

API. # 15-065-24047-00-00

GEOLOGICAL REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY RL Investment, LLC.
 LEASE Hanna # 2-18
 FIELD Guck
 LOCATION 990'FNL + 1650'FEL
 SEC 18 TWSP 10s RGE 25w
 COUNTY Graham STATE Kansas

ELEVATION
 KB 2561'
 DF 2559'
 GL 2553'
 Depths Measured From
 Log KB Drilling KB

CONTRACTOR WW Drilling Rig # 12
 SPUD 6-6-14 COMP 6-12-14
 SAMPLES SAVED FROM 3550' TO R.T.D.

CASING
 Surface 8 5/8 @ 220'
 Production none

ELECTRIC LOGS
Nabors

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	E. LOG	DATUM	A	B	C	D
			<u>4-log</u>	●	●		
<u>Anhydrite</u>	<u>2177</u>	<u>2176 + 385</u>		<u>+ 380</u>	<u>+ 382</u>		
<u>Base Anhydrite</u>	<u>2217</u>	<u>2215 + 346</u>		<u>+ 348</u>	<u>+ 345</u>		
<u>Tapeka</u>	<u>3570</u>	<u>3570-1009</u>		<u>-1005</u>	<u>-1004</u>		
<u>Heebner</u>	<u>3786</u>	<u>3786-1225</u>		<u>-1221</u>	<u>-1218</u>		
<u>Toronto</u>	<u>3808</u>	<u>3808-1247</u>		<u>-1243</u>	<u>-1239</u>		
<u>Lansing</u>	<u>3826</u>	<u>3825-1264</u>		<u>-1259</u>	<u>-1256</u>		
<u>Base Kansas City</u>	<u>4057</u>	<u>4057-1496</u>		<u>-1494</u>	<u>-1493</u>		
<u>Total Depth</u>	<u>4100</u>	<u>4099-1538</u>		<u>-1543</u>	<u>-1547</u>		

REFERENCE WELLS

- ^A RL Investment, LLC. Hanna # 1-18, 653'FNL + 335'FEL Sec. 18-10s-25w
- ^B RL Investment, LLC. Ballig A # 1, 1304'FNL + 1000'FEL Sec. 17-10s-25w
- ^C
- ^D

REMARKS

This well ran 5 to 8 feet lower on the Lansing top than the reference wells. Considering the low structural position and open hole log analysis it was decided this well should be plugged and abandoned.

Richard B. Bell
6-12-14

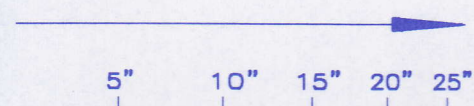
7502

LEGEND

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

LOG 7710

DRILLING TIME IN MINUTES
PER FOOT
Rate of Penetration Decreases



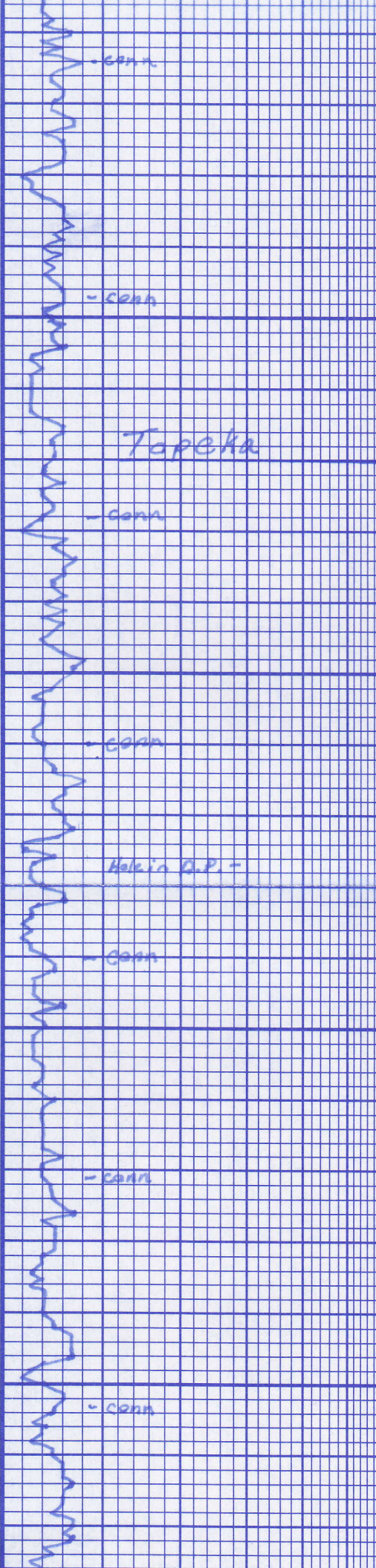
DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
2170				
2200				
20				
3450				

Anhydrite

-conn

Base Anhydrite

-conn



20

40

60

80

3600

20

40

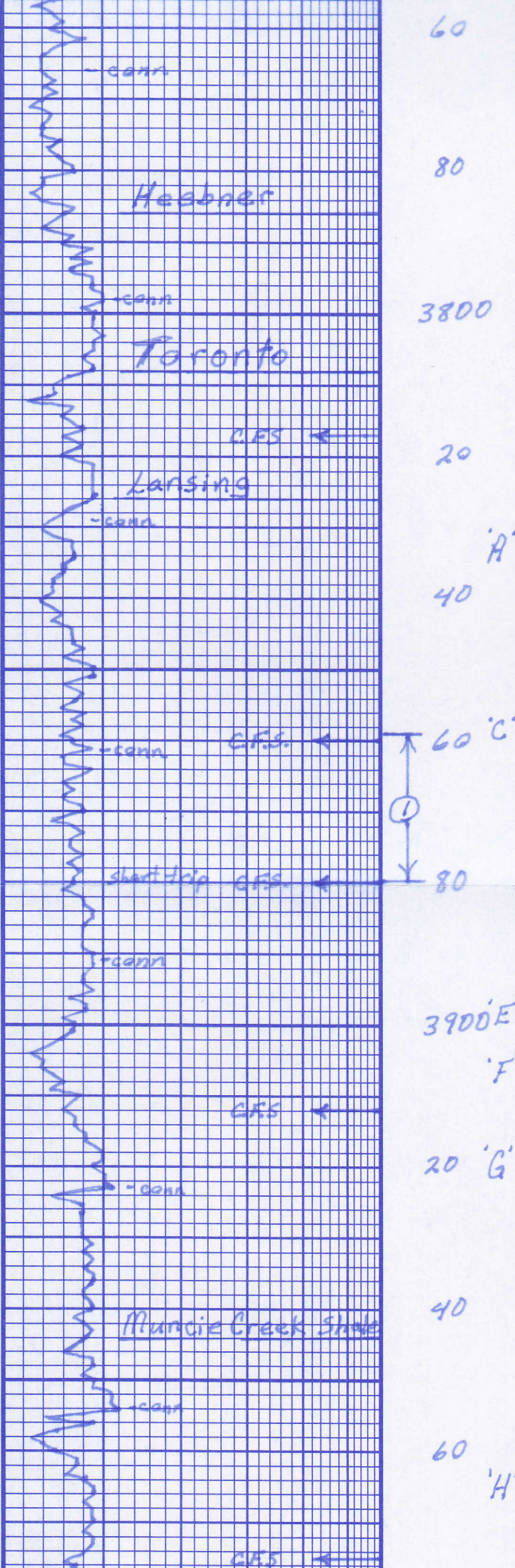
60

80

3700

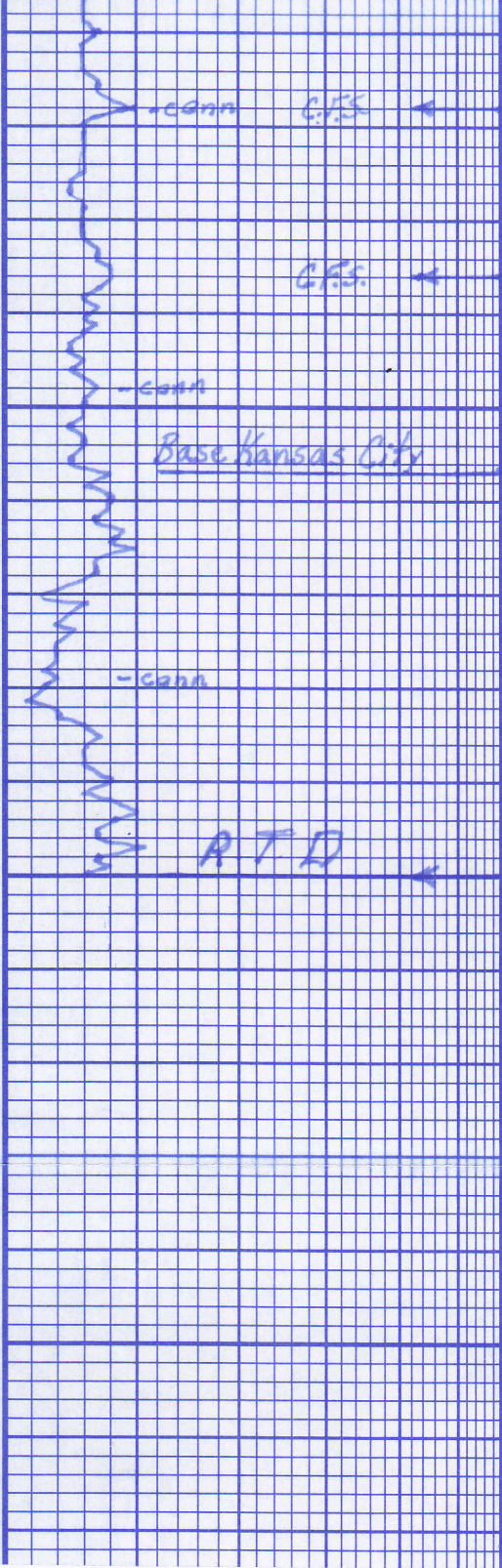
20

	LS: tn-gry mtd fslf dms
	sh. gry
	LS: tn-gry-sli. yel fslf dms
	sh: gry + gry stty
	LS: gry fslf dms
	LS: wh-tn sli-cky-fxln-sli. fslf dms N.S.O.
	sh: brn stty
	LS: a.a.
	LS: tn-gry sli-cky-fslf pr. in part ϕ N.S.O.
	LS: wh-tn mly fslf friable No v.s. ϕ N.S.O.
	LS: tn-gry fslf dms
	sh: brn + gry
	LS: wh-tn fxln sli. ool pp ϕ N.S.O. Tr. Δ + n
	LS: wh-tn cky-fxln sli. ool w/ foss. inclus. pp ϕ N.S.O.
	LS: wh-tn cky-fxln ool pp ϕ N.S.O. Δ + y wh-tn
	Dol: tn fxln incln ϕ N.S.O.
	LS: tn-gry fxln-fslf dms Tr Δ wh-tn
	Sh: blk Carb
	LS: tn-gry fxln-sli fslf
	ss. gry v. fn. gn cansol ^{dms} in gran ϕ N.S.O.
	st: stone: gry + brn
	LS: sh fslf pp ϕ Tr. v. gry ϕ N.S.O.
	LS: wh-tn cky-fxln Tr. ool pp ϕ - in part ϕ N.S.O.
	LS: wh-tn fxln ool pp ϕ



60	LS: wh. sli. cky. fslf dns N.S.O.
	LS: wh. cky. fxln No. vis φ N.S.O.
80	LS: wh. tn - lt. brn cky - fslf dns N.S.O.
	Sh: blk carb
	LS: tn - gry fslf dns
3800	sh: gry
	sh: gry slty
	LS: wh. tn cky. fxln pp φ N.S.O. Δ + y wh. tn or
20	sh: gry
	LS: wh. tn sli. cky - fxln ööl in part φ N.S.O.
40	
	LS: tn - sli. yel fslf dns
	LS: wh. tn sli. cky. fxln Tr sub ööl dns N.S.O. No cat No odor Δ + tn
60	sh: gry
	LS: wh. tn sli. cky. fxln ööl pp φ Lt. O stn Tr floating F.O. ft. odor
80	
	LS: aa R.T. stn aa.
	LS: tn fslf dns
3900	LS: wh. tn fslf dns N.S.O.
	LS: wh. tn sli. cky. fxln ööl - Tr. ööl pp φ - in part φ Lt. O stn Tr pp floating F.O. fr. odor
20	LS: wh. crm fxln dns N.S.O.
	Same
	aa tr Δ + tn
40	Sh: blk carb
	LS: tn fslf dns
	slt. stone: gry
60	
	LS: wh. tn fxln tr pr. pp φ Tr isol. Vugs R.T. pr Lt. septid O stn R.T. lt. brn F.O. on crushing No odor

Diamond Test
 DST #1 385
 30-30-30-
 IF: gd surge N
 FF: No blow
 Recovery: 1' m
 Tool Sample: 1
 Hyd: 1889-18
 FP: 5-8/7-8
 BHP: 21-15 #
 BH Temp: 116°
 Board 38
 Strap 38
 Diff.
 Incline @ 3880



J
 LS: wh-tn sli. chy. fxl n. ool. tr
 in part φ. Scat pcs of thick
 sh: F.Q. on crushing No odor ✓

20
 sh: brn + gry

K
 LS: tn. gry fxl n. ool tr
 in part φ. Scat pcs of thick
 sh: F.Q. No odor ✓

40
 sh: gry + brn

L
 LS: wh-tn - lt. gry sli. chy
 fxl n sub ool dms N.S.O.

60
 LS: aa
 sh: gry + brn

sh: brn, gry + grn

80
 slt stone: brn

LS: white chy - fxl n dms N.S.O.
 Δ + K tn - br

sh: brn + gry LS + Δ aa

4100