

Company : B & W SOUTHERN
 Geologist : ED GONZALES
 Well : JC WILLIAMSON ROSS DRAW UNIT NO 26
 County & State : EDDY COUNTY NEW MEXICO
 Legal : 450'FNL & 450'FEL,SCT 34,T-26-S,R-30-E
 Survey :
 Elevation : G.L. 2990 K.B. 3000
 Field : ROSS DRAW
 API Number :
 Spud Date : 11/23/2003
 Dates Logged : 11/28/2003 To 12/3/2003
 Depths Logged : 3000 To 5720
 Rig : ROD - RIC RIG NO 2
 Unit #
 Loggers : RICH MASTERSON

30-015-33083

Riley Geological Consultants
 P.O. Box 3247
 Lubbock, TX 79452-3247
 806-744-6460 Office
 806-632-8380 Mobile

RECEIVED
 JAN 27 2004
 OCD-ARTESIA

Abbreviations

- | | |
|----------------------------|---------------------------|
| CG - Conn Gas | NB - New Bit |
| CO - Circ Out | NCB- New Core Bit |
| TG - Trip Gas | DCB- Diamond Core Bit |
| CS - Casing Seat | DS - Directional Survey |
| NR - No Returns | DC - Depth Correction |
| XO - Change Out | MD - Measured Depth |
| TIH - Trip In Hole | TOH - Trip Out Hole |
| HIP - Hole In Pipe | TVD - True Vertical Depth |
| BHA - Bottom Hole Assembly | |
| DST - Drill Stem Test | |

Drilling Rate Lines

ROP : Rate Of Penetration : _____
 Minutes Per Foot (MPF)
 Feet Per Hour (FPH)

 Gamma Ray Neutron _____
 Counts Per Second

Lithology Symbols

- | | |
|--------------------|----------------------------|
| • • • Sand | ▲▲▲▲▲▲ Chert |
| ┆┆┆┆┆┆ Limestone | x^ x^ x^ Conglomerate A |
| ┆┆┆┆┆┆ Dolomite | x^B x^B x^B Conglomerate B |
| ✓✓✓✓✓✓ Anhydrite | x^C x^C x^C Conglomerate C |
| v v v Volcanics | ————— Shale |
| ┆┆┆ Fractures | ***** Salt |
| ■ ■ ■ Bentonite | ▲ ▲ ▲ Chalk |
| ◀ ◀ ◀ Silt | C C C Calcite |
| ■ ■ ■ Coal | F F F Fossil |
| △ △ △ Metamorphics | ▲ ▲ ▲ Granite Wash |
| X X X Granite | P P P Pyrite |

Gas Chromatograph Lines

Total Gas _____
 Methane _____
 Ethane _____
 Propane _____
 Isobutane _____
 Butane _____

S
L
I
D
E

Mech
Data

Drilling Rate
Gamma Ray

Poro
25
-0%

Graphic
Lithology

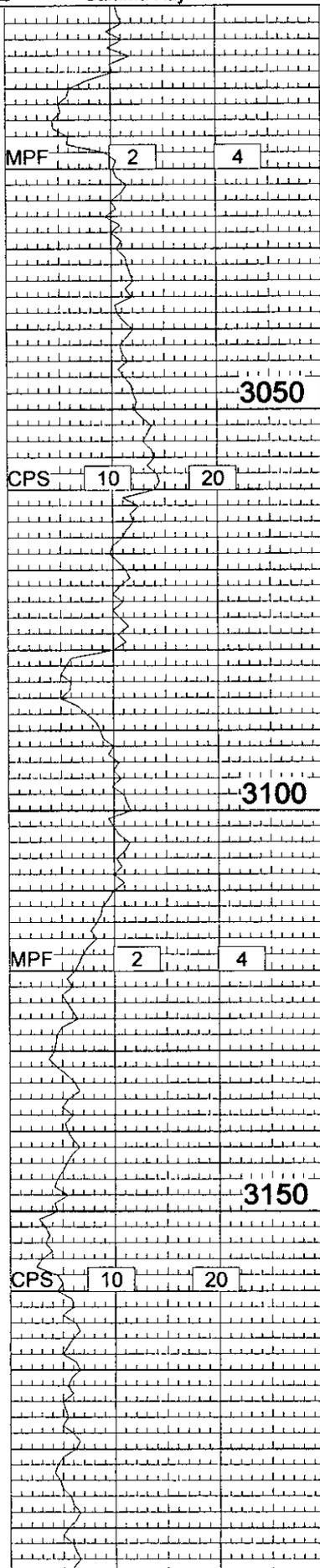
Flor
0 -
100

Cut
PFG

Sample
Descriptions

Hydrocarbon Gases
1%C1 = 100 units

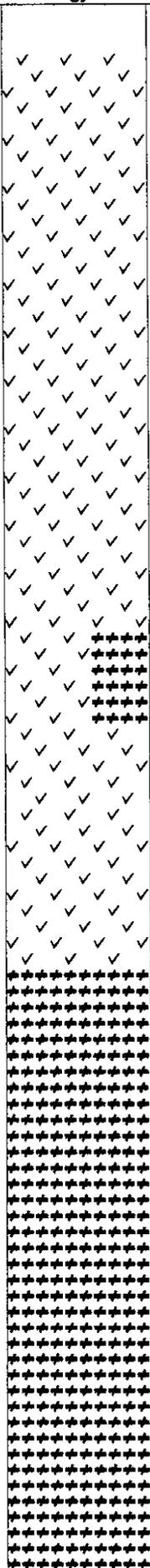
WOB 45K
PP 1200
SPM 58
RPM 65
PROPERTIES
MW 10
VIS 30
PH 10



3050

3100

3150

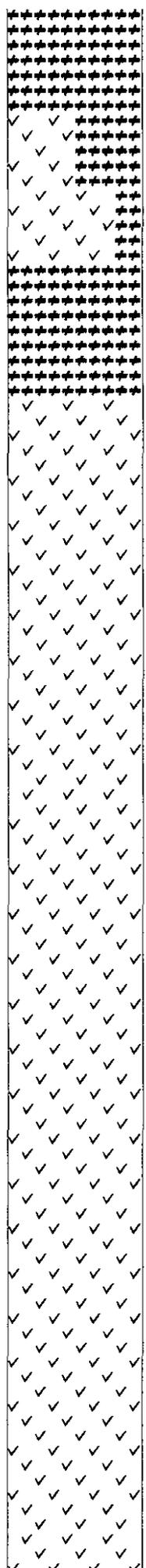
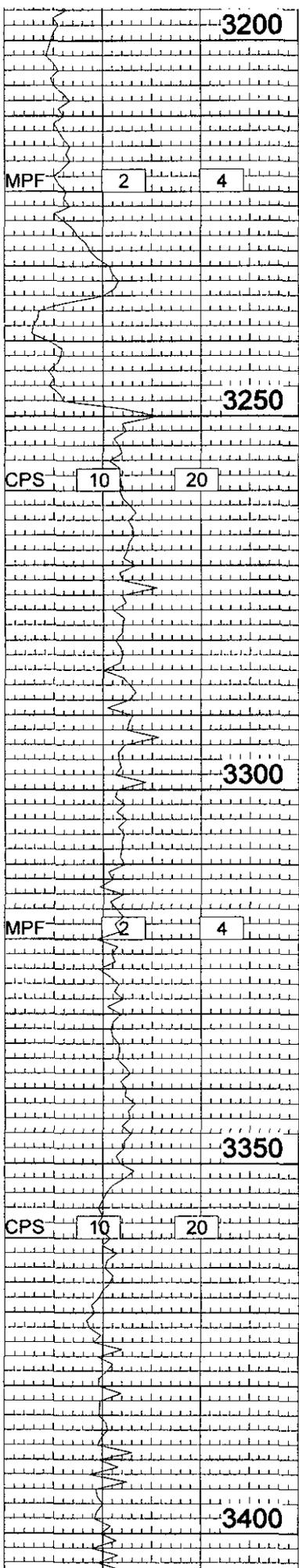


ANHY: CLR WH OFF WH
SFT TO MODHRD BR TTL
FRSTD IP VF XLN TO MDXLN
CALC IP

ANHY: WH OFF WH CLR SFT
TO BR TTL MOD HRD FRSTD
CALC IP VF XLN TO MDXLN

ANHY: CLR WH OFF WH
SFT TO MODHRD CALC IP
FRSTD IP

SALT: CLR WH FRSTD RND
MDHRD



ANHY: WH OFF WH CLR SFT
TO MODHRD CALC IP FRSTD
IP VFXLN TO MDXLN

SALT: ROUNDED CLR FRM
FRSTD

BASE OF SALT 3250'

ANHY: WH CLR GRY OFF WH
VFXLN TO MDXLN SFT TO
BRTTL SOME CALCRS

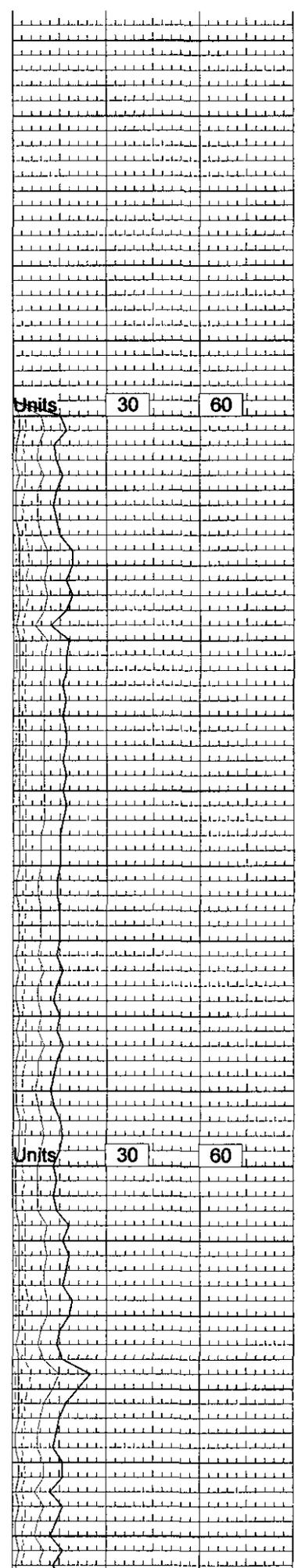
ANHY: CLR WH OFF WH GRY
VFXLN TO MDXLN SFT TO
BRTTL SME CALCRS
SALT CAVINGS

ANHY: GRY WH CLR SFT TO
BRTL SOME CALC VFXLN TO
MDXLN
SALT CAVINGS

ANHY: WH OFF WH CLR GRY
SFT TO BRTL MD HRD RNDD
ANG VFXLN TO MDXLN CALC
CLR RNDD SALT CAVINGS

TEST GAS →

ANHY: WH OFF WH GRY CLR
RNDD ANGLR VFXLN TO
MDXLN SFT TO MOD HRD
BRTTL CALC IP
CLR RNDD SALT CAVINGS

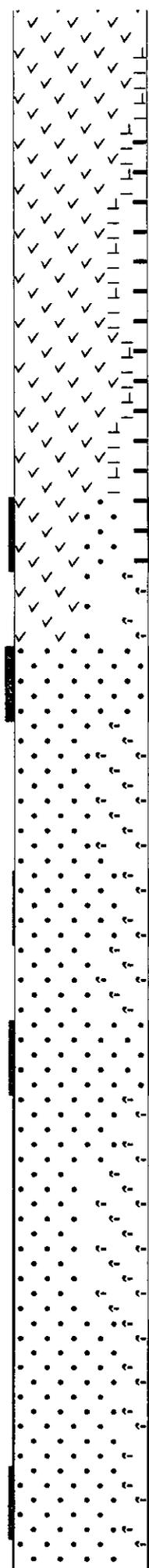
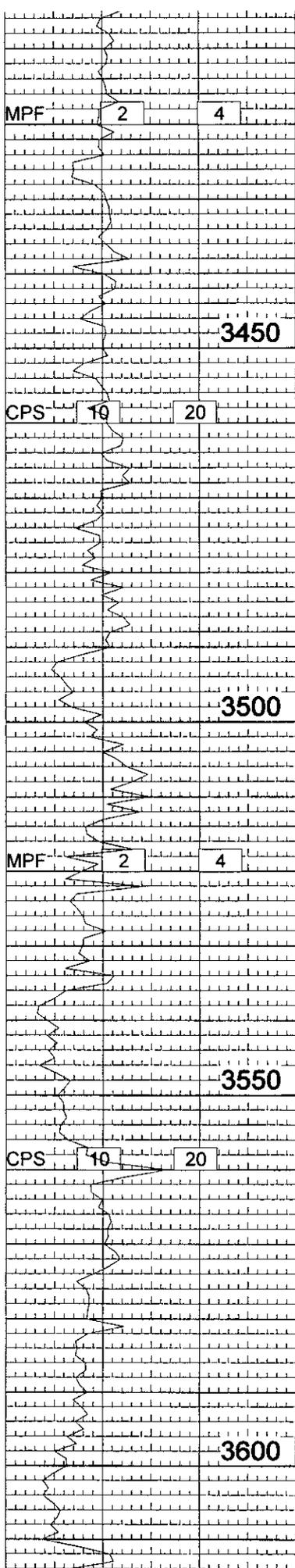


DEV SURV
@ 3448'
2 DEGREES

11/29/03
WOB 45K
PP 1250
RPM 65
SPM 58

MUD
PROPERTIES

9.8
30
PH 10.5



LS: WH OFF WH MCRXLN
ANHYDRIC FRM TO MDHRD
ABNDNT CLR FRSTD RNDD
SALT CVNGS

SH: GRY SLTY SFT SLI
CALC

SH: GRY DRK GRY SLTY
CALC SFT TO FRM
ABNDNT CLR RNDD SLT
AND ANHYDRITE CVNGS

SAMPLES ARE POOR DUE TO
ABNDNT SALT AND ANHYDRIT
CAVINGS

TEST GAS=====>>>>>>>>

SS: CLR SBRND VFGRND
UNCNSLDTD QRTZ GRNS
10% BLU WH FLR FR BLU
WH FLSH CUT
FLTNG GRNS AND OIL ODOR

SLTSTN: GRY CALC CMNT
SFT ARG IP
CONN GAS=====>>>>>>>>

SS: CLR SBRND VFGRND
UNCNSLDTD QRTZ GRNS
NOTE: ANHY IS IGNORED
IN PERCENTAGES
CALC CMNT FRIABLE
FLTNG GRNS OIL ODOR 10%
BRI YLLW FLR FR WET CUT

SLTSTN: GRY SFT ARG IP
CALC CMNT

SS: WH CLR FRIABLE TO
FEW SBRND UNCNSLDTD
QRTZ GRNS SOME FLTNG
CALC CMNT VFGRND
10% BRI YLW FLR PR WET
CUT SLI OIL ODOR IN
SMPLS

ABNDNT CVGS IN SMPLES

SS: CLR VFGRND SBRND
UNCNSLDTD QRTZ GRNS
10% YELLW FLR PR WET
CUT

SS: CLR WH VFGRND FRIA
CALC CMNT FEW UNCNSLDTD
QRTZ GRNS TR YLLW FLR
NO CUT

SLTSTN: GRY CALC CMNT
FRM SLI ARG

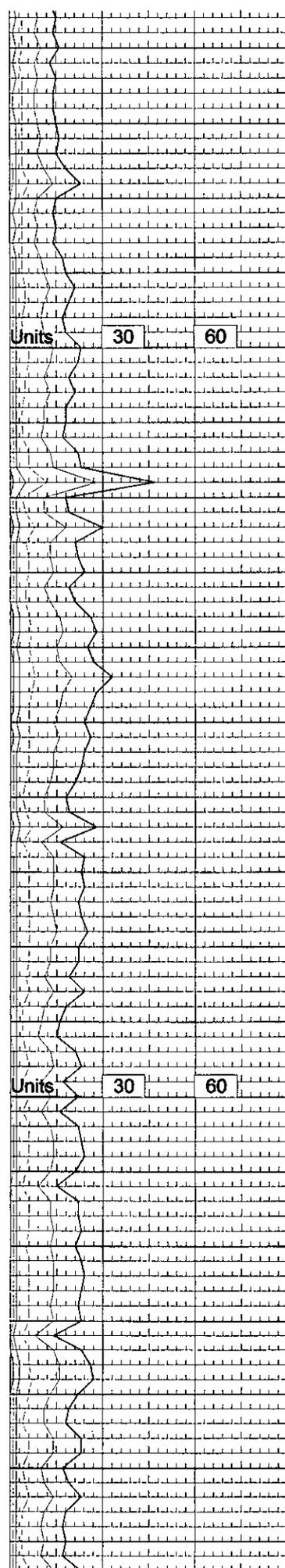
SH: BLK DRK GRY SLTY
SLI PYRTC FRM

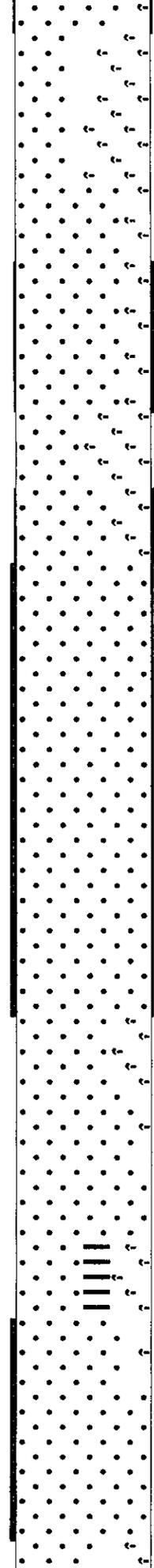
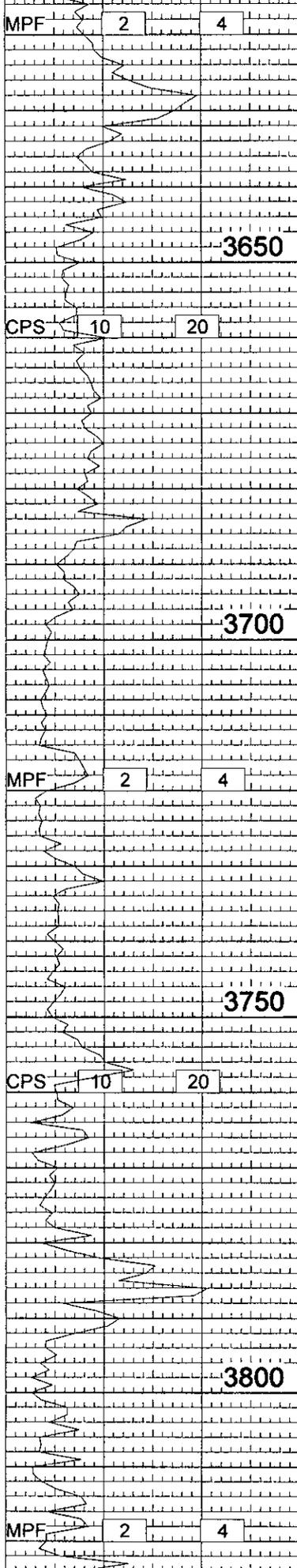
ABNDNT ANHY & SLT CVGS
IN SMPLES

SS: CLR WH VFGRND FRIAB
CALC CMNT FEW UNCNSLDTD
QRTZ GRNS SBANGLR TO
SBRND 10% YLLW FLR
FR FLSHNG WET CUT

SS: CLR WH UNCNSLDTD
VFGRND SBRND QRTZ GRNS
10% YLW FLR PR FLSH CUT

SS: WH CLR FRIA VFGRND





SBANGLR TO SBRNDD SLTY

SH: BLK DRK GRY PYRTC
FRM SLTY IP

SLTSTN: GRY DRK GRY ARG
IP SFT TO FRM CALC CMNT

NOTE: ABDNNT ANHY & SLT
CVGS IN SMPLES

SS: WH CLR VFGRND FRIAB
CALC CMNT SBANGLR TO
SBRNDD SLTY IP

SS: CLR WH VFGRND FRIAB
CALC CMNT SOME UNCNSLDT
FLTNQ QRTZ GRNS
15% YLW FLR PR WET CUT

RAN LOST CIRC MTRL IN
MUD

SLTSTN: GRY DRK GRY ARG
IP CALC CMNT SFT TO FRM

SS: CLR WH VFGRND FRIAB
CALC CMNT SBANGLR TO
SBRNDD 10% YLW FLR FR
FLSH WET CUT BLU WH

SS: CLR WH VFGRND FRIAB
TO UNCNSLDTD QRTZ GRNS
SBANGLR TO SBRNDD CALC
CMNT 5% YLW FLR PR WET
CUT

SS: CLR WH VFGRND SBRND
TO SBANGLR UNCNSLDTD
QRTZ GRNS 5% YLW FLR
NO CUT

SS: CLR WH VFGRND SBRND
TO SBANGLR FRIABL TO
UNCNSLDTD QRTZ GRNS
CALC CMNT

SLTSTN: GRY DRK GRY ARG
IP CALC CMNT SFT TO FRM

SS: WH CLR VFGRND FRIAB
TO UNCNSLDTD SBANGLR TO
SBRNDD

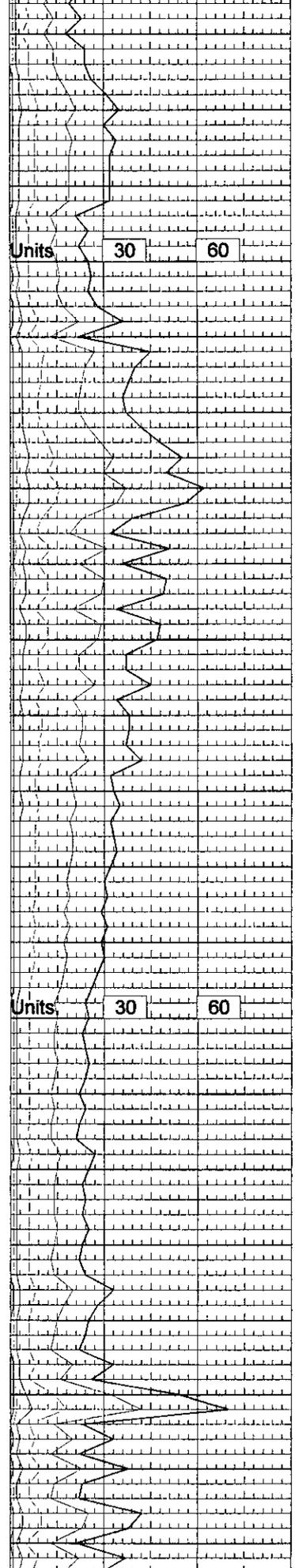
SH: BLK DRK GRY PYRTC
FRM CALC IP CARBNCS
SLTY IP

SS: WH CLR VFGRND FRIAB
TO UNCNSLDTD SBANGLR TO
SBRNDD 5% YLW FLR NO WT
CUT

TEST GAS =====>>>>>>

TEST GAS =====>>>>>>
SS:

SLTSTN: GRY SFT TO FRM
ARG IP CALC CMNT

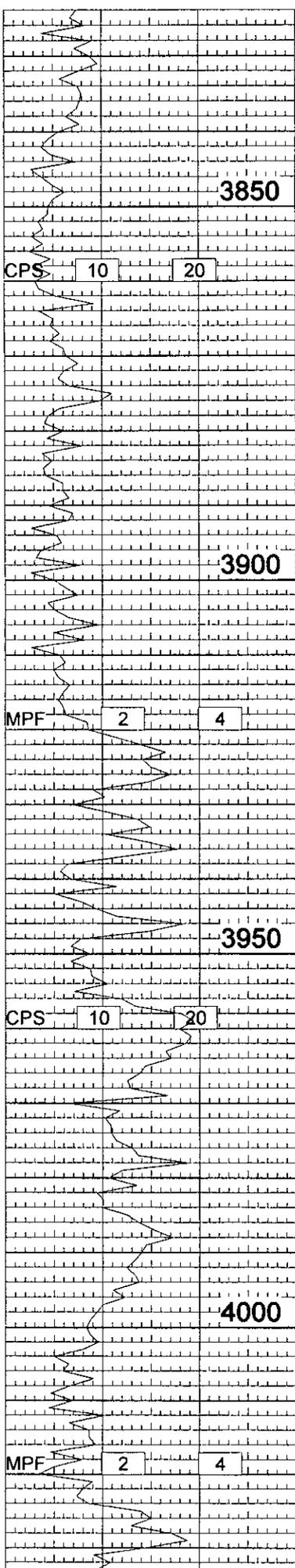


DEV SURV
 @ 3913'
 3 DEGREES

11/30/03
 WOB 55K
 RPM 65
 SPM 58
 PP 1400

MUD
 PROPERTIES

MW 9.8
 PH 10.5
 VIS 29



3850

CPS 10 20

3900

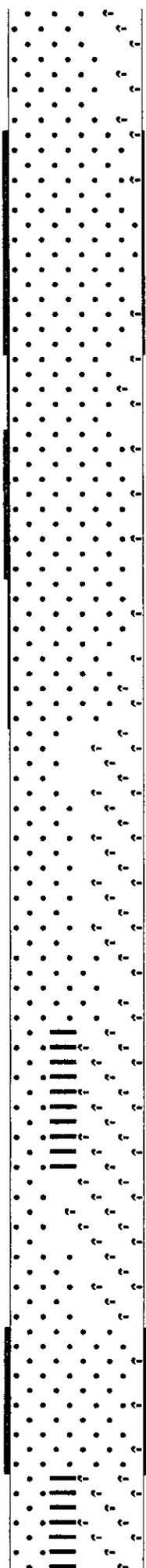
MPF 2 4

3950

CPS 10 20

4000

MPF 2 4



SS: CLR WH VFGRND FRIAB
 TO UNCNSLDTD SBRND QTZ
 GRNS CALC CMNT
 5% YLW FLR

SS: CLR WH VFGRND SBRND
 UNCNSLDTD QRTZ GRNS

SLTSTN: GRY CALC CMNT
 ARG IP SFT TO FRM

SS: CLR WH VFGRND SBRND
 UNCNSLDTD QRTZ GRNS

SURVEY GAS=====>>>>
 ALSO SWEEP HOLE WPAPER

SS: WH CLR VFGRND SBRND
 UNCNSLDTD QRTZ GRNS TO
 VERY FRIABLE CALC CMNT

TRIP GAS =====>>>>

SLTSTN: GRY DRK GRY ARG
 IP CALC CMNT SFT TO FRM

SH: BLK SLTY PYRTC FRM

SLTSTN: GRY DRK GRY ARG
 IP SFT TO FRM CALC CMNT

SS: WH CLR FRIABLE VFGR
 CALC CMNT SLTY
 SH: BLK SLTY PYRTC FRM

SLTSTN: GRY CALC CMNT
 SFT ARG IP

SH: BLK SLTY PYRTC FRM
 CARBNCS IP

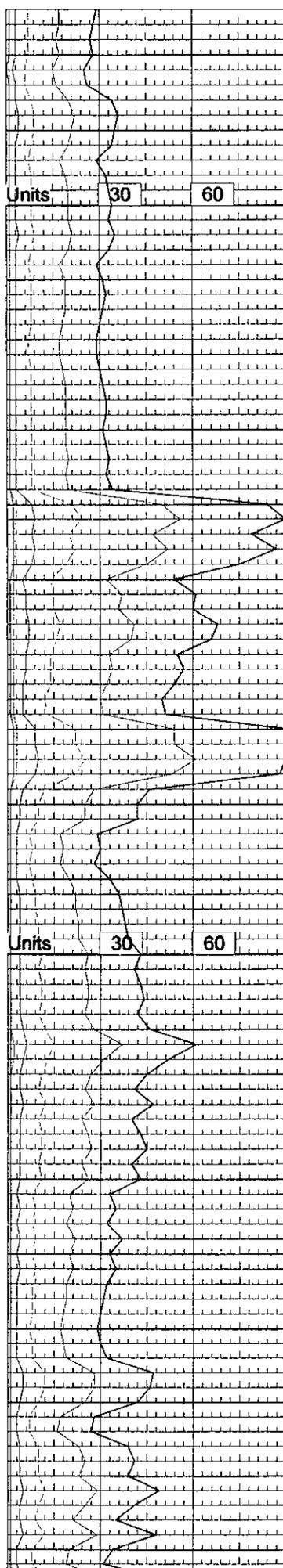
SLTSTN: GRY SFT TO FRM
 CALC CMNT
 SH: BLK DRK GRY PYRTC
 FRM SLTY IP CARBNCS

SS: WH CLR VFGRND FRIAB
 CALC CMNT SLTY IP

SS: CLR WH VFGRND SBRND
 UNCNSLDTD QRTZ GRNS
 TO VERY FRIAB CALC CMNT
 10% YLW FLR FR WET FLSH
 CUT

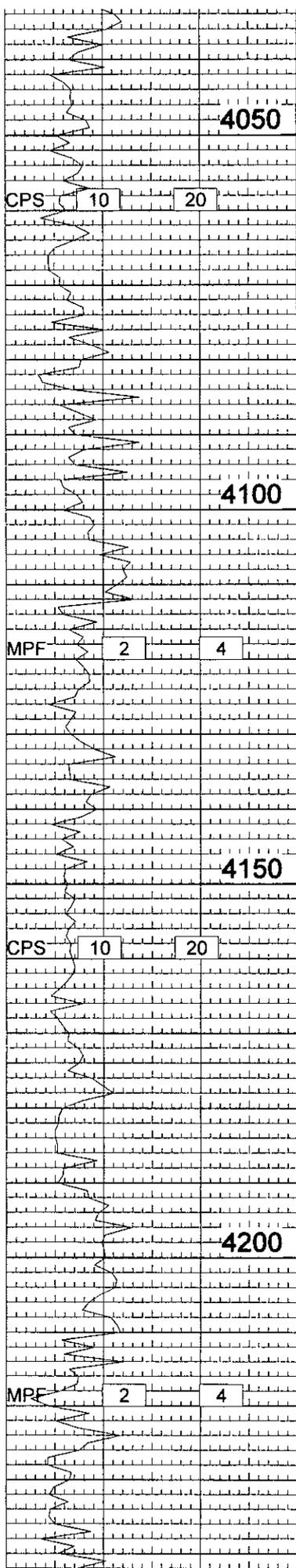
SLTSTN: GRY ARG IP CALC
 CMNT SFT TO FRM

SH: BLK DRK GRY SLTY
 FRM PYRTC CRBNCS



Units 30 60

Units 30 60



4050

CPS 10 20

4100

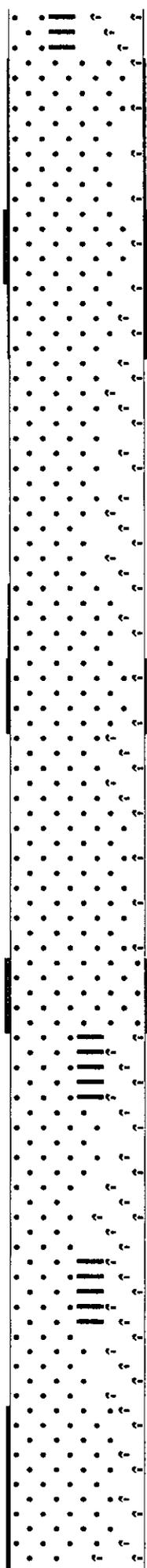
MPF 2 4

4150

CPS 10 20

4200

MPF 2 4



SS: WH CLR VFGRND SBRND
CALC CMNT FRIABLE TO
UNCNSLDTD QRTZ GRNS
5% YLLW FLR W/ POOR
FLSH CUT

SH: BLK CRBNCS FRM SLTY
IP PYRTC

SS: WH CLR VFGRND SBRND
UNCNSLDTD TO VRY FRIABL
QRTZ GRNS
10% YLLW FLR PR WET CUT
FLASH

65% OF SAMPLE IS SALT
& ANHY CVNGS

SLTSTN: GRY SFT TO FRM
CALC CMNT ARG IP

SH: BLK PYRTC FRM SLTY
IP

SLTSTN: GRY DRK GRY ARG
IP CALC CMNT SFT TO FRM

SS: WH CLR VFGRND FRIA
CALC CMNT SBRNDD TO
SBANGLR

SS: WH CLR VFGRND VRY
FRIABLE TO FEW UNCNSLDT
QRTZ GRNS SBRNDD
5% YLLW FLR PR WET FLSH
CUT

SLTSTN: GRY DRK GRY SFT
TO FRM CALC CMNT ARG IP
SLI PYRTC

SS: WH CLR VFGRND SBRND
VERY FRIABL TO UNCNSLDT
QRTZ GRNS CALC CMNT

SS: WH CLR VFGRND SBRND
TO SBANGLR FRIABLE CALC
CMNT

SS: CLR WH VFGRND SBRND
QRTZ GRNS UNCNSLDTD
5% YLLW FLR VRY PR WET
CUT

SLTSTN: GRY SFT TO FRM
CALC CMNT ARG IP

SS: WH CLR VFGRND FRIAB
TO UNCNSLDTD QRTZ GRNS
SBRNDD TO SBANGLR CALC
CMNT

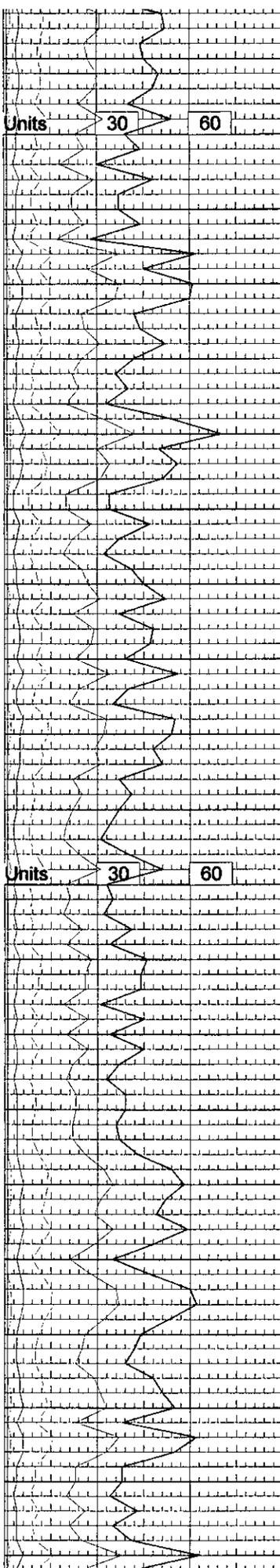
SH: BLK PYRTC CARBNCS
FRM SLTY IP

SLTSTN: GRY CALC CMNT
SFT TO FRM ARG IP

SS: WH CLR VFGRND FRIA
TO UNCNSLDTD QRTZ GRNS
CALC CMNT

SS: WH CLR VFGRND VRY
FRIABL TO UNCNSLDTD QRTZ
GRNS CALC CMNT SBRNDD
TO SBANGLR

60% OF SMPL IS SALT &
ANHY CVGS

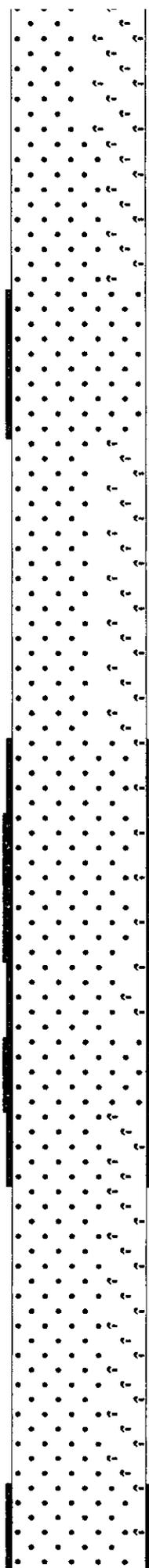
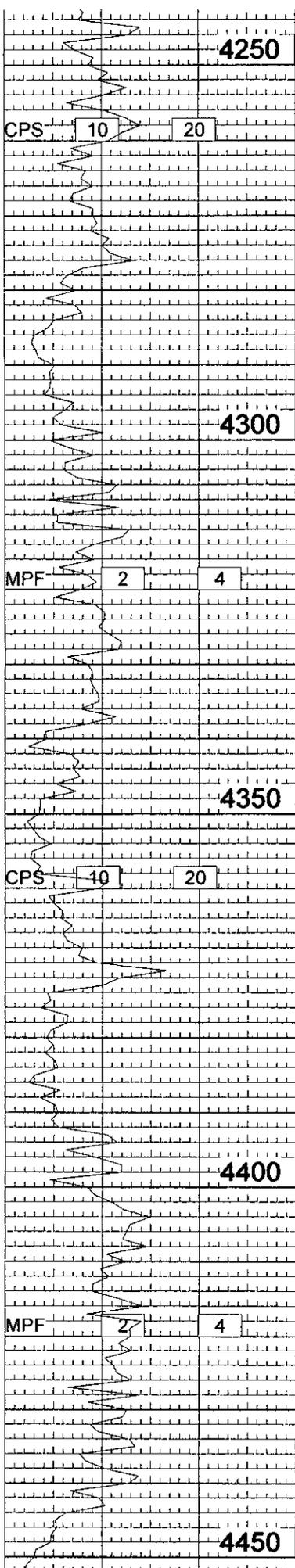


Units 30 60

Units 30 60

NOTE: GAS
SCALE
CHANGE

DEV SURV
@ 4250'
1 1/2 DEG



SLTSTN: GRY SFT TO FRM
ARG IP CALC CMNT

SH: BLK CARBNCS FRM
SLTY PYRTC
SLTSTN: GRY DRK GRY ARG
IP SFT TO FRM CALC CMNT

SS: WH OFF WH CLR VFGRN
SBRNDD FRIABL CALC CMNT
SLTY IP

SS: CLR WH FRSTD VFGRND
SBRNDD UNCNSLDTD QRTZ
GRNS
TR FLR NO CUT

SURVEY GAS=====>>>

SLTSTN: GRY SLI PYRTC
SFT CALC CMNT

SH: BLK PYRTC SLTY IP
FRM SLI CALC CRBNCS

SLTSTN: GRY DRK GRY PYR
SFT TO FRM ARG IP CALC
CMNT

SLTSTN: GRY SFT TO FRM
ARG IP CALC CMNT SLI
PYRTC

RED BLUFF OR FLAG PAY
SS: CLR VFGRND SBRNDD
UNCNSLDTD QRTZ GRNS
OIL ODOR WHEN WSHNG
OIL FILM
20% BRI YLLW FLR
FR FLSH WET BLU WH CUT
FLTNG GRNS ALL FLOR

SS: CLR VFGRND SBRNDD
UNCNSLDTD QRTZ GRNS
FLTNG GRNS OIL ODOR W/
WSHNG SMPLS 20% BRI
YLLW FLR
FR BLU WH FLSH WET CUT

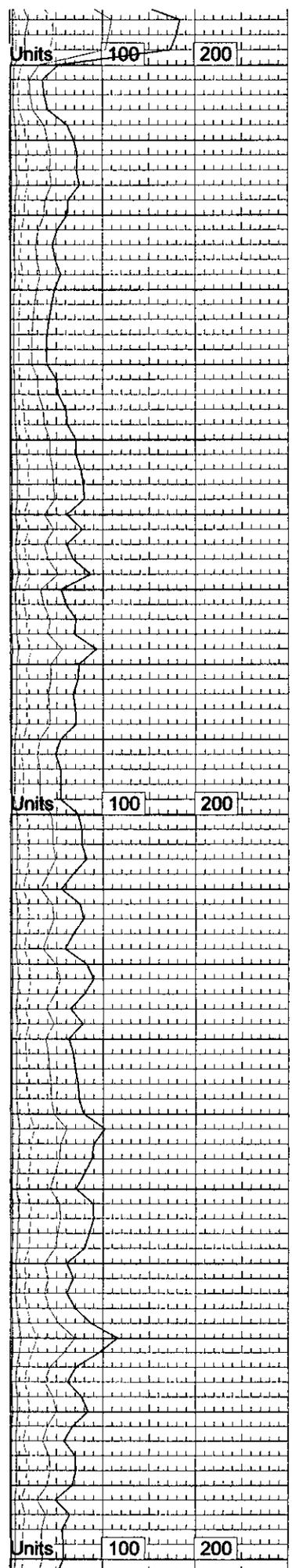
SLTSTN: GRY CALC CMNT
SFT TO FRM ARG IP

SH: BLK CARBNCS PYRTC
FRM SLTY IP
TOP OF CHERRY CANYON

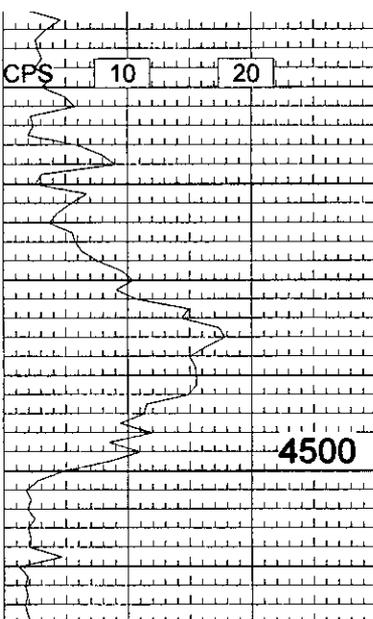
SLTSTN: GRY DRK GRY ARG
IP PYRTC SFT TO FRM
CALC CMNT

SS: WH OFF WH FRIAB TO
TIGHT CALC CMNT SBANGLR
SLTY IP

SS: CLR VFGRND UNCNSLDT
QRTZ GRNS FEW FLTRS
SBRNDD 10% BRI YELLOW
FLOR POOR FLSH WET CUT

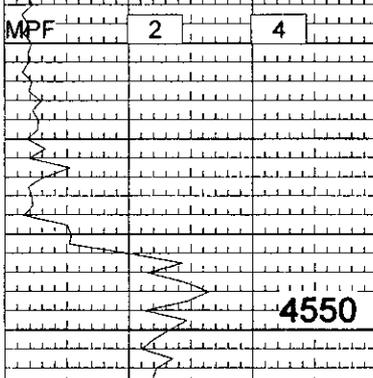


CPS 10 20



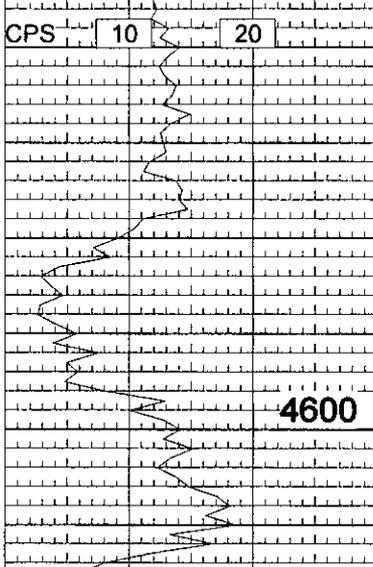
4500

MPF 2 4



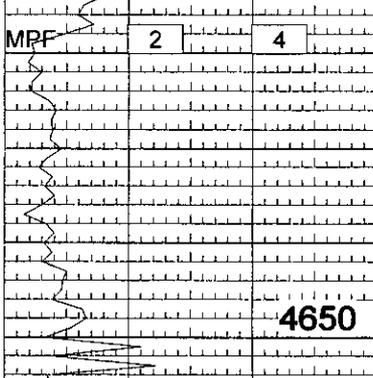
4550

CPS 10 20



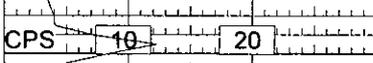
4600

MPF 2 4



4650

CPS 10 20



SS: CLR VFGRND UNCNSLDT
QRTZ GRNS SBRNDD 10%
BRI YLLW FLR POOR WET
FLSH CUT

LS: WH GRY LT BRWN DNS
MCRXLN BR TTL MOD HRD

SS: CLR VFGRND SBRNDD
UNCNSLDTD QRTZ GRNS
SWEET OIL ODOR WHL WSHN
SMPL FLTNG GRNS 15%BRI
YLLW FLR WFR FLSH WET
CUT

SS: CLR VFGRND SBRNDD
UNCNSLDTD QRTZ GRNS
FLTNG GRNS OIL ODOR
20% BRI YLLW FLR WFR
FLSH WET CUTS

LS: LT BRWN WH OFF WH
MCRXLN DNS BR TTL MDHRD

LS: WH OFF WH LT BRWN
DNS BR TTL MD HRD MCRXLN

MANZANITA MARKER
BENTONITE

SS: CLR VFGRND UNCNSLDT
SBRNDD QRTZ GRNS SOME
FLTRS OIL ODOR IN SMPLS
35% BLU WH FLR W/ GD
FLSH WET CUT
OIL STN ON SMPL SCK

SLTSTN: GRY SFT TO FRM
CALC CMNT SNDY IP ARG
IP

SS: CLR WH VFGRND SBRND
UNCNSLDTD QRTZ GRNS TO
VRY FRIABL CALC CMNT
10% BLU WH FLR FR FLSH
WET CUT FLTNG GRNS

SS: CLR WH VFGRND SBRND
UNCNSLDTD QRTZ GRNS
FLTNG GRNS
25% BRI YLW FLR PR FLSH
WET CUT

SI TSTN: GRY DRK GRY ARG

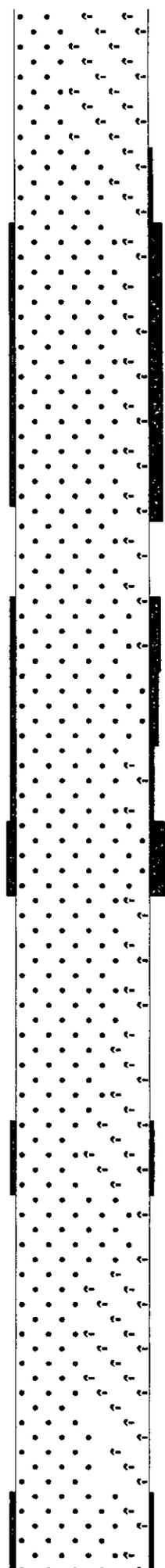
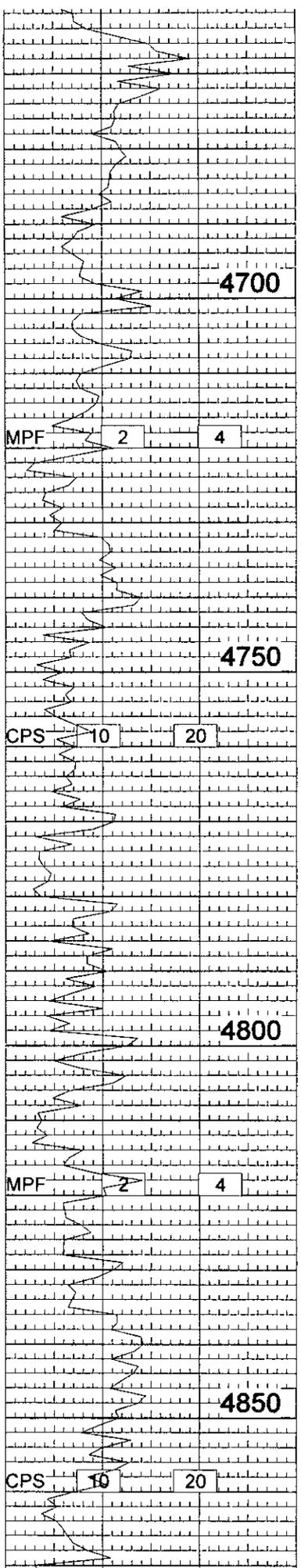
Units 100 200

Units 100 200

12/01/03
 WOB 45K
 RPM 70
 SPM 58
 PP 1400

MUD
 PROPERTIES

MW 9.8
 PH 10
 VIS 29
 DEV SURV
 @ 4751'
 1 1/2 DEG



IP SFT TO FRM CALC CMNT

SS: WH CLR VFGRND FRIAB
 CALC CMNT SLTY IP

SS: CLR VFGRND UNCNSLDT
 SBRNDD QRTZ GRNS FLTNG
 IP TO VRY FRIABL CALC
 CMNT 30% YLW FLR W/PR
 FLSH WET CUT

SS: WH CLR VFGRND VRY
 FRIABLE TO UNCNSLDTD
 SBRNDD QRTZ GRNS CALC
 CMNT 30% BR! YLW FLR
 VRY POOR TGH WET CUT

SS: WH CLR VFGRND VRY
 FRIABLE TO UNCNSLDTD QTZ
 GRNS CALC CMNT SBRNDD
 TO SBANGLR 25% YELLOW
 FLR W/ POOR WET FLASH
 CUT

SLTSTN: GRY ARG IP SFT
 TO FRM CALC CMNT SNDY
 IP

TOP F SND PAY IN TUNSTL
 SS: CLR VFGRND SBRNDD
 UNCNSLDTD QRTZ GRNS
 SOME FLTRS
 35% BR! YLW FLR W/FAIR
 FLASH WET CUT

SS: WH OFF WH VFGRND
 FRIABLE TO TGH CALC
 CMNT SLTY IP SBANGLR TO
 SBRNDD

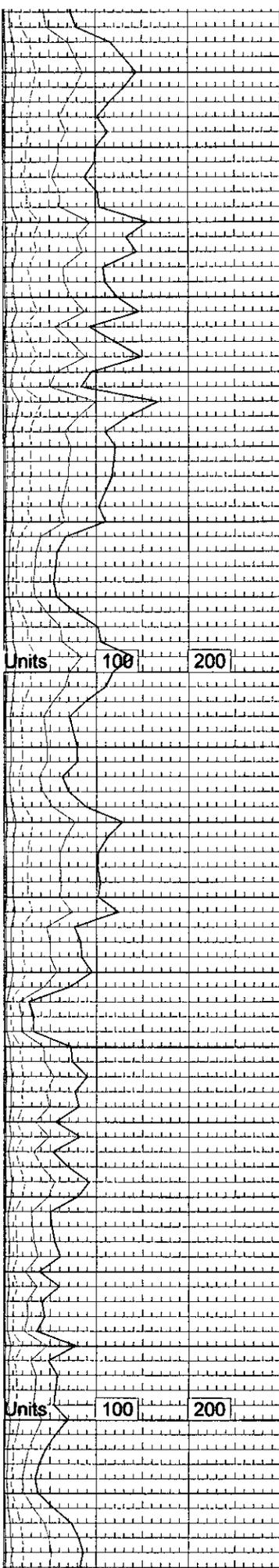
SLTSTN: GRY DRK GRY ARG
 IP PYRTC IP CALC CMNT
 SFT TO FRM
 SS: WH CLR OFF WH VFGRN
 VRY FRIABLE TO UNCNSLDT
 QRTZ GRNS

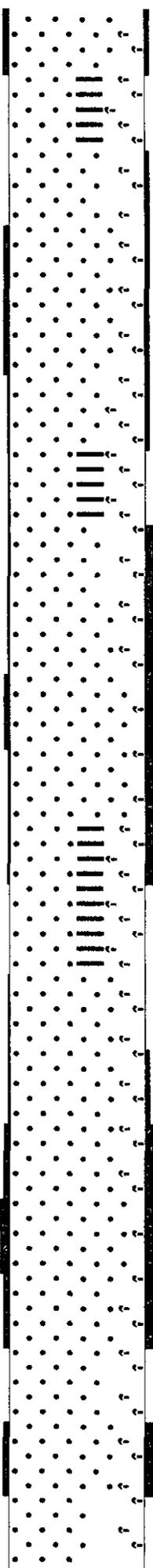
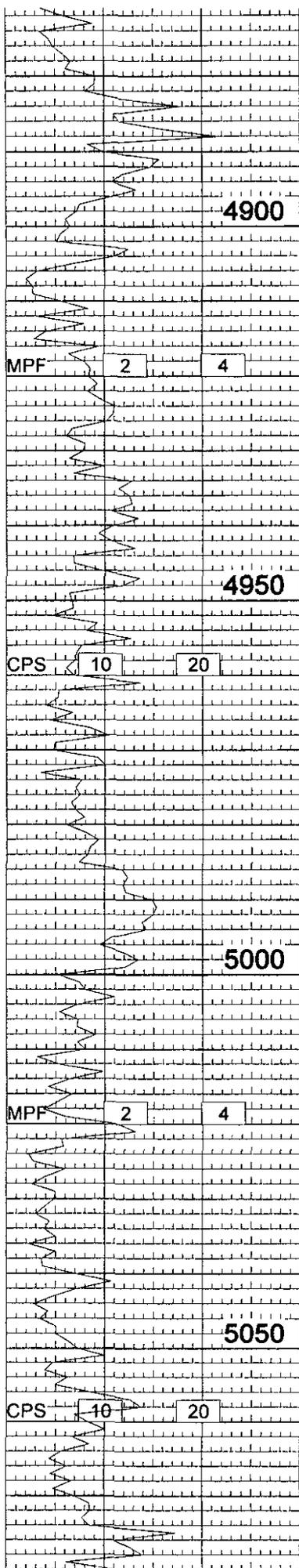
SS: WH OFF WH CLR VFGRN
 CALC CMNT SLTY IP
 SBANGLR TO SBRNDD

SLTSTN: GRY CALC CMNT
 SFT TO FRM ARG IP
 SNDY IP

SH: BLK PYRTC FRM SLTY
 IP CARBNCS SLI CALCRS

SS: WH OFF WH CLR VFGRN
 FRIABLE TO UNCNSLDTD
 SBRNDD QRTZ GRNS CALC
 CMNT 10% YELLOW FLR W/
 POOR WET FLASH CUT





SH: BLK PYRTC CARBNCS
SLI CALC SLTY

SS: WH OFF WH VFGRND
FRIABLE CALC CMNT
SBANGLR TO SBRNDD 10%
YLW FLR W/ POOR WET
FLSH CUT NO STRMRS

SS: WH OFF WH FRIABLE
TO TIGHT CALC CMNT VFGRN
SBANGLR TO SBRNDD

SH: BLK PYRTC SLTY FRM
CRBNCS SLI CALCRS

SS: WH OFF WH CLR VFGRN
SBANGLR TO SBRNDD CALC
CMNT FRIABLE TO TIGHT
20% BRI YLW GLD FLR W/
VERY POOR WET CUT FR
DRY CUT

SS: CLR WH VFGRND FRIA
TO UNCNSLDTD SBRNDD QTZ
GRNS 20% BRI YGLD FLR
NO WET CUT FR DRY CUT

SH: BLK CARBNACS FRM
PYRTC SLTY IP

SLTSTN: GRY DRK GRY SFT
TO FRM CALC CMNT

SH: BLK CRBNCS FRM SLTY
IP PYRTC IP

SS: WH OFF WH VFGRND
CALC CMNT FRIABLE SBRND
TO SBANGLR
25% BRI YLW FLR

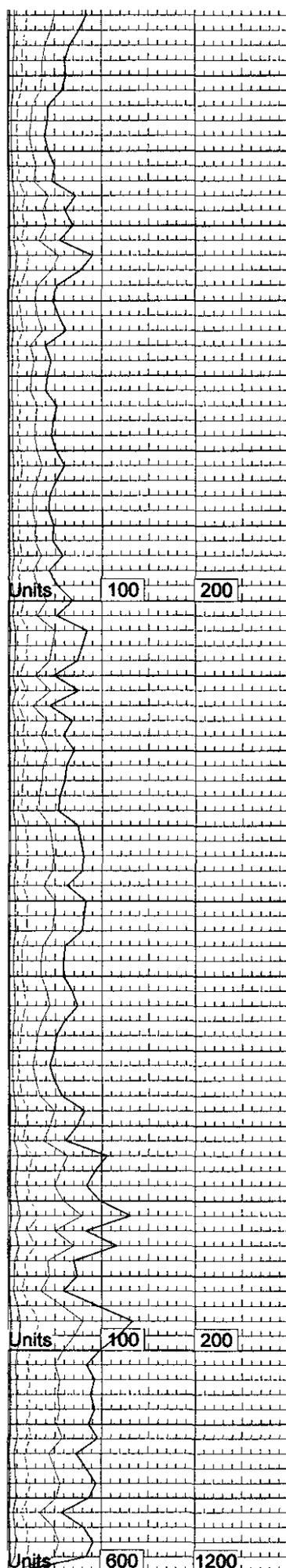
SS: CLR WH VFGRND SBRND
CALC CMNT VERY FRIABLE
TO UNCNSLDTD FLTNG QRTZ
GRNS 20% BRI YLW FLR
POOR WET CUT

SH: BLK PYRTC FRM SLTY
IP CARBNCS SLI CALC IP

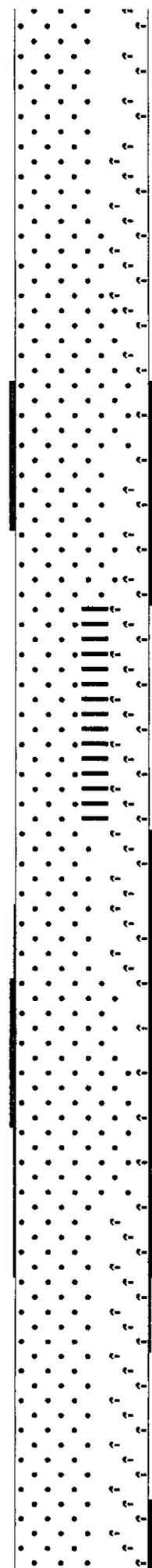
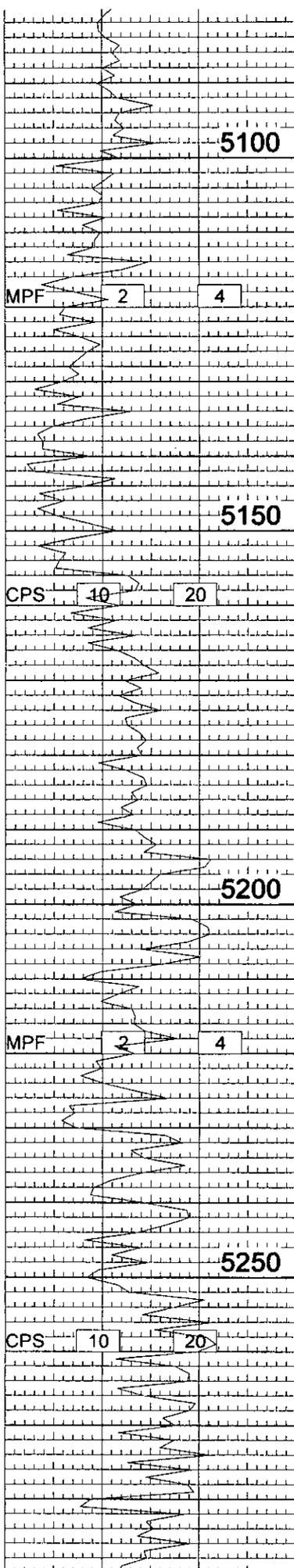
SLTSTN: GRY CALC CMNT
SFT TO FRM ARG IP

SS: CLR WH VFGRND VRY
FRIABLE TO UNCNSLDTD
QRTZ GRNS 20% YLW FLR
POOR WET CUT FR DRY CUT

SH: BLK CARBNCS SLTY
IP FRM
NOTE*****
MOVED AGITATOR TO MUD



CHANGED
GAS +
SCALE



PIT TO MUD UP
SLTSTN: GRY GRN SNDY IP
SFT SLI FNLY PYRTC

SH: BLK SLI FNLY PYRTC
FRM CARBNCS

SLTSTN: GRY GRN SFT
CALCRS SLI FNLY PYRTC

SS: WH CLR OFF WH VFGRN
CALC CMNT FRIABL SBANGL
TO SBRNDD

SS: CLR WH OFF WH VFGRN
FRIABL TO UNCNSLTD QRT
GRNS CALC CMNT
10% BRI YLW FLOR WK WET
CUT 3 STRMRS

SH: BLK FRM SLI PYRTC
CARBONACS

SLTSTN: GRY GRN SFT
CALCRS SNDY IP

MUD SWEEP HOLE UNLNG
LARGE SMPLS GAS KICK

SH: BLK DRK GRY PYRTC
FRM CRBNCS

SLTSTN: GRY DRK GRY SFT
TO FRM CALCRS ARG IP

SS: WH OFF WH CL VFGRND
SBRNDD TO SBANGLR FRIAB
CALC CMNT 10% BRI YLW
FLR NO WET CUT FR DRY
CUT WHEN CRSHD

SS: WH CLR VFGRND FRIAB
FEW UNCNSLTD GRNS
FLTNG GRNS 10% BRI YLW
FLOR W/ POOR WET CUT
FR DRY CUT

SS: WH CLR VFGRND VERY
FRIABLE TO UNCNSLTD
QRTZ GRNS CALC CMNT
10% YELLOW FLR POOR WET
CUT GOOD DRY CUT

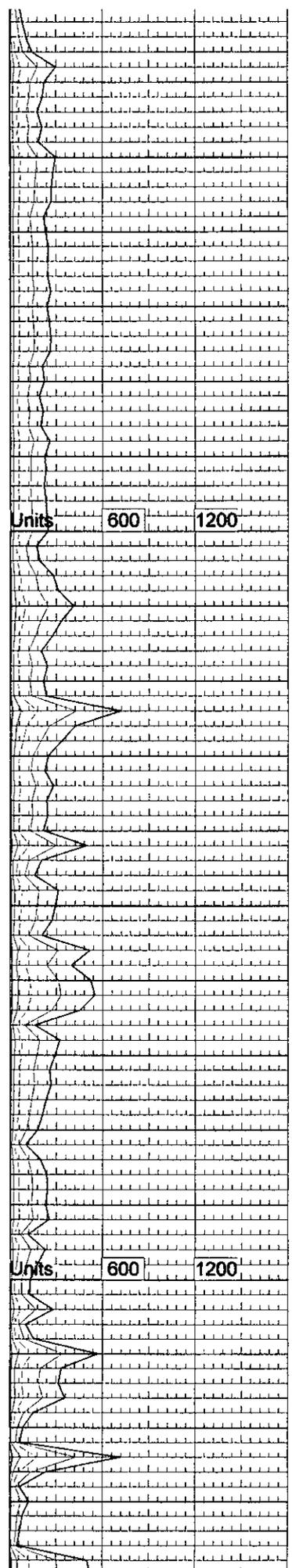
SS: WH CLR VFGRND VERY
FRIABL CALC CMNT 10%
BRI YLW FLR POOR WET
CUT GOOD DRY CUT WHEN
CRSHD

SH: BLK DRK GRY CRBNCS
SLTY IP FRM

SLTSTN: GRY GRN CALCRS
SFT SME QRTZ INCLNS

SS: WH CLR VFGRND CALC
CMNT SLTY IP PRLY SRTD

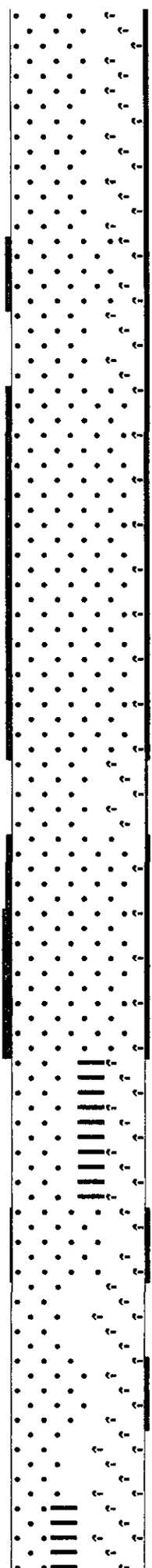
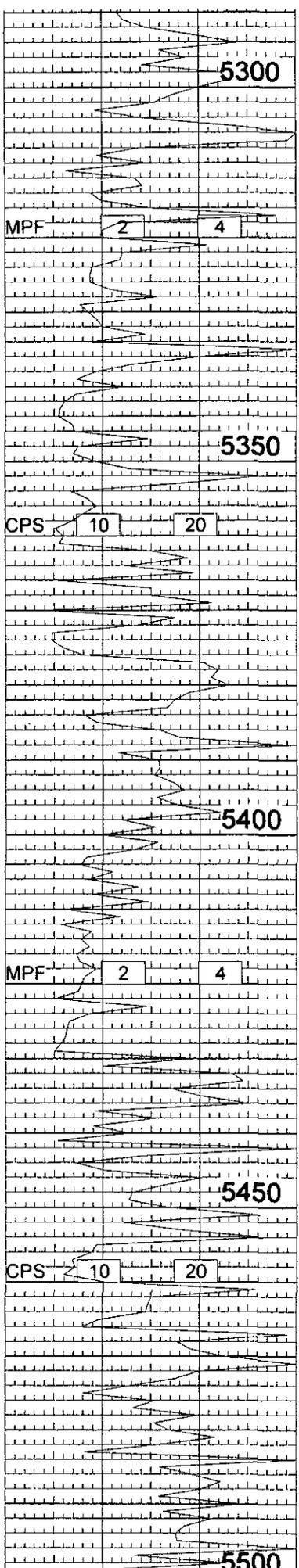
SS: WH CLR VFGRND CALC
CMNT SVRL FLTNG GRNS
10% YLW FLR W/POOR WET
CUT FR DRY CUT
SAMPLES ARE POOR MOSTLY



12/02/03
 WOB 55K
 RPM 70
 SPM 58
 PP 1500

 MUD
 PROPERTIES

 MW 10
 VIS 38
 PH 10
 WL 15



CAVINGS

SS: CLR WH VFGRND FRIAB TO UNCNSLTD QRTZ GRNS SBRNDD CALC CMNT 10% BRI YLW FLR W/ POOR WET FLASH CUT

SS: CLR WH VFGRND FRIAB CALC CMNT 10% BRI YLW FLR W/ POOR WET CUT GOOD DRY CUT /STRMRS

SLTSTN: GRY GRN SFT CALC IP

SS: CLR WH VFGRND FRIAB CALC CMNT 10% BRI YLW WH FLOR W/ POOR WET CUT OIL FILM ON WSHNG

SS: CLR WH VFGRND FRIAB CALC CMNT 10% BRI YLW FLR W/POOR WET CUT

SS: WH VFGRND SBANGLR CALC CMNT FRIABL 10% BRI YLW FLR W/ POOR WET FLASH CUT

SLTSTN: GRY GRN SFT ARG IP CALC IP

SS: WH CLR VFGRND FRIA CALC CMNT SBANGLR 10% BRI YLW FLOR POOR WET FLASH CUT W/ STRMRS

SS: WH CLR VFGRND FRIA CALC CMNT SBANGLR TO SBRNDD 10% BRI YLW FLR POOR WET FLASH CUT

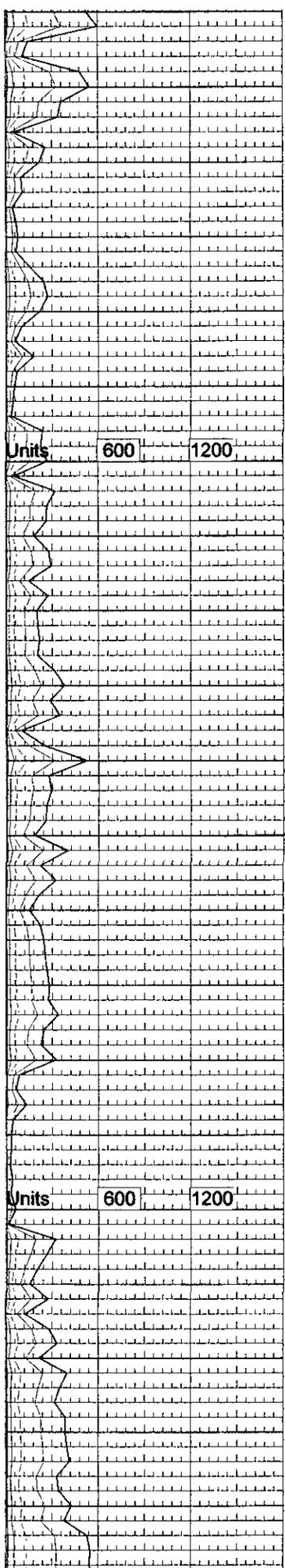
SH: BLK DRK GRY PYRTC CARBNCS SFT TO FRM
 NOTE: FLOW TO PIT WAS LOWER ERGO GAS READINGS
 SLTSTN: DRK GRY GRY GRN SFT TO FRM CALC IP ARG IP

SS: WH OFF WH CLR VFGRN CALC CMNT FRIABLE SBANGLR TO SBRNDD 10% YLW FLR TGHT DISH CUT NO STRMRS

SLTSTN: GRY GRN DRK GRY CALC IP ARG IP SFT TO FRM

SS: OFF WH WH VFGRND HVY CALC CMNT SBANGLR TO SBRNDD FRIAB TO TGHT 10% BRI YLW FLR NO WET CUT

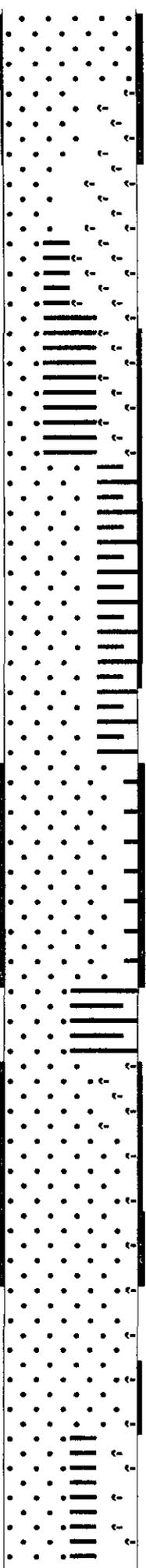
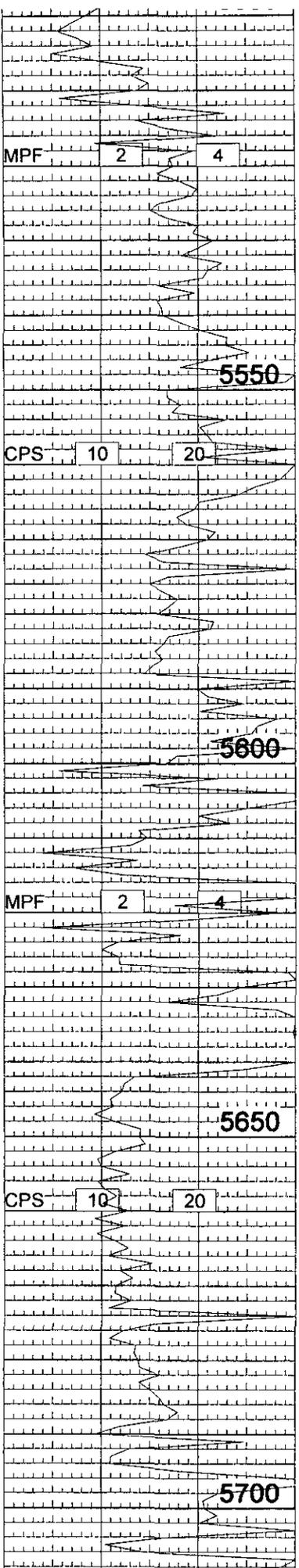
SH: BLK CARBNCS FRM PYRTC SLTY IP



12/03/03
 WOB 45K
 SPM 58
 70
 550

MUD
 PROPERTIES

MW 10
 VL 25
 PH 10
 VIS 34
 BIT NO 3
 VAREL CH47
 194043



SS: WH CLR VFGRND FRIAB
 CALC CMNT 15% BRI YLW
 TR WH FLR POOR WET CUT
 WITH STRMRS

SLTSTN: GRY GRN DRK GRY
 CALC CMNT SFT TO FRM
 ARG IP

SLTSTN: DRK GRY GRY SFT
 TO FRM CALCRS ARG IP

SLTSTN: GRY DRK GRY SFT
 TO FRM CALC IP

SS: WH VFGRND CALC CMNT
 TIGHT TO FRIABL SBANGLR
 STRONG OIL ODOR IN SMP
 10% BLU WH FLR POOR CUT
 SH: BLK CRBNCS FRM
 SLTY IP PYRTC IP

SS: WH OFF WH VFGRND
 TIGHT TO FRIABL SBANGLR
 CALC CMNT 10% BLU WH TO
 BRI YLW FLR DISH CUT
 WHEN WET GOOD DRY CUT
 SH: BLK DRK GRY PYRTC
 FRM BLKY VERY CRBNCS

SH: BLK PYRTC VRY
 CRBNCS BLKY SLTY IP

TRIP GAS PEAKS OUT AT
 1425 UNITS
 WILLIAMSON SS: WH CLR
 VFGRND FEW UNCNSLTD
 QRTZ FLTRS VERY FRIABL
 CALC CMNT 15
 CALC CMNT 15% BRI YLW
 FLR FAIR WET FLSH AND
 STRMRS EXCLLNT DRY CUT

SS: WH CLR VFGRND FRIAB
 CALC CMNT SBRNDD TO
 SBANGLR 15% BRI YLW FLR
 W FAIR STRMNG WET CUT
 EXCLLNT DRY CUT

RAISED AGITATOR AFTER
 CONTINOUS DRWING OF
 LINES=====

SLTSTN: GRY CALC CMNT
 SFT SLI PYRTC

SS: WH OFF WH CLR VRY
 FRIABL CALC CMNT SBRNDD
 10% BRI YLW FLR
 POOR WET CUT FR DRY CUT

SS: WH OFF WH CLR VRY
 FRIABL CALC CMNT SBRNDD
 15% BRI YLW FLR POOR
 WET CUT

TR BLK CARBNCS PYRTC SH

SS: WH CLR OFF WH VFGRN
 CALC CMNT TIGHT TO FRIA
 SBRNDD TO SBANGLR 10%
 BRI YLW FLR NO WET CUT

SH: BLK CRBNCS PYRTC
 SLTY IP BLKY FRM

