

Berexco, LLC
Schwerdt #2-2
NENWNE Section 2 1S-36W
Rawlins County, Kansas

GEOLOGIST
William B. Bynog

RESUME

OPERATOR: Berexco, LLC.

WELL NAME & NUMBER: Schwerdt #2-2

LOCATION: NENWNE Section 2 1S-36W

COUNTY: Rawlins

STATE: Kansas

SPUD DATE: 7-16-2014 COMPLETION DATE: 7-25-2014

ELEVATIONS: GL: 3045 KB: 3056

CONTRACTOR: Beredco Drilling Rig 10

LOGS: PIONEER TYPES: Rag, Micro log

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 3940-4040, DST#2 4030-4090,
DST#3 4075-4145, DST#4 4130-4230

WELL STATUS: Ran 5 ½ Production Casing

DISCUSSION

Schwerdt #2-2 1S-36W is a southwestern extension of Scoda field drilled a total depth of 4380 feet testing the Lansing Kansas City formation in Rawlins County, Kansas. This well was drilled with the help of seismic data and well control.

Structurally, Schwerdt #2-2 1S-36W came in one foot high to the prognosis and six feet low to Penny #12-31 1S-35W, a productive well.

There were no quality sample shows or porosity development up hole in the Foraker or Douglas sand as in Penny #12-31, due to the structural relationship. The first quality sample show was in the Lansing A zone with poor to fair porosity development. The A zone was tested on Drill stem test #1 recovering only two feet of mud with low pressures due to past production. The B zone had fair sample shows with poor porosity development and was tested on drill stem test #2 recovering only five feet of mud. Drill stem test #2 had poor flow pressure but good shut-in pressure suggesting some permeability, perhaps treatable. Drill stem test #3 on the C zone recovered only three feet of mud with very low pressures due to production in the area. The E zone had good sample shows and poor to fair porosity development. Drill stem test #4 on the E zone recovered 30 feet of clean oil and 180 feet of oil cut mud (30% oil) with virgin pressures.

Logs agreed with sample evaluation recording poor to fair porosity development with fair resistivity in the Lansing Kansas City zones. The Lansing Kansas City zones were tight, testing small amounts of mud with the exception of the E zone.

A decision was made to run 5 ½ production casing based on a favorable drill stem test on the E zone and log calculations.

Schwerdt #2-2. Sample Descriptions
BEREDCO DRILLING RIG 10 DRILLING 7 7/8 HOLE

3500-88 SHALE red,soft,silty,very argillaceous in part

FORAKER

3588-3600 LIMESTONE white,pale gray,slightly hard,chalky,argillaceous,sandy in part, poor porosity,very rare black dead stain

3600-30 LIMESTONE pale gray,slightly hard, dirty,argillaceous,sandy in part,poor porosity,no shows with thin SHALE as above

3630-50 SHALE red,very soft,very argillaceous

3650-65 LIMESTONE white,firm,very chalky,poor vis porosity,no shows

3665-3700 SHALE as above

3700-10 LIMESTONE pale gray,firm, dirty,argillaceous,slightly chalky,no shows

3710-60 Shale red,very soft,very argillaceous, gummy with thin LIMESTONE as above

3760-70 LIMESTONE buff,hard,blocky,dense,poor porosity,no shows

3770-90 SHALE as above very argillaceous

TOPEKA

Schwerdt #2-2.Sample Descriptions

3790-3608 LIMESTONE buff,pale yell,very hard,dense,blocky,chalky in part,poor porosity,no shows

3608-15 SHALE as above

3815-33 LIMESTONE buff,pale yell, slightly hard to very hard,dense to subchalky in part,poor porosity,no shows with thin SHALE as above

3833-50 SANDSTONE pale orange, friable, very fine grained, poor vis porosity, no shows

3850-80 SHALE red, firm, blocky, britt in part

3880-94 LIMESTONE buff,pale yell,very hard,slightly fossils,dense,blocky,no shows

3894-3911 SHALE as above

OREAD

3911-22 GRAINSTONE white, firm, very oolitic, chalky, poor to fair intgranular porosity, spotty black dead stain, no free oil

3922-40 LIMESTONE white, buff, very hard, dense, blocky, poor porosity, no shows

3940-60 LIMESTONE pale gray, hard, blocky, dense, argillaceous

Schwerdt #2-2.Sample Descriptions

3960-80 SHALE dark gray,black,hard,blocky, carbonaceous, fissile in part, with thin LIMESTONE as above

3980-90 SHALE as above with thin SANDSTONE gray, friable,very fine grained,clay filled,poor porosity,no shows

3990-4012 SHALE red,soft,very argillaceous

LANSING A

4012-24 GRAINSTONE buff, firm,very oolitic,fair oomoldic porosity,spotty to even live brown stain,very good cut,good show free oil

4024-30 LIMESTONE buff,hard,dense,poor porosity,no shows

4030-32 LIMESTONE buff,hard,oolitic,poor to fair oomoldic porosity,spotty live brown stain,good cut,fair show free oil

4032-38 SANDSTONE white,friable,very fine grained,clay filled,poor to fair intg porosity,spotty live brown stain,fair cut with thin SHALE as above

4038-64 SHALE red,soft,very argillaceous

B

4064-76 GRAINSTONE white,firm,very oolitic,slightly chalky,poor to fair intergranular porosity,spotty to even live brown stain,good cut,poor show free oil

Schwerdt #2-2. Sample Descriptions

4076-84 LIMESTONE buff,hard,dense, blocky,no shows

4084-4118 SHALE green,red,firm,britt, waxy in part

C

4118-22 LIMESTONE white,firm,slightly oolitic, chalky in part,poor to fair intg and pinpoint vuggy porosity,spotty live brown stain,good cut,fine show free oil

4122-40 LIMESTONE pale gray,very hard, dense,chalky in part,trace Chert tan,no shows

4140-67 SHALE red,slightly hard,britt

D

4167-74 LIMESTONE buff,hard,blocky, dense,chalky in part,poor porosity,trace black dead stain,no free oil

4174-82 LIMESTONE buff,pale gray,very hard,dense,no shows

4182-90 SHALE green,firm,argillaceous,waxy in part

4190-4207 SHALE red,firm,fissile

E

4207-12 GRAINSTONE white,buff,slightly hard,fossils,chalky in part,poor intg and pinpoint porosity,very spotty live brown stain,fair cut,no free oil

Schwerdt #2-2.Sample Descriptions

4212-22 LIMESTONE buff,very hard,dense, blocky,no shows

4222-50 SHALE green,red,firm,as above

F

4250-70 LIMESTONE buff,hard,blocky, dense,no shows with thin SHALE as above

4270-4350 SHALE as above with thin LIMESTONE as above

4350-60 LIMESTONE buff,hard,dense, blocky,no shows

4366-80 SHALE as above

RTD 4380'

LTD 4382'