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 212 Main St. • P.O. Box 215 • Clarin, KS 67525

# GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY H/D Exploration LLC

LEASE Snider #1

FIELD Beaver

LOCATION Se-Sw-nene

SEC 9 TWPSP 16S RGE 12W

COUNTY Barton STATE Kansas

CONTRACTOR Southern Wind Drilling (rig #2)

SPUD 10/18/2013 COMP 10/25/13

RTD 3303 LTD 3303

MUD UP 2551 TYPE MUD Chemical displaced

SAMPLES SAVED FROM 2700 TO 2700

DRILLING TIME KEPT FROM 2700 TO 2700

SAMPLES EXAMINED FROM 2700 TO 2700

GEOLOGICAL SUPERVISION FROM 2800 TO 2800

GEOLOGIST ON WELL Jim Musgrove

FORMATION TOPS LOG SAMPLES

KB 1870

DF 1861

GL 1861

Measurements Are All From - KB -

CAS/NO 85/811e 775

SURFACE PRODUCT ION 5/21/03 299

ELECTRICAL SURVEYS Bay Pines

Dual Inducton, Dual Compensated Forestry

RTD =

anhydrite	681		
base anhydrite	708		
Hebner	2935		
Toronto	2951		
Douglas	2966		
Broken lime	3021		
Mansing	3032		

5 1/2" production casing was set & cemented on the Snider #1.  
 Respectfully submitted,  
 James C. Musgrove  
 Petroleum Geologist



## LEGEND

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

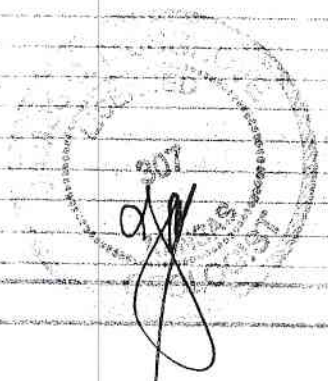
DRILLING TIME





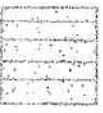





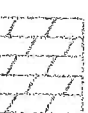
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James C. Maxson  
 Petroleum Geologist.

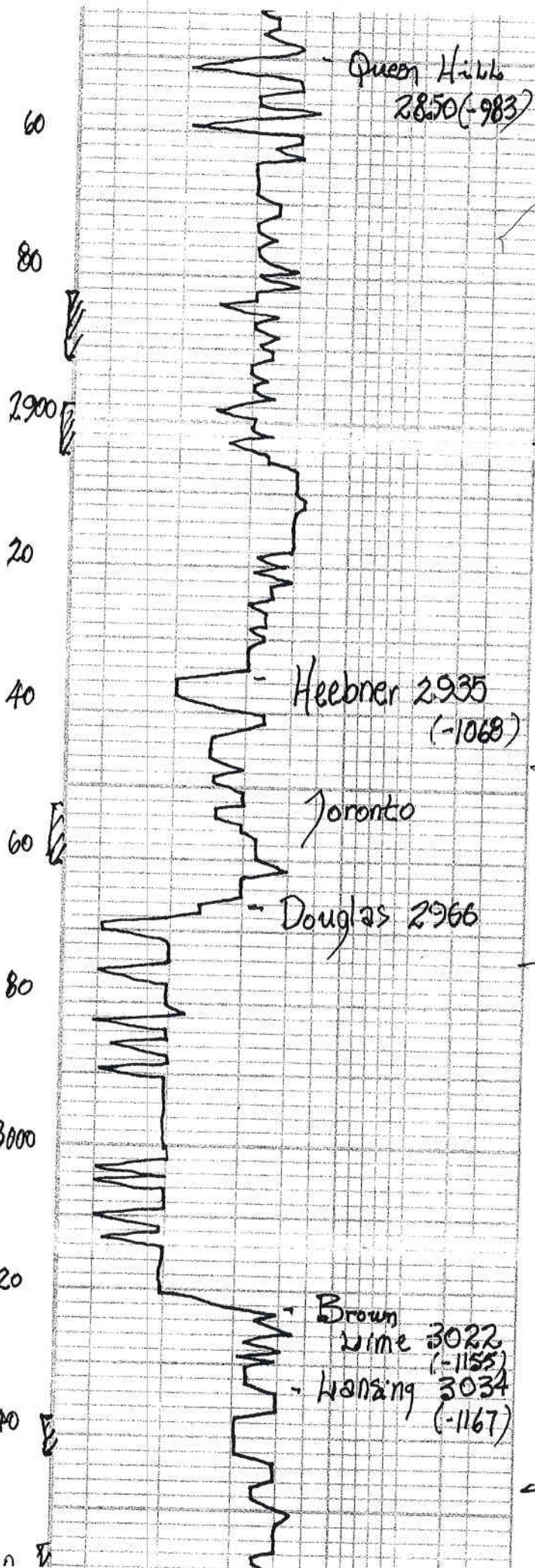


LEGEND

-   
Anhydrite
-   
Salt
-   
Sandstone
-   
Shale
-   
Carb sh
-   
Limestone
-   
Coll. Lims
-   
Chert
-   
Dolomite

DEPTH	DRILLING TIME (Logarithmic Scale)	SAMPLE DESCRIPTIONS	REMARKS
	.5    1    2    3    4    5    10    15    20    30		
20	[Hand-drawn drilling time curve]	LS; wh/gry; fine gran, cherty; poorly dev. o'	
40	[Hand-drawn drilling time curve]		
60	[Hand-drawn drilling time curve]		
80	[Hand-drawn drilling time curve]		
200	[Hand-drawn drilling time curve]		





Queen Hills 2850 (-983)

blk carb sh.

- 1867KB -

ls, gry-wh-fx, few gran, chky

~ ~

ls, wh/gry, fx, gran, few foss, Jr. brown stn, nsfo, no odor.

~ ~ ~ ~ ~

~ ~

ls, gry, brown, fx, chky, Jr. gry A

Heebner 2935 (-1068)

blk carb. sh.

gry/green sst sh

Toronto

ls, brown, fx, chky, Jr. brown spotty stn, nsfo, no odor.

Douglas 2966

mar/gry-green-brick red sh/silty sh.

~ ~

Jr. sand, gry, wh, vfg, sub-rounded, friable, mica, shaly in part, ns

~ ~

Brown Lime 3022 (-1155)

ls, tan, gry, fx, dense

- 1867KB -

Lansing 3034 (-1167)

ls, gry, finely ool/oomy, Jr. brown stn, Jr. fo, ft. odor.

DSC #1 3026 -3064

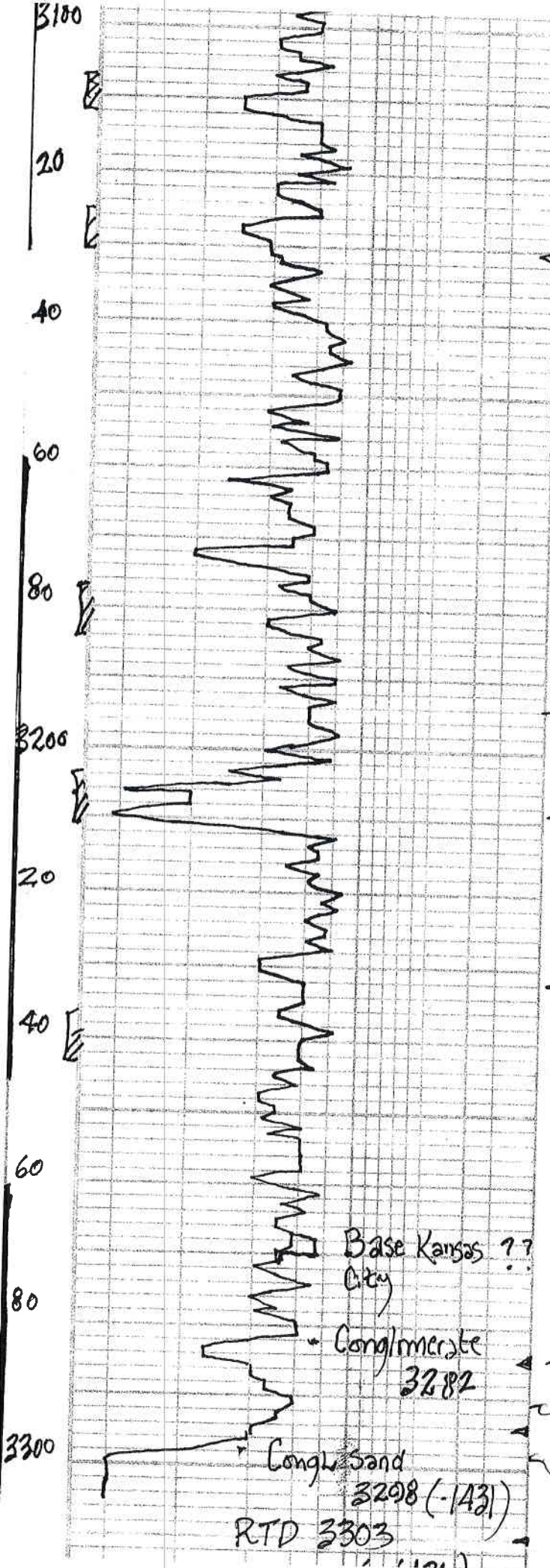
ls, ax, scatt stn, sfo, odor.

30-30-45-60

Blow; strong (Bob 10 mins)

~ ~





LS, wh, fxl, finely ool  
 Sparry calcite cement, golden brown  
 sfo, ??? odor

pressures; Isip 630 PSI  
 Ss: P 616 "  
 If P 43-122 "  
 Ss P 124-228 "  
 HSH  
 1472-1463'

LS, wh/gy, fxl, ool, com  
 Slightly dry, fr. str  
 nsfo; no odor

Dst #2 3096-3131  
 30-30-45-60  
 Blow; strong  
 (Bob 10 mins)

LS, tan, brown, fxl,  
 Slightly dry (dense)

2nd opening; strong  
 (Bob 9 mins)  
 Rec; 250' gas in pipe  
 120' slightly oil  
 gas cut watery  
 mud  
 (590 oil; 2590 gas)  
 10% water; 60% mud

blk carb sh.

LS, wh, gy, com, slightly  
 chky; dry, fr. com  
 fr. brown str, fr. fo  
 fr. odor

pressures; Isip 602 PSI  
 Ss: P 601 "  
 If P 22-63 "  
 Ss P 71-129 "  
 HSH  
 1512-1493'

LS, wh/tan, ool; poor o;  
 fr. str, nsfo;

LS, wh, ool, com, fr. o;  
 brown str, sfo, odor

Dst #3 3160-3246  
 30-30-30-45  
 Blow; strong (Bob  
 2 mins)

slug/v.c sh

2nd opening; strong, G.T.S.  
 20 mins, TSTM  
 Rec; 680' clean  
 Gassy oil

LS, gy, tan, fxl, chky  
 poor

aa, circ; dry (dense)

pressures; Isip 675 PSI  
 Ss: P 646 "  
 If P 45-133 "  
 Ss P 141-222 "  
 HSH  
 1548-1536'

LS, wh/gy - chky

Base Kansas ??  
 City

Conglomerate  
 3282

max / bulk red soft  
 blocky sh.

(1428)

Dst #4 3261-3303  
 30-30-30-30  
 Blow; strong

aa  
 LS, wh/fxl sandy in  
 part ms

Congl. Sand  
 3298 (-1431)

A wh/tan, grey/opaque  
 sand, wh/red; sub rounded,  
 silty; friable, fr. str;  
 Golden str, fr. fo, etc. odor ???

Rec; 120' GIP  
 850' Gassy oil  
 pressures; Isip 670 PSI

RTD 3303