

**BEREXCO, LLC.  
HINES UNIT 18X  
SENWNW SECTION 16 11N-15W  
RUSSELL COUNTY, KANSAS**

**GEOLOGIST  
WILLIAM B. BYNOG**

## RESUME

OPERATOR: BEREXCO, LLC.

WELL NAME & NUMBER: HINES UNIT 18X

LOCATION: SENWNW SECTION 16 11S-15W

COUNTY: RUSSELL

STATE: KANSAS

SPUD DATE: 12-2-2011 COMPLETION DATE: 12-10-2011

ELEVATIONS: GL: 2978' KB: 2989'

CONTRACTOR: BEREDCO RIG 10

LOGS: LOG TECH TYPES: RAG, MICROLOG & SONIC

WELLSITE ENGINEER: NONE

MUD COMPANY: ANDY'S MUD

MUD TYPE & ENGINEER: FRESH CHEMICAL

GEOLOGIST: WILLIAM B.BYNOG

HOLE SIZE: 7 7/8

MUD LOGGING BY: NONE

DRILL STEM TEST COMPANY: TRILOBITE TESTING

DRILL STEM TEST: NONE

WELL STATUS: SET PRODUCTION CASING

## DISCUSSION

Hines Unit 18x was drilled a total depth of 3425 testing the Lansing Kansas City, Conglomerate and Arbuckle formations in Russell County, Kansas. Our major objectives were the Lansing Kansas City A through F zones, Conglomerate and Arbuckle formations. This was a continuation of infield drilling in the old Fairport field. There were no drill stem tests planned for this well, only sample evaluation.

Structurally, Hines Unit 18X came in 15 feet high to Lebow Unit # 9X on the Lansing log top.

As a result of running high the 35 foot Topeka, lower Topeka, Plattsmouth, most of the zones in the Lansing Kansas City and Arbuckle had very good sample shows.

Logs recorded fair to good porosity development with high resistivity in the zones of interest. A decision was made to set production pipe based on their structural relationship and all the porosity development with quality sample shows.

HINES UNIT 18X SAMPLE DESCRIPTIONS  
BEREDCO DRILLING RIG 10 DRILLING 7 7/8 HOLE

HINES UNIT 18X SAMPLE DESCRIPTIONS

SAMPLES LAGGED BY GEOLOGIST ON LOCATION

2050-2090 LIMESTONE white, firm, chalky, poor porosity, no shows with thin bedded  
SHALE red, very soft, very argillaceous

2090-2170 LIMESTONE white, pale gray, firm, fossils, slightly chalky, poor porosity, no  
shows with thin SHALE as above

2170-80 SHALE as above

2180-2250 LIMESTONE buff, firm, slightly fossils, poor porosity, no shows

2250-70 SHALE red, very soft, very argillaceous

2270-90 LIMESTONE buff, slightly hard, very oolitic, fair oocastic porosity, no shows

2290-2385 SHALE gray, firm, silty with thin LIMESTONE buff, hard, dense, no shows

2385-2400 LIMESTONE buff, hard, blocky, dense, no shows

2400-2520 SHALE gray, green, firm, waxy, argillaceous, some silty

2520-35 LIMESTONE buff, hard, blocky, smooth texture, poor porosity, no shows

2535-2575 SHALE gray, firm, waxy, argillaceous, abundant pyrite

2575-90 LIMESTONE buff, tan, hard, blocky, dense, no shows

HINES UNIT 18X SAMPLE DESCRIPTIONS

2590-2605 SHALE as above

2605-55 LIMESTONE buff,firm,fossils,slightly chalky,poor porosity,no shows with thin bedded SHALE as above

2655-70 LIMESTONE buff,firm,very fossils,slightly chalky,fair porosity,no shows

2670-2732 SHALE as above

2710-34 LIMESTONE buff,firm,blocky, smooth texture,dense,no shows with thin SHALE as above

as above

TOPEKA

2734-55 LIMESTONE buff,hard,blocky,dense,poor porosity,no shows

2755-65 SHALE as above

35'TOPEKA

2765-68 LIMESTONE buff,hard,blocky, dense,poor porosity,no shows

2768-85 LIMESTONE buff.firm,micro crystalline,poor to fair intxln porosity,even brown live stain,very good cut,and odor,good showfree oil

2785-95 SHALE as above

2795-2840 LIMESTONE buff,hard,slightly chalky,poor porosity,no shows

2840-58 LIMESTONE white,firm,microcrystalline, poor intxln porosity,spotty to even live brown stain,good cut and odor,fair show free oil

HINES UNIT 18X SAMPLE DESCRIPTIONS

2858-64 SHALE black,green,firm,fi ssile, carbonaceous

2864-70 LIMESTONE buff,hard,very fnly,poor microcrystalline porosity,spotty to even brown live brown stain,good cut

2870-82 LIMESTONE as above firm,poor to fair microcrystalline porosity,spotty to even live brown stain,good cut and odor,fair show free oil

2870-90LIMESTONE buff,firm,fossils, chalky,poor visible porosity,no shows

2890-95 LIMESTONE buff,firm,fossils, chlky,poor porosity,trace brown live stain,good cut and odor

2895-2900 SHALE gray,green,firm,fi ssile

2900-42 LIMESTONE buff,hard,blocky,slightly fossils,dense,poor porosity,no shows with very thin SHALE as above

2942-50 SHALE as above

PLATTSMOUTH

2950-76 LIMESTONE white,firm,very fossils, slightly chalky,fair intxln and vuggy porosity,spotty to even live brown stain,good cut and odor,poor show free oil

2976-86 LIMESTONE buff,pale gray,hard, dense,blocky,poor porosity,no shows

HEEBNER

2986-90 SHALE black,firm,fi ssile,carbonaceous

2990-3000 LIMESTONE buff,very hard,dense,no shows

3000-10 SHALE gray,green,black,firm,fi ssile,slightly carbonaceous

TORONTO

HINES UNIT 18X SAMPLE DESCRIPTIONS

30010-20 LIMESTONE buff,hard,micro crystalline,poor crystalline and pinpoint vuggy porosity, spotty live brown stain,good cut

3020-40 SHALE red,gray,soft,argillaceous

LANSING A

3040- 50 LIMESTONE buff,hard,dense,some scattered poor vuggy porosity,spotty live brown stain,good cut,trace free oil

3050-64 SHALE red,green,gray,firm, argillaceous,fissile

B ZONE

3064-70 LIMESTONE buff,hard,dense, some scattered poor vuggy porosity, spotty live brown stain,good cut

C ZONE

3070-3100 LIMESTONE white,buff,very hard,blocky, dense,some scattered poor vuggy porosity,spotty live brown stain,fair cut

3100-10 SHALE red,green,gray,firm, fissile

E ZONE

3110-24 LIMESTONE buff,firm,fossils, oolitic,poor to fair intg and vuggy porosity,spotty to even live brown stain, very good cut and odor,trace free oil

3124-28 SHALE as above

F ZONE

3128-36 LIMESTONE white,hard,dense,trace poor pinpoint vuggy porosity,very spotty brown stain,fair cut with stringers SHALE as above

G ZONE

3136-42 LIMESTONE white,firm,very oolitic, good moldic porosity,spotty to even live brown stain,good cut and odor

HINES UNIT 18X SAMPLE DESCRIPTIONS

3142-70 LIMESTONE white, buff, very hard, dense, some scattered poor moldic porosity, very spotty faint brown stain, fair cut

3170-80 SHALE as above

H ZONE

3180-3202 LIMESTONE white, buff, very hard, dense, slightly chalky with thin SHALE as above

I ZONE

3202- 10 LIMESTONE as above some scattered fossils, oolitic, poor to fair porosity, spotty brown live stain, fair cut

3210-20 SHALE black, gray, green, firm, fissile

J ZONE

3220-26 LIMESTONE buff, very hard, dense, no shows

3226-32 LIMESTONE buff, firm, micro crystalline, fair to good inxln and vuggy porosity, even brown stain, good cut, no free oil

3232-40 LIMESTONE as above buff, very hard, dense, no shows

3240-55 SHALE gray, black, green, carbonaceous

K ZONE

3255- 70 LIMESTONE white, hard, blocky, dense, some scattered poor moldic porosity, very spotty brown stain, fair cut

3270-84 SHALE as above

3284-94 LIMESTONE white, buff, slightly hard, slightly chalky, poor porosity, no shows

BKS



HINES UNIT 18X SAMPLE DESCRIPTIONS

3294-3306 SHALE gray,green,soft,argillaceous

MARMATON

3306-16 LIMESTONE white,buff,very hard,dense,no shows

3316-30 SHALE as above

3330-44 LIMESTONE as above,dense,sandy in part,no shows, abundant Chert  
tan,orange,no shows

CONGLOMERATE

3344-72 SHALE as above some sandy, Chert as above ,no shows

ARBUCKLE

3372-80 DOLOMITE tan,firm,micro sucrosic,fair to good intxln porosity,even brown  
live stain,very good cut and odor

3380-86 DOLOMITE buff,very hard,dense, trace poor pinpoint vuggy porosity,very  
spotty stain,good cut

3386-3406 DOLOMITE buff,firm,sucrosic texture,fair to good intxln and vuggy  
porosity, spotty to even live brown stain,very good cut and odor,good show free oil

3406-12 DOLOMITE as above,buff,very hard, dense,no shows

3412-25 DOLOMITE as above fair to good porosity,spotty stain,fair cut

RTD 3425'

LTD 3424'