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**GEOLOGIC
 REPORT
 LOG**

COMPANY DOWNING-NELSON OIL CO., INC.

WELL STALNAKER 'B' #1-14

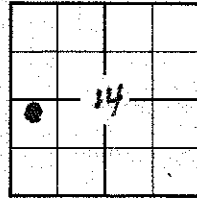
FIELD WILDCAT

LOCATION 2369' FSL & 410' FWL

SEC. 14 TWP. 14S RGE. 21W

COUNTY TREGO

STATE KANSAS



PRODUCTION MARMATON

ELEVATION KB 2226

DF _____

GL 2218

Drilling Measured From: KB

Samples Saved From 3500 To: TD

Drilling Time From 3200 To: TD

Samples Examined From: 3500 To: TD

Geological Supervision From 3500 To Total Depth

Wellsite Geologist RON NELSON

Electrical Surveys NABORS - DUAL IND. -

SONIC - DENSITY NEUTRON -
MICRO

OPERATOR DNOCI

CONTRACTOR DISCOVERY DRILLING RIG #3

COMM: 2-16-13 COMP: 2-27-13

CASING RECORD

SURF: 8 5/8" @ 218' PROD: 5 1/2" @ 4078'

TOTAL DEPTH DRILLERS: 4079'

TOTAL DEPTH LOG: 4081'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
TOP ANHYDRITE	1589	1590	+636	NA
BASE ANHYDRITE	1630	1632	+594	NA
TOPEKA	3294	3295	-1069	+6
HEERDEN	3532	3534	-1308	+9
TORONTO	3552	3554	-1328	+9
LHC	3573	3574	-1348	+7
BRC	3819	3818	-1592	+7
MARMATON	3901	3904	-1678	+6
CHEROKEE SHALE	3947	3948	-1722	+10
CONGLOMERATE	3967	3970	-1744	+8
ARBUCLE	4028	4030	-1804	-26

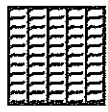
REFERENCE WELL FOR STRUCTURE BLACK DIAMOND'S STALNAKER #1 - DE@
SW-NW-SW SEC 14-14-21

DRILL STEM TESTS

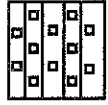
No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHP-FHP	RECOVERY

REMARKS AND RECOMMENDATIONS RAW 5 1/2" PRODUCTION CASING FOR MARMATON
PRODUCTION.
Ron Nelson

LEGEND



Anhydrite



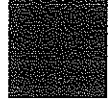
Salt



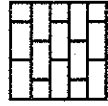
Sandstone



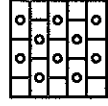
Shale



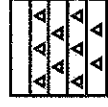
Carb sh



Limestone



Ool.Lime



Chert



Dolomite

DRILLING TIME IN MINUTES
PER FOOT

Rate of Penetration Decreases

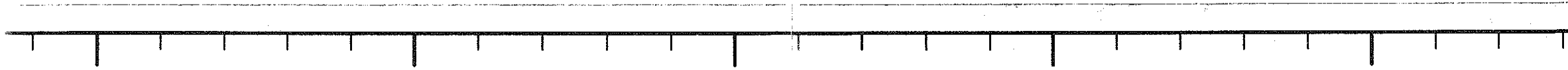


5" 10" 15"

DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
1550				
1600				
1650				
3200				

TOP ANHYDRITE #637
Log #636

BASE ANHYDRITE #516
Log #514



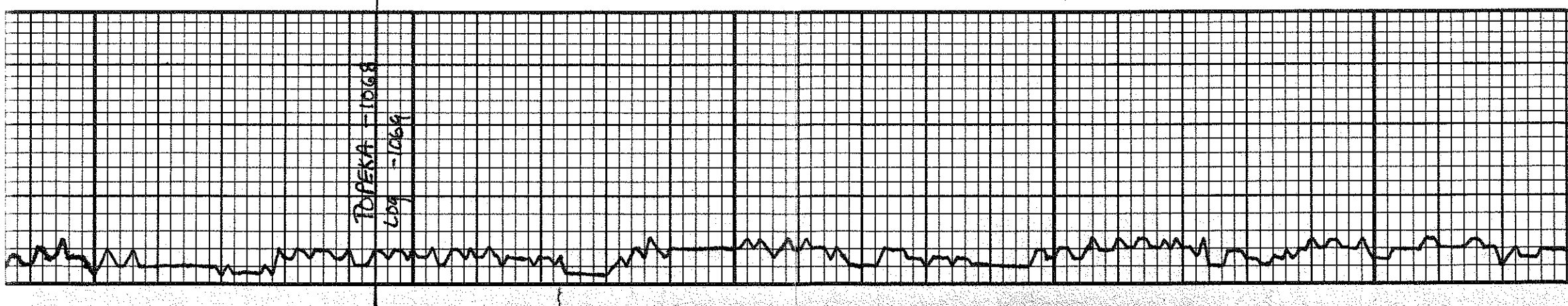
50

3300

50

3400

50



TOPEKA - 1068
609 - 1069

3500

11/26/82 - 1306
Log - 1308

50

10/20/82 - 1320
Log - 1328

11/26/82 - 1344
Log - 1348

3600

50

3700

tan chryls N.S. 9d 1841

modons wh. tan us prob
N.S.

vans wh us probus
w/ the wh ent

sh am casg

pus braces

shs qry dk qry bra

modons tan fa xylus N.S.

qy sh

vans wh tan us w/ tan ool

gy & bra latel shs

ls wh - tan, mst v fa xylus
fupes w/ s d ool w/ tan
all prob all N.S.

wh vans fa xylus barren us
N.S.

dk qy sh

ls wh - tan w/ fupes s r xylus
all v fa xylus probus
app tan us plous, may blk
str, ssfd, w/ s d ool, mst mic xylus
vans N.S. no p

sh o qry

ls wh - tan mst fa - v fa xylus
DMS pr xylus 1-2 pcs w/ blk
edge brn 1-500 no ool

ls wh - tan mic xylus v vans
no app N.S. w/ tan ool

dk qy sh

ls wh 1-2 pcs tan vng & base p.
w/ fupes s r mst v vans wh
mic xylus N.S.

qy sh

ls tan mo suc xylus, plous 1-2 pcs
w/ s d ool. s d ool. s d ool.

sh o qry

ls wh - tan fa - v fa xylus ool
upr right N.S. 1-2 w/ ool's
f fa p

fmg mic xylus v vans no app
N.S.

are w/ s d ool w/ tan

op v vans

shs dk qry 977

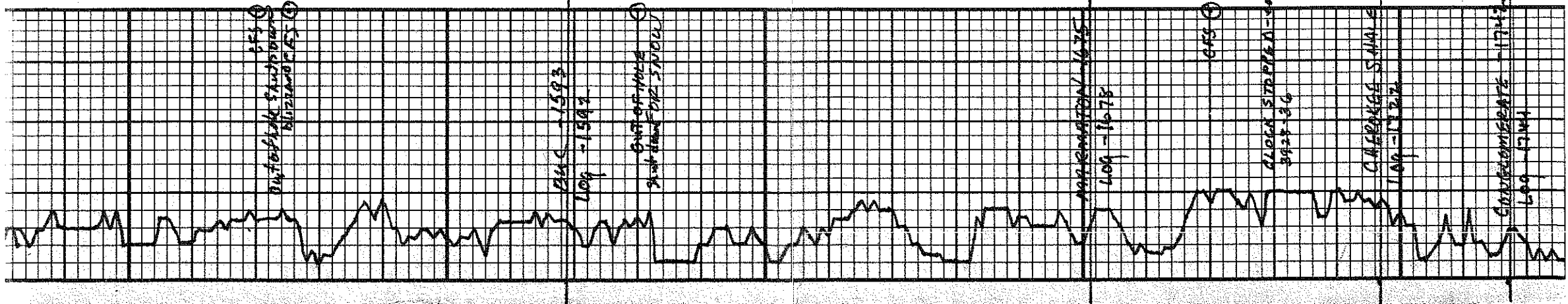
ls tan - H tan fupes ool in
v fa mat. mst v fa xylus
all v pr p all N.S.

w/ tan ool

ch. d. n. u.

DST #1
3594' - 3650'
45° 45' 45" - 45°
w/ s d ool below both opens
IFP 16-27
FFP 27-31
SIP 269-201
HP 1749-1703
REC 46' 00M
459000, 5590000

DST #2
3724' - 3770'



LS brn - tan, fwpes v. das mat w/ tan side clay @ 5m friable 1-2 w/ vis. fragments ssd - sta. 600	LS wh - g. ls, tan fwpes fort. oc w/ ed. o.c. 1-2 w/ g. tal. bl. str.	brng mic. xyl. w. tan wh - tan. ss ALL NS w/ wh. chd	gry - n. wh. gr. ss	LS wh. f. suc. xyl. fr. lab. bl. gr. 1xyl. @ NS.	brng mic. xyl. w. tan. fwpes. oc. LS. w/ tan. chd NS.	BLK - v. tal. gr. sh	tan - w/ tan. fwpes. ss. fwpes. clay. ss. friable	MST. v. ons. v. pr. fac. ls.	w/ tan. chd	SA. gry. dk. gry.	tan. brn. - tan. ls. xyl. ons.	RO. brn. gry. sh.	w/ str. tan. - brn. ons. ls. NS.	abund. RO. brn. gry. sh.	LS wh. tan. mic. xyl. w. v. ons. NO. app. NS.	w/ l. - g. ss. - tan. chd.	RO. & brn. sh.	DNS. tan. - wh. ls. NO. app. NS.	SHS. RO. brn.	gry. dk. gry.	ONS. wh. ls. pr. NS. mic. xyl.	Dk. brn. - gry. wh. mosaic xyl. w/ tan. visible bedding. friable. sub. gry. - wh. v. g. ss. v. tal. ed. gr. pr. xyl. g. f. ac. p. but many not friable. 5m. g. d. pe. ss. 5m. stat.	mic. xyl. tan. - wh. ls. v. pr. wh. @ NS. w/ abund. chd. wh. tan. BRU. op.	aq	SHS. brn. gry. brn. sh.	abund. RO. sh.	SS. cl. ops. gr. 2. g. tal. bl. chd. ss. w/ 90. p. s. fr. NO. od. 3m. brn. tan. fwpes. 3m. ab. sh.	SS. ls. - tan. no. cons. cl. pr. NS. BRU. f. sh. 55. 10. 1000	frng. m. sh. chd. wh. tan. - brn. wh. ss.
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20-30-30-30-30
 1st op 1 1/4" BLOW
 2nd op 1" BLOW
 IFFP 14-20
 FFP 19-22
 SIP 58-44
 HP 1819-1792
 REC 30' 50CM

DST # 3
 3903-3920'
 45"-45'-45"-45"
 1st op 808 34 min
 2nd op 808 31 min
 w/ surf blow both SZ's.
 IFFP 18-52
 FFP 55-83
 SIP 1054-1011
 HP 1899-1871
 REC 120' 90S
 90' 500IL
 90' 500C. OIL

DST # 4
 3940-3983'
 45"-45'-45"-45"
 1st op 3 3/4" BLOW
 2nd op 3 1/4" BLOW
 IFFP 18-53
 FFP 34-85
 SIP 311-176
 HP 1841-1908
 REC 40' V SWCM

CFS ①

ABSOLUTE -1800
LOG -1800

R7D -1953
L7D -1955

CFS ②

4000

50

4100

abundant chert top of my Ran sp
shp frs qtz & mica n.s.

mostly calc. chert w/ sm. red
gr. silt. & mica n.s.

abundant varicolored n.s., shp
frs of v. much gray blue blue

grn calc. n.s.
w/ frs of ss, fr. lmy n.s.
grn sh

base of gray silt. sh. w/ qtz & mica n.s.

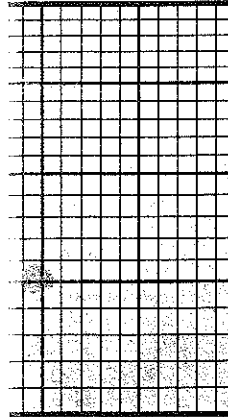
frs of n.s. sh. w/ mica n.s.
p. sh.

frs of calc. sh. w/ mica n.s.
wh. frs, fr. qtz n.s.

massive n.s. p. l. gray-blue
oolite n.s.

oolite n.s.

Ran. sh.



DRILLING TIME Minutes/Foot
 5" 10" 15"
 Rate of Penetration Decreases

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR Discovery Drilling Rig #3

LEASE Strawser B 1/1-14 IP Albem

ELEVATION 2226' NB RTD 4079'

LOCATION 2.369' ESE of 440' ENE

SEC 14 TWP 14S RNG 26W

COUNTY TRERO STATE KANSAS