Well File Copy

RICHARD S. (Steve) DAVIS JR.
Petroleum Geologist

212 N. Market Wichita, Kansas 67202 Phone (316) 267-9115

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY SHAKESPEARE OIL COMPANY, INC.
LEASE OTTLEY #5-15
FIELD CHALK BUTTES
LOCATION 1279' FNL & 436' FEL
SEC 15 TWSP 14S RGE 32W
COUNTY LOGAN STATE KANSAS

ELEVATIONS
KB 2752
DF KB 2753 WAS USED, SAMPLE TOPS
GL 2742
Measurements Are All From KB 2752

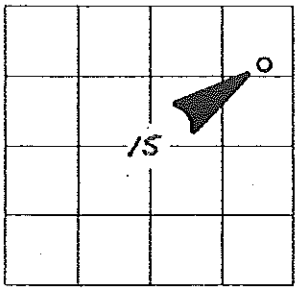
CONTRACTOR HD DRILLING, LLC RIG #2
SPUD 9-29-2009 COMP 10-12-2009
RTD KB 2753 4470(-1717) LTD KB 2752 4466(-1714)
MUD UP 3460 TYPE MUD CHEMICAL

CASING
SURFACE 8 5/8" @ 228'
PRODUCTION 5 1/2

ELECTRICAL SURVEYS
HALLIBURTON:
FULL SUITE

SAMPLES SAVED FROM 3500 TO RTD
DRILLING TIME KEPT FROM 3500 TO RTD
SAMPLES EXAMINED FROM 3500 TO RTD
GEOLOGICAL SUPERVISION FROM 3500 TO RTD
GEOLOGIST ON WELL STEVE DAVIS

FORMATION TOPS	LOG	SAMPLES
BLAINYDRITE	2224 +528	2227
HEEBNER	3715 -963	3718
LANSING	3751 -999	3755
MUNCIE CREEK	3912 -1160	3914
STARK	4002 -1250	4004
B.K.C.	4076 -1324	4076
PAWNEE	4204 -1452	4207
CHEROKEE SH	4284 -1532	4286
JOHNSON ZONE	4326 -1574	4327
MISSISSIPPI	4388 -1636	4391



API#: 15-109-20861

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS
1	12 1/4	HZ	RR	228	228	2
2	7 7/8	HTC	GT1	1527	1299	9 3/4
3	7 7/8	HTC	[illegible]	[illegible]	[illegible]	[illegible]

DAILY PENETRATION

9-29	Spud	
9-30	228	10-11 4390

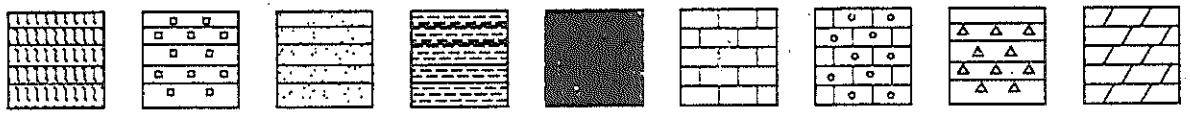
DAILY PENETRATION

9-29	spud		
9-30	228	10-11	4390
10-1	1725	10-12	4470
10-2	2840		
10-3	3240		
10-4	3574		
10-5	3840		
10-6	3940		
10-7	3973		
10-8	4065		
10-9	4278		
10-10	4355		

BIT RECORD

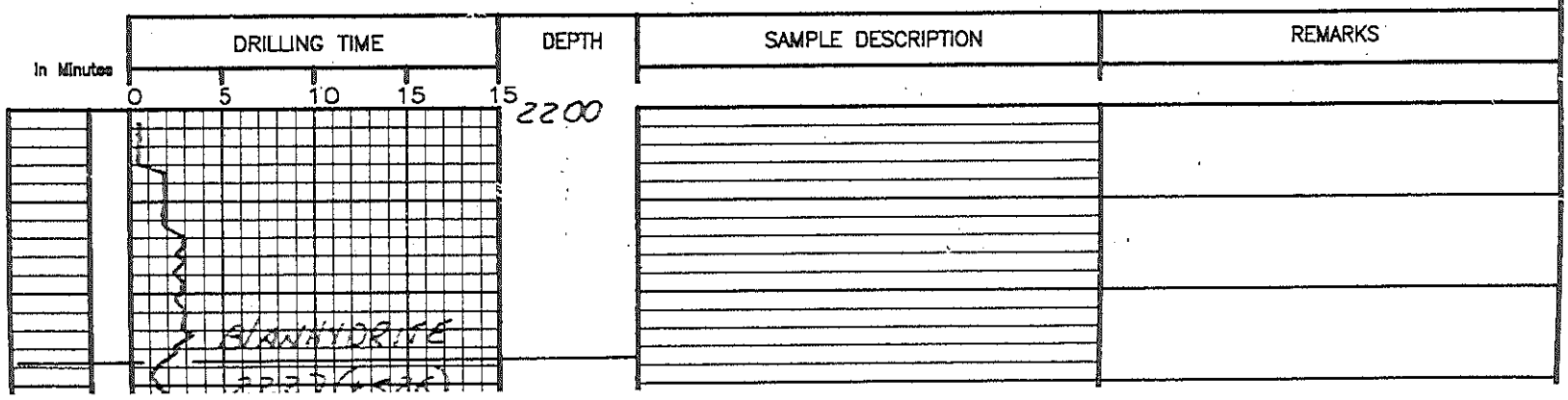
NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS
1	12 1/4	UZ	RT	228	228	2
2	7 7/8	HTC	GT 1	1527	1299	9 3/4
3	7 7/8	HTC	GX 20C	2881	1354	24 1/4
4	7 7/8	UZ	QX 20	3574	693	29 1/4
5	7 7/8	HTC	GX 20C	3998	424	27
6	7 7/8	UZ	QX 20	4370	372	37 1/2

LEGEND

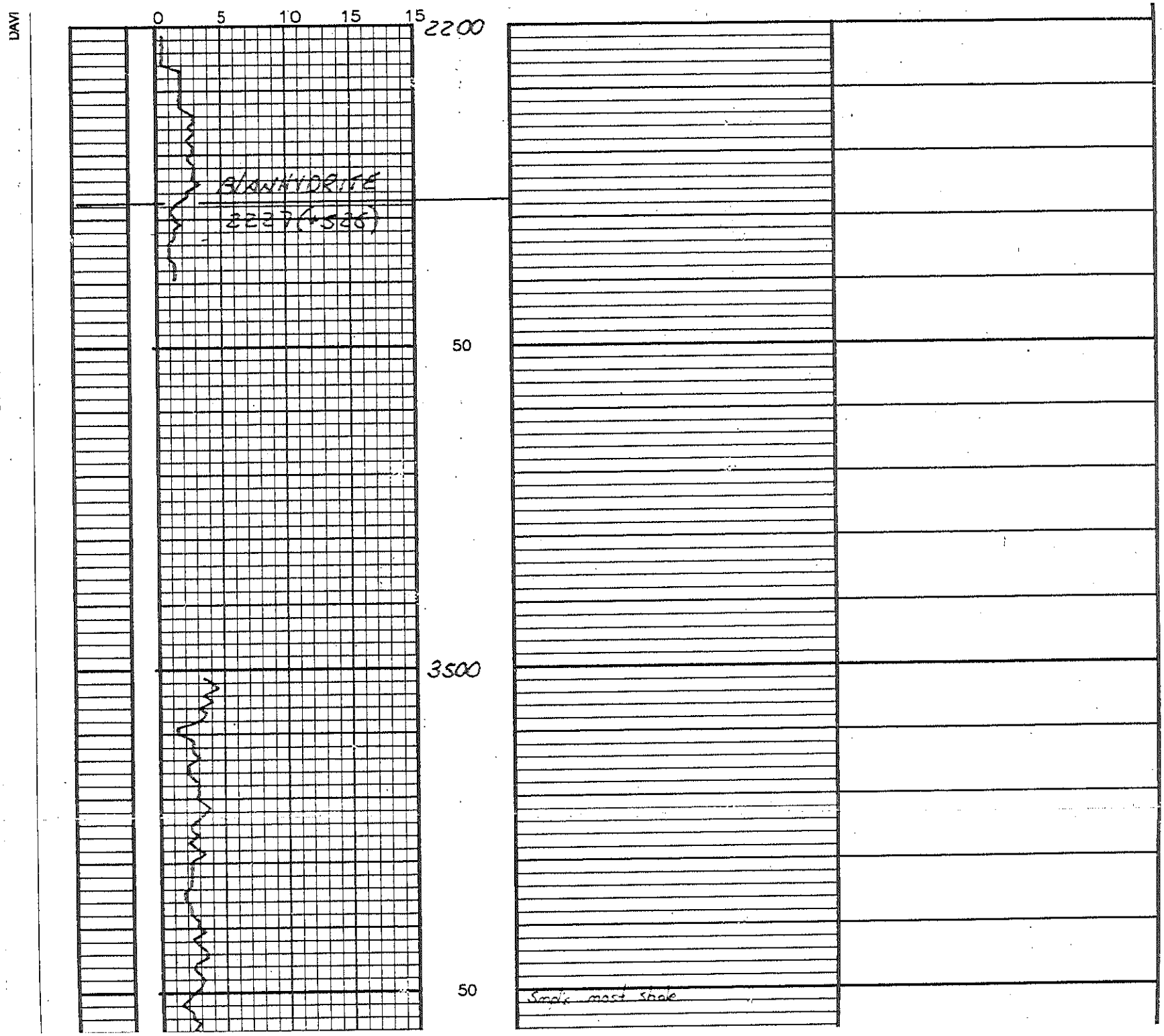


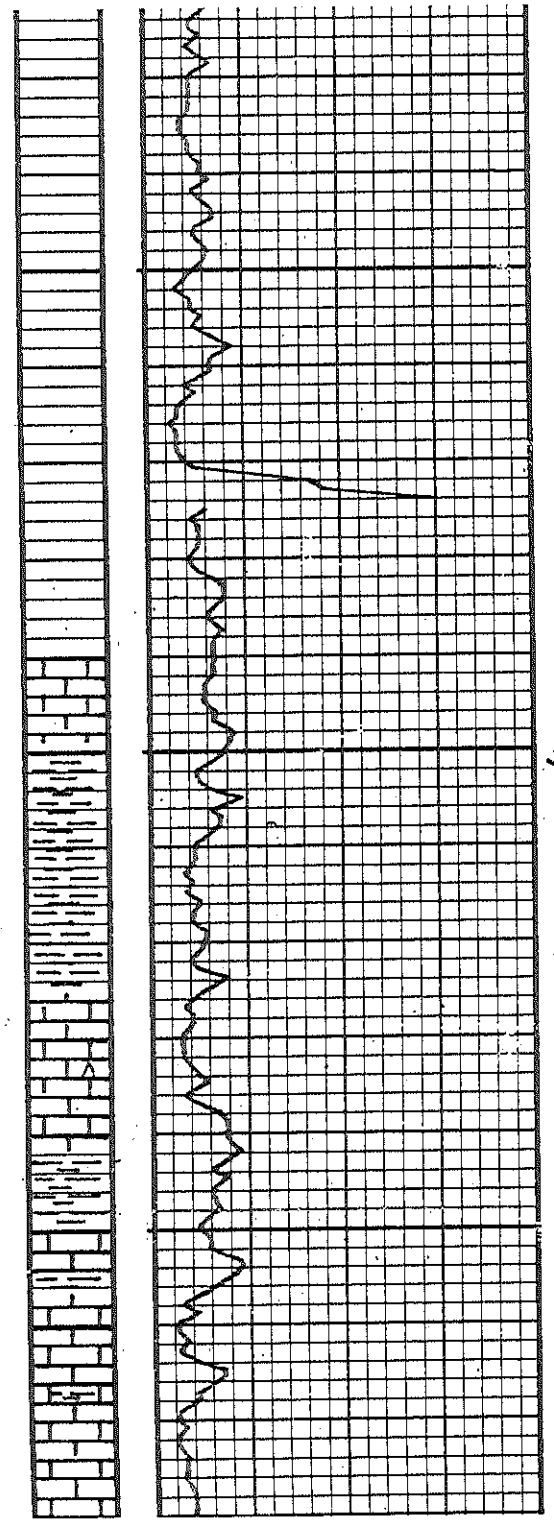
Anhydrite | Salt | Sandstone | Shale | Carb sh | Limestone | Ool.Lime | Chert | Dolomite

SCALE " = 100'



DAVIDJ-6


DAVI
0
5
10
15
15
2200
BLANKYDRITE
2227 (+526)
50
3500
50
Sand: most shale



50

3500

50

Smpl's most shale

Trip Smpl's, Most red shale

LS brown, gray, tan, loss org. chky, wh (Most shale)

Shale gray, green & rust silty

BB

LS gray - tan tan silty loss chky wh & Chf gray, white

Shale gray - black

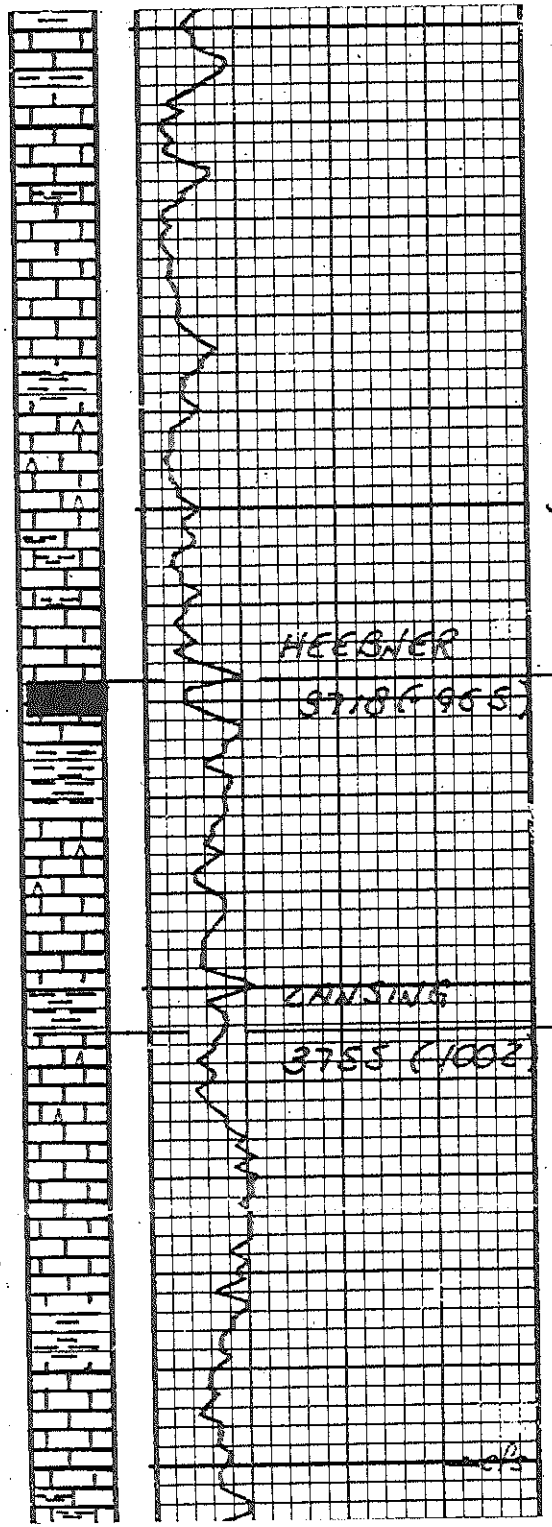
LS tan - brown tan, loss - ool dense wh & Shale gray, black, green & rust

LS gray - brown tan loss org

LS org gray tan loss - ool mold & ns

Bit Trip @ 3574
strap .22 short

Vis 72 Wt 8.7 F/L 6.0
Chl. 2,200 PH 11.5 CCM 2#
(10-4-09)



50

3700

50

3800

LS tan-brown fxln foss-ool dense vvd, + Shale gray, black, green + rust

LS gray-brown fxln foss arg

LS crm-gray fxln foss-ool Pmold ∅ NS

Shale gray, black + green

LS crm-tan fxln foss-ool IP chky Pmold ∅ NS + Cht tan foss

LS gray-brown fxln sill, foss arg vvd

Shale black carb

Most Shale gray, black, green + rust

LS gray-crm fxln foss-ool IP chky Pmold ∅ NS + Cht white opq

LS tan-gray vfxln dense vvd

Shale gray, green + black

LS crm-tan fxln-fxln foss-ool IP chky Pmold ∅ spd asph sm, NSFO, v odor + Cht crm-white opq

LS crm-white vfxln silty foss ool IP dense vvd

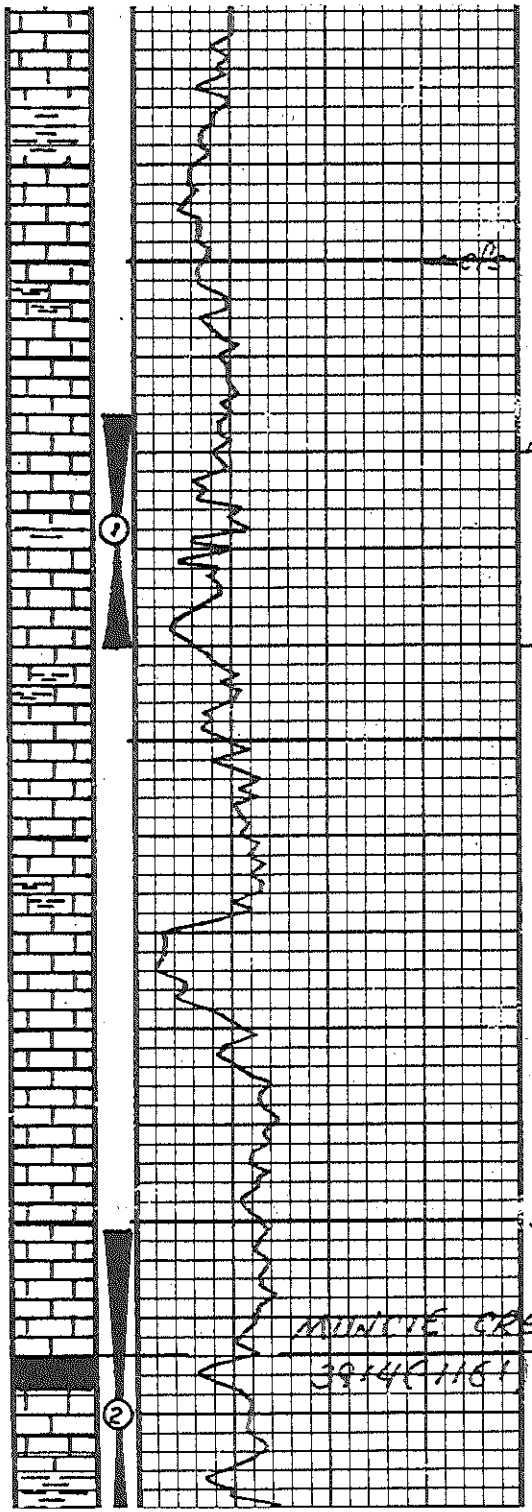
LS AR + Shale gray-green

LS tan-crm fxln ool, Pool ∅ vg Pixln ∅ S.FSFO, spd sta, spd dull Fluor, lt odor

LS gray-crm fxln foss-ool IP

Survey @ 3840, 3/4°

DST #1 3816 - 3840
30 - 30 - 45 - 90
BLOW:
I.F. 5½"
I.S.I. weak surface return
F.F. 6"
F.S.I. weak surface return
RECOVERY:
40' O.S.W M. (40% W 60% M)



ml IP dense NVP

LS AA + Shale gray-green

LS tan-crm f-xln ool Pinpl ϕ & Pixln ϕ S.ESFO, spotd stn, spotd dull fluor, lit odor

LS gray-crm f-vf-xln foss-ool IP chky Pmoldϕ lt spotd stn, NSFO, dull spotd fluor, odor

LS crm-off white micro xln dense NVP

LS tan-gray vf-xln ool-ool IP Pmoldϕ most NVP NS

LS tan-crm vf-mxln foss-ool IP sltly chky Pmoldϕ-Pinlnϕ S.ESFO, spotd-unif lt stn, spotd-unif fluor, F odor

LS tan-crm f-xln foss-ool IP some chky NVP + Shale gray-green

LS tan-crm f-vf-xln foss-ool IP dense NVP

LS crm-white f-xln ool IP chky Pool mod ϕ NS

LS lt gray-tan vf micro xln sltly foss dense NVP

LS gray-tan vf micro xln dense NVP

Shale black carb

LS gray-tan f-vf-xln foss Pmoldϕ dense S.SFO, spotd stn, spotd fluor, lit odor + Shale gray, black + green

DST #1 3816 - 3840
30 - 30 - 45 - 90
BLOW:
I.F. 5½"
I.S.I. weak surface return
F.F. 6"
F.S.I. weak surface return
RECOVERY:
40' O.S.W.M. (40% W 60% M)
62' O.S.M.W. (70% W 30% M)
124' M.W. (85% W 15% M)

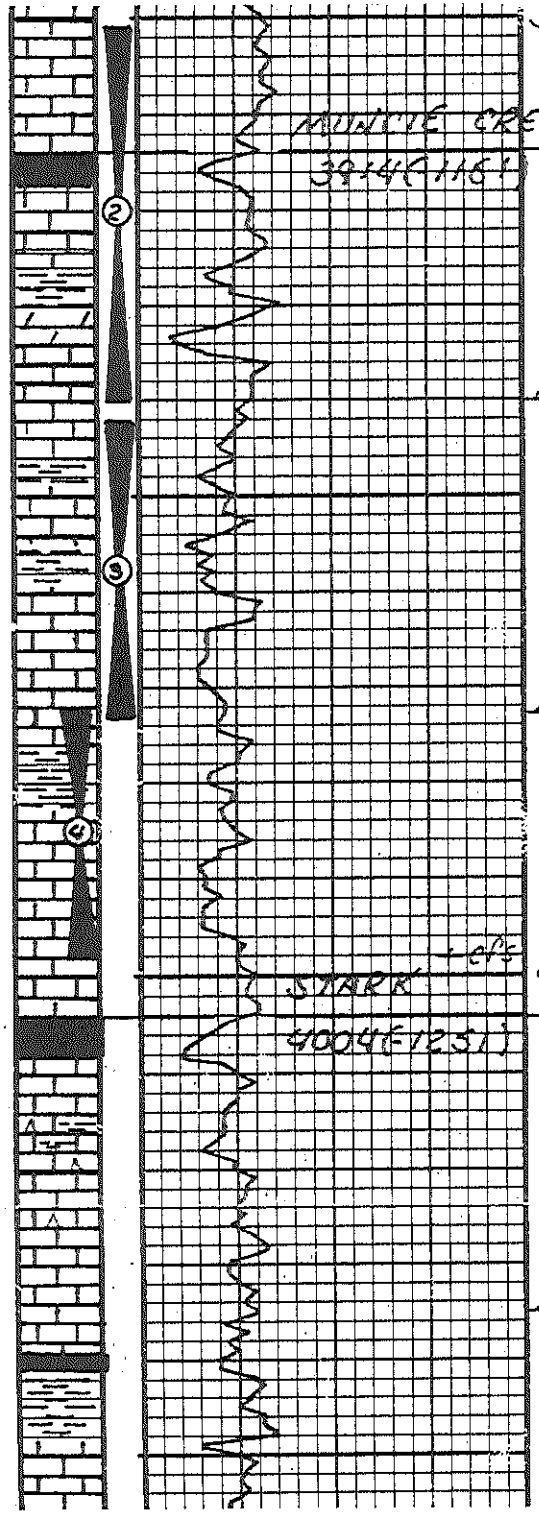
226' TOTAL FLUID (Chl. 48,000)
I.H.P. 1876#
I.F.P. 18-77#
I.S.I.P. 1184#
F.F.P. 80-116#
F.S.I.P. 1198#
F.H.P. 1830# B.H.T. 113°F

Vis. 50 Wt. 9.0 Fil. 6.8
Chl. 3,000 PH 11.0 LCM 1.5#
(10-5-09)

DST #2 3901 - 3940
30 - 30 - 45 - 60
BLOW:
I.F. 9"
I.S.I. No return
F.F. 11"
F.S.I. weak surface return
RECOVERY:
30' O.S.W.M. (30% W 70% M)
121' O.S.M.W. (55% W 45% M)
124' M.W. (90% W 10% M)

275' TOTAL FLUID (Chl. 52,000)
I.H.P. 1938#
I.F.P. 20-108#
I.S.I.P. 1253#
F.F.P. 111-175#
F.S.I.P. 1252#
F.H.P. 1880# B.H.T. 114°F

Vis. 53 Wt. 9.1 Fil. 6.4
Chl. 3,300 PH 11.5 LCM 1.5#
(10-6-09)



CS gray-tan vf micro xln dense NVP

Shale black carb

CS gray-tan f-vfxln foss P mod P dense S.S.F.O. spd sta, spd fluor, lt odor & Shale gray, black & green

Dolo tan-crm fxln sltly foss-ool F-P ixln P & E P xgy-pp P F.S.F.O. spt'd-wat sta, spt'd fluor, F-odor

CS gray-brown vf micro xln dense few foss frag NVP

CS AB & Shale gray, black, green & brown

CS tan-gray fxln foss-ool chky, LP F-P iport P & E P ixln P S-F.S.F.O. spt'd-wat sta, spt'd fluor, F-odor

CS brown, gray f-vfxln sltly foss-ool dense NVP & Shale black, gray & green

CS tan-crm fxln ool-foss P mod P & P ixln P, F.P.S.F.O. spt'd-wat sta w/ few pcs black asph sta, spt'd fluor, F-odor

Shale black carb

CS tan-gray f-vfxln ool-ool LP P ool mold P, V.S.S.F.O. spt'd sta, spt'd fluor, strong S odor

CS tan-gray f-vfxln sltly foss dense some chky NVP

Shale black carb, rust, green & gray

CS tan-gray vfxln sltly foss NVP dense

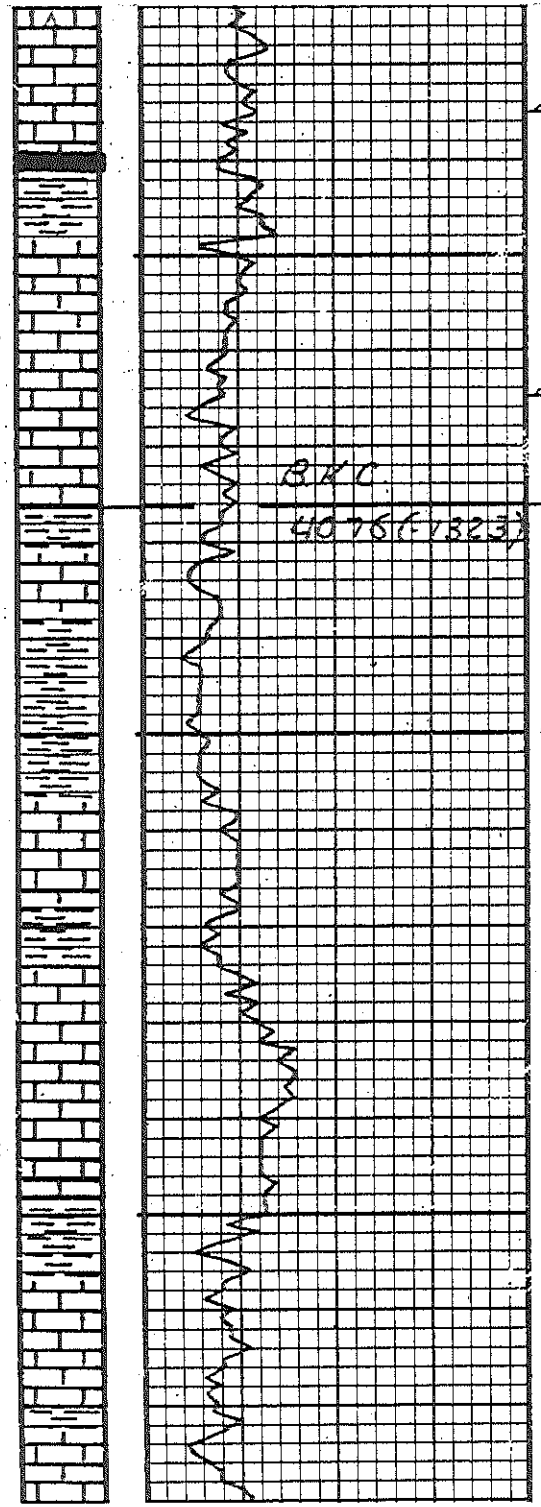
I.H.P. 1956#
I.F.P. 20-108#
I.S.I.P. 1253#
F.F.P. 111-175#
F.S.I.P. 1252#
F.H.P. 1880# B.H.T. 114°F

Vis. 53 Wt. 9.1 Fil. 6.4
Chl. 3,300 PH 11.5 CCM 1.5#
(10-6-09)

DST #3 3942-3973
30-30-45-90
BLOW:
I.F. B.O.B. 22 min.
I.S.I. ½" return
F.F. B.O.B. 30 min.
F.S.I. 3½" return
RECOVERY: 20S' G.I.P.
45' G & M.W.C.O.
(5% G 50% O 35% W 10% M)
61' O.S.M.W.
(50% W 50% M)
307' M.W.
(90% W 10% M)
413' TOTAL FLUID (Chl. 50,000)
I.H.P. 1987#
I.F.P. 25-123#
I.S.I.P. 1224#
F.F.P. 127-200#
F.S.I.P. 1244#
F.H.P. 1931# B.H.T. 116°F

Vis. 50 Wt. 9.0 Fil. 6.4
Chl. 5,600 PH 11.5 CCM 1#
(10-7-09)

DST #4 3972-3998
30-30-30-30
I.F. 3"
I.S.I. No return
F.F. 2"
F.S.I. weak surface return
RECOVERY:
62' S.O.C.M. (2% O 98% M)
62' O.S.W.M. (27% W 73% M)
124' TOTAL FLUID (Chl. 40,000)
I.H.P. 2002#



LS tan-gray f-vfxln silty foss dense some chky NVØ

Shale black carb, rust, green & gray

LS tan-gray vfxln silty foss NVØ dense

LS brown-gray vf-fxln ool foss p.p. fair spty stn. NSFO, spty fluor lit odor

LS tan-gray f-vfxln silty foss dense NVØ

Shale gray, black, green & rust + LS gray vfxln arg

Most Shale rust, gray & green

LS tan-off white f-vfxln silty foss some chky NVØ

Shale gray, green, rust & black

LS tan-gray f-vfxln silty foss chky p.p. NVØ

LS tan-gray vfxln silty foss NVØ dense + Shale rust, black & gray

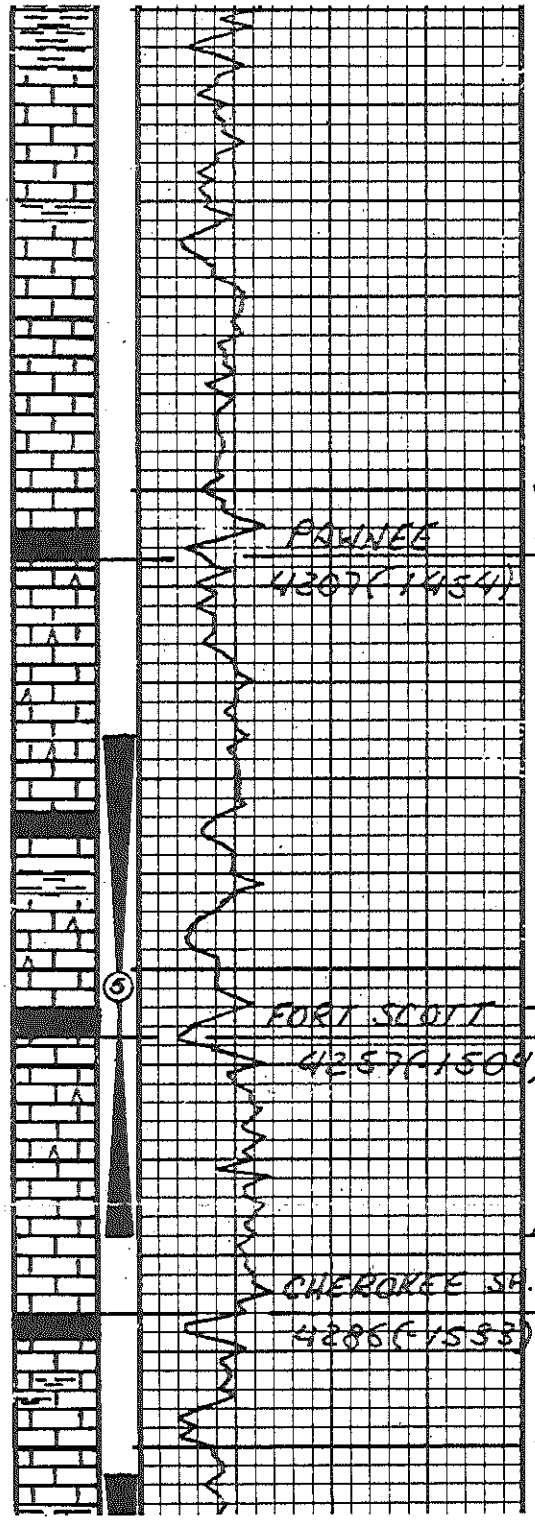
Shale black - gray & green

LS crm-off white f-vfxln foss-ool chky Pvgy Ø NSFO

LS AA + Shale gray, black, green & rust

I.F. 3"
I.S.I. No return
F.F. 2"
F.S.I. weak surface return
RECOVERY:
62' S.O.C.M. (2% O 98% M)
62' O.S.W.M. (27% W 73% M)
124' TOTAL FLUID (Chl. 40,000)
I.H.P. 2002#
I.F.P. 20-51#
I.S.I.P. 1016#
F.F.P. 58-77#
F.S.I.P. 992#
F.H.P. 1936# BHT 109°F

Vis 56 Wt 9.2 Fil 6.8
Chl. 5,300 PH 11.5 CCM 1#
(10-8-09)



Shale black - gray & green

LS crm - off white f-xln foss - ool chky Pxln ø v.S.F.O.

LS AA & Shale gray, black, green & rust

LS gray, tan, v f-xln few foss frag v.v ø dense

LS gray - tan f-v f-xln foss - ool I.P. v.v ø

Shale black sub carb

LS crm - off white f-v f-xln ool - ool I.P. some chky v.v ø & Cht white opq

LS gray - tan v f-xln slity foss - ool dense v.v ø & LS brown micro xln & Cht brown - gray

Shale black carb

LS tan - brown f-xln ool - ool I.P. Pxln ø & Pool ø f-fr S.F.O. spt'd v.v ø dk sta, gold fluor, fr odor & Cht brown & white opq.

Shale black carb

LS tan - gray f-xln chky I.P. ool v.P. opq, S.S.F.O., rare spt'd sta & fluor, fnt odor & Cht gray & brown slity foss

LS tan - gray v f-xln few foss frag v.v ø dense

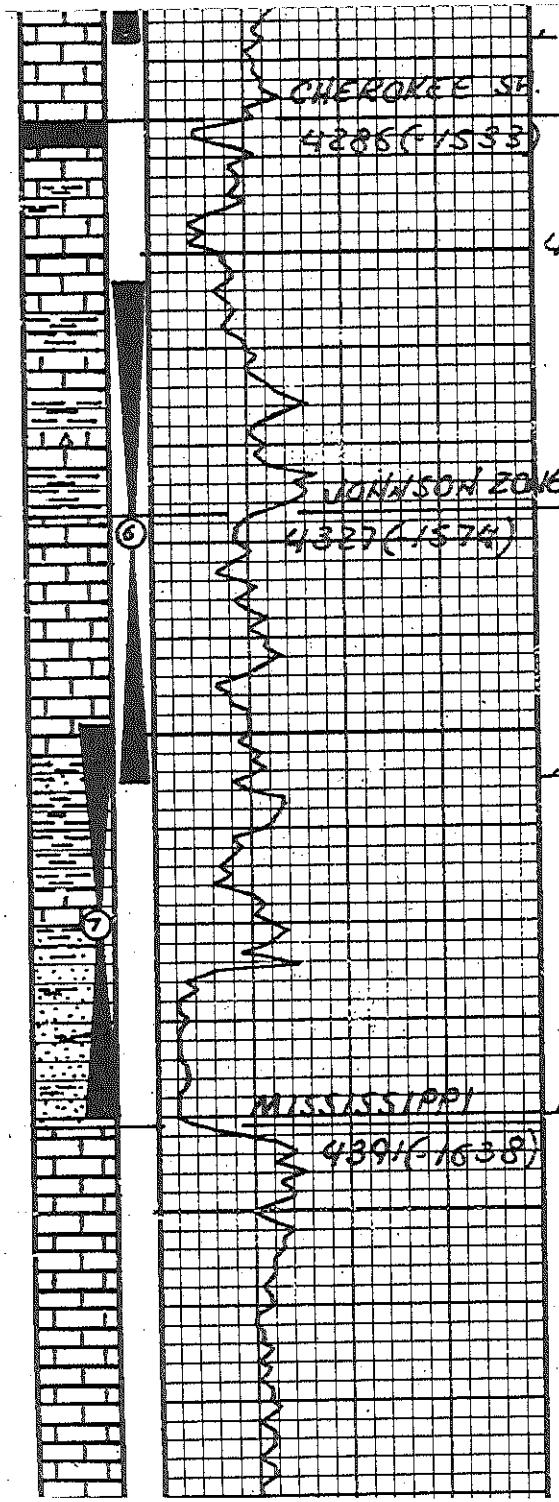
Shale black carb

LS tan - gray f-xln foss - ool chky Pxln ø v.S.F.O. spt'd sta & fluor fnt odor & Abnt shale green, gray, rust & black

DST #5 4226 - 4278
30 - 30 - 60 - 90
BLOW:
I.F. 3½"
I.S.I. weak surface return
F.F. 4"
F.S.I. ½" return
RECOVERY:
20' O & W.C.M.
(7% O 13% W 80% M)
124' S.O. & W.C.M.
(1% O 9% W 90% M)

144' TOTAL FLUID
(Chl 29,000 35° API)
I.H.P. 2169#
I.F.P. 29 - 56#
I.S.I.P. 931#
F.F.P. 69 - 98#
F.S.I.P. 975#
F.H.P. 2142# BHT 112°F

Vis. 51 Wt. 9.3 Fil. 7.2
Chl. 5,000 PH 11.0 LCM 1#
(10 - 9 - 09)



LS tan-gray vfxln tow foss frag wvg dense

Shale black carb

LS tan-gray fxln foss-ool chky Pixln & v.s.s.f.o. spld stn & fluor fnt odor & Abnt shale green gray, rust & black

LS tan-gray vfxln silty foss dense wvg & Shale black-gray

LS tan-gray f-vfxln silty foss wvg dense & Shale black, gray & green w/ some lht white-gray

LS brown-gray f-vfxln foss LP Pixln & & Pyxy & F.G.S.F.O (some bleeding) spld-unif dk stn, spld fluor & odor

LS w/ show AA & LS tan-gray f-vfxln foss-ool Pyxy & spld stn, N.S.F.O. & tbd chic SS tan, clr qtz fmgrn sub ang mod sort, comp Pisd F.S.F.O spld-unif stn, dull spld fluor, F odor

Most shale black, green gray & rust & LS tan-gray f-vfxln silty foss Ppp & spld asph stn N.S.F.O.

Shale green, yellow, black, gray & rust & SS green-gray v fgrn well sort ang. Pisd spld stn

SS brown-clr qtz fmgrn some ccs sub ang, sub rd mod. P sort, fri. F.G isd, F.G.S.F.O, spld-unif stn, dull spld fluor, fnt odor & Abnt Shale AA

LS white, gray f-m sdy, chky LP wvg

LS off white-tan f-m sdy wvg

LS crm white f-m sdy, chky LP wvg (abnt Shale slough)

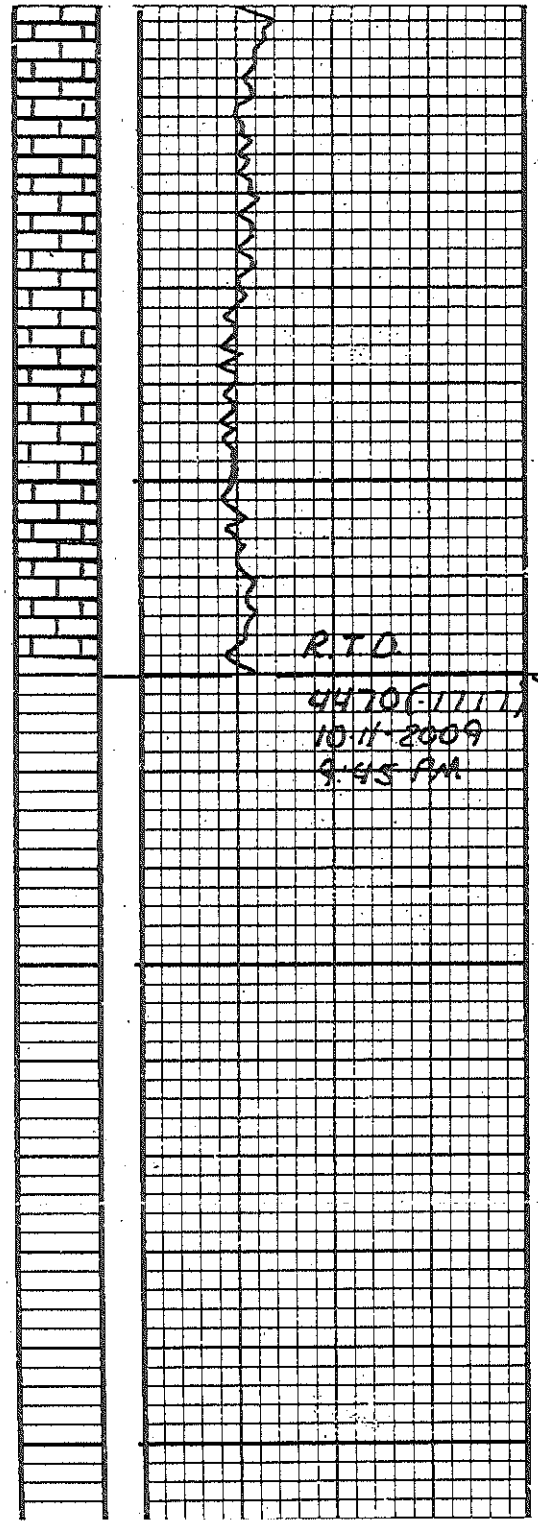
F.S.I.P. 975#
F.H.P. 2142# B.H.T 112°F

Vis. 51 Wt. 9.3 Fil. 7.2
Chl. 5,000 PH 11.0 LCM 1#
(10-9-09)

DST #6 4303-4355
30 - 30 - 60 - 60
BLOW:
I.F. 2½"
I.S.I. No return
F.F. 3"
F.S.I. surface return died 25min.
RECOVERY: 90' G.L.P.
30' G.O.C.M.
(5% G 4% O 91% M)
62' G.O.C.M.
(10% G 1% O 89% M)
92' TOTAL FLUID
I.H.P. 2260#
I.F.P. 29-50#
I.S.I.P. 626#
F.F.P. 54-81#
F.S.I.P. 863#
F.H.P. 2202# B.H.T. 114°F

Vis. 46 Wt. 9.4 Fil. 6.8
Chl. 4,400 PH 10.5 LCM. 5#
(10-10-09)

DST #7 4349-4390
15 - 30 - 45 - 90
BLOW:
I.F. B.O.B. 4min.
I.S.I. B.O.B. 7min.
F.F. B.O.B. 3½min.
F.S.I. B.O.B. 9 min.
RECOVERY: 1280 G.L.P.
550' G.O.
(35% G 65% O 36°API)
183' G.O.C.M.



CS off white-tan f-m sdy vvd

CS crm-white f-m sdy chky IP vvd (Cont. Shale slough)

CS white-gray f-m sdy chky few loss flag

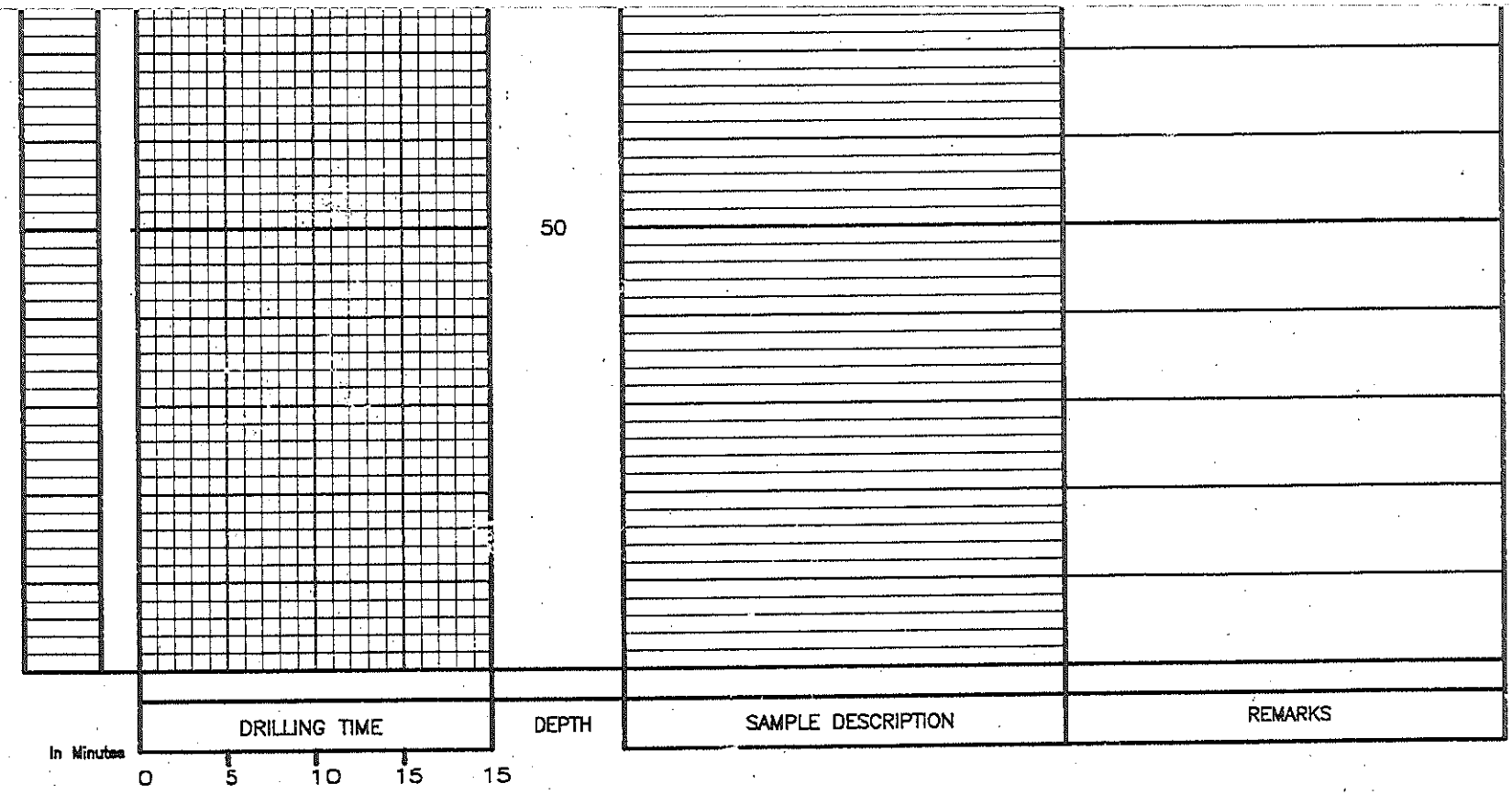
CS crm-white f-m sdy chky IP some pyr

CS AA + CS tan v-f-m sdy dense vvd

CS white-crm f-m sdy, slly cal, chky IP vvd

15 - 30 - 45 - 90
BLOW:
I.F. B.O.B. 4 min.
I.S.I. B.O.B. 7 min.
F.F. B.O.B. 3½ min.
F.S.I. B.O.B. 9 min.
RECOVERY: 1280 G.I.P.
550' G.O.
(35% G 65% O 36° API)
183' G.O.C.M.
(30% G 20% O 50% M)
246' G.W. & S.O.C.M.
(20% G 1% O 1% W 78% M)
979' TOTAL FLUID
I.H.P. 2240#
I.F.P. 68-167#
I.S.I.P. 1154#
F.F.P. 186-386#
F.S.I.P. 1144#
F.H.P. 2145# B.H.T. 121°F

Survey @ 4470' 1°


50
DRILLING TIME
DEPTH
SAMPLE DESCRIPTION
REMARKS
In Minutes
0
5
10
15
15