

**BEREXCO, LLC.
MEARS A # 1-9
SENE 9 1N-37W
CHEYENNE COUNTY, KANSAS**

**GEOLOGIST
WILLIAM B. BYNOG**

RESUME

OPERATOR:	BEREXCO, LLC.
WELL NAME & NUMBER:	MEARS A # 1-9
LOCATION:	SENE 9 1N-37W
COUNTY:	CHEYENNE
STATE:	KANSAS
SPUD DATE: 8-25-2012	COMPLETION DATE: 9-9-2012
ELEVATIONS:	GL: 3129' KB: 3140'
CONTRACTOR:	BEREDCO RIG 10
LOGS: LOG TECH	TYPES: RAG, MICROLOG & SONIC
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 3630-3720, DST# 2 3920-4035, DST# 3 4030-4180, DST# 4 4176-4220, DST# 5 4215-4310, DST# 6 4460-4500
WELL STATUS:	RAN 5 ½ PRODUCTION CASING

DISCUSSION

Mears A # 1-9 was drilled a total depth of 5142 feet, testing the Lansing Kansas City, Pawnee and Granite in Cheyenne County, Kansas. Structurally, Mears A # 1-9 came in ten feet high, on the Lansing top to Murfin's Shones # 1-5 well in section 5 1S-37W, two miles northwest of this location.

As a result of running high there were good sample shows in the Oread, Lansing Kansas City A and B, C and E zones. The Pawnee also had good sample shows and fair porosity development. Most of these zones were tested with poor results recovering small amounts of oil, mud and water, except for the Pawnee. The Pawnee zone is a well-developed Grainstone associated with a good drilling break and was tested on drill stem test # 6, recovering 1000 feet of gas in pipe and 848 feet of oil with a small water cut.

Logs agreed with sample evaluation recording tight low porous zones with high resistivity in the Lansing Kansas City and fair porosity development in Pawnee with high resistivity. A decision was made to run 5 ½ production casing on the Pawnee zone and other marginal Lansing Kansas City zones.

MEARS A # 1-9 SAMPLE DESCRIPTIONS

ANHYDRITE 3082(+58) S

3088(+52) L

BASE 3113(+27) S

3122(+18) L

MEARS A # 1 - 9 SAMPLE DESCRIPTIONS

3500-3610 SHALE red,firm,very silty

3610-30 LIMESTONE pale gray,firm,sandy, chnky,poor porosity,no shows abundant Chert orange

3630-56 SHALE red,firm,silty

FORAKER

3656-90 Limestone white,pale gray,firm,slightly oolitic,sandy,poor porosity,spotty black dead stain,no free oil with thin SHALE as above

3690-3705 SANDSTONE pale maroon,white,friable,very fine grained,clay fled,poor porosity,rare dead stain, some poor to fine intergranular porosity, even brown live stain,good cut,faint odor,no free oil

3705-86 SHALE red,very soft,very argillaceous, gummy with very thin LIMESTONE pale

MEARS A # 1-9 SAMPLE DESCRIPTIONS

gray,firm,chalky,poor porosity,no shows

3786-95 LIMESTONE white,pale gray,firm to hard,dense to chalky,poor porosity,no shows

3795-3800 SHALE as above

3800-20 LIMESTONE white,hard,oolitic,slightly chalky,poor porosity,abundant black dead stain

3825-62 LIMESTONE buff,very hard,dense, smth texture,crpxln with very thin SHALE as above

3862-76 LIMESTONE buff,very hard,dense,slightly fossils,no shows

3875-82 SHALE red,very soft,argillaceous,slightly silty

TOPEKA

3875-90 LIMESTONE white,firm,very chalky, fossils,poor pormns

3890-3900 SHALE as above

3900-24 LIMESTONE white,buff,hard,slightly chalky,poor porosity,no shows,abundant Chert white, orange

3924-70 SHALE red,green,firm,argillaceous,silty with thin LIMESTONE white,firm,chlky

MEARS A # 1-9 SAMPLE DESCRIPTIONS

3970-4006 SHALE maroon,firm,very argillaceous

OREAD

4006-16 LIMESTONE white,pale gray,very hard,dense,slightly fossils,poor pinpoint vuggy porosity,very spotty live brown stain,good cut

4016-22 LIMESTONE buff,firm,fnly crystalline,slightly fossils,poor to fair intxln and vuggy porosity,even to spotty live brown stain,very good cut,fair odor,fair show free oil

4022-48 LIMESTONE buff,very hard,blocky,dense,crpxln,no shows with thin SHALE green,dark gray,firm,fissile

4048-60 LIMESTONE pale gray,buff,very hard,dense,blocky,crpxln,no shows

4060-80 SHALE dark gray,green,gray,firm,fissile some LIMESTONE as above

4080-88 SHALE red,very soft,very argillaceous, gummy

LANSING A

4088-98 LIMESTONE buff,pale yell,very hard, dense,crpxln,rare poor pinpoint vuggy porosity,very spotty live brown stain,fair cut,no free oil

4098-4112 LIMESTONE buff,very hard,dense, crpxln,blocky,rare dead black stain on fracture face

MEARS A # 1-9 SAMPLE DESCRIPTIONS

4112-20 SANDSTONE white, slightly friable, very fine grained, poor visible porosity, spotty black dead stain

4120-46 SHALE red, gray, green, firm, fissile

B ZONE

4146-58 LIMESTONE white, firm, oolitic, chalky, fair intergranular and vuggy porosity, spotty black thick stain, good cut, poor show free oil with thin very hard, dense, crpxln, no shows

4158-64 SHALE green, firm, silty

4164-70 LIMESTONE buff, very hard, dense, blocky, dense, very rare poor pinpoint vuggy porosity, very spotty stain, fair cut, no free oil

4170-76 LIMESTONE buff, very hard, dense, blocky, crpxln, no shows

4176-4200 SHALE green, red, firm, argillaceous, slightly silty

C ZONE

4200-10 GRAINSTONE white, firm, very oolitic, fair intergranular and vuggy porosity, spotty to even live brown stain, very good cut, good show free oil

4210-20 LIMESTONE pale gray, hard, dense, argillaceous, poor porosity, no shows

MEARS A # 1-9 SAMPLE DESCRIPTIONS

4220-46 SHALE as above

D ZONE

4246-60 LIMESTONE buff,very hard,dense, blocky,slightly fossils,poor porosity,no shows

4260-74 LIMESTONE white,buff,slightly hard,slightly oolitic,poor pinpoint vuggy porosity,spotty black dead stain,no free oil

4274-96 SHALE red,very soft,very argillaceous

E ZONE

4296-4300 LIMESTONE buff,hard,dense, no shows

4300-06 LIMESTONE white,firm,chalky, fnly crystalline,poor porosity,spotty live brown stain,fair cut

4310-18 SHALE red,firm,very silty

4318-30 SANDSTONE white,friable,very fine grained,wsrtd clay fled,poor porosity,no shows

4330-42 SHALE as above

F ZONE

4336-52 LIMESTONE white,buff,hard,slightly fossils,dense,poor porosity,no shows

MEARS A # 1-9 SAMPLE DESCRIPTIONS

4350-70 LIMESTONE buff,very hard,dense,no shows with thin SHALE as above

4370-4400 SHALE red,ft,very argillaceous

4400-10 LIMESTONE buff,very hard,dense, crpxln,no shows

4410-56 SHALE red,green,firm,fissile, argillaceous,waxy with thin LIMESTONE as above

4454-60 LIMESTONE buff,very hard,dense, crpxln,no shows

4460-85 SHALE green,gray,firm,fissile,waxy

PAWNEE

4485-94 GRAINSTONE white, firm,very oolitic,fair to good intergranular porosity, spotty to even live brown stain,very good cut,good show free oil

4494-4545 LIMESTONE gray,very hard,dense,crpxln no shows with thin SHALE gray,green,firm,fissile

CHEROKEE

4545-60 SHALE black,firm,carbonaceous,very blocky

4560-70 SHALE gray,green,very soft,very argillaceous

MEARS A # 1-9 SAMPLE DESCRIPTIONS

4570-4608 LIMESTONE buff,very hard,dense,slightly fossils,poor porosity,no shows with thin SHALE as above

4608-20 SANDSTONE white,friable,very fine grained,clay fled,chalky,poor porosity,no shows

4620-32 LIMESTONE pale gray,buff,very hard,dense,no shows

4632-4044 SHALE red,green,gray,firm,fissile

4644-52 SANDSTONE white,pale green,red, firm,fine to coarse grained,angular,poor sorted,fair intergranular porosity,no shows

4652-4744 Shale red,green,gray,maroon,firm, fissile,some silty with abundant unconsolidated coarse sand grains, no shows

SANDSTONE white,unconsolidated,fine to coarse grained, rounded to very angular,psrtd,no shows

4744-60 SANDSTONE translucent,friable,fine to crse grained,rounded to sang,msrtd,good intergranular porosity,no shows

4760-74 SHALE as above

4774-82 SANDSTONE translucent,friable,fine to m grained, msrtd,rounded to sang,good intergranular porosity,no shows

MEARS A # 1-9 SAMPLE DESCRIPTIONS

4782-4796 SHALE yell,black,green,gray, blocky,slightly carbonaceous

4796-10 SANDSTONE as above with thin SHALE as above

MISSISSIPPIAN

4814-30 DOLOMITE white,pale gray,firm,fnly crystalline,chalky in part,poor intxln porosity,no shows,abundant Chert white

4830-45 DOLOMITE buff,soft,fnly crystalline, fair intxln porosity,no shows,abundant Chert as above

4845-55 DOLOMITE white,hard,vfnly crystalline,poor porosity,glaucconitic

4854-86 DOLOMITE brown,hard,fnly crystalline,poor porosity,no shows

4886-4920 DOLOMITE brown,very hard,very dense, crpxln,

4890-65 LIMESTONE white,buff,firm,chalky,poor porosity,no shows with thin SHALE green,red,firm, fissile

4965-80 DOLOMITE buff,pale gray,very hard, very fnly crystalline,dense,poor porosity,no shows

4980-5030 DOLOMITE buff,very hard,dense, some sub crystalline, no visible porosity,abundant glauconite with thin stringers SHALE red,green,firm, waxy

MEARS A # 1-9 SAMPLE DESCRIPTIONS

5030-46 SHALE red,green,maroon,gray,firm, fissile

5046-70 SANDSTONE trnls,white,firm,fine to m grained,rounded to sang,msrtd,abundant glauconite,fair intergranular porosity,no shows,abundant unconsolidated sand

5070-76 SANDSTONE translucent,white,hard, coarse grained,angular,sileous,trace pink grains,poor porosity,no shows,abundant unconsolidated grains and SHALE as above

5076-5107 SANDSTONE translucent,pinkish,firm, m to coarse grained,srnd to sang,fair intergranular porosity,no shows sileous cement, trace pink feldspar grains

GRANITE WASH

5107-16 GRANITE WASH weathered dull pink feldspar,translucent quartz and biotite crystals,no shows

GRANITE

5116-42 GRANITE fresh,clean, very sharp pink feldspar,translucent quartz and biotite crystals,dense,no shows

DRILLED DEEPER AFTER LOGS

RTD 5142'