

GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY Berexco LLC
 LEASE Hibbert NO. 1-16
 LOCATION 1882' FSL + 391' FEL
 SEC. 16 TWP. 23S RNG. 32W
 COUNTY Finney, STATE Kansas
 FIELD Wheat

WELL
FILE

ELEVATIONS
 KB 2909
 DF 2907
 GL 2897

MEASUREMENTS ARE
 ALL FROM KB

CASING RECORD
878' of 17.50 w/ 800 SX.
 ___ of ___ w/ ___ SX.
 ___ of ___ w/ ___ SX.
 ___ of ___ w/ ___ SX.

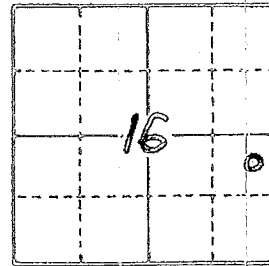
EL. LOG. RES. S^{GR} DEN. NEUT. GR. CALIPER
ML:SONIC

CONTRACTOR Beredco Dalg Rig #1
 COMM. 7-14-2014 COMP. 7-28-2014
 RTD 4950 LTD 4948
 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. Gaieves

FORMATION TOPS

FORMATION	SAMPLE	LOG	SUBSEA
Base Heebner	3894	3889	- 980
Toronto	3906	3902	- 993
Lansing "B"	3987	3974	- 1065
Kansas City "A"	4282	4280	- 1371
BKC	4417	4414	- 1505
Marmaton	4440	4436	- 1527
Pawnee	4513	4511	- 1602
Ft. Scott	4541	4539	- 1630
Cherokee	4561	4558	- 1649
Morrow Fm.	4716	4711	- 1802
St Genevieve	4752	4743	- 1834
St Louis	4787	4779	- 1870
St Louis "C"	4836	4834	- 1925
TD	4950	4948	



API #15-055-22320

REMARKS Earth Tech had an unmanned gas detection trailer on this well from 3600 to total depth.

(16)
 2909
 2907
 2897
 Edwin H. Gaieves
 Geologist

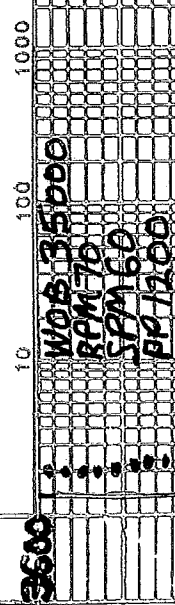
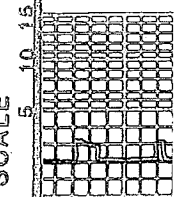
LITHOLOGY

SANDSTONE
 LIMESTONE
 SHALE
 GYPSUM
 CHROMATOGRAPH
 HOT WIRE BY TOTAL GAS VOLUME
 GRANITE WASH
 ANY @ GYP

DRILL TIME SCALE

SAMPLE DESCRIPTION

GAS SCALE



Lms. lt. gray - sli. to fely. Shly. & grayish tan to tan; crypto. to v. v. fm. xln.; sub-chalk sub-succo. & p. abn. to med. H. yel. to H. yel. fluor.; No cut; No cut; No vis. for

Lms. abn. wht. to cream - chalk & tan; crypto. to v. v. fm. xln.; sub-chalk, sub-succo. to v. sug. q. H. yel. fluor.; No cut; abn. pr. tot. & f. g. d. micro pp to inter. in porosity

Lms. similar 3600 - 3652 with scattered interbeds lms. similar 3652 - 3671

Lms. similar 3652 - 3671

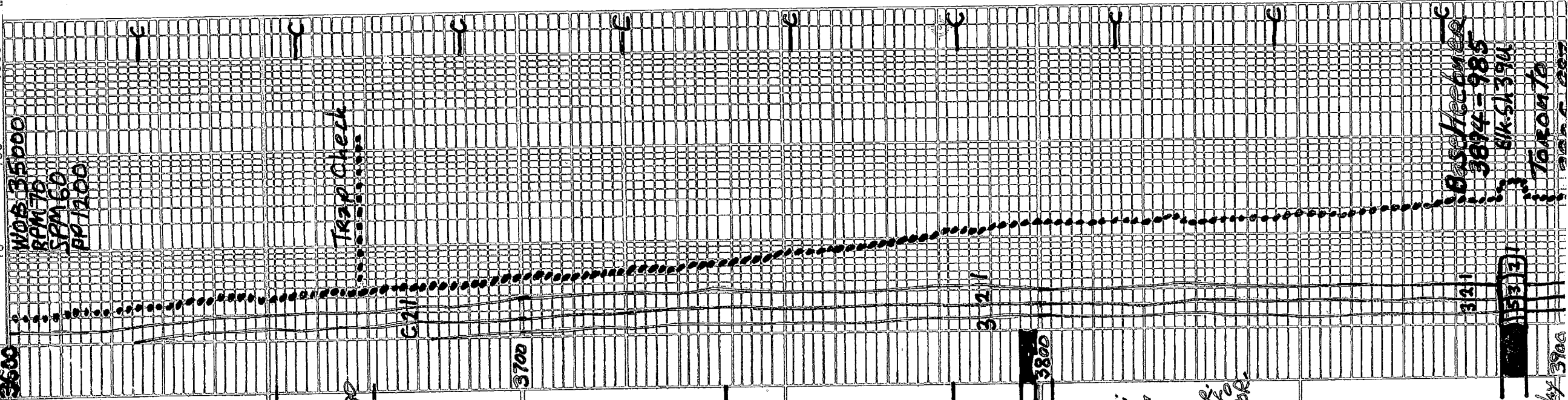
Lms similar 3600 - 3652

Sh. v. dark gray - calc. to black - carb. Lms similar 3600 - 3652

Lms. abn. wht. to cream - chalk & tan; sli. to v. grayish. Ifs; crypto. to v. v. tan. xln. hyp. f. sub-chalk & sub-succo. to sli. to very succo. ites. Phas. to anoolites; abn. H. to tan. H. yel. fluor. No cut; abn. pr. to fat hyp. the good to sli. f. exc. micro pp. to inter. in por.

Sh. v. dark gray. to black - carb

Sh. H. gray, greenish Ifs; soft & mushy



WOB 35000
RPM 70
SPM 60
PP 1200

Trap Check

Basal Heeburns
3874-985
Blk. sh 3900
TORONTO

v. v. xln; tes. sub-bil. sub-sucro. To sacro; dul. h. yel. fluor; No cat. hytes pp. to the micro-pp. por.
Lms. H. gray to tan; crypto. to v. v. tan. xln. sub-chalk sub-sucro & packets. w. tes. sub-lithog. dul. yel. fluor. IPS; No cat.; No Vis POR
Sh. v. dark gray. to black - carb.
Lms. similar 4160 - 4172
Lms. H. gray to tan; crypto. to v. v. tan. xln. sub-chalk sub-sucro & packets. w. tes. sub-lithog. dul. yel. fluor; No cat. hytes pp. to the micro-pp. por.
Lms. grayish. tan to tan; crypto. to v. v. tan. xln. sub-chalk, sub-sucro & packets. tes. ferr.; No cat. No Vis POR

4200

Lms. tes. wht. to cream-chalk & tan, grayish (P) crypto. to v. v. tan xln; v. to extra. oolitic; matrix sub-sucro to sacro and prækst. ind. yel. to yel. fluor. - zon. mottled; No cat. abn pr. fr. gd. to excel. oolitic porosity Very. Quest. perm.

Lms similar 4206 - 4257 w/ much Tes. oolitic - much porosity

Lms. similar 4189 - 4206

Sh. v. dark gray. to black - carb
Lms. H. to med. gray. - sl. to v. sub-gray to extra. calc. med. gray. tes. crypto. xln. sub-chalk to sh. packets. No cat. No Vis POR

Lms. similar 4206 - 4257

Lms. H. to med. gray, tanish IPS - sl. to fr. x Shly; crypto. xln; sub-chalk, packets to tes. sub-lithog. dul. h. yel. fluor. IPS; No cat. No Vis POR

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

Interbedded Limestones

- ① Slower Dalq. Lms. similar 4282 - 4290 and 4301 - 4320
- ② Faster Dalq. Lms. tes. wht. to cream-chalk & H. gray. to tan; crypto. to v. v. tan. xln. sl. to v. oolitic for v. to extra. oolitic; matrix sub-sucro and packets; ind. yel. to yel. fluor. - mottled IPS; abn pr. to oolitic por.; Prob No perm.

4321

4417-4440 Sh. med. to dark gray; very to extra. calc. IPS

4440 - 4469 Lms. H. gray to tan; crypto. to v. v. tan xln; tes. sub-chalk sub-sucro & packets or sub-lithog. dul. yel. to yel. fluor. No cat. No Vis POR

- A. 4469 - 4472 Sh. v. dark gray to blk - carb
- B. 4472 - 4510 Lms. similar 4440 - 4459

Bk. Sh. 1900
Kansas City
4282-1373

321

321

321

4440

TANA Creek

BMG

4417-1508

321

Marmaton

4440-1531

Dev. Surv:
 1. 849 1/2" 3426 3/4"
 2. 1760 1 3/4" 4530 3/4"
 3. 2127 1 1/4" 4950 1/2"
 Daily Drig. Progress:

1. 3600 At 6:38 PM 7-19-2014
 2. 3987 At 7:00 AM 7-20-2014
 3. 4425 At 7:00 AM 7-21-2014
 4. 4530 At 7:00 AM 7-22-2014
 5. 4555 At 7:00 AM 7-23-2014
 6. 4682 At 7:00 AM 7-24-2014

7. 4740 At 7:00 AM 7-25-2014
 8. 4846 At 7:00 AM 7-26-2014
 9. 4888 At 7:00 AM 7-27-2014
 10. 4950 At 7:00 AM 7-28-2014

DST #1 Pawnee 4505-4530
 IO weak surface blow thought open
 FO surge on opening No Blow
 Rec. 20 ft 100% Mud Max Temp 114°F
 Tool Samp 5' oil split Mud < 1/2" oil 79% Mud
 IHP 2177# FFP 14-18" in 30 min
 IHP 6-12" in 30 min FSP 1190# in 60 min
 IHP 1220# in 60 min FHP 2146

DST #2 FISCOIT 4537-4555
 IO Ex. low Bob 155 min FO 64 lbs Bob
 Rec 1383' Oil 17' Total Fluid
 135' Clean oil; 42' Mud coil 308 gals 45% oil 15% Mud
 Tool Samp 15' 93% 70% oil 15% Mud
 IHP 2168# FFP 357# in 60 min
 IHP 8-24" in 30 min FSP 1290# in 120 min
 IHP 1291# in 60 min FHP 2167#

DST #3 MORROW 4712-4740 Max Temp 117°F
 IO surge blow to .25 inches; FO surge then 100% low
 Rec 20 Total Fluid 5% oil 75% Mud
 Tool Samp 10% oil 90% Mud
 IHP 2367# FFP 16-16" in 60 min
 IHP 7-12" in 30 min FSP 714# in 120 min
 IHP 70# in 60 min FHP 2296#

DST #4 ST LOUIS 4830-4846 Max Temp 118°F
 IO surge blow to .5" FO .25" in to 1.5 inches
 Rec 30 ft Fluid 4% oil + 96% Mud
 Tool Samp 35% Oil 65% Mud
 IHP 2456#
 IHP 6-13" in 30 min
 IHP 977# in 60 min
 FFP 18-22" in 60 min
 FSP 868# in 60 min
 FHP 2449# in 120 min

Mud Info:

Date	7-19	7-20	7-21	7-22	7-23	7-24	7-25	7-26
Time	11:30 AM	9:10 AM	11:25 AM	11:55 AM	12:30 AM	2:30 AM	5:00 AM	
Density	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9
WT	8.5	9.1	9.2	9.3	9.3	9.4	9.4	9.4
Vig	44	45	40	42	54	55	58	56
PV	12	14	10	13	16	17	18	18
YP	13	15	12	14	17	18	20	20
GS	13 1/2	14 1/2	13 1/2	14 1/2	16 1/2	17 1/2	18 1/2	19 1/2
WL	7.5	8.0	8.2	8.8	8.8	9.2	8.8	8.8
Cake	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
PH	11.0	10.0	10.0	9.5	9.5	9.5	8.5	8.5
Chl	300	1100	1500	1700	1900	2000	3500	3800
Ca	20	20	20	20	20	20	40	60
LCM	0	2	1 1/2	2	2	2	2	2

135' Green oil, 42% gamma cori 3059's 5222801 K-1 2015/1/14/CA
 Tool Samp 15 @ 925 70% oil 15% mud
 IHP 2162# FFP 3576# in 60 min
 FFP 8-34# in 30 min; FSP 1290# in 120 min
 ISIP 1291# in 60 min; FHP 2167#
 DST #3 MORROW 4712-4740 Max Temp 117°F
 IP Sure blow to .25 inches; FO Sure Then 108 blow
 Rec 20 Total Fluid 5% oil 95% mud
 Tool Samp 10% oil 90% mud
 IHP 2367# FFP 16-16 in 60 min
 IHP 7-12# in 30 min; FSP 71# in 120 min
 ISIP 70# in 60 min; FHP 2296#
 DST #4 ST LOUIS #4830-4846 Max Temp 118°F
 IP Sure blow to .5" FO .25" inc. to 1.5 inches
 Rec 30 ft Fluid 4% oil + 96% Mud
 Tool Samp 35% Oil 65% Mud
 IHP 2456#
 IHP 6-13# in 30 min
 ISIP 977# in 60 min
 FFP 18-22# in 60 min
 FSP 868# in 120 min
 FHP 2449# in 120 min

Mud Info:

Date	7-19	7-20	7-21	7-22	7-23	7-24	7-25	7-26
Time	11:30 AM	9:00 AM	11:30 AM	1:30 AM	1:30 AM	2:30 AM	2:30 AM	6:00 AM
Density	8.5	9.1	9.2	9.3	9.3	9.25	9.4	9.4
Vis	44	45	40	42	54	55	58	56
PV	12	14	10	13	16	17	18	18
YP	13	15	12	14	17	18	20	20
GS	17/36	17/42	17/35	17/38	17/49	17/52	15/52	15/46
WL	7.5	8.0	8.2	8.8	8.8	9.2	8.8	8.8
Cake	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
PH	11.0	10.0	10.0	9.0	9.5	9.5	8.5	8.5
Chl	3400	1900	1500	1700	1300	2000	3500	3800
Ca	20	20	20	20	20	20	40	60
LCM	0	2	1/2	2	2	2	2	2

OPERATOR Belexco LLC LOCATION 1882 ESL & 391' FEL
 LEASE Hibbert NO. 1-16 SEC 16 TWP. 23S RANG. 32W
 ELEVATION 2909 KB AFD 4950 COUNTY Finney STATE Kansas