

35-15s-14w

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GEOLOGICAL REPORT
FOR
SCHECK OIL OPERATIONS, INC.
Russell, Kansas

KING No. 4
API No. 15-167-23664
2210' FWL &
2310 FWL
Sec. 35 T 15 S R 14 W
Russell County, Ks.

Oct. 12, 2010

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GEOLOGICAL REPORT FOR
SCHECK OIL OPERATIONS, INC.
RUSSELL, KANSAS

Operator No. 9292

GEOLOGICAL REPORT:

King No. 4
2210' FSL & 2310 FWL
Sec. 35, T 15 S, R 14 W
Russell County, Ks.
API No. 15-167-23664-00-00

CONTRACTOR:

Maverick Drilling, LLC.
Lic. 34223

DRILLING COMMENCED:

Oct. 1, 2010

DRILLING COMPLETED:

Oct. 8, 2010

CASING RECORD:

464' of 8 5/8" surface casing,
cemented with 225 sx. cement.
3399' of 5 1/2" production cas-
ing cemented with 150 sx. cem.

SAMPLES:

Saved and examined from 2750'
to 3400', RTD. Zones of interest
are described in this report.

DRILLING TIME:

Recorded and plotted from
2750' to 3400', RTD. A copy of
the plotted drilling time/lithology
log is included with this report.

DRILLSTEM TESTS:

Four by Trilobite Testing, Inc.
Hays, Kansas.

ELECTRIC LOGS:

Radiation-Guard-Cliper and
Micro-resistivity by Log Tech
of Hays, Kansas.

ELEVATIONS:

KellyBushing: 1915'
Ground Level: 1908'
Measurements From: K. B.

FORMATIONS:	ROTARY DEPTHS:	E. LOG DEPTHS:	DATUMS: E. LOG:
Anhydrite		890	+1025
Topeka Lime	2811	2802	- 887
Heebner Shale	3038	3032	-1117
Toronto Lime	3053	3048	-1133
Lansing-Kansas City	3106	3100	-1185
Base of Kansas City	3330	3324	-1409
Arbuckle Dolomite	3335	3329	-1414
Total Detph	3400	3396	-1481

LITHOLOGY: Zones of Interest (corrected to E. Log Detphs):

TOPEKA LIME:

2960-2974: LS-white, light gray, dense to chlky with some fossil porosity. Rare dark oil stain. No free oil or odor.

2980-2990: LS-as above with some fossil porosity, Still dark and tarry oil stain. No free oil or odor.

TORONTO LIME:

3052-3057: LS-white, buff, crystalline with some fossil porosity. Rare light oil stain. No free oil or odor.

LANSING-KANSAS CITY:

3100-3110: LS-white dense, no oil staining. A zone.

3116-3120: LS-white, dense to fair fossil porosity with scattered light oil stain, slight show of free oil and faint odor. Tested by drillstem test No. 1:
B zone

3138-3144: LS-white, oolitic and oolitic, barren with trace of light oil stain. No free oil or odor. Tested by drillstem test No. 1.
C zone

DRILLSTEM TEST No. 1: 3112-3140 (corr. 3106-3134 (28' Anchor))

Tool open 30 min. weak blow. Shut in 45 min. Open 30 min. no blow.
Tool shut in 45 min.

Recovery: 65' of gas
25' VSOCM (1% oil)

IFP: 15-20 psi
IBHP: 121 psi
FFP: 19-25 psi
FBHP: 118 psi

LITHOLOGY, Cont... (LKC)

- 3168-3190: LS-E & F zones undifferentiated white dense to slight partly oolitic with rare trace of oil stain. No free oil or odor.
- 3192-3216: LS-white, abundant, oolitic and oolitic with good barren G zone porosity and very minor trace of oil stain.
- 3250-3254: LS-white, dense to slight fossiliferous with slight porosity. H zone No oil stain noted.
- 3258-3270; LS-white, buff, dense to slight fossil porosity. No oil stain. I zone
- 3276-3290: LS-buff, light gray dense with trace of oolitic and oolitic J zone porosity with trace of oil stain.
- 3310-3324: LS-white, buff, dense. K zone.

ARBUCKLE DOLOMITE: (E. Log depths, as best correlated)

- Circ. @ 3332: DOL-white, fine crystalline, mostly dense with oil stain some dense, unstained dolomite. Good oil odor and slight show of free oil. good oily taste. Some crynoid limestone with oil stain and saturation, and porosity.
- Circ.@ 3333: DOL-Still abundant white, crynoid lime with good oil stain and saturation. Some white, fine crystalline dolomite with very little oil stain. Sample had good oil odor, show of free oil and good oily taste.
- Circ. 3335: DOL-as above with limestone as above. Some gray, brown and pale green shale. (E. Log 3334-36).
- Circ. 3339: DOL-Increase in white, dense, fine crystalline with rare light oil stain with other rocks as above, and oil stain as above. Good odor and oily taste.
- Circ @ 3342: DOL-definite increase in white fine crystalline with increase in oil stain and saturation. Still some lime with oil stain and oil odor.
- Circ. 4849: DOL-white, fine to medium crystalline with oil stain and saturation. Slight show of free oil and good odor. Good oily taste.
- Circ. 3355: DOL-White fine to medium crystalline with fair scattered oil stain and saturation. Increase in dolomite. Slight show of free oil and good oil odor and good oily taste.

Cont...next page for drillstem tests

Arbuckle, cont...

DRILLSTEM TEST No. 2: 3327-3341 (corr. 3320-3334 (14' of anchor))

Tool open 30 min. with weak blow 16 min. Tool shut in 45 min.

Recovery: 10' oil specked mud

IFP: 21-21 psi
IBHP: 802 psi

DRILLSTEM TEST No. 3: 3326-3348 (corr. 3319-3341 (22' anchor))

Tool open 30 min. Tool shut in 60 min. Tool opwn 15 min. Initial Flow weak blow. Final flow, no blow.

Recovery: 15' oil specked mud

IFP: 20-20 psi
IBHP: 770 psi
FFP: 21-21 psi

DRILLSTEM TEST No. 4: 3325-3360: (corr.3318-3353 (35' anchor))

Tool open 30 min. with fair to strong blow, increase to 13" in bucket. Tool shut in 60 min. Tool open 60 min. with fair to strong blow, off bottom of bucket in 19 min. Tool shut in 60 min.

Recovery: 220' of gas
85' of clean gassy oil. 10% gas, 90% oil
63' of gassy mud cut watery oil. 20% gas,
30% oil
28% water
22% mud
125' of slight oil cut muddy water. 4% oil
80% water
16% mud
62' of muddy water with oil specks 94% water
6% mud

IFP: 20-63 psi
IBHP: 1086 psi
FFP: 66-156 psi
fbhp; 1069 psi

Arbuckle, cont...

- 3353-3360: DOL-as above, same oil stain and saturation. More dense, as indicated by E. Log.
- 3360-3370: DOL-as above with fine crystalline porosity with less oil stain.
- 3370-3380: DOL-white, dense, white fine crystalline with less oil stain and saturation. Still minor show of free oil and odor.
- 3390-3396: DOL-white, dense to only slight crystalline porosity. Almost no oil stain at all. Considerably more dense.

REMARKS & RECOMMENDATIONS:

Based on the E. Log measurements; I make the following structural comparison with the King #3 and the old Shell Oil Company dry hole:

	KING #3	KING #4	SHELL OIL
Lansing-Kansas City	-1180	-1184	-1197?
Arbuckle Dolomite	-1413	-1414	-1432
Equivalent Pay Zone Porosity	-1419-1428	-1425-1433	-1432-1437

You will note from the above comparison that the King #4 ran only slightly lower on top of the LKC when compared to the King #3; and, considerably higher than the estimated top on the Shell dry hole. On top of the best Arbuckle porosity (which will be productive) the King #4 ran somewhat lower (6') than the King #3; somewhat higher than the productive interval than the Shell dry hole.

Three drillstem tests were taken in the Arbuckle Formation with only test #4 recovering commercial oil from the porosity interval of -1425-33.

My recommendation, then, is to consider perforating within that interval; perhaps at the depths of 3341 & 3342 (at the very top of the porosity interval). The Arbuckle will undoubtedly produce a volume of water with the oil production. This is due to the depletion of the reservoir from the other existing wells on the lease.

Further, I do not believe that the zones of minor oil stain in the Topeka, Toronto or the Lansing-Kansas City have any commercial value.

Respectfully submitted;

Francis C. Whisler

Francis C. Whisler, CPG

DEPTH	DRILLING TIME	LITHOLOGY	REMARKS
3000		LS - wht lt Gvy dns	
		AA & chky	
20		AA	
HEEBNER		sh - blk carb in 50-60 smpl	
40 3038 (-1123)		sh - Gvy blk brn	
TORONTO		LS - wht buff x/n w/ some	
50 3053 (-1138)		foss ϕ ; R. lt stn	
60		NFO or odor	Vis, 54 Wt. 8.9 LCM (H)
		sh - sft Gvy brn &	
80		pale grn	
		same	
3100		LS - wht dns	
LANSING KC			
3106 (-1191)			
20		LS - wht dns to fair ϕ w/	
		scatt'd fair lt, oil stn	Vis, 55 Wt. 9
		SS FOT + Ft. odor	
		LS - wht ool-oolc - barren ϕ	
40		w/ Tr. lt oil stn	
		NFO or odor	
		LS - wht dns	
		LS - AA	
60		LS - AA	Vis, 51 Wt. 9.1
		sh - Abnt Gvy	
80		LS - wht dns, partly ool	
		w/ vy R, Tr, stn	
		LS - AA, stn - AA	
3200		LS - wht, Abnt ool-oolc	
		Good ϕ - barren w/	Vis 58 Wt. 9
		vy minor Tr. stn	
		LS - wht dns w/ whitcht	
20		LS - AA	
		AA	
40			
50		sh - blk Gvy	

Depth

Drilling Time

Lithology

Remarks

SCHECK OIL OPERATIONS, INC.
King #4: API# 167-23664-00

5 10 Min.

2210' FSL & 2310' FWL
Sec. 35 T 15 S R 14 W

Russell County, KS

LS-off wht to lt Gvy
dns

Sh-Abnt Gvy

LS- Move lt Gvy dns

LS-AA

LS-AA w/Gvy-blk chf

LS-watcky

LS-etch-AA

LS-wht lt Gvy dns
to chky

Sh-Blk Carb (KING HILL)
in 20-30 Smp

40 min Lag time

LS-wht chky

LS- lt Gvy dns

LS-AA

Sh-Trace blk Carb sh

60-70 Smp

Incr Blk Carb sh

70-80 Smp

LS-wht Gvy dns to
chky. some foss
w/R. Dk. oil stn.

LS-AA some foss

Still Dk oil stn-Tarry

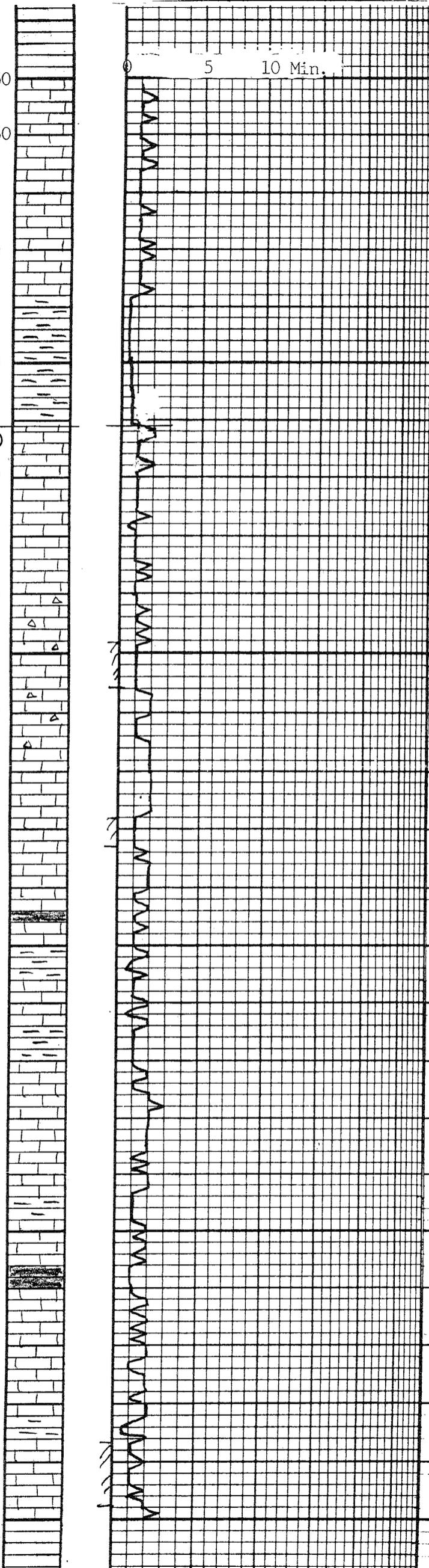
NFO. or odor

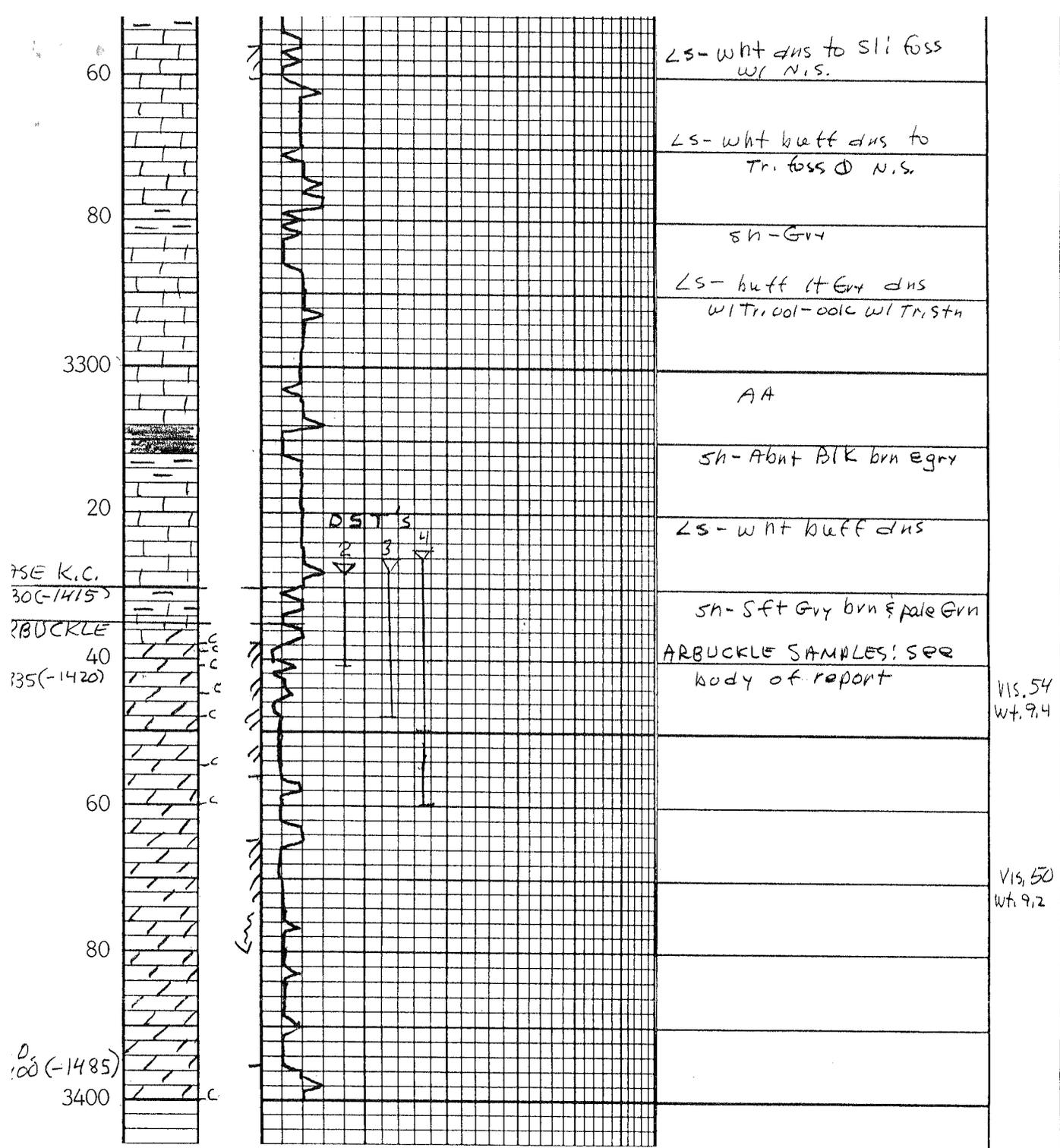
Vis. 55
Wt 8.8
LCM 2#

Vis. 58
Wt 8.8

TOPEKA
2811(-896)

2750
60
80
2800
20
40
60
80
2900
20
40
50
60
80
3000





LS - wht dms to sli foss
w/ N.S.

LS - wht buff dms to
Tri. foss & N.S.

sh - Gvy

LS - buff lt Gvy dms
w/ Tri. ool - oolc w/ Tri. stn

AA

sh - Abnt Blk brn egry

LS - wht buff dms

sh - Sft Gvy brn & pale Gvy

ARBUCKLE SAMPLES: SEE
body of report

Vis. 54
wt. 9.4

Vis. 50
wt. 9.2

DST 1
2
3
4

7SE K.C.
30C-1415

ARBUCKLE

35(-1420)

00(-1485)
3400

60

80

3300

20

60

80