

# WELLSITE GEOLOGIST'S REPORT

RENE HUSTEAD  
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: **CALCARA NO. 4-19**  
Well Id:  
Location: **SEC 19-T19S-14W**  
License Number: **15-009-26,263-0000**  
Spud Date: **July 5-2019**  
Surface Coordinates: **1650' FEL, 660' FSL  
C E/2 SW SE**  
Bottom Hole **VERTICAL**  
Coordinates:  
Ground Elevation (ft): **1898'** K.B. Elevation (ft): **1911'**  
Logged Interval (ft): **1700'** To: **3750'** Total Depth (ft): **3750'**  
Formation: **LANSING/KC AND ARBUCKLE**  
Type of Drilling Fluid: **STARCH/CHEMICAL**

Region: **Barton Co**  
Drilling Completed: **July 15 -2019**

Printed by WellSight LogViewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR:

Company: **F.G. Holl Company LLC**  
Address: **9431 E. Central, Suite 100  
Wichita, Kansas 67206**

## DRILLING CONTRACTOR:

### DUKE RIG #2

Double derrick; drill pipe 4.5' X H (16.25#); collars 6.25 x2.25 x 478'; Bit 1; 12.25,J2HA1PG #17135RR, BIT #2 7 7/8,J2 TYPE 23C,J1021, BIT 3,7 7/8, J2-MD30MH,#F17618RR, 3-15's; Reference datum 8 ft above ground level. Poor Boy's (Martin- Decker) mechanical geologist. Toolpusher -Dion Vasquez

## SURFACE CASING:

**SURFACE CASING SET 8 5/8 INCHES 23 LBS AT 830' WITH 350 SAXS OF CEMENT**  
**PRODUCTION CASING SET 5 1/2 INCHES 14 LBS AT 3672 FT WITH 175 SAXS OF CEMENT**

## CIRCULATION SYSTEM:

Pump Make:IDECO,Pump model: MM 550, liner size 6 ,stroke 14. Starch mud @ 1582' to 2582', Chemical mud @ 2582' to TD  
Mud/Co/Service Mud, Inc.-Gerald Adams-Great Bend, Ks-620-770-2022

## GAS DETECTION SYSTEM:

MBC Well Logging and Leasing -Analog Gas Detection.

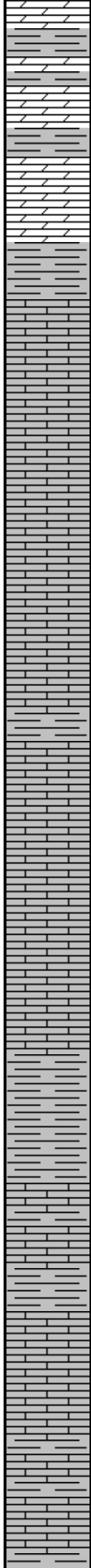
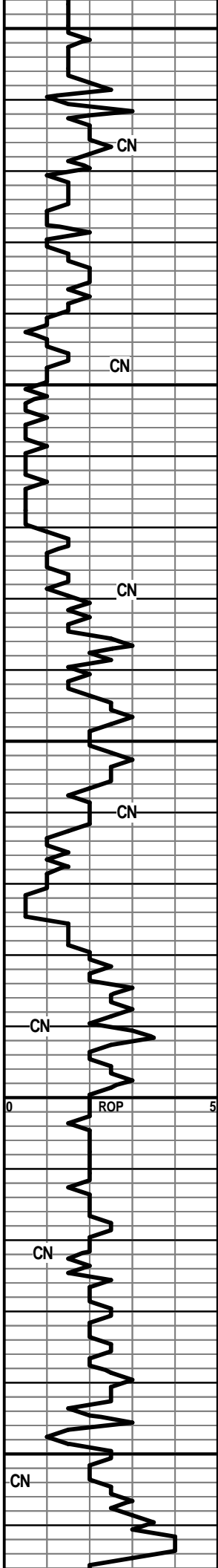
**OPEN HOLE LOGS:**

DN (PE), DI (SP), ML:Sonic, Fracfinder 5" detail RTD-3675; 2" DI to surface casing; ; Pioneer Energy Services, Hays, KS, Recorded by IAN MABB; Log total depth (3674') was to rotary total depth (3675').

**WELLSITE GEOLOGIST:**

**RENE HUSTEAD**  
 4714 N. PORTWEST CIRCLE  
 WICHITA, KANSAS 67204  
 PHONE (913) 208-3390

ROP ROP (min/ft) ———	DST	Lithology	Porosity and Show	MD	Geological Descriptions	TG, C1-C4 / REMARKS
				17	ANHY-FRSTY GRY-SUB-ANG-TR SH-GRY-IMBD DOLO-GRY-TN-FN-GRN-BRIT  DOLO AND ANHY <b>HERINGTON 1744' (167')</b> <b>LOG-1738'- (173')</b>	MUD DATA DEPTH-1,163' WT.-8.6 VIS 27  SURVEYS DEPTH DEGREES 489' 3/4 830' 1 3365' 3/4 3675' 3/4
				1750	DOLO-GRY-FN-GRN-SM PYR XLS-FR PP POR-GAS SHOW  DOLO-GRY-FN-GRN-SH-GRY-IMBD-TR PP POR  SH-DK GRY-BLKY  DOLO-OFF WHT/GRY-FN GRN-BRIT-FN PP POR IP TO NO VIS POR  SH-RED-SILTY <b>WINFIELD 1798' (113')</b> <b>LOG 1790' (121')</b>	HOT WIRE-70 UNIT
				1800	DOLO-LT GRY-SUCRO-BRIT-GD PP POR-TR FRAC IN ROCK-GAS INCRS DOLO-LT TN-F-GRN-HD-DNS  DOLO-LT GRY-F-GRN-GD PP POR-GAS SHOW  DOLO-GRY-F-GRN-HD-DNS W/ TR PP POR  SH-GRY-BLKY-DOLO  DOLO-LT GRY/BLK SPOTS-FN GRN-SUCRO IP-SH DK GRY IMBD-GD PP AND SHALLOW VUG POR-GAS SHOW	



1850  
1900  
1950  
2000  
2050

SH-RED-V-SFT-GUMMY

**TOWANDA 1854' (57')**

DOLO-GRY-V-F-GRN-HD-DNS

DOLO -LT BRN/GRY-CRS-GRN-FOSS-FR INTER-GRN POR

SH-DK GRY-FRM-BLKY

LS-GRY-F-XLN-OOL-TR VUG POR

LS-OFF WHT-M-GRN-BRIT-SM FOSS/OOL-TR INTER-PRT POR

POOR SAMPLES

LS-OFF WHT-F-XLN-FOSS-BRY-BRIT-SM VUG POR- W/ CHRT-OFF WHT-FOSS-FRSH

LS-OFF WHT-F-XLN-BRIT-DNS

1950 LS-OFF WHT/TN-F-GRN-BRIT TO HD-MSTLY DNS W/ FOSS-TR OOL

LS A.A.

MISSING SAMPLE

LS-TN-F-XLN-FOSS-HD-DNS-TR SH GRY IMBD

**B/FLORENCE 2004' (-93')**

SH-GRY-LMY-BLKY-FOSS

KENNY LS 2012'

LS-TN-F-GRN-FOSS-OOL-BRIT-SHLY

SH-GRY/RD-SFT-GUMMY

SH-GRY-GUMMY

**WREFORD 2042' (-131')**

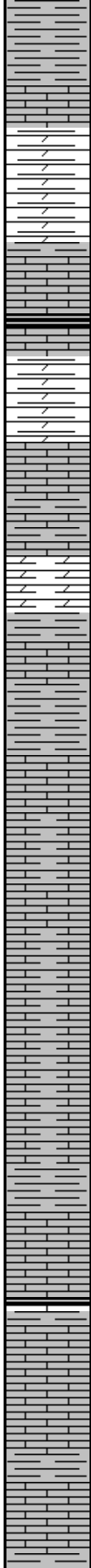
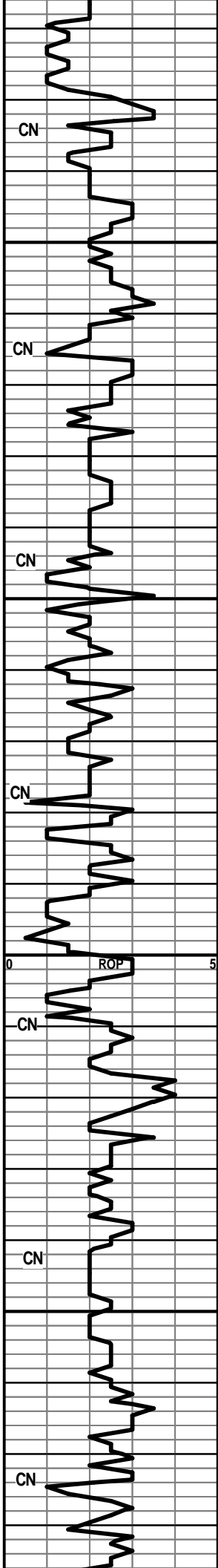
LS-TN-M-GRN-FOSS-OOL-FR TO GD VUG/INTER-GRN POR-GAS SHOW

LS-GRY-F-XLN-HD-DNS

**COUNCIL GROVE 2064' (-153')**

HOT WIRE 74 UNIT

MUD DATA  
DEPTH-2,060'  
WT. 9.3



2100

SH-GRY/GRN-RD-SFT-GUMMY  
 LS-REDDISH BRN-F-XLN-HD-DNS  
 SH-GRY-SFT-GUMMY

CROUSE 2102'

LS-DK BRN-F-XLN-HD-DNS  
 SH-BLK-CARB

SH-RED/GRY-SFT-GUMMY

SHALES-GRY-GRN-BLK-RED-SFT-GUMMY TR OF  
 LS-OFF WHT-F-GRN-BRIT-CHLKY

2150

LS-OFF WHT-F-GRN-FOSS-OOL-BRIT-CHLKY IP-TR  
 INTER-PRT POR

SH-RED-GRN-BLK-GRY-SFT-GUMMY TR LS-LT BRN  
 -F-XLN-HD-DNS

SHALES A.A. W/ TR LS-OFF  
 WHT-M-GRN-FOSS-OOL-CHLKY-NO VIS POR

LS-OFF WHT-F-GRN-FOSS-OOL-TR CHLKY-BRIT TO HD

LS-OFF WHT-F-XLN-TR FOSS-TR OOL-HD-DNS

LS A.A. CHLKY  
 SH-LT-GRY-SFT-SILTY

2200

LS/SH A.A.

SH-GRY-FRM-BLKY/LS-TN-F-XLN-FOSS-HD-DNS

LS-LT TN-V-FXLN/GRN-BLOCKY-HD-DNS

SH-RED-SFT-SILTY

**NEVA 2236' (-325')**

2250

LS-TN-F-XLN-HD-DNS

SH-GRY-SPLNTY

LS-TN/GRY-F-XLN-FOSS-OOL-HD-DNS

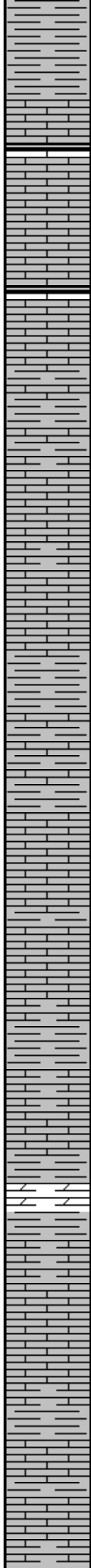
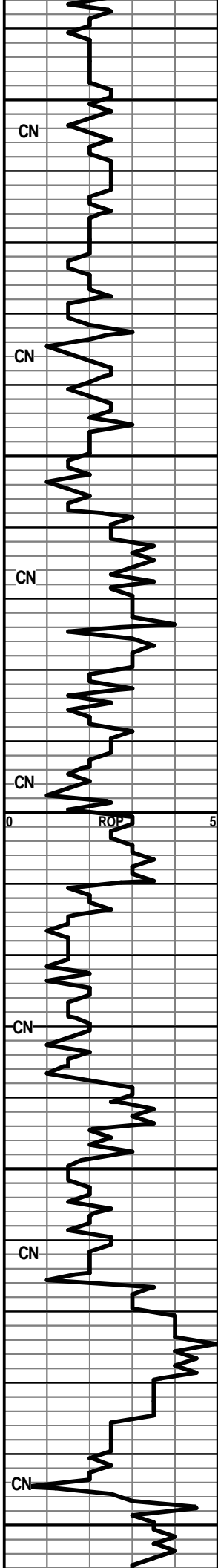
HOT WIRE -66 UNIT

HOT WIRE-75 UNIT GAS INCREASE

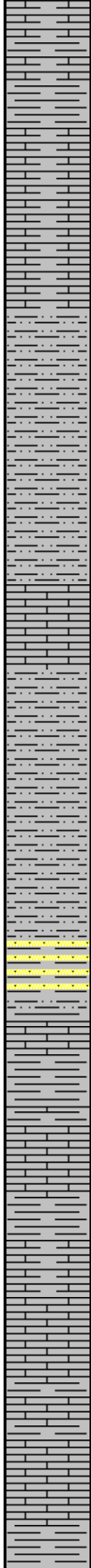
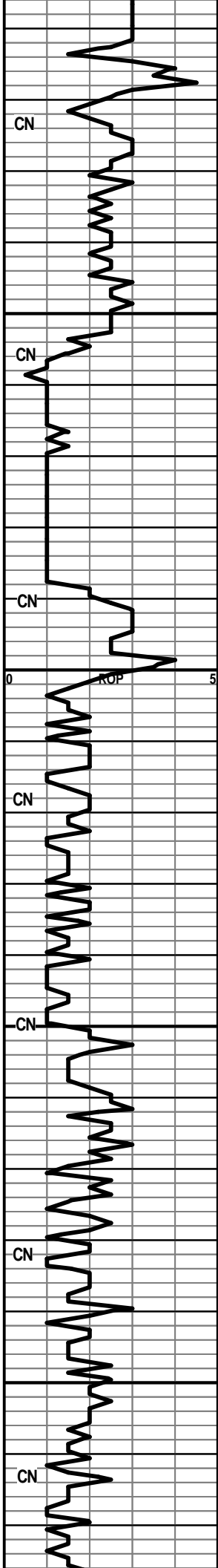
LS-GRY-TN-F-XLN-HD-DNS W/ GLAU IMBD

SH-BLK-CARB

LS-OFF WHT/BLK SPOTS-F-XLN-OOL-SH-GRY  
 IMRD-NO VIS POR



2300  
 LS-GRY-F-XLN-HD-DNS/SH-GRY-FRM-BLKY  
 SH-RED-GRY-SILTY  
**RED EAGLE 2300' (-389')**  
 LS-GRY-F-XLN-SHLY-HD-DNS  
 SH-GRY-FRM-LMY  
 LS-BRN/GRY-F-XLN-FOSS FRAGS-SHLY-HD-DNS  
 LS-LT GRY-F-XLN-FOSS-HD-DNS  
 SH-BLK-CARB  
 LS-GRY-F-XLN-SHLY-HD-DNS  
 SH-GRY-LMY  
 2350  
 LS-GRY-TN-F-GRN-FOSS-CHLKY IP-PR TO FR  
 INTER-GRN POR-GAS SHOW  
 LS-GRY-TN-OFF WHT-V-F-GRN-FOSS-HD-DNS  
 LS A.A. TR CHLK  
 SH-GRY-SPLNTY  
 LS-TN-OFF WHT-F-XLN-FOSS-HD-DNS  
 SH-BLK-CARB  
 2400  
 LS-GRY-F-XLN-SHLY/SH-GRY-LMY  
 LS-OFF WHT-W/BLK SPOTS-F-GRN-BLK  
 OOL/FOSS-BRIT-CHLKY-PR INTER-GRN POR  
 SH-GRY-FRM-FOSS  
 SH-GRY-FRM-FOSS/LS-GRY-F-XLN-FOSS-HD-DNS  
 SH/LS A.A.  
 2450  
 POOR SAMPLE  
 SH-GRY-FRM-FOSS  
 LS-OFF WHT-M-GRN-FOSS-V-BRIT-FR INTER-GRN  
 POR-NO VIS GAS INCRS  
 LS-TN-F-XLN-FOSS-BRIT-DNS  
 LS-TN/GRY-F-XLN-SM FOSS FRAGS-TR CHLK-HD-DNS  
 SH-GRY-SFT-FOSS  
 2500  
 LS-TN-F-XLN-V-OOL-HD-DNS



2550

SH-GRY-GUMMY  
 LS-LT GRY-F-XLN/GRN-HD-DNS TR FOSS FRAGS  
 SH-GRY-FRM-WAXEY  
 SH-GRY/RED/GRN-SFT-GUMMY IP TO FRM-SPLNTY  
 LS-GRY-F-XLN-SHLY-HD-DNS  
 LS/SH A.A.

2550

SH-GRY-SILTY  
 SH-GRY-SFT-SILTY  
 SLTSS-FRSTY-GRY-V-FN GRN-SHLY-MICA-HEM  
 SH-GRY-SFT-SILTY

**STOTLER 2537' (-626')**

LS-TN-F-XLN-FOSS FRAGS-HD-DNS

2600

SH-GRY-FOSS-SNDY  
 SH-GRY-SPLNTY-W/ LS-OFF WHT-F-XLN-FOSS-BRIT  
 -DNS  
 SLTSS-FRSTY GRY-F-GRN-SHLY-MICA-HEM

SH-GRY-SPLNTY  
 SH-GRY-BLK-SPLNTY  
 SS-FRSTY WHT-M-GRN-ANG-WELL SRTEG-TT-TR  
 MICA-TR GLAU  
 SH-RED-GRY-FRM-BLKY

2650

**TARKIO 2650' (-739')**  
**LOG-2648' (-737')**  
 SH-GRY-GRN-SPLNTY  
 LS-TN-F-XLN-BRIT-CHLKY-FOSS FRAGS-TR GLAU IMBD

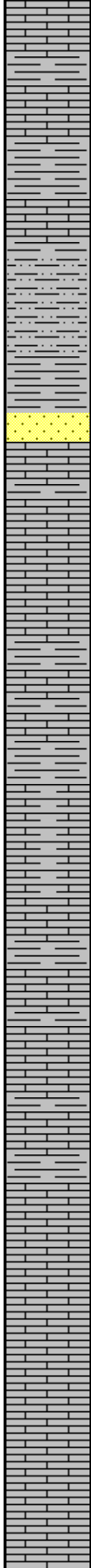
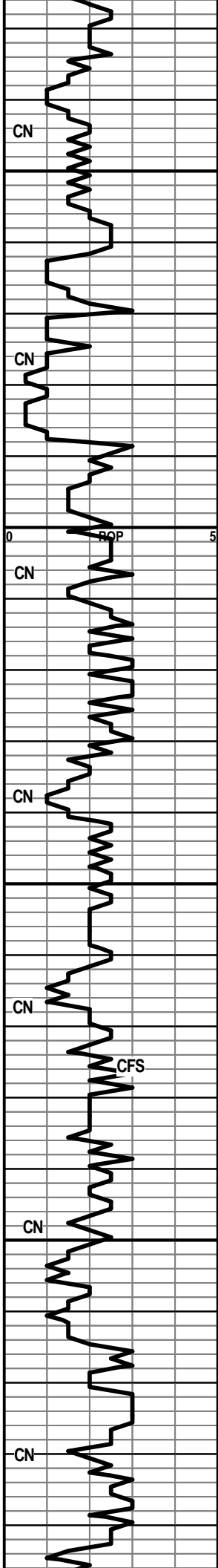
2700

LS-TN-F-XLN-OOL-FOSS-HD-DNS  
 SH-GRY-LMY  
 LS-TN-F-XLN-FOSS-HD-DNS  
 LS-TN-F-XLN-TR FOSS-HD-DNS  
 SH-GRY-LMY  
 LS-TN/GRY-F-XLN-HD-DNS

SH-GRY-SPLNTY

HOT WIRE-30 UNIT GAS INCRS

MUD DATA  
 DEPTH-2,679'  
 WT. 8.9  
 VIS 40  
 FIL-9.6



LS-TN-F-XLN-TR FOSS-HD-DNS

SH-GRY-SPLNTY

LS-TN-F-XLN-V-FOSS-THIN-BEDDED-BRIT-NO VIS POR

2750 SH-GRY-SPLNTY

LS-TN-F-XLN-HD-DNS

SLTSS-FRSTY GRY-F-GRN-SILTY-MICA-HEM

SLTSS A.A.

SH-GRY-SFT-SILTY-W/ LG SND GRNS

SS-FRSTY  
WHT-M-GRN-RND-WELL-SRTED-FRI-MICA-HEM

**HOWARD 2786' (-875')**

LS-REDDISH BRN-F-XLN-FOSS-HD-DNS

2800 LS-TN-F-XLN-FOSS FRAGS-HD-DNS

LS-CRM-FGRN-FOSS-CHLKY-BRIT-NO VIS POR OR SHOW

SH-GRY-SFT-BLKY

LS-GRY/CRM-F-XLN-FOSS FRAGS-BRIT TO HD-SLI CHLKY IP

SH-GRY-BLKY-FOSS

LS-GRY/CRM-F-XLN-FOSS-SHLY-HD-DNS

2850 LS-TN-F-XLN-OOL-HD-DNS W/ PYR XLS

**TOPEKA 2862' (-951')**

LS-TN-F-GRN-SUCRO-FOSS-OOL-BRIT-TR PP POR-NO VIS CUT

LS-CRM-M-GRN-PYR XLS DISS THRU-HD-DNS

LS-GRY-BLOCKY-HD-DNS

LS-OFF WHT/BLK SPKS-F-XLN-SM BLK OOL-HD-DNS

SH-GRY-FRM-BLKY-FOSS

2900 LS-GRY-F-XLN-SH DISS THRU-HD-DNS W/ FOSS FRAGS

LS A.A. W/CHLK IN TRAY

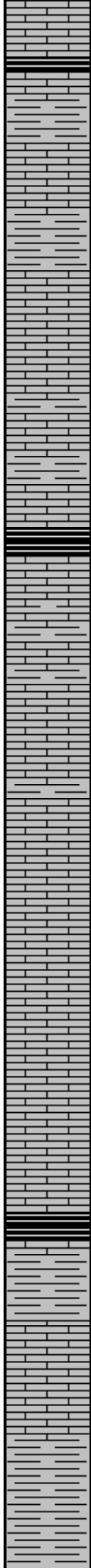
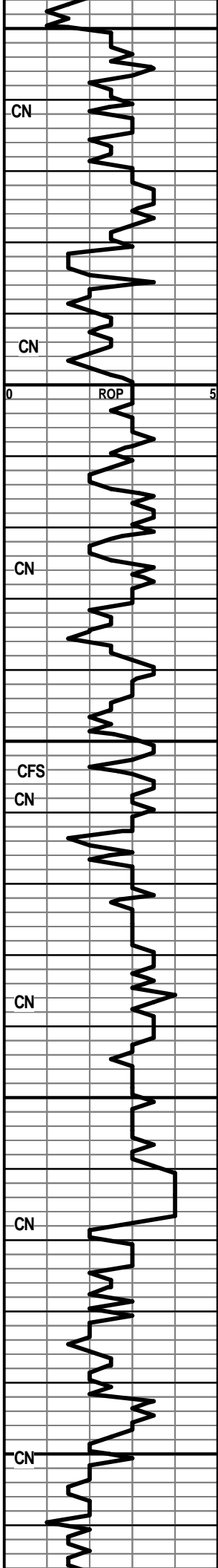
LS-TN-F-XLN-FOSS-HD-DNS

LS-TN-F-XLN-HD-DNS-FOSS W/ CHRT-BLK-OPQ-FRSH-PYR IMBD

LS-TN-F-XLN-CHLKY-BRIT-FOSS FRAGS-NO VIS POR-DNS

45 UNIT GAS INCRS

HOTWIRE 10 UNITS



2950  
3000  
3050  
3100  
3150

**QUEEN 2954' (-643')**

SH-BLK-CARB  
 SH-GRY-SFT-WAXEY  
 LS-TN-F-SLN-FOSS-CHLKY IP W/  
 CHRT-GRY-OPQ-FOSS-FUS-FRSH  
 LS-OFF WHT-F-XLN-BLOCKY-HD-DNS  
 SH-GRY-FRM-LMY  
 LS-CRM-F-XLN-CHLKY-BRIT-DNS-FOSS-W/ CHRT A.A.

SH-GRY-SPLINTY  
 LS-GRY-F-XLN-SHLY-FOSS-HD-DNS  
 SH-GRY-BLKY  
 KING SH- 3021' (-1,110')  
 SH-BLK-CARB  
 LS-OFF WHT-FN-GRN-OOL-PR INTER-GRN POR TR  
 CHLK

LS-TN-F-GRN-FOSS-TR OOL-CHLKY-PR PP POR-NO  
 VIS SHOW  
 LS-TN-F-XLN-FOSS-HD-DNS  
 SH-GRY-BLKY-LMY-FOSS-CRINOID STEM-PYR IN TRAY  
 SH-GRY-SPLINTY  
 LS-TN-F-XLN-SHLY-FOSS-HD-DNS  
 LS-TN/GRY-F-XLN-FOSS-HD-DNS

LS A.A.

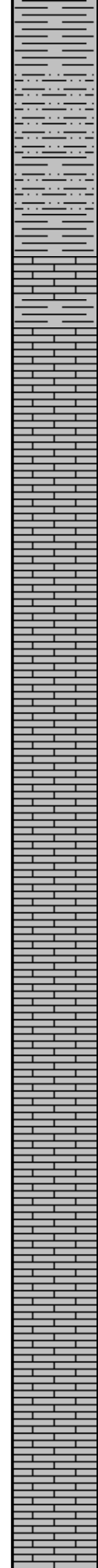
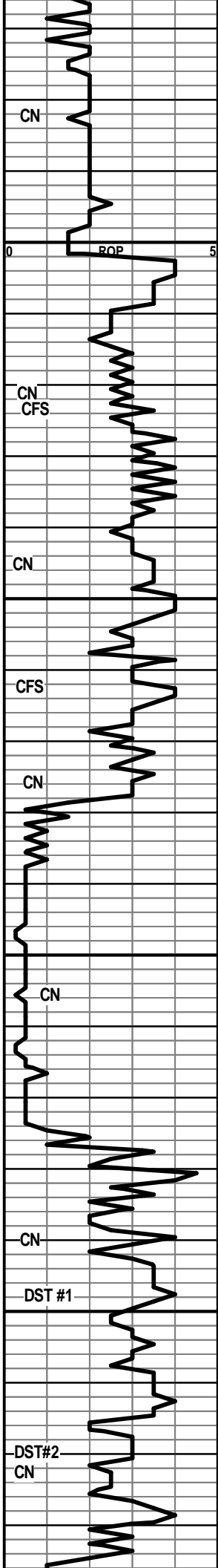
**HEEBNER 3116' (-1205')**  
 SH-BLK-CARB  
**TORONTO 3132' (-1221')**  
 LS-CRM-F-XLN-CHLKY IP-FOSS-TR PP AND SM VUG  
 POR-NO VIS SHOW

**DOUGLAS SH 3148' (-1237')**  
 SH-LT GRY-GUMMY W/ SND GRN  
 SH-GRY-SFT-GUMMY  
 SH-GRY-GRN-RED-SFT-SILTY W/ LS-TN-F-XLN-HD-DNS

MUD DATA  
 DEPTH-3,104'  
 WT. 9.3  
 VIS 67  
 FIL 8.0

20 UNIT GAS INCRS





SH-GRY-SFT-SILTY

SLTSS-FRST GRY-FN-GRN-FRM-SHLY-MICA-HEM

SLTSS A.A.

**BROWN LS 3202' (-1291')**

LS-BRN-F-XLN-TR FOSS-HD-DNS

LANSING/KC 3212' (-1301')

LS-OFF WHT-F-XLN-TR FOSS-SM PP AND INTER-GRN  
POR-BRIGHT WHT FLOR-GD STRM CUT-FNT  
ODOR-GAS INCRS

POOR SAMPLE

LS-LT GRY-F-XLN-SURCO-HD-DNS W/ TR CHRT-LT BRN  
STN

LS-CRM-F-GRN-FOSS FRAGS-PP POR-DK BRN  
STN-GLD FLOR-GD STRM CUT-GOOD ODOR

LS-BRN-F-XLN-V-OOL/FOSS-FR INTER-PRT POR-DK  
BRN STN-GLD FLOR-STRM CUT-GD ODOR

LS-TN-F-XLN-OOL-BRIT-GD-OOL-MOLDIC POR-MSTLY  
BARREN W/TR OF DK BRN STN-GD ODOR

LS-TN-F-XLN-OOL-BRIT-GD OOL-MOLDIC POR-LT BRN  
STN-GLD FLOR-GD CUT-V-STRNG ODOR

LS-TN-F-XLN-OOL-GD-OOL-MOLDIC POR-LT BRN STN  
IP-GLD FLOR-GD CUT-STRNG ODOR-GAS BUB

POOR SAMPLE

LS-TN-F-XLN-OOL-GD-FR-OOL-MOLDIC POR-LT BRN  
STN-GLD FLOR-STRM CUT-FREE OIL-STRNG ODOR

LS-TN-F-XLN-OOL-GD-FR-OOL-MOLDIC POR-TR DK  
BRN STN-GLD FLOR-GD STRM CUT-GD-ODOR

LS-TN-F-XLN-FR-GD OOL-MOLDIC POR-TR DK BRN STN  
-GLD FLOR-GD STRM CUT-STRNG ODOR

LS-TN-F-XLN/GRN-SUCRO-HD-DNS W/ TR STNING-YEL  
MIN FLOR-NO VIS CUT-NO ODOR

LS-CRM-F-XLN/GRN-PR TO FR INTER-GRN/PP POR W/  
LRG VUG POR-DK BRNSTN-GLD FLOR-FR STRM  
CUT-FNT ODOR

LS-TN-F-XLN-HD-DNS W/ SOME  
LS-TN-F-XLN-V-FOSS-GD INTER-PRT POR-DK BRN  
STN-GLD FLOR-STRM CUT-FNT ODOR

LS-OFF WHT-F-XLN-V-CHLKY-DK BLK STN-YEL/GLD FLOR TO NO  
VIS FLOR-FR FLSH CUT-GD ODOR-FREE OIL

LS-TN-F-XLN-FOSS-OOL-SM VUG POR-LT BRN STN-NO VIS  
FLOR-GD STRM CUT-CHLK IN TRAY-FREE OIL

LS-TN/BRN-F-XLN-OOL-GD OOL-MOLDIC AND  
INTER-XLN POR-DK BRN STN-WHT FLOR-GD STRM

18 UNIT GAS INCRS

25 UNIT GAS INCRS

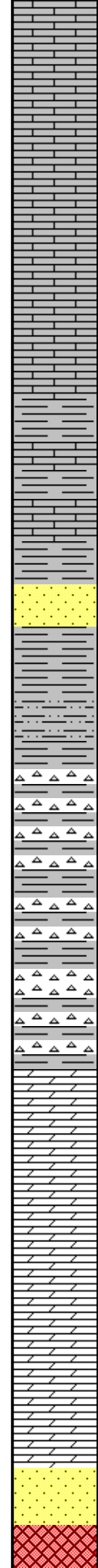
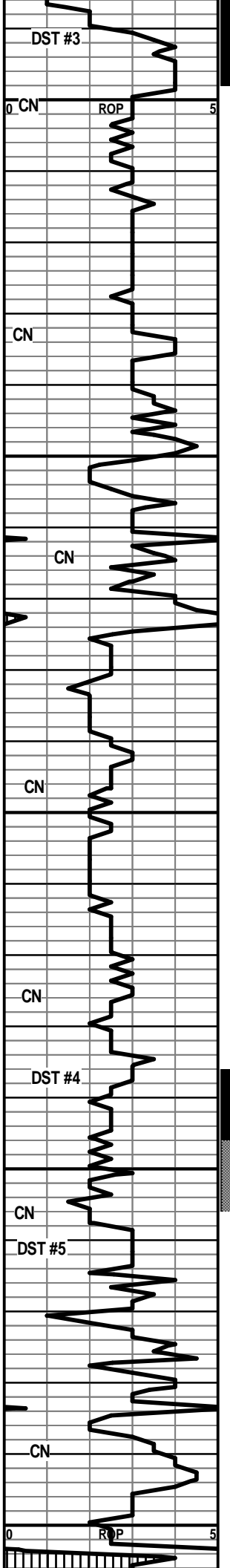
MUD DATA  
DEPTH-3,365'  
WT. 9.5  
VIS 48  
FIL 9.6

DST #1  
3340'-3365'  
REC-1 FT DRILLING MUD  
IBLW-WK SURF BLW FOR 15 MIN AND DIED  
FBLW-NO BLW  
15/30/15/30  
SIP-47.3-45.95  
IFP-41.43-43.02  
FFP-47.34-44.47  
HP-1716.86-1685.65

35 UNIT GAS INCRS

80 UNIT GAS INCRS

DST #2  
3365-3380  
IBLW-WK BLDING BLW TO 9 INCHES  
FBLW-WK BLDING BLW BLT TO 5 INCHES  
REC-20 FT 1% OIL 99% MUD, 60 FT MUDDY  
420 1% OIL 28% MUD 61% 420



CUT-FNT ODOR -GAS BUB

LS-OFF WHT-F-XLN-HD-DNS

3400 LS-TN-F-XLN-V-OOL-TR PP POR-NO VIS STN-NO CUT-FNT ODOR

LS-TN-F-XLN-FOSS-TR OOL-TR PP POR-1 PC CHLK W/ BLK STN IN TRAY

LS-TN-F-XLN-OOL-HD-DNS

LS-OFF WHT-TN-F-XLN-HD-DNS W/ CHLK IN TRAY

LS-TN-F-XLN-HD-DNS W/ FOSS-FUS

LS-TN-F-XLN-HD-DNS W/ TR GLAU SH-GRY-SPLNTY

**BASE OF THE B/KC 3450' (-1,539')**

SH-GRY/GRN-SPLNTY-BLKY

LS-OFF WHT-F-XLN-HD-DNS

SS-FRSTY WHT-F-GRN-S-M-GRN-PR SRTEG-CALC CMT-TT-NO VIS SHOW

SH-GRY/GRN-FRM-BLKY

SH-GRY-RED-SILTY

SHALES-RED-GRN-BRN-SPLNTY W/ CHRT-TN-OPQ-FRSH

3500 SH-RED-SFT-SILTY W/ CHRT-CRM-OPQ-FRSH

SH-RED-GRY-SPLNTY-W/ CHRT-TN-OPQ-OOL-FRSH

CHERT-OFF WHT-OPQ TO TRANS-OOL IP-FRSH TO TRIP

**ARBUCKLE 3536' (-1625')**

DOLO-OFF WHT-M-CRS-GRN-BRIT-LT BRN STN-GLD FLOR-GD STRM CUT-STRNG ODOR

DOLO-M-CRS GRN-BRIT-TR GLAU-LT BRN STN-GLD FLOR-STRM CUT-GD ODOR-FREE OIL

3550 DOLO-TN-F-XLN-OOL-PR-OOL-MOLDIC POR-LTBRN STN-BRIGHT YEL FLOR-GD STRM CUT-FNT ODOR-NO SHOW FREE OIL

DOLO-OFF WHT-F-XLN-V-SNDY-BRIT-FR INTER-GRN POR-LT BRN STN IP-NO VIS FLOR-NO VIS CUT-NO SHOW

REGAN SAND 3594' (-1683')

3600 QUARTZITE 3603' (-1692')

QUARTZITE OLD QRTZ AND TR REDDISH QUARTZ

H<sub>2</sub>O, 1% OIL 36% MUD, 61% H<sub>2</sub>O

100 FT-GIP

30/60/45/90

SIP-550.35-542.95

IFP-39.66-49.59

FFP-56.67-74.64

HP-1695.14-1657.11

DST #3

3380'-3398'

IBLW-BOB IN 1 MIN

FBLW-BOB IN 1 MIN

REC-220 FT CLEAN OIL 20% GAS AND 80% OIL

5/60/60/90

SIP-1108.08-1089.66

IFP-42.22-43.3

FFP-47.43-102.39

HP-1707.39-1663.37

GAS TO SURF

GAS RATES

CHOK (IN)	PSIG	MCF/D
1ST 0.13	.01	5.39
LAST 0.13	1.30	5.88
MAX 0.13	1.30	5.88

MUD DATA

DEPTH-3400

WT. 9.4

VIS-46

FIL-9.6

DST #4

3537-3545

IBLW-STRNG BLW -GAS TO SURF IN 5 MIN

FBLW-STRNG BLW- SEE GAS FLW CHART

REC 35 FT 80% OIL AND 20% MUD

5/60/45/90

SIP-1116.09-780

IFLW-126.79-91.82

FFLW-84.89-48.24

HP-1784.26-1620.10

GAS RATES

CHOK(IN)	PSIG	MCF/D
1ST 0.38	65	290.86
0.38	21.75	132.43
0.38	65	290.86

DST #5

3545-3555'

IBLW-STRNG BLW -GAS TO SURF

FBLW-STRNG BLW (SEE GAS CHART)

REC -100 FT CLEAN OIL 20% GAS, 80% OIL, 60 FT OIL/GAS CUT WATER 30% GAS, 30% OIL, 10% MUD 30% WATER, 60 FT SLI OIL/MUD CUT WATER, 4% OIL/8% MUD/88% WATER, 180 FT WATER

5/60/45/90

SIP-1196.58-1152.06

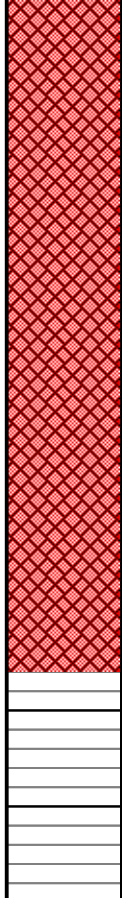
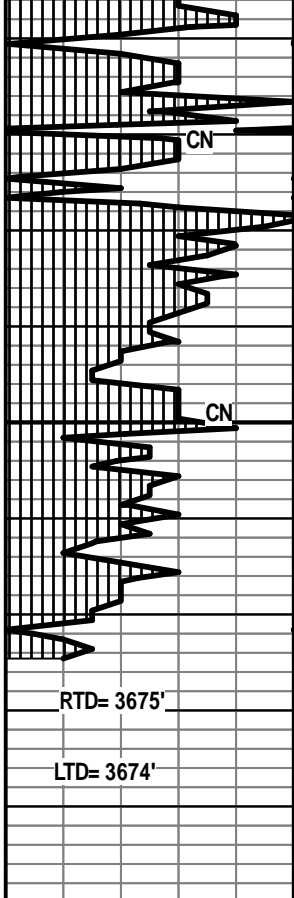
IFLW-98.47-89.04

FFLW-100.22-206.49

HP-1795.55-1700.86

GAS RATE

CHOK (IN)	PSIG	MCF/D
1ST 0.25	25.50	63.3
0.25	10.5	39.5



3650  
00

QUARTZITE-CLR QRTZ AND TR REDDISH QUARTZ WITH BLK MIN (AMPHIBOLES) -NO VIS FLOR-NO VIS CUT

QUARTZITE A.A.

QUARTZITE-CLR QRTZ TO REDDISH QUARTZ W/ BLK MIN-NO VIS FLOR-NO VIS CUT

QUARTZITE A.A. W/ SHALES -GRY-RED-SPLNTY

QUARTZITE-CLR QRTZ WITH BLK MIN-SHALES-GRN-RED-GRY-BLKY

QUARTZITE AND SHALE A.A.

QUARTZITE -CLR QRTZ TO REDDISH QUARTZ W/ BLK MIN (AMPHIBOLES)-NO VIS FLOR-NO VIS CUT

MUD DATA  
DEPTH-3545'  
WT.9.4  
VIS 48  
FIL 9.2  
LCM 0

MUD DATA  
DEPTH-3581'  
WT. 9.2  
VIS 46  
FIL 8.8  
LCM-0