



GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY Berexco LLC
 LEASE Walker NO. 10-20
 LOCATION B34' FSL + 1479' FEL
 SEC. 20 TWP. 23S RNG. 32W
 COUNTY Finney STATE Kansas
 FIELD Congdon North

CONTRACTOR Berexco Drilg. Rig # 1
 COMM. 1-27-2015 COMP. 2-11-2015
 RTD 4970 LTD 4964

No. of DST'S Four 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	SAMPLE	LOG	SURSEA
Base Heebner	3832	3830	- 968
Toronto	3842	3842	- 980
Lansing Fm	3868	3869	- 1007
Kansas City Fm	4237	4232	- 1370
BKC	4358	4366	- 1504
Marmaton	4379	4388	- 1526
Pawnee	4467	4464	- 1602
Ft. Scott	4500	4496	- 1634
Cherokee Fm.	4520	4515	- 1653
Morrow Fm.	4691	4684	- 1822
St. Louis	4786	4777	- 1915
TD	4970	4964	

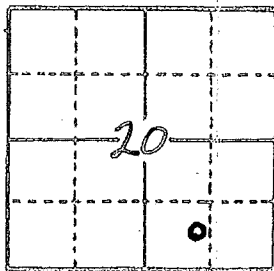
API# 15-055-22379

ELEVATIONS
 KB 2862
 DF 2860
 GL 2850

MEASUREMENTS ARE ALL FROM KB

CASING RECORD
8 5/8" OF 1756' W/ SX.
 OF W/ SX.
 OF W/ SX.
 OF W/ SX.

EL. LOG A.C. RES. SP. GR
Den. Newt. GR. Caliper
M.L. Sonic



REMARKS Earth-Tech 1-888-543-8378 had an unmanned gas detection trailer on this well from 3600 feet to total depth.

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LITHOLOGY

- SANDSTONE
- LIMESTONE
- SHALE
- CONCRETE
- SILTSTONE
- DOLOMITE
- GRANITE MASH
- SAND & GYP

CHROMATOGRAPH

- C1 = METHANE
- C2 = ETHANE
- C3 = PROPANE
- C4 = BUTANE
- C5 = PENTANE
- C6 = HEXANE

HOT WIRE BY TOTAL GAS VOLUME

GAS SCALE

SAMPLE DESCRIPTION

DRILL TIME SCALE

SHALE
DRI
DRETT

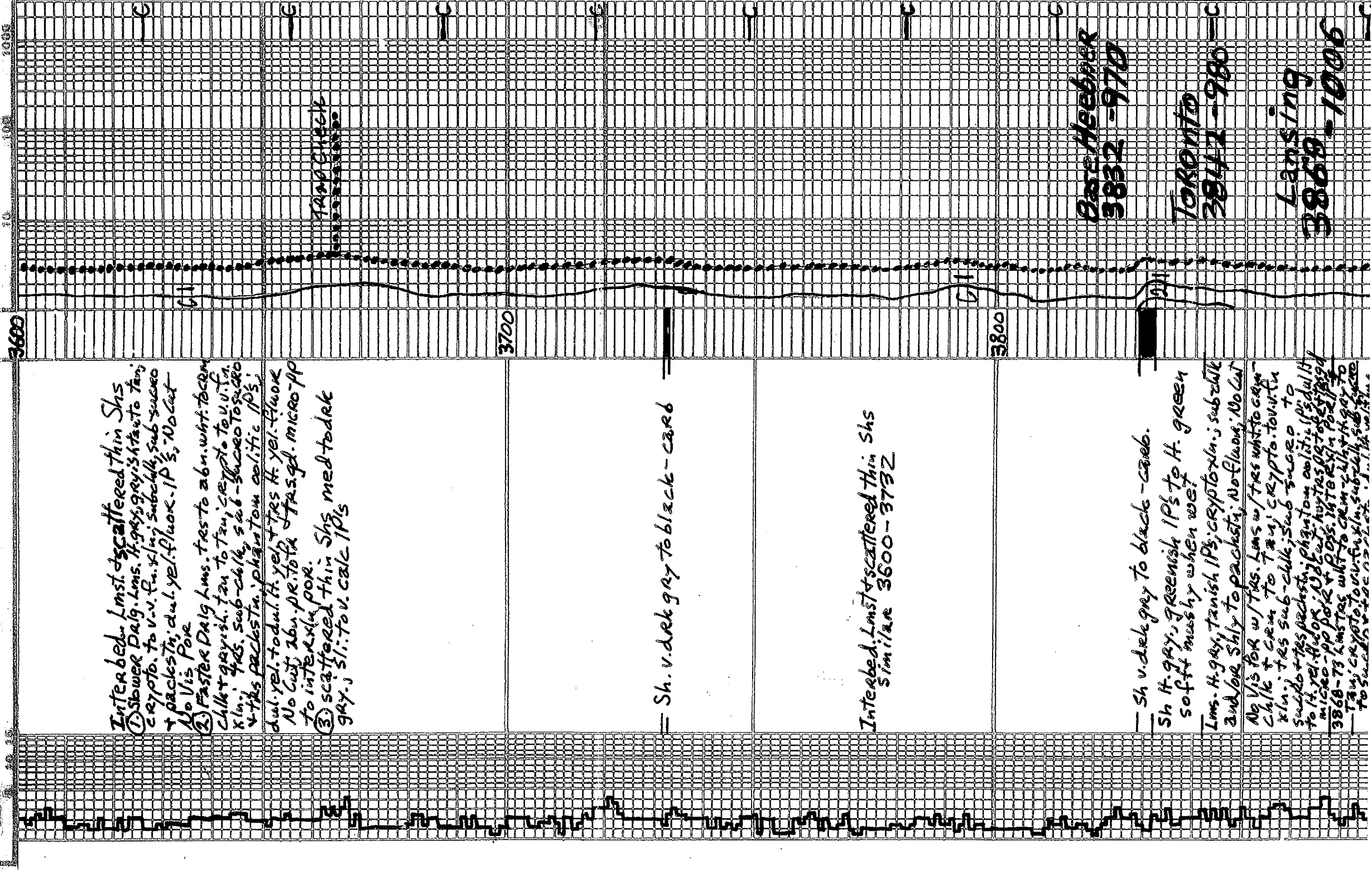
GRANITE MASH TOTAL GAS VOLUME
LANT & EXP

SCALE
= 100 cc
= 100 cc
= PENTANE

DRI
TIME
SCALE

SAMPLE DESCRIPTION

GAS SCALE



Interbed. Lms. & scattered thin Shs
 ① Slower Dalg. Lms. H. gray, grayish to tan; crypto. to v.v. fm. xln; subbed, sub-succo & packets; dul. yel. fluor. IP 5; No cut No Vis. For

② Faster Dalg Lms. trs to abn. wht. to cen. chlk & grayish. tan to tan; crypto. to v.v. fm. xln; trs. sub-chlk, sub-succo to succo & trs packets; phantom oolitic IP 5; dul. yel. to dul. h. yel. trs H. yel. fluor. No cut; abn. pr. to a f. r. s. qd. micro-pp to interxln por.

③ scattered thin Shs med to drk gray; sl. to v. calc. IP 5

= Sh. v. drk gray to black - carb

Interbed. Lms & scattered thin Shs
 Similar 3600-3732

= Sh. v. drk gray to black - carb.
 Sh H. gray, greenish IP 5 to H. green soft mass by when wet

Lms. H. gray, tanish IP 5; crypto xln; subbed & v. ore Shly to packets; No flow; No cut No Vis for w/ trs. Lms w/ trs wht. to cen. chlk & cen. to tan; crypto. to v.v. fm. xln. trs sub-chlk; sub-succo to succo & trs packets; phantom oolitic IP 5; dul. h. to H. rel. fluor. U. cut hor. trs to v. ore IP 5; micro-pp por & ool. wht. to xln por. 3868-73 Lms trs wht. to cen. xln; H. gray to tan; crypto. to v.v. fm. xln; subbed; sub-succo to succo & trs packets; No flow; No cut

Base Heebner
3832-970

Toronto
2842-980 = C

Lansing
3868-1006

4128-4156 Interbed. lms. w/ chert
similar 4016-4092

Lms similar 4168-4210

Lms similar #2 Description 4016-92

Lms trs. to hv. trs. wht. to cream-chalk
grayish. tan to tan; crypto. to v. v. fn.
xln. v. to extly oolitic. por
sh. to v. oolitic; matrix sub-sucro.
to sl. trs. sucro. + packstn; dal. yel
fluor; No cut abn. gd. to excc.
oolitic por.; v. Quest. perm.

4210-4221 Lms similar 4168-4210
w/ less oolitic + more oolitic

4221-4233 Lms. H. gray. to tan; crypto. to
v. v. fn. xln.; sub-sucro. packstn + trs
No vis. por. dal. yel. fluor. sps; No cut

Sh. v. drk gray. to black-carb

Lms similar 4221-4233
4247-4250 Lms. hv. trs to abn wht to
CRM. chalk + H. gray. to tan; crypto. to v. v. fn
v. to extly oolitic transition; v. oolitic; matrix
sub-sucro. to trs. sucro. + packstn; dal. yel. fluor.
to gd. v. yel. fluor; No cut; ext. abn
trs. gd. to excc. oolitic por.; v. Quest. perm
4250-4271 Lms. H. to med. gray; crypto
to v. v. fn. xln.; trs. sub-chalk sub-sucro
packstn. to sub-lithog r.; dal. yel. fluor
No cut; No vis. por.

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

4274-4312 Lms similar 4250-4271
w/ trs. to abn. wht. to CRM. - chalk IP's
and scattered trs. Chert gray. opp.

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

4312-4358 Lms. H. gray. grading to tan;
crypto. to v. v. fn. xln.; trs. sub-chalk
sub-sucro. packstn. to sub-lithog r
scattered trs. sh. oolitic; dal. yel.
fluor; No cut; trs. poor oolitic
v. v. Quest. perm.

4358-4379 Lms. H. to med. gray. -
v. shly. IP's grading to calc. sh. + sh. s
med. to drk. gray. - greenish IP's
crypto. xln.; sub-chalk; por. shly to
packstn.; No cut; No vis por

4379-4426 Lms. w/ scattered trs.
wht. to CRM. - chalk + H. gray. grading to
tan; crypto. to v. v. fn. xln.; sub-chalk
sub-sucro. + packstn. shly to oolitic
IP's; (tan + gray) dal. yel. fluor. No cut
No. vis porosity

4426-4429 Lms. tan. to drk tan.

Kansas City
4237-1275

Blk Sh 170

Blk Sh 174

154

184

Blk

4358-1496

Marionaton

4379-1517

G21

G21

G21

G1

4200

4300

4400

TD 4970

7 7/8 inch Bit-Info:
 #1 Smith FH 23 VVPS
 In 1756 out 4970 TD
 Circ. Points

- 1. 4251 6. 4540 11. 4775
- 2. 4450 7. 4570 12. 4790
- 3. 4480 8. 4700 13. 4805
- 4. 4570 9. 4730 14. 4970 TD
- 5. 4515 10. 4760

Dev. Surveys:
 1. 508 7/4 5. 4450 3/4
 2. 1158 7/4 6. 4775 1/2
 3. 1156 MR? 7. 4970 1/2 TD
 4. 2053 1/4

Daily Daily Progress:

- 1. 3600 3:50 PM 2-2-15
- 2. 4001 7:00 AM 2-3-15
- 3. 4440 7:00 AM 2-4-15
- 4. 4450 7:00 AM 2-5-15
- 5. 4515 7:00 AM 2-6-15
- 6. 4630 7:00 AM 2-7-15
- 7. 4775 7:00 AM 2-8-15
- 8. 4805 7:00 AM 2-9-15
- 9. 4854 7:00 AM 2-10-15
- 10. 4970 7:00 AM 2-11-15

DST #1 Maximator 4419-4450
 1st sp GSB 808 17min No BB
 2nd sp SSB Built to 9 inches No BB
 Rec 135 ft Total Fluid + 485 GIP
 5' Clean Oil 100% Oil
 130' Hocm 40% oil 60% Mud
 Gravity 29.5 @ 60° Max Temp 110°F
 Tool Sample 80% oil 20% Mud
 IHP 2199# FFP 48-62 in 60min
 I/SIP 20-42# in 30min F/SIP 226# in 120min
 I/SIP 276# in 60min FHP 2178

DST #2 Ft Scott 4495-4515
 IO WSB Built to 5 1/2" No BB
 FO WSB Built to 9" 1 inch 88
 Rec 332' Total Fluid 758' GIP
 87' Clean oil 100% oil
 177' OG W/M 20% G 45% oil 82% W 28% Mud
 66' OG W/M 26% G 26% W 18% W 30% Mud
 chl 3200ppm ATTCH 25% Oppm Next 1197#
 R.w. 27 @ 70°F pH 7.0
 Tool Sample 28% G 60% W 4% O 8% Mud
 IHP 2057# FFP 62-102 in 60min
 I/SIP 15-54# in 30min F/SIP 600# in 120min
 I/SIP 594# in 60min FHP 2011

DST #3 MORROW SD 4758-4775
 IO WSB Built to 1 1/8" No BB
 FO No Bit
 Rec 45' Total Fluid Max Temp 114°F
 45' G W/M 28% G 46% W 52% Mud
 chl 3200ppm ATTCH 1200ppm
 R.w. 30 @ 72°F pH 7.0
 Tool Sample 28% G 43% W 55% Mud
 IHP 2114# FFP 34-45 in 30 min
 I/SIP 12-29# in 30min F/SIP 524# in 120min
 I/SIP 530# in 60min FHP 2207

DST #4 St. Louis 4773-4805
 IO SSB 808 7 1/2 min 8" BB
 FO SSB 808 7 min 6" BB
 Rec 541' Total Fluid 1299' GIP
 253' GO 4% Gas 96% Oil
 288' W/M GO 15% G 66% W 42% W 15% M
 Grav 29.4 @ 60°
 Tool Sample Mostly Gas + Some Muddy Oil
 IHP 2254# FFP 196-253 in 60min
 I/SIP 50-192# in 30min F/SIP 310# in 120min
 I/SIP 311# in 60min FHP 2239# in 120min

Tool Sample 2868 @ 8080 W @ 102 Min
 IHP 20.57 @ FFP 62-103 in 60 min
 IFP 15-54 in 30 min FSP 600 @ in 120 min
 ISIP 594 in 60 min FHP 2011

 DST #3 MORROW Sd 4758-4775
 IO WSB Built To 1 1/8" No BB
 FO No BB
 Rec 45' Total Fluid Mar 7 to 1140 F
 45' GWM 28G-468 W-528 Mud
 Schl 3200 ppm Fitch 12000 ppm
 Rv - 30 @ 720 pH 7.0
 Tool Sample 2869 - 4980 W - 558 Mud
 IHP 21.14 @ FFP 34-45 in 30 min
 IFP 12-29 in 30 min FSP 524 @ in 120 min
 ISIP 580 @ in 60 min FHP 2207

DST #4 St. Louis 4773-4805
 IO SSB 808 7/2 min 8" BB
 FO SSB 808 7 min 6" BB
 Rec 54' Total Fluid 1299' GIP
 253' GO 48 Gas 968 Oil
 288' WMGD 158G-6680-4200-158M
 GRAV 29.4 @ 60
 Tool Sample Mostly Gas & Some Muddy Oil
 IHP 22.52 @ FFP 196-253 in 60 min
 IFP 50-192 in 30 min FSP 310 @ in 120 min
 ISIP 311 @ in 60 min FHP 2239 @ in 120 min

Mud Info:

Date	1-2 10:50 AM	2-3 11:00 P	2-4 11:10 P	2-5 11:20 P	2-6 7:15 A	2-7 8:00 A	2-8 8:10 A	2-9 9:00 A	2-10 12:16 P
Depth	3471	4138	4450	4450	4515	4617	4775	4805	4928
Wt.	8.6	9.25	9.35	9.4	9.2	9.1	9.2	9.2	9.25
Vis	60	45	50	49	64	49	52	52	57
PV	18	13	15	17	18	15	16	17	16
YP	20	13	16	17	22	17	18	19	16
GS	15/47	17/29	15/44	16/39	15/45	13/35	14/29	15/24	17/45
WL	9.6	8.4	7.6	6.8	6.4	7.1	7.2	7.2	8.2
Cake	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
pH	11.0	11.0	10.5	9.5	9.0	10.5	10.5	10.0	9.0
Chl	100	2300	1600	2550	2400	2000	2100	2000	2100
Ca	20	20	20	20	40	20	40	40	40
LFM	0	2	4	4 1/2	4	3	3	3	2

OPERATOR Bekexco LLC LOCATION 834' FSL @ 1479' FEL
 LEASE Walker NO. 10-20 SEC 20 TWP. 23S RMO 32W
 ELEVATION 2862 KB RTO 4970 COUN. Finney STATE Kansas