

**BEREXCO, LLC.  
SCHWIEN # 1  
W2NENESW 30-14S-14W  
RUSSELL COUNTY, KANSAS**

**GEOLOGIST  
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## DISCUSSION

Schwien # 1 was drilled a total depth of 3333 feet testing the Lansing Kansas City and Arbuckle formations in Russell County, Kansas.

Structurally, Schwien # 1 came in two feet low to Hummel # 5 on the Lansing top and flat on the Arbuckle.

There were good sample shows in the Lansing A, B, and C zones with fair porosity development. All three of these zones were tested on drill stem test # 1 recovering only 10 feet of oil spotted mud. Pressures were very low due to productive wells in the area. The F and G zones had good porosity development and good sample shows and were tested on drill stem test # 2 with good results, recovering 887 feet of gas in pipe and 180 feet of heavy oil and gas cut mud. Drilling continued to the Kansas City I and J zones. Both these zones had good sample shows and were tested on drill stem test # 3 recovering 90 feet of gas in pipe and 30 feet of oil cut gassy mud.

There were two drill stem test in the Arbuckle, #4 in the top four feet and # 5 covering the next five feet. Drill stem test # 4 recovered all oil and gas with good pressures. Drill stem test # 5 recovered mainly all oil and gas with some water and also good pressures.

Logs agreed with sample evaluation recording fair porosity development in the Lansing Kansas City zones with high resistivity. The two upper zones in the Arbuckle looked good on logs and had very good sample shows. We tested the first bench recovering all oil with good pressures. The second bench was also tested with good results, recovering gas, oil and little water.

A decision was made to run production pipe based on drill stem tests in the Lansing Kansas City and upper Arbuckle.

SCHWIEN #1 SAMPLE DESCRIPTIONS  
BEREDCO DRILLING RIG 10 DRILLING 7 7/8 HOLE

SCHWIEN # 1 SAMPLE DESCRIPTIONS

2500-55 SHALE gray,gray green,soft,argillaceous

2555-2600 LIMESTONE buff,hard,very fossiliferous,micxln,poor porosity,no shows

2600-60 SHALE as above with thin LIMESTONE as above

2660-90 LIMESTONE buff,hard,fossiliferous, dirty,poor porosity,no shows

2690-2724 SHALE as above

TOPEKA

2724-54 LIMESTONE buff, very hard,dense, blocky,no shows

2754-60 LIMESTONE buff,firm,fossiliferous, slightly argillaceous,fair intg porosity,no shows

2760-2804 LIMESTONE buff,very hard,dense, as above, no shows

2804-26 LIMESTONE buff,firm,slightly argillaceous, fossiliferous,poor to fair micxln porosity,no shows

## SCHWIEN #1 SAMPLE DESCRIPTIONS

2820-82 LIMESTONE buff,hard,blocky,poor porosity, slightly fossiliferous,no shows with thin bedded SHALE black,gray,green,firm,fissile, carbonaceous

2882-98 LIMESTONE buff,firm,slightly argillaceous,fossiliferous,fair micxln porosity,no shows with thin SHALE as above

### PLATTSMOUTH

2898-2914 LIMESTONE buff,slightly hard, micxln,very fossiliferous,poor porosity,no shows with thin SHALE as above

2914-28 LIMESTONE white,firm,micxln, poor crystalline and pinpoint vuggy porosity,very spotty live brown stain,good cut

2928-44 LIMESTONE buff,very hard,dense, no show

### HEEBNER

2944-50 SHALE black,gray,green,firm, fissile,carbonaceous with thin LIMESTONE buff, very hard,dense

2950-64 SHALE red,green,gray,firm,very argillaceous

### TORONTO

2964-70 LIMESTONE buff,firm,fossiliferous, micxln,slightly chalky,fair intxln porosity,spotty brown live stain,good cut

## SCHWIEN #1 SAMPLE DESCRIPTIONS

2970-76 LIMESTONE buff,very hard,dense

2976-3000 SHALE as above

LANSILNG A

3000-06 LIMESTONE buff,very hard,dense

3006-10 LIMESTONE buff,firm,fossiliferous, micxln,poor to fair crystalline porosity,very spotty live brown stain,fair cut

3010-20 SHALE as above

B

3020-28 LIMESTONE white,firm,micxln, fair crystalline porosity,spotty to even brown live stain,good cut

3028-34 SHALE as above

C

3034-40 LIMESTONE buff,firm,micxln, oolitic,poor to fair crystalline and vuggy porosity,spotty brown live stain,good cut and odor

3040-72 LIMESTONE buff,very hard,dense with thin SHALE gray,green,firm,argillaceous

## SCHWIEN #1 SAMPLE DESCRIPTIONS

F

3072-80 GRAINSTONE white, firm, very oolitic, fair to good intg porosity, spotty to even live brown stain, very good cut and odor, good show free oil with thin SHALE as above

G

3082-85 LIMESTONE pale gray, hard, oolitic, slightly chalky, poor to fair intxln and vuggy porosity, spotty live brown stain, very good cut and odor, good show free oil

3085-92 LIMESTONE white, buff, very hard, dense

3192-98 LIMESTONE white, firm, very oolitic, good intg and oomoldic porosity, spotty to even, live brown stain, very good cut, poor show free oil

3098-3106 LIMESTONE buff, firm, very oolitic, good oomoldic porosity, very spotty light brown stain, residue cut

3106-30 LIMESTONE buff, very hard, dense, no shows

3130-40 SHALE gray, green, red, black, firm, argillaceous

H

3140-58 LIMESTONE buff, very hard, dense, no shows with thin SHALE as above

I



## SCHWIEN #1 SAMPLE DESCRIPTIONS

3158-76 LIMESTONE as above with scattered LIMESTONE white,firm,oolitic,fair intg porosity, spotty live brown stain,fair cut

J

3176-80 LIMESTONE white,firm,slightly oolitic, poor to fair micxln and pinpoint vuggy porosity, spotty live brown stain,good cut

3180- 3200 LIMESTONE buff,very hard,dense, blocky,no shows with thin SHALE as above

3200-16 SHALE as above

K

3216-32 LIMESTONE buff,hard,very oolitic,poor micxln and intg porosity,spotty to even live brown stain,good cut and odor,good show free oil

3232-40 SHALE as above

ARBUCKLE

3240-44 DOLOMITE white,firm,micsuc texture,fair to good intxln porosity,even live brown stain,very good cut and odor,good show free oil

3244-48 DOLOMITE white,slightly hard,sandy in part,micxln,poor to fair crystalline porosity,spotty live brown stain,good cut and odor,fair show free oil

3248-52 DOLOMITE white,firm,micsuc to sucrosic texture,sandy in part,good crystalline porosity,very

SCHWIEN #1 SAMPLE DESCRIPTIONS

good cut and odor,good show free oil