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GEOLOGIST'S WELL REPORT

COMPANY Staab Oil Company (6037)
WELL Hayes #1
FIELD Wildcat
LOCATION (legal) SW NW SE SE 840' FSL 1063' FEL
Section 6 TWP 8S RGE 18W
(Map) 4 miles S + 4 miles W of Stockton KS
COUNTY Rooks STATE Kansas
ELEVATION: 1965 K.B. 1960 G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-163-24251
GEOLOGY BY Janel Staab

PERTINENT WELL DATA

CONTRACTOR Shields Drilling Co. (5184)

RIG #2 HYDRAULICS Bath 225 6x14x6

DRILL PIPE 4 1/2" X-H COLLARS 6 1/4" 311'

CASING: SURFACE 8 5/8" @ 218' w/ 150 SX comm

PRODUCTION 5 1/2" @ 3478" w/ 150 SX comm

DRILLING FLUID: COMPANY Mud-Co / Service Mud Inc
Dr in Ann w/ 350 SX

TYPE: Chemical
Gary Schmidtberg
Tyler Lang

REMARKS: Full Service

DRILL STEM TESTS: COMPANY Trilobite Testing Inc.

NUMBER OF TESTS 4 Ray Schwager

ELECTIC LOGS: COMPANY Pioneer Energy Services

DETAIL (5") 2800 - RTD

TYPE DI, Comp N-D, Micro

DRILLING TIME FROM 2850 TO RTD

SAMPLE TIME FROM 2910 TO RTD

SUPERVISION FROM 2910 TO RTD

VERTICAL DEVIATION 1/2" @ 218', 3/4" @ 3165'

PLUGGING REPORT 30 SX Rat, 15 SX Mouse

RESERVE PIT _____

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
9-09-14		MIRU SPUD
9-10-14	250'	Drilling under surface
9-11-14	1350'	Drilling anhydrite
9-12-14	2901'	Drilling Topeka Lin
9-13-14	3165'	DST #1 Topeka Tor l
9-14-14	3257'	DST # 2 LKc E. F. G
9-15-14	3328'	DST # 3 LKc KL
9-16-14	3480	TD logged Set Co

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	Top Tor LKCA 3075- 3165	22# 35# 5"	1106# 60"	27# 35# 60"	1088# 90"	1467# 1447#	280' GIP 20' 0 + 6cm 20% G 62' 40 + 6cm 20% G 62' 40 + 6cm 20% G
2	LKCEFG 3211- 3257	36# 49# 5"	1208# 60"	41# 51# 60"	1175# 90"	1541# 1515#	90' mw w/ Show 80% 180' mw 90% w
3	LKCKH 3328- 3370	26# 27# 5"	1223# 60"	24# 31# 30"	1024# 30"	1601 1559	rec 10' mud
4	Simpson Arbuckle 3387- 3427	53# 103# 5"	1190# 60"	130# 344# 60"	1167# 90"	1634# 1591#	745' GIP 680' CO 186' Gmo 30% G
5							
6							
7							
8							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	2856'					
2	2921	88	85			
3	3053	89	58			
4	3094	88	60			
5	3162	88	60			
6	3175	88	50			
7	3220	90	48			
8						
9	3257	90	54			
10	3370	91	55			
11	3387	89	53			

Displaced
LCM 3#
LCM 3#
LCM 2#
LCM 2#
LCM 2#
LCM 2#
LCM 2#
LCM 1#
Trace

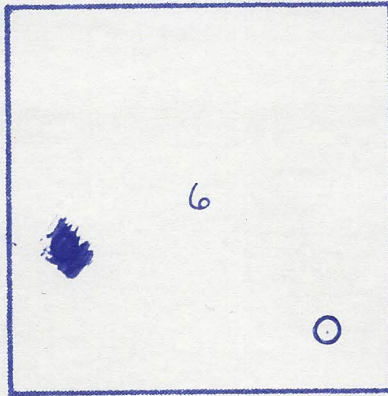
BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTH	FEET	HOURS
1	1 1/4"	Reed	Mill tooth	218'	218'	5
2	7/8"	Reed	S-52	3480	3262	84
3						
4						

FORMATION TOPS & STRUCTURAL GEO

REFERRED TO:

- A: Hinkle, Apex, Etal
Veverka No #1
- B: _____
- C: _____
- D: _____
- E: _____



sec 8

STRATIGRAPHIC MARKERS	SUBJECT WELL			STRUCTURAL POSITION		
	SAMPLE	E. LOG	DATUM	A	B	C
Anhydrite	1373'	1370'	+595			
Base	1403'	1403'	+562			
Tupeka	2901'	2898'	-933	-942		
Heeb Sh	3106'	3103'	-1137	-1150		
Toronto	3128'	3125'	-1160	-1175		
Lansing	3146	3143'	-1178	-1192		
Bhc	3306'	3365'	-1400	-1398		
Arbuckle	3420	3420'	-1455	-1468		
TD	3480'	3479'	-1514	-1499		

Pipe strap 1.74' short

*Structural position of subject well as compared to refer

as 20% oil
30% oil
40% oil

of oil
water
color

is 60% oil

6 6 7

The Hayes #1 in Rooks Co was drilled starting September 9 2014 and reached September 16 2014 using Shields Drill rig #2

3-D seismic survey indicated a high compared to dryholes near local. Oil shows were encountered starting the lower Topeka thru the Arbuckle. Logs were run with DST1+4 having positive logs were run and supported sample for reinforced DST

Recommend setting production pipe on the Arbuckle, Simpson Dolomite, LKC and Topeka

Jarrel Saal

N
D E

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 .D on
 ing Co.
 ructural
 wn.
 ting on
 DST
 e results
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 onto

REMARKS

LITHOLOGY (LAGGED)

& SHOWS
 POOR
 FAIR
 GOOD
 DST

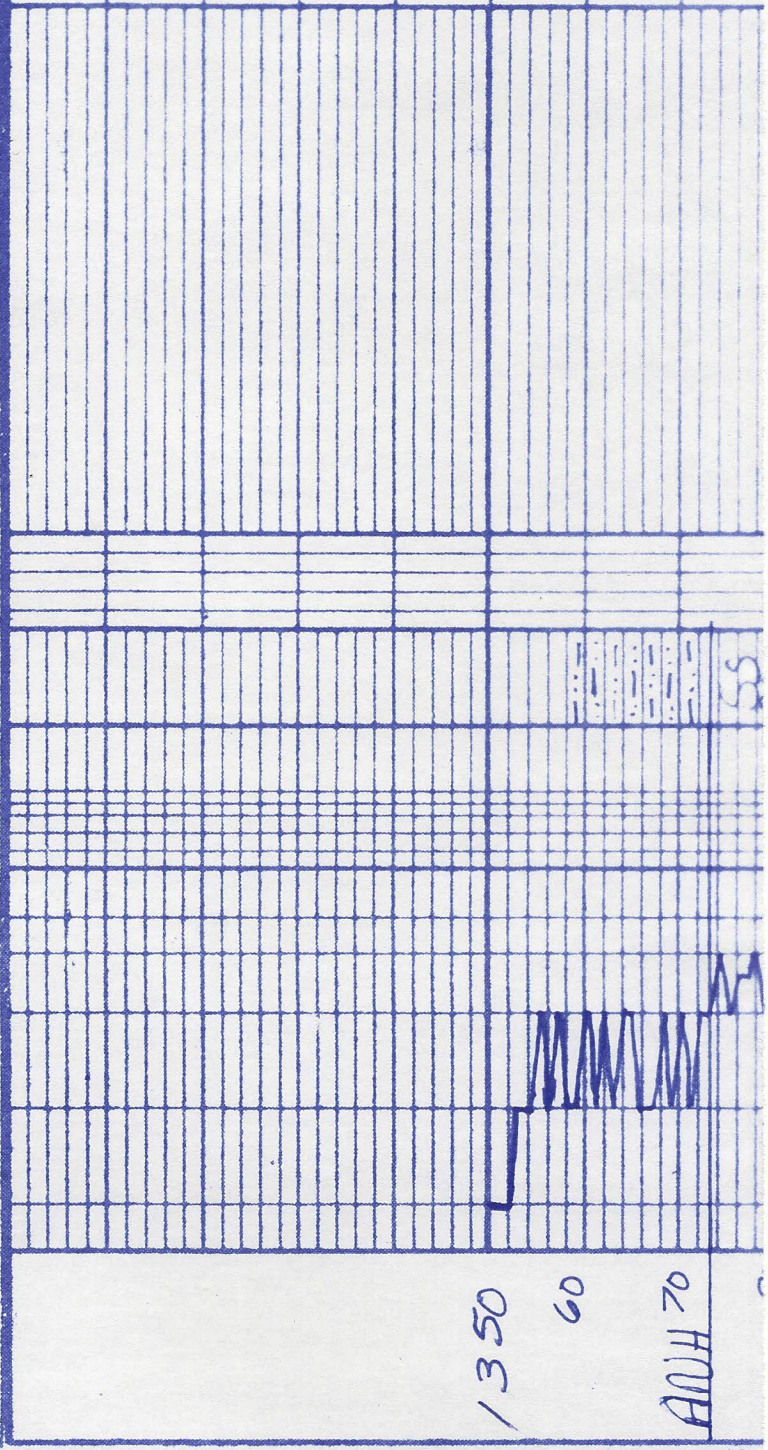
DRILLING TIME (min/ft)

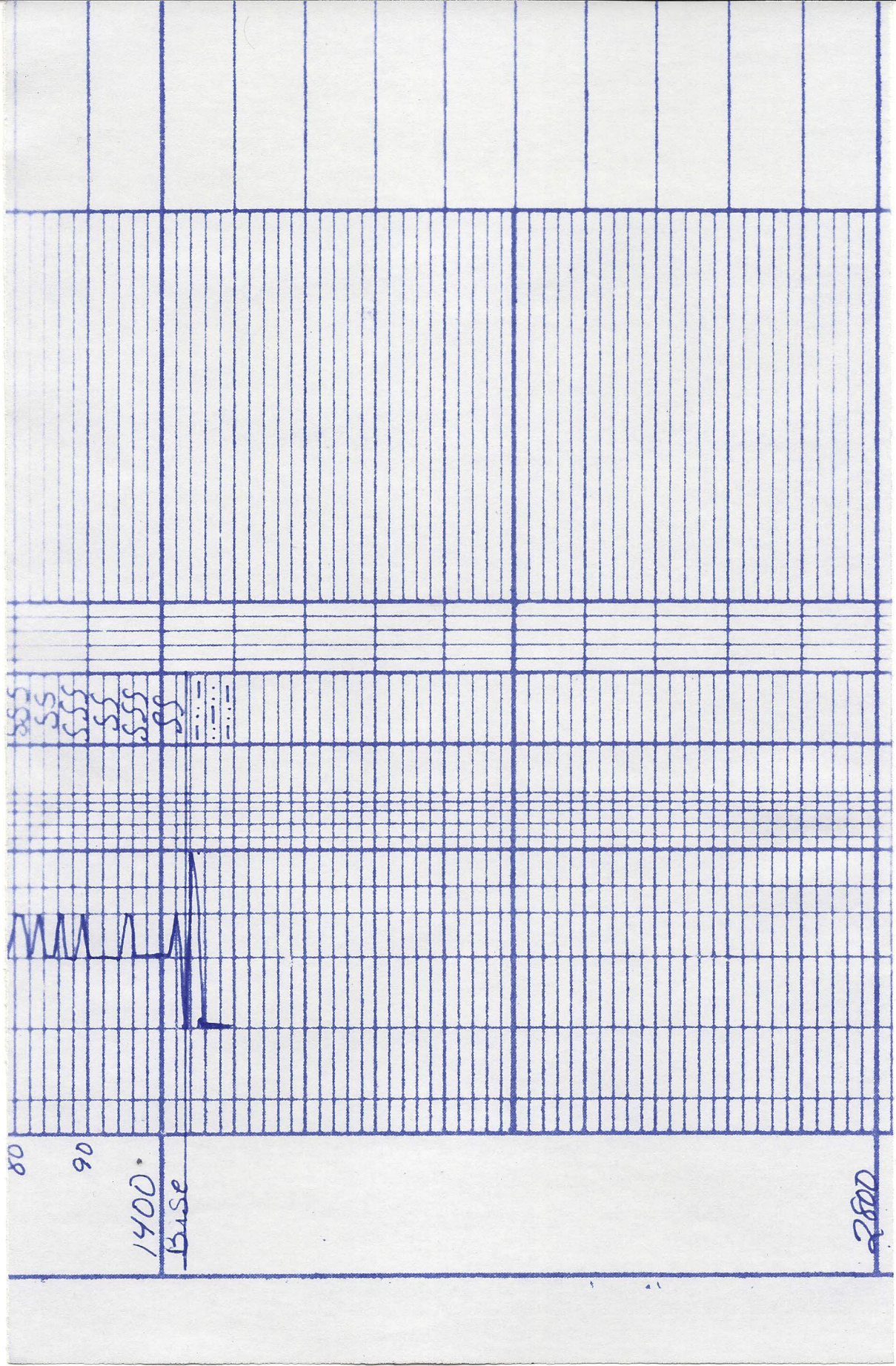
1/2 1 2 3 4 5 6 7 8 9 10

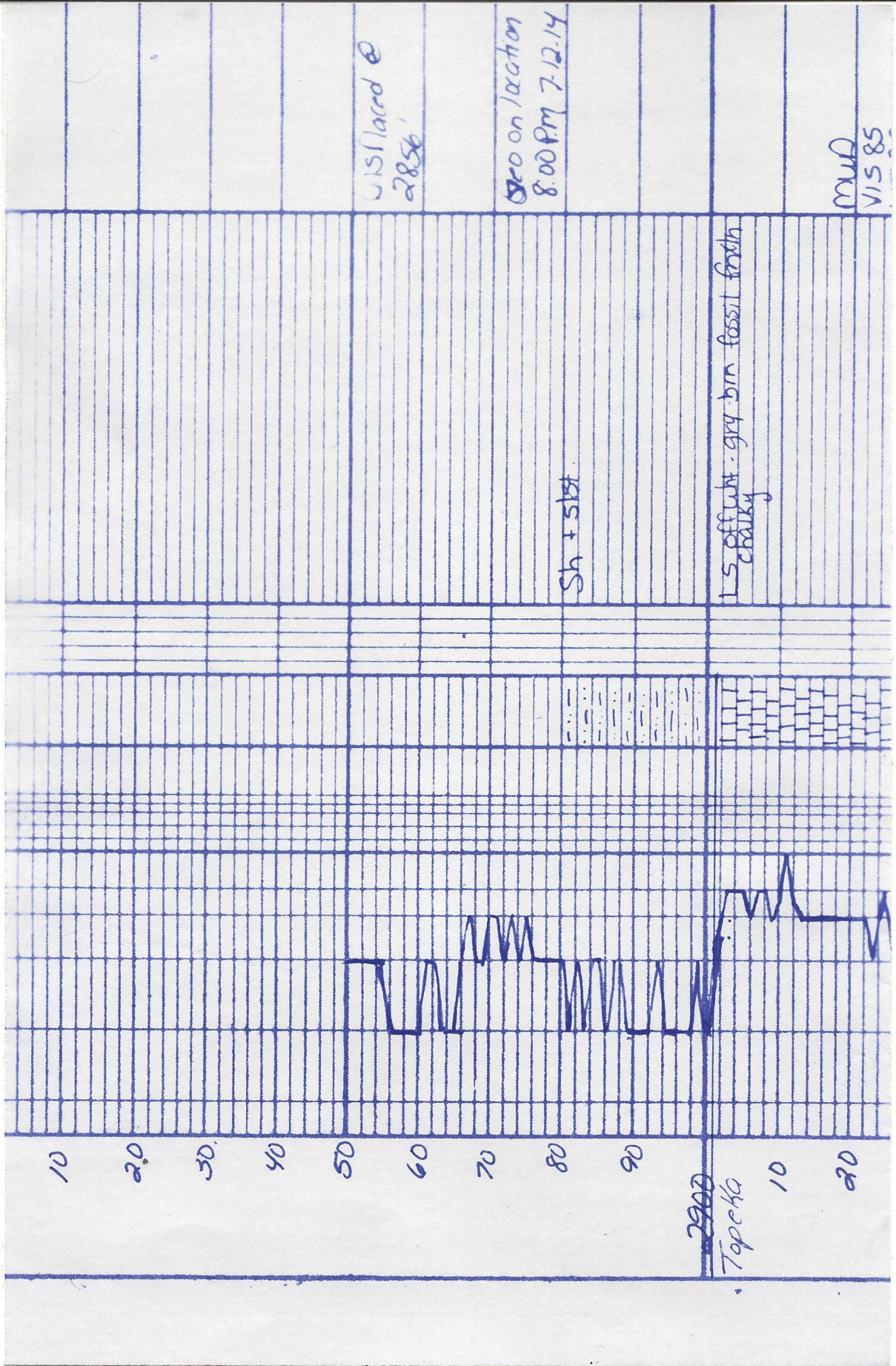
1350

60

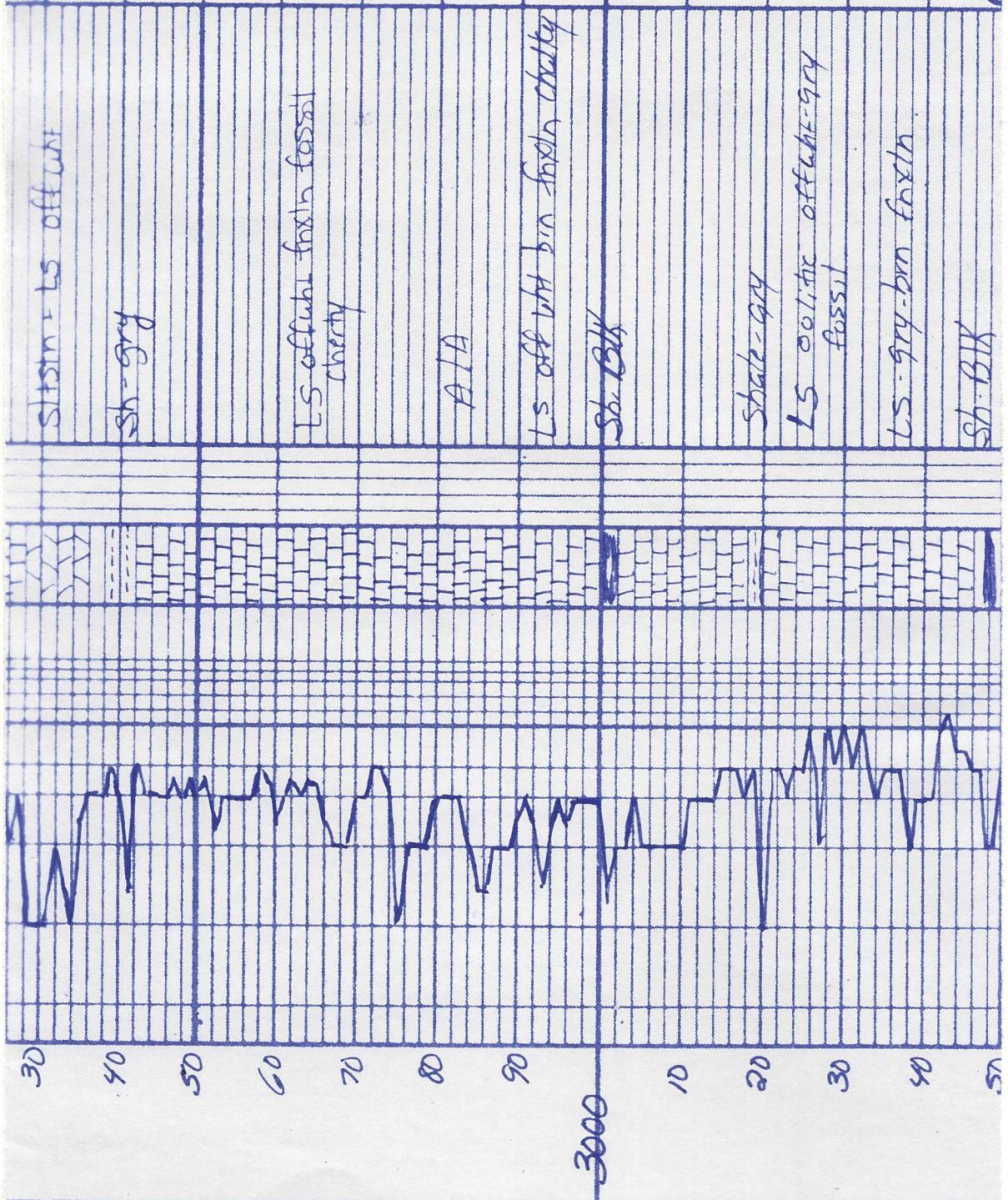
APR 70





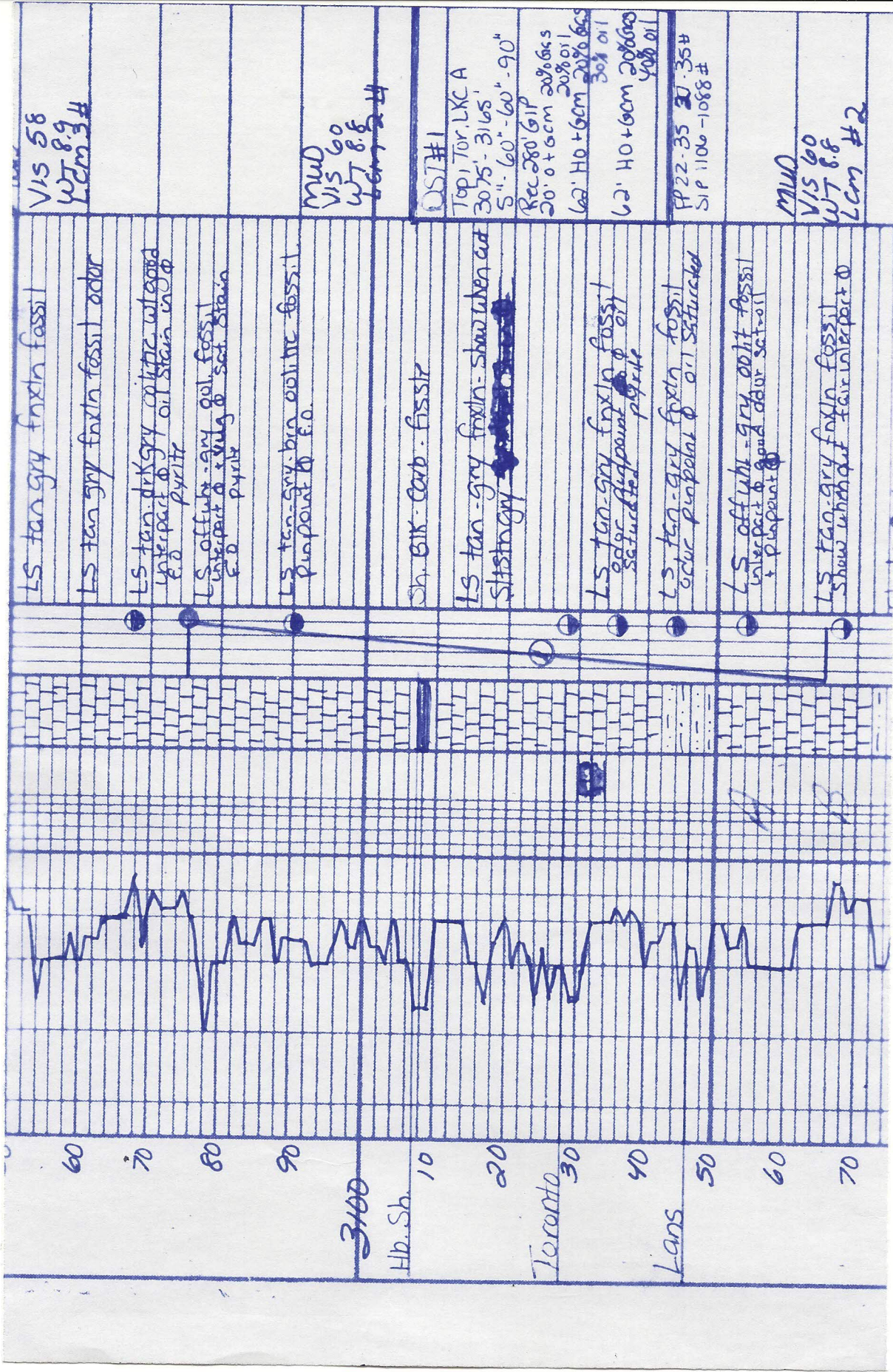


WT 8
LCM 3
#



WT 8
LCM 3
#

WT 8
LCM 3
#



LS tan gry finln fossil

LS tan gry finln fossil odor

LS tan - gry. finln. fossil interpart of & vulg of sat. stana
pyrite

LS offwh - gry. gnl. fossil interpart of & vulg of sat. stana
pyrite

LS tan - gry. brn. calcine fossil. Pimpout of f.o.

Sh. Blk. Carb. fissile

LS tan - gry finln - show when cut
Siltstagny

LS tan - gry finln fossil odor. Pimpout of oil saturated pyrite

LS tan - gry finln fossil odor. Pimpout of oil saturated

LS offwh - gry. whit. fossil interpart of sand odor sat. oil + pimpout

LS tan - gry finln fossil show without fair interpart of

VIS 58
WT 8.9
Lcm #1

MUD
VIS 60
WT 8.8
Lcm #2

OST #1

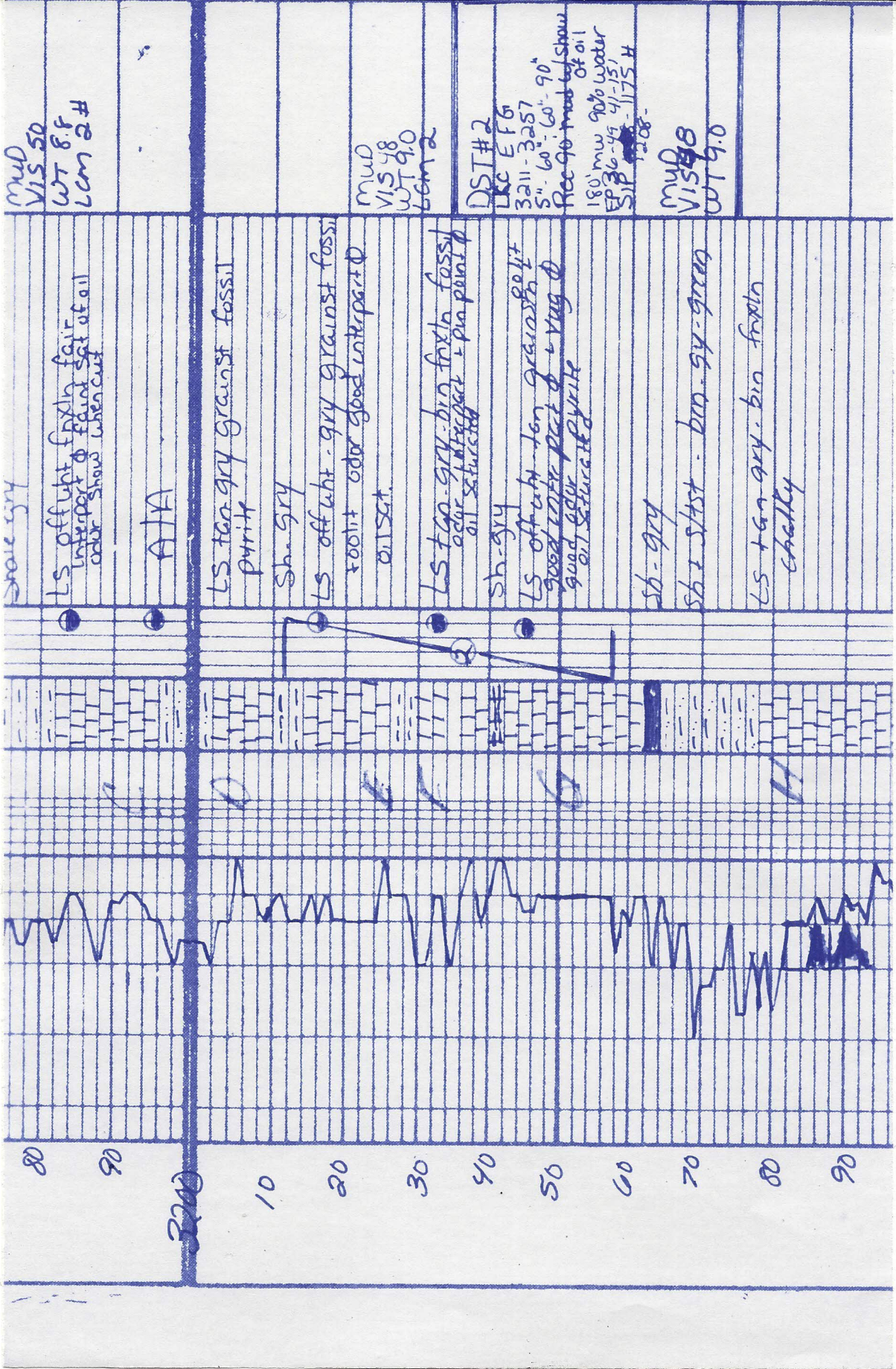
Top 100' LXC A
3075 - 3165'
5" - 60" - 60" - 90"

Rec 280' GIP
20' oil + 6cm 20% oil
62' HO + 6cm 20% oil

62' HO + 6cm 20% oil
40% oil

FP 22-35 20.35#
SIP 1106 - 1088#

MUD
VIS 60
WT 8.8
Lcm #2



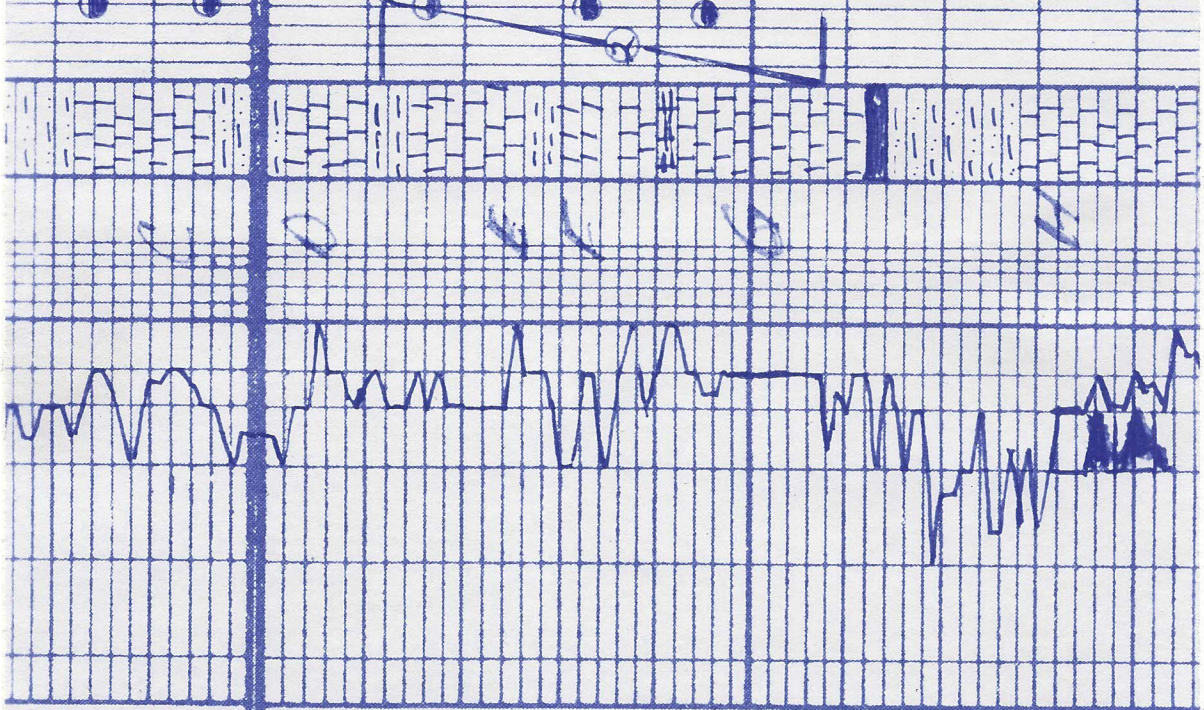
Mud
VIS 50
WT 8.8
LCM 2.4

Mud
VIS 48
WT 9.0
LCM 2

DST #2
LKC EFG
311-3257
5" 60' 60" 90"
Rec 90' mud cut show
180' mw 90% water
EP 36-49 41-15'
SIP 1175 H
1208-

Mud
VIS 48
WT 9.0

shale grey
LS off wht. fine to fair interpart of sand sat at oil or show when cut
ATA
LS tan gry graunst fossil pyrite
sh. gry
LS off wht. - gry graunst fossil rootit odor good interpart oil sat.
LS tan gry - bin fin to fossil odor interpart - pin point oil saturated
sh. gry
LS off wht. - tan graunst rootit good water part of - very good odor pyrite oil saturated
sh. gry
sh. & stst - bin gy - green
LS tan gry - bin fin to cherty



80
90
22.0
10
20
30
40
50
60
70
80
90

MUD
 V1553
 WT 8.9
 LCM 1#

OST #3 LK 14L
 3326-3370
 S: 60" - 60" - 90"

REC 10' mud
 FP 26.27 24.31#
 SIP 1223-1024#

MUD
 V1553
 WT 8.9
 LCM #

MUD
 V1553
 WT 8.9

MUD
 V1553
 WT 8.9

OST #4 Arch
 3387-3427
 REC 745 GIP
 680 CO

sh - gry. md green
 sh - gry. brn

LS off lght frsh fossil
 shaly
 show when cut + crushed

ALA

sh - BIK

LS off lght frsh fossil +
 gothic pinpoint + veg of
 faint stem good shaly
 cut

sh BIK

LS off lght drk +
 granular veg of prepared
 fair to good set pyrite

sh gry red green
 shaly brn. rd. gals

SS pyrite

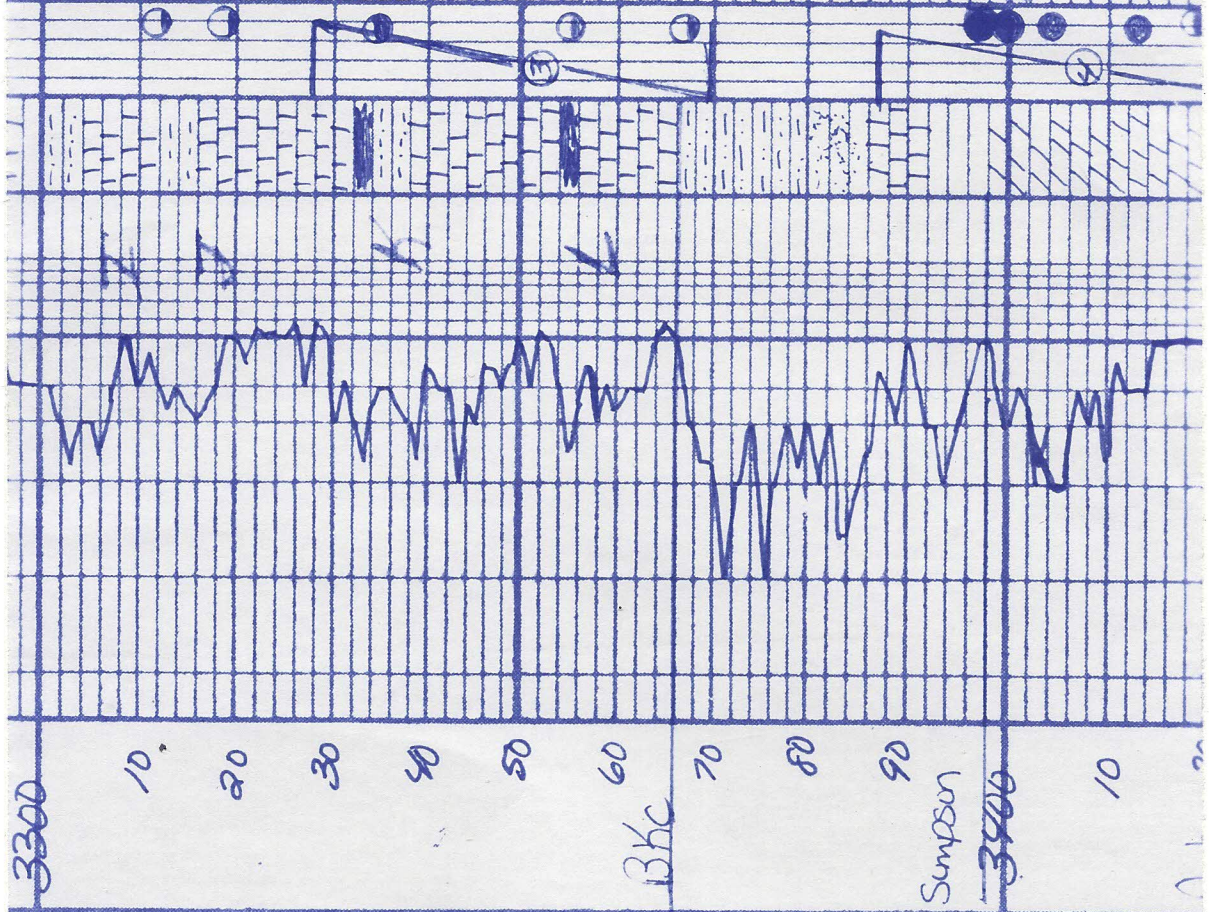
LS tan frsh fossil pyrite

LS drab brn fossil

Drab gry xln poor D

LS tan drk frsh fossil
 good veg of - good
 to a good set color

Drab tan mlt xln



3300

10

20

30

40

50

60

70

80

90

Simpson

3500

10

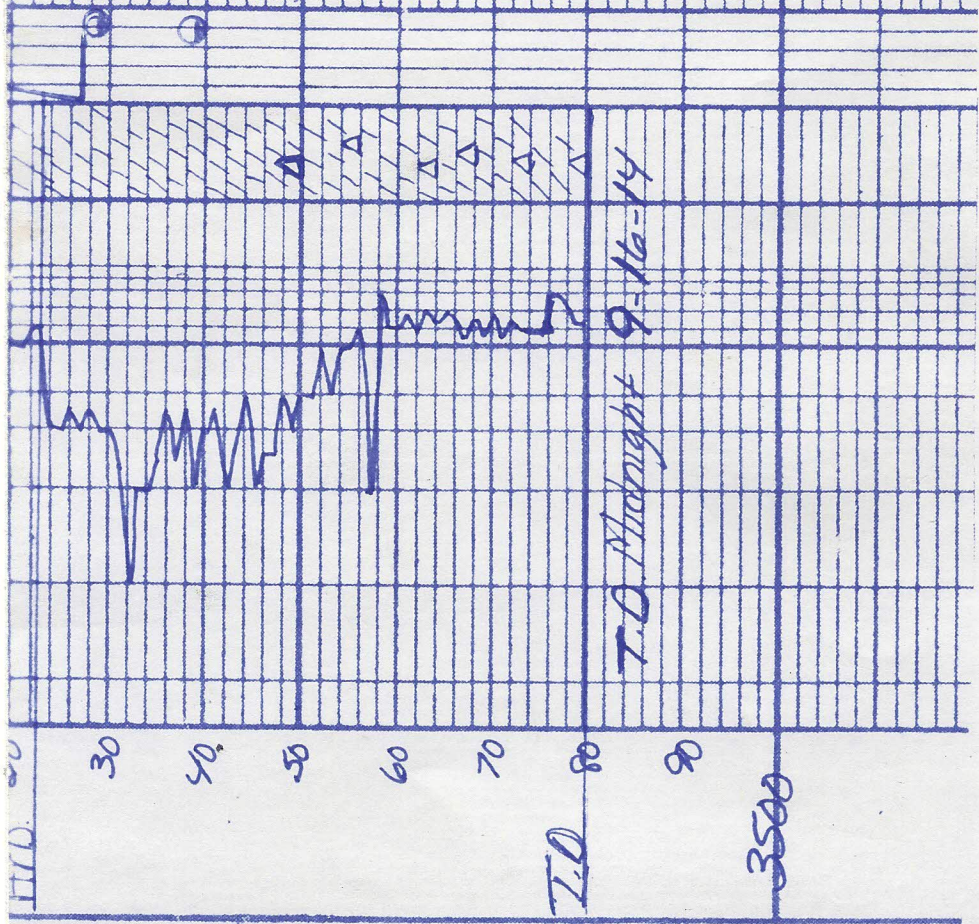
180 6990 50963
60900.1
100 mud
FP 53-103 130-344
SIP 1190-1167

Contactor hole + veg @ good
fine soil fair soil
Dob. 160 good x/b
interact. veg @ good
fair soil weather
at Sh. ben red grey green

Dob off soil good x/b
Barren

MUD
VIS 52
WT 9.1

MUD
VIS 50
WT 9.1
LCM 1#



T.O.

T.O. Midnight 9-16-14

3500