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GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co, Inc.

WELL Befort # 2-12
FIELD
LOCATION 880' FSL & 400' FWL
SEC. 12 TWP. 14s RGE. 19w
COUNTY Ellis
STATE Kansas

PRODUCTION LKC & Toronto

ELEVATION KB 2182
DF
GL 2174
Drilling Measured From: KB

Samples Saved From 3150 To: TD
Drilling Time From 3100 To: TD
Samples Examined From: 3150 To: TD
Geological Supervision From 3100 To Total Depth
Wellsite Geologist Marc Downing
Electrical Surveys Nabors
CNL/CDL
DIL
MEL

OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #3
COMM: COMP: 10-4-13

CASING RECORD

SURF: 8⅝" @ 222' PROD: 5½" @ 3894'
TOTAL DEPTH DRILLERS: 3895'
TOTAL DEPTH LOG: 3896'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Topeka	3182	3182	-1000	+8
HEEBNER	3430	3430	-1248	+8
Toronto	3449	3448	-1266	+10
LKC	3477	3476	-1294	+10
BKC	3708	3710	-1528	+2
Arbuckle	3823	3823	-1641	+5
Top Anhydrite		1447	+735	
Base Anhydrite		1489	+639	

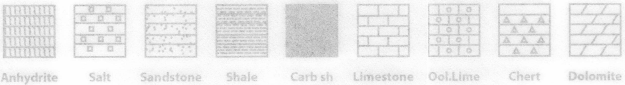
REFERENCE WELL FOR STRUCTURE DNOCI
Befort #1-12 630' FSL & 1520' FWL Sec. 12-14s-19w

DRILL STEM TESTS

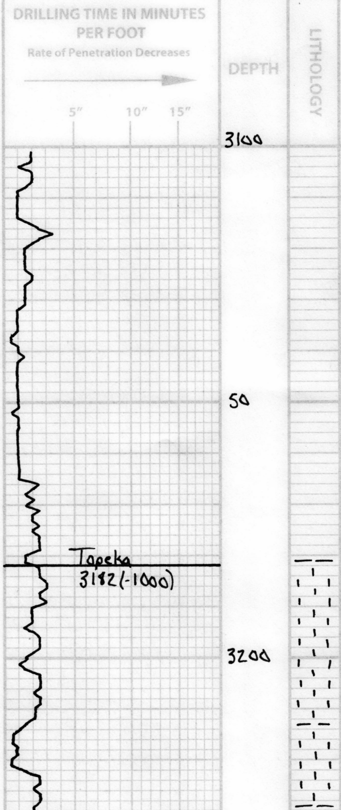
No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHP-FHP	RECOVER

REMARKS AND RECOMMENDATIONS

LEGEND



DRILLING TIME IN MINUTES PER FOOT	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS



3100

50

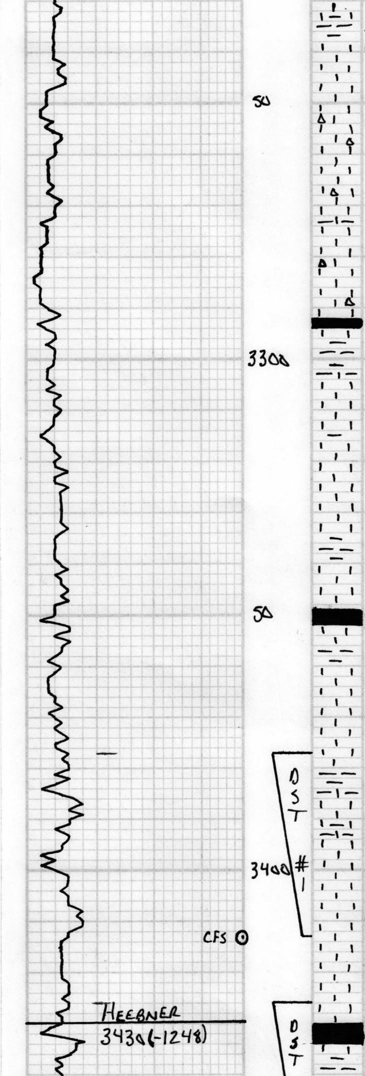
Topeka
3182(-1000)

Sh: drk gry

LS: wht, md xln w/ foss. Scat vug + ppφ, chlky in prt, NS. Fr amt gry Sh int beds.

3200

LS: wht, Fn xln. Mostly chlky, scat gd ppφ, All NS.



Sh: gry
LS: wht, md xln, Foss. prø & tite. Trng Scat vugø
w/ chlky rx, NS.

LS: tan-wht, md xln,
Scat Foss & gry chts.
Same vugø, mostly sub
xln-chlky, mtld in prt.

LS: wht-tan, md xln,
v mtld, v chlky, All
NS. Scat tan-gry chts.

Sh: Black Carb

Sh: gry

LS: wht, vfn-mic xln,
prø & dns.

LS: Same A/A w/ Fr amt
Subxln-chlky rx, NS.

Sh: gry
LS: tan-wht, md xln, dolom.
Scatø, gry chts, NS.

Sh: Black Carb

Sh: gry
LS: wht, fn-md xln, Sub
xln-chlky, scat gdø, All
NS, trng prø & dns. Fr
amt mtld rx.

Sh: gry
LS: tan, md xln, Foss. Fr vugø
w/ Fr-gd lt brn sat stn, sptd
SFO, Fr Od. Scat Sub xln rx.

LS: tan, md xln, sml Foss, dolom
in prt. gd intxlnø w/ sml
vugs, gd lt brn sat stn w/
Fr-gd SFO, gssy in prt. Fr Od.

LS: tan, md xln, prø &
dns

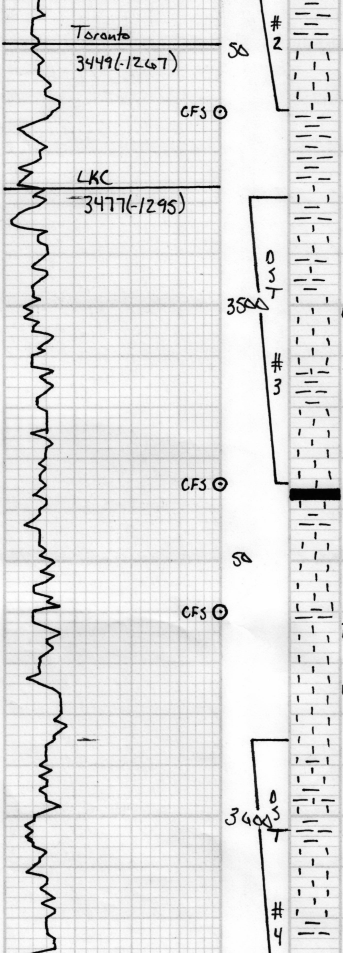
LS: tan-wht, md xln,
mtld. Scat chlky rx.
NS.

Sh: Black Carb

DST #1
3377-3413
45-45-45-45
I.F.- 3¼" blow
F.F.- 2" blow
IFP: 16-25
FFP: 26-50
SIP: 1084-1052
HP: 1560-1569
Rec:
40' WM w/ oil spots
15% w
BHT: 102°

DST #2
3426-3462
45-45-45-45
I.F.-BOB 17 min
F.F.-BOB 1 min/1" SIB
IFP: 16-39
FFP: 33-66
SIP: 905-895
HP: 1590-1600
Rec:
800' GIP
20' CO
60' GOCM 10% g, 5% o
BHT: 110° G=30

DST #3
3479-3535
30-30-30-30
I.F.- Surf



Sh: gry

LS: tam, fn-md xln, dolom, Few sml Foss. Fr-gd vug + intxln ø, Friable. gd sat stn w/ gd SFO, Fnt Od.

Sh: gry

LS: tam, md xln, prø

Sh: brn

LS: tam, Fn xln, suc in prt. pr ø, lt brn stn, NSFO, No Od.

Sh: gry

LS: wht-tam, Fn-md xln. Fr amt subxln-chlky rx, gd intxlnø, Scat lt stn w/ Fr SFO. Scat frag Foss w/ sml vugs, v Fnt Od.

Sh: gry

LS: tam, Fn-md xln, Scat Foss. Fr-gd intxln ø, scat vugs. gd Sat stn, Fr-gd SFO, Fr-gd Od.

Sh: Black Carb

Sh: gry

LS: wht-tam, md xln. Scat vugø w/ lt brn stn, spttd SFO, Fnt Od. Scat chlky rx.

Sh: gry

LS: tam, md xln, Few Foss, Fr intxln ø, sml vugs. Fr lt brn stn, spttd SFO, lt Od.

LS: wht, md xln, Fr vugø. Sltly sub xln, All NS + No Od.

Sh: drk gry-blk

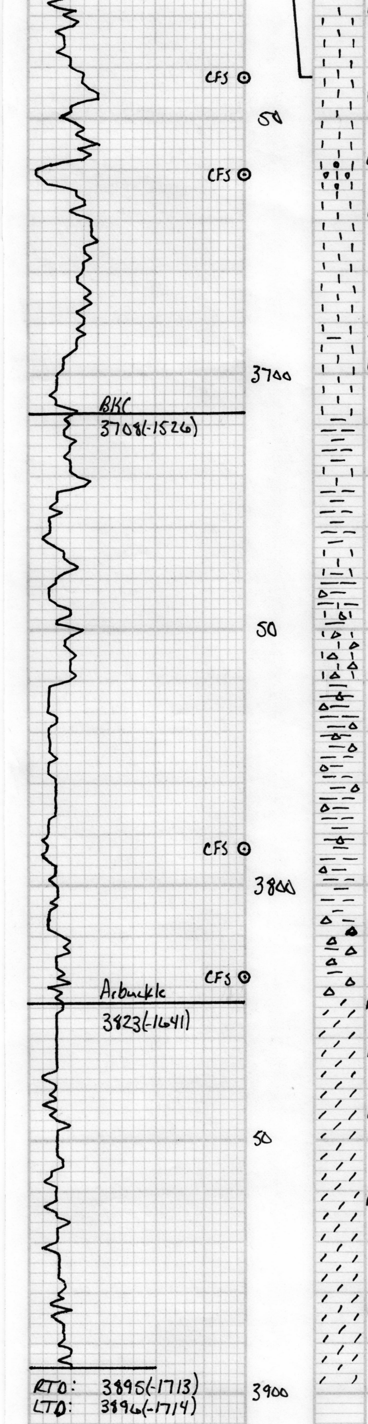
Sh: drk gry

LS: tam, md xln, Foss. Fr-gd vug + intxlnø, Scat subxln Fr-gd lt brn sat stn, Fr SFO, gd Od.

Sh: gry

F.F.- 2" blow
IFP: 13-20
FFP: 18-23
SIP: 78-67
HP: 1627-1619
Rec:
110' GIP
10' OGCM 10%g, 10%o
BHT: 104°

OST #4
3585-3642
45-45-45-45
I.F.- 6 1/2" blow
F.F.- BOB Immed. / No SIB
IFP: 14-34
FFP: 29-48
SIP: 793-986
HP: 1695-1675
Rec:
775' GIP
60' GMO 30%g, 40%o
30' OGCM 10%g, 10%o
BHT: 110°



RTD: 3895(-1713)
LTD: 3896(-1714)

LS: wht, mostly sub xln w/ NS. Scat ool rx w/ fr stn, spttd SFO, lt Od. tan cht△. Fr amt drk gry Sh in CFS.

LS: tan, lrg foss. prØ, scat vugs, mostly tite. Fr stn, pr-fr SFO, sltly hvy, fnt Od.

LS: wht, tot ool. gd oocØ, some gd-fr sat w/ gd SFO, gssy in prt. Much barren Ø, fr-gd Od.

LS: tan-wht, fn-md xln, scat ool, All prØ.

All NS, No Od.

Sh: gry

LS: wht, fr amt subxln-chlky rx. Scat fr oocØ, some fr stn + SFO, many barren rx, lt Od.

Sh: gry

LS: tan, md xln, prØ.

Sh: red-brn

LS: tan, fn-md xln, sltly suc. Scat intxlnØ w/ fr stn, SFO lt Od.

Sh: brn-red, scat org cht▲.

Much org + tan cht△, Scat LS w/ pr stn, rare SFO, No Od.

Abnt red + org chts, some tan. Much red Sh, Scat LS. All NS, washes red.

Much AIA, red + org chts. Trng much Sh, brn + gry.

Dolo: wht, fn-md rhom xln. Mostly prØ + barren, Scat hvy stn + SFO, No Od. Fr amt Sh.

Dolo: wht, md rhom xln, fr intxln + vugØ. Fr-gd sat w/ gd SFO, lt Od.

Dolo: Scat rx AIA, trng many barren rx. Fr amt w/ hvy blk-dead stn, No Od.

Dolo: wht, md xln, rhom.

fr vugØ, trng tite.

Scat gilsonite, mostly barren.

Dolo: wht, prØ, md-crs rhom xln. All NS.