



UD w/ OIL SPOTS

L (GR 18.8°)  
CM (10% O, 90% M)

31P  
GCCO (GR 23°)  
OCMW

31P  
320 (GR 33°)  
330CM  
340CM  
350CMW

31P  
320 (35GR)  
330CM

S & DEV. SURVEYS

RRAPS:  
6.46 SHORT  
2.57 SHORT  
DN SURVEYS:  
1/4° @ 14945-1.5°  
1°

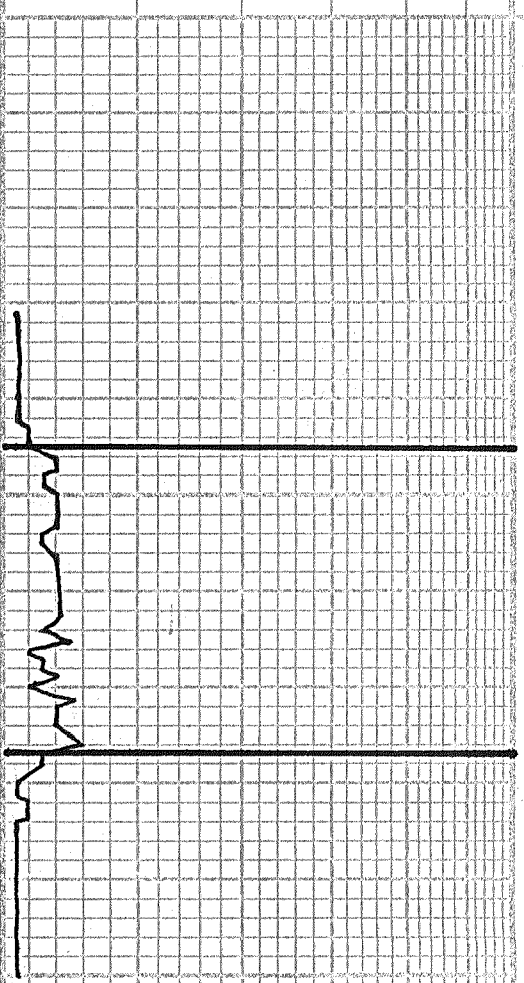
OS	LOG	CAL
10/27	3#	1300
12/27	2#	1000
8/21	2#	1000
10/27	2#	1000
13/30	2#	1000
15/33	1.5#	1200
19/25	2#	1100
21/18	1/2#	1000

### LEGEND

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

DRILLING TIME IN MINUTES  
PER FOOT  
Rate of Penetration Decreases

5" 10" 15" 20" 25"



DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

**ANHYDRITE-TOP**  
3145 (+107)

**ANHYDRITE-BASE**  
3177 (+45)

NOTE: 22 STAND SHORT  
TRIP PRIOR TO DST#1

**DST #1**  
**(3548-3650)**  
**30"-60"-60"-90"**

DST

LOG 7710

#1

3550

60

70

80

90

3600

10

20

30

40

3650

60

70

80

90

3700

10

20

30

40

3750

sh: rust, red, silty → sandy, v. fn. grain ed, sh: green, waxy w/ sh grey, dk. grey

sh: rust, red marion w/ some interbedded abhy, silty, sandy, sh: grey, dk. grey, green, waxy

sh: red, rust, peach, v. silty → sdy w/ anhy nodules; sh: dk. grey, grn waxy

sh, siltstone, v. fn. grained ss: as above

sh: rust, brown, sandy, silty few pcs sh: grey, green-waxy

sh: as above w/ few pcs lt. grey off wh, v. fn. grained ss. calc, firm no vis φ no show

sh: rust, brown, reddish-brown, silty, sandy (v. fn. grnd) in part

sh: as above

ls: off wh, tan, lt. grey, fn-med granular w/ calcite cement, v. sli. foss; pr-tr ppt & vuggy φ; scat fr intergranular φ; gd show hvy fo, bleeding on break, spotty to full, dk to vry dk stain & sat, gd cut, no odor sh: rust, brown, red-brown, silty

sh: rust, red, silty, sli. sandy w/ considerable sh: grey, dk. grey, w/ green, waxy sh.

sh: as above w/ few clusters lt. grey, siltstone → v. fn. grnd ss, friable, shaley, no vis φ no show

sh: rust, brown, silty → sdy, sh: grey, dk. grey, calc in part

sh: rust, brown, silty, sh: red, grey, w/ green waxy shale, few pcs brown dolo: v. fn. frxtln, sli sdy no vis φ, no show

ls: off wh, tan, v. fn. some med xtlr v. sli. foss, scat calcite, cpl pcs w/ app pr. vuggy φ, no show. considerable Δ, red, orange, brown, fresh, sharp op → semi. trans

ls: tan, brown, grey-brown, v. fn. frxtln, tr. foss, dense, no vis φ, no show

ls: as above, few pcs sli. sandy, no vis φ, sh: rust, brown, silty, siltstone: lt. grey, grey-green

sh: brown, rust, silty, few pcs dolo: brown, grey, v. fn. frxtln, shaley, tr. pr interxtln φ, no show

ls: off wh, fn. some med xtlr, sli sandy, tr. foss, tr. calcite, no vis φ N.S. considerable sh: brown, silty

ls: tan, fn. med xtlr, v. sli. foss, tr. calcite, no vis φ, no show: dolo: lt. grey, v. frxtln, no vis φ no show

ls: grey, dk. grey, some brown fn. med xtlr, foss, few pcs sli. dolomitic some mottled, no vis φ no show

IFP: 1 BLOW BLDG 10 3/2  
ISIP: NO BLOW  
FFP: SURF BLOW BLDG TO 2 1/2"  
FSIP: NO BLOW

RECOVERED:

65' MUD w/ OIL SPOTS

HSP: 1673<sup>#</sup> - 1646<sup>#</sup>

FP: 16<sup>#</sup>-32<sup>#</sup> / 31<sup>#</sup>-51<sup>#</sup>

SIP: 1045<sup>#</sup> - 988<sup>#</sup>

BHT: 123° F

NEVA

3625 (-373)

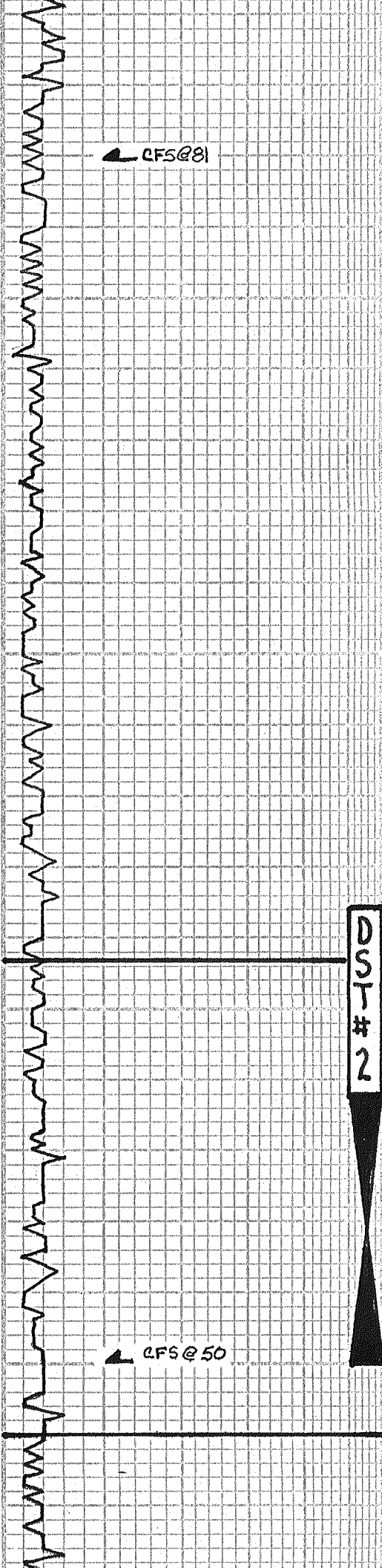
RED EAGLE

3687 (-437)

FORAKER

3737 (-485)

CF5@50



60  
70  
80  
90  
3800  
10  
20  
30  
40  
3850  
60  
70  
80  
90  
3900  
10  
20  
30  
40  
3950  
60  
70

ls: brown, fn-medxtln, sli. ool, v. sli. foss, no vis  $\phi$ , no show w/ shale: grey, dk. grey, calc in part, shale: rust, orange  
ls: lt. grey - brown, grey, micro-fn xtln, dense; ls: off wh, lt. grey, fnxtln and haly in part  
dolo: grey, dk. grey, v. fn. xtln, shly sh: grey, green, calc in part  
sh: brown, orange, sli. sandy, sh grey, green, calc in part, few pcs dolo: dk. brown, v. fnxtln, hard, dense  
sh: as above: inc in grey sh few pcs dolo as above  
sh: grey, green, some brown, rust  
ls: wh, off wh, fnxtln, oolitic, sli. foss, calcite cement, no vis  $\phi$  NS.  
ls: tan, grey, v. fnxtln, v. sli. foss, dense; sh: grey, calc, green waxy  
ls: tan, lt. grey, fnxtln, dense, dolo: grey, v. fnxtln, shaley, no vis  $\phi$ , no show; sh: grey, green  
sh: grey, dk. grey, calc in part, sh: green, blue-green, v. sli. sandy  
sh: brown, sli. dolomitic, orange sli. sandy, grey, green  
sh: brown, rust, sli. silty, green, waxy, few sand grains, grey  
ls: off. wh, lt. grey, medxtln, sli. foss, granular in part, scat calcite no vis  $\phi$  no show; sh: rust, brwn, grey  
ls: grey, dk. grey, brown, medxtln, mottled, no vis  $\phi$ , no show; sh: grey dk. grey, calc  
ls: tan, lt. grey, fn-medxtln, v. sli. foss, granular in part, dense, no vis  $\phi$ , no show  
ls: off wh, tan, lt. grey, fn-medxtln tr. foss, sli. chalky, fr ppt  $\phi$ , no show w/ sh: grey, green, some brown  
ls: wh, tan, lt. grey, fn-medxtln, fr ool, mottled in part, no vis  $\phi$  no show; ls: wh, fnxtln, chalky in part  
sh: rust, brown; sh: grey, dk. grey, calc in part; sh: green, waxy  
ls: off. wh, tan, fn-medxtln, v. sli. ool, v. sli. foss, no vis  $\phi$ ; no show  
sh: grey, grey-green, sli. calc; few pcs brown, scat. sh inclusions  
ls: off. wh, tan, fnxtln, granular, ool. in part, scat calcite cement, scat pr-trace fr intergranular & vuggy  $\phi$ , gd  $\phi$  of spl w/ spotty full lt-dk stain & sat. several pcs w/ F-65 live ppts FO on brk, gd show hvly dk oil, fr slow streaming cut, no odor  
sh: mostly grey, green, some brown  
ls: wh, tan, v. fn xtln, dense; ls: wh, tan, fn-medxtln, ool. in part, scat calcite, poss, pr interxtln,  $\phi$ , no show  
ls: wh, off. wh, fn-some medxtln, sli. oolitic, no vis  $\phi$ , no show, w/ sh: grey, green

NOTE: 10 STAND SHORT TRIP PRIOR TO DST #2

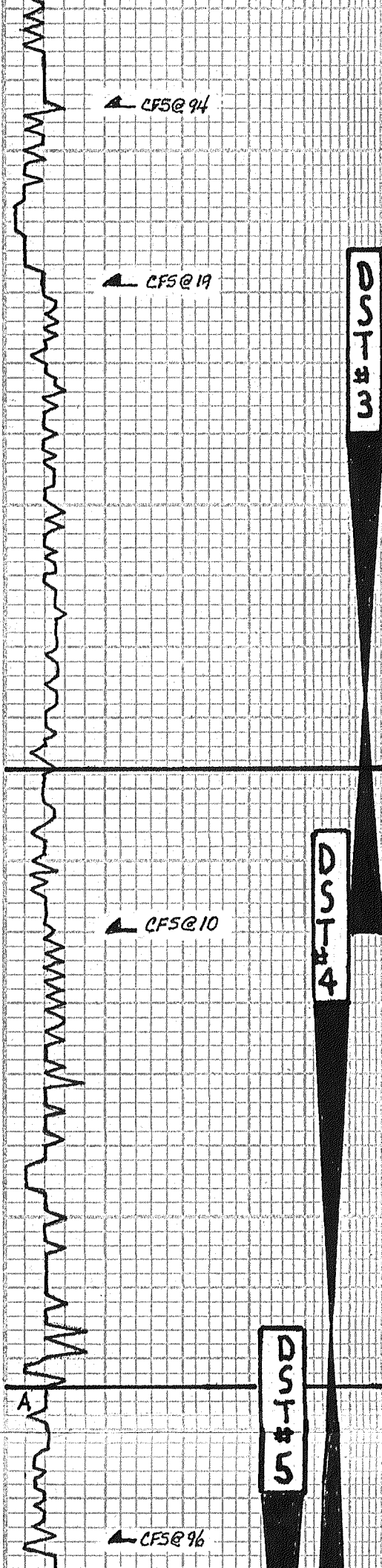
**DST #2**  
**(3912 - 3950)**  
**30"-60"-60"-90"**  
1FP: 1/4" BLOW BLDG TO 3"  
ISIP: NO BLOW  
FFP: 1/4" BLOW BLDG TO 3"  
FSIP: NO BLOW  
**RECOVERED:**  
**15' CO (GR 18.8)**  
**55' SOCM (10% O, 90% W)**  
**HSP: 1896 - 1850**  
**FP: 23-27/34-45**  
**SIP: 1073 - 1113**  
**BHT: 131 F**

**STOTLER**  
**3893 (- 641)**

**TOPEKA**  
**3960 (- 708)**

3rd STAND PULLED THE (+30-35K) ON TRIP OUT FOR DST #3





4000

4050

4100

4150

11200

ls: off wh, fn-medxtln, sli foss, calcitic, no vis  $\phi$ , no show; ls: wh, fnxtln, chalky; sh: green, some w/ ls: inclusions; ls: tan, beige, fn-med xtln, sli calcitic, scat. lrg calcite xls no vis  $\phi$ , no show  
sh: grey, dk grey, green, calc in part to greenish-grey shaley ls: as above w/ green, shale, sli sandy  
sh: rust, brown, silty  $\rightarrow$  sandy, to ss/siltstone, v. fn grained, shaley (red) friable, no vis  $\phi$ , no show; few pcs wh-green wh, v. fn, grnd, shaley, friable ss. no vis  $\phi$ , no show  
sh: grey, green, w/ few pcs ls: tan, medxtln, dense, some greenish w/ included sh:  
ls: lt. grey, micro-v. fnxtln, dense w/ ls: tan, medxtln, sli calcitic, no vis  $\phi$ , no show; few pcs wh, fnxtln, chalky  
ls: lt. grey, micro-fnxtln, dense w/ sh: purple, silty  $\rightarrow$  sli. sandy  
sh: purple, brown, silty, calc; ls: v. fnxtln, purple, shaley  
sh: lt. grey, lt. green, silty; sli calc; sh: grey, calc in part; ls: dk grey, sli foss, shaley  
sh: lt. grey, silty, sli. calc; grey calc shale  $\rightarrow$  grey, fnxtln, shly ls.  
ls: grey, fnxtln, shaley, sli. chalky w/ sh: grey, green  
ls: tan, fn-medxtln, oolitic, foss, pr-scat fr to qd in feroolitic & foss  $\phi$ , pr-fr vuggy  $\phi$ , scat fr-gd lt & dk-blk stain w/ sat. fr-some vry gd SFO on break, gd med-fast streaming cut, v. ff. odor  
ls: tan, grey, brown, fn-medxtln sli. foss dense  
ls: grey, brown, micro-fnxtln, dense, ls: off. lt. grey, fnxtln, sli. chalky  
ls: as above; w/ ls: dk. grey, black fn-medxtln, dense; inc in shale, grey, dk. grey  
ls: grey, brown, micro-fnxtln, dense  
sh: grey, green, w/ few pcs ls: tan fn-medxtln, no vis  $\phi$ , no show  
ss: wh, tan, vary fn, grnd, most friable, few pcs calc, hard, rd, sub-rd well sorted, app pr intergrained  $\phi$ , spotty to even lt. brownst, 2 pcs w/ minute ppts FO on break, pr wk slow streaming cut, no odor  
sh: rust, brown, silty  $\rightarrow$  sli sandy  
sh: rust, brown, few pcs bright orange, w/ grey & green shale  
sh: as above; inc in grey-green sh  
ls: tan, fn-medxtln, sli foss, oolitic & ooc in part w/ pr. some fr ooc  $\phi$ , scat pr vuggy  $\phi$ , few large isolated vugs, spotty pr-gd dk brn/blk st w/ sat, FS'vry dk brn/blk oil w/ S-FS ppts brn oil on brk, some gas bubbles w/ w/ ring oil, no odor  
ls: tan, brown, fn-medxtln, dense, wh fnxtln, sli chalky ls: scat, dd oil stain, no show live oil

**DST #3**  
(4040-4110)  
30"-60"-60"-90"  
IFP: BOB IN 7"  
ISIP: SURF BLOW BLDG TO 5"  
FFP: BOB IN 7"  
FSIP: SURF BLOW BLDG TO 4"  
**RECOVERED:**  
378' GIP  
1192' SGCD (GR 23°)  
(5% GAS, 95% OIL)  
65' SOCMW  
(5% OIL 20% MUD 75% WTR)  
HSP: 1981<sup>#</sup>-1946<sup>#</sup>  
FP: 89<sup>#</sup>-252<sup>#</sup>/253<sup>#</sup>-452<sup>#</sup>  
SIP: 1191<sup>#</sup>-1170<sup>#</sup>  
BHT: 145°F

**OREAD**  
4087 (-835)

**DST #4**  
(4120-4215)  
30"-60"-60"-90"  
IFP: BOB IN 15"  
ISIP: WK BLOW BLDG TO 4 1/4"  
FFP: BOB IN 13"  
FSIP: WK BLOW BLDG TO 4 1/2"  
**RECOVERED:**  
378' GIP  
237' GCD (33 GR)  
(30% GAS, 70% OIL)  
141' G & OCM  
(15% GAS, 25% OIL, 60% MUD)  
HSP: 2052<sup>#</sup>-1968<sup>#</sup>  
FP: 27<sup>#</sup>-95<sup>#</sup>/104<sup>#</sup>-133<sup>#</sup>  
SIP: 883<sup>#</sup>-753<sup>#</sup>  
BHT: 136°F

**LANSING**  
4174 (-922)

**DST #5**  
(4189-4265)  
30"-60"-30"-60"

CFS@94

CFS@19

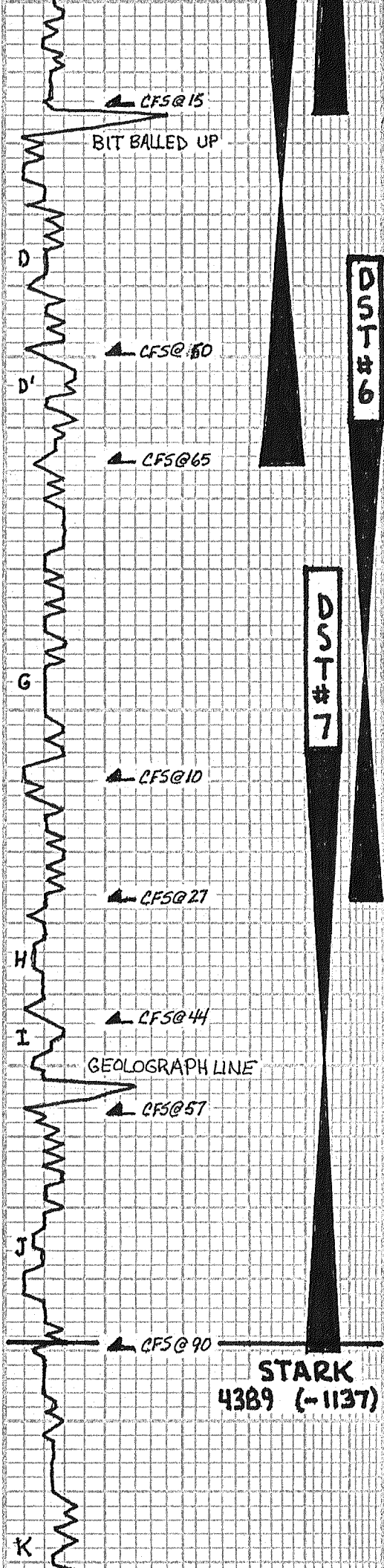
CFS@10

CFS@96

DST #3

DST #4

DST #5



7200

10

20

30

40

4250

60

70

80

90

4300

10

20

30

40

4350

60

70

80

90

4400

10

20

ss: lt. grey, vfn grained, calc in part, friable to firm, poss trace pr intergrained  $\phi$ , scat ad ojl residue, trace vpr wk cut, NSF0, no stain, no odor

sh: mostly rusty-brown, w/lt. grn sh w/ scat imbedded sand grains

sh: rusty-brown, some silty, few pcs siltstone; sh: pale green w/ few ls inclusions, sh: grey, bright orange, few pcs purple

ls: wh, tan, fn-medxtln, granular in part sli. calc foss, scat pyrite, pr-fr scat intergranular & vuggy  $\phi$ , scat pr tess-cast  $\phi$ , spotty to gd lt brown-dk brown blk st w/ some sat, F5F0 (lt-med brown & dk brown, hvv), few gas bubbles w/ ring of oil, fr slow streaming cut, v. ft. odor becoming frxtln, sli chalky w/ dec show toward base.

ls: wh, lt. grey, fn-medxtln, calcite in part, v. scat pr ppt & small vuggy  $\phi$ , opl pcs w/ pr spotty dk brown/blk st, 2 pcs w/ V55 dk brown oil globules, scat dd oil st, no odor

sh: grey, rust-brown, pale green

sh: rust-brown, grey; sh: pale green, some w/ ls inclusions; ls: tan, fn-medxtln, w/ imbedded green sh

sh: rust-brown, grey, pale green, w/ ls: tan, fn-medxtln, some interbedded red shale

ls: beige, lt. grey, fn-medxtln, trace calc & foss, calcite deposits along faces/fracs, some refermented ls grains, pr-few pcs w/ fr. interxtln  $\phi$ , some isolated vuggy  $\phi$  spotty to fr golden brown & dk brown st, 5-F5 ppt oil, few gas bubble w/ oiling pr-fr slow streaming cut, no odor

ls: as above, chalky in part, dec in  $\phi$  & show toward base @ CFS@10

sh: mostly med to dk grey

ls: dk. grey, fnxtln, dense; ss: lt. grey vfn-grained, calc w/ ls inclusions, shaley

ls: dk. brown, dk. grey, fn-medxtln, few pcs dolomite, mostly dense, hard, scat vpr ppt  $\phi$ , scat pr spotty dk st, few pcs w/ few isolated ppt FD on brk, opl pcs w/ very pr crush cut, no odor - CFS@27

ls: tan, fn-medxtln, v. sli. foss, chalky in part, app pr ppt & vuggy  $\phi$ , 4-5 pcs/tray w/ spotty pr st, 2 pcs w/ opl ppt. FD on brk no odor

sh: grey, green, some brown

ls: tan, lt. grey, fn-medxtln, chalky in part, dense, no vis  $\phi$ , N5

sh: brown, sli. silty; grey, calc, green, few pcs bright orange

sh: as above. inc in bright orange sh; few pcs ss: brown, vfn grnd, shaley, no vis  $\phi$ , no show

ls: tan, lt. grey, fn-medxtln, fr foss, pr some fr. ppt & vuggy  $\phi$ , scat pr interxtln  $\phi$ , fr-few pcs gd lt. brown st, scat pr dk/ld st, 5-F5F0 & few gas bubbles on break, slow fr streaming cut, no odor

ls: as above, w/ significant dec in show sli. inc in ad oil stain, becoming sli. chalky

sh: brown, silty in part; sh: grey, mica; sh: pale green

sh: as above, w/ ss: grey, lt. grey, v. fn grnd, rnd-subround, well-sorted, calc, firm, no vis  $\phi$ , no show

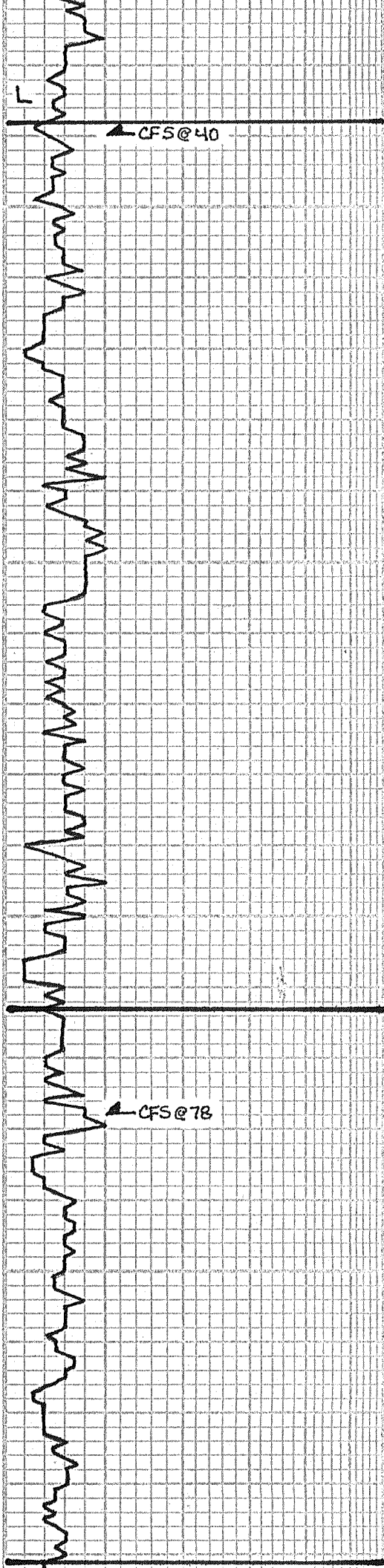
sh: rust-brown, sli silty, some grey

ls: wh, lt. grey, v. fn-fnxtln, most dense, vry scat, vry pr fr ppt  $\phi$ , 2-3 pcs/tray w/ pr spotty lt. st, 2 pcs total w/ isolated minute ppt. FD, pr slow cut, no odor

30"-60"-30"-60"  
IFP: BOB IN 1"  
ISIP: SURF BLOW BLDG TO 1/4"  
FFP: BOB IN 1"  
FSIP: SURF BLOW BLDG TO 1/4"  
**RECOVERED:**  
270' O&WCM  
(25% OIL, 75% WTR, 50% MUD)  
189' O&M&W  
(25% OIL, 15% MUD, 65% WTR)  
2202' V50&MCW  
(2% OIL, 3% MUD, 95% WTR)  
CNL: 17000 PPM  
SYSTEM: 1000 PPM  
HSP: 2096<sup>#</sup>-2035<sup>#</sup>  
FP: 235<sup>#</sup>-886<sup>#</sup>/919<sup>#</sup>-1199<sup>#</sup>  
SIP: 1247<sup>#</sup>-1247<sup>#</sup>  
BHT: 147<sup>o</sup>F

**DST #6**  
(4259 - 4327)  
30"-60"-60"-90"  
IFP: 1/2" BLOW BLDG TO BOB IN 22"  
ISIP: SURF BLOW BLDG TO 2 1/4"  
FFP: SURF BLOW BLDG TO BOB IN 22"  
FSIP: SURF BLOW BLDG TO 2"  
**RECOVERED:**  
282' GCO (GR 30°)  
(25% GAS, 75% OIL.)  
130' SG&OCM  
(10% GAS, 20% OIL, 70% MUD)  
40' GIP  
HSP: 2129<sup>#</sup>-2076<sup>#</sup>  
FP: 18<sup>#</sup>-93<sup>#</sup>/103<sup>#</sup>-154<sup>#</sup>  
SIP: 1312<sup>#</sup>-1310<sup>#</sup>  
BHT: 139<sup>o</sup>F

**DST #7**  
(4305 - 4390)  
30"-60"-60"-90"  
IFP: 1/4" BLOW BLDG TO 3 1/4"  
ISIP: SURFACE BLOW  
FFP: SURF BLOW BLDG TO 2"  
FSIP: SURFACE BLOW  
**RECOVERED:**  
125' SOCM  
(5% OIL, 95% MUD)  
HSP: 2189<sup>#</sup>-2079<sup>#</sup>  
FP: 36<sup>#</sup>-52<sup>#</sup>/56<sup>#</sup>-74<sup>#</sup>  
SIP: 1353<sup>#</sup>-1345<sup>#</sup>  
BHT: 133<sup>o</sup>F



30

40

4450

60

70

80

90

4500

10

20

30

40

4550

60

70

80

90

4600

10

20

30

40

ls: wh, lt. grey, v. fnxtln, sli chalky, dense

sh: brown, grey, scat ls inclusions, few pcs bright orange, rust

ls: tan, wh, vfnxtln, sli chalky, dense no vis  $\phi$ , no show

sh: grey

ls: tan, fn-medxtln, sli foss, no vis  $\phi$  no show; w/ ls: wh, fnxtln, sandy

sh: grey, green, some brown

ls: off-wh, lt. grey, fnxtln, sandy, no vis  $\phi$ , no show; ls: tan, lt. grey, fn-medxtln, v sli foss, no vis  $\phi$ , no show

sh: grey, calc in pt; sh: green w/ ls laminations &amp; inclusions; sh: brown, rust, orange

sh: grey, some sli. sandy; sh: green w/ ls inclusions, sh: brown; few pcs ls: detrital, green sh matrix

ls: greenish-grey, fnxtln, sandy, dense

ls: grey, fnxtln, dense w/ sh: grey, green

sh: mostly brown, rust, sli silty; sh: grey, sh: green, scat imbedded sd grs few pcs lt. grey, lt. brown, siltstone

sh: rust, brown, sli. silty; sh: green w/ ls inclusions  $\rightarrow$  green, fnxtln, shly ls; siltstone, grey; shale: grey, dk grey

sh: grey, green, rust, brown; w/ ls: tan, fn-medxtln, detrital, green sh matrix, tr. pyrite

sh: as above; w/ green shaley ls &amp; limey shale

ls: grey, tan, v. fn. fnxtln, dense;

ls: wh, fnxtln, chalky in part; few clusters, ss: grey, fn-grned, calc, shly

sh: grey, calc; sh: green, few ls inclusions, sh: brown, rust; few pcs dk grey, fnxtln, dense, ls

sh: grey, calc; some brown, green, bright orange; few clusters ss: clear, fn-med grained, poorly sorted, sub-rnd-sub l'ar, firm-hard, green sh matrix, no vis  $\phi$ , no fluor, st, cut, FO or cut

sh: grey, green, brown

ls: tan, lt. grey, fn-medxtln, sli sdy in part, no vis  $\phi$ , no show; ls: tan, v. fnxtln, no vis  $\phi$ , few areas of lt. discoloration; very fn isolated ppt  $\phi$ , few larger vugs, w/ wet stain, tr. dk brown oil, rare ppt brown oil, pre-edge cut, no odor; - CF5@78

sh: grey, med dk grey w/ ls lamina-tions, sh: green, some brown

ls: off-wh, tan, grey-brown, micro-fnxtln, dense, no vis  $\phi$ , no show; ls: wh, fnxtln, v. sli sandy, chalky in ptls: tan, lt. grey, micro-fnxtln, dense ls: off-wh, fn-medxtln, sli chalky, cpl pcs w/ v. pr vuggy  $\phi$ , no show

ls: as above

sh: grey, dk grey, brownish-black, some brown, few pcs green, w/ ls inclusions

ls: tan, grey-tan, fn-medxtln, sandy in part, v. sli foss, no vis  $\phi$ , no showls: tan, brown, fn-medxtln, sli sandy, no vis  $\phi$ , no show; wh, fnxtln, chalky in part - chalky

BKC

4438 (-1186)

PAWNEE

4563 (-1311)

spls rerun after log. 2 pcs total w/ pr spaly lt. st. 2 pcs w/ pr-tr. fr small vuggy  $\phi$ .

CHEROKEE



4650

ls: tan, lt. grey, v. fn - fnxtln, trace  
foss, no vis  $\phi$ , no show;  
ss: clear, fn-med grained, fr. sorting  
subrnd - sub L'lar, firm - hard, v. calc,  
no vis  $\phi$ , no st, fluor, cut, odor,  
NSFO

60

ls: as above w/ ss: a.a. N.S

70

sh: lt. grey, mica; med grey, green  
w/ scat, ls inclusions; ls: tan, lt. gry  
vfn - some med xln, sli sandy, no  
vis  $\phi$ , no show

80

sh: lt. grey, grey, green, brown, few  
pcs blue; sh: grey, green, sli sdy

90

ls: wh, tan, fnxtln, chally in part,  
no vis  $\phi$ , no show

sh: lt  $\rightarrow$  med grey, calc, sli. silty,  
some green, brown, purple shale

4700

ss: clear, wh, fn. med grained, sub  
round - sub L'lar, fr sorting, calc,  
no vis  $\phi$ , no st, fluor, odor or cut; NSFO

10

shale: lt. grey, grey, some green, few  
pcs, brown, purple

20

sh: lt. grey, grey, sh: brown, silty to  
sandy; few pcs green shale

30

sh: as above; few clusters ss: grey,  
fn. grained well sorted, calc, firm,  
w/ grey sh laminations; no vis  $\phi$ , NS

40

ss: grey, med grained, rounded, pr-fr  
sorting, friable, sh matrix, no vis  $\phi$ ,  
few large clear quartz subrnd sand  
grains

sh: brown, rust, sli silty

4750

ss: clear, wh, tan, fn. graind, subrnd,  
fr sorting, friable, fr intergrained  $\phi$

no fluor, st, cut, odor, no show FO

sh: mostly brown, w/ some grey,  
green, yellow

60

ss: clear, tan, fn. med graind, sub-  
rnd, fr sorting, firm, friable, sli.

calc in part, app pr - fr intergrained  $\phi$   
no fluor, st, cut, or odor, NSFO; few

70

large, sub round, clear, quartz sd  
grns; NS

80

sh: brown, red-brown, some brown  
lt to med grey

90

sh: as above, inc in orange shale;  
few pcs yellow

4800

ss: wh, tan, fn. crsp graind, L'lar,  
pr sorting, hard, quartzitic in app.

no vis  $\phi$ , no show; ss: wh, tan, grey  
fn. grained, rnded, well sorted, shaley

calc, poss, pr intergrained  $\phi$ , no st,  
fluor, cut or odor, no show FO

sh: brown, rust grey, some purple,  
green, yellow

10

ss: clear tan, few pcs wh, fn. med  
grained, firm, sub rnd, fr sorting

some shale in fill, poss pr inter-  
grained por.; no fluor, st, cut, odor

few large loose clear quartz sd grns  
sh: brown rust-brown, grey, green,  
few pcs yellow

30

sh: brown, rust-brown, sli. silty,  
some grey, green

40

sh: as above; w/ few pcs green  
sh w/ ls inclusions;

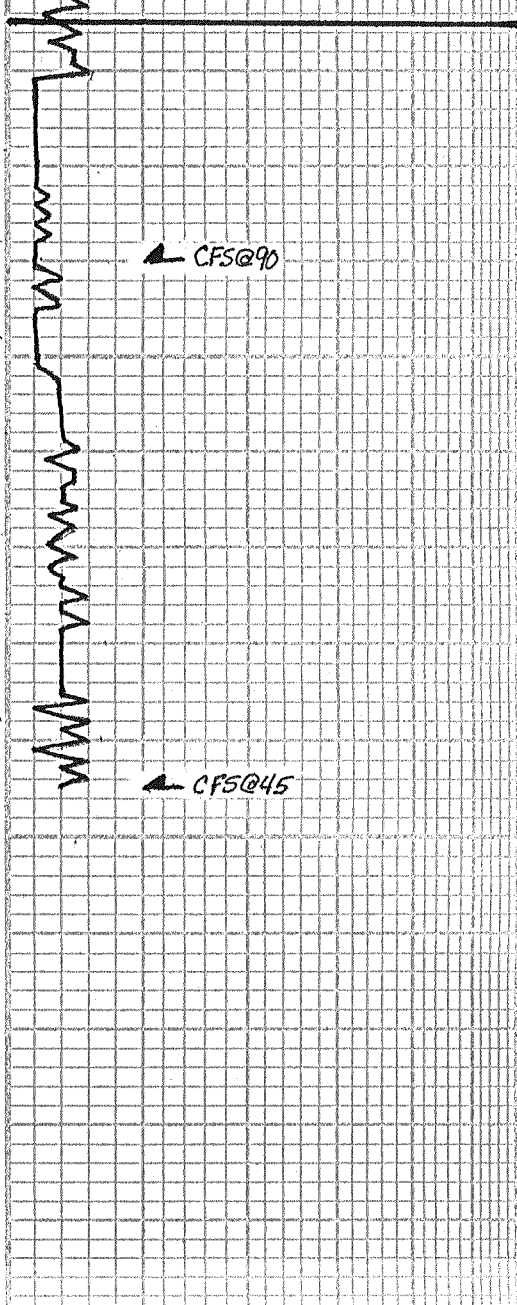
4850

sh: brown, rust, green, grey

60

sh: as above w/ ss: grey, fn. grned  
well sorted, friable, shale matrix





4900

10

20

30

40

4950

no vis  $\phi$ , no show  
 $\Delta$  mostly wh, fresh, opaque, few  
 $\Delta$  pc weathered w/ pt ppt  $\phi$ , sh:  
 $\Delta$  grey, green (erosional?)  
 $\Delta$  wh, bluish-wh, fresh, opaque  
to semi translucent; few pcs wh  
 $\Delta$ , weathered in part, poss pr ppt  
 $\phi$ , No st, floor, cut or odor, NSFO  
 $\Delta$  as above; few pcs dol: brown,  
fnxtln, hard, dense, wh: fnxtln,  
chalky ls  $\rightarrow$  chalk

ls: tan, brown, v. fn. fnxtln, dense,  
no vis  $\phi$ , no show; wh fnxtln,  
chalky ls; few pcs wh, fresh -  
slt weathered op  $\Delta$

ls: wh, tan, lt. brown, fnxtln, chalky  
in part, no vis  $\phi$ , no show

ls: tan, fn. few pcs medxtln, tr  
foss, no vis  $\phi$ , no show

ls: as above, w/ inc in wh, fnxtln  
chalky ls:

ls: wh, tan, brown, micro-fnxtln,  
few pcs medxtln, tr. foss, no vis  $\phi$   
no show. wh, fnxtln ls, chalky in  
part

PULLED IS STAND  
SHORT TRIP  
PRIOR TO LOG

5" 10" 15" 20" 25"  
DRILLING TIME Minutes/Foot

Rate of Penetration Decreases  $\rightarrow$

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS