HARDROCK
Consulting, Inc.

Geologic Report

Drilling Time and Sample Log

Operator **StrataKan Exploration, LLC.**
Lease **Andrews B** No. **22-1**
API # **15-185-23967-0000**
Field **Kenilworth**
Location **330' FNL & 1850' FWL**
Sec. **22** Twp. **22s** Rge. **13w**
County **Stafford** State **Kansas**

Elevation
KB 1895'
DF
GL 1890'

Casing Record
Surface
8 5/8" @ 681'
Production
5 1/2" @ 3888'

Electrical Surveys
CNL/CDL, DIL, MEL

Formation	Log Tops	Sample Tops	Struct Comp
Anhydrite	747' +1148	748' +1147	+4
Base	773' +1126	771' +1124	+5
Topeka	2951' -1056	2952' -1057	-1
Heebner	3252' -1357	3253' -1358	-2
Toronto	3271' -1376	3272' -1377	+1
Douglas	3286' -1391	3288' -1393	FL
Brown Lime	3383' -1488	3384' -1489	-1
Lansing	3403' -1508	3405' -1510	FL
BKC	3625' -1730	3626' -1731	+3
Viola	3691' -1796	3694' -1799	-3
Simpson	3748' -1853	3750' -1855	FL
Arbuckle	3807' -1912	3811' -1916	-3
Total Depth	4009' -2114	4010' -2115	

Reference Well For Structural Comparison **StrataKan Exploration, LLC. Andrews #22-1**
950' FNL & 2050' FWL Sec. 22 T22s R13w Stafford Co. Kansas

Drilling Contractor		**WW Drilling Co. Rig #8**		
Commenced	9-29-2016	Completed		10-8-2016
Samples Saved From		**2900'**	To	RTD
Drilling Time Kept From		**2850'**	To	RTD
Samples Examined From		**2900'**	To	RTD
Geological Supervision From		**2900'**	To	RTD

Displacement **2800'** Mud Type **Chemical**

Summary and Recommendations

The location for the Andrews B #22-1 was found via 3-D seismic s The new well ran structurally as expected via the survey. Three Drill Tests were conducted, one of which recovered commercial amounts o from the Simpson Formation. Once commercial production ceases th could be converted into a salt water disoposal. After all gathered dat been examined the decision was made to run 5 1/2 inch production ca to further evaluate the Andrews B #22-1 well.

Packer Shoe set @ 3888'

Respectfully Submitted

Jason T Alm
Hard Rock Consulting,

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Stem
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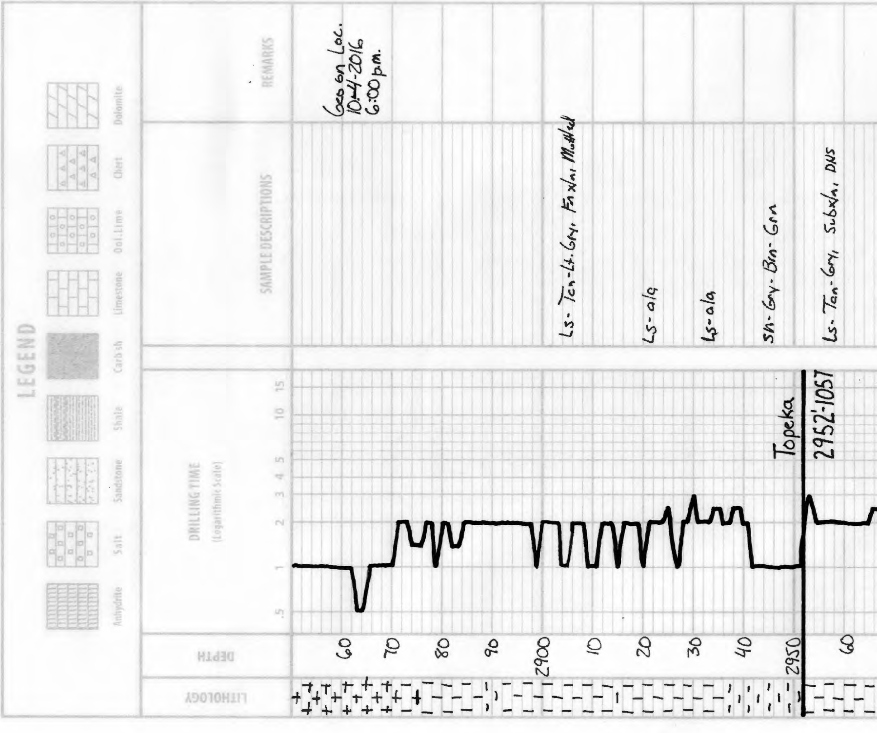
Inc.



Geo on Loc.
10-4-2016
6:00 p.m.

Ls- Tan-Lt. Gry, Fnxln, Mottled

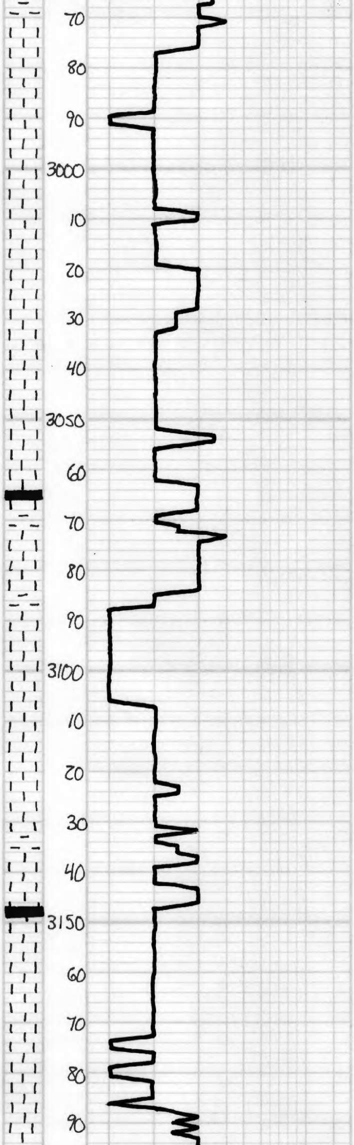
Ls- a/a

Ls- a/a

Sh- Gry- Brn- Grn

Ls- Tan- Gry, Subxln, DNS

Topeka
2952'-1057



Sh-Gry

Ls- Tan-Lt.Gry, Fn xln w/ Fair interxln & vussy φ, Barren

Ls- ala w/ Good interxln & vussy φ, Barren

Ls- Tan-Gry, Fnxln w/ Fair-Good interxln & vussy φ. Barren

Ls- Tan-Gry, Fn-Subxln, DNS

Ls- Tan-Gry, Fn-Medxln w/ Fair-Good interxln & vussy φ Barren

Ls- ala

Sh- Drk Gry- Blk

Ls- Tan-Lt. Gry, Fn-Subxln, DNS

Ls- Tan-Lt. Gry, Fn-Med xln w/ Good interxln & vussy φ, Barren, Chalky

Ls- ala

Ls- Fair-Good interxln & vussy φ. Barren

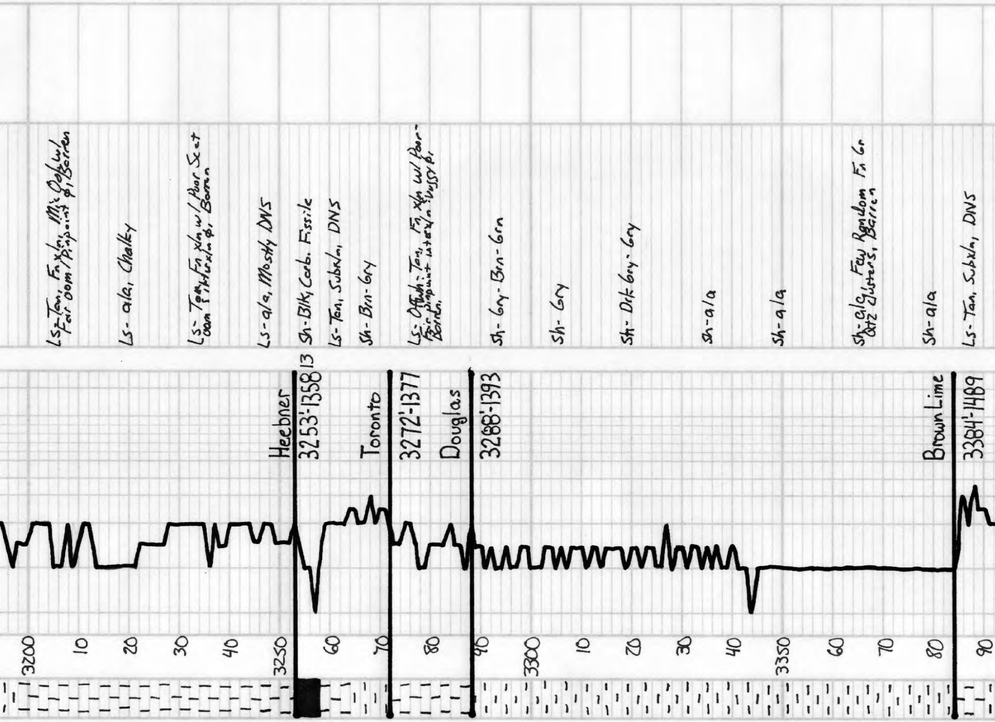
Sh- Gry-Brn

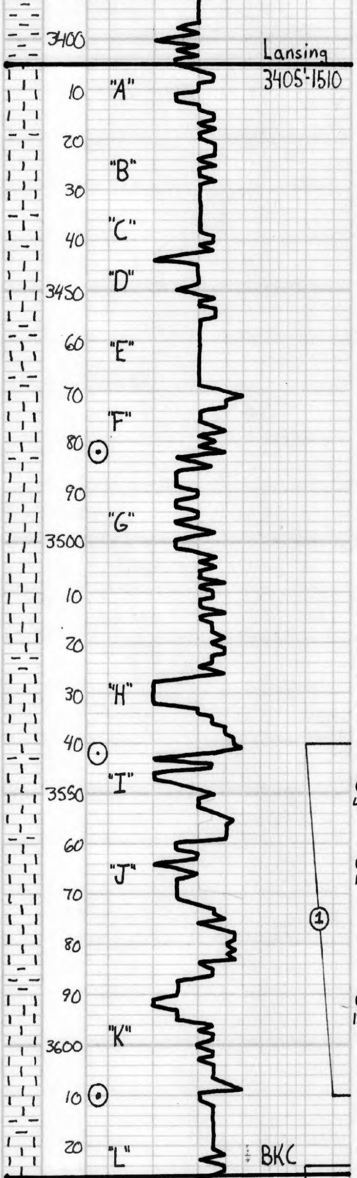
Sh- Blk

Ls- Tan-Lt. Gry, Fnxln w/ Fair-Good interxln & vussy φ & oom φ, Barren, V. Chalky

Ls- ala

Ls- Tan-Lt. Gry, Fn-Subxln, Dol. DNS





Sh- Gry- Brn

Ls- Tan, Fn-Subxln, Sl. Ool w/
Poor ooc : oom ϕ. Barren

Ls- Tan-Lt. Gry, Fn- Subxln, Ool.
w/ Poor-V. Poor ooc ϕ. Barren
Mostly DNS

Sh- Gry- Drk Gry

Ls- Tan, Subxln, DNS

Ls- Tan- Offwh, Fn xln w/
Scat Poor Pinpoint interxln ϕ.
V. Lt spot oil St in ϕ. NSFO, No
Odor, Mostly Barren

Sh- Brn

Ls- Tan- Offwh, Fn xln, Sl. Ool.
w/ Poor Pinpoint oom ϕ, Barren,
Mostly DNS

Ls- Tan- Offwh, Fn- Subxln, Ool.
w/ Poor oom : ooc ϕ, Barren, Chalky

Ls- Tan, Fn- Subxln, Ool. w/
Poor ooc ϕ, Barren, Sl. Chalky
Δ- Wht- Gry- Fossil

Ls- o/a, Mostly DNS

Ls- Tan, Fn- Subxln, Sl. Ool.
Mostly DNS, Sl. Δ- Wht

Sh- Gry

Ls- Offwh- Tan, Fnxln, Ool. w/
Good oom ϕ, Barren

● 46 Ls- Offwh, Fn xln, Ool. w/ Fair
ooc : scat oom ϕ, Lt- Fair oil scat
oil St, Sl. SFO, When broken,
Lt Odor

● 19 Ls- Offwh- Tan, Fn xln, Ool. PKST w/
Poor- Fair oom : ooc ϕ, Lt Scat
oil st in ϕ. NSFO, Lt Odor

Ls- a/a, DNS

Sh- Drk Gry

● 125 Ls- Offwh- Wht- Lt. Gry, Fn xln,
Ool. PKST w/ Fair- Good oom ϕ,
Lt- Good oil st w/ scat Good Sat,
Fair- Good SFO, Good Odor,
Br. Yel. Fluor.

Ls- a/a, DNS

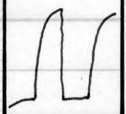
Sh- Drk Gry

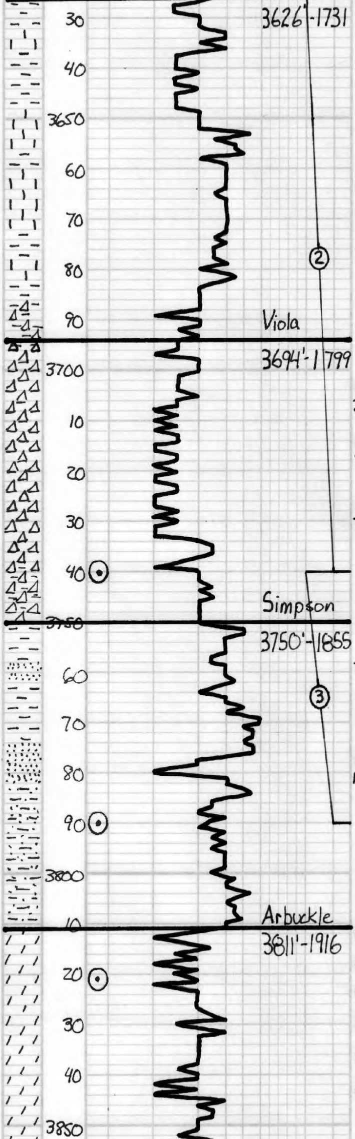
Ls- Tan- Lt. Gry, Subxln DNS

DST#1
LKC "I-K"
3540'-3610'
45"-45"-45"-45"

IH	1763#
IF	21-83# Built to 4in
ISI	947# Dead
FF	83-102# Built to 2in
FSI	905# Dead
FH	1717#
BHT	109°F

Recovery:
180' Mud





Ls-a/a

Sh-Brn-Gry-Grn

Ls-Tan-Lt. Gry, Subx/n, DNS

Ls-a/a, Sl. Mottled, Sl. ∆-Brn

Sh-Brn

Sh-Brn-Grn, ∆-Tan-Blocky-Sharp

● 39 ∆∇- Wht-Tan, Sharp-Angular w/ Fair Scat pinpoint, vussy ϕ, Lt-Fair oil st in ϕ, Sl. SFO, Good Odor, Dull Yel. Fluor.

● 31 ∆∇- Wht-Tan, Sharp-Angular w/ Fair-Good scat pinpoint vussy ϕ Lt-Good oil st in ϕ w/ Few Pxs w/ Good sat, Sl. SFO, Good Odor Dull Yel Flour, Fair Cut

● 72 ∆∇-Wht-Offwh, Sharp-Angular w/ Fair-Good scat pinpoint vussy ϕ Lt-Good oil st in ϕ w/ Scat Good Sat Sl. SFO, Good Odor, Dull Yel Fluor, Poor-Fair Cut

∆∇-a/a, Dead oil, Increasing Brn Sh

Sh-Turqoise-Brn

75 SS-Qtz, V. Fn Gr. V. DNS w/ lt brn even o. st, NSFO, Bri Yel Fluor.

Sh-Grn, Few Dirty Qtz Clusters, Barren

● 195 SS-Qtz, Clr-Sl. Frosted, Fn-Med Gr. Sub-Round to Sub-Angular, Poor-Fair Cem, Fair-Well Sort w/ Fair inter-gr oil Lt spot to Heavy oil st w/ scat Heavy Sat, Fair SFO in cluster, Gas bubbles on break, Fair-Good Spot Yel Fluor, Excellent Cut, Fair-Good Odor

Sh-Grn-Lt. Brn, Many Dirty Qtz Clusters, Scat Very st in cluster, NSFO, No Odor

Sh-Turqoise, Grn-Gry, Many Dirty Qtz Clusters, Barren, Many Rounded Gr.

●

Dolo-Poor Samples, Good Odor

●

● Dolo-Wht-Tan, Fn-Med x/n w/ Fair interx/n & vussy ϕ, Heavy oil st-sat, GSFO, Good Odor, Oil on cup

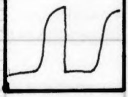
●

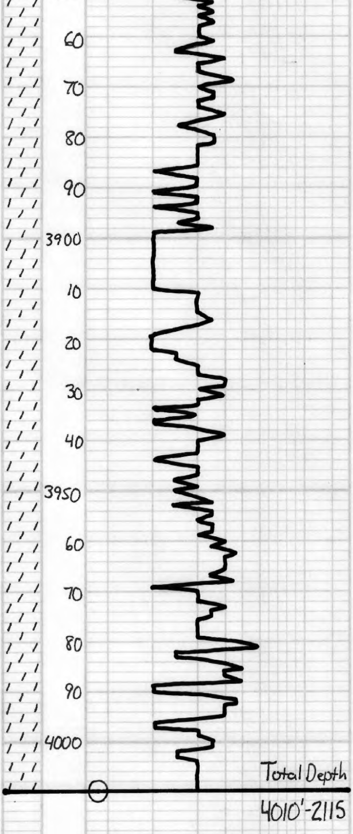
● Dolo-a/a w/ Fair-Good interx/n & vussy ϕ, Heavy oil st in ϕ w/ Good sat in part, GSFO, Good Oil on cup

● Dolo-Wht-Tan, Fn-Med x/n, Sl. Ool. w/ Fair interx/n & vussy ϕ, Lt-Fair oil st-sat, FSFO, Good odor.

DST#2
Viola
3624'-3740'
30"-30"-15"
IH 1823#
IF 22-31# Dead
ISI 116# Dead
FF 33# Dead
FH 1770#
BHT 104°F
Recovery:
5' Mud

DST#3
Simpson
3740'-3790'
45"-45"-45"-45"
IH 1884#
IF 35-65# Built to 3½ i
ISI 735# Dead
FF 72-77# Built to 1 in
FSI 715# Dead
FH 1891#
BHT 108°F
Recovery:
120' GOWCM
10% O, 12% W





Dolo- Wht-Tan, Fn-Med xln, Sl. Ool. w/ Fair interxln & vugsy φ, Sl. Scat tarry st, NSFO, Strong Sulphur odor, Mostly Barren

Dolo- a/a, Totally Barren

Dolo- a/a

Dolo- Wht-Tan, Fn-Med xln w/ Fair-Good interxln & vugsy φ, Barren

Dolo- a/a, Good interxln & vugsy φ, Barren

Dolo- a/a

Dolo Wht-Tan, Fn-Med xln w/ Poor-Fair interxln φ, Barren

Dolo- a/a, Fair-Good interxln & vugsy φ, Barren

Dolo- a/a

Dolo- Wht-Tan, Fn-Med xln w/ Poor-Fair interxln & vugsy φ, Barren

Dolo- Wht-Tan, Fn-Med Rhombic xln w/ Fair interxln φ, Barren

Dolo- a/a

Dolo- a/a

Respectfully,
Jason T. Ah
10-10-2016