

# SUTTLES LOGGING, INC.



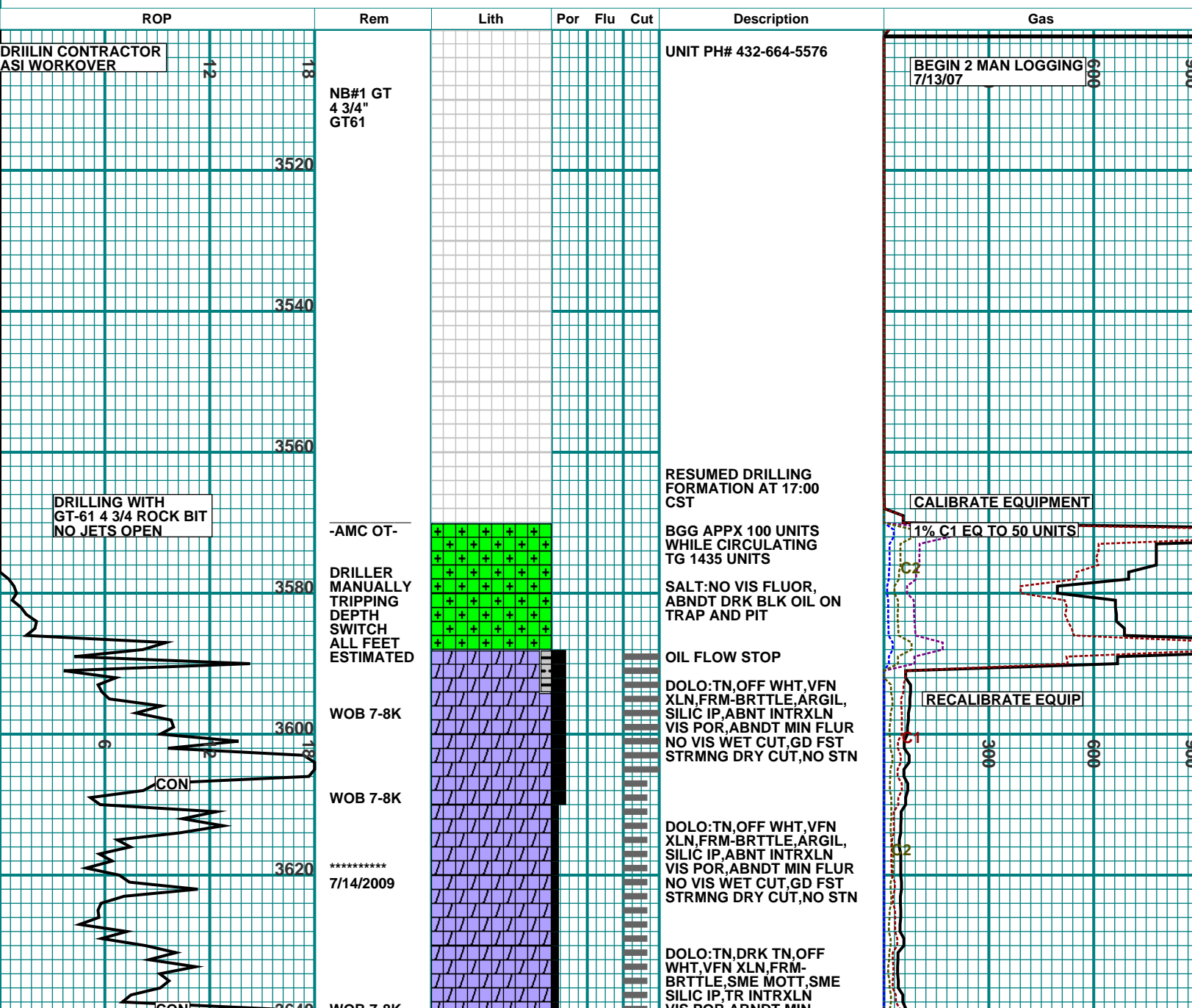
HYDROCARBON WELL LOGGING  
GEOLOGICAL CONSULTING

PO Box 10725, Midland, Tx. 79702  
(432)687-3148 Fax(432)687-3157

- CO - Circulate Out
- CON - Connection
- DC - Depth Correction
- DS - Directional Survey
- LC - Lost Circulation
- NB - New Bit
- NR - No Returns
- WOB - Weight on Bit

Producer: SUCCESS OIL CO	
Well Name: AMOCO CRAWAR #1	
Location: 467' FNL & 853' FWL, SEC 18, BLK B-20	
API: 42-475-33523	Permit:
Survey: PSL SURVEY	Field:
County,St: WARD COUNTY, TX.	
Logger1: A. MIKE CHAVARRIA	Logger2: DARREL MARTIN
Elevation (GL): 2563	(KB): 2569
Depth (Start): 3500	(End): 5398
Date (Start): 07/13/2009	(End): 07/26/2009
Unit #: 439	SLI Job#: 9272-09-172

<ul style="list-style-type: none"> <li> Nothing</li> <li> Salt</li> <li> Dolomite</li> <li> Shale</li> <li> Lime Stone</li> </ul>	<ul style="list-style-type: none"> <li> Total Gas</li> <li> Methane C1</li> <li> Ethane C2</li> <li> Propane C3</li> <li> Butane C4</li> <li> Pentane C5</li> </ul>
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CHNG ROTATIN RUBBER

3660

CON

3680

CON

3700

CHANGE SCALE

MIKE C.  
\*\*\*\*\*  
DARREL M.  
WOB 8 M  
RPM 130  
SPM  
PP 350

WT 10  
VIS 29

3720

CONN

3740

3760

CONN

3780

3800

CONN

3820

CONN

3840

\*\*\*\*\*  
7/15/2009

CONN

3860

FLUOR:NO VIS WET CUT,  
FR-GD FST MLKY DRY  
CUT,NO VIS STN

DOLO:TN,OFF WHT,DRK  
TN,VFN XLN,FRM-  
BRITTLE,SME MOTT,SME  
SILIC IP,TR INTRXLN  
VIS POR,MOD SUCROS,  
SME MIN FLUOR,NO WET  
CUT,FR-GD FST MLKY DRY  
CUT,NO VIS STN

DOLO:TN,OFF WHT,CRM,  
VFN XLN,FRM,SME SILIC  
IP,PRED SUCROS TX,TR  
DLL YLLW FLUOR,NO VIS  
WET CUT

DOLO:TN,OFF WHT,CRM,  
VFN XLN,FRM,SME SILIC  
IP,PRED SUCROS TX,TR  
DLL YLLW FLUOR,NO VIS  
WET CUT

CUTTINGS V FINE

DOL: TN WH VFXLN  
CLEAN NO FL NO WET  
POOR DRY CUT

LS/DOL: WH TN CRM  
VFXLN 100% PALE TO  
MOD YL FL FAIR WET  
CUT GOOD DRY CUT

LS/DOL: WH TN CRM LT  
BN VFXLN 100% PALE TO  
MOD YL FL FAIR WET  
CUT GOOD DRY CUT

NOTE: TR SALT IN UN  
CLEAN SAMP

LS/DOL: WH TN CRM LT  
BN VFXLN 100% PALE TO  
MOD YL FL FAIR WET  
CUT GOOD DRY CUT

SH: DK GY BK FRM BLKY  
OILY FLOATING (GOOD  
WET CUT NOT LOGGED)

LS/DOL: WH TN CRM  
VFXLN 100% PALE TO  
MOD YL-BN FL FAIR WET  
CUT GOOD DRY CUT

LS/DOL: WH TN CRM  
VFXLN 100% PALE TO  
MOD YL-BN FL FAIR WET  
CUT GOOD DRY CUT

LS/DOL: WH TN CRM  
VFXLN 100% PALE TO  
MOD YL-BN FL FAIR WET  
CUT GOOD DRY CUT

LS/DOL: WH TN CRM  
VFXLN 100% PALE TO  
MOD YL-BN FL FAIR WET  
CUT GOOD DRY CUT

LS/DOL: LT TN TN WH  
VFXLN CLEAN 100% PALE  
TO MOD YL FL SL TR  
BLU-WH-YL FL FAIR WET  
CUT GOOD DRY CUT

DOL: WH CRM TN VFXLN  
CALC 100% MOD TO BRT  
YL FL GOOD MLKY WET  
CUT

CARBIDE LAG 47 MIN

CHANGE SCALE

100

200

300

C2

C3

C2

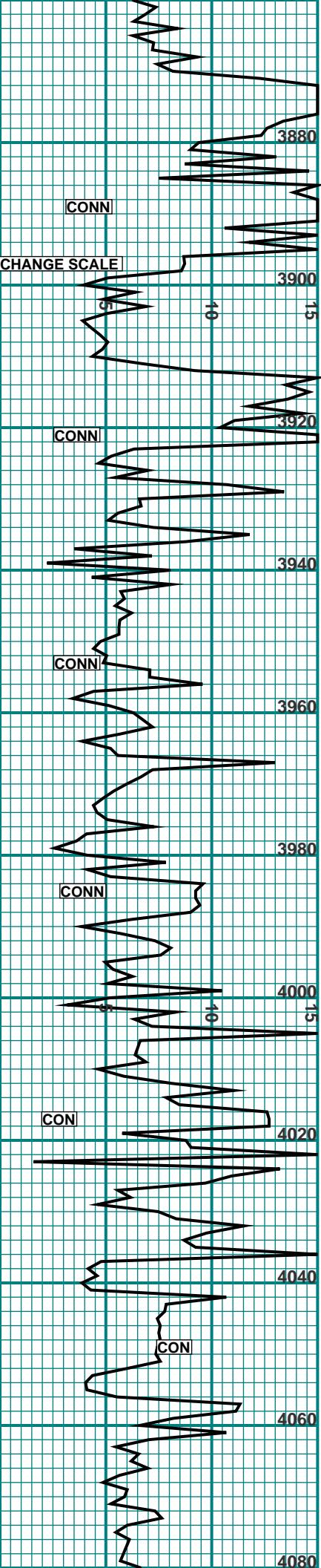
C3

C2

C3

C1

CHANGE SCALE



NOTE: SCALE CHANGE

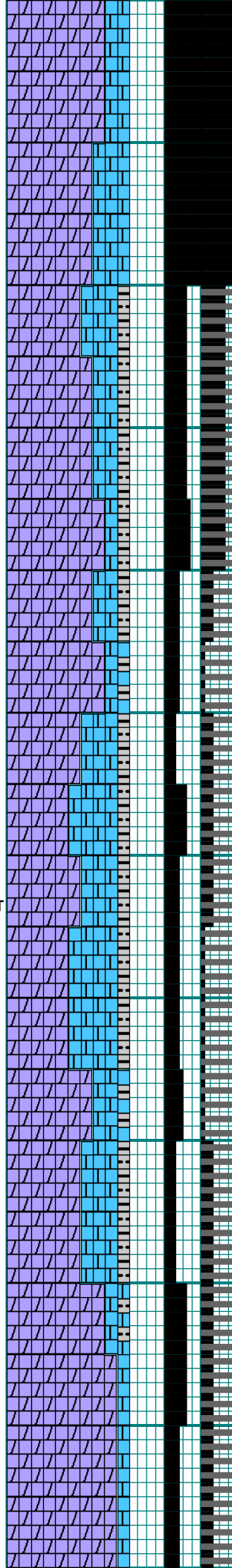
DARREL M.  
\*\*\*\*\*  
-AMC OT-

WOB 8K

CHANGE ROT RUBBER

WOB 22K  
PP 500

\*\*\*\*\*  
7/16/2009



DOL: WH CRM TN VFXLN  
CALC 100% MOD TO BRT  
YL FL GOOD MLKY WET  
CUT

LS/DOL: WH CRM VFXLN  
100% BRT TO MOD YL FL  
GOOD MLKY WET CUT

SH: BK HRD BLKY V  
OILY FLOATING

LS/DOL: WH CRM TN  
VFXLN 60% MOD, BRT, &  
PALE YL FL 4 CTG W  
GOOD WET CUT REST  
POOR WET CUT GOOD DRY

LS/DOL: AA 3 CTGS W  
GOOD STRM MLKY WET  
CUT REST POOR WET CUT

DOLO: OFF WHT, TN, DRK  
CRM, VFN XLN, FRM, SME  
SUCROS, 80% BRT YLLW  
FLUOR, FR FST MLKY WET  
CUT, GD FST STRMNG  
MLKY DRY CUT, MOD-  
STRNG PETRO ODOR ON  
SMPLES, TR DULL YLLW  
RESID RING

DOLO: OFF WHT, TN, DKCRM,  
GRY, VFN XLN, FRM, SME  
SUCROS, 50% BRT YLLW  
FLUOR, PR FST MLKY WET  
CUT, GD FST STRMNG  
MLKY DRY CUT, TR  
PETRO ODOR ON SMPLES,  
FNT PALE YLLW RESID  
RING, NO VIS STN

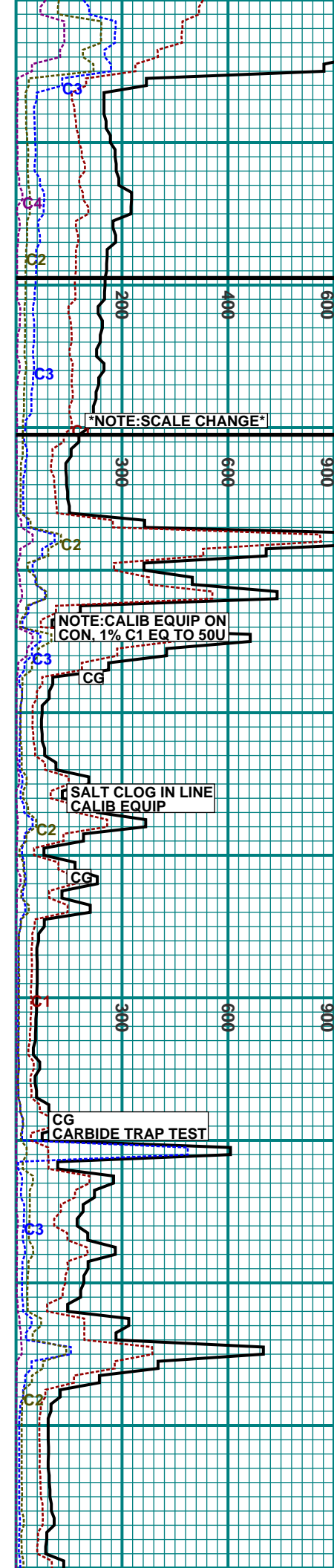
DOLO/LS: OFF WHT, TN, LT  
GRY, DRK TN, VFN XLN,  
FRM, SME SUCROS, SME  
ARGIL IP, PRED CLN, 50-  
60% BRT YLLW FLUOR, PR-  
FR FST MLKY WET CUT,  
FR-GD FST MLKY DRY  
CUT, NO VIS STN, TR-MOD  
PETRO ODOR ON SMPLES,  
TR DULL YLLW RESID  
RING

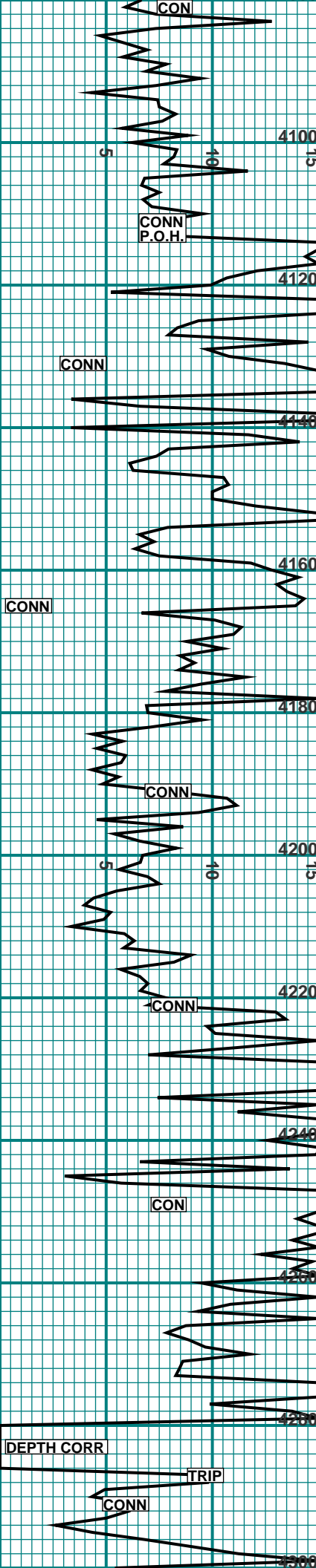
DOLO/LS: OFF WHT, TN, LT  
GRY, DRK TN, VFN XLN,  
FRM, SME SUCROS, SME  
ARGIL IP, PRED CLN, 30-  
40% BRT YLLW FLUOR, TR-  
PR FST MLKY WET CUT,  
GD FST MLKY DRY CUT,  
NO VIS STN, TR-MOD  
PETRO ODOR ON SMPLES,  
TR DULL YLLW RESID  
RING

SH: BLK, BLCKY, BRTTLE,  
CARB

DOLO: DRK TN, TN, OFF  
WHT, VFN XLN, FRM, PRED  
CLN, 30-40% BRT GLD  
FLUOR, PR-FR FST MLKY-  
YLLW WET CUT, GD FST  
STRMNG MLKY-YLLW DRY  
CUT, SME TN OIL STN,  
SME FLTNG XLS

DOLO: DRK TN, TN, OFF  
WHT, VFN XLN, FRM, PRED  
CLN, 60-70% BRT YLLW  
FLUOR, PR-FR FST MLKY-  
WET CUT, GD FST STRMNG  
MLKY DRY CUT, NO VIS  
STN, MOD PETRO ODOR ON  
SMPLES, TR BRT YLLW/  
WHT RESID RING





MIKE C.  
\*\*\*\*\*  
DARREL M.

\*\*\*\*\*  
7/17/2009  
WOB 10/12M  
RPM 180  
PP 300

DARREL M.  
\*\*\*\*\*  
-AMC OT-

CNGE ROT  
RUBBER

\*\*\*\*\*  
7/18/2009

MIKE C.  
\*\*\*\*\*  
DARREL M.

NB 3  
SERV RIG

DOLO/LS:OFF WHT,TN,LT  
GRY,DRK TN,VFN XLN,LT  
FRM,SME SUCROS,SME  
ARGIL IP,PRED CLN,30-  
40% BRT YLLW FLUOR,PR  
FST MLKY WET CUT,FR-  
GD FST MLKY DRY CUT,  
NO VIS STN,FNT-TR  
PALE YLLE RESID RING

\*\*\*\*\*  
PULL OUT HOLE 4113  
11 AM TUBING PARTED  
ABOVE D.C. WAIT ON  
FISHING TOOLS P.O.H.  
W FISH 5 PM TRIP IN  
HOLE W NEW BIT 2 GT61  
4 3/4" ROCK BIT 6:45  
PM PICK UP 4 D.C. LAY  
DOWN 4 JTS DP. RES  
DRLG 9:45 PM  
\*\*\*\*\*

LS/DOL: WH OFF WH  
GYISH VFXLN 100% MOD  
TO BRT YL FL FAIR WET  
CUT GOOD DRY CUT

DOL: WH GYISH VFXLN  
CHKY IP 60% MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

DOL: WH GYISH VFXLN  
CHKY IP 60% MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

SH:GRY,DRKGRY,BLK,  
RND,SMELCKY,V/ARGIL,  
SMS SLTY, TRCARB,SME  
CALC,

DOLO:DRK BUFF,DRK TN,  
OFF WHT,VFN-FNXLN,FRM,  
SME ARGIL,TR SHLY IP,  
40% BRT YLW FLUOR,PR  
FST MLKY WET CUT,FR-  
GD FST STRMNG DRY,TR  
PALE YLW RESID RING,  
MOD PETRO ODOR,TR LT  
BRN OIL STNG

DOLO/LS:DRK BUFF,BUFF,  
DRK TN,VFN XLN,FRM,  
SILIC,CLN,20-30%BRT  
YLLW FLUOR,TR FST/PR  
SLO MLKY WET CUT,FNT  
PLE YLLW RESID RING,TR  
STNG

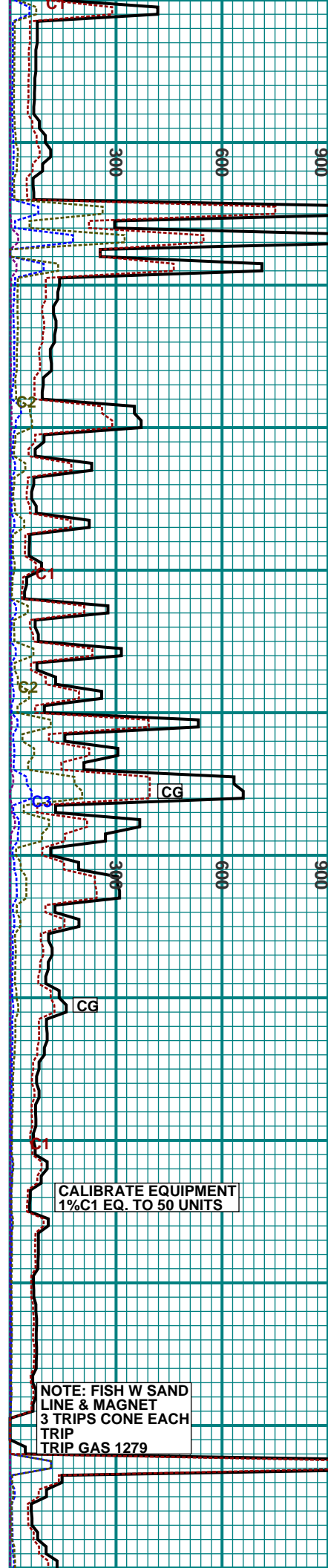
LS:LT BUFF,CRM,VFN-FN  
XLN,FRM-BRTTLE,CHALKY,  
10-15% BRT YLW FLUOR,  
TR SLO-NO WET CUT,TR-  
PR FST DRY CUT

DOLO/LS:DRK BUFF,BUFF,  
DRK TN,VFN XLN,FRM,  
SILIC,CLN,SCAT BRT  
YLLW FLUOR,NO VIS WET  
CUT,TR FST MLKY DRY  
CUT

DOLO/LS:DRK BUFF,BUFF,  
DRK TN,VFN XLN,FRM,  
SILIC,CLN,SCAT BRT  
YLLW FLUOR,NO VIS WET  
CUT,TR FST MLKY DRY  
CUT

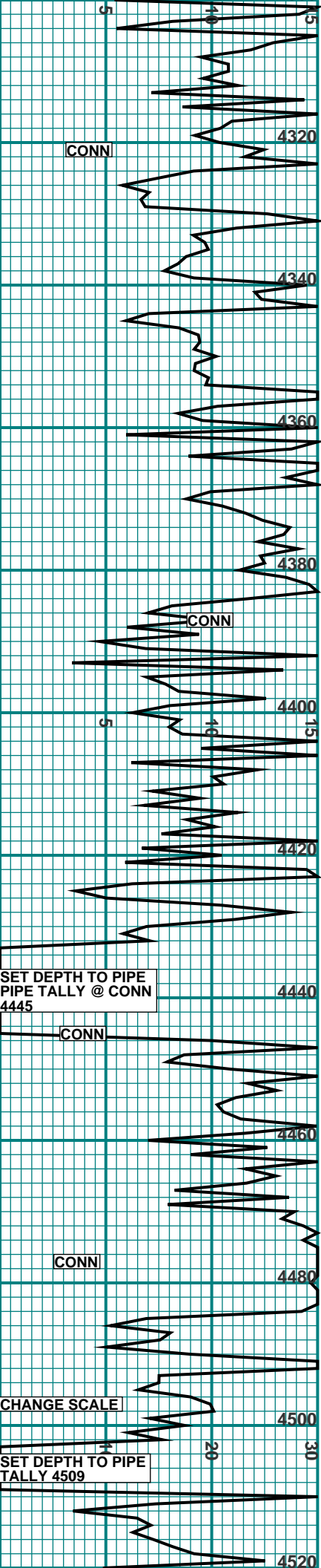
\*\*\*\*\*  
T.O.H APPX 09:00AM  
LOST 3 CONES ON BOTTOM  
WAIT ON FISHING TOOLS  
SET DEPTH TO 4286  
TRIP IN HOLE W BIT 3  
VAREL ETD47S 3:50 PM  
RES DRLG 6:10 PM  
\*\*\*\*\*

DOL: LT BN TN VFXLN  
CLEAN TO V CALC 40%  
PALE TO MOD YL-BN FL  
POOR WET CUT FAIR DRY  
CUT



CALIBRATE EQUIPMENT  
1% C1 EQ. TO 50 UNITS

NOTE: FISH W SAND  
LINE & MAGNET  
3 TRIPS CONE EACH  
TRIP  
TRIP GAS 1279



\*\*\*\*\*  
7/19/2009

DARREL M.  
\*\*\*\*\*  
MIKE C.

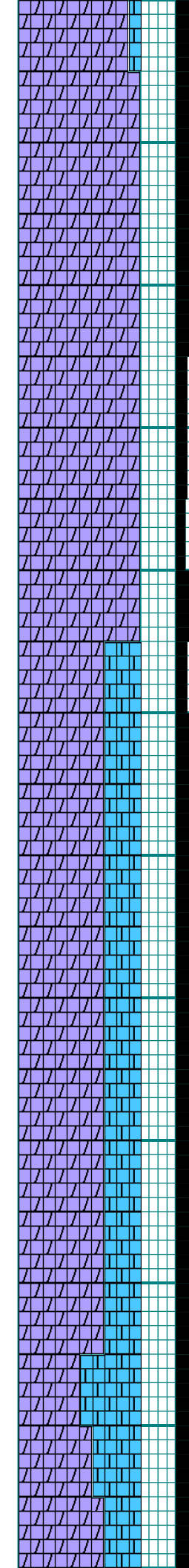
\*\*\*\*\*  
7/20/2009

BIT # 3  
WOB 6-8K

MIKE C.  
\*\*\*\*\*  
DARREL M.

DOWN RIG REPAIR

\*\*\*\*\*  
7/21/2009



P.O.H. TUBING PARTED  
4304 11 PM, FISH, CIRC  
ON BOTTOM W BIT 3 4:20  
AM, RES DRLG 4:46 AM  
\*\*\*\*\*

DOL: LT BN BN TN VFXLN  
TR FXLN CLEAN 40% MOD  
YL FL POOR WET CUT  
FAIR DRY CUT

\*CUTTINGS ARE COARSE\*

DOLO:LT BRN,DRK TN,TR  
CRM,VFN-FN XLN,FRM,-  
MOD HRD,ARIL,SME MOTT,  
30-40% DULL YLLW  
FLUOR,TR FST MLKY  
WET CUT,PR-FR FST  
STMNG DRY CUT,FNT  
PALE YLLW RESID RING  
\*\*\*\*\*

TOH TUBING PARTED,TD  
4354',13:35CST,RESUMED  
DRLNG 01:25CST W/BIT  
#3,MOD AMNT DRK BRN  
OIL SKIM ON TRAP/PIT  
\*\*\*\*\*

DOLO:TN,LTTN,TR LT  
BRN,VFN-FN XLN,FRM,TR  
MOD HRD,20-30% DULL  
YLLW FLUOR,TR SLO  
MLKY WET CUT,PR FST  
MLY DRY CUT,FNT-TR  
BRT WHT/YLLW RESID  
RING

DOL: WH TN TR LT BN  
VFXLN CLEAN TO V CALC  
50% MOD YL TO BRT YL  
FL FAIR WET CUT GOOD  
DRY CUT NO STAIN/ODOR

LS/DOL: LT ERTY BN TN  
LT BN VFXLN 30% MOD  
YL FL POOR WET CUT  
FAIR DRY CUT

LS/DOL: TN WH LT BN  
VFXLN 80% MOD TR BRT  
YL FL FAIR WET CUT  
GOOD DRY CUT

LS/DOL: AA 100% YL TO  
BRT YL FL TR STAIN NO  
ODOR GOOD MLKY WET

DOL: LT BN TN TR WH  
VFXLN CLEAN V CALC  
100% YL BRT YL & MOD  
YL FL TR WXY STAIN NO  
ODOR GOOD WET CUT

DOL: TN WH LT BN  
VFXLN CLEAN TO V CALC  
100% YL BRT YL MOD YL  
TR BLU-WH FL GOOD WET  
CUT

DOL: TN WH LT BN VFXLN  
CLEAN & CALC 70% MOD  
TO BRT YL FL FAIR WET  
CUT GOOD DRY CUT

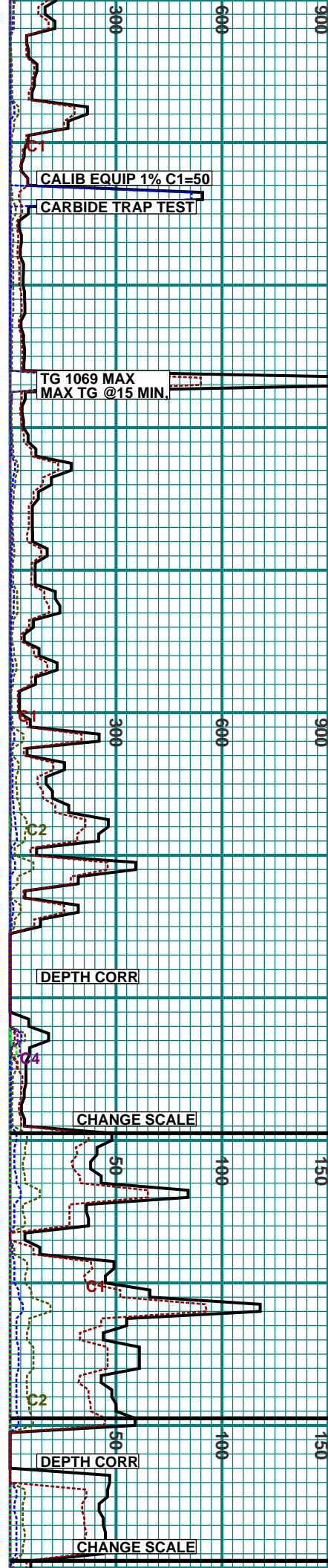
LS/DOL: WH TN LT BN  
VFXLN 60% PRED MOD YL  
FL POOR WET CUT FAIR  
DRY CUT

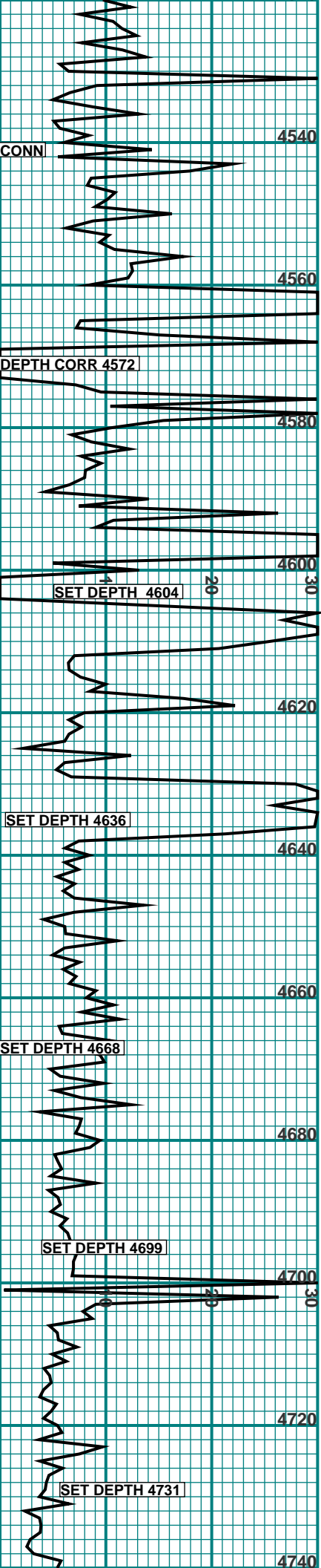
LS/DOL: WH TN VFXLN  
60% PRED MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

LS/DOL: WH TN VFXLN  
60% PRED MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

LS/DOL: TN WH VFXLN  
60% MOD SL TR BRT YL  
FL V SL TR STAIN POOR  
WET CUT FAIR DRY CUT

LS/DOL: TN WH VFXLN  
60% MOD SL TR BRT YL  
FL V SL TR STAIN POOR  
WET CUT FAIR DRY CUT





DARREL M.  
\*\*\*\*\*  
DARREL M.  
4540

NB NO 4  
\*\*\*\*\*  
7/22/2009  
4560

4580

4600  
DARREL M.  
\*\*\*\*\*  
JIM A.

4620

4640  
DDC

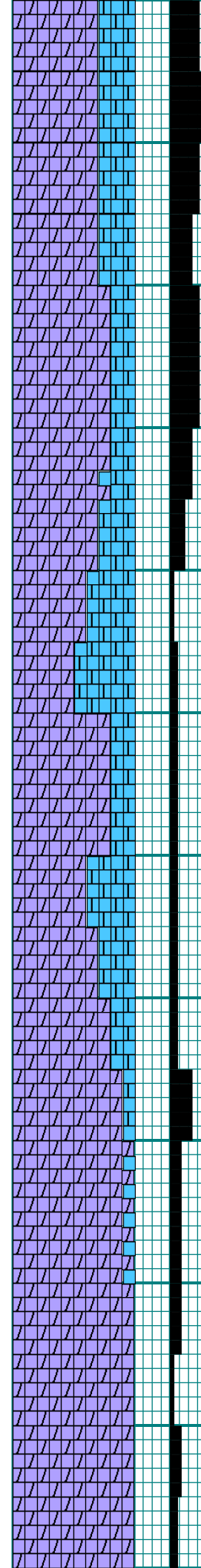
4660

4680  
DDC  
\*\*\*\*\*  
7/23/2009

4700  
DDC

4720

4740



LS/DOL: TN OFF WH  
VFXLN 80% YL & BRT YL  
FL MOD STAIN FAIR WET  
CUT GOOD DRY CUT

DOL: 100% YL BRT YL FL  
ABNT STAIN GOOD WET  
CUT

LS/DOL: LT ERTY TN  
VFXLN 80% YL TO BRT  
YL FL MOD WXY STAIN  
GOOD WET CUT

LS/DOL: TN TR WH  
VFXLN 60% MOD YL TR  
BRT YL NO STAIN FAIR  
WET CUT GOOD DRY CUT  
\*\*\*\*\*

P.O.H. 4563 RUN BIT 4  
VAREL ETD 47 S RESM  
DRLG 12:01 AM  
\*\*\*\*\*

LS/DOL: TN PALE GY-WH  
VFXLN 80% PRED MOD YL  
FL POOR WET CUT FAIR  
DRY CUT

LS/DOL: TN LT BN  
VFXLN 60% PALE TO MOD  
YL FL TRACE WET CUT  
POOR DRY CUT

LS/DOL: BN DK BN TR  
TN VFXLN 40% PRED  
PALE YL FL TR WET CUT  
POOR DRY CUT

LS:GY-LTGY-OFFWHT-WHT,  
MIC-VVFXLN,BRIT-SLI  
FRM,SM SLI PYR INCL,  
SM SLI PRLY LUSTR,SLI  
ARG IP,20% DULL YELL-  
YELL FLUOR,TRC DRY  
CUT,NO WET CUT

DOL:GY-LTGY-LTTN-TN-  
LTBRN,MIC-VVFXLN,BRIT-  
SLI FRM,ARG IP,SM  
GRDNG-SUCR,20%DULL  
YELL-YELL FLUOR,NO  
WET CUT,SLW DVLPNG  
TRC DRY CUT,VRY FNT  
LT YELL RES RNG,

NOTE:VRY SLI TRC LIVE  
OIL ON PIT  
\*\*\*\*\*

LS:GY-LTGY-OFFWHT-WHT,  
MIC-VVFXLN,BRIT-SLI  
FRM,SM SLI PYR INCL,  
SM SLI PRLY LUSTR,SLI  
ARG IP,20% DULL YELL-  
YELL FLUOR,TRC DRY  
CUT,NO WET CUT

DOL:LTTN-LTBRN-LTGY-  
GY,VVF-VFXLN,BRIT-SLI  
FRM,60%YELL-LTGLD  
FLUOR,TRC SLW DVLPNG  
WET CUT,PR SLW DVLPNG  
DRY CUT

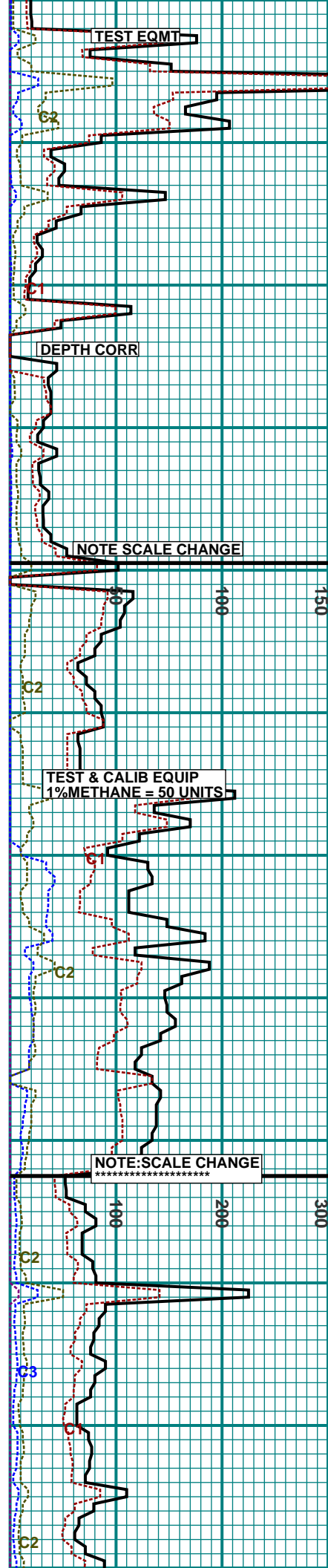
DOL:LTTN-LTBRN-LTGY-  
GY,VVF-VFXLN,BRIT-SLI  
FRM,30%YELL-LTGLD  
FLUOR,TRC SLW DVLPNG  
WET CUT,PR SLW DVLPNG  
DRY CUT

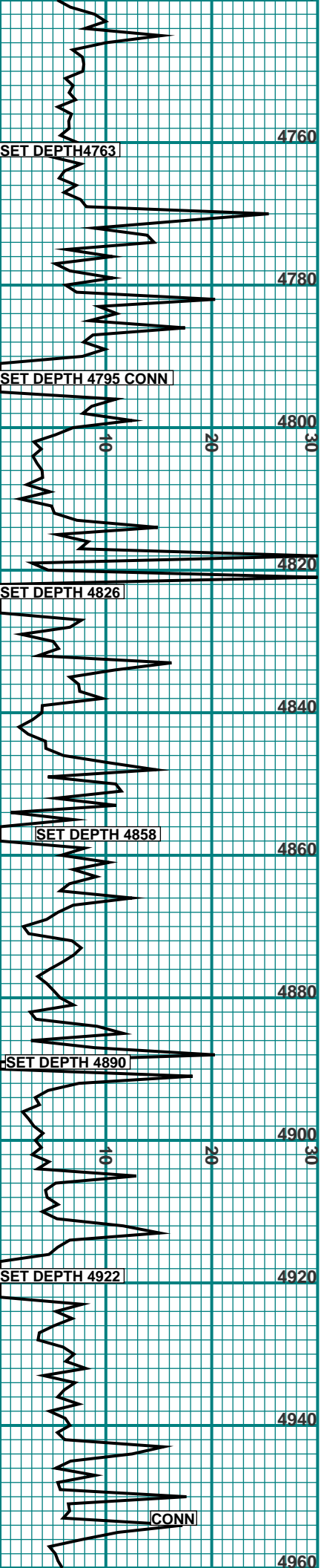
NOTE:SM SLI STN & ODOR  
\*\*\*\*\*

DOL:DRKBRN-LTTN-  
OFFWHT-DRKGY-GY,VF-  
FXLN,BRIT-SLI FRM,  
FRAC IP,30%YELL-DULL  
YELL FLUOR,PR WET SLW  
DVLPNG CUT,FR WHT DRY  
CUT

DOL:A/A,30% DULL YELL-  
YELL FLUOR,TRC SLW  
DVLPNG WET CUT,PR  
SLW DVLPNG DRY CUT

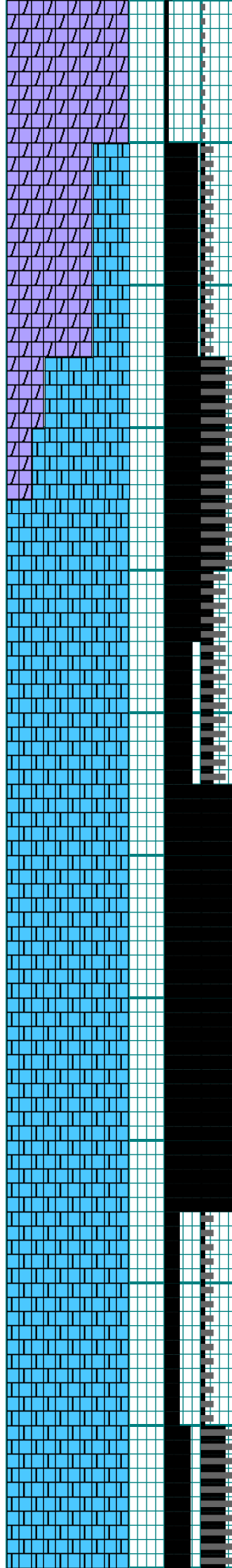
DOL:DRKBRN-LTTN-  
OFFWHT-DRKGY-GY,VF-  
FXLN,BRIT-SLI FRM,  
FRAC IP,20%YELL-DULL  
YELL FLUOR,TRC WET SLW





JIM A.  
\*\*\*\*\*  
DARREL M.

\*\*\*\*\*  
7/24/2009



DVLPNG CUT,TRC DRY CUT  
NOTE:DOL:A/A,10%FLUOR,  
CUTS A/A

LS/DOL: LT BN TN  
VFXLN 90% DULL YL-BN  
FL TR WET CUT POOR  
DRY CUT

LS/DOL: TN LT BN  
VFXLN 90% PALE TO MOD  
YL FL TR WET CUT POOR  
DRY CUT

LS/DOL: TN CRM VFXLN  
100% MOD TO BRT YL FL  
TR WXY STAIN FAIR WET  
CUT GOOD DRY CUT

LS: WH CRM TN VFXLN  
(MOSTLY SOL IN 10%  
HCL) 100% MOD TR BRT  
YL FL TR WXY STAIN  
FAIR WET CUT GOOD DRY  
LS: TN CRM WH VFXLN  
100% MOD TO BRT YL FL  
FAIR WET CUT GOOD DRY  
CUT

LS: TN WH LT BN VFXLN  
100% PRED PALE TO MOD  
YL FL NO STAIN POOR  
WET CUT FAIR DRY CUT

LS: TN BN WH VFXLN 80%  
PALE TO MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

LS: WH TN BN VFXLN 80%  
PALE TO MOD YL FL  
POOR WET CUT FAIR DRY  
CUT

LS: TN WH LT BN VFXLN  
CLEAN 100% YL & BRT  
YL FL TR TO MOD WXY  
STAIN GOOD MLKY WET  
CUT

LS: TN LT BN WH VFXLN  
CLEAN 100% YL BRT YL  
TR BLU-WH FL GOOD  
MLKY WET CUT

LS: WH TN LT BN VFXLN  
CLEAN 100% YL BRT YL  
TR BLU-WH FL GOOD  
MLKY WET CUT

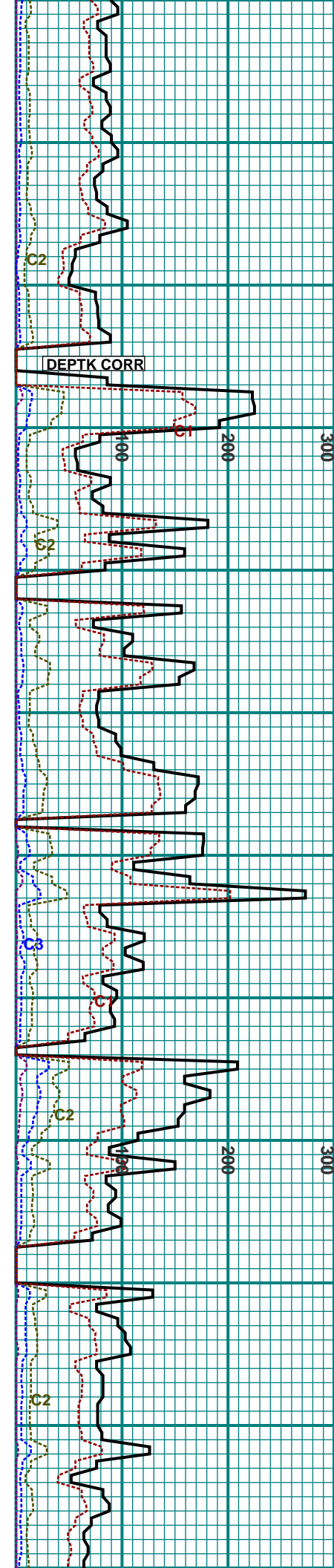
LS: WH TN LT BN VFXLN  
CLEAN 100% YL BRT YL  
TR BLU-WH FL GOOD  
MLKY WET CUT

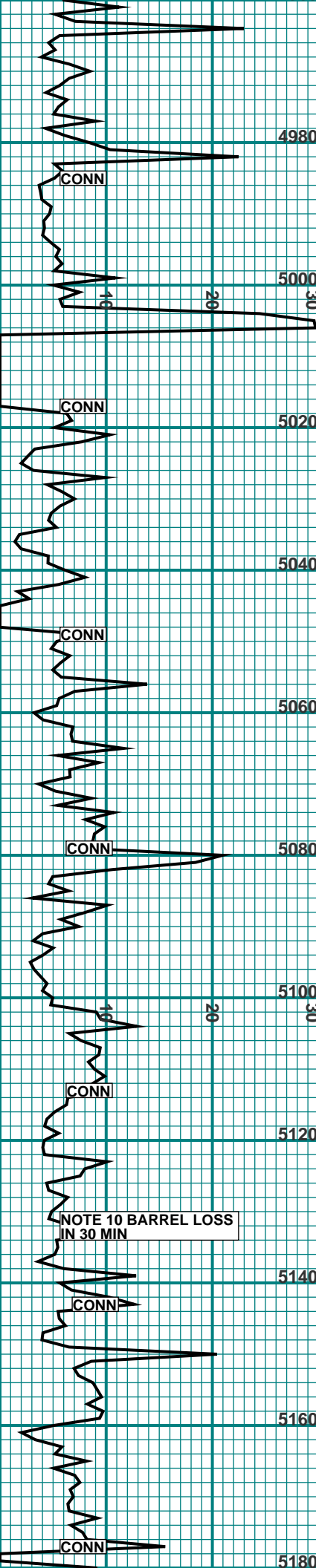
LS: WH TN LT BN VFXLN  
CLEAN 100% YL BRT YL  
TR BLU-WH FL GOOD  
MLKY WET CUT

LS: LT BN TN TR WH  
VFXLN 40% PALE YL BN  
TO MOD YL-BN FL TR  
WET CUT POOR DRY CUT

LS: LT BN TN TR WH  
VFXLN 40% PALE YL BN  
TO MOD YL-BN FL TR  
WET CUT POOR DRY CUT

LS: LT BN TN TR WH  
VFXLN 70% YL-BN & BRT  
YL FL TR WXY STAIN  
FAIR WET CUT GOOD DRY  
CUT





DARREL M.  
\*\*\*\*\*  
S.ALEMAN

DCD

DCD

\*\*\*\*\*  
7/25/2009  
DCD

DCD

DCD

CONN

CONN

CONN

CONN

CONN

CONN

CONN

NOTE 10 BARREL LOSS  
IN 30 MIN

LS: LT BN TN TR WH  
VFXLN 70% YL-BN & BRT  
YL FL SL TR WXY STAIN  
FAIR WET CUT GOOD DRY  
CUT

LS: LT BN TN TR WH  
VFXLN 20% YL-BN & BRT  
YL FL SL TR WXY STAIN  
POOR WET CUT FAIR DRY  
CUT

LS: OFFWHT-LTGY-DRKGY-  
WHT, VVF-VFXLN, BRIT-  
SLI FRM, SLI ARG IP,  
SLI FOSS INCL, TRC  
YELL FLUOR, TRC WET/  
DRY CUT FNT LTYELL  
RES RING

LS: OFFWHT-LTTN-LTGY-  
GY, VVF-VFXLN, BRIT-SLI  
FRM, SLI STN, SLI ODOR,  
30% YELL-DULL YELL  
FLUOR, TRC WET CUT,  
POOR SLW DVL PNG DRY  
CUT  
NOTE: SLI DD OIL STN  
NOTE: SM SLI LIVE OIL  
IN RETURN

LS: LTTN-LTBRN-OFFWHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM SLI VUGGY POR,  
SM GRDNG-SUCR IP, 50%  
YELL FLUOR, TRC WET,  
POOR DRY CUT  
LS: A/A, FLUOR A/A, SLW  
DVL PNG TRACE WET/DRY  
CUT, FNT RES RING

LS: LTTN-OFFWHT-WHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM PAPERY IP, TRC  
YELL FLUOR, NO WET/SLW  
DVL PNG TRC DRY CUT

LS: CRM-LTTN-OFFWHT-  
WHT, VVF-VFXLN, FRM-SLI  
BRIT, 10% YELL-DULL  
YELL FLUOR, FNT SLW  
DVL PNG TRACE WET DRY  
CUT  
NOTE: SM DD OIL STN

LS: LTTN-CRM-LTBRN, VVF-  
FXLN, BRIT-SLI FRM, SM  
GRDNG-SUCR, SM SLI  
VUGGY POR, TRC-10%  
YELL-DULL YELL FLUOR,  
SLW DVL PNG TRC WET/  
DRY CUT  
LS: LTTN-OFFWHT-WHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM PAPERY IP, TRC  
YELL FLUOR, NO WET/SLW  
DVL PNG TRC DRY CUT

LS: LTTN-CRM-LTBRN, VVF-  
FXLN, BRIT-SLI FRM, SM  
GRDNG-SUCR, SM SLI  
VUGGY POR, TRC-10%  
YELL-DULL YELL FLUOR,  
SLW DVL PNG TRC WET/  
DRY CUT

LS: LTTN-OFFWHT-WHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM PAPERY IP, TRC  
YELL FLUOR, NO WET/SLW  
DVL PNG TRC DRY CUT

LS: LTTN-OFFWHT-WHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM PAPERY IP, TRC  
YELL FLUOR, NO WET/SLW  
DVL PNG TRC DRY CUT

LS: LTTN-OFFWHT-WHT,  
VVF-VFXLN, BRIT-SLI  
FRM, SM PAPERY IP, TRC  
YELL FLUOR, NO WET/SLW  
DVL PNG TRC DRY CUT

LT GN OIL ON PIT

C2

C3

TEST & CALIB EQUIP  
1% METHANE = 50 UNITS  
\*\*\*\*\*

C2

C2

C2

C2

300

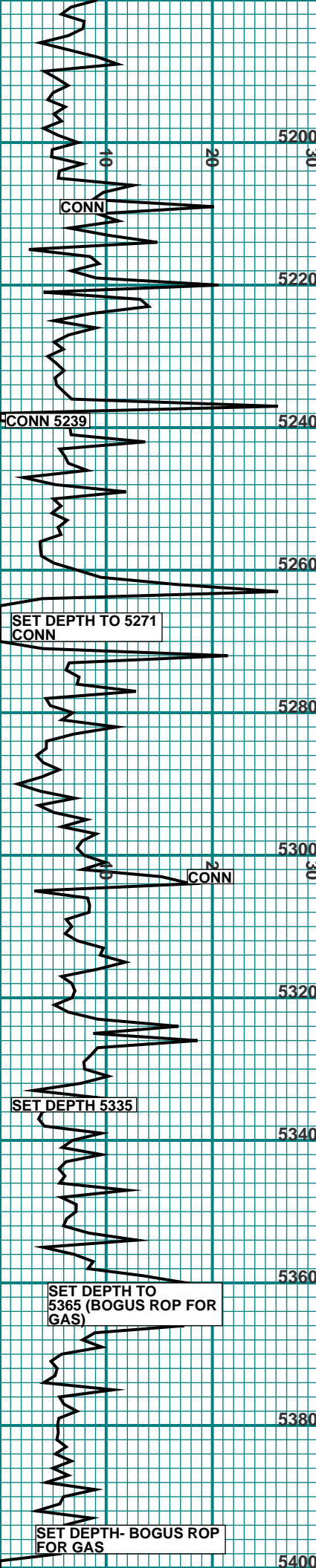
300

200

100

300





JIM A.  
\*\*\*\*\*  
DARREL M.

DDC

\*\*\*\*\*  
7/26/2009

TD 5398

DVLPNG TRC DRY CUT

LS: LTTN-LTBRN-LTGY-OFFWHT-WHT,VVF-VFXLN, FRM-SLI BRIT,FRAC IP, SM VRY SLI STN,TRC YELL FLUOR,NO WET CUT, VRY SLW DVLPNG FNT TRC DRY CUT

LS: TN BN DK BN VFXLN CLEAN 60% YL MOD YL TR BRT YL FL TR WET CUT MOD DRY CUT

LS: TN WH LT BN VFXLN CLEAN 60% YL MOD YL SL TR BRT YL FL TR WET CUT MOD DRY CUT

LS: WH TN VFXLN 40% MOD TO PALE YL FL TR WET CUT POOR DRY CUT

LS: WH TN VFXLN 60% MOD YL FL MOD WET CUT FAIR DRY CUT

LS: WH TN VFXLN 60% MOD YL FL MOD WET CUT FAIR DRY CUT  
2 FT SAMP 90% YL BRT YL FL GOOD MLKY WET CUT

LS: WH BN TN VFXLN 40% MOD PALE & TR BRT YL FL TRACE WET CUT POOR WET CUT

LS: WH BN TN VFXLN 40% MOD PALE & TR BRT YL FL TRACE WET CUT POOR WET CUT  
6 FT SAMP 60% YL MOD YL TR BRT YL FL F DRY CUT

4 FT S. 90% YL BRT YL FL GOOD MLKY WET CUT  
6 FT SAMP AA

LS: TN BN WH DK BN 90% YL BRT YL TR BLU-WH FL GOOD MLKY WET CUT

LS: BN TN DK BN WH VFXLN 80% MOD TO BRT YL FL OVERALL FAIR WET CUT 4 CTGS W GOOD MLKY WET CUT

LS: BN TN DK BN VFXLN 70% PALE MOD & BRT YL FL FAIR WET CUT TR W GOOD WET CUT PRED FAIR GOOD DRY CUT

LS: BN DK BN TR WH TN VFXLN 80% MOD TO BRT YL FL NEAR GOOD WET CUT V GOOD DRY CUT

LS: BN DK BN TR WH TN VFXLN 80% MOD TO BRT YL FL NEAR GOOD WET CUT V GOOD DRY CUT  
\*\*\*GOOD WET CUT\*\*\*

LS: WH TN BN VFXLN 50% YL BRT YL FL FAIR WET CUT GOOD DRY CUT

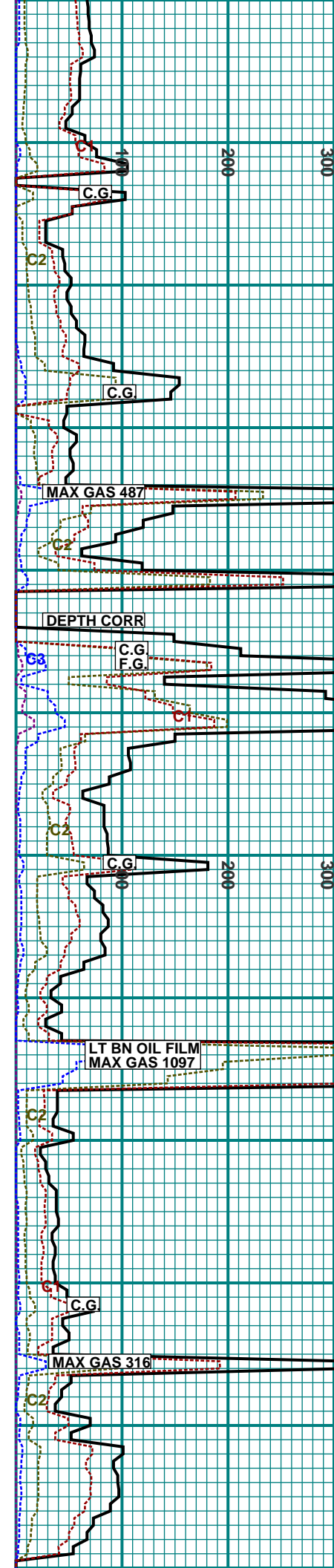
LS: WH TN BN VFXLN 30% MOD YL FL TR WET CUT POOR DRY CUT

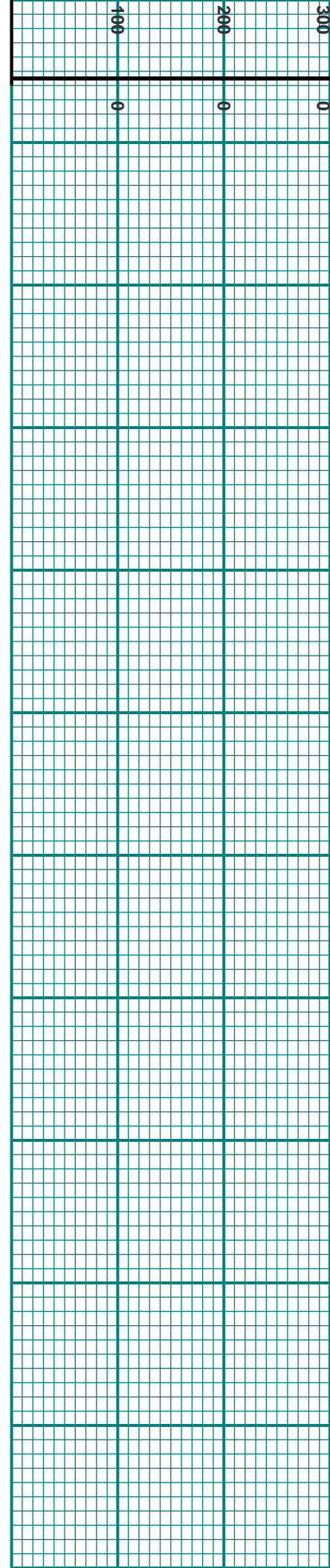
LS: WH TN BN VFXLN 30% MOD YL FL TR WET CUT POOR DRY CUT

20% MOD YL FL TR WET CUT POOR DRY CUT  
20% MOD TO PALE YL FL TR WET CUT POOR DRY CUT

LS: TN BN PALE GY WH VFXLN BEC SILIC 20% PALE TO MOD YL FL TR WET CUT POOR DRY CUT  
(SLOW EFFER,BUT 95% SOL IN 10% HCL)

\*\*\*\*\*  
TD 5398 10 AM. CIRC SAMPLES & FOR E. LOGS THANK YOU FOR USING SUTTLES LOGGING





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