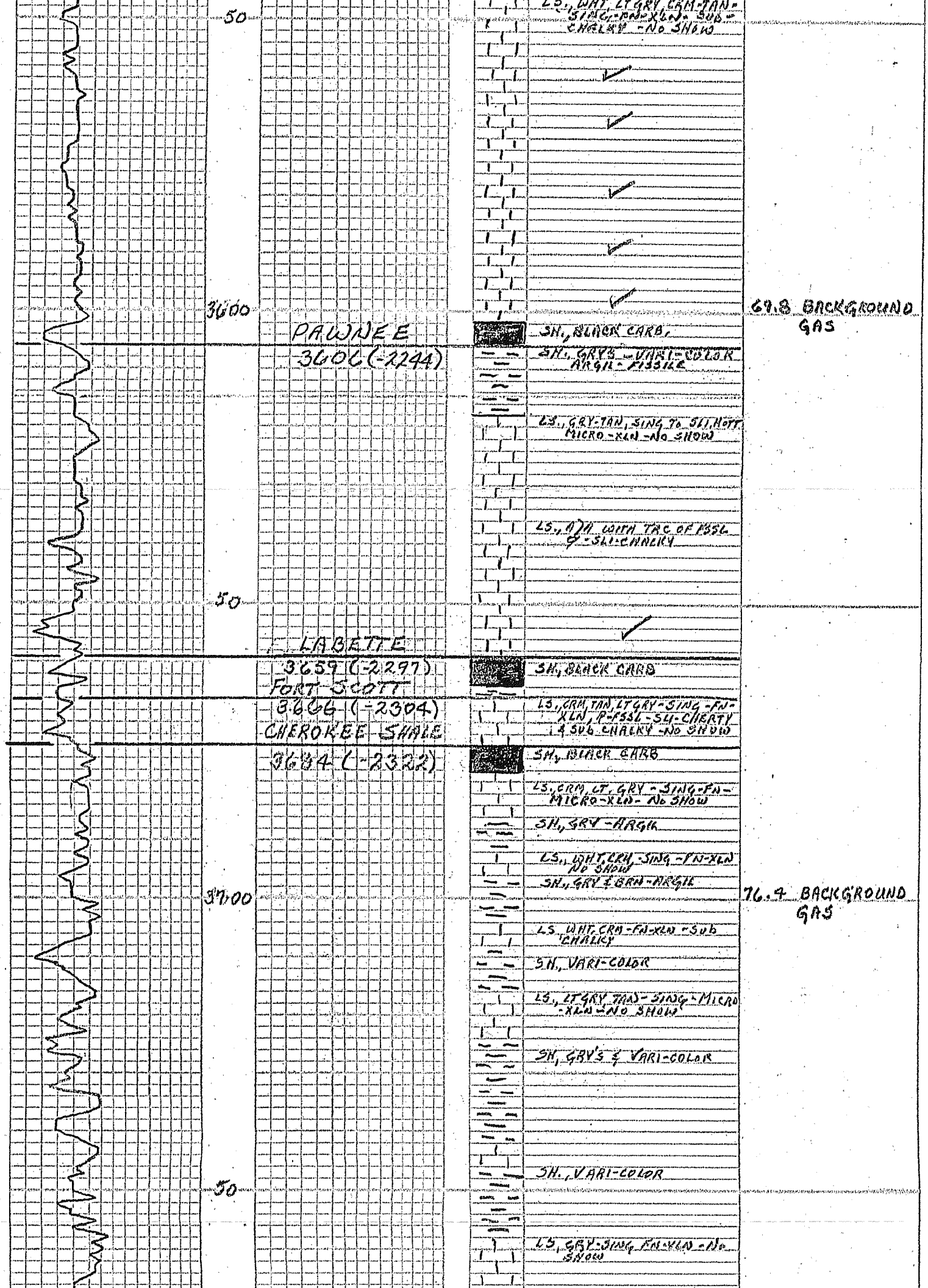
LS., CRM, TAN, LT. GRY-FN-XLN MICO-XLN-P.P.O. IN V.I. A FEW PCS - NO SHOW

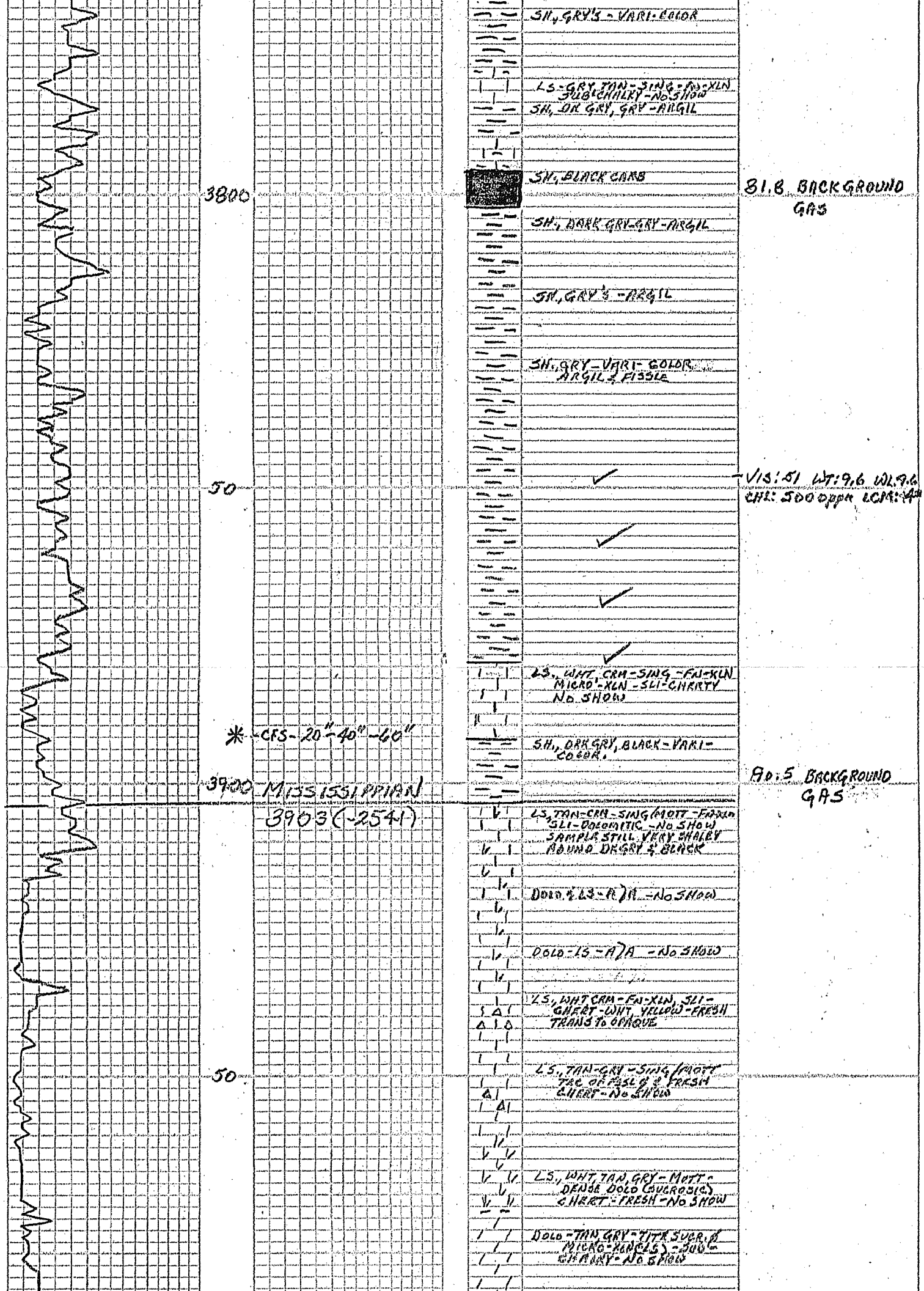
- VIS: 50 WT: 9.4 WL: 8.0 CHL: 7000 ppm LCM: 0%

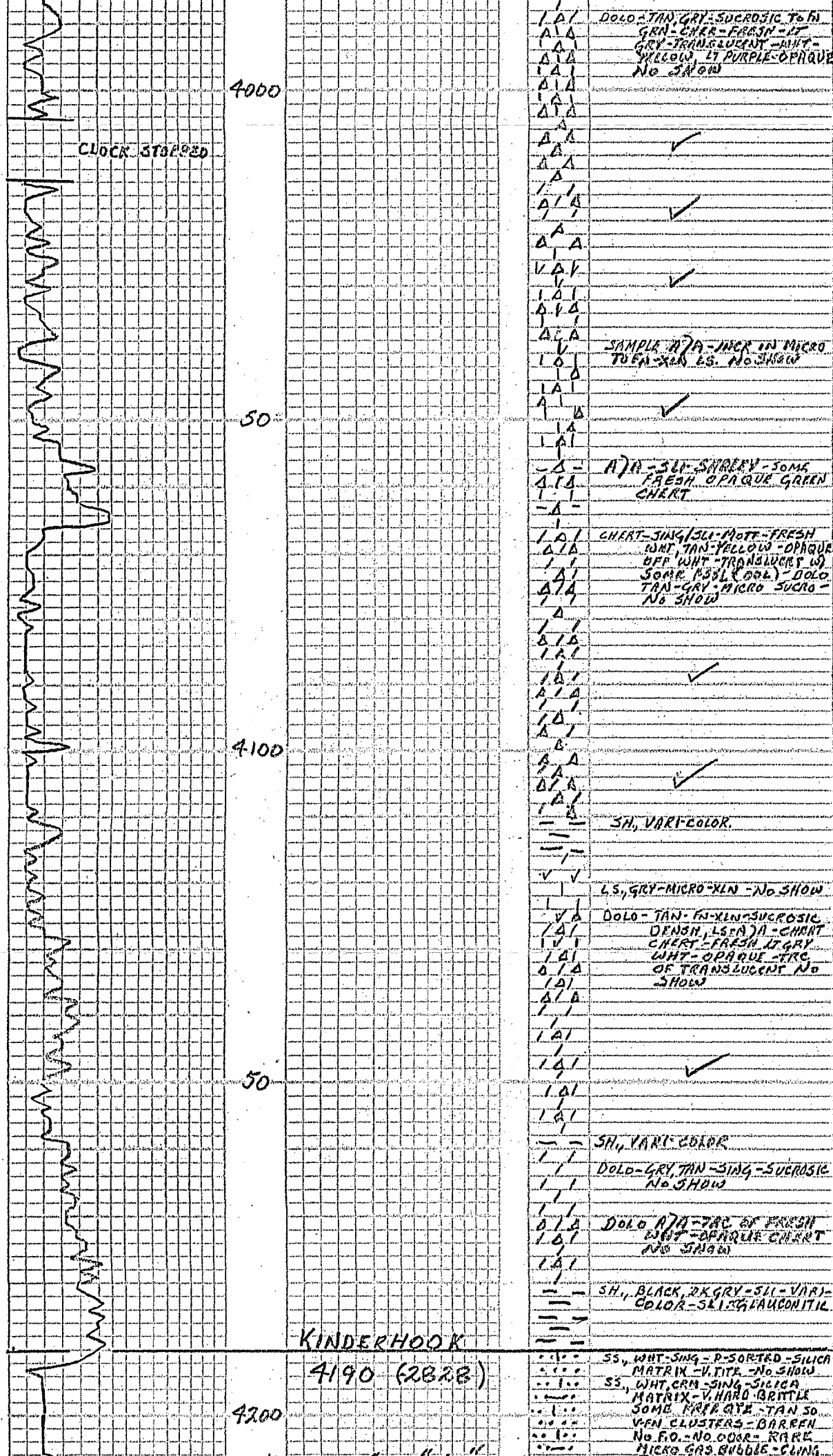
SH., DK-GRY - ARGIL - TRC OF BLACK-PLATY

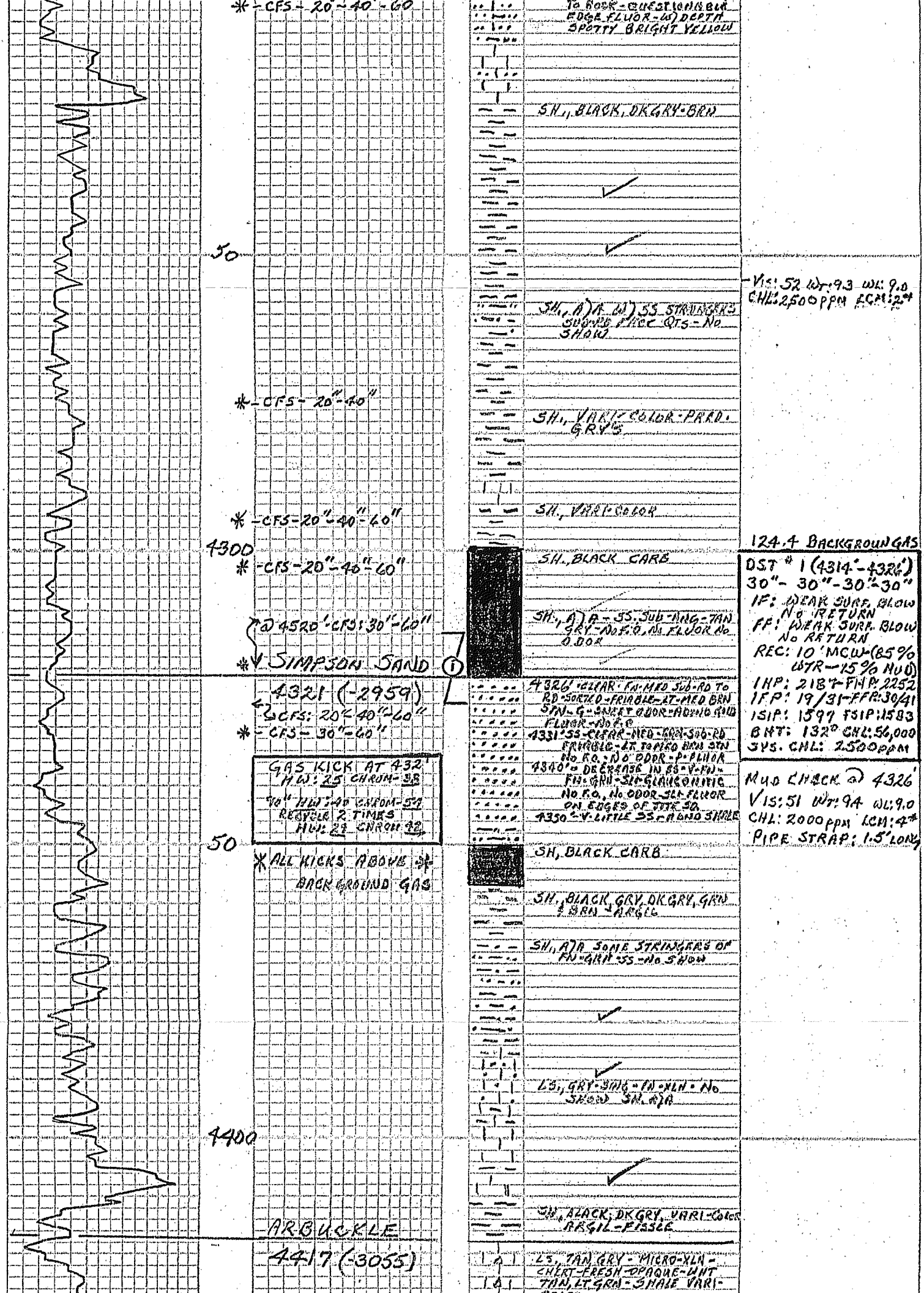
LS., WHT, CRM, LT. GRY-SING. FN-XLN - NO SHOW.

SH., BLACK CARB


50
LS., WHT, LT GRY, CRM-TAN-SING-FN-XLN. SUB-CHALKY -NO SHOW
3600
PAWNEE
3606 (-2244)
SH., BLACK CARB.
SH., GRYS -VARI-COLOR ARGIL - FISSILE
LS., GRY-TAN, SING TO SLI. MOTT MICRO-XLN -NO SHOW
LS., A/A WITH TRC OF FSSL & -SLI-CHALKY
50
LABETTE
3659 (-2297)
SH., BLACK CARB
FORT SCOTT
3666 (-2304)
CHEROKEE SHALE
3684 (-2322)
LS., CRM, TAN, LT GRY-SING-FN-XLN, P-FSSL-SLI-CHERTY & SUB CHALKY -NO SHOW
SH., BLACK CARB
LS., CRM, LT. GRY - SING-FN-MICRO-XLN- NO SHOW
SH., GRY -ARGIL
LS., WHT, CRM -SING -FN-XLN NO SHOW
SH., GRY & GRN-ARGIL
3700
LS. WHT, CRM-FN-XLN -SUB CHALKY
SH., VARI-COLOR
LS., LT GRY TAN - SING - MICRO -XLN -NO SHOW
SH, GRY'S & VARI-COLOR
SH., VARI-COLOR
50
LS., GRY-SING, FN-XLN -NO SHOW
69.8 BACKGROUND GAS
76.4 BACKGROUND GAS


SH, GRY'S - VARI-COLOR
LS-GRY TAN-SING-FN-XLN SUB-CHALKY-NO SHOW
SH, DK GRY, GRY-ARGIL
SH, BLACK CARB
3800
81.8 BACKGROUND GAS
SH, DARK GRY-GRY-ARGIL
SH, GRY'S-ARGIL
SH, GRY-VARI-COLOR ARGIL & FISSLE
50
VIS: 51 WT: 9.6 WL: 9.6
CHL: 5000ppm LCM: 4#
LS, WHT, CRM-SING-FN-XLN MICRO-XLN-SLI-CHERTY NO SHOW
* CFS-20"-40"-60"
SH, DRK GRY, BLACK-VARI-COLOR.
3900
MISSISSIPPIAN
3903 (-2541)
80.5 BACKGROUND GAS
LS, TAN-CRM-SING/MOTT-FN-XLN SLI-DOLOMITIC-NO SHOW SAMPLE STILL VERY SHALEY AROUND DK GRY & BLACK
DOLO & LS-A)A-NO SHOW
DOLO-LS-A)A-NO SHOW
LS, WHT CRM-FN-XLN, SLI-CHERT-WHT, YELLOW-FRESH TRANS TO OPAQUE
50
LS, TAN-GRY-SING/MOTT TRC OF FSL & FRESH CHERT-NO SHOW
LS, WHT, TAN, GRY-MOTT-DENSE DOLO (SUCROSIC) CHERT-FRESH-NO SHOW
DOLO-TAN, GRY-TITR SUCR. & MICRO-XLN (LS)-SUB-CHALKY-NO SHOW


DOLO-TAN, GRY-SUCROSIC TO FN GRN-CHER-FRESH-LT GRY-TRANSLUCENT-WHT-YELLOW LT PURPLE-OPAQUE NO SHOW
4000
CLOCK STOPPED
SAMPLE A)A-INCR IN MICRO TO FN-XLN LS. NO SHOW
50
96.3 BACKGROUND GAS
A)A-SLI-SHALEY-SOME FRESH OPAQUE GREEN CHERT
CHERT-SING/SLI-MOTT-FRESH WHT, TAN-YELLOW-OPAQUE OFF WHT-TRANSLUCENT W/ SOME PEBBL (DOL)-DOLO TAN-GRY-MICRO SUCRO-NO SHOW
4100
SH, VARI-COLOR.
LS, GRY-MICRO-XLN-NO SHOW
DOLO-TAN-FN-XLN-SUCROSIC DENSH, LS A)A-CHART CHERT-FRESH LT GRY WHT-OPAQUE-TRC OF TRANSLUCENT NO SHOW
50
SH, VARI-COLOR
DOLO-GRY, TAN-SING-SUCROSIC NO SHOW
DOLO A)A-TRC OF FRESH WHT-OPAQUE CHERT NO SHOW
SH, BLACK, DK GRY-SLI-VARI-COLOR-SLI-GLAUCONITIC
KINDERHOOK
4190 (-2828)
SS, WHT-SING-P-SORTED-SILICA MATRIX-V. TITE-NO SHOW
SS, WHT, CRM-SING-SILICA MATRIX-V. HARD BRITTLE SOME FRIABLE-TAN SO V-FN CLUSTERS-BARREN NO F.O.-NO ODOR-RARE MICRO GAS BUBBLE-SLING
4200
198.2 BACKGROUND GAS


*-CFS-20"-40"-60"
TO ROCK-QUESTIONABLE
EDGE FLUOR-(W) DEPTH
SPOTTY BRIGHT YELLOW
SH., BLACK, DK GRY-BRN
50
VIS: 52 WT: 9.3 WL: 9.0
CHL: 2500 PPM LCM: 2#
SH., A) A W) SS STRINGERS
SUBRD PREC QTS-NO
SHOW
*-CFS-20"-40"
SH., VARI-COLOR-PRED.
GRYS
SH., VARI-COLOR
*-CFS-20"-40"-60"
124.4 BACKGROUND GAS
4300
SH., BLACK CARB
*-CFS-20"-40"-60"
DST # 1 (4314'-4326')
30"-30"-30"-30"
IF: WEAK SURF. BLOW
NO RETURN
FF: WEAK SURF. BLOW
NO RETURN
REC: 10' MCW-(85% WTR-15% MUD)
IHP: 2187-FHP: 2252
IFP: 19/31-FFP: 30/41
ISIP: 1597 FSIP: 1583
BHT: 132° CHL: 56,000
SYS. CHL: 2500 PPM
@ 4520'-CFS: 30"-60"
SH., A) A-SS. SUB-ANG-TAN
GRY-NO F.O., NO FLUOR NO
ODOR
*SIMPSON SAND
4321 (-2959)
4326' CLEAR-FN-MED SUB-RD TO
RD-SORTED-FRIABLE-LT-MED BRN
STN-G-SWEET ODOR-ABUND GOOD
FLUOR-NO F.O.
CFS: 20"-40"-60"
*-CFS-30"-60"
4331' SS-CLEAR-MED-GRN-SUB-RD
FRIABLE-LT TO MED BRN STN
NO F.O.-NO ODOR-P-FLUOR
GAS KICK AT 4321
HW: 25 CHROM-38
90" HW: 40 CHROM-54
RECYCLE 2 TIMES
HW: 28 CHROM 42
4340' DECREASE IN SS-V-FN-
FN-GRN-SLI-GLAUCONITIC
NO F.O., NO ODOR-SLI-FLUOR
ON EDGES OF TIGHT SD.
4350' V-LITTLE SS-A BND SHALE
MUD CHECK @ 4326'
VIS: 51 WT: 9.4 WL: 9.0
CHL: 2000 PPM LCM: 4#
PIPE STRAP: 1.5' LONG
50
*ALL KICKS ABOVE
BACKGROUND GAS
SH., BLACK CARB
SH., BLACK, GRY, DK GRY, GRN
& BRN ARGL
SH., A) A SOME STRINGERS OF
FN-GRN SS-NO SHOW
LS., GRY-SUG-FN-XLN-NO
SHOW SH. A) A
4400
SH., BLACK, DK GRY, VARI-COLOR
ARGIL-FISSLE
ARBUCKLE
4417 (-3055)
LS., TAN, GRY-MICRO-XLN-
CHERT-FRESH-OPAQUE-WHT
TAN, LT GRN-SHALE VARI-