

# GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY BEREXCO LLC  
 LEASE TATE "A" NO. 2-12  
 LOCATION 22201FNL & 335FEL  
 SEC. 12 TWP. 27W RNG. 33W  
 COUNTY HASKELL STATE KANSAS  
 FIELD KISNER SOUTH

ELEVATIONS  
 KB 2905  
 DF 2902  
 GL 2892  
 MEASUREMENTS ARE ALL FROM KB

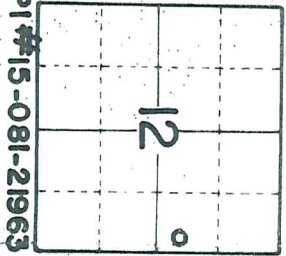
CONTRACTOR BEREDCO DRLG. RIG NO. 2  
 COMM. 8-30-2011 COMP. 9-17-2011  
 RTD 5400 LTD 5404  
 No. of DST'S 4 No. of CORES NONE

SCASING RECORD  
 8/8 dt 1802 w/ sx.  
 dt w/ sx.  
 dt w/ sx.  
 dt w/ sx.  
 EL. LOG ARIND-SP-GR  
DENN-UT-GR-CALIPER  
ML-SONIC

SAMPLES SAVED FROM 3800 TO TD  
 DRILLING TIME KEPT FROM 3800 TO TD  
 SAMPLES EXAMINED FROM 3800 TO TD  
 GEOLOGICAL SUPERVISION FROM 3800 TO TD  
 GEOLOGIST ON WELL EDWIN H. GRIEVES

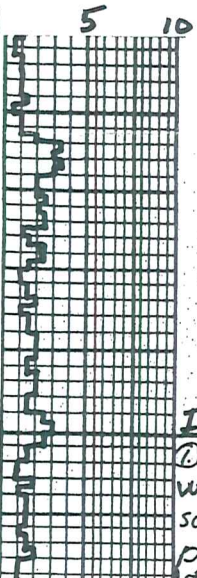
FORMATION TOPS  
 BASE HEEBNER  
TORONTO  
LANSING FM.  
MARMATON  
PAWNEE  
FT. SCOTT  
CHEROKEE  
MORROW FM.  
CHESTER FM.  
ST. GENEVIEVE  
ST. LOUIS  
TD

SAMPLE	LOG	SUBSEA
4017	4031	-1115
4029	4061	-1126
4060	4606	-1156
4600	4707	-1701
4707	4708	-1803
4744	4744	-1839
4759	4760	-1855
5000	5003	-2098
5101	5104	-2199
5162	5152	-2247
5229	5126	-2321
5400	5404	



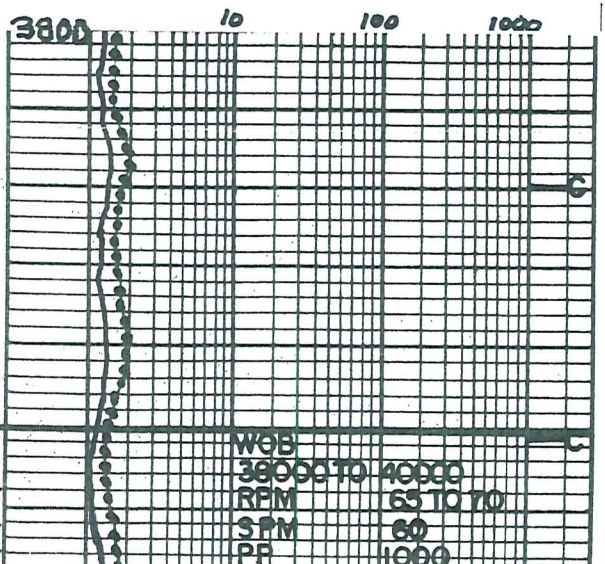
REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 3800 feet to total depth.

Thank you,  
 Edwin H. Grievess  
 Geologist



**Interbedded Limestones**

① Faster Drlg Lms. v. to extrly. chiky. crm. to wht. & crm. to lt. tan; crypt. to v. fn. xly. sub-chlk, sub-sugro. to sugro & trs. pzkstn.; phzatom oolitic to oolitic



oolitic IP's; dul. H. to H. yel. fluor  
 No Cut; tr to huy. trs. pr to tr micropp  
 por. IP's + poss interxln por IP's  
 (2) Slower Delg. Lms. tan, gryish. IP's; crypto  
 to v.v. fn. xln.; sub-chlk, sub-sucro +  
 packstn.; dul. H. to H. yel. fluor; No Cut  
 No Vis. por.

3900

4000

Base Heebner  
 4017-1112

BLK. SH. III

Toronto  
 4029-1124

Lansing Fm.  
 4060-1155

Sh black - carb  
 4017-19 Lms. crm. to tan; crypto to wfn  
 tr; sub-sucro, packstn. to trs. sub-lithogr.  
 dul. H. yel. fluor; No cut; No Vis por  
 Sh H. gray to H. green

Lms. abn. wht. to crm. - chlk + crm to tan  
 sub-chlk, sub-sucro. to sucro; dul. yel. to  
 yel. fluor. No cut; abn. pr. to trs. tr. micropp  
 por. + poss interxln por. IP's; abn chert  
 grays. opaque  
 interbedded limestones

Lms. crm to tan; crypto to v.v. fn. xln.; sub-chlk,  
 sub-sucro + packstn.; dul. yel. to yel. fluor; No cut  
 No Vis por

Lms. tanish gry. to H. tan; crypto to v.v. fn. xln.; shly  
 sub-chlk + shly; sub-sucro + packstn.; dul. yel. fluor  
 IP's; No cut; No Vis por

Lms. tan, gryish. tan to tanish gry.; crypto  
 to v.v. fn. xln.; trs. sub-chlk, sub-sucro,  
 packstn + trs. sub-lithogr.; dul. H. yel  
 to dul. yel. fluor; No cut; No Vis por

Lms. tan, gryish. IP's; crypto. to v.v. fn. xln.  
 sub-sucro + packstn.; v. dul. yel. fluor;  
 No cut; No Vis. por

4100

Lms. trs. wht. to crm chlk + tan; wfn. shly sub-sucro to  
 sucro; phantom oolitic IP's; dul. H. yel. to dul. yel.  
 fluor; No cut; abn. pr. to trs. tr. micropp. por. +  
 poss. interxln. por IP's; trs chert grays - opaque

Lms. gryish. tan to tan; crypto. to v.v. fn. xln.  
 trs. sub-chlk, sub-sucro. + packstn.;  
 dul. yel. fluor. IP's; No cut; No Vis por.

Lms. abn. wht. to crm chlk + tan; crypto. to v.v. fn. xln.  
 trs. sub-chlk., sub-sucro. to sucro; trs phantom  
 oolitic to shly trs. oolitic; dul. H. yel. fluor; No cut;  
 trs pr to gdt sl; trs excel. oolitic por abn;  
 abn. pr. to trs. tr. micropp. por. +  
 poss. interxln. por. IP's

Lms. H. gry, tanish IP's; crypto. to v.v. fn. xln.; trs  
 sub-chlk, sub-sucro., packstn + sub-lithogr.  
 trs phantom oolitic; dul. yel. fluor; No cut;  
 No Vis. por.; w/huy. trs. chert grays to tan; opaque

Sh med to v. drk gry - calc to blk - carb

Lms. abn. wht. to crm - chlk. w/ chlk oolites  
 IP's + tr. ory. to tan; crypto to v.v. fn. xln.;

sub-chlk; sub-sucro. to sucro. + packstn; sli to extaly. Phizantam politic to tes oolitic  
dul. yel. fluor.; No Cut; TRS. PR to FR  
micro - pp. POR.

4200

TRAP CHECK

Lms. lt. gray to tan; crypto. to v.v. fn. xln.; TRS.  
sub-chlk; sub-sucro, packstn + TRS sub lithogr.  
dul. yel. fluor.; No Cut; No Vis. POR.

Lms. H. to med. gray; crypto. to v.v. fn. xln  
sli. to very shly; TRS. sub-chlk for shly.  
TRS sub-sucro + packstn; TRS. v. dul. yel.  
fluor.; No Cut; No Vis. POR.

Lms. abn. wht. to cream. chlk + tan, grayish. IP's  
crypto. to v.v. fn. xln. v. to extaly. oolitic  
+ for sli. to fol. oolitic; matrix TRS sub-chlk,  
sub-sucro + sucro + packstn; dul. yel. fluor  
No Cut; abn. pr. te. gd. to excel oolitic POR  
Prob. No PERM.

Lms. similar 4207-4222

Lms. Similar 4241-4261 w/  
less oolitic in bottom of zone  
and more oolitic

4300

Lms. similar 4207-4222

Sh. H. to med. gray; sli. to extaly. calc

Lms. similar 4207-4222

Sh. H. to v. drk. gray. - calc to v. drk gray  
to black-carb.

BLK. SH. 16U

Lms. H. to med. gray. - shly. to tan; crypto  
to v.v. fn. xln.; sub-chlk for shly. IP's;  
sub-sucro, packstn + TRS. sub lithogr.  
dul. H. yel. to dul. yel. fluor.; No Cut  
No Vis. POR.

RECYCLE 3U

4400

Sh. H. gray. to H. green; sli. to faly. calc

Lms. H. gray. to tanish gray; crypto. to  
v.v. fn. xln.; v. abn. sub-chlk, TRS.  
sub-sucro + packstn; dul. yel. fluor.  
No Cut; No Vis. POR.

Lms. grayish. tan to tan; crypto  
to v.v. fn. xln.; sub-chlk; sub-sucro  
to sucro; dul. yel. fluor.; No Cut; huy TRS  
poor to fair micro - p.p. POR.

Lms. similar 4417-4444

Kansas City 440  
4466-1561

Sh. v. drk. gray to black-carb

BLK. SH. 30U

Lms. lt. to med. gray. - sli. to extaly. shly; crypto  
to v.v. fn. xln.; sub-chlk for shly, TRS sub-sucro  
+ packstn; dul. yel. fluor. IP's; No Cut; No Vis. POR.  
Lms. tan, wht. to cream. chlk + tan, grayish. IP's  
crypto. to v.v. fn. xln.; extaly oolitic + for  
sli. to fol. oolitic; matrix TRS sub-chlk, sub-sucro  
to sucro + TRS. packstn; dul. yel. to  
glan. yel. fluor.; No Cut; abn. pr. te. gd.  
to excel oolitic + huy. TRS. pr. to  
TRS. FR micro pp + poss. intery. POR.

4482-4512 Lms. H. gray. to tan; crypto.  
to v.v. fn. xln.; sub-chlk. sli. TRS sub-sucro  
+ packstn. + sub lithogr.; v. dul. yel. fluor.  
No Cut; No Vis. POR.

4500

sh. black-carb

BLK. SH. 24U

Lms. 2bn. wht to crm-chlk & H. gray. to tan; crypto to v.v. fn. xln.; sl. to v. oolitic and por. sli. oolitic; matrix: trs. sub-chlk, sub-sucro to sucro & packstn.; dul. yel. to tan yel. fluo. No cut; 2bn. pr to ph. oolitic & micro-pp. por.; Quest. Perm. w/ huy trs chert grays; opaque

4526-4556 Lms. trs. wht to crm-chlk & H. gray; tanish IP's; sub-chlk, sub-sucro, packstn & trs. sub-litho gr.; sl. to fr. sh. sh. IP's; dul. yel. fluo. No cut No vis por

Sh. med. to drk. gray; sl. to extly. calc.

Lms. H. to med. gray; v. to extly. shly. to tan; crypto xln.; packstn. to sub-litho gr.; tan's have dul. yel. fluo. No cut; No vis por

Sh med to drk. gray. v. to extly. calc grading to shly. Limestones

4600-4610 Lms. tan w/ even brn. oilst. v. to v. fn. xln. w/ sl. trs. in. calc. xln. & fr. prob along fractures; sub-sucro to sucro

sl. trs. foss; huy trs. oolitic; huy tr. phantom oolitic; strong oil odor; yel. to glau. yel. fluo. r.; flush to excel. staining. cuts; 2bn. pr to huy trs. gd. to excel. vugular, pp, micro-pp & interxy. por. w/ prob. fracturing

4610-4628 Lms. H. gray to tan; crypto. to v.v. fn. xln.; sub-chlk trs. sub-sucro & packstn.; phantom oolitic IP's dul. yel. fluo.; No cut; No vis por

4628-4636 Lms. tan to trs. H. gray; crypto to v.v. fn. xln.; sub-sucro to sucro & packstn. to sub-litho gr.; solution & recrystallization; trs. oolitic; trs. phantom oolitic; trs. foss. fat. to fr. oil odor; sp. to tan to brown w/ trs. blk oil sm. lt. yel. yel. & glau. yel. fluo.; molled flush tag. staining cuts; 2bn. pr to bet huy trs. gd. to sl. trs. excel. vugular, pp, micro-pp & interxy. por. in jugst along fractures; v. Quest. Perm.

4636-53 Lms. sl. trs. wht to crm-chlk & H. gray to tanish gray; crypto xln.; sub-chlk, packstn & sub-litho gr.; dul. yel. fluo. No cut No vis por

4653-71 Lms. huy trs. to 2bn. wht to crm-chlk & tan; crypto. to v.v. fn. xln.; sub-chlk, sub-sucro & packstn.; phantom oolitic IP's to oolitic IP's; dul. yel. fluo.; No cut; No vis por; v. sl. trs. chert gray-opaque

Lms. extr. 2bn. wht to crm-chlk & crm. v. H. trs.; crypto to v.v. fn. xln.; sub-chlk, sub-sucro to trs. sucro & packstn.; phantom oolitic IP's to trs. oolitic; dul. H. to tan. H. yel. fluo. r.; No cut; 2bn. pr to fr. trs. gd. micro-pp por.

Lms. trs. crm. to H. gray-chlk IP's & H. gray to tan; crypto. to v.v. fn. xln.; trs. sub-chlk, trs. sub-sucro, packstn & sub-litho gr. id. of H. yel. IP's to dul. yel. fluo. IP's; No cut; No vis. por

Sh. v. drk. gray - calc to black-carb

Sh med to drk. gray; v. to extly. calc

Lms. 2bn. wht. to crm-chlk & tan, grayish IP's crypto. to v.v. fn. xln.; sub-chlk, sub-sucro to trs. sucro & packstn.; trs. phantom oolitic; dul. yel. to tan. yel. fluo. No cut; widely scattered trs. v. poor micro-pp por

Lms. huy trs. wht. to crm-chlk & H. gray to tan; crypto. to v.v. fn. xln.; sub-chlk, sub-sucro & packstn.; sl. trs. sub-litho gr.; phantom oolitic IP's; dul. yel. fluo. r.; No cut; No vis por

Sh. black-carb

Lms. trs. wht. to crm-chlk & H. gray to tan; crypto to v.v. fn. xln.; phantom oolitic IP's; sub-chlk, sub-sucro & packstn.; trs. foss; dul. yel. to dul. H. yel. fluo. No cut; No vis por w/ trs. chert; gray opaque

Sh. very drk gray to black-carb

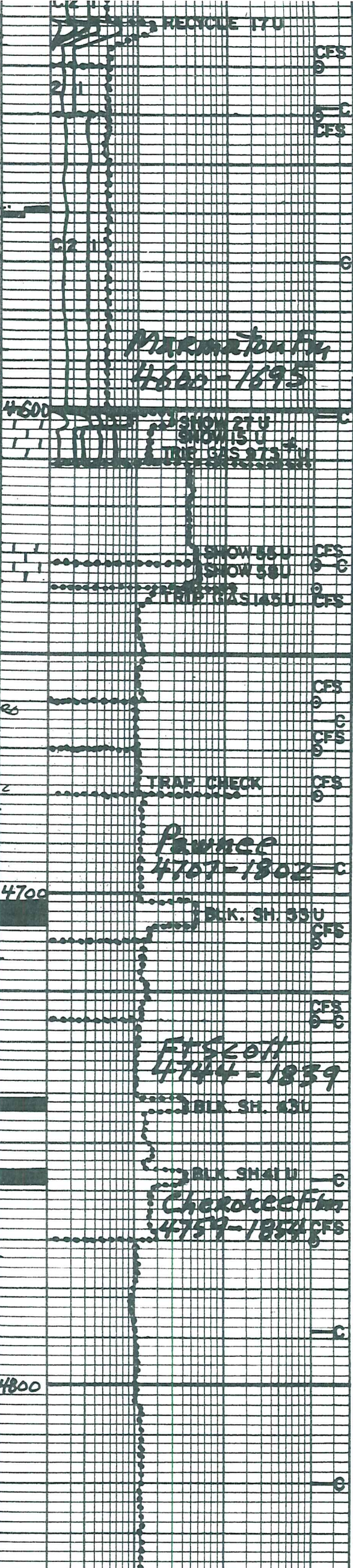
Lms. similar 4744-4756

Lms. H. to med. gray; sl. to v. shly. to tan; crypto. to v.v. fn. xln.; sub-chlk, sub-sucro & packstn.; dul. yel. fluo. r. IP's; No cut; No vis por

Lms. H. gray to tan; crypto. to v.v. fn. xln.; v. very to extly. oolitic (tan w/ trs. gray); matrix sub-chlk, packstn. & trs. sub-litho gr. dul. H. yel. fluo. r. IP's; No cut; No vis por.

Interbedded Limestones and Shales

Lms. H. to med & trs. drk. gray; sl. to extly. shly. grading to v. calc. sh.; crypto to v.v. fn. xln.; sub-chlk & or shly.; trs. sub-sucro,



xlin; sub-chlk + Tor Shly., Trs sub-sucro.,  
 packstn. + Trs. to abn. sub-lithogr.  
 v. dul. yel. fluor. IP's; No Cut; No Vis. POR.  
 (A) Lms. grayish tan to tan, crypto to tan. In  
 xlin; trs sub-chlk, Trs to hv trs. Sub-sucro.  
 packstn and sub-lithogr.; dul. yel. to sli  
 trs. yel. fluor.; No Cut; No Vis POR  
 (B) Sh med. to drk gray. - sli. to extly calc  
 (C) Sh v. drk gray to blk-carb. looking

4945-5000 Interbedded Limestones  
 + Shales similar 4802-4945  
 w/trs to abn Shs. Lt. green to olive  
 greens + greenish grays to grayish  
 greens; sli. Silty IP's.

A. 5000-5005 Sh v. drk. gray to black  
 splintery  
 B. 5005-5011 Sh med. to v. drk gray  
 + trs. black-splintery IP's w/trs  
 pyrite w/ abn Lms. Lt. to med gray.  
 sli. to v. calc. to tan, crypto. to v. u. (with  
 packstn. + sub-lithogr.; No fluor.;  
 No Cut; No Vis POR. w/ v. abn. Siltstn.  
 Lt. to med gray. and H green. Lt. tan  
 from Lms. Sh. filled IP's in fill

A. IP's, Trs to v. abn glauc. or chlorite  
 No fluor.; No Cut; No Vis POR.  
 B. C. 5011-5013 Siltstn. tan; Qtz shly.  
 v. u. fu. gr. - ang.; Paly. sorted  
 No fluor.; No Cut; No Vis POR.

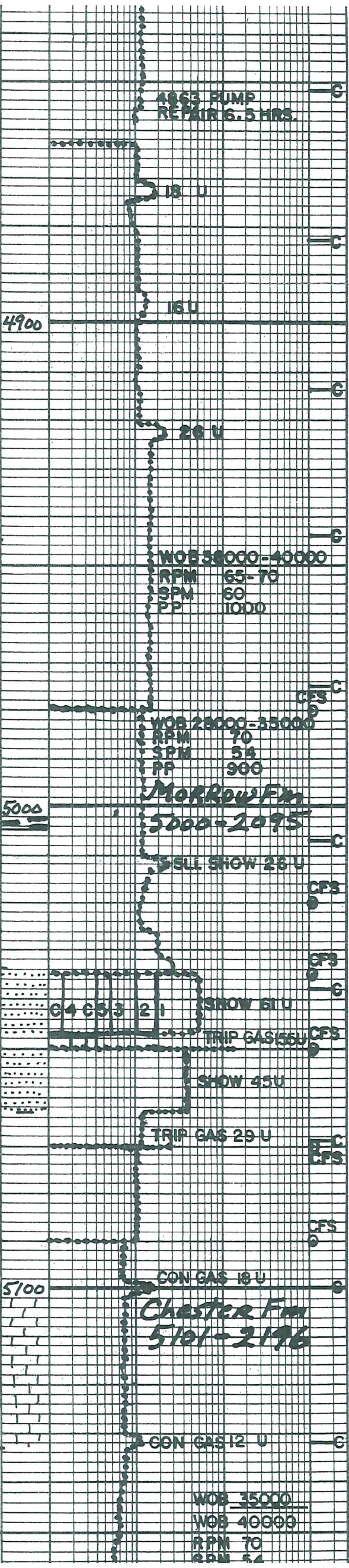
D. 5013-5026 Sh. w/ Lmst + siltstn  
 Similar 5005-5011  
 E. Siltstn. trs. gray to brn. from oil stn.  
 gradng. IP's to Qtz silt. brn. from oil stn.  
 v. u. fu. gr. + silt filled, ang. j. paly. sorted;  
 trs w/ trs glauc. or chlorite trs. w/ trs  
 fully disseminated pyr. j. to abn Sh. and  
 laminations + partings, glau. yel. fluor.  
 when air dried w/ flush to good string cuts  
 v. widely scattered v. pr. micro pp. por  
 Prob. No Perm.

F. 5034-5063 Qtz. Siltstn. from even oil  
 stn.; v. u. fu. gr. - ang.; silt filled IP's; gradng.  
 sort. trs. w/ trs. glauc. or chlorite + abn  
 v. drk. gray to blk. Sh. laminations + partings  
 trs. w/ trs to abn. finely disseminated pyr.  
 trs. to abn. Lt. green Sh. partings + laminations  
 silt + shly. IP's; glau. yel. fluor. when  
 air dried; w/ flush to good string cuts  
 about 1/4 to 1/2 w/ abn partings, trs. to  
 sli. trs. excel. micro pp. to intergr. por  
 Quest. Perm.

5063-5101 Sh. med. to v. drk gray. - splintery IP's  
 w/ hv trs. pyrite; abn. sh. to extly. silty Tor  
 Sh. - v. u. fu. gr. ang. gradng. to siltstn. med.  
 drk. gray; shale filled hv. trs. siltstn. tan  
 to brown from even oil stn. w/ yel. to glau.  
 yel. fluor. when air dried w/ good string  
 cuts IP's; No Vis POR

Lms. trs. wht. to crm. - chlk + lt. gray. Tanish IP's  
 crypto. to trs v. u. fu. xlin.; trs. sub-chlk  
 sub-sucro. to sucro. packstn + trs. Sub-  
 lithogr.; sli. trs. foss; trs. phenomolitic  
 to trs. colitic w/ sucro. matrix; w/ sptd  
 tan oil stn. w/ yel. fluor. w/ flush to good  
 stringing, cuts; w/ sli. trs. pr. to micro pp  
 to intergr. in por in sucro. matrix

Lms Lt. gray to tan, greenish IP's, crypto to  
 v. u. fu. xlin., Predom. extly micro-colic  
 +/or sli. to extly Qtz. Silt - v. u. fu. gr. ang.;  
 matrix trs. chlk, sub-chlk, sub-sucro.  
 v. dul. yel. fluor.; No Cut; No Vis POR w/ trs. to  
 abn. in bottom of zone Lms w/ med to lg  
 oolites, matrix sub-chlk, sub-sucro. and  
 packstn.; v. dul. yel. fluor.; No Cut



DIST. 29 30 BELOW

Novis POR

RIM 37  
PP 350

Lms. H. gry., tanish IP's; crypto to v.u. su. xln; extly. micro-oolitic to tres small +/or sli. to fely. Qtz sdy. w. (ngr. ang.) matrix; tres. chlk, tres. sub-chlk + sub-sucro; dul. H. yel. fluor; Noluit; Novis POR

St. Genevieve  
5162-2257

Lms similar 5162-5201 w/ large incr. in small oolites w/ zbn. incrs. of chlk and sub-chlk in matrix  
Olive grn. sly. waxy IP's gray to olive grn.  
Lms. crypto xln, packets. Lms. tan, grayish, IP's crypto to v.u. su. xln; sli. to extly. oolitic (sm, med, lg) matrix; chlk, sub-chlk, sub-sucro + packets; dul. yel. fluor. IP's; Noluit; Novis POR  
Lms. tan, grayish. IP's; crypto to v.u. su. xln. v. to extly. oolitic (med to lg) tres sm) matrix; abn. chlk, sub-chlk, sub-sucro + packets; dul. yel. fluor.; Noluit; Novis POR w/ v. zbn. Chert gry to tan; transl. to opaque; oolite replacement IP's  
5227-5250 Lms similar 5223-5229 w/ only tres. chert similar 5223-5229

5200

St. Louis  
5229-2324

Lms. med. tan, grayish. IP's; crypto to v.u. su. xln; tres. chlk, sub-chlk, sub-sucro + packets; tres to zbn. sli. to extly. oolitic (sm, med + lg); v. dul. yel. fluor.; Noluit; Novis POR.

TRAP CHECK

Lms. tres. to hvy. tres. wht. to crm. chlk w/ chlk oolites IP's (sm to med) + hvy. tres. Lms. tan; crypto to v.u. su. xln; sli. to extly. oolitic (sm, med + lg) matrix; chlk, sub-chlk, sub-sucro + tres + packets; v. dul. yel. fluor.; Noluit; Novis POR  
Predominately Lms. H. gray to tan; crypto to v.u. su. xln; v. to extly. micro-oolitic to tres sli. to v. Qtz sdy. w. (ngr. ang.) matrix; tres. chlk, sub-chlk + sub-sucro; y. dul. yel. fluor. Noluit; Novis POR w/ v. sli. tres. Chert gry to tan; transl. to opaque; oolite replacement IP's

TRAP CHECK

5199-5311 Lms. similar 5269-5290 w/ chlkiness incr. to extly. zbn. + sli. tr. chert

5300

SLI GAS SHOW 5 U

Lms. tan, grayish. IP's; crypto xln; packets to tres. sub-lithogr; dul. yel. fluor.; Noluit; Novis POR.  
Lms. tres. to hvy. tres. wht. to crm. chlk, tres. w/ chlk oolites; + tan, grayish. IP's; crypto to v.u. su. xln; sli. to extly. oolitic (sm, med + lg); matrix; chlk, sub-chlk, sub-sucro + packets; dul. yel. fluor. Noluit; Novis POR. w/ tres. to hvy. tres. Chert gry to tan; opaque to transl.

Lms. similar 5317-5327 Interbedded with Lms. gray to tan; crypto xln; packets. to sub-lithographic; dul. yel. to tres. yel. fluor.; Noluit; Novis POR. w/ tres. Chert gry to tan opaque to transl.

5400

### TD 5400

Bit Info 7 7/8 inch Bits  
#1 New Hughs GX 225  
in 1806 out 5400 TD

Dev. Surv.:

1. 743 1/2°	5. 2887 1°
2. 1241 3/4°	6. 4611 1°
3. 1806 1 1/2°	7. 5050 1 1/4°
4. 2357 1°	8. 5400 1 1/2° TD

Cir Points:

1. 4480	8. 4670	15. 5035
2. 4530	9. 4680	16. 5050
3. 4540	10. 4710	17. 5070
4. 4611	11. 4726	18. 5090
5. 4632	12. 4770	19. 5310
6. 4637	13. 4980	20. 5400 TD
7. 4660	14. 5020	

6. 4637 13. 4980 20. 5400TD  
 7. 4660 14. 5020

Daily Drlg Progress

1. 3800 2:45 PM 9-5-2011  
 2. 4191 7:00 AM 9-6-2011  
 3. 4522 7:00 AM 9-7-2011  
 4. 4611 7:00 AM 9-8-2011  
 5. 4637 7:00 AM 9-9-2011  
 6. 4660 7:00 AM 9-10-2011  
 7. 4863 7:00 AM 9-11-2011  
 8. 5035 7:00 AM 9-12-2011  
 9. 5050 7:00 AM 9-13-2011  
 10. 5070 7:00 AM 9-14-2011  
 11. 5222 7:00 AM 9-15-2011  
 12. 5400 7:00 AM 9-16-2011

DST #1 Marmaton "A" 4586-4611

IO Strong Blow BOB 1min  
 FO Strong Blow BOB 1min GTS 8min  
 Gas Burned Nicely  
 Rec 528-ft of Fluid BHT 122°F  
 341ft 10% gas 42% oil 48% mud  
 187ft 2% gas 78% oil 20% mud  
 Grv. 38.2 @ 60°  
 Tool Samp 75% oil 25% mud  
 IHP 2175# FFP 114-191# in 60min  
 IFP 41-108# in 30min FSIP 1045# in 120min  
 ISIP 1045# in 60min FHP 2153#

DST #2 Marmaton "B" 4623-4637

IO weak surf. blow built to 1 1/2 inch  
 FO weak surf. blow built to 1 inch  
 Rec 5 ft fluid 1% gas 99% mud  
 Tool Sample 22% oil + 78% mud  
 BHT 117  
 IHP 2133#  
 IFP 7-17# in 30 min  
 ISIP 96# in 60 min  
 FFP 18-22# in 60 min  
 FSIP 132# in 120 min  
 FHP 2109#

DST #3 Morrow 5036-5050

IO V. weak surf. blow after 15min  
 began to incr. to 1/2 inch @ shut in  
 FO weak surf. blow incr. to 2 3/4 inch  
 Rec 20ft fluid 2% oil 98% mud  
 Tool Sample 3% gas, 20% oil, 77% mud  
 BHT 126°F  
 IHP 2396#  
 IFP 8-19# in 30 min  
 ISIP 295# in 60 min  
 FFP 20-27# in 60 min  
 FSIP 347# in 120 min  
 FHP 2370#

DST #4 Morrow 5048-5070

IO weak surf. blow incr. to 1/4 inch  
 FO V. weak surface blow died in 10min  
 Rec 5ft fluid mud w/Ascum of oil  
 BHT 123°F  
 Tool Sample Drlg Mud w/spots of oil  
 IHP 2352#  
 IFP 8-13# in 30 min  
 ISIP 29# in 60 min  
 FFP 16-16# in 30 min  
 FSIP 23# in 60 min  
 FHP 2318#

Mud Info:

Date	9-5	9-6	9-7	9-8	9-9	9-10	9-11
Depth	3810	4329	4611	4611	4637	4710	4864
Wt.	8.65	9.1	9.3	9.1	8.15	8.75	9.1
Vis	46	46	52	49	54	53	53
PV	14	15	17	15	17	15	17
VO	17	11	17	15	17	17	17

IFF 2576  
 IFF 8-19# in 30 min  
 ISIP 295# in 60 min  
 FFP 20-27# in 60 min  
 PSIP 347# in 120 min  
 FHP 2370#

DST#4 Morrow 5048-5070  
 ID weak surf. blow in ce to 1/4 inch  
 FOV weak surface blow died in 10 min  
 Rec 5ft fluid mud w/Ascum of oil  
 BHT 1230 F  
 Tool Sample Dalg Mud w/spots of oil  
 IHP 2352#  
 IFF 8-13# in 30 min  
 ISIP 29# in 60 min  
 FFP 16-16# in 30 min  
 PSIP 23# in 60 min  
 FHP 2318#

Mud Log:

Date	7-8	7-9	7-10	7-11	7-12	7-13	7-14	7-15
Depth	3818	4329	4611	4611	4651	4710	4804	5000
Wt.	8.65	9.1	9.3	9.1	8.15	8.75	9.1	9.25
Vis	46	46	52	49	54	53	55	53
PV	14	15	17	15	17	15	17	17
YP	15	16	17	15	17	17	21	17
GS	14/43	14/40	16/49	14/43	16/49	14/45	16/49	16/40
WL	9.6	9.3	8.8	7.6	7.6	8.4	6.8	8.4
Cake	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
pH	11.0	9.5	10.5	10.5	11.0	9.5	11.0	10.5
Chl	2100	3600	3400	3800	2300	2500	1400	3000
Ca	20	20	20	20	20	20	20	20
LCM	3	3	5	4	4	4	4	2

Date	7-13	7-14	7-15					
Depth	540A	2:20P	2:25P					
Wt.	9.3	9.1	9.15					
Vis	53	71	52					
PV	16	20	17					
YP	16	22	17					
GS	14/45	19/36	15/48					
WL	8.0	8.0	8.4					
Cake	1/32	1/32	1/32					
pH	10.5	9.5	9.5					
Chl	1800	2800	2900					
Ca	40	20	20					
LCM	3	2	2					

OPERATOR BEREXCO LLC LOCATION 2220'FNL & 335'FEL  
 LEASE TATE "A" NO. 2-12 SEC. 12 TWP. 27S RANG. 33W  
 ELEVATION 2905 KB RTD. 5400 COUNTY HASKELL STATE KANSAS