

DRILLING TIME & SAMPLE LOG

COMPANY Berexco LLC
 LEASE RA NO. 1-6
 LOCATION 800'FSL + 2975'FEL
 SEC. 6 TWP. 29S RNG. 40W
 COUNTY Stanton STATE Kansas
 FIELD Arroyo Northeast

ELEVATIONS
 KB 3330
 DF 3328
 GL 3318
 MEASUREMENTS ARE ALL FROM KB

CASING RECORD
8 7/8" at 1725' w/ SX.
 ___ at ___ w/ ___ SX.
 ___ at ___ w/ ___ SX.
 ___ at ___ w/ ___ SX.

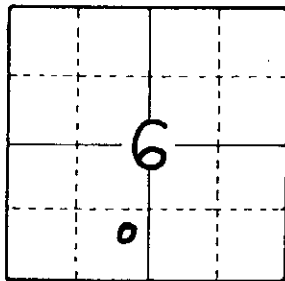
EL. LOG ACT Res: SP GR
DN NEUT GR Caliper
MI-Sonic

CONTRACTOR Beredco Delg. Rig #1
 COMM. 4-6-2016 COMP. 4-20-2016
 RTD 5672 LTD
 No. of DST'S None No. of CORES None

SAMPLES SAVED FROM 3700 TO TD
 DRILLING TIME KEPT FROM 3500 TO TD
 SAMPLES EXAMINED FROM 3700 TO TD
 GEOLOGICAL SUPERVISION FROM 4000 TO TD
 GEOLOGIST ON WELL Edwin H. Grieves

FORMATION TOPS

FORMATION TOPS	SAMPLE	LOG	SUBSEA
<u>Base Heebner</u>	<u>3709</u>		
<u>Lansing</u>	<u>3767</u>		
<u>Marionton</u>	<u>4366</u>		
<u>Ft Scott</u>	<u>4531</u>		
<u>Morrow</u>	<u>5019</u>		
<u>St. Genevieve</u>	<u>5557</u>		
<u>St. Louis</u>	<u>5604</u>		
<u>TD</u>	<u>5672</u>		



API#15-187-21325

REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 4122 to total depth.

Lost Circ At 4863 - Lost over 1000 bbls of Mud

Handwritten notes:
 1000' FSL
 New Kit
 9/20/16
 Geo

LITHOLOGY
 SANDSTONE
 LIMESTONE
 SHALE
 CHERT

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

SILTSTONE
 COLOMITE
 GRANITE WASH
 SANDY B GTP

HOT WIRE BY TOTAL GAS VOLUME

DRILL TIME SCALE 5 10 15
 SAMPLE DESCRIPTION
 GAS SCALE 10 100 1000
 3500

DRILL TIME SCALE

5 10 15

SAMPLE DESCRIPTION

GAS SCALE

10 100 1000

3500

3600

3700

Sh. v. dark gry. to blk. - ca. ab.
- Lms. grayish. Tan; crypto. x. imp. packstr.
to sub-lithog. ; dul. yel. fluor. No cut
No Vis. pore

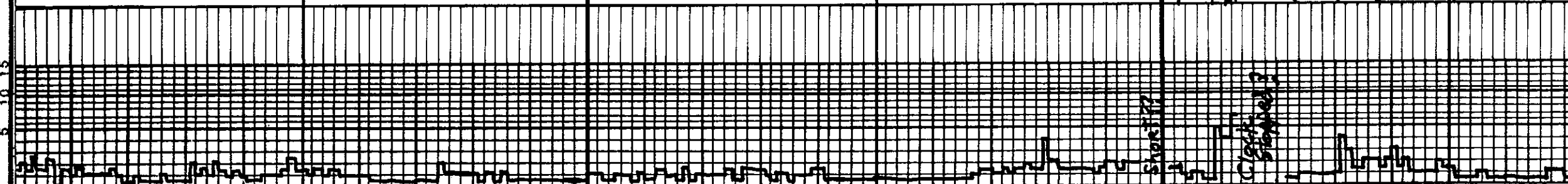
Sh. lt. gry. to lt. grn. silty IP's v. soft
mushy when wet
Lms. Tes. wh. to cream ch. l. to con. to tan; crypto
to v. v. tan. x. in; sub. ch. ly. 5. ub. - sucrao. to
sucrao. du. ; yel. - fluor. No cut. Tes. v. PE
mic. 0 - p. to pos. sites. inter. x. pore

Lms. lt. to med. gry. - sl. to fine; sh. ly. to
grayish. tan to tan; crypto. to v. tan. Linj
sub - ch. ly. No. Sh. y. sub - sucrao and
pach. st. y. Tes. dul. yel. fluor. ; No cut
No Vis. pore.

Sh. lt., med. to dark. gry. ; sl. to extr. m.
calc.

Base Heedbner
3709 = 379

TRANSING
3767-437



Lms. lt. to med. gray - sl. to fely sh. to gray sh. tan to tan. crypto. to vit. thin. sub-ch. 16 to 2 sh. sub-sucro and packstn. trs. dul. yel. fluor. No cut No vis. por.

Sh lt. med to dark. gray; sl. to extraly calc.

Chart change

Laminating
3767-437

Interbedded Limestones

1. Slower Dr. lg. Lms. H. to med gray - sl. to fely. sh. tan. to gray sh. tan. to tan. crypto. to v. v. fn. x. ln. sub-ch. 10 to 15 sh. sub-sucro. Packstn. trs. sub. No cut. No vis. por. dul. yel. fluor. IP; No cut. No vis. por.
2. Faster Dr. lg. Lms. trs. wht to cr. r. ch. ls. IP's & gray sh. tan to tan. crypto. to v. v. fn. x. ln. sub-ch. 10 to 15 sh. sub-sucro. trs. sucro. & packstn. trs. sl. to fely. phan. tan. oolitic; dul. yel. fluor. No cut; scattered trs. pr. to sl. trs. fine micro-pp. por.

3800

3900

Geological

LIME
BRECKE

Lms. v. to extr. zbn. wht. to cream-ch. k. and gray sh. tan to tan. crypto. to v. v. fn. x. ln. v. to extraly oolitic; No R sl. to fely to trs. v. oolitic; matrix sub-ch. k. sub-sucro and packstn.; dul. yel. to trs. yel. fluor. No cut; extr. zbn. fr. g. to excel oolitic por.; Quest. Fe. m.

4000

matrix sub-chk, sub-succo and
pachstn; dul. yel. to taw. yel. fluor.
No cut; extr. abn. fr. 9A to excel
oolitic por.; Quest. Perm.

4000

Lms. lt. to med. gray - sli. to v. shly
+ grayish. tan to tan; crypto to
v. u. fine. xln; sub-chk like shly.
Sub-succo + pachstn; taw. dul. yel.
fluor. 1P5; No cut; No Vis for

4100

Lms. extr. abn. wht to cr. m. - chk and
cr. m. to lt. tan; crypto. to v. u. fine. xln;
v. to extraly oolitic for sli. to frly
oolitic; matrix sub-ly sub-succo
+ pachstn - dul. lt. to h. yel. fluor.
No cut; abn. fr. 9d to excel. oolitic
por.; Quest. Perm

Lms. similar 4064 - 4140

Lms. taw. wht. to cr. m. - chk + tan;
crypto. to u. fine. xln; v. to extraly.
oolitic for sli. to frly oolitic;
matrix taw. sub-chk, taw. sub-succo
+ pachstn; gldn. yel. to yel.
mottled fluor.; No cut; v. abn.
pa. fr. 9d. to excel. oolitic por.
very Quest. Perm

4200

Lms. lt. med. to taw. dul. to d. k. + d. k. gey
sli. to u. shly w/ taw. tanish gray to
sli. taw. tan; crypto. to taw. sub-succo
sub-chk like low shly; sli. taw. sub-succo
+ pachstn; v. sli. taw. dul. yel. fluor.
No cut; No Vis for

Gas Deflection Well
Starting 4027



lms. H., med. to tan dark to dark grey
 slt. to u. shly. w/ tan. to wish grey. to
 sh. tan. tan. crypto. to tan. u. shly.
 sub-chalk. w/ tan. shly. sh. tan. sub-succo
 + p. ch. stn. v. sh. tan. d. u. yellow. fluor.
 No cut. No vis. por.

Sh. H., med. to dk. grey; faly. to
 extly. c. & l. c. gran. to shly. lms.

Interbedded Limestones

1. Slower Dalg. tes. wht. to cr. chalk.
 + lt. grey, cr. m. to tan; crypto. to
 v. u. tan. xln.; sub-chalk, sub-succo
 to tan; succo. p. ch. stn. + tes.
 Sub-lithographic; d. u. yellow. fluor. lms.
 No cut. No vis. por.

2. Faster Dalg. lms. ext. abn.
 wht. to cr. chalk + H. tan to tan,
 greyish. lms. crypto. to v. u. tan. xln.
 sub-chalk, sub-succo to succo.
 + p. ch. stn.; tes. to huy. tan. shly.
 to faly. oolitic; stn. to huy. tan. to
 huy. tes. slt. to faly. oolitic;
 d. u. H. yellow. fluor. No cut.

huy. tes. pr. to pr. micro. pp.
 to interbed. por. + tes. to huy.
 tes. pr. fr. to good oolitic
 por. Quest. form in
 oolitic por.

Nizamatom
 4300 = 1056

WOB 10000
 APM 100
 SPM 50
 PP 1000

SH 525.1-226

4500



4500

4600

4700

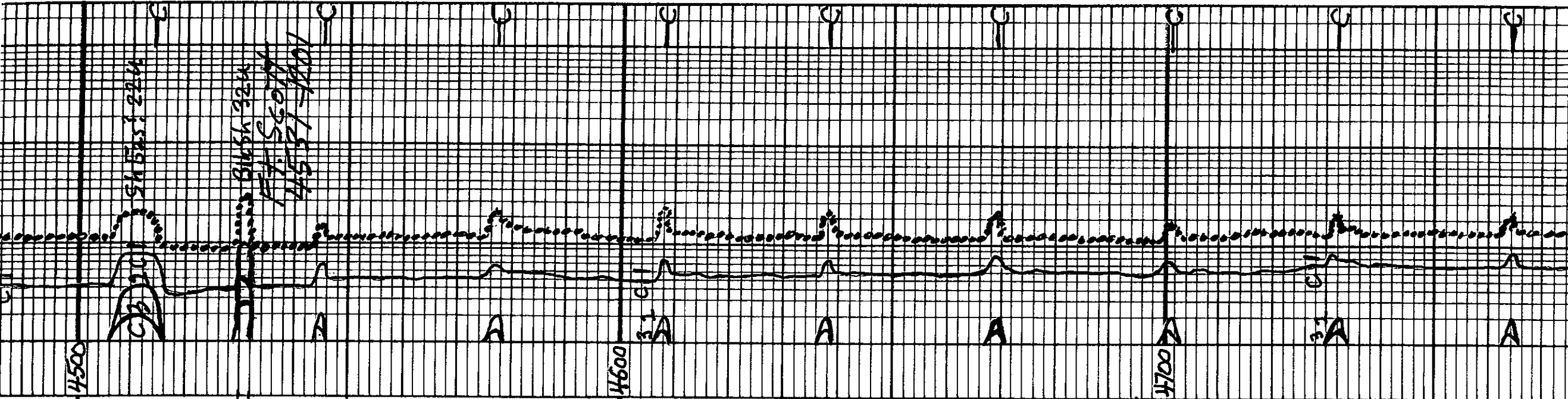
Sh. v. dk. gray to black - carb

Interbedded Limestones & Shales

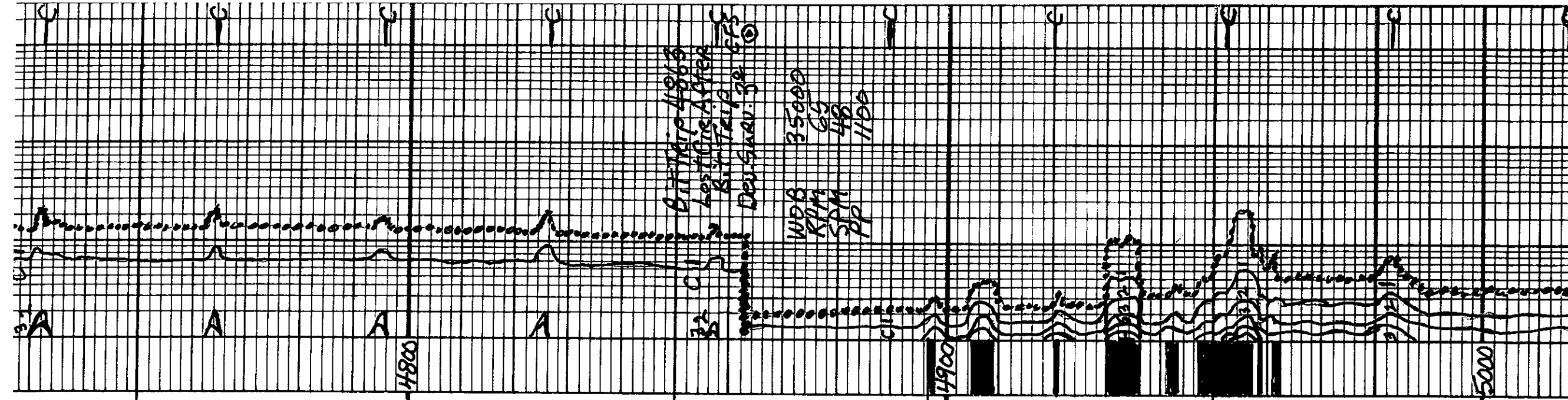
- ① Lms. sh. to med. to dk. gray - sh. to extremely shaly; grad to calc. shs. crypto. to tan; crypto. to vit. to sub-obl., sub-succ. or p. zechstein; phantoms oolitic IP's to thin. oolitic; dub. H. yellow. No cut; No vis for
- ② Lms. H. med. to dk. gray - sh. to extremely shaly; grad to calc. shs. crypto. xlv. sub-obl. to shaly, packstn. + sub-lithographic thin. dub. yellow. IP's, No cut No vis for
- ③ Sh. H. med. to dk. gray; grad to extremely calc. IP's grading to extra. shaly. Lms. thin.

SH 551 2216

SH 551 2216
FT. STONE
45 31 1001



WATER STRIKE



All Trip 4868
 Lest. Cr. After
 Kittling
 Des. Surv. 30 65

WDB 35000
 KPM 64
 SPM 48
 PP 1100

4800

4900

5000

A

A

A

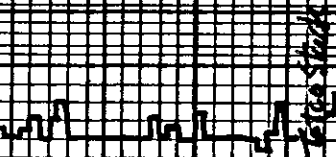
A

32

33

C1

Interbedded Limestones & Shales
 Similar 4531-4897 w/abu
 Interbeds Shales & dk. grey.
 to black - carb.



Large Shale

Morrow Fan
5087-1617

5000

211

621

5100

636201

5200

Sh. med. gray, soft, w/silky luster
+ dark gray - splintery lps.
w/abu. prob. thin interbeds
Lms. H. gray, Totani, crypto. to
v.v. fine, sub-calc, res. sub-suscep.
packstn + sub-lithographic;
No fluor; No cut; No U₂ for
w/tes pyrite lps

Sh. w/only sl. lms. Lmsts.
similar 5085-5206



Sh. w/only sl. trs. Lmsts.
similar 5085-5206

Lm. + Qtz grs Sdst 50 to 100%
Lmgas v. or 50 to 100% Qtz grs;
lt. gray to tan, mottled lps; lmg
fn to coarse. - Qtz. gas v. fn to med.
ang to tes. sub-ang. gradng to sub-Rnd
Trs to 30% glauc., No fluc., No cut
No vis for

Sh. med. gray, soft, w/silky luster to
dk. gray. - splintery lps

Qtz Sdst w/trs Lmgas; lt. gray to
tan; Qtz v. to med. gr., ang. to
trs. sub-ang. gradng to sub-Rnd.
Zero to huy trs. Lm. gas lps; v. fn to
coarse gas; trs. sl. micaceous; tes.
to abn. gray; No fluc.; No cut,
No vis for

Sh. med. gray, soft, w/silky luster -
dew. gray. - splintery lps; w/trs
Lm + Qtz Sdsts similar
5381 - 5399 w/sh. matrix lps +
abn. sl. to v. finely disseminated
pyrite

Qtz Sdst lt. gray, whitish gray to
tanish gray v. fn. to tan w/huy
Trs to abn. med to coarse gas
ang w/trs to huy trs subang to sub-Rnd
pr. sort; v. faint oil adng, mostly
sl. to v. glauc. to chloritic; huy trs
ltd. yel. fluc. w/ tan to dk. staining
cut; huy trs to 60% glaucous; abn.
Sm. clustres v. v. to v. - v. fluc. to
huy trs to 20% loose Qtz grs
Sh. similar 5399 - 5420 w/huy trs Lm
gas; can to tan, ang to 40% huy trs
Qtz. yel. fluc., No cut, No vis for

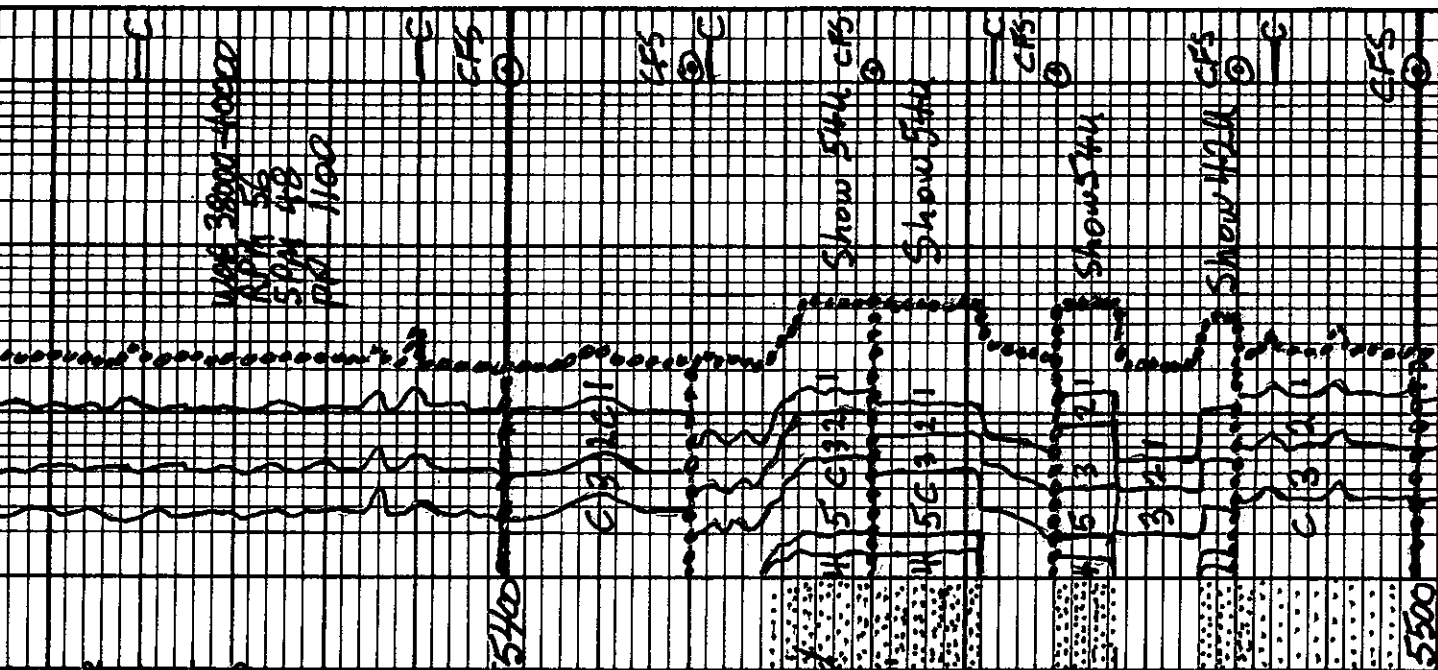
Qtz Sdst similar 5429 - 5452

Sh. w/Lms similar 5452 - 5460

Qtz. sdst. similar 5429-5452 w/
more med. coarse gas + more
sub-Rnd. to Rnd. gas

Qtz Sdst v. lt. gray to whitish gray; sl.
Trs. tan; v. fn. to v. th. gr.; ang;
Trs. blk. mingled lps by pr. sl. lps
Trs. finely disseminated pyrite,
Trs. yel. fluc. w/ faint to fe. staining
cuts; Trs. w/poor intergr. por

Sh. med. gray, soft, w/silky luster
+ dk. gray; splintery lps w/trs
2 ll. trs to 10% trs



5085
5206
5381
5399
5429
5452
5460

5085

5206

5381

5399

5429

5452

5460

5085

5206

5381

5399

5429

5452

5460

Otr. Sdly. v. H. gray. to wh. to dk. gray. + sh. tan; v. u. f. to u. gray. + sh. tan. b. k. m. orange. 19 as before. Sh. l. o. gas. f. finely disseminated. p. r. tan. yel. fluor. w/ faint to fl. strong cuts; tan. w/ poor interst. por.

Sh. med. gray, soft, w/ sil. cluster + drk. gray. splintery IP's w/ tan. + tr. drk. Red. Red Shale

Sh. similar to 5505-5533 w/ v. abu drk. Red Shs.

Lms. pink + red w/ tan; crypto to v. u. tan. x. l. m. + sh. med. calc. to sh. to tan. Qtz Sdly. v. o. tan. gray; matrix sub-sucro. o. p. calc. + fluor. No cut; No Vis for

Lms. H. gray. to tan w/ tan pink + red; crypto to v. u. tan. x. l. m. + sh. med. calc. to sh. to tan. Qtz Sdly. v. u. tan. gray; matrix sub-sucro. to p. calc. + tan. H. vel. fluor. IP's; No cut; No Vis for

Lms. tan. to h. tan. wh. to cream; chalk + gray. tan. to tan. crypto to v. u. tan. x. l. m. + sh. to centrally oolitic (sm. med. + tr. sh. matrix chalk sub-chalk) sub-sucro. + p. calc. No cut. H. vel. fluor. IP's. No cut. No Vis. por. w/ tan. to abu. Chert orange to h. gray and tan. tan. app. to tan. sh.

TD 5672

7 3/8" Bit Info
#1 PDC BIT 1725-4863

#2 New Smith F271PV
in at 4863 out TD 5672

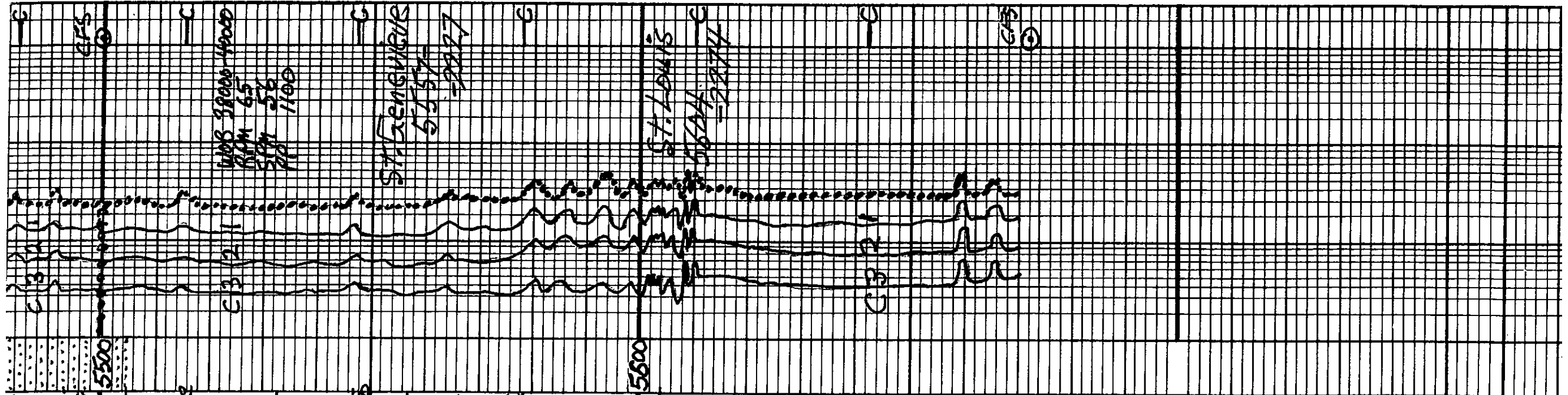
Cir. Prints

1. 4863
2. 5400
3. 5420
4. 5440
5. 5460
6. 5480
7. 5500
8. 5672

Dev. Swagers
1. 4863 30
2. 5672

Daily. Dily. Progress

1. 3742 AT 7:00 AM 4-12-16
2. 4313 AT 7:00 AM 4-13-16
3. 4863 AT 7:00 AM 4-14-16
4. 4863 AT 7:00 AM 4-15-16
5. 5015 AT 7:00 AM 4-16-16
6. 5301 AT 7:00 AM 4-17-16
7. 5500 AT 7:00 AM 4-18-16
8. 5660 AT 7:00 AM 4-19-16



hms H. gray. tot smw / has pink + red.
 crypto to uv. fu. x ly. extra ly
 micro-collitic and / sl. to fully
 Qtz Sdy - uv. fu. gr. - ang. matrix
 sub-sucro. to packston. dul. H. vel
 fluora IP's; Noctus. No Vis for

Lms. tes. to huy. tas. wht. to cream
 chalk + gray bit to tan. crypto
 to uv. Ex. xln. sl. to centrally
 oolitic (sm. med + tes. by
 matrix chlk sub-chlk.)
 sub-sucro. + packston. No. cut
 dul. H. vel. fluor. No. cut
 No Vis for. w/ tas. to a bn
 chert orange to h. gray and
 tes. tan. opaque to transl.

TD 5672

7 7/8" Bit Info
 #1 PDC BM 1725-4863
 #2 New Smith F271PV
 in at 4863 out TD 5672

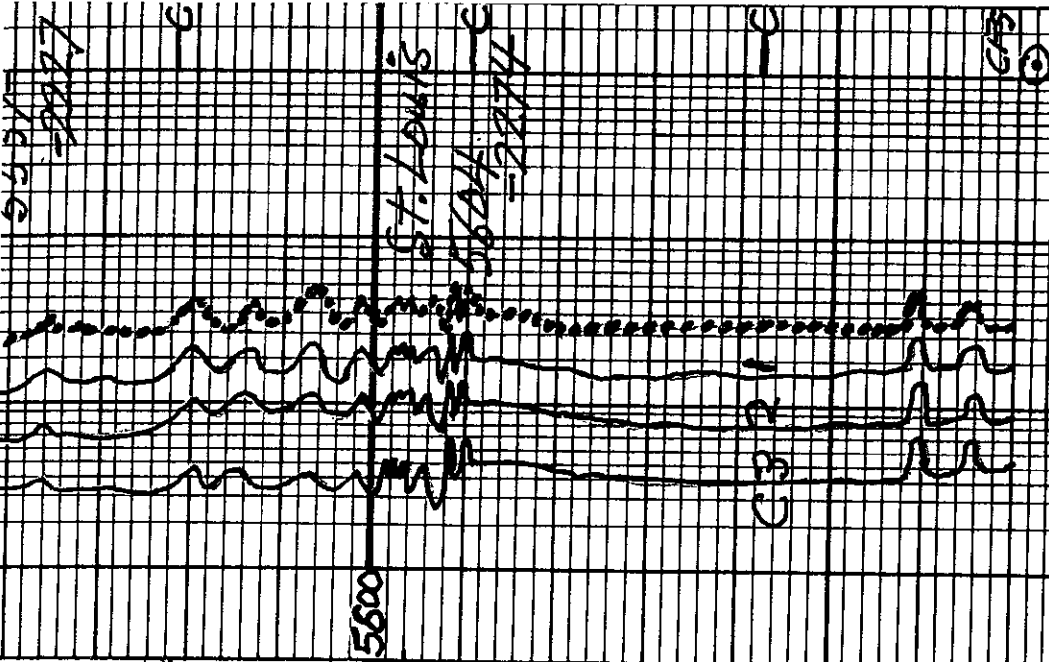
Cip. Points

1. 4863
 2. 5400
 3. 5420
 4. 5440
 5. 5460
 6. 5480
 7. 5500
 8. 5672
- Dev. Surveys
 1. 4863
 2. 5672

Daily. Dily. Progress

1.	3742	At 7:00 AM	4-12-16
2.	4313	At 7:00 AM	4-13-16
3.	4863	At 7:00 AM	4-14-16
4.	4863	At 7:00 AM	4-15-16
5.	5015	At 7:00 AM	4-16-16
6.	5301	At 7:00 AM	4-17-16
7.	5500	At 7:00 AM	4-18-16
8.	5660	At 7:00 AM	4-19-16
9.	5672	At 7:00 AM	4-20-16

No DST's Were Run



OPERATOR Berexco LLC LOCATION 800' FSL + 2975' FEL
 LEASE RA NO. L-6 SEC 6 TWP. 29S ANG. 40W
 ELEVATION 3330 KB RTD 5672 COUN. Stanton STATE KANSAS