

**BEREXCO, LLC.
MEARS A #3-9
SWNESESE SECTION 9 1S-37W
CHEYENNE COUNTY, KANSAS**

**GEOLOGIST
WILLIAM B. BYNOG**

RESUME

OPERATOR: BEREXCO, LLC.

WELL NAME & NUMBER: MEARS A#3-9

LOCATION: SWNESESE SECTION 9 1S-37W

COUNTY: CHEYENNE

STATE: KANSAS

SPUD DATE: 3-22-2014 COMPLETION DATE: 4-2-2014

ELEVATIONS: GL: 3252 KB: 3263

CONTRACTOR: BEREDCO RIG 10

LOGS: LOG TECH TYPES: RAG, MICROLOG

WELLSITE ENGINEER: NONE

MUD COMPANY: MORGAN MUD

MUD TYPE & ENGINEER: FRESH CHEMICAL

GEOLOGIST: WILLIAM B.BYNOG

HOLE SIZE: 7 7/8

MUD LOGGING BY: NONE

DRILL STEM TEST COMPANY: TRILOBITE

DRILL STEM TEST: DST#1 4095-4150, DST#2 4230-4360,
DST#34335-4435, DST#44585-4625

WELL STATUS: RAN 5 ½ PRODUCTION PIPE

DISCUSSION

Mears A #3-9 is a wildcat well drilled a total depth of 4760 feet testing the Lansing Kansas City, Pawnee and Cherokee formations in Cheyenne County, Kansas. This well was drilled with the help of seismic data and well control.

Structurally, Mears A #3-9 came in 7 feet high to the prognosis and other producers in the area.

As a result of running high there were fair sample shows and fair porosity development in the Oread, Lansing B, C and E zones and good development in the Pawnee zone. The Oread was tested on drill stem test #1 recovering only 5 feet of mud. Drill stem test #2 on the Lansing B and C zones had better results recovering 1 foot of free oil and 119 feet of oil cut mud. Drill stem test #3 on the D and E zones recovered only 5 feet of mud. The Pawnee is the best zone with very good porosity development and excellent oil shows in a clean grainstone. Drill stem test #4 recovered 1364 feet of gas in pipe, 1344 feet of clean oil and 120 feet of gas and oil cut mud with good permeability.

Logs agreed with sample evaluation recording fair to good porosity development with high resistivity. The Lansing Kansas City zones were tight, testing small amounts of free oil. The Pawnee zone is a very permeable grainstone with 18% porosity.

A decision was made to run 5 ½ production casing based on favorable drill stem tests and log calculations.

MEARS A 3-9 SAMPLES DESCRIPTIONS
BREDECO DRILLING RIG 10 DRILLING 7 7/8 HOLE

3500-3700 SHALE red,dft,very argillaceous,very silty in part

3700-70 SHALE red,very silty

3770-88 LIMESTONE pale gray,hard,blocky,dense,dirty

FORAKER

3788-3806 LIMESTONE pale gray,firm,slightly oolitic,chalky,poor pinpoint vuggy porosity,spotty to even live brown stain,good milky cut,poor show free oil

3806-24 SHALE as above

3824-36 SANDSTONE pale gray,green,firm,very fine grained,calcareous cement,poor porosity,no shows

3836-70 SHALE gray,green,firm,argillaceous

3870-76 LIMESTONE pale gray,hard,slightly sandy,poor porosity,no shows

3876-3910 SHALE red,green,pale gray,firm,silty in part

MEARS A 3-9 SAMPLES DESCRIPTIONS

3910-46 SHALE red,very soft,very argillaceous with thin LIMESTONE as above no shows

3946-62 LIMESTONE white,pale gray,slightly hard,slightly fossils,chalky,poor porosity,spotty black dead stain,no free oil

3962-4008 SHALE red,soft,very argillaceous

TOPEKA

4008-60 LIMESTONE buff,slightly hard,slightly fossils,sandy in part,poor porosity,very spotty black dead stain,no free oil with thin SHALE as above

4060-90 SHALE as above

4090- 4106 LIMESTONE buff,very hard,dense, blocky,smth texture,no shows with thin SHALE

4106-40 SHALE green,firm,waxy,very argillaceous in part

OREAD

4140-46 GRAINSTONE white,firm,fossils,slightly chalky,poor to fair vuggy porosity,spotty to even live brown stain,good milky cut,good show free oil

4146-60 LIMESTONE buff,hard,dense,blocky,poor poor to poor vuggy porosity,very spotty live brown stain,good cut

4160-84 LIMESTONE pale gray,very hard,dense,blocky,no shows

A

MEARS A 3-9 SAMPLES DESCRIPTIONS

4184-4212 SHALE red,very soft,very argillaceous some dark gray,slightly hard,fissile

4212-40 LIMESTONE pale gray,tan,very hard,dense,smth texture,poor porosity,no shows

4240-70 SHALE as above with some SANDSTONE white,very fine grained,friable,chalky,very spotty black dead stain

B

4270-82 LIMESTONE white,firm,slightly fossils,chalky,poor pinpoint vuggy porosity,very spotty live brown stain,good cut,fair show free oil

4282-4300 LIMESTONE buff,very hard,dense, blocky,smth texture,no shows with thin SHALE as above

4300-21 SHALE red,very soft,very argillaceous

C

4321-25 GRAINSTONE white,firm,very fossils,fair intg and crystalline porosity,spotty to even live brown stain,very good milky cut,fair show free oil,fair odor

4325-36 LIMESTONE white,firm,chalky, slightly fossils,poor pinpoint porosity,very spotty live brown stain,fair cut

4336-50 LIMESTONE pale gray,very hard,dense,poor porosity,no shows

MEARS A 3-9 SAMPLES DESCRIPTIONS

4350-60 SHALE green,firm,waxy,fissile

4360-66 SHALE red,firm,silty some sandy in part

D

4372-92 LIMESTONE buff,very hard,dense, smth texture,no shows

4392-4408 SHALE as above

E

4408-16 GRAINSTONE white, firm,fossils,chalky,poor to fair intg and crystalline porosity,spotty live brown stain,good milky cut,fair show free oil

4416-26 LIMESTONE white,slightly hard,sub chalky,poor porosity,no shows

4426-57 SHALE red,firm,argillaceous,silty in part

F

4457-76 LIMESTONE buff,very hard,dense, chalky in part,poor porosity,no shows

4470-4500 LIMESTONE as above with interbed SHALE as above

4500-22 LIMESTONE buff,pale gray,hard,blocky,dense,chalky in part no shows

MEARS A 3-9 SAMPLES DESCRIPTIONS

4522-78 SHALE red,firm,silty, some sandy in part with very thin LIMESTONE as above pale gray,hard,dense,no shows

4578-90 LIMESTONE pale gray,very hard,dense,no shows

4590-4604 SHALE pale gray,green,slightly hard,waxy in part

PAWNEE

4604-12 GRAINSTONE white,slightly hard,very oolitic,clean,fair intg porosity, even brown stain,good milky cut,fair show free oil

4612-62 LIMESTONE pale gray,hard,dense, chalky in part,dense,some Chert orange,no shows with very thin SHALE dark gray black,firm,fissile,carbonaceous

4664-84 SHALE red,green,firm,waxy, some black carbonaceous

4684-4710 LIMESTONE buff,gray,very hard,dense, chalky in part,poor porosity,no shows

4710-46 SHALE as above with interbed SANDSTONE pale red,white,very hard,very fine to m good,dense, sileous,no vis porosity,no shows

4746-60 LIMESTONE and SHALE as above

RTD 4760'

LTD 4759'

MEARS A 3-9 SAMPLES DESCRIPTIONS