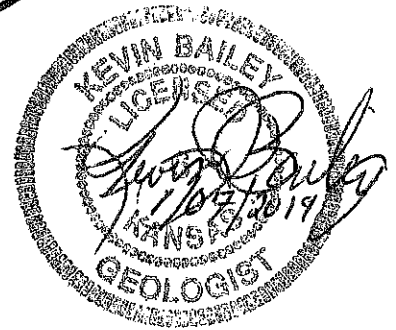




16221 LEO CIRCLE
 LEAVENWORTH, KS 66048
 913 544 7527
 KEVIN BAILEY



COMPANY: CFA OIL Company Don Clark
 WELL: Rudolph #1
 FIELD: WildCat DEEP Creek Road COUNTY: RILEY STATE: KANSAS
 LOCATION: E2-NW-NE-NE S14 T11S R8E or 330ft FNL, 989ft FEL

Interval Logged: 500ft To: 2171 G.L.: 1169 K.B: 1178
 Date Logged: 12/26/2018 To: 12/31/2018 Spud Date: 12/22/2018
 Rig: SOUTHWIND Drilling Unit No.: 70
 Loggers: PIONEER Log Tech, Hays, KS D. Schmidt
 Api No.: 15-161-20082-00-00
 Filename: rudlf1-4.mlw
 Geologist: KEVIN BAILEY

reated By MainLog

Abbreviations

NB...New Bit DST...Drill Stem Test
 CO...Circ Out DS...Directional Survey
 NR...No Returns CG...Connection gas
 TG...Trip Gas LAT...Logged After Trip
 WOB...Wt on Bit PP...Pump Pressure
 RPM...Rev/Min SPM...Strokes/Min
 SG...Survey Gas DTG...Down Time Gas

Mud Data

WT..Weight V..Viscosity
 PH..Acidity F..Filtrate
 CHL..Chlorides SC..Solids Content
 PV..Plastic Vis YP..Yield Point

Lithology Symbols

Anhydrite	Salt	Granite
Siltstone	Chert	Sandstone
Dolomite	Conglomerate	Limestone
Coal	Shale	Bentonite
Carb Shale	Granite Wash	Quartz Wash
Red Sh	Org Sh	Green Sh
CL 1	CL 2	CL 3
CL 4	CL 6	Cust Sh6

Accessories

Glauconite Pyrite Fossils Oolites
 Fractures Cement

Accessories

Ammonoid Bryzoans Coal Coral
 Crinoid Forams Fossils Fracture
 Gastropod Glauconite Mollusk Nautaloid
 Oolites Pyrite Radiolaria Trilobite
 Worm Burrow

Drilling Rate
 MIN/FT

Vis
 Por

Tr/

p
 f
 g

Lithology

%
 Oil Cut
 Flu
 Tr/ Tr/
 p f g p f g

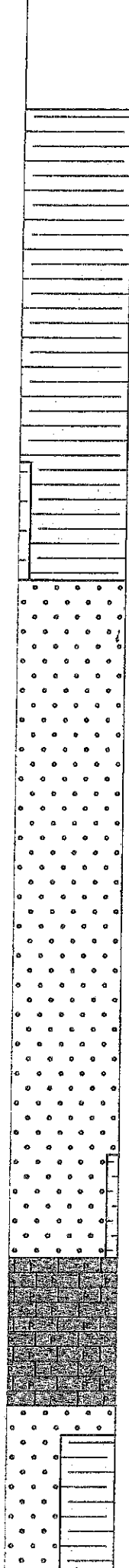
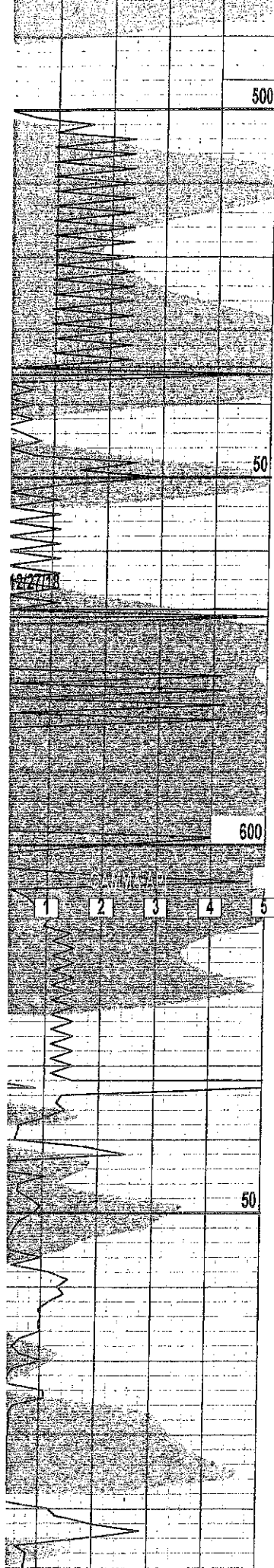
Descriptions/Remarks

GAS CURVES

TG _____
 C1 _____
 C2 _____
 C3 _____
 IC4 _____
 NC4 _____
 IC5 _____
 NC5 _____

25 50 100 200 300 400 500
 Start 30ft samples

FUD Mud Engineer Aron



SH GRY DRK GRY SOFT

AA

AA

SH GRY SLTY IN PARTS

AA

SH GRY > SLTY BECMNG
SLY FVNSNDS

AA

AA BECMNG SNDS FRLYCMNT
XYLN GRN GILSONITE D/O

AA

AA

SS GRY VFINE SOFT SILTY

AA

AA

SS LT GRY-GRY VFINE SND
SILTY IN PARTS TRC SH'S

AA

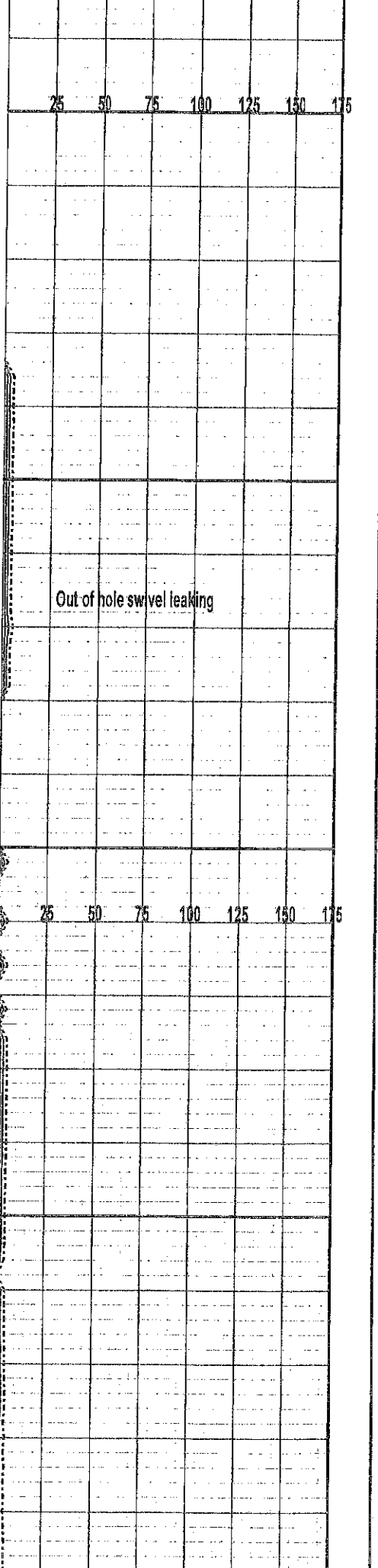
AA LS CRM FSL FUSSLNDS
PYRTIC

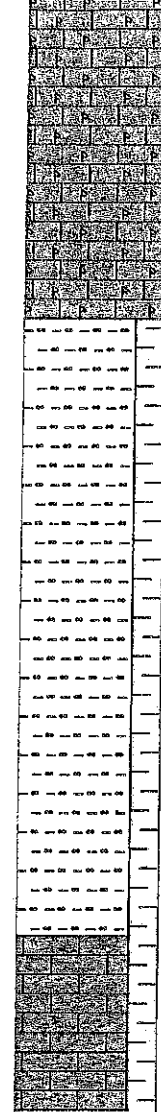
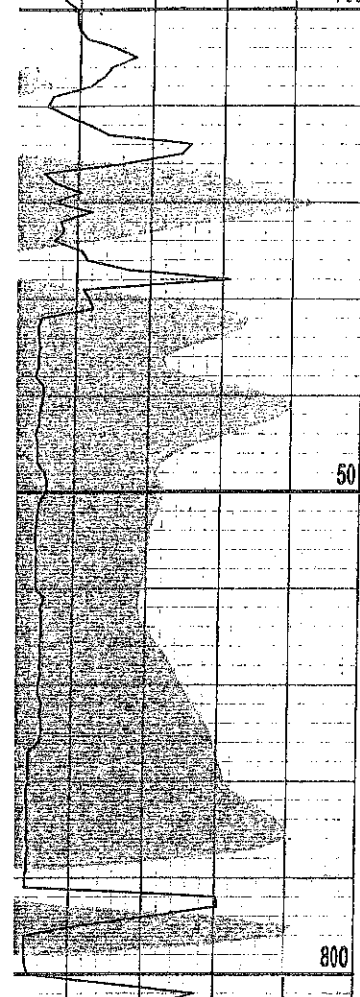
AA

AA BECMNG SNDY SHLY

AA

PULL TIGHT AT CONECTION





LS CRM CRMGY FSL TRC
PYRTC

AA < PYRT

AA SLTY SHS GRAY TRC SS

SHLY-SLTY-SNDS GRY TRC
BLK SH

AA

AA

AA

AA LS CRM FSL DENS HARD
NO SHW

AA

AA LS CRM TRC FSL NVPR-
STY NO SHW NO ODOR

AA

AA

AA

AA

LS CRM LTGRYTRC PYRT NV
PRSTY NO SHW NO ODOR

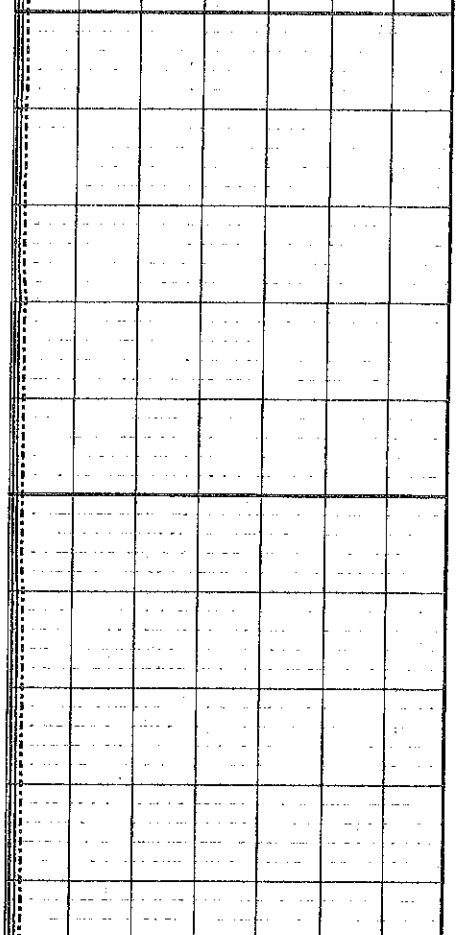
AA W/SLTY SH'S

AA

AA

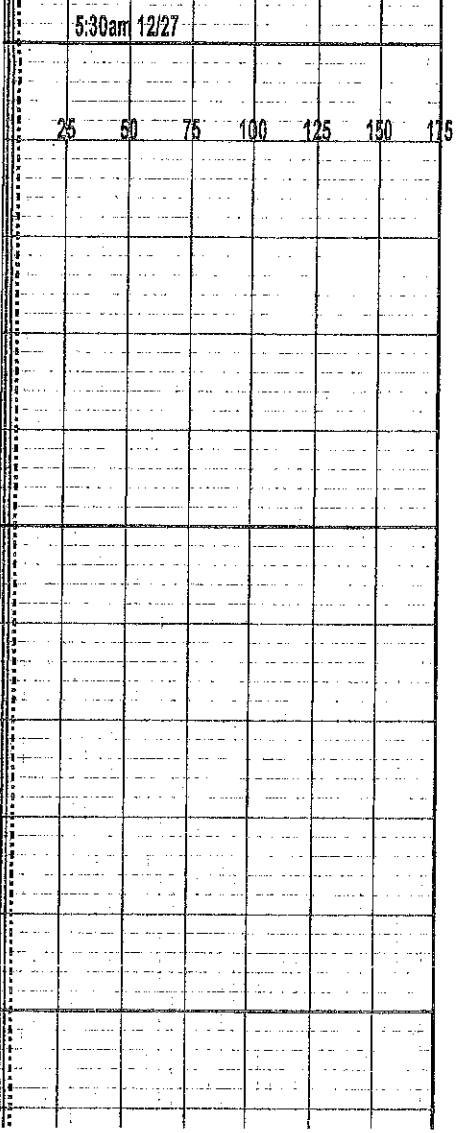
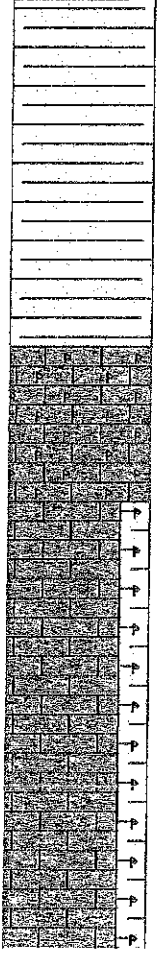
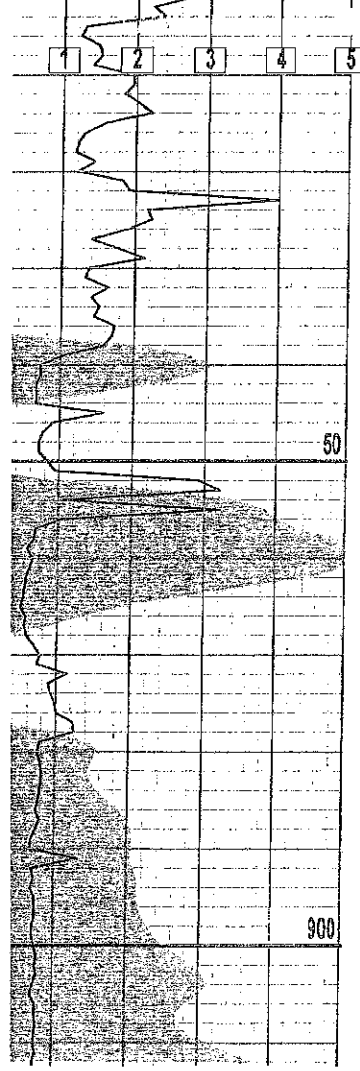
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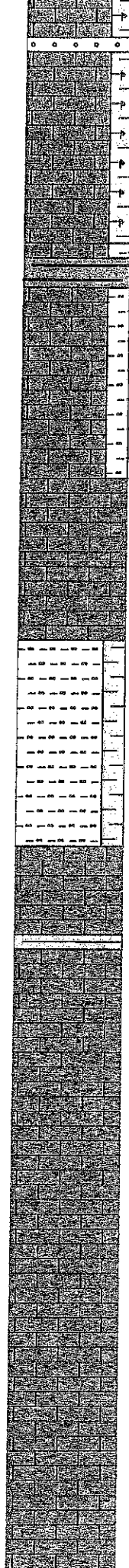
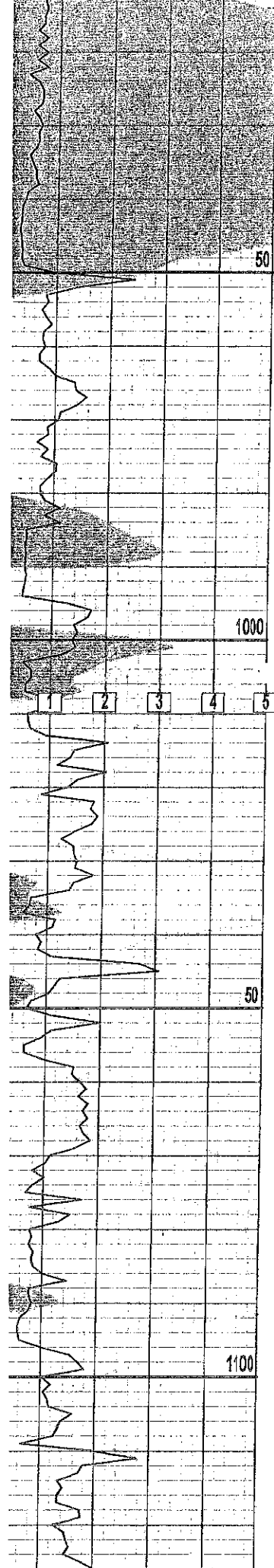
AA



5:30am 12/27

25 50 75 100 125 150 175





AA SNDS SLTY GRY

AA

AA

SH CARBO BLK
LS CRM XYLN WHT SLTLY
CRCRSC GRNS NO ODOR NO
SHW

AA

AA

AA BCMNG LS CRM XYLNWHT
DENSE NVPSTY NO SHW NO
ODOR

AA

AA

SLTTY SH LTGRY NO ODOR

AA

LS CRM-WHT XYLN IN PRTS
NVPSTY NO ODOR NO SHW

AA W/ TRC SH GRY

AA

AA

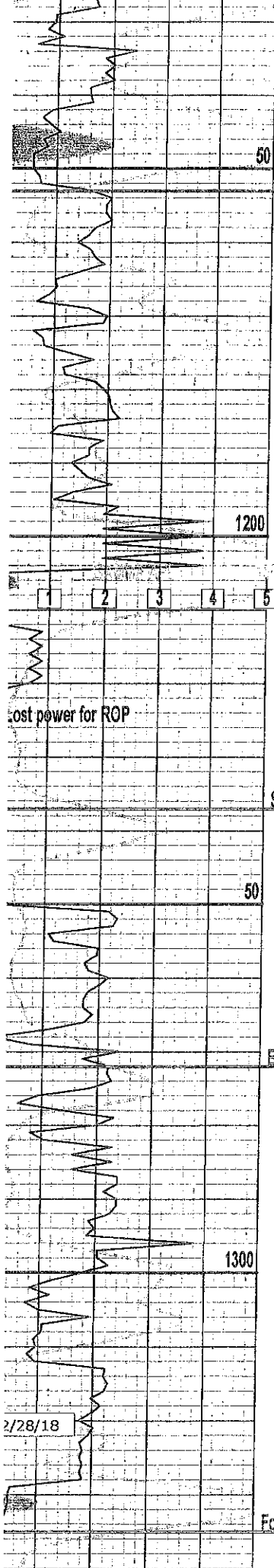
LS CRM XYLN NO SHW NO O

AA

LS GRycRMXYLN BRITTLE NO
ODOR NVPSTY NO SHW

AA

25 50 75 100 125 150 175



Lansing 1153

Stark 1237 M

Bas of KC. 12

Fort Scot 133

LS CRM CRMLYN DENSE

AA

SH GRY BLK

LS GRY CRM NVPSTY NO SHW

AA

SH'S GRY BLK

LS CRM FSL GRY SH'S NO SHW NO ODOR

AA

AA

LS CRM TO WHXYLN DENSE NVPRSTY NO SHW NO ODOR

AA

AA BECMNG BRGHT WHTCRM W/ FSL

AA

LS CRM WHT TRC PYRT NO SHW/ODOR

AA

AA SH BLK

LS CRM SOFT MILKY SH LT GRY NO SHW

AA

LS CRMTAN MILKY THRGOUT NO SHW/NO ODOR

AA

AA SHLY SOFT MILKY GRY

SH SLTYSND MILKY THROGH

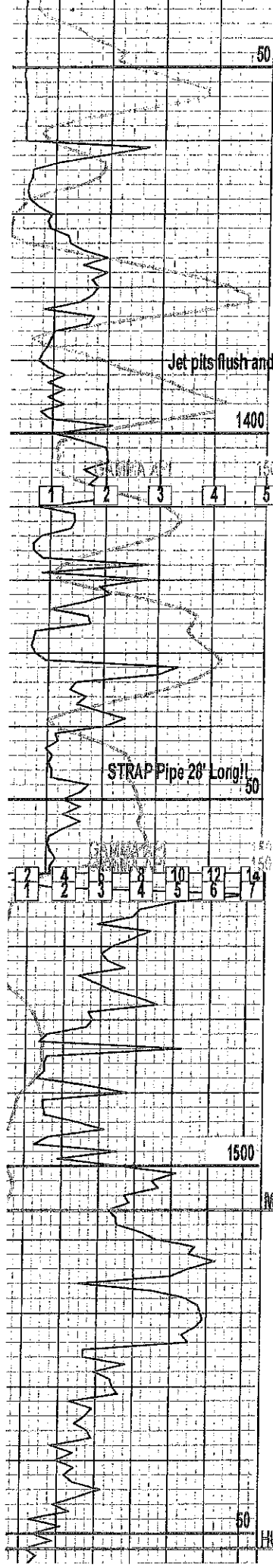
Lost Power

25 50 75 100 125 150 175

Lost Power

No power for 6 hour

Lost power



OUT NO SHW NO ODOR

AA

LS LTGRYCRM CHLKY NOSHW
NO ODOR

AA SOFT LTGRY SH'S SILT

LS CRM XYLEN IN PART'S
CHERTS FSL SLIGHTLY DOL
DENSE NVPSTY NOSHWODOR

AA TRC LTGRYGRN SHL

CHERTYLS/DOL WHTCRM XY
LN DENSE HARD NVPSTY NO
ODOR NO SHW

AA >DOL CHRYS WHT CRM
XYLN BECMNG BRTTL NOSHW
NO ODOR

AA TRC PYRT

INTERBDD LMSCHERT SH'S

CFS for SAMPLE Box REPAIR
SH MULTI COLOR

LS CRM CHERTYLS/DOL WHT
DENSE HARD NVPSTY NOSHW

AA BECMNG SH GRY BRWN
INTBDD LS NVPSTY NOSHW
NO ODOR

AA CHERTYLS DOL CRM TO
LITE YLLW XYLN DOL NVP-
RSTY NO SHW NO ODOR

DOL XYLN YLLW DENSE NO
SHW NO ODOR

AA W/ DOLCHERTS CRM-BRT
DOL YLLWCRM MIROFSL NO
SHW DENSE HARD NO ODOR

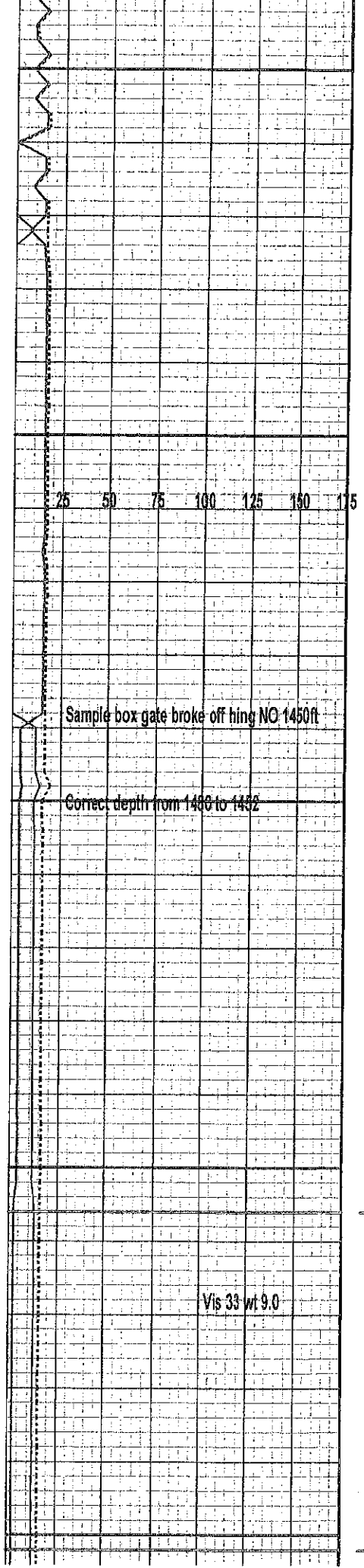
AA BECMNG DOL PEACH MED
GRN NVERSTY NO SHW/ODOR

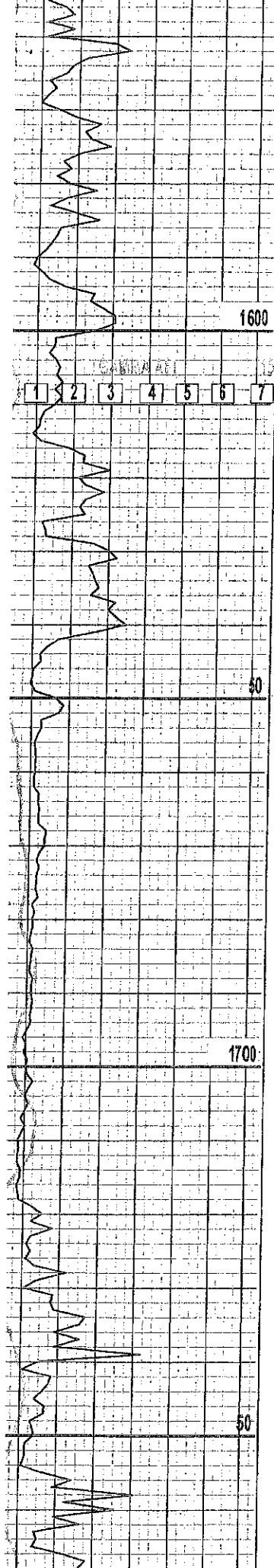
AA DOL REDSHPINK XYLN-
HRD VDENSE NVERSTY NO
SHW NO ODOR

DOL LTTN-CRMTN DENSE NV
PRSTY NO SHW NO ODOR

AA DOL LTTN-TNCRM MILKY
THRGHOUT TRC GLACNITE
NO ODOR NO SHW

AA > MILKY THRGHOUT





DOL LTTN TRC SORCSC NO SHW NO ODOR
 SH BLK BLKBRWN LMNTD
 DOL CRMYLN CRMYLWXYLN
 NVPRSTY NO SHW NO ODOR
 AA
 DOL LTTNYLWXYLN DENSE N VPRSTY NO SHW/ODOR
 AA NO MLKY
 AA
 DOL LTCRMYLW TO CRM XYL NVPRSTY NO NO ODOR
 AA
 DOL BRGHTXYLNWHT DENSE NVPRSTY NO SHW NO ODOR
 AA SH DRKGRYBLK STRKS OF BLK
 AA
 DOL CRMTNXLYN PYRTIC N VPRSTY NO SHW NO ODOR
 AA
 DOL CRMWHT-XLYN TRC BLK SH ?SLUFF NO ODOR NOSHW
 DOL CRMWHT-BRGHTWHT XYL TRC SEMI SURCOSC NOODR NO SHW
 AA DOL CRMWHT TRC PYRT NVPRSTY NO ODOR NO SHW
 AA

 DOL LTTN TRC XYLN NVPRSTY NO ODOR NO SHW

 AA DOL TANCRM

 AA

 DOL CRM WHT XYLN TRCFSL NVPRSTY NO ODOR NO SHW

 AA

 DOL DULL CRM WHT NVPRSTY BRITTLE IN PART NO ODOR NO SHW

 AA

 AA

 DOL CRMWHT MICROXYLN NO ODOR NO SHW

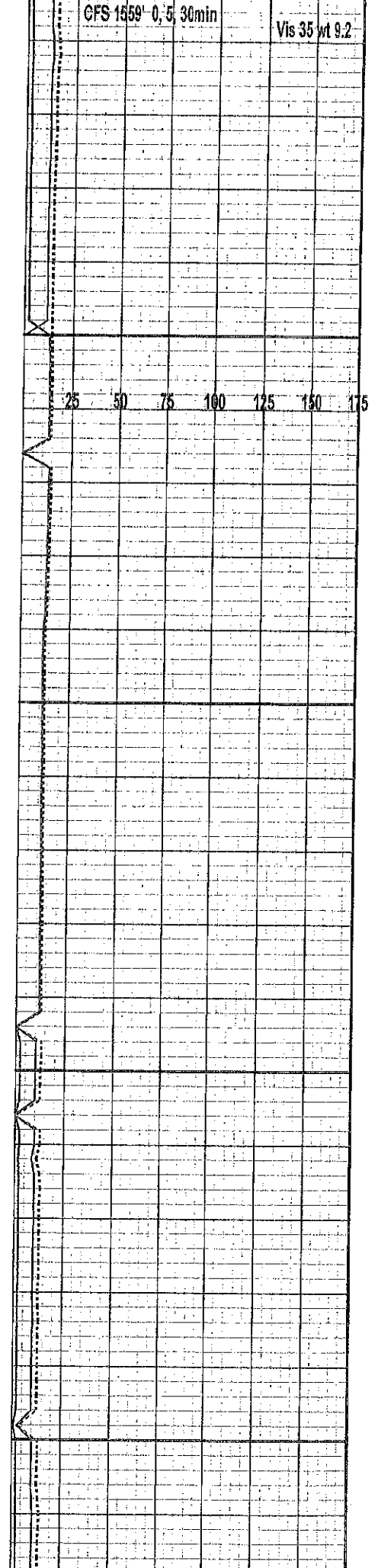
 AA DOL WHTMICROXYLN FSL NO ODOR NO SHW

 AA BECMNG SURCOSC TO TRC VUGGY CRM DOL FR TO GD SURFACE PRSTY BUT HARD IN PARTS. SOME BRITLNESS IN UPPER GLOCNT-GRN NO ODOR NO SHW
 AA

 CHANGING TO DOL LTYLLW TRC SURCOSIT NO VUGS NO ODR NO SHW

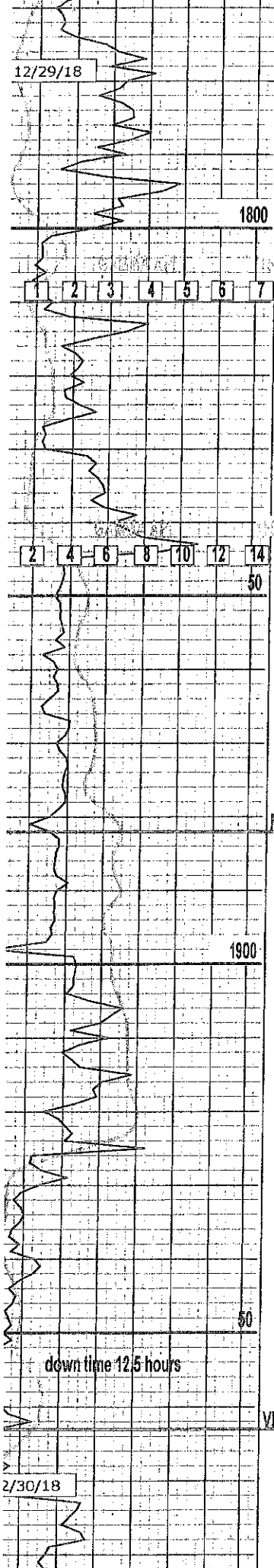
 DOL CRM SLIGHTLY SURCRSC NVPRSTY NO ODOR NO SHW

 AA DOL WHT SURCRSC TRC OF VUGS TRC PRSTY NO ODR NO SHW



CFS 1559' 0, 5, 30min

Vis 35 wt 9.2



Maquoketa 1 S)

VIOLA 1963

AA

AA MUTLI COLRD SH'S

AA > SH'S

AA DOL CRM XYLNWHT TRC
FSL NO ODOR NO SHW PR
VPRSTY

AA

DOL WHT XYLN SH MULTI
COLRD NO ODOR NO SHW

AA

DOL CRMYLW XYLN TRC SH
LT'GRYBLU

AA > SH'S

SH VLTGRY MLKY LITE GRY

AA

DOL CRM MEDXYLN NVPSTY
NO ODOR NO SHW

SH LTGRY SHLYLS BULKY
NO LAMINTION
SH'S GRY LT GRY BLK LMI
NTD

AA

AA > BLK

DOL WHTCRM XYLN MILKY T
SH LT'GRY BULKY

AA < SH

AA

DOL CRM CRMWHT TRC PYRT
NVPRSTY NO ODOR NO SHW

AA < SH'S MLKY THRGHOUT

DOL TAN XYLN SORCOSC W/
BRWN STAIN NO ODOR NO
SHW

AA DOL LT TAN TO DULL C
CRM FR VPRSTY TRC STAIN
NO ODOR NO SHW

AA DOL CRM SURCSC GDV-
PRSTY NO SHW NO ODOR

AA W/TRC CRT CRM NVPR-
STY NO SHW NO ODOR
AA SH MULTI COLRD SH'S

SH LT GRY BLKK BRWN SH
MULTI COLRD

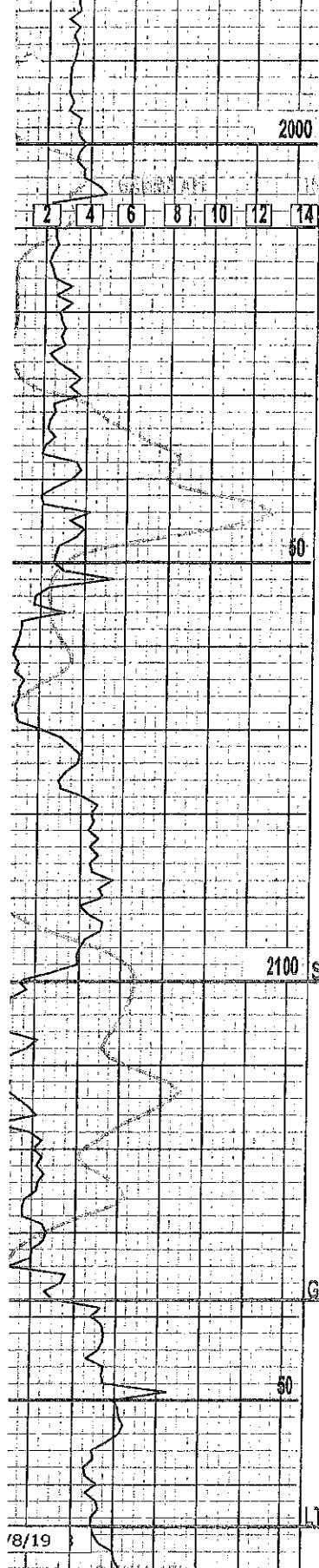
SH'S MULTI COLRD
DOL CRMMCROXYLN MILKY

25 50 75 100 125 150 175

Jet pits

FUDck Vis45 wt 9.4 wl 10.8

Out of HOLE for cathed repair



W/ SRCSC DOL FRVPRSTY
NO SHW NO ODR

DOL CLEARXYLNSRCSC FR-V
PRSTY NO ODR NO SHW

DOL LT TN W/CRMGY CRT
NVPRSTY NO SHW NO ODR

AA

SNSD VFN FR ODOR TRC O
DRPS IN VFNSS SOFT

DOL L'TN TRCCHRT FRC SH
LTGRY NO SHW NO ODR

AA > SH'S

DOL T'NTNGRT TRC FSL NV-
PRSTY NO SHW NO ODR

AA DOL CRM MIROXYLYN NO
SHW NO ODR

AA CRT CRM YELW NVPRSTY
NO ODR NO SHW

AA SH GRY MLKY CHLKY
TRC CRTS NO ODR NO SH
DOL WHTXYLN MEDGRNXYLN
FR-GD PRSTY NO ODR NO
SHW

AA

DOL CRM W/XYLN CLUSIONS
GRNS DENSE NO SHW/ODR

AA

DOL TANMICROXYLN ORZTGR
CLEAR GLASSY NVPRSTY NO
ODR NO SHW

AA CRT CRMGLACNIT PRYT
NVPRSTY NO SHW NO ODR

AA DOL TANXYLN GLCNT SH
LTGRY GLCNTC NO SHW NO
ODR

SS GLACNITCSNDS CLEAR
GRN XYLN FRVPRSTY NO-
ODR NO SHW

DOL CRMXYLN DENSE NOSHW
NO ODR NO SHW PRVPRSTY

AA

SNDS MULTI COLRD CONG.
RED STAINING THRGHOUT
NO ODR NO SHW

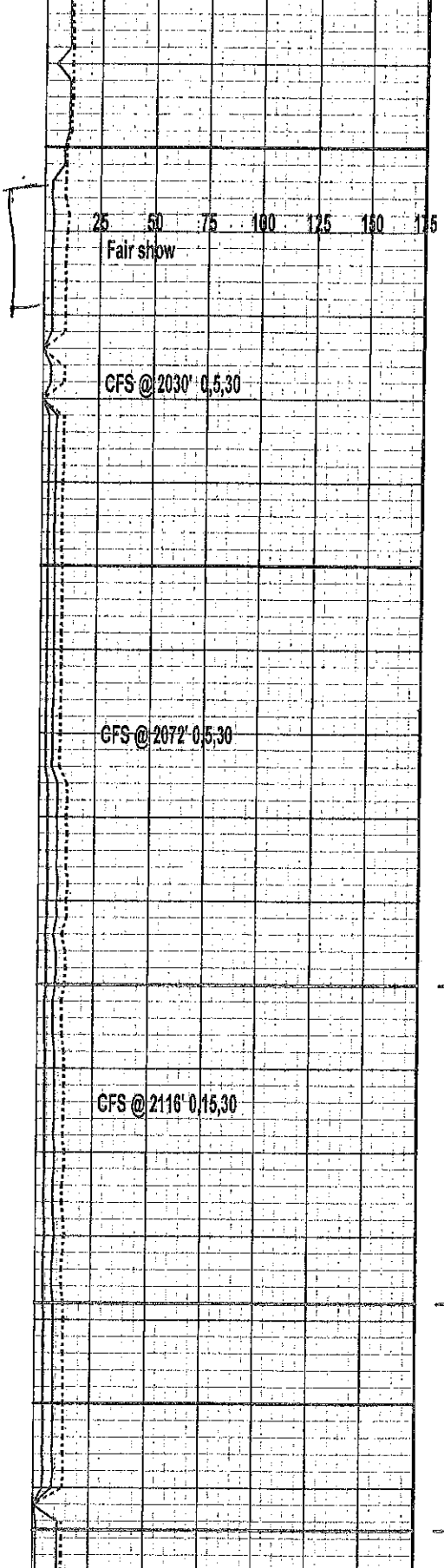
DOL SLGHLY WTHRD DULL
WHT RED STAINED NO ODR
NO SHW

DOL XLNGLACNT W/ PYRIT
TRC SH GRY BRWN SILTS
NO ODR NO SHW

DOL PEACHORANGE MICROXY
LN NVPRSTY NO SHW/ODR

DOL MICROXYLN ORNGRED
REDPINK ORTZ XYLS WEATH
RD ORTZ DO GILSNITE RED
STAINED

AA DOL CRMRUSTY ORTZ GR



2100 Simpson 2100 (MUT 9/2/00 SS)

GRANIT Was 0 SS

LTD 2165 MD

LTD 2165

2171 RTD