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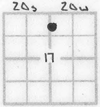
GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co., Inc.

WELL Showalter # 1-17
FIELD Browns Grove
LOCATION 740' FNL + 2480' FEL
SEC. 17 TWP. 20s RGE. 20w
COUNTY Pawnee
STATE Kansas



PRODUCTION Miss
ELEVATION KB 2188
DF
GL 2180
Drilling Measured From: KB
Samples Saved From 4050 To: TD
Drilling Time From 3550 To: TD
Samples Examined From: 4050 To: TD
Geological Supervision From 3550 To Total Depth
Wellsite Geologist Marc Downing
Electrical Surveys Log-Tech
CNL/CDL
DIL
MEL
Sonic

OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #4
COMM: 1-4-12 COMP: 1-12-12

CASING RECORD

SURF: 8⅝" @ 1157' PROD: 5½" @ 4320'
TOTAL DEPTH DRILLERS: 4324'
TOTAL DEPTH LOG 4333'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	1369	1370	+819	-8
Base Anhydrite	1393	1394	+795	-5
HEEBNER	3693	3700	-1505	-4
Lansing	3743	3749	-1555	-6
BKC	4044	4050	-1856	-2
Fort Scott	4221	4227	-2033	+1
CHEROKEE SH.	4239	4245	-2051	-1
Miss	4290	4296	-2102	+7
Osage	4320	NA	-2132	+1

REFERENCE WELL FOR STRUCTURE DNOCI
Showalter-Vandenberg #1-17 2190' FNL + 155' FWL Sec. 17-20s-20w

DAILY PENETRATION		BIT RECORD						
DATE	DEPTH	NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS

FORMATION	INTERVAL	DESCRIPTION OF SHOW	LOG ANALYSIS	
			Ø	S W

DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHH-FHH	RECOVERY

REMARKS AND RECOMMENDATIONS

LEGEND

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

REMARKS

OIL SHOWS

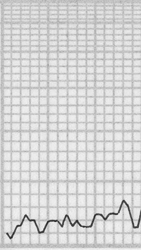
SAMPLE DESCRIPTIONS

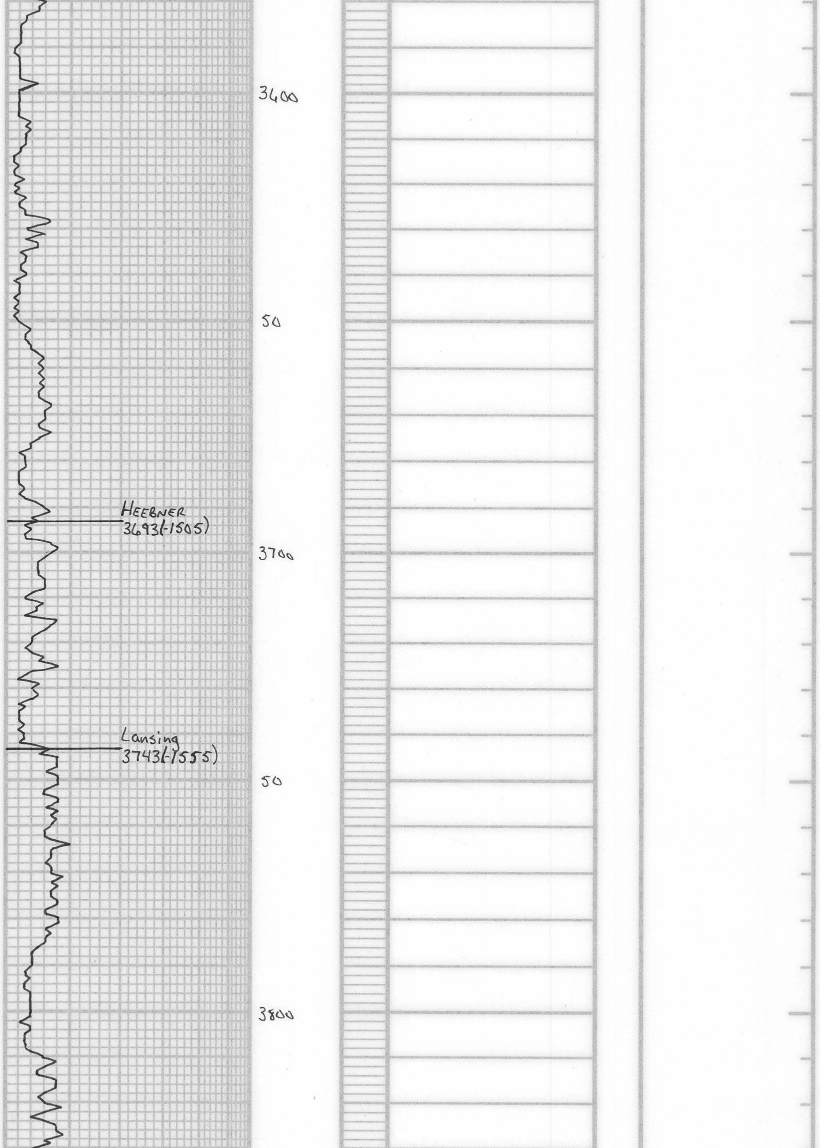
LITHOLOGY

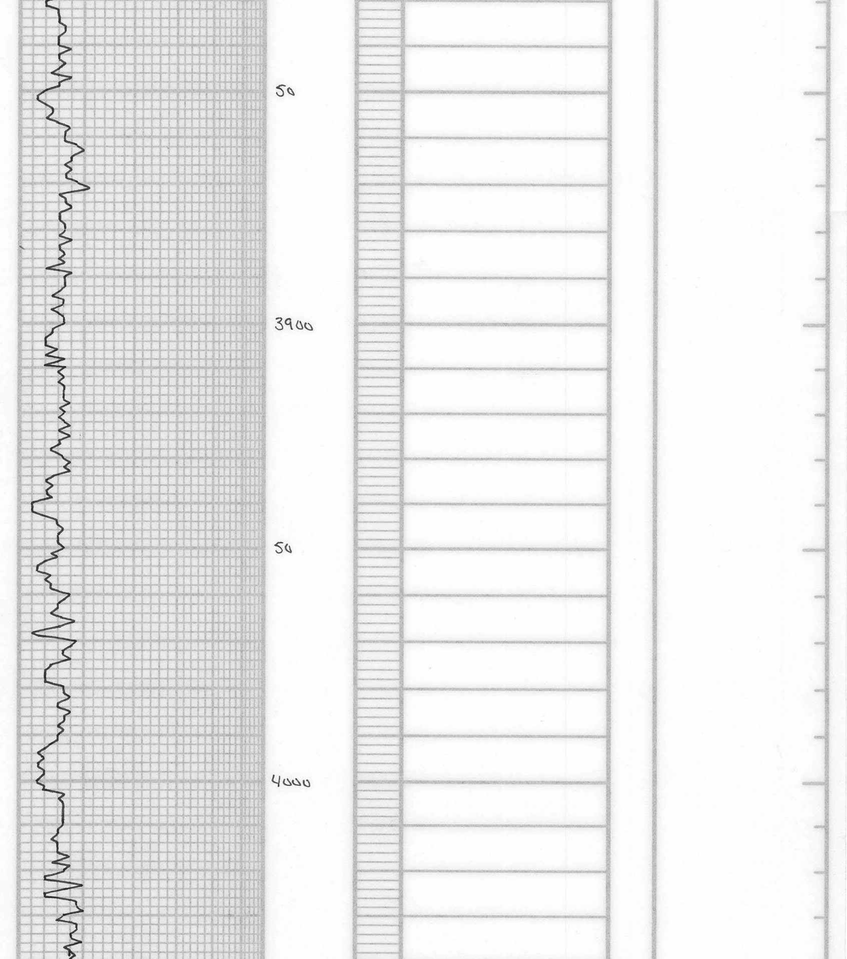
DEPTH

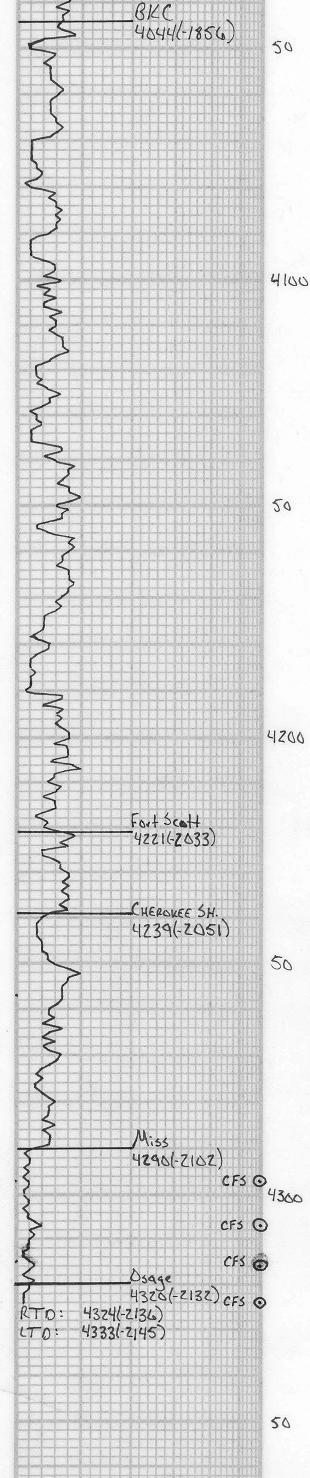
3550

DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Decreases

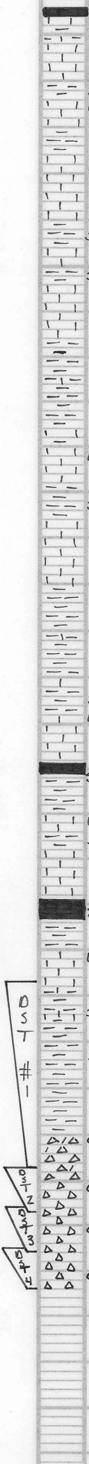








RTD: 4324(-2136)
LTD: 4333(-2145)



Sh: Black Carb

LS: wht, Fn xln, dns, prφ

Sh: gry
LS: wht, Fn xln, scat ool, dns

Sh: lt gry-grn
LS: tan-wht, No visφ, vdns, All NS.

Sh: drk gry

Sh: gry
LS: wht, fn-md xln, mostly dns, subxln in prt.
Sh: drk gry-blk

Sh: gry w/ lt gry

LS: tan, Fn-md xln, foss, prφ, NS.

Sh: gry
LS: tan-wht, A/A, foss, dns, No visφ.

Sh: drk gry w/ blk Carb.

Sh: drk gry
LS: tan-wht, Fn xln, prφ w/ No visφ

Sh: Black Carb

LS: tan-wht, Fn-md xln, dns
Sh: gry
LS: tan-wht, Fn-md xln, scat Foss, All prφ + totally barren, No Od.

Sh: Black Carb

LS: tan-wht, Fn-md xln, few sml foss, vdns, No visφ

Sh: gry - lt gry

Sh: gry w/ some brn

Cht: wht-tan, scat clr. V weath in base w/ vgd intxln + ppφ. Friable in prt. gd-vgd sat stn w/ gd SFO. vgd-strong Od, gd grn-yel Fluor, Free oil on cup. : 16

Cht: Fr Amt A/A, less show. Trng wht, Frly Fresh, shp in prt, slt weath + ppφ. scat lt stn, rare SFO. Fluor trng blue tint, lt Od. : 74

Cht: More wht, Fresh + shp, rare edge stn. Fr amt wht-clr cht, v weath w/ gd lt oil stn. Fr Fluor, grn-yel w/ some lt blue tint. lt Od, slt FO on cup.

Cht: scat ex A/A trng mostly wht w/ some lt tan. Fresh + shp, Ang. Scat rubbr SFO, rare stn. Few pcs w/ vugs, Fr SFO in φ. lt-Fr Od, Fr-gd grn-yel Fluor w/ blue tint.

Vis: 51 Wt: 8.9

DST #1
4257-4297
45-45-45-45
I.F.- 3¾" blow
F.F.- 1" blow. Tool plug
IFP: 36-90
FFP: 52-86
SIP: 1293-1342
HP: 2146-2115
Rec:
63' OCM 10%o
BHT: 110°

Vis: 60 Wt: 9.3

DST #2
4297-4307
45-45-45-45
I.F.- 3¾" blow. Tool plug
F.F.- BOB 22 min./Wk Surf SIB
IFP: 211-1378
FFP: 59-288
SIP: 1383-1256
HP: 2177-2112
Rec:
157' GIP
80' GO 90%o
31' OCM 20%o
46' OCM 10%o
BHT: 117° G=36

Vis: 70 Wt: 9.1

DST #3
4306-4316
30-45-45-60
I.F.- BOB 10 min/1¼" SIB
F.F.- BOB 15 min/1⅛" SIB
IFP: 71-77
FFP: 90-127
SIP: 1218-1143
HP: 2126-2042
Rec:
330' GIP
248' GO 70%o
32' GOCM 10%g, 10%o
BHT: 119° G=36

DST #4
4315-4324
30-45-30-45
I.F.- BOB 8 min/3¾" SIB
F.F.- BOB 10 min/4" SIB
IFP: 31-102
FFP: 108-173
SIP: 1382-1382
HP: 2235-2108
Rec:
378' GIP
239' GO 90%o
63' GMCO 20%g, 75%o
126' GWMO 15%g, 20%w, 45%o
BHT: 125° G=36