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GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co., Inc.
WELL Dewald #1-13
FIELD
LOCATION 1142' FNL - 1611' FEL
SEC. 13 TWP. 17s RGE. 19W
COUNTY Rush
STATE Kansas

17s 19W
13
Deets #1

PRODUCTION Congl. Sand
ELEVATION KB 2162
DF
GL 2154
Drilling Measured From: 2162 KB

Samples Saved From 3400 To: TD
Drilling Time From 3050 To: TD
Samples Examined From 3450 To: TD
Geological Supervision From 3050 To Total Depth
Wellsite Geologist Alan Downing
Electrical Surveys Nabors
CDNL/GR - Microlog
Sonic - Dual Induction

OPERATOR DNOCI
CONTRACTOR Discovery Drlg. Rig #3
COMM: 10-29-13 COMP: 11-04-13

CASING RECORD

SURF: 8 5/8" 1364' PROD: 5½ - 4000'
TOTAL DEPTH DRILLERS: 4000
TOTAL DEPTH LOG: 4003

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Anhydrite	1355	1358	+804	-31
Base	1391	1392	+770	-30
Topeka	3195	3198	-1036	-27
Heebner	3483	3488	-1326	-32
Lansing	3529	3533	-1371	-31
BKC	3800	3803	-1641	-37
Marmaton	3846	3848	-1686	-34
Congl. ss	3882	3886	-1724	-36
Arbuckle	3807	3811	-1749	NR
Congl. Fill	3928	3932	-1770	-
Arb	3974	3978	-1816	-

REFERENCE WELL FOR STRUCTURE Birmingham - Bartlett
Deets #1 NW-NW-SE Sec 13-17s-19W

DRILL STEM TESTS

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

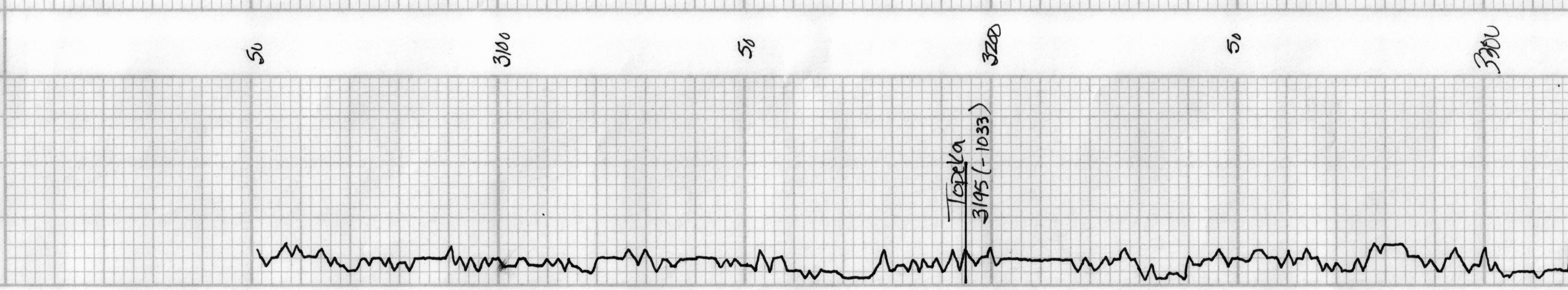
REMARKS AND RECOMMENDATIONS

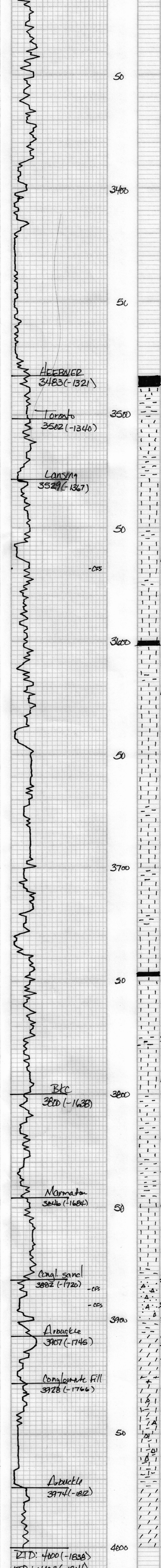
* Note We drilled in a faulted area were Arbucke was encontered twice with Conglomerate fill inbetween - Congl. sand above 1st Arbuckle Bench was found to be highly Productive, above second bench congl. was mostly Chert & Red shales w/ scatt Indv. ss grains scattered throughout -

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





Sh: Black - carb

Ls: Wht V fxn Vdse

Sh: gm -

Ls: Wht - mottled wht
f - subxn - chky i'n pt Ns
W few pcs wht Δchert

Sh: gm - Brown - Red

Ls: Wht fxn dse W fair
amt wht chky Ls i'ntbed
few pcs wht clr. Δchert
)

Sh: gm

Ls: Wht Tan fxn V. good oocϕ
all totally Barren Ns

Sh: grey

Ls: Wht lt - Tan fxn ool
W scatt ool - oocϕ No
show - Barren

Sh: Black - carb

Ls: Wht fxn V. ool W fr. ool.
oocϕ Ns

Ls: Tan fxn ool W poor ϕ
Ns.

Ls: Tan fxn V. good oocϕ
No show totally Barren

Ls: Tan - lt. Tan f. - Vfxn
all Vdse W few pcs V. ool
cmn - Δchert.

Sh: V dark gm - Black

Ls: Wht lt Tan fxn ool
W poor ϕ Ns - chky
i'n pt

Sh: gm

Ls: Tan fxn good ool oocϕ Ns
No odor - becoming totally
oolitic + dse

Sh: gm - Brown

Ls: Wht fxn V. good excellt
oocϕ x/SFO - No odor
all totally Barren
becoming ool tite

Sh: Black - carb - drk gn

Ls: Wht f - subxn W fr.
good ool - oocϕ No show
No odor
)

Sh: gm -

Ls: Wht cmn f - subxn W
fair interxn - oocϕ Ns

Ls: Wht ool - V. tite - Ns

Sh: Red - grey - green

Ls: Wht f - Vfxn Vdse

Ls: Tan f - Vfxn W few
pcs wht Δchert

Sh: gm - Brown - Red

Ls: Wht f - Vfxn all V. dse
W lots of pink - plag
Δchert all V. dse No show
oil or stn - No odor
)

Sh: gm - Black

SS: crs grn & clusters lrs tite
clusters W SFO - No odor lots loose
SS in bottom - Ns

SS: crs - V. crs Indv grns on bottom
thru - V. tite ang clusters - slt.
gilsonetic stn. NSFO - No odor

Sh: Tourquise

Dolo: Wht f - mxln Rhom
poor ϕ Totally Barren Ns

Dolo: crsxln Rhom Wht Ns

Ls: Wht f - V fxn W lots of
Dolomite Rhomb - (arbuckle)
interbedded - and much
Varicolors chert - througout
No show - W lots Indv.
Crs gr. SS ~~clusters~~ grns
througout all Ns.

Sh: Tourquise gm

Dolo: Wht crs xln Rhom
W poor i'ntxn ϕ - all
No show totally Barren
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