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GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY SHAKESPEARE OIL COMPANY, INC.
LEASE GREY #3-9
FIELD STRATFORD WEST
LOCATION 2520'FSL & 1000'FEL
SEC 9 TWSP 13S RGE 32W
COUNTY LOGAN STATE KANSAS

ELEVATIONS
KB 2999
DF
GL 2989
Measurements Are All From KB 2999

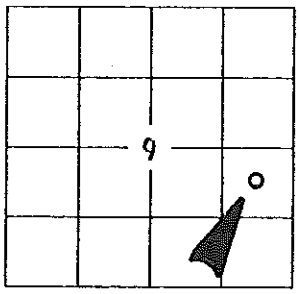
CONTRACTOR H2O DRILLING LLC RIG #2
SPUD 4-19-2011 COMP 5-2-2011
RTD 4710 LTD 4706
MUD UP 3473 TYPE MUD CHEMICAL

CASING
SURFACE 8 5/8" @ 224'
PRODUCTION None

ELECTRICAL SURVEYS
WEATHERFORD: D.I.L., C.D.L./C.N.L., M.L. & Sonic

SAMPLES SAVED FROM 3800 TO RTD
DRILLING TIME KEPT FROM 3750 TO RTD
SAMPLES EXAMINED FROM 3800 TO RTD
GEOLOGICAL SUPERVISION FROM 3850 TO RTD
GEOLOGIST ON WELL STEVE DAVIS

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2480 +519	2483
B/ANHYDRITE	2501 +498	2508
HEEBNER	3951 -952	3953
LANSING	3996 -997	3998
MUNCIE CREEK	4144 -1145	4146
STARK	4228 -1229	4234
FORT SCOTT	4480 -1481	4488
CHEROKEE SH	4509 -1510	4514
JOHNSON ZONE	4551 -1552	4557
MISSISSIPPI	4623 -1624	4626



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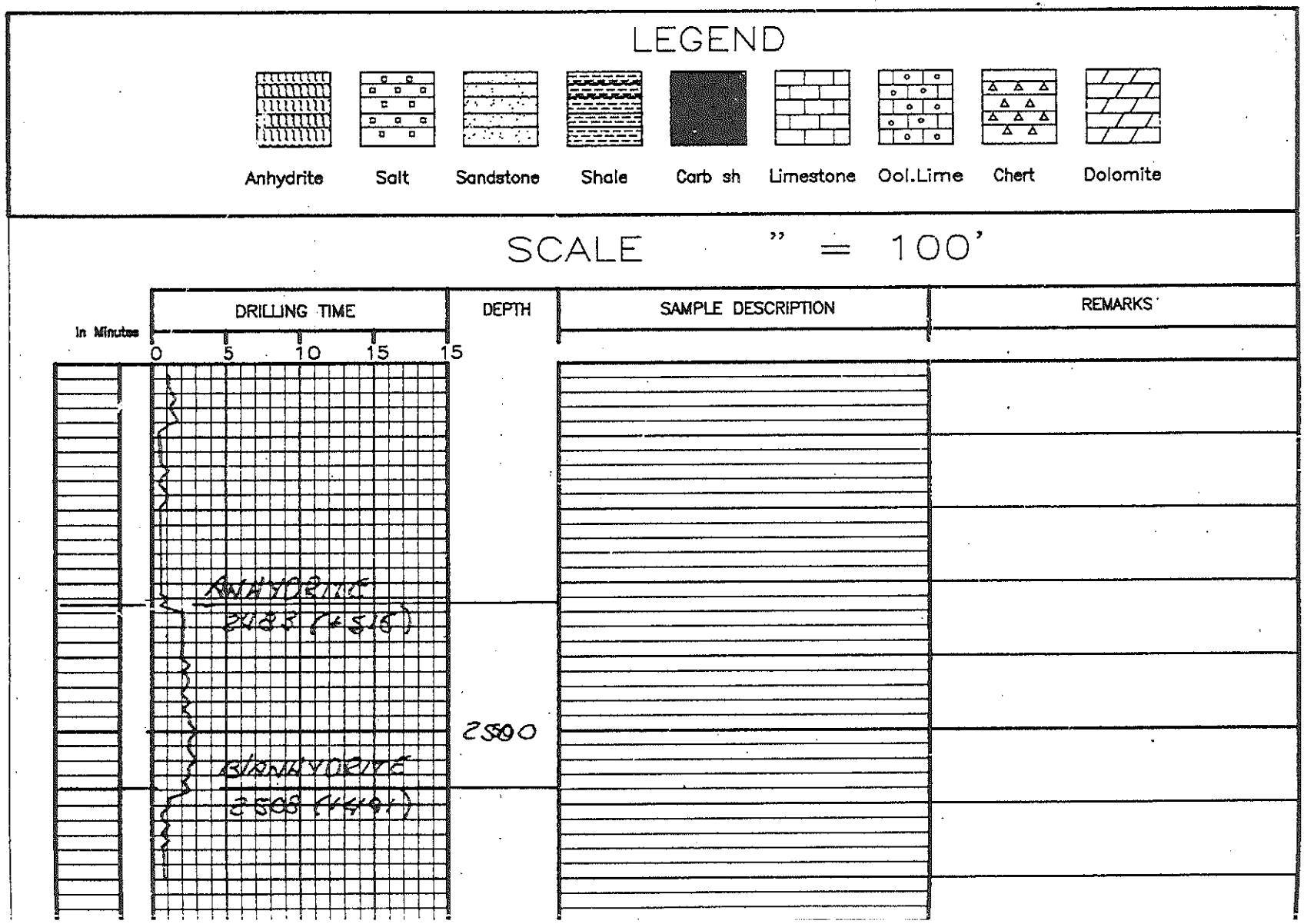
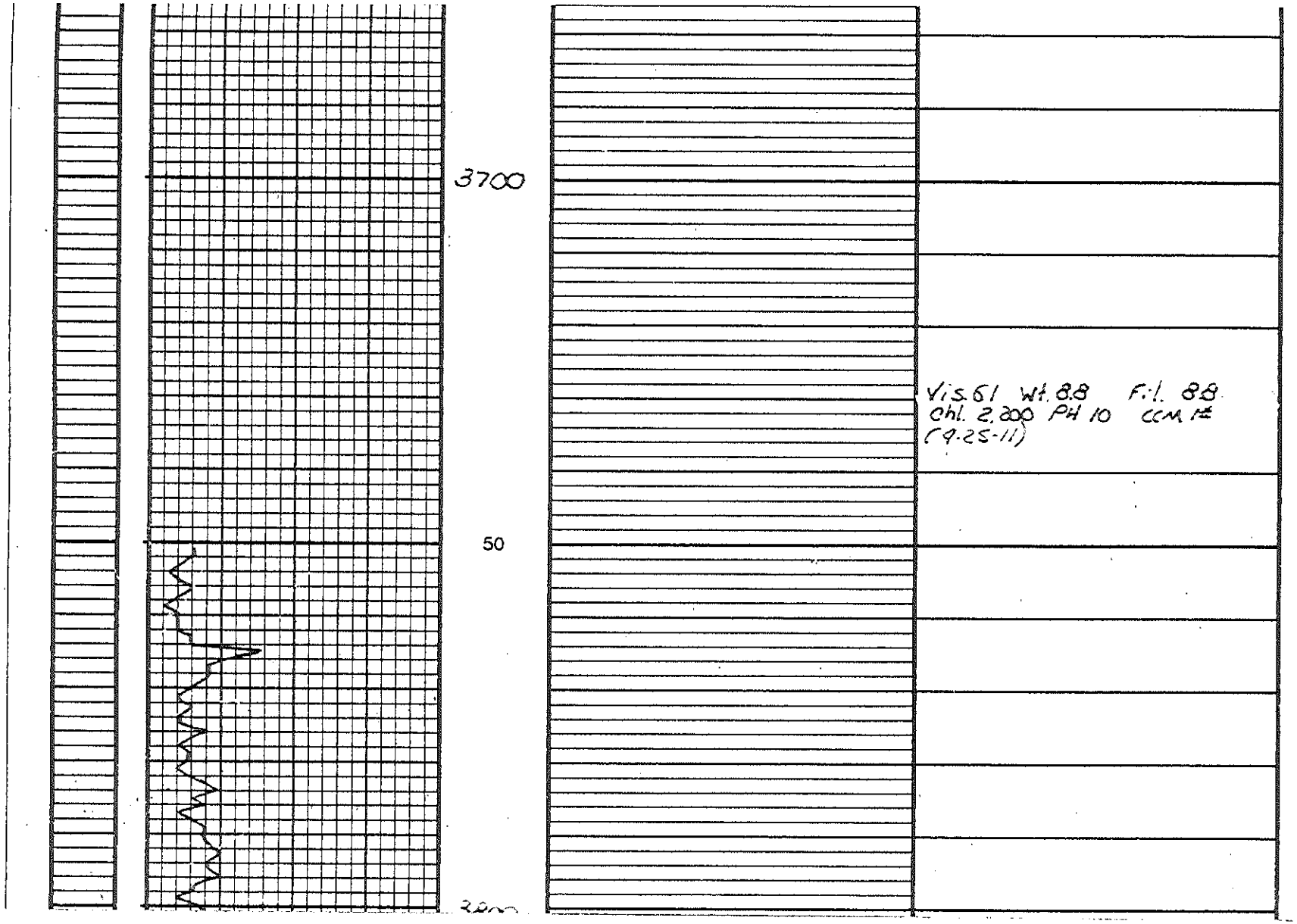
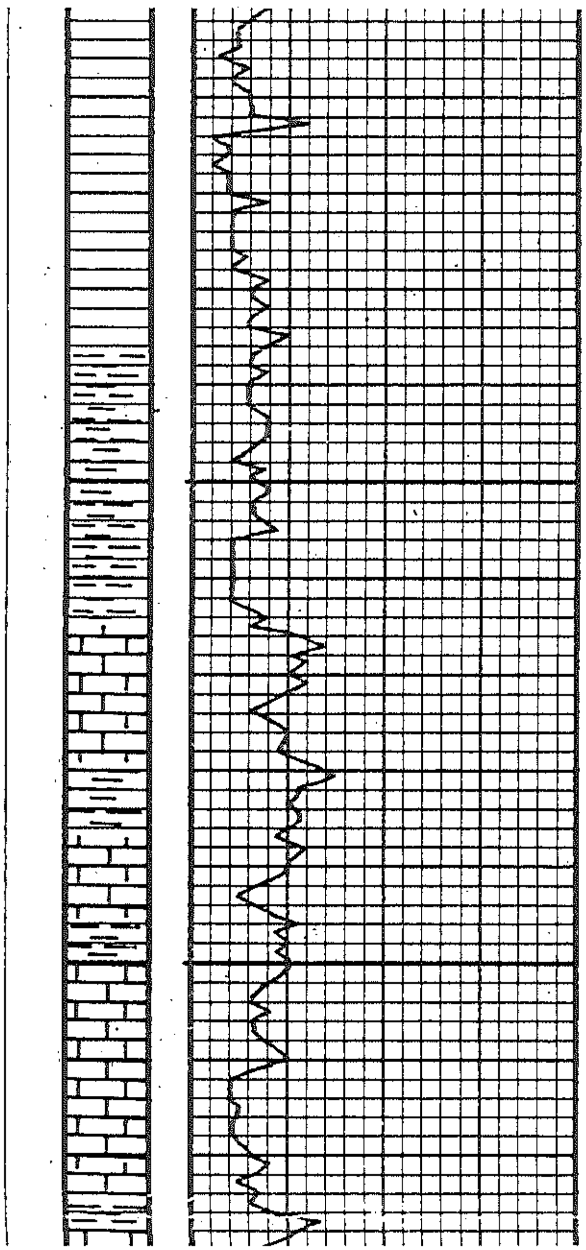

LEGEND
Anhydrite
Salt
Sandstone
Shale
Carb sh
Limestone
Ool.Lime
Chert
Dolomite
SCALE " = 100'
DRILLING TIME
In Minutes
0
5
10
15
15
DEPTH
SAMPLE DESCRIPTION
REMARKS
ANHYDRITE
2483 (+516)
2590
BARNHYDRITE
2565 (+434)
DAVIS-6


3700
50
Vis. 61 Wt. 8.8 F.L. 8.8
Chl. 2.200 PH 10 CCM ±
(9-25-11)



50

Shale gray-green silty

LS gray-fon f-lo arg silty foss xld

LS AA + shale black, gray & green

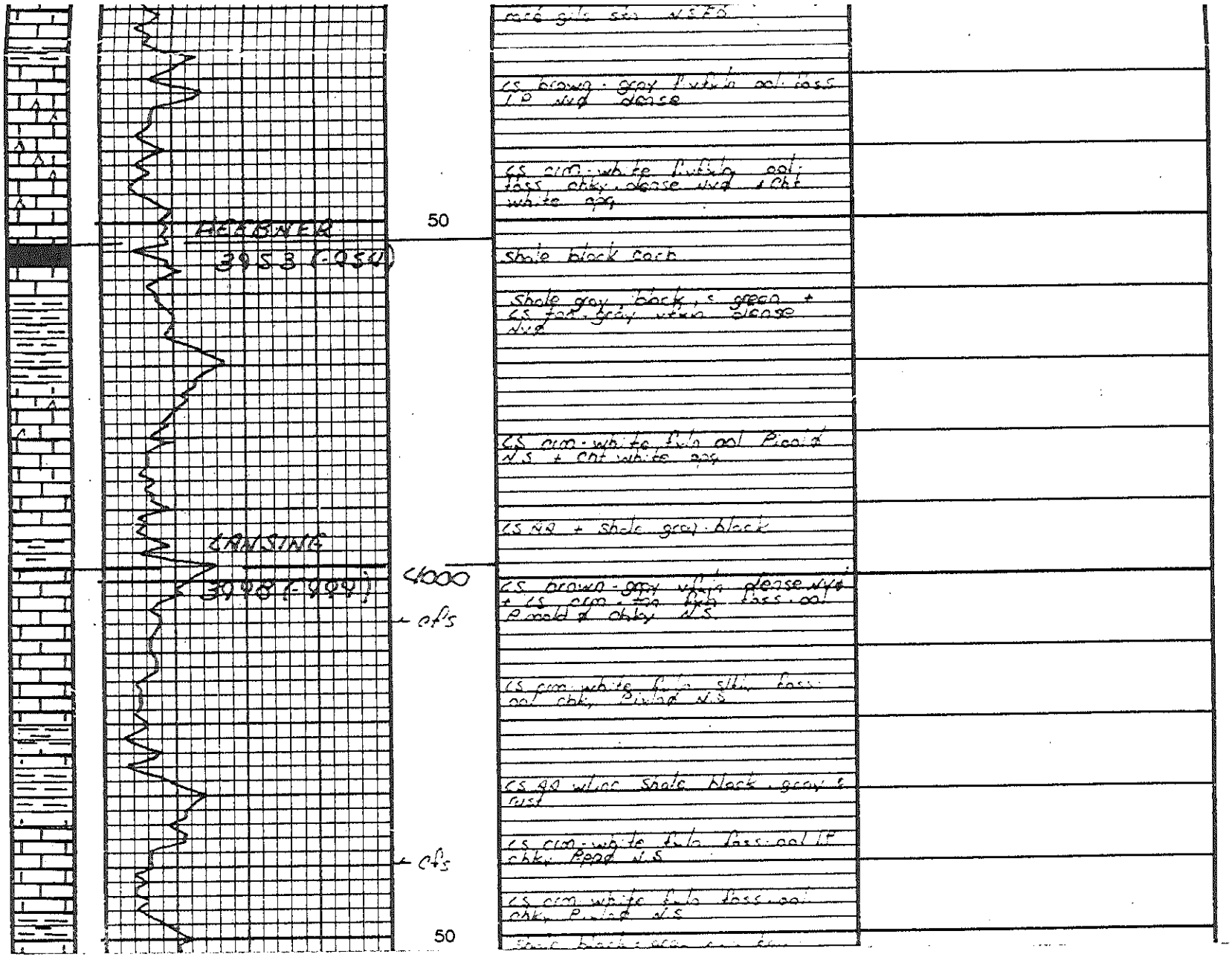
LS crm-gray f-lo silty foss-ool fxgy d NS

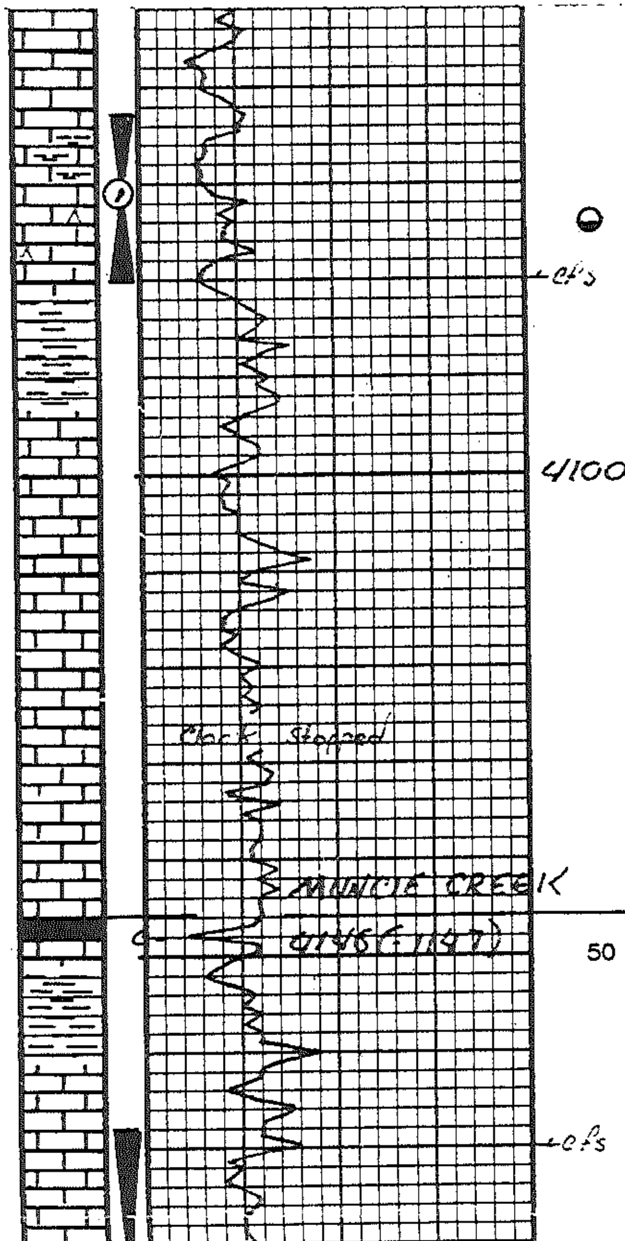
3900

shale black

LS crm-gray f-lo chky LP dense xld

LS crm-white f-lo chky silty foss-ool Pmold d & Pinpt rare gils sta NSFO


DRAWDOWN
3953 (-954)
50
DRAWDOWN
4000
3908 (-909)
cfs
cfs
50



[illegible] brown [illegible] sl. foss. dense
NVØ

LS tan-crm f.-v.f.xln sltly foss.
dense NVØ + Shale black + gray

LS crm-white f.-v.f.xln foss.-ool. I.P.
chky [illegible] + Pmoldd SSFO
sptd lt stn, sptd dull fluor
fnt odor + cut fair [illegible]

Abnt Shale gray, black + carb

LS crm-tan f.-v.f.xln chky I.P.
NVØ

LS crm-gray f.xln foss. dense
NVØ

LS white-crm f.-v.f.xln foss.-ool.
NVØ

LS gray-tan f.-v.f.xln dense
NVØ

LS AA + Cht gray-brown

Shale black carb

LS gray-brown f.-v.f.xln NVØ
dense + Shale gray-black

LS crm-white f.xln sltly foss.
chky I.P. [illegible] rare sptd stn
NSFO

[illegible] gray [illegible]
NVØ

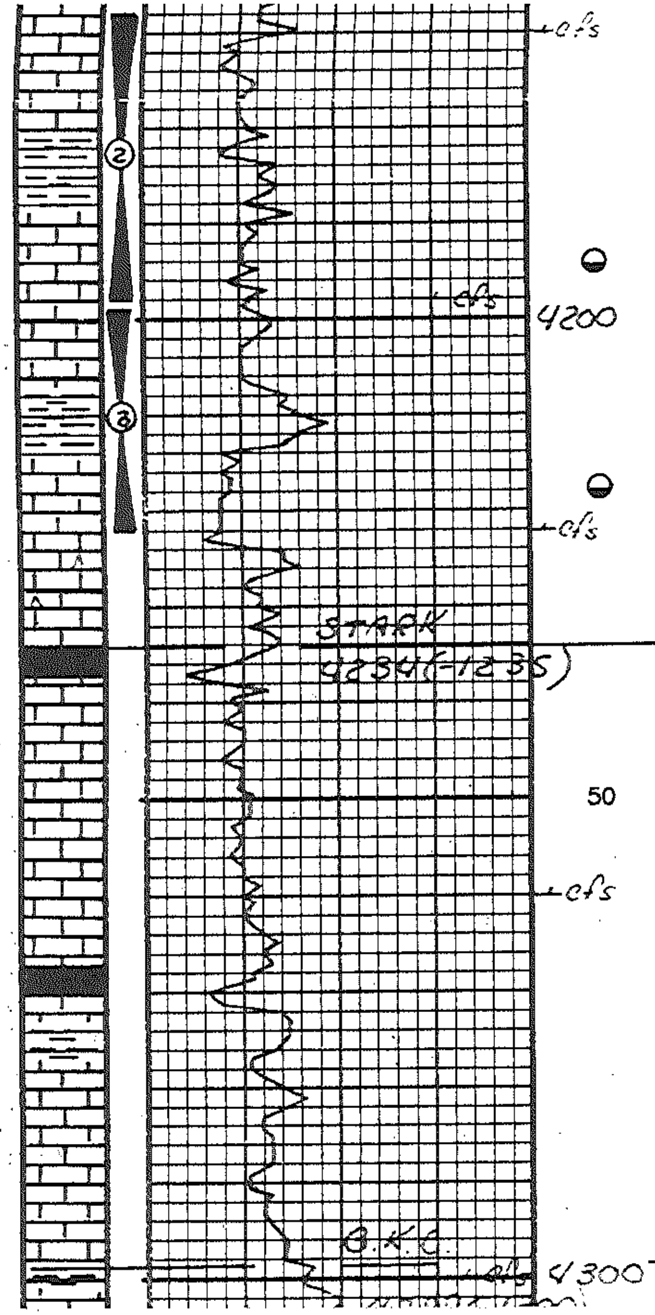
Survey @ 4080 1¼°

Vis. 54 wt. 9.2 F.L. 8.0
Chl. 2,500 PH 10 LCM 1#
(4-26-11)

DST #1 4063 - 4080
30 - 30 - 45 - 60
BLOW:
I.F. 2"
F.F. Weak built 3"
(No return I.S.I. or F.S.I.)
RECOVERY:
1' F.O. (100%O)
115' M (100%M)
I.H.P. 2044#
I.F.P. 29-53#
I.S.I.P. 1120#
F.F.P. 61-88#
F.S.I.P. 1139#
F.H.P. 1992# B.H.T. 116°F

Vis. 49 wt. 9.2 F.L. 8.8
Chl. 3,000 PH 9.5 LCM 1#
(4-27-11)

DST #2 4168 - 4198
30 - 30 - 30 - 30



LS brown gray vf micro xln slid

LS AA w/inc. Shale gray-black

LS brown, tan f.xln foss-ool
P mold d ε P int d chky IP
S.S.-F.S.F.O. fluor spotted sta. dull
wht fluor. fnt odor

Shale gray-black

LS tan-gray f-vf xln foss-ool IP
some chky P mold d, S.S.F.O.
spotted lt sta, dull wht fluor
F. odor

LS gray-tan vf micro xln
some chky IP dense slid
ε Cht gray opq.

Shale black carb

LS brown-gray f-vf xln foss-ool IP
dense slid

LS gray-cream vf microxln foss-ool
dense slid

Shale black carb

Inc. Shale gray, black, green ε
rust

LS brown-gray micro xln slid
slty foss dense

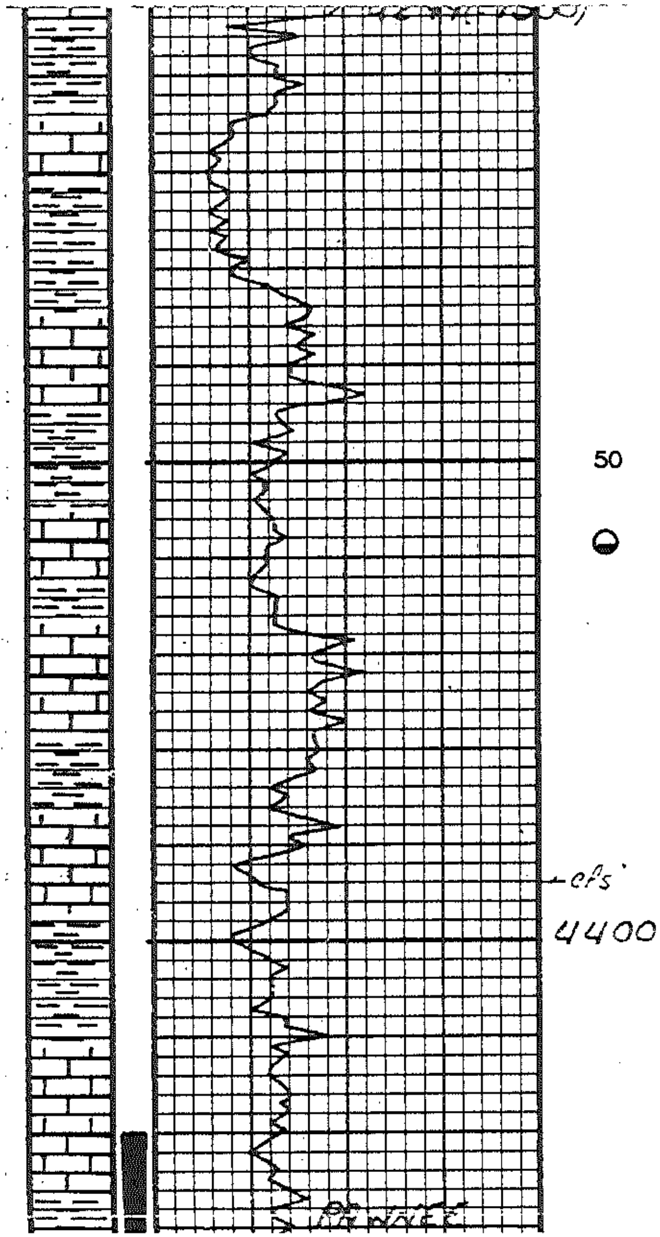
LS gray xf xln slty foss slid
spotted gilc edge sta. S.S.F.O.
sl odor ε LS brown micro xln
dense

Chl. 3,000 PH 9.5 CCM 1#
(4-27-11)

OST #2 4168-4198
30-30-30-30
BLOW:
I.F. Weak surface blow
F.F. Weak died 12 min.
RECOVERY: 5' M
I.H.P. 2109#
I.F.P. 28-28#
I.S.I.P. 1026#
F.F.P. 30-31#
F.S.I.P. 981#
F.H.P. 2050# B.H.T. 109°F

Vis. 53 Wt. 9.4 Fil. 9.6
Chl. 3,400 PH 9.6 CCM 1#
(4-28-11)

OST #3 4199-4222
30-30-30-30
BLOW:
I.F. Weak surface blow
F.F. No blow
RECOVERY: 10' M
I.H.P. 2138#
I.F.P. 27-28#
I.S.I.P. 1019#
F.F.P. 28-29#
F.S.I.P. 950#
F.H.P. 2035# B.H.T. 109°F



Shale rust, gray & green

Shale gray, green silty & rust soft

Shale AA & LS gray-tan vf-xln silty foss dense NVP

Shale gray, black, green & rust

LS gray-tan vf micro xln Pyrite XSSFO (hvy) CCS spotd edge stn. NFluor, NOdor

LS gray-tan vf micro xln NVP dense

Shale black - gray

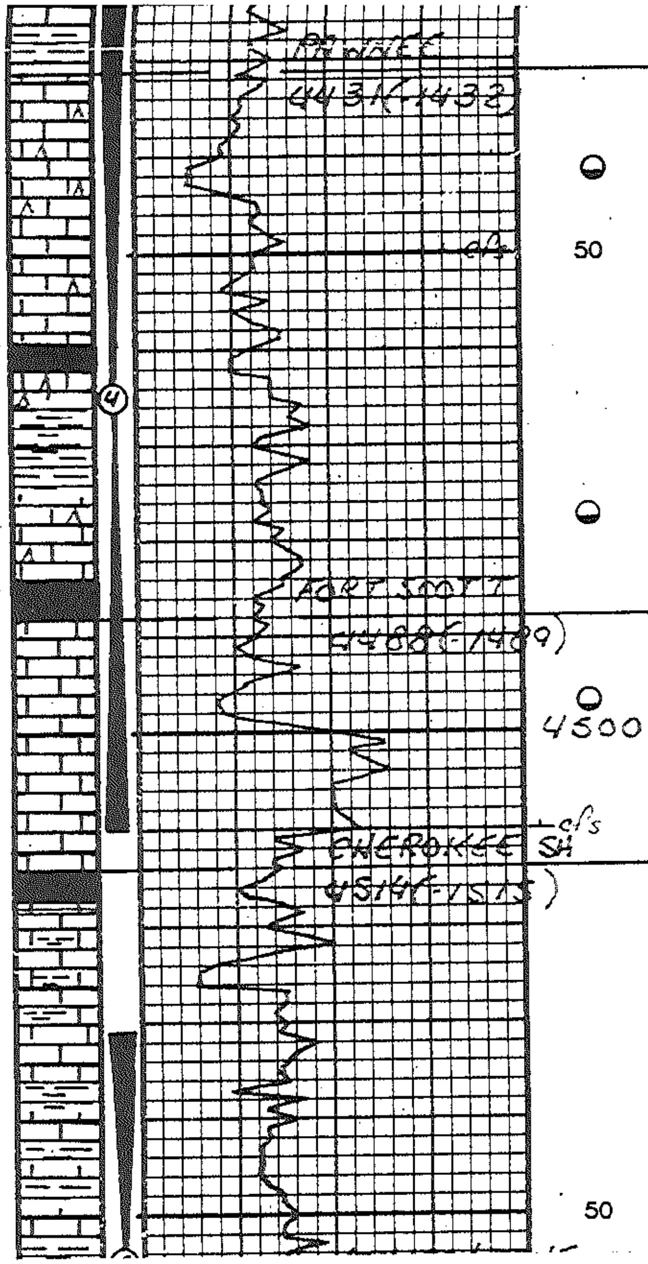
LS gray-tan vf-xln dense NVP spotd gilc stn NSFO NOdor

Vis 48 wt 9.3 Fil 9.6
Chl. 4,000 PH 9.5 LCM 1#
(4-29-11)

Abst Shale black gray & green
LS tan-gray vf micro xln silty foss NVP rare spotd edge CCS stn NSFO NOdor

LS gray-brown vf-xln silty foss dense NVP

Shale black sub carb - gray



Shale black sub carb - gray

LS tan-gray f-vf xln foss ool LP Pinpt SSFO, satd lt stn, satd dull fluor, f odor & cht white, gray opq

LS gray-brown vf xln dense sltly foss dvp

Shale black carb & cht black brown

Abnt Shale black gray, rust & green

LS tan-crm f xln sltly foss-ool chky LP Pinpt SSFO, rare satd lt stn, dull satd fluor, fnt odor on bck & cht white brown

Shale black carb

LS brown-crm f xln ool chky Pinpt & Pool mottld SSFO, satd w/ lt stn satd dull fluor fnt odor & cht brown, gray & white

LS brown-tan f-vf xln ool LP dense dvp

Shale black carb & pyr

LS gray-tan f xln ool chky Pool mottld rare satd lt stn, dSFO & Shale green, gray, black & rust

LS tan-gray vf xln ool dvp dense

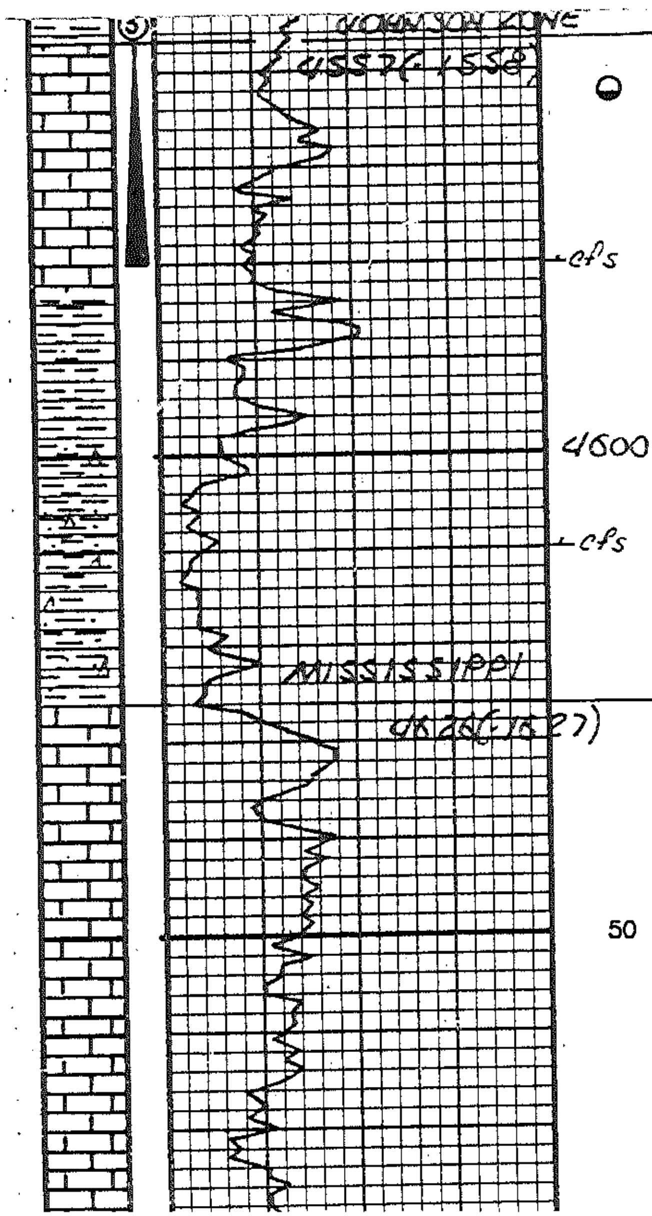
LS tan-gray vf micro xln dense dvp carb satd edge fcs stn dSFO & Abnt Shale black, gray & green

Shale black-gray

Vis. 55 Wt. 9.3 Fil. 8.8
Chl. 3,500 PH10.5 CCM 3#
(4-30-11)

DST #4 4420 - 4510
30 - 30 - 30 - 30
BLOW:
I.F. Surface blow died 3 min.
F.F. No blow
RECOVERY: 5'M
I.H.P. 2310#
I.F.P. 67-75#
I.S.I.P. 657#
F.F.P. 77-79#
F.S.I.P. 618#
F.H.P. 2277# B.H.T. 114°F

DST #5 4531 - 4580
30 - 30 - 30 - 30



CS gray-tan f-vf xln slty foss Pin pt ϕ & Pray ϕ S.F.S.F.O. Chuy spt'd stn, spt'd dull fluor, F odor

CS gray-tan f-vf xln slty ool foss chky, I.P. NVϕ

CS AA w/inc Shale green, black, gray & rust

Shale AA w/few clus SS tan-gray f grn sub rd, well sort, F.i.g.ϕ, N.S. & CS brown micro xln dense

Shale black, gray, rust & yellow & Cht pink & orange & SS white-gray vf-f grn rd, mod sort fri, F.i.g.ϕ N.S.

Shale vari colo AA & Cht tan orange & pink w/few clus SS white vf-f grn mod sort, rd fri, F.i.g.ϕ N.S.

CS cream-white f xln sdy chky I.P. NVϕ

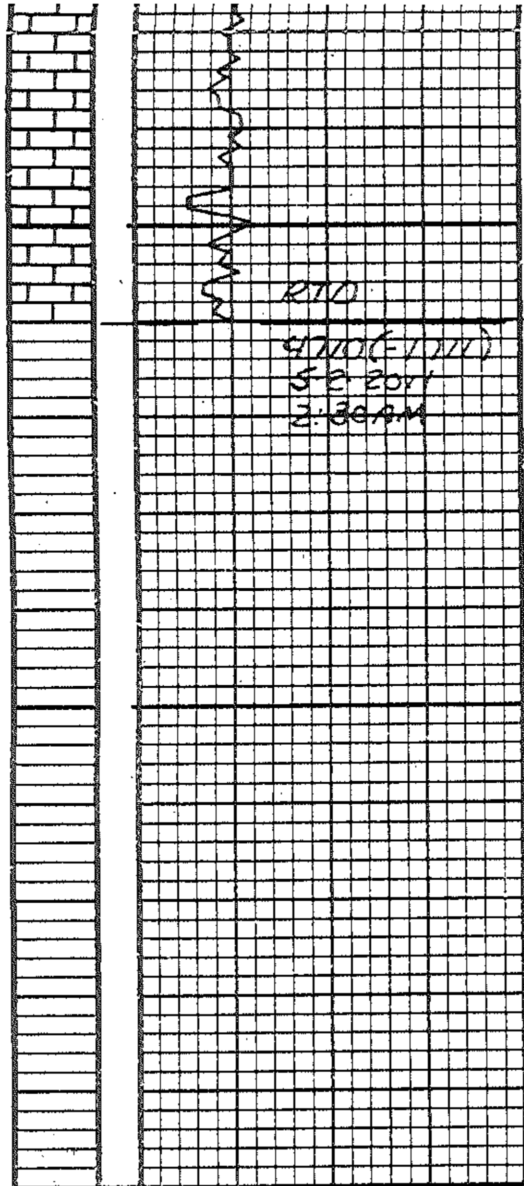
CS cream-white f xln sdy chky NVϕ

CS cream-white f xln sdy ool chky I.P. NVϕ

CS cream-white f xln ool-ool I.P. & CS gray-tan vf xln dense NVϕ

BLOW:
I.F. Surface blow
F.F. No blow
RECOVERY: 5'M
I.H.P. 2385#
I.F.P. 62-54#
I.S.I.P. 57#
F.F.P. 54-51#
F.S.I.P. 51#
F.H.P. 2225# B.H.T. 116°F

Vis. 57 Wt. 9.4 Fil. 9.6
Chl. 4,600 PH 9.5 CCM 3#
(5-1-11)



4700

cfs

50

SAMPLE DESCRIPTION	REMARKS
LS tan-gray, vf-fxln ool i.p. slid dense	
LS brown-tan f-vfxln ool-sdy i.p. slid dense	
LS white, f-vfxln sltly ool-sdy some chky slid	