

JUSTIN D. CARTER

CONSULTING GEOLOGIST

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

Well Name: KELLER-GATES 1-17
Well Id:
Location: NE, SE, NE, NE Sec. 17 - 22S - 13W Stafford Co., KS
License Number: 15-185-24043-0000
Spud Date: 12/19/18
Surface Coordinates: 835' FNL, 110' FEL
Region: Kenilworth West
Drilling Completed: 01/05/19

Bottom Hole
Coordinates:
Ground Elevation (ft): 1902' K.B. Elevation (ft): 1910'
Logged Interval (ft): 3100' To: 3890' Total Depth (ft): 3890'
Formation: L/KC, ARBUCKLE
Type of Drilling Fluid: Chemical Mud

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: BIRD DOG OIL, LLC
Address: 1801 Broadway, Suite #200
Denver, CO 80202-3840
Co. Geo.: Mr. Scott Stewart

GEOLOGIST

Name: Justin D. Carter
Company: Consulting Geologist
Address: 1640 N. Roosevelt Ave.
Liberal, KS 67901
Phone: 620-655-1187

Comments

Drilling Contractor: Discovery Drilling Rig #2
Tool Pusher: Terry Wickham

8 5/8" surface casing set at 305'

Mud: MudCo
Engineer: Jason Whiting

Gas Detector: Blue Stem

DSTs: Eagle Testers
Tester: Gene Budig

Open-Hole Loggers: ELI Wireline



DRILL STEM TEST REPORT

Bird Dog Oil LLC
 1801 Broadway Suite 200
 Denver, Colorado 80202
 ATTN: Justen Carter

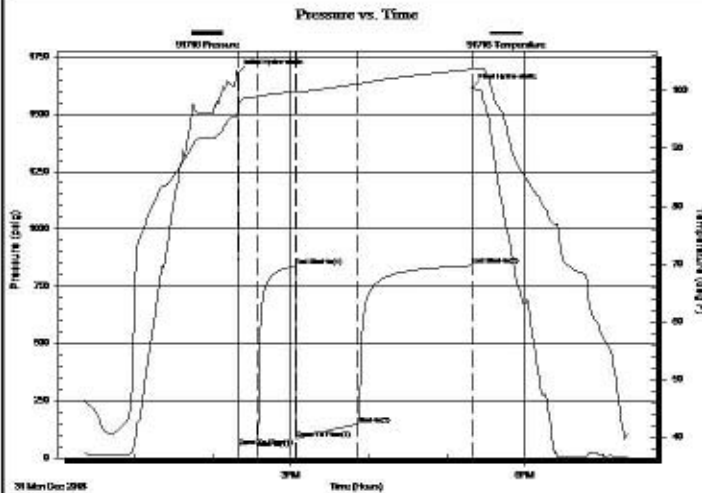
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 01061 DST#:1
 Test Start: 2018.12.31 @ 12:18:00

GENERAL INFORMATION:

Formation: **Kansas City "A-D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 14:20:00 Tester: Gene Budig
 Time Test Ended: 19:21:00 Unit No: 1
 Interval: **3428.00 ft (KB) To 3474.00 ft (KB) (TVD)** Reference Elevations: 1912.00 ft (KB)
 Total Depth: 3474.00 ft (KB) (TVD) 1904.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 839.86 psig @ 3468.74 ft (KB) Capacity: 5000.00 psig
 Start Date: 2018.12.31 End Date: 2018.12.31 Last Calib.: 2018.12.31
 Start Time: 12:18:00 End Time: 19:19:59 Time On Blm: 2018.12.31 @ 14:19:30
 Time Off Blm: 2018.12.31 @ 17:19:30

TEST COMMENT: 1st Opening 15 Minutes Weak building blow built to 5 inches into the water
 1st Shut-In 30 Minutes
 2nd Opening 45 Minutes weak building blow built to 9 inchesw into the water
 2nd Shut-In 90 Minutes



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1679.82	96.78	Initial Hydro-static
1	51.39	97.71	Open To Flow (1)
15	78.03	98.99	Shut-In(1)
45	838.27	99.88	End Shut-In(1)
45	81.23	99.89	Open To Flow (2)
92	147.45	101.13	Shut-In(2)
180	839.86	103.69	End Shut-In(2)
180	1615.89	103.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	slightly muddy water 15% Mud 85% Water	0.72
120.00	Slightly muddy water 10% Mud 90% Water	0.95

Gas Rates

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



DRILL STEM TEST REPORT

Bird Dog Oil LLC
 1801 Broadway Suite 200
 Denver, Colorado 80202
 ATTN: Justen Carter

17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 01062 DST#: 2
 Test Start: 2019.01.01 @ 02:03:00

GENERAL INFORMATION:

Formation: **Kansas City "E & F"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 03:51:00 Tester: Gene Budig
 Time Test Ended: 09:02:00 Unit No: 1
 Interval: **3470.00 ft (KB) To 3496.00 ft (KB) (TVD)** Reference Elevations: 1912.00 ft (KB)
 Total Depth: 3496.00 ft (KB) (TVD) 1904.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

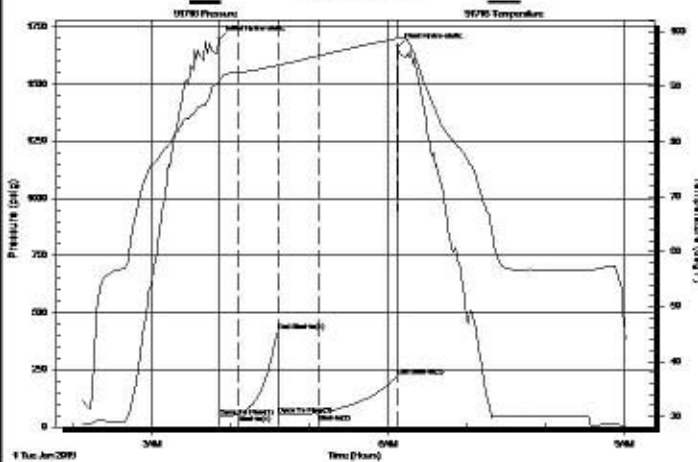
Serial #: 91716

Outside

Press@RunDepth: 223.75 psig @ 3491.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.01 End Date: 2019.01.01 Last Calib.: 2019.01.01
 Start Time: 02:03:00 End Time: 09:01:30 Time On Btm: 2019.01.01 @ 03:51:00
 Time Off Btm: 2019.01.01 @ 06:07:00

TEST COMMENT: 1st Opening 15 minutes weak blow for 5 minutes and died
 1 Shut-In 30 minutes
 2nd opening 30 minutes very weak blow for 4 minutes & decreased to intermittent blow 4 minutes and died
 2nd Shut-In minutes

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1697.84	90.97	Initial Hydro-static
1	46.58	91.15	Open To Flow (1)
15	54.73	92.61	Shut-In(1)
45	418.88	93.92	End Shut-In(1)
45	55.36	93.95	Open To Flow (2)
76	59.75	95.60	Shut-In(2)
136	223.75	98.76	End Shut-In(2)
136	1663.46	98.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	oil cut mud 90%Mud 10%Oil	0.24

Gas Rates

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



DRILL STEM TEST REPORT

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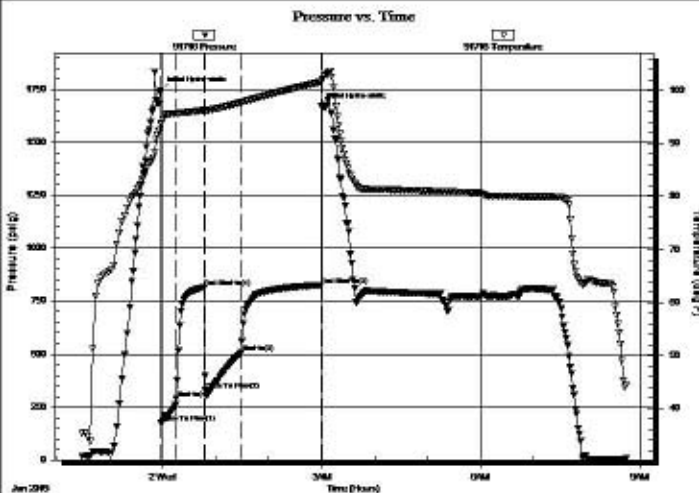
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 01063 DST#: 3
 Test Start: 2019.01.01 @ 22:24:00

GENERAL INFORMATION:

Formation: **Kansas City "H-I-J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 23:58:00 Tester: Gene Budig
 Time Test Ended: 08:46:00 Unit No: 1
 Interval: **3536.00 ft (KB) To 3592.00 ft (KB) (TVD)** Reference Elevations: 1912.00 ft (KB)
 Total Depth: 3496.00 ft (KB) (TVD) 1904.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 825.92 psig @ 3586.76 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.01 End Date: 2019.01.02 Last Calib.: 2019.01.02
 Start Time: 22:28:30 End Time: 08:45:30 Time On Btm: 2019.01.01 @ 23:57:30
 Time Off Btm: 2019.01.02 @ 02:59:30

TEST COMMENT: 1st Opening 15 Minutes Strong blow bottom of the bucket in 1 minute
 1st Shut-In 30 Minutes Gas to surface
 2nd Opening 45 Minutes Strong blow gas to surface SEE GAS FLOW REPORT
 2nd Shut-In 90 Minutes strong blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1746.08	93.53	Initial Hydro-static
1	177.10	93.70	Open To Flow (1)
18	287.88	95.65	Shut-In(1)
50	814.94	96.28	End Shut-In(1)
51	329.23	96.28	Open To Flow (2)
91	506.88	97.71	Shut-In(2)
182	825.92	101.59	End Shut-In(2)
182	1669.67	101.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1750.00	Clean Gassy oil 35% Gas 65% Oil	23.03

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	39.00	19.99
Last Gas Rate	0.13	0.01	5.39
Max. Gas Rate	0.13	39.00	19.99



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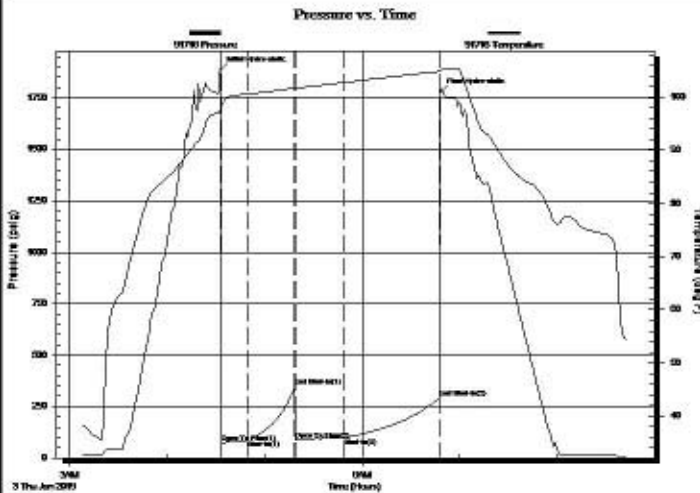
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: ew DST#: 4
 Test Start: 2019.01.03 @ 03:04:00

GENERAL INFORMATION:

Formation: **viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:34:00
 Time Test Ended: 08:43:00
 Interval: **3698.00 ft (KB) To 3760.00 ft (KB) (TVD)**
 Total Depth: **3760.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Reference Elevations: 1912.00 ft (KB)
 1904.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 293.77 psig @ 3754.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.03 End Date: 2019.01.03 Last Calib.: 2019.01.03
 Start Time: 03:04:00 End Time: 08:43:30 Time On Btm: 2019.01.03 @ 04:33:00
 Time Off Btm: 2019.01.03 @ 06:48:00

TEST COMMENT: 1st Opening 15 Minutes weak building blow built to 4 inches into the water
 1st Shut-In 30 Minutes
 2nd Opening 30 Minutes weak steady 2 inch blow
 2nd Shut-In 60 Minutes



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.65	97.70	Initial Hydro-static
1	72.51	98.21	Open To Flow (1)
16	85.21	100.52	Shut-In(1)
46	347.54	101.69	End Shut-In(1)
46	89.31	101.70	Open To Flow (2)
76	97.86	102.76	Shut-In(2)
135	293.77	104.80	End Shut-In(2)
135	1776.18	104.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling Mud	0.56

Gas Rates

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



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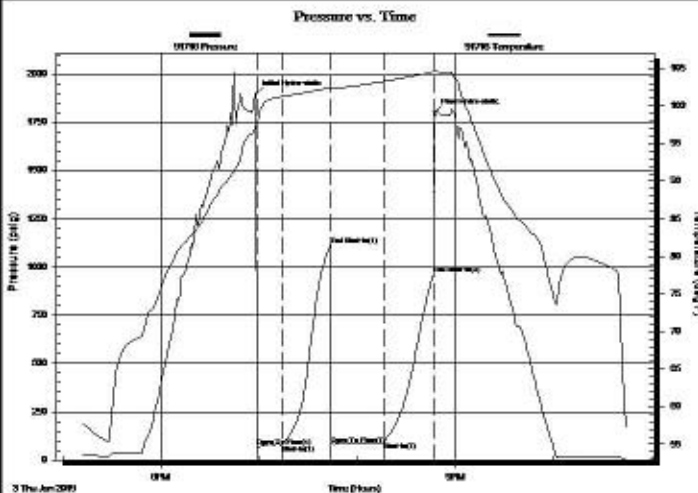
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 01065 DST#: 5
 Test Start: 2019.01.03 @ 17:08:00

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:00:00
 Time Test Ended: 22:46:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Interval: **3756.00 ft (KB) To 3810.00 ft (KB) (TVD)**
 Reference Elevations: 1912.00 ft (KB)
 Total Depth: 3810.00 ft (KB) (TVD) 1904.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 966.66 psig @ 3804.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.03 End Date: 2019.01.03 Last Calib.: 2019.01.03
 Start Time: 17:08:00 End Time: 22:44:29 Time On Btm: 2019.01.03 @ 18:58:00
 Time Off Btm: 2019.01.03 @ 20:47:00

TEST COMMENT: 1st Opening 15 Minutes weak blow built to 2 1/2 inches
 1st Shut-In 30 Minutes
 2nd Opening 30 Minutes weak blow built to 1 1/2 inches decreased to 1 1/4 inch into the water
 2nd Shut-In 30 Minutes



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.96	97.28	Initial Hydro-static
1	66.95	97.52	Open To Flow (1)
16	77.16	101.26	Shut-In(1)
46	1111.31	102.48	End Shut-In(1)
46	79.39	102.48	Open To Flow (2)
78	90.88	103.28	Shut-In(2)
109	966.66	104.56	End Shut-In(2)
109	1800.83	104.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Drilling Mud	0.48

Gas Rates

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



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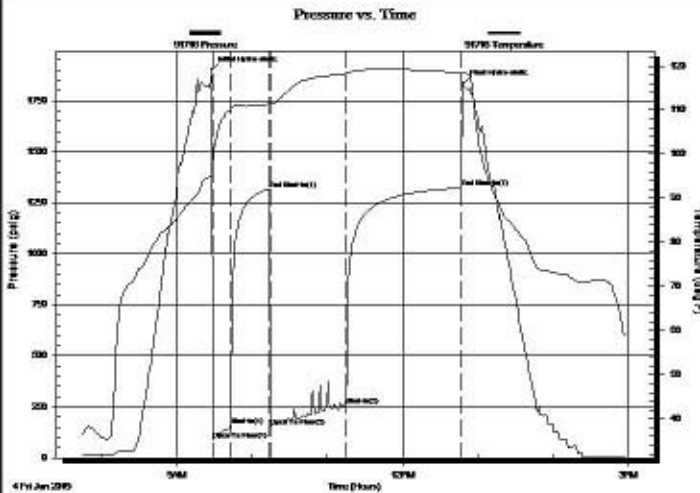
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 01066 DST#: 6
 Test Start: 2019.01.04 @ 07:45:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:32:00
 Time Test Ended: 15:03:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 1
 Interval: **3756.00 ft (KB) To 3832.00 ft (KB) (TVD)**
 Total Depth: **3832.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Fair
 Reference Elevations: 1912.00 ft (KB)
 1904.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 1324.19 psig @ 3826.77 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.04 End Date: 2019.01.04 Last Calib.: 2019.01.04
 Start Time: 07:45:00 End Time: 14:58:59 Time On Btm: 2019.01.04 @ 09:28:00
 Time Off Btm: 2019.01.04 @ 12:48:00

TEST COMMENT: 1st Opening 15 minutes fair blow built to 8 1/2 inches into the water
 1st Shut-In 30 Minutes no blow back
 2nd Opening 60 Minutes built to the bottom of a 5 gallon bucket in 27 Minutes
 2nd Shut-In 90 Minutes no blow back



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1900.33	96.03	Initial Hydro-static
1	88.98	96.84	Open To Flow (1)
15	158.36	109.91	Shut-In(1)
46	1317.26	111.34	End Shut-In(1)
47	156.50	111.34	Open To Flow (2)
107	255.89	118.32	Shut-In(2)
199	1324.19	118.46	End Shut-In(2)
200	1834.14	118.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
390.00	Muddy Gassy Frothy Oil	3.96
0.00	would not separate when ground out	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Bird Dog Oil LLC
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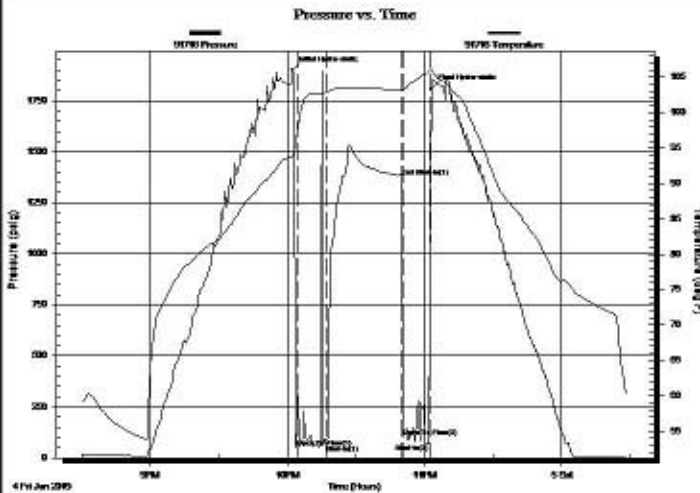
17-22s-13w Stafford
Keller Gates #1-17
 Job Ticket: 0167 DST#: 7
 Test Start: 2019.01.04 @ 20:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 22:06:00 Tester: Gene Budig
 Time Test Ended: 12:32:00 Unit No: 1
 Interval: **3832.00 ft (KB) To 3837.00 ft (KB) (TVD)** Reference Elevations: 1912.00 ft (KB)
 Total Depth: 3837.00 ft (KB) (TVD) 1904.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 8.00 ft

Serial #: 91716 Outside
 Press@RunDepth: 1378.83 psig @ 3832.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2019.01.04 End Date: 2019.01.05 Last Calib.: 2019.01.05
 Start Time: 20:30:00 End Time: 00:28:30 Time On Btm: 2019.01.04 @ 22:02:00
 Time Off Btm: 2019.01.04 @ 23:03:00

TEST COMMENT: 1st opening 15 Minutes w eakblow for 5 minutesn and died flushed tool w eak surge no help
 1st shut-in 30 minutes
 2nd opening 10 minutges no blow came out of the hole



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1900.47	93.74	Initial Hydro-static
2	49.24	96.67	Open To Flow (1)
15	64.45	102.96	Shut-In(1)
48	1378.83	103.22	End Shut-In(1)
49	101.17	103.22	Open To Flow (2)
60	69.95	105.89	Shut-In(2)
61	1808.02	106.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	drilling mud	0.16

Gas Rates

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

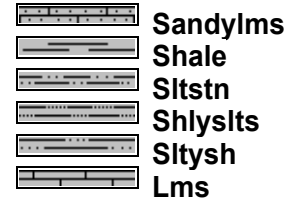
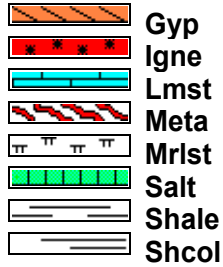
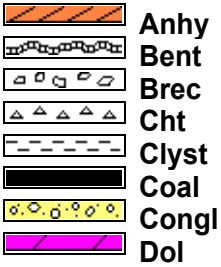
Remarks

After careful review of the sample log, electric logs, and DST reports, the decision was made to run 5 1/2" casing to do further testing of the L/KC and Arbuckle zones in the Keller-Gates #1-17.

Respectfully submitted,

Justin D. Carter
Consulting Geologist

ROCK TYPES



ACCESSORIES

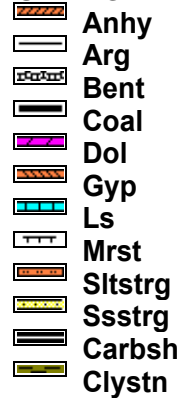
FOSSIL



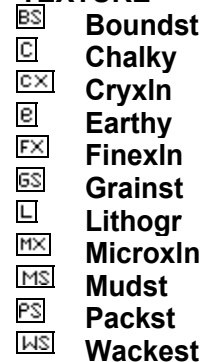
MINERAL



STRINGER



TEXTURE

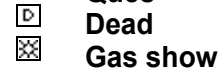


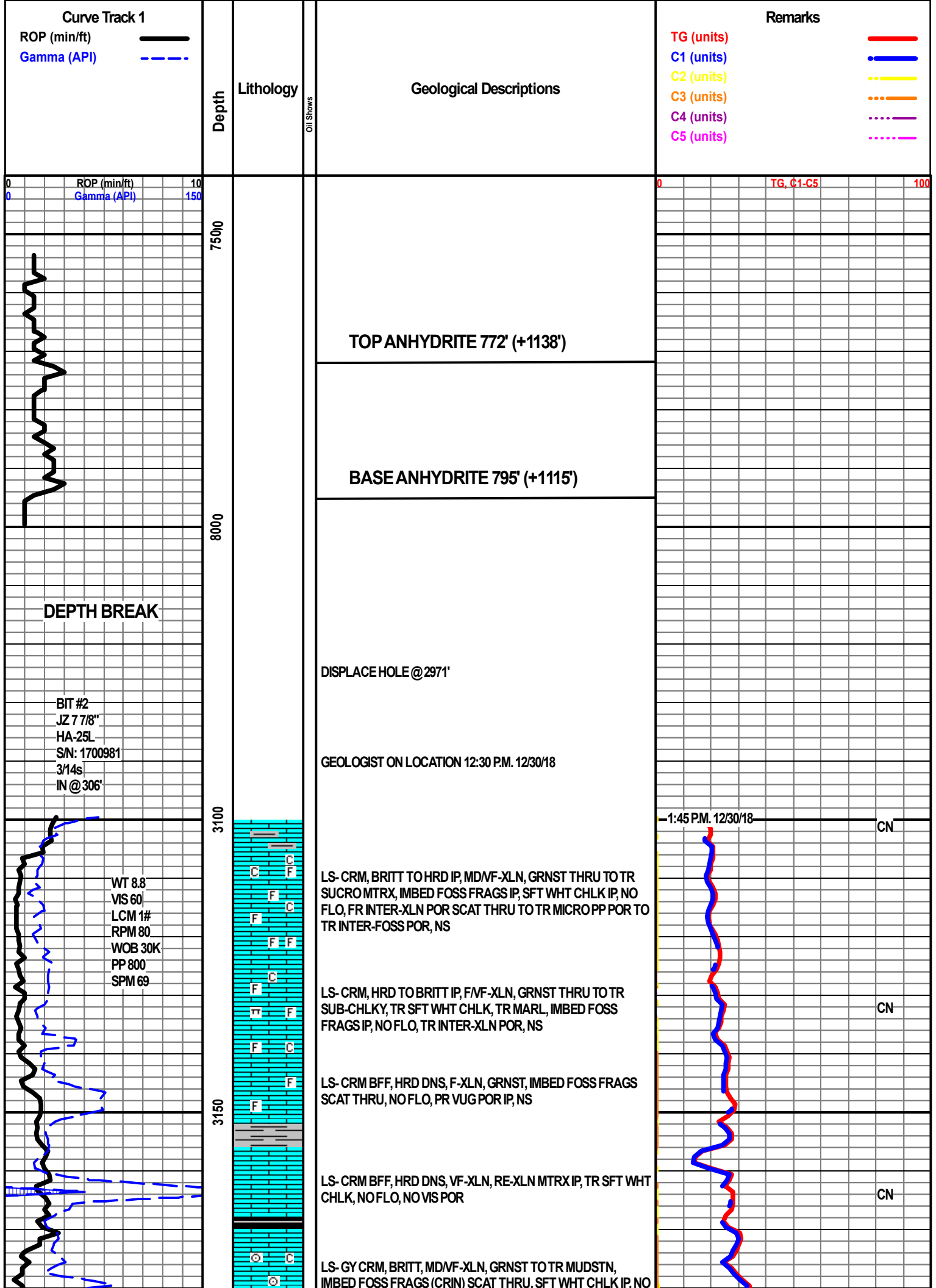
OTHER SYMBOLS

INTERVALS



OIL SHOWS





Curve Track 1

ROP (min/ft) ———
 Gamma (API) - - - -

Remarks

TG (units) ———
 C1 (units) ———
 C2 (units) ———
 C3 (units) ———
 C4 (units) ———
 C5 (units) ———

Depth

Lithology

Geological Descriptions

Oil Shows

ROP (min/ft) 10
 Gamma (API) 150

TG, C1-C5 100

7500

TOP ANHYDRITE 772' (+1138')

8000

BASE ANHYDRITE 795' (+1115')

DEPTH BREAK

DISPLACE HOLE @2971'

BIT #2
 JZ 7 7/8"
 HA-25L
 SN: 1700981
 3/4s
 IN @306'

GEOLOGIST ON LOCATION 12:30 P.M. 12/30/18

3100

WT 8.8
 VIS 60
 LCM 1#
 RPM 80
 WOB 30K
 PP 800
 SPM 69

LS- CRM, BRITT TO HRD IP, MD/VF-XLN, GRNST THRU TO TR SUCRO MTRX, IMBED FOSS FRAGS IP, SFT WHT CHLK IP, NO FLO, FR INTER-XLN POR SCAT THRU TO TR MICRO PP POR TO TR INTER-FOSS POR, NS

1:45 P.M. 12/30/18 CN

3150

LS- CRM, HRD TO BRITT IP, F/VF-XLN, GRNST THRU TO TR SUB-CHLKY, TR SFT WHT CHLK, TR MARL, IMBED FOSS FRAGS IP, NO FLO, TR INTER-XLN POR, NS

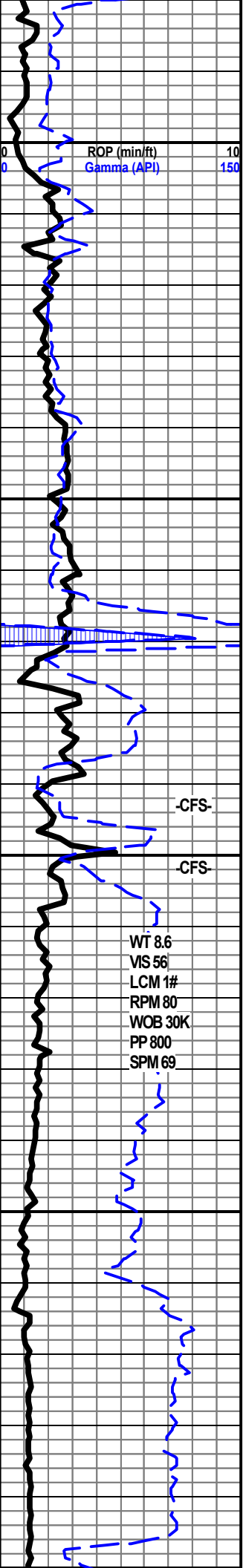
CN

LS- CRM BFF, HRD DNS, F-XLN, GRNST, IMBED FOSS FRAGS SCAT THRU, NO FLO, PR VUG POR IP, NS

LS- CRM BFF, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR SFT WHT CHLK, NO FLO, NO VIS POR

CN

LS- GY CRM, BRITT, MD/VF-XLN, GRNST TO TR MUDSTN, IMBED FOSS FRAGS (CRIN) SCAT THRU. SFT WHT CHLK IP, NO



3200
3250
3300
3350
00

ROP (min/ft)
Gamma (API)

WT 8.6
VIS 56
LCM 1#
RPM 80
WOB 30K
PP 800
SPM 69

-CFS-
-CFS-



FLO, PR INTER-XLN POR SCAT THRU TO TR INTER-FOSS POR, TR DEAD STAIN, NO ODOR

LS- LT TN, HRD, MD/F-XLN, GRNST, SFT WHT CHLK IP, NO FLO, PR/FR INTER-XLN POR THRU, NS

LS- LT GY, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR IMBED SH, NO FLO, NO VIS POR

LS- CRM TN, HRD TO BRITT IP, MD/F-XLN, SUCRO MTRX THRU, NO FLO, FR INTER-XLN POR THRU, NS

LS- BFF CRM, HRD DNS, VF-XLN, RE-XLN MTRX IP TO TR GRNST, TR SFT WHT CHLK, NO FLO, NO VIS POR

LS- WHT BFF, HRD DNS, VF-XLN, RE-XLN MTRX IP TO GRNST IP, NO FLO, TR INTER-XLN POR TO NO VIS POR THRU, TR DEAD STAIN, NO ODOR

HEEBNER 3271' (-1361')

LS- LT GY WHT, HRD, MDVF-XLN, GRNST IP TO RE-XLN MTRX IP, TR PYR, NO FLO, NO VIS CUT, TR INTER-XLN POR TO TR VUG POR, NO STAIN, NO ODOR

TORONTO 3289' (-1379')

LS- TN CRM, BRITT TO HRD IP, FVF-XLN, GRNST, TR DLL YEL GLD FLO, NO VIS CUT, FR MICRO PP POR IP TO TR INTER-XLN POR, NO STAIN, NO ODOR

DOUGLAS 3307' (-1397')

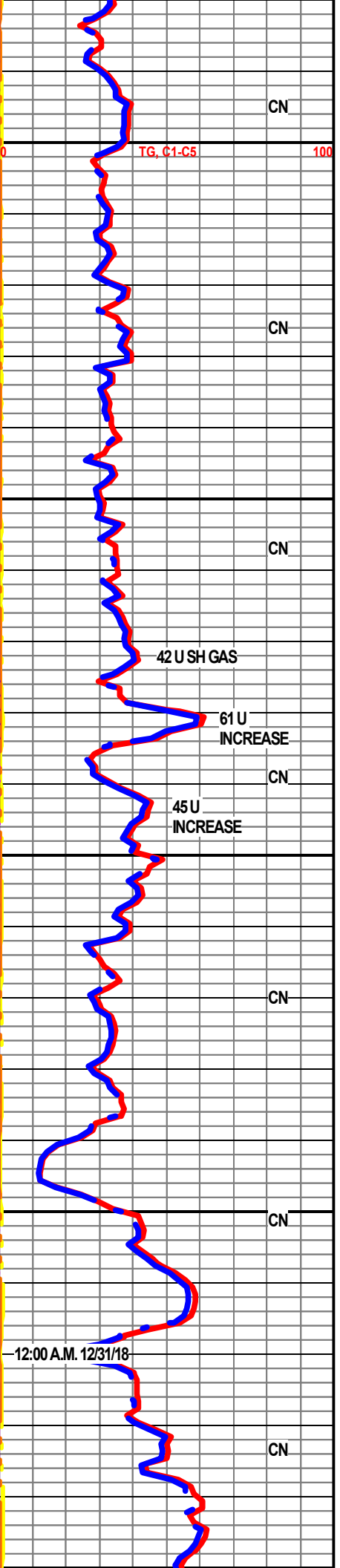
SH- RD GRN, FRM TO SFT IP, OXIDIZ RD SH, BLKY

SH- GY LT GRN, FRM TO SFT IP, FISS TO BLKYIP, ARG

SLTST- LT GY, TT, VF-GRN, DISS BLK SH THRU, NO VIS POR

SLTST- GY, TT, FVF-GRNS, DISS BLK SH IP TO MICA SH IP, TR INTER-GRN POR TO NO VIS POR THRU

BROWN LIME 3402' (-1492')

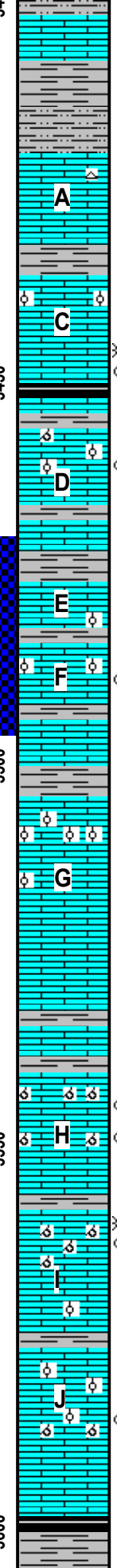
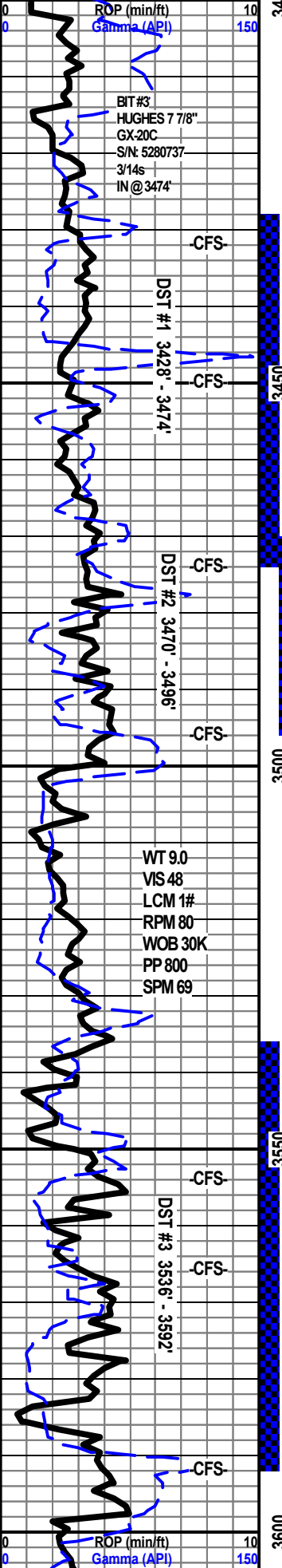


TG, C1-C5

42 U SH GAS
61 U INCREASE
45 U INCREASE

12:00 A.M. 12/31/18

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SHORT TRIP 25 STANDS @ 3403'

LANSING 3420' (-1510')

LS- OFF WHT, HRD DNS, FVF-XLN, GRNST IP TO RE-XLN MTRX IP TO TR SUB-CHLKY, NO FLO, TR INTER-XLN POR TO NO VS POR THRU, NS

LS- TN CRM, HRD TO BRITT IP, FVF-XLN, GRNST, YEL GLD FLO IN 70%, PR/FR FLUSH TO FR SLO BLU STRM CUT, PR/FR INTER-XLN POR SCAT THRU, TN STAIN IN 80%, FAINT ODOR

LS- WHT BFF TN, HRD TO BRITT IP, FVF-XLN, GRNST TO TR SUB-CHLKY, TR IMBED OOL, BRIT YEL GLD FLO IN 90%, PR FLUSH TO FR SLO BLU STRM CUT, FR INTER-XLN POR SCAT THRU TO TR VUG TO OOMLD POR, TN STAIN IN 80%, FAINT ODOR, TR FREE OIL

STRAP OUT @ 3474', 0.6' SHORT TO BOARD

LS- OFF WHT, BRITT, F-XLN, GRNST TO TR SUB-CHLKY, IMBED OOL IP, YEL GLD FLO SCAT THRU, FR FLUSH TO FR SLO BLU STRM CUT, FR INTE-XLN POR THRU TO TR INTER-OOL POR, TN STAIN IN 70%, FAINT ODOR, TR FREE OIL

LS- CRM, BRITT, FVF-XLN, GRNST, IMBED OOL SCAT THRU, NO FLO, TR DLL YEL FLO, NO VIS CUT, PR INTER-XLN POR THRU TO TR INTER-OOL POR, TR STAIN, NO ODOR

LS- LT TN, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

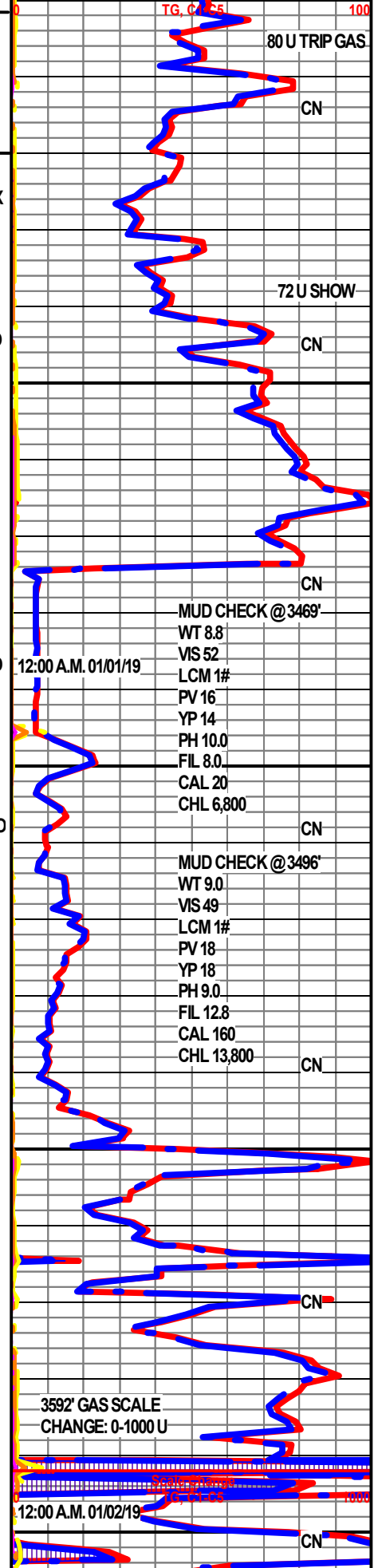
LS- BFF LT GY, BRITT, VF-XLN, GRNST, IMBED OOL IP, TR YEL GL FLO, PR FLUSH TO FR SLO BLU STRM CUT, FR OOMLD POR THRU, TR DK TN STAIN, FAINT ODOR, NS FREE OIL

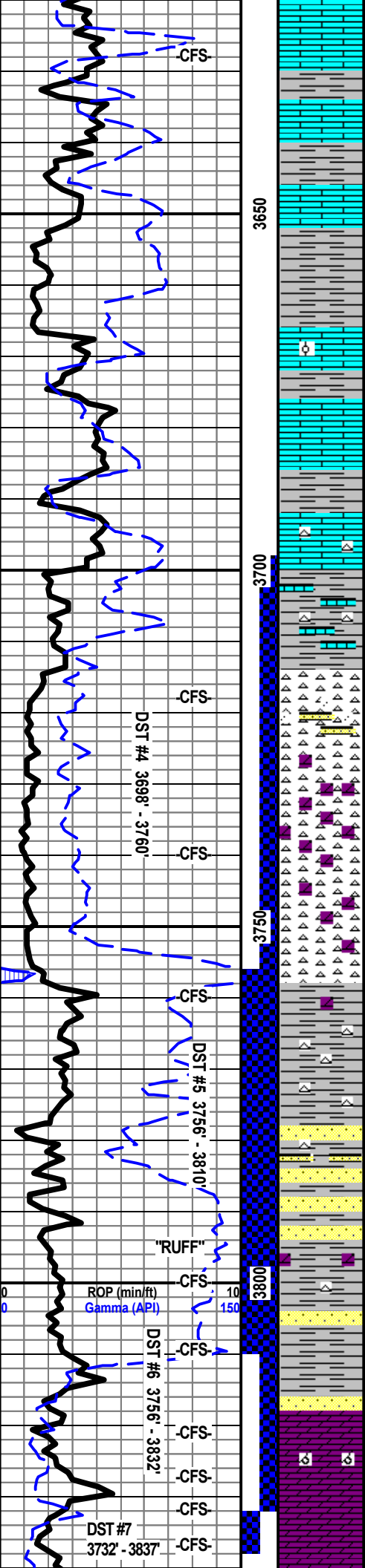
LS- TN WHT, BRITT, FVF-XLN, GRNST, TR IMBED OOL, BRIT YEL GLD FLO IN 20%, GD FLUSH TO GD BLU STRM CUT, FR OOMLD POR THRU, TN STAIN THRU TO BLK DEAD STAIN IN OOMLDS, STRNG ODOR, TR FREE OIL, TR GAS BUBBLS

LS- WHT TN, BRITT, VF-XLN, GRNST, OOL IP, SCAT BRIT YEL GLD FLO, FR FLUSH TO FR BLU STRM CUT, FR INTER-OOL POR IP TO PR/FR OOMLD POR IP, TR LIVE OIL STAIN TO TN STAIN IP, FREE OIL, FR ODOR

SH- GY LT GRN, SFT TO FRM IP, LMY, FISS IPTO BLKY IP

LS- CRM LT GY, HRD DNS, VF-XLN, RE-XLN MTRX THRU, TR OOL, BRIT YEL GLD FLO IN 50%, PR FLUSH TO PR SLO BLU STRM CUT, TR INTER-XLN POR TO TR MICRO PP POR, TR TN STAIN, FAINT ODOR, NO FREE OIL





BKC 3631' (-1721')

LS- CRM LT GY, HRD DNS, VF-XLN, RE-XLN MTRX, NO FLO, NO VIS CUT, NO VIS POR, TR DEAD BLK STAIN, FAINT ODOR

SH- GY GRN, FRM, BLKY, SLTY TO TR LMY

LS- WHT LT GY, HRD, FVF-XLN, RE-XLN MTRX IP TO GRNST IP, TR OOL, SCATYEL GLD FLO, FR FLUSH TO PR BLU STRM CUT, TR INTER-XLN POR TO TR VUG POR, TN STAIN IP TO TR LIVE BLK STAIN, TR FREE OIL, FAINT ODOR

LS- LT GY, HRD DNS, FVF-XLN, RE-XLN MTRX THRU, TR BRITYEL GLD FLO, FR FLUSH TO TO FAINT BLU STRM CUT, TR INTER-XLN POR TO NO VIS POR THRU, TR LIVE OIL STAIN, NO ODOR

LS- TN LT GRN, HRD DNS, MIDVF-XLN, RE-XLN MTRX TO TR MUDSTN, TR OPQ CHRT, IMBED GRN SH IP, NO FLO, NO VIS CUT, NO VIS POR, TR BLK STAIN, NO ODOR

CONGL RD GRN GY SH & LS- CRM, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR OOL, NO FLO, NO VIS CUT, NO VIS POR, TR BLK STAIN, NO ODOR

VIOLA 3714' (-1804')

CHRT- WHT, HRD DNS, ANG, TR BLK STAIN, NO VIS CUT, NO ODOR, TR FREE OIL

LMY SS- TN MOTT, TT TO FRI IP, F-GRN, FR SRT, SUB-ANG GRNS, ARG IP, TR LG LIME GRNS, NO FLO, PR SLO BLU STRM CUT, TR TN STAIN, NO ODOR

3726' CHRT- WHT, HRD DNS, ANG, TR IMBED FOSS FRAGS, TR BRIT YEL FLO, PR SLO BLU STRM CUT, TR TN STAIN, NO VIS POR, NO ODOR

DOLO- TN, HRD DNS, VF-XLN, SUCRO MTRX THRU TO TR RE-XLN MTRX, YEL GLD FLO IN 90%, FR FLUSH TO FAINT BLU STRM CUT, NO VIS POR, TN STAIN THRU, GD SHOW FREE OIL

CHRT- WHT, HRD DNS, TR TN VF-XLN DOLO, TR TN STAIN, NO ODOR

SH- RD GRN GY, FRM, BLKY, LMY, WHT CHRT IP, TR DOLO

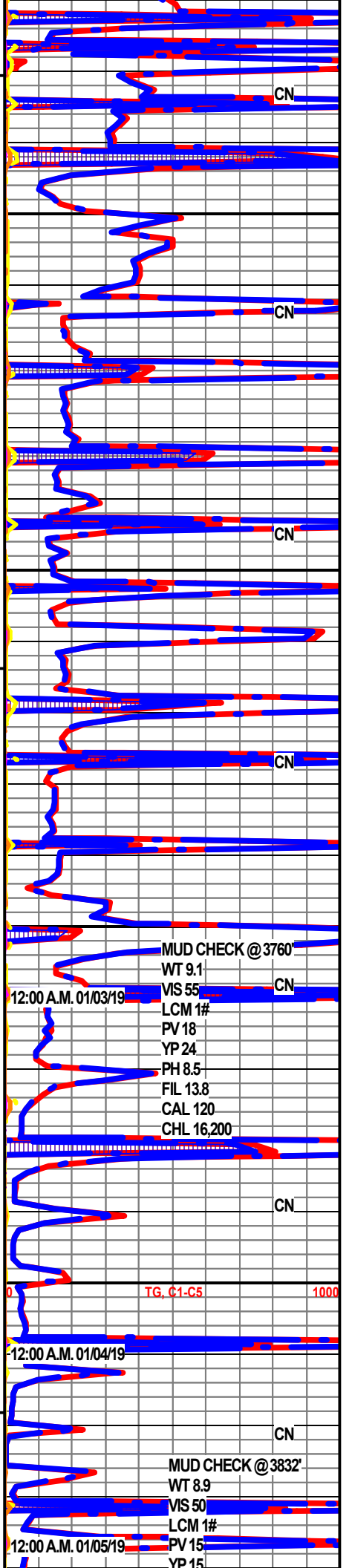
SS- TN CLR, TT TO FRI IP, FVF-GRNS, PR SRT, SUB-ANG GRNS, SILI, TR YEL FLO, FR FLUSH TO GD FAST BLU STRM CUT, FR INTER-GRN POR THRU, TN STAIN IP, TR FREE OIL, NO ODOR

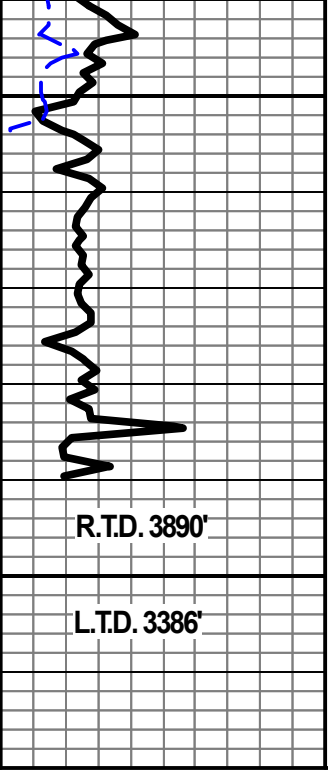
SS- TN, TT, F-GRNS, FR SRT, SUB-ANG GRNS, TR YEL GLD FLO, FAINT FLUSH TO PR SLO BLU STRM CUT, PR/FR INTER-GRN POR THRU, DK TN STAIN THRU, NO ODOR, TR FREE OIL

ARBUCKLE 3818' (-1908')

DOLO- TN, HRD, FVF-XLN, SUCRO MTRX THRU, DLL YEL FLO THRU, FAINT SLO BLU STRM CUT, PR OOMLD POR SCAT THRU TO TR INTER-XLN POR, TR TN STAIN, FR ODOR, FREE OIL IP

3830' DOLO- TN WHT, HRD DNS, FVF-XLN, SUCRO MTRX THRU, YEL GLD FLO THRU, FAINT FLUSH TO FAINT BLU STRM CUT, PR INTER-XLN POR THRU, BLK STAIN IP, FAINT ODOR





3850

3900

R.T.D. 3890'

L.T.D. 3386'



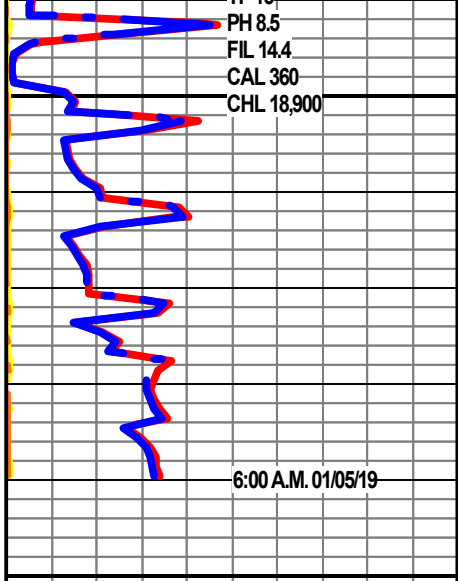
3835' DOLO- PINKISH WHT, HRD, MD-XLN, SUCRO MTRX THRU, TR YEL GLD FLO, GD FLUSH TO FR BRN STRM CUT, FR INTER-XLN POR THRU, LIVE BLK STAIN SCAT THRU, STRNG ODOR, FREE OIL

3840' DOLO- WHT, HRD, MD/F-XLN, SUCRO MTRX THRU, YEL GLD FLO THRU, FR/GD FLUSH TO FR BLU STRM CUT, FR INTER-XLN POR THRU, LIVE BLK STAIN IP, FAIR ODOR, TR FREE OIL

3852' DOLO- WHT LT CRM, HRD, MD/F-XLN, SUCRO MTRX THRU, YEL GLD FLO THRU, FAINT BLU STRM CUT, FR INTER-XLN POR THRU, TR BLK STAIN, FAINT/FR ODOR, NO FREE OIL

3865' DOLO- CRM, HRD, F-XLN, SUCRO MTRX THRU, DLL YEL GLD FLO THRU, NO VIS CUT, PR INTER-XLN POR THRU, TR BLK RESID STAIN, FR ODOR

3880' DOLO- CRM, HRD DNS, FVF-XLN, SUCRO MTRX THRU TO TR RE-XLN MTRX, DLL YEL FLO THRU, NO VIS CUT, NO VIS POR



PH 8.5
FIL 14.4
CAL 360
CHL 18,900

6:00 A.M. 01/05/19