

# GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY **BEREXCO, LLC** NO. **2-21**

LEASE **EVA** LOCATION **335'FSL & 1650'FWL**

SEC. **21** TWP. **18S** RNG. **31W**

COUNTY **SCOTT** STATE **KANSAS**

FIELD **EVA**

CONTRACTOR **BEREDCO DRLG. RIG NO. 2**

COMM. **11-18-2010** COMP. **12-3-2010**

RTD **4750** LTD **4746**

No. of DST'S **7** No. of CORES **NONE**

SAMPLES SAVED FROM **3600** TO **TD**

DRILLING TIME KEPT FROM **3600** TO **TD**

SAMPLES EXAMINED FROM **3600** TO **TD**

GEOLOGICAL SUPERVISION FROM **3600** TO **TD**

GEOLOGIST ON WELL **EDWIN H. GRIEVES**

FORMATION TOPS

FORMATION TOPS	SAMPLE	LOG	SUBSEA
BASE HEEBNER	3876	3870	912
TORONTO	3888	3884	926
LANSING FM	3919	3911	953
KANSAS CITY "A" ZN	4194	4189	1231
MARMATON	4333	4320	1362
PAWNEE	4395	4388	1430
FT. SCOTT	4422	4418	1460
CHEROKEE	4441	4437	1479
MISSISSIPPI	4528	4525	1567
SPERGEN	4584	4577	1619
TD	4750	4746	

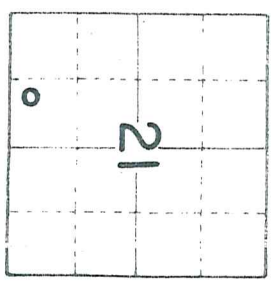
ELEVATIONS

KB **2958**  
DF **2956**  
GL **2946**

MEASUREMENTS ARE ALL FROM **KB**

CASING RECORD  
878" OI **439** W/ **425** SX.

EL LOG **A.O. RES. P. GR**  
**DEN. NEUT. GR. CAL. I. PER**  
**ML. SONIC**



REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 2600 to total depth.

*Thank you,  
Edwin H. Grievess  
Geologist*

LITHOLOGY

- SANDSTONE
- LIMESTONE
- SHALE
- CHERT

- SILTSTONE
- DOLOMITE
- GRANITE WASH
- ANHY & GYP

CHROMATOGRAPH

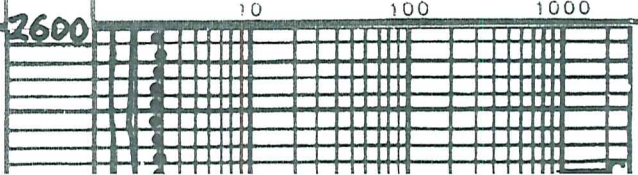
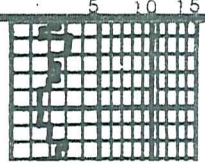
HOT WIRE BY TOTAL GAS VOLUME

- C1 = METHANE
- C2 = ETHANE
- C3 = PROPANE
- C4 = ISOBUTANE
- C5 = BUTANE
- C6 = ISOPENTANE
- C7 = PENTANE

DRILL TIME SCALE

SAMPLE DESCRIPTION

GAS SCALE





① Lms. trs. wht. to crm. - chlk + tan, grayish. IP's; crypto. to v. v. fn. xln.; sub-chlk, sub-sucro. + packstn.; abn dul. yel. mineral fluor. w/v. widely scattered trs. sptd. drk. tan to brn oil stn.; w/gd string cuts; No Vis Por

NO LITE GASSES RECORDED

② Lms. similar 3600 - 3619

TRAP CHECK

Lms. extr. abn. wht to crm. - chlk + tan, grayish. IP's; crypto. to v. v. fn. xln.; sub-chlk, sub-sucro + packstn.; dul. yel. fluor. No cut; No Vis Por

3700

Interbedded Limestones similar 3619 to 3698 w/No Shows

Lms. trs. wht. to crm. - chlk + tan, grayish IP's crypto. to fn. xln.; sub-chlk, sub-sucro to sucro + packstn.; hvy. trs. finely disseminated pp. dul. lt. to H. yel. fluor.; No cut; poss interstr. porosity in sucro

Lms. H. to med. gry. - v. to extrly. shly. grading to extaly calc. Shs. w/ trs. tanish to sli. trs. tan; crypto. xln.; sub-chlk and/or shly. and packstn.; sli. trs. dul. yel. fluor.; No cut; No Vis Por.

Interbedded Limestones and Shales:

① Lms. trs. wht. to crm. - chlk + tan, grayish. IP's crypto. to v. v. fn. xln.; sub-chlk, sub-sucro. + packstn.; dul. H. to H. yel. fluor.; No cut No Vis Por.

3800

② Lms. H. to med. gry. - sli. to extaly shly. grading to extaly. calc. shs.; crypto. xln.; sub-chlk and/or shly. + packstn.; No fluor.; No cut No Vis Por

③ Shs. H. to med gry., sli. to extaly. calc

Lms. trs. to abn. wht. to crm. - chlk + tan, grayish. IP's; crypto. to v. v. fn. xln.; sub-chlk., sub-sucro. to sucro. + packstn.; trs w/ phantom oolites; dul. H. to trs. H. yel. fluor.; No cut; hvy. trs. to abn. pr. to fr. micro-pp. and poss. interstr. por.

3873-3876

A. Sh. brownish black - carb

B 3876-3879 Lms. tan, grayish IP's crypto to v. v. fn. xln.; trs, sub-chlk sub-sucro. + packstn.; dul. H. to H. yel. fluor.; No cut; No Vis Por.

Base Heebner 3876-918

BLK. SH. 4 U

Toronto 3888-930

Sh. H. gray, greenish IP's to trs H green and olive green

Lms. trs. wht. to crm. - chlk + tan, grayish IP's crypto. to v. v. fn. xln.; sub-chlk, sub-sucro + packstn.; dul. H. to H. yel. fluor.; No cut; No Vis Por

Lms. extr. abn. wht. to crm. - chlk + crm. to tan; crypto

3900

to v. v. fn. xln.; sub-chlk, sub-sucro to sucro + packstn.; oolitic IP's; dul. H. yel. to dul. yel. fluor.; No cut; abn. pr. to trs. fr. micro-pp. por. + poss interstr. por. in sucro. trs. to hvy. trs. Chert wht. crm. to tan; opaque

Lansing Fm. 3919-961

Lms. abn. wht. to crm. - chlk., sub-sucro.,

trs. tobytes Chert w/ht, cement tan; opaque

Lms. & bn. wht. to cream - chlk., sub-sucro., packstn. + trs. sub-lithogr.; dul. lt. to trs. lt. yel. fluor.; No Cut; No Vis. Por. w/ trs. Chert gray to tan; opaque

3919-961

Lms. extr. & bn. wht. to cream - chlk. + lt. gray to tan; crypto. to v.v. fin. xln.; sub-chlk., sub-sucro. + packstn.; trs. oolitic; dul. lt. yel. fluor.; No Cut; No Vis. Por

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

Leasing "D"

3997-1039

Lms. trs. to hyp. trs. wht. to cream - chlk. + tan, grayish. IP's to trs. lt. gray; crypto. to v.v. fin. xln.; sub-chlk., sub-sucro. + packstn.; trs. oolitic (tan + lt. gray); dul. lt. to lt. yel. fluor.; No Cut; No Vis Porosity

4000

4027-4040 Lms. extr. & bn. wht. to cream - chlk. + tan, grayish IP's; crypto. to v.v. fin. xln.; v. to ext. oolitic +/or sli. to v. oolitic matrix sub-chlk., sub-sucro. to sucro. + packstn.; dul. lt. to lt. yel. fluor. No Cut; abn. pr. fr. to excel. oolitic por. w/ w/ht. pr. to sli. trs. fr. micro-pp. por. + pass. int. sh. por.

TRAP CHECK

Leasing "E"

4027-1069

Lms. extr. & bn. wht. to cream - chlk. + cement tan crypto. to v.v. fin. xln.; sub-chlk., sub-sucro. to sucro. + trs. packstn.; dul. lt. to trs. lt. yel. fluor.; No Cut; hyp. trs. pr. micro-pp. por. IP's Lms. v. & bn. wht. to cream - chlk. + cream w/ scattered lt. tan oil stn. - crypto. to v.v. fin. xln.; sub-chlk., sub-sucro. to sucro. fr. togd oil odor; trs. wht. med. to coarse calc. xls. frags. scattered lat. yel. fluor. w/ milky togd Ring cuts; scattered trs. pr. micro-pp. por. + trs. pr. micro-pp. + pass. int. sh. por. Lms. trs. wht. to cream - chlk. + tan, grayish IP's crypto. to v.v. fin. xln.; trs. sub-chlk., sub-sucro. + packstn.; v. oolitic IP's; tan + gray; dul. lt. to lt. yel. fluor. No Cut; No Vis Por

C4087-90 Sh. v. drk. gray to blk. - carb. looking  
4090-4101 Lms. similar 4076-4087

Leasing "F"

4060-1102

SHOW 6.5U

Leasing "G"

4090-1132

Lms. trs. wht. to cream - chlk. + tan, grayish. IP's w/ sptd. to even med. to drk. tan oil stn. IP's - brown when dried; v.v. fin. to tan xln. w/ ext. abn. embedded med. to coarse. xls.; strong oil odor; gldn. yel. fluor. w/ flush. to excel. strong cuts; abn. pr. to fr. trs. qd. micro-pp. to intersh. por.

4100

Sh. med. to v. drk. gray to trs. blk. carb. looking

(D) 4130-4169 Lms. lt. gray to tan crypto. to v.v. fin. xln.; sub-chlk., sub-sucro. + packstn.; dul. lt. to lt. yel. fluor. No Cut; No Vis Por

(E) 4169-4179 Lms. tan, grayish. IP's w/ abn. drk. tan to brn. sptd. to even

oil stn.; crypto. to v.v. fin. xln. w/ trs. wht. med. to coarse calc. xls. frags. trs. sub-chlk., sub-sucro. to sucro. + trs. packstn.; hyp. trs. to abn. oolitic +/or oolitic. fr. togd oil odor; dul. gldn. tog'dn. yel. fluor.; flush to gld. strong cuts; trs. to hyp. trs

(F) 4179-4191 Lms. similar 4130-4169

(G) Sh. v. drk. gray to blk. carb. looking

(H) Lms. sli. trs. cream - chlk. w/ lt. tan spotted oil stn. + lt. tan to tan w/ sptd. to even drk. tan to brn. oil stn.; fr. to fr. oil odor; crypto. to v.v. fin. xln. w/ trs. clear, med. to coarse calc. xls

4120

(I) sined tan w/ oil; sub-sucro. to v. sucro. + packstn.; trs. oolitic + sli. trs. phant. oolitic; yel. + dul. gldn. tog'dn. yel. fluor. w/ flush to gld. strong cuts. + some w/ only fine cuts; hyp. trs

SHOW 6U

SHOW 10U

SHOW 9U

TRIP GAS 105U

SHOW 14U

Leasing "J"

4169-1211

SHOW 24U

TRIP GAS 55U

Leasing "K"

4191-1236

BLK. SH. 9U

SHOW 20U

NO TRIP GAS

TRAP CHECK

+ sli. tas. phantom oolitic; yel. + dul. gl. d. tog. l. n. yel. fluor. w/ flush to gd. streaming cuts. + some w/ only ring cuts; hv. trs. pr. to fr. + trs. gd. to excel. p.p. micro-pp. + interxln por. Quost. form to good form.

(I) 4194-4199 Lms similar 4130-69  
 (J) 4206-4241 Lms. abn. wht. to crm. chlk + crm. totan, grayish. IP's; sub-chlk, sub-sucro, + pachstn; dul. yel. fluor.; No cut; No Vis Por.

(K) 4241-44 Sh. v. drngky to blk - carb  
 (L) 4244-48 Lms. H. gray totan; crypto xln; + v. fn. med. to coarse, wht to clear calc. xst. fragm. w/ drk tan to brn. sptd. to even oil stn. gd. oil oler; dul. gl. d. tog. l. n. yel. + brt. yel. fluor. w/ flush to gd. streaming cuts; w/ pr. fr. gd. to excel. interxln por. w/ prob. Uvular + fracture por.

(M) 4248-62 Lms. H. gray totan; tan crypto. xln; sli. tas. sub-chlk, pachstn. + sub-lithogr.; dul. H. tot. H. yel. fluor.; No cut; No Vis Por.

(N) 4262-65 Lms. tan, grayish IP's w/ sptd. to even drk. tan to brn. oil stn; crypto to fn. xln sub-sucro to sucro + pachstn w/ embedded to rev. zed med. to coarse xls; phantom oolites to tas. oolites; dul. gl. d. tog. l. n. yel. fluor. gd. oil oler; w/ flush to gd. streaming cuts; abn. pr. fr. gd. to excel. p.p. micro-pp. + interxln por. w/ sli. tas. pr. to fr. solution por.

(O) 4265-71 Lms. similar 4248-62  
 (P) 4271-77 Lms. tan, grayish. IP's w/ sptd. to even, drk. tan to brn. oil stn. crypto xln - pachstn to v. fn. med. to coarse xln; sub-sucro to v. sucro. poss. along fractures in vugs; tas. solution bed oolite (drussied) w/ v. v. fn. matrix sucro - oil stn. fr. oil oler; dul. gl. d. tog. l. n. yel. fluor. w/ flush to gd. streaming cuts abn. pr. to fr. + hv. trs. gd. to excel. p.p. micro-pp. + interxln por.

(Q) 4277-80 Lms. similar 4248-62  
 (R) 4280-88 Sh. med. to v. drk. gray to blk - carb w/ Lms. similar 4248-62  
 (S) 4288-98 Lms. grayish. tan totan; crypto to v. v. fn. xln; tas. sub-chlk, sub-sucro + pachstn; dul. H. yel. minor fluor. w/ widely scattered tas. fr. med. to tas. coarse calc. xls + fragm. apparent. from open frac. + vugs w/ sptd. drk. tan to brn. oil stn. w/ flush to excel. streaming cuts w/ tas. pr. fr. to gd. micro-pp. + interxln por. Maybe string from above?

(T) Sh. med. gray to extremely calc.  
 (U) 4317-23 Lms. tan, grayish. IP's; crypto to v. v. fn. xln; sub-chlk, sub-sucro + pachstn. dul. yel. fluor.; No cut; No Vis Por.

(V) Sh. med. gray; extaly calc. gd. med. to extaly shly l. v. s.

(W) 4333-42 Lms. H. gray, tanish IP's to tas. tan crypto. to v. v. fn. xln; sub-chlk, sub-sucro + pachstn; dul. yel. fluor.; No cut; No Vis Por.

(X) 4342-49 Lms. grayish. tan totan w/ sptd. to even drk. tan to brn. oil stn; v. v. totan xln w/ embedded med. to coarse calc. xls sub-sucro to sucro; fr. to fr. oil oler; phantom oolitic IP's; dul. gl. d. tog. l. n. yel. to yel. fluor.; flush to excel. streaming cuts abn. pr. to fr. + hv. trs. excel. Uv. p.p. micro-pp. + interxln por.

(Y) 4349-60 Lms. tan to H. gray; crypto to v. v. fn. xln; sub-chlk, sub-sucro, pachstn; + tas. sub-lithogr. dul. yel. fluor.; No cut; No Vis Por.

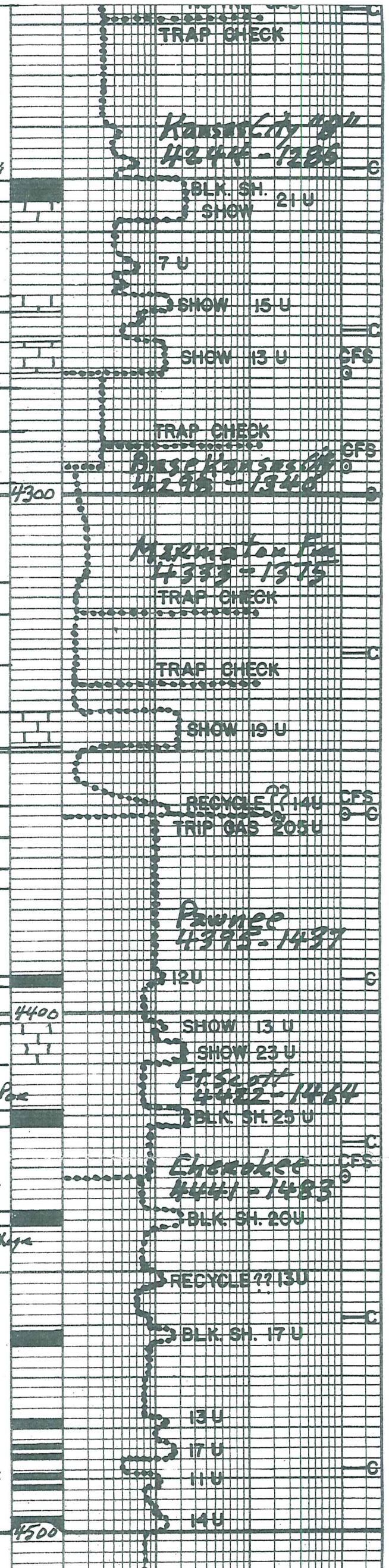
(Z) 4360-66 Lms. similar 4349-49 w/ abn. chert gr. totan + tas. orang. trns. to opp. w/ tas. shows similar 4342-49 prob. from above.

(AA) 4366-72 Lms. H. gray totan; crypto to v. v. fn. xln; sub-chlk, sub-sucro, pachstn + tas. sub-lithogr.; phantom oolitic IP's to tas. oolitic; dul. yel. fluor.; No cut; No Vis Por.

(BB) 4372-76 Sh. med. gray - extaly calc.  
 (CC) 4376-93 Lms. H. gray totan; crypto to v. v. fn. xln; sli. totaly. shly. IP's; sub-chlk + or shly; sub-sucro + pachstn; dul. yel. fluor. IP's No cut; No Vis Por.

(DD) Sh. med. to v. drk. gray; sli. tas. blk. carb. looking  
 (EE) 4395-4402 Lms. med. to drk. gray. v. to extaly. shly. gd. med. to extaly. calc. sh; crypto xln; sub-chlk + or shly + pachstn; No fluor. No cut; No Vis Por.

(FF) 4402-10 Lms. tan, grayish. IP's w/ abn. chert. even drk. tan to brn. oil stn. covets



tn, med. to coarse xln; sub-chlk, sub-succo + packstn, rexized oolites to phantom oolites; faint oil odes; dul. glau. to glau. yel. fluor. w/ flush. to excel. streaming cuts

abn. pr. to ex. to exc. p.p.t. micro pp por; v. Quest. Por in IP's; w/ abn chest mostly fresh; wht. to tan transl to opp. w/ trs. sl; weath. exc. w/ sl. trs w/ blk. oil stn.

(GG) 4410-19 Lms. lt. gray, totan; crypto to v. v. tn xln; trs. chlk, sub-chlk, sub-succo + packstn. dul. yel. fluor. IP's; No cut; No Vis Por

(H) 4419-22 Sh. v. dk. gray to black-carb

(II) Lms. lt. to med. gray. sl. to ext. shly to grayish tan totan; crypto to v. v. tn. sub-chlk, sub-succo, packstn + trs. sub-lithogr.; trs. Phantom oolitic dul. glau. yel. fluor. IP's; No cut; No Vis Por

(JJ) 4438-41 Sh. v. dk. gray to black-carb.

(KK) 4444-4518 Interbedded Lmsts + Shs

① Lms. lt. gray, totan; crypto. to v. v. tn. xln; trs. sub-chlk, trs. sub-succo, packstn + abn. sub-lithogr.; scattered trs. phantom oolitic IP's; abn. dul. glau. yel. fluor. No cut No Vis Por

② Lms. med. to dk. gray. v. to ext. shly. crypto. xln; sub-chlk, sub-succo + packstn. No fluor. No cut; No Vis Por

③ Sh. med. to v. dk. gray. sl. to ext. calc.

④ Sh. v. dk. gray to blk. carb.

(LL) 4518-25 Lms. lt. tan totan, grayish. IP's w/ abn. spid. to even oil stn. prob. along fiss. bedding planes; crypto to v. v. tn. xln; sl. to v. oolitic (sn to med); matrix chlk, sub-chlk sub-succo + packstn; w/ dul. yel. fluor. to exc. No cut; No Vis Por w/ trs. v. v. tn. xln w/ bitu v. succo, but yel. fluor. flush to exc. streaming cuts

(MM) 4528-4539 Interbedded Limestones

1. Lms. tan, crypto. xln; packstn + sub-lithogr. No cut; No cut; No Vis Por

2. Lms. tan, grayish. IP's w/ trs. dk. tan to abn. spid. to even oil stn. prob. along fiss. bedding planes; crypto to v. v. tn. xln; sl. to v. oolitic (sn to med); matrix chlk, sub-chlk sub-succo + packstn; w/ dul. yel. fluor. to exc. No cut; No Vis Por w/ trs. v. v. tn. xln w/ bitu v. succo, but yel. fluor. flush to exc. streaming cuts

(NN) 4539-4564 Lms. tan; sl. grayish IP's Crypto. to v. v. tn. xln. v. to ext. oolitic + gran. to med. matrix chlk, sub-chlk sub-succo + packstn; dul. yel. fluor. No cut; No Vis Por. w/ trs. chest wht, gray totan; trs. to opp. side

(OO) 4564-4584 Lmsts w/ chert similar to 4539-4564 sl. dolomitic IP's w/ v. sl. trs. tan to abn. oil stn. w/ glau. yel. fluor. flush to exc. streaming cuts; No Vis Por

(PP) 4584-4590 v. v. tn. xln; trs. sub-succo to ext. succo. Ark. tan to dk. brown

from oil stn; glau. yel. fluor. to yellow fluor. flush to exc. streaming cuts; trs. pr. to abn. fr. gd to exc. micro pp + interxln por. faint oil odes

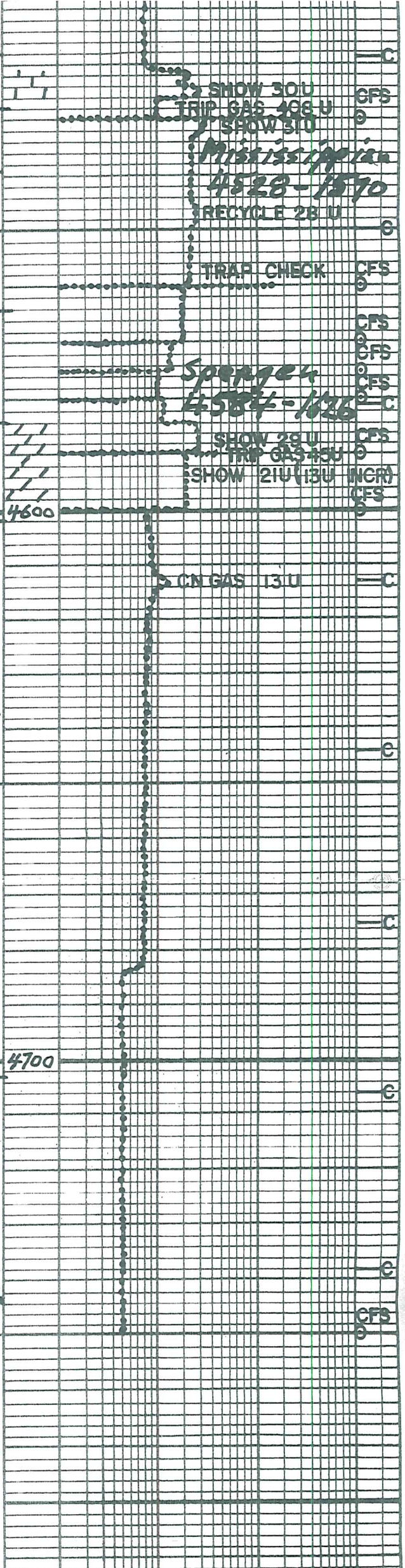
4590-4602 Dolo. similar 4584-4590 incr. in sub-succo; lt. gray totan, por + stn. marbled in Green Rock abn. pet. to thuy trs. gd to exc. micro-pp to prob. interxln por.; same yel. to glau. yel. fluor. w/ flush to exc. streaming cuts; 35-40% has stn + show

(RR) 4602-4703 Interbedded Dolomites Lmy Dolomites to Dolomitic Limestones

① Faster Dalg. Dol. tan to lt. gray; v. v. tn. xln; sub-succo to v. succo; dul. yel. fluor. No cut; abn. ph. to exc. micro-pp por. and prob. interxln por.

② Slower Orig. Lmy. Dolo to Dolo. Lmsts. lt. gray, totan; mottled IP's; crypto to (xln) chlk, sub-chlk, sub-succo to succo and packstn; phantom oolitic IP's to trs. oolitic IP's (gray + tan); sl. to finely shly IP's dul. yel. w/ trs. yel. fluor. IP's; abn. No Vis Por

(RS) 4703-4750 Interbedded Dolo., Lmy Dolo to Dolo Lmsts similar 4602-4703 w/ trs. to abn. chest wht. gray to tan; trs. sl. to opp. side



TD 4750

DST #1 Lansing "H" 4100-4125  
 10 Strong Blow BOB 2 1/2 min

1997ft Total Fluid  
10ft Clean oil  
930ft 82% G, 42% oil; 25% Mud 25% WTR  
1057ft 80% wtr; 20% Mud w/scum oil  
Grav. 26° @ 60°F  
wtr Ph 7.5 Chl 26000 PPM Ft Chl 3000 PPM  
BHT 134° RW .31 @ 56°F  
IHP 1917# in 15 min.  
IFP 127 to 499# in 30 min.

ISIP 889#  
FFP 527 to 863# in 120 min.  
FSIP 900#  
FHP 1913#

DST #2 Lansing "J" 4165-4176  
IO: Weak Blow Built to 2 1/2" in 15 min  
FO: Weak Blow After 3 min Built to 5" in 60 min  
Rec 198ft Total fluid  
10ft Clean Oil Grav. 30.6 @ 60°F  
180ft 62% oil; 54% wtr; 40% Mud  
wtr Ph. 9.6 Chl 10000 PPM RW. 08 @ 42°F  
BHT 122°F

IHP 1943  
IFP 7 to 38# in 15 min.  
ISIP 909# in 30 min.  
FFP 42 to 117# in 60 min.  
FSIP 915# in 120 min.  
FHP 1936#

DST #3 Kansas City "A" 4195 to 4205  
IO Weak blow built to 6 1/2" in 15 min  
FO Weak blow built to BOB in 5 1/2 min  
Total Fluid 650ft  
650 wtr w/scum oil Ph. 8.5 Chl 24000 PPM  
RW .36 @ 42°F Ft Chl 4000 PPM

BHT 134°  
IHP 1949#  
IFP 8 to 91# in 15 min.  
ISIP 937# in 30 min.  
FFP 97 to 299# in 60 min.  
FSIP 943# in 120 min.  
FHP 1942#

DST #4 Kansas City "B" 4260-4295  
IO: Weak surface Blow Built to 1/2" in 15 min  
FO: No Blow  
Total Fluid 3ft  
3ft Mud w/Few oil spots

Electronic Recorder Failed

IHP 2022#  
IFP 31 to 41# in 15 min.  
ISIP 1060# in 30 min.  
FFP 31 to 41# in 30 min.  
FSIP 993# in 60 min.  
FHP 2013#

DST #5 Marmaton 4340-4362  
IO Strong Blow BOB 1 min 35 sec  
FO Strong Blow Dnce. BOB 6 min  
Total Fluid 740ft  
648ft Clean Oil Grav. 32° @ 60°F

92ft SOCGM 30% G; 10% O; 60% Mud  
IHP 1996# BHT 133°F  
IFP 38 to 205#  
ISIP 323#  
FFP 213 to 309#  
FSIP 330#  
FHP 1993#

DST #6 Unconformity 2, 4571-4530  
IO: Weak Blow Built to 8" in 15 min  
FO: Weak Blow Built BOB in 19 1/2 min  
Rec. Total Fluid 374' + GIP 263'  
273 fl Clean oil Grav. 32.8 @ 60°F

101ft GMCO 20% Gas; 53% oil; 27% mud  
Tool Sample 22% gas; 76% oil; 22% mud  
IHP 2089# BHT 129°F  
IFP 9 to 51# in 15 min.

FHP 2073#  
 DST #7 Spergen 4575-4590  
 IO weak surface blow built to 1/2" in 15 min  
 FO No Blow  
 Rec. Total Fluid 15 ft  
 1 ft Clean Oil  
 14 ft 5% Oil specked Mud 2% oil 98% mud  
 Tool Samp. 5% oil; 95% mud  
 IHP 2130#  
 JFP 6 to 14# in 15 min  
 BSIP 1078# in 30 min  
 FFP 16-29# in 30 min  
 FSIP 981# in 30 min  
 FHP 2113#

Mud Info:

Date	11-22	11-23	11-24	11-25	11-26	11-27	11-28	11-29
	7:45A	7:30A	10:0A	8:30A	11:5A	10:45A	8:30A	11:5A
Depth	3119	3658	4115	4125	4176	4205	4295	4362
Wt.	9.4	8.8	9.2	9.2	9.2	9.1	9.0	8.9
Vis	32	53	49	50	55	52	49	50
PV	—	15	11	14	15	12	14	12
YP	—	17	15	16	18	15	15	15
GS	—	9/16	10/17	9/18	12/21	8/15		7/13
WL	N/C	8.8	9.6	8.8	9.6	7.2	7.2	6.8
Cake	—	1/32	1/32	1/32	1/32	1/32	1/32	1/32
pH	6.0	10.5	9.0	10.0	10.5	10.5	10.0	10.0
Chl	3200	2600	3000	3700	4000	5000	3800	2300
Ca Hvy	60	80	60	80	20	40	20	
LCM	3	3	2	2	2	2	2	2

Date	11-30	12-1	12-2
	11:0A	11:20A	11:55A
Depth	4530	4530	4590
Wt.	9.1	9.1	9.0
Vis	48	55	52
PV	15	15	12
YP	13	17	14
GS	?	?	?
WL	7.2	8.8	8.0
Cake	1/32	1/32	1/32
pH	10.5	9.5	10.0
chl	2500	3600	4000
Ca	60	80	60
LCM	2	2	2

7 7/8 inch Bit Info: in out  
 Bit #1 New Smith F27I 444

Dev. Surv:

- 444 1°
- 964 1/2°
- 1433 3/4°
- 2460 3/4°



3. 1433 3/4°  
 4. 2460 3/4°  
 5. 4125 1°  
 6. 4750 3/4° TD

**Cir. Points:**

1. 4033	11. 4432
2. 4092	12. 4530
3. 4100	13. 4560
4. 4115	14. 4570
5. 4125	15. 4575
6. 4176	16. 4580
7. 4205	17. 4590
8. 4277	18. 4600
9. 4295	19. 4750
10. 4362	

**Daily Drlg Progress:**

1. 3600	6:17AM	11-23-10
2. 3615	7:00AM	11-23-10
3. 4100	7:00AM	11-24-10
4. 4125	7:00AM	11-25-10
5. 4176	7:00AM	11-26-10
6. 4205	7:00AM	11-27-10
7. 4295	7:00AM	11-28-10
8. 4362	7:00AM	11-29-10
9. 4487	7:00AM	11-29-10
10. 4530	7:00AM	12-1-10
11. 4590	7:00AM	12-2-10
12. 4750	7:00AM	12-3-10

OPERATOR BEREXCO, LLC

LOCATION 335'FSL & 1650'FWL

LEASE EVA NO. 2-21

SEC. 21 TWP. 18S Rng. 31W

ELEVATION 2958KB RTD 4750

COUNTY SCOTT STATE KANSAS