

GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY RAYDON EXPLORATION, INC.

LEASE FOX NO. 1-30

LOCATION 1485FSL & 1535FW1

SEC. 30 TWP. 33S RNC. 30W

COUNTY MEADE STATE KANSAS

FIELD KISMET

ELEVATIONS

KB 2718

DF 2716

GL 2702

MEASUREMENTS ARE

ALL FROM KB

CASING RECORD

8025 1655 W/ 3A.

 W/ 3A.

 W/ 3A.

 W/ 3A.

 W/ 3A.

CONTRACTOR TOMCAT DRLG. RIG NO. 1

COMM. 7-12-2012 COMP. 7-29-2012

RTD 6000 LTD 5992.

NO. OF DST'S THREE NO. OF CORES NONE

EL. LOG A.C. RES. SP. GR.
DEN. NEUT. GR. CALIPER
ML. SONIC

SAMPLES SAVED FROM 4200 TO TD

DRILLING TIME KEPT FROM 4200 TO TD

SAMPLES EXAMINED FROM 4200 TO TD

GEOLOGICAL SUPERVISION FROM 4200 TO TD

GEOLOGIST ON WELL EDWIN H. GRIEVES

FORMATION TOPS

BASE HEEBNER

TORONTO

LANSING

MARMATON

CHEROKEE

MORROW

CHESTER

TD

SAMPLE
4338

4352

4464

5116

5324

5641

5745

6000

LOG
4332

4344

4462

5108

5314

5630

5746

5992

SUBSEA
-1614

-1626

-1744

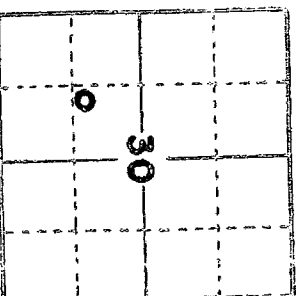
-2390

-2596

-2912

-3028

API NO. 15-119-21320

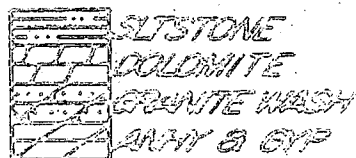
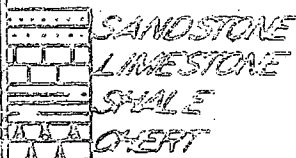


REMARKS Earth-Tech had an unmanned gas detection trailer
on this well from 4200 feet to total depth.

Note: E-log tops are 8 to 10 feet higher than
geological-log tops.

Thank you
Edwin H. Fries
Geologist

LITHOLOGY



CHROMATOGRAPH

HOT WIRE BY
TOTAL GAS VOLUME

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

DRILL TIME
SCALE

5 10 15

SAMPLE DESCRIPTION

GAS SCALE

10

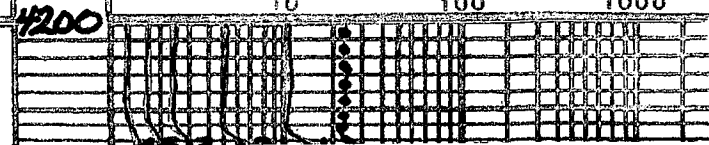
100

1000



Lms. H. to med. gray, crypto to v. fine
faly to very shly; sub-ch. to shly.

4200



Interbedded or Gradational
Limestones and Shales

- ① Lms. similar 4200-4226
- ② Sh med to v. drk. gray; very
to extaly. calc. to v. drk. gray. to
black - carb.

Sh med. to v. drk. gray; sl. to very
calc IP's

Lms. lt. gray to tan; crypto to v. v. fu. xlu.
sub-chlk, trs. sub-succo + p. chstu;
dul. H. yel. fluor.; No Cut, No Vis Por

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

Lms. similar 4292-4312

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

Lms. similar 4292-4312

sh there same to H. green

320

260

380

WOB 35000
REM 80
SPM 60
PR 1000

4300

Baschebner
4338-1620

4 53 20 1

BLK. SH. 61 U

4 53 20 1

BLK. SH. 60 U

Toronto

Lms. tes. wht. to crm. chlk + tan; crypto. to v. l. xln; subchlk, sub-sucro. to sucro, phantom oolitic; IP's. to tes. oolitic; bgt. H. yol. fluor. No Cut. 264
P.R. to L.R. + tes. qd. micro. pp + poss. interst. por.
Lms. H. gray. to tan; crypto. xln; pach. testis; dul. H. yol. fluor; No Cut; No Vis Por

Lms. similar 4352-4362

Lms. similar 4362-4370

Lms. tes. wht. to crm. chlk + tan; crypto. to v. v. l. xln; tes. sub-chlk, sub-sucro. to sucro. tes. phantom oolitic; dul. H. yol. fluor. No Cut; hvy tes. prot. testr. micro. pp + poss. interst. porosity

Lms. lt. gray. to grayish tan; crypto. to v. l. xln; tes. sub-chlk, sub-sucro + pach. testis; dul. H. yol. fluor. IP's; No Cut; No Vis Por.

Sh med. to v. drk. gray; sli to v. calc. IP's

Lms similar 4414-4440

4300

02

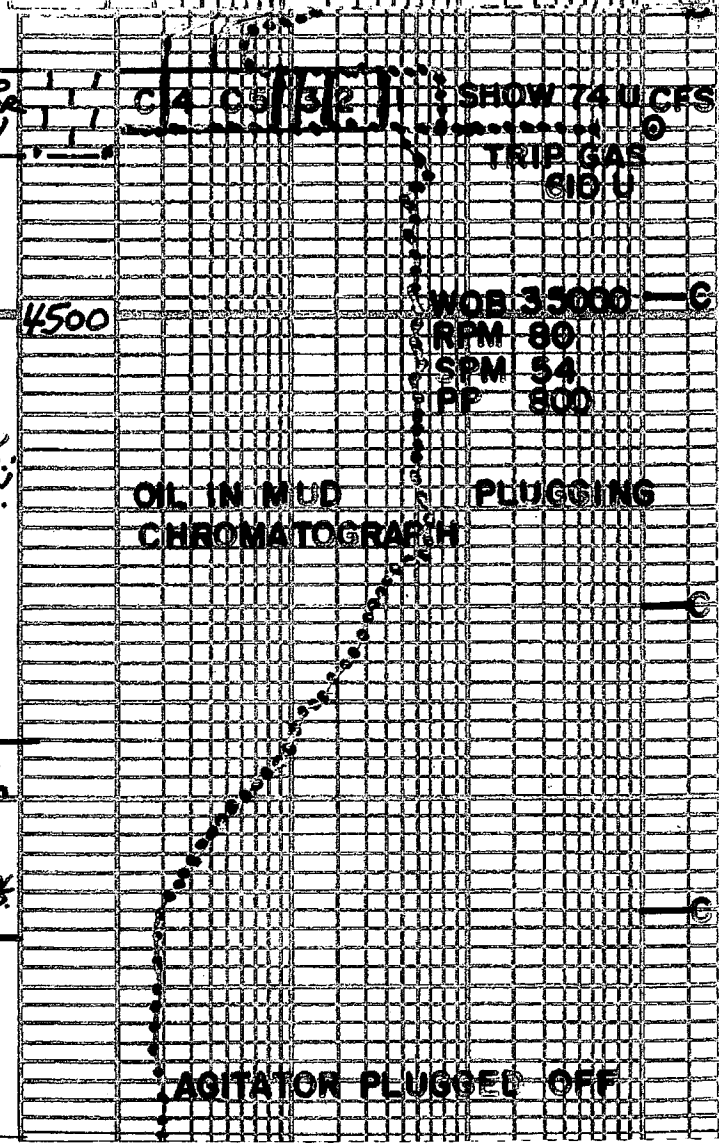
Lansing Fm
4469-1751

Lms. tes. wht. to crm.-chlk + tan; crypto.
to v.v. fu. xln. jbn. sl. to v. oolitic for
sl. to v. oolitic; mat. x sub-sucro. to sucro.
tes. Re. sized to mat. sucro. foss. lps. fr. oil odor
spid. to even del. tan oil stn; brn. yel. to gl. nysl
fluor.; flush to gd stem ngs; x. to x. to
xgd oolitic por + tan pat. to sl. tan to
excl. micro-pp + prob. interx. por

Lms. lt. gray - sl. to fely shly lps to tan;
crypto. to v.v. fu. xln. tes. sub-chlk,
sub-sucro. + packstn. + tes sub-lithog.;
dul. lt. to lt. yel. fluor.; No cut, No visior.

Lms. grayish tan to tan; crypto. to v.v. fu. xln.
sub-chlk; sub-sucro. to sucro. + packstn;
dul. lt. to lt. yel. fluor.; No cut, abn poor
very micro-pp. por w/ poss interx. for lps.

Interbedded Limestones
① Faster Delg. similar 4544-4565
② Slower Delg. similar 4485-4544



Lms. v. abn. whit. to cream-chalk + grayish tan to tan; crypto. to v. v. lu. xlu; phanton oolitic to oolitic w/tes phanton oolitic sub-chalk, sub-succro to succro + p. chert; d. l. to l. yel. fluor; Dol. cut; abn. p. l. to tes. for tagd. micro-pp. per. IP's

Lms. grayish-tan to tan; crypto. to v. v. lu. xlu; sub-chalk, sub-succro + p. chert; phanton oolitic IP's; d. l. yel. fluor; Dol. cut; No. 10 per

Lms. similar 4587-4624 w/ sl. tes chert tan; opaque

Lms. similar 4624-4656

Sh med. to v. drk. gray - calc to v. drk gray to black - chert

Lms similar 4624-4656

4600

TRAP CHECK

AGITATOR PLUGGED OFF

NO. 38000
RPM 80
SPM 54
PP 650

NONCASTED - C

4700

Lansing 6"
4700-1982

to v.v. fu. xln.; v. to v. xln. v. to v. xln. v. to v. xln.
 to v. xln. v. to v. xln. v. to v. xln. v. to v. xln.
 51. tas. loss. f. agn. d. ak. gl. n. yel. fluor. v. f. agn.
 stenug cuts to t. xln. v. xln. v. xln. v. xln. v. xln.
 exel. oolitic xln. v. xln. v. xln. v. xln. v. xln.
 tas. qd. m. xln. v. xln. v. xln. v. xln. v. xln.
 poss. tas. inter. xln. v. xln. v. xln. v. xln. v. xln.

4722-4748 Lms. similar 4624-4656
 w/prob. interbeds Shs. med to v. dk.
 gray - calc to v. dk. gray to blk.

Lms. lt. gray to tan; crypto. to tas. v. v. fu.
 xln.; tas. sub-chile, tas. sub-succo.
 and pachyst. to sub-lithographic;
 d. lt. yel. fluor. lps; No cut; No visor

Lms. tas. to hvy. tas. cream to wht-chlk.
 + H. can totan; cream to v. v. fu. xln.;

SHOW 6211

TRIP 045

44U

CFB
0-C

AGITATOR PLUGGED OFF

4800

sub chlk sub-succo. to succo. hvy. tas phanton
oolitic to tas. oolitic for tas. phanton
oolitic to sl. tas oolitic; dul. h. yel. fluor
IPs; No cut; tas. pr. oolitic to micaceous sp. por

Lms. H. gray, tanish gray to grayish tan and
tas. tan; crypto. xlu.; pale to
sub-lithographic; dul. lt. yel. fluor;
IPs; No cut; No vis. por.

OIL IN MUD FLUGGED OFF
CHROMATOGRAPH

4900

Lms. med. gray - v. to extaly. shly; crypto
xlu.; sub-chlk to shly to pale tan.
No fluor; No cut; No vis. por

Sh med to dk. gray; v. to extaly calc

Sh med to v. dk. gray - calc. to v. dk. gray.
to black - carb.

Lms. H. gray to tan; crypto to v. v. l. xlu.
tas. sub-chlk, tas sub-succo to black sh.

Kansas City 4
4945-2227

BLK. SH. TSU

phantom. oolitic IP's to trs. oolitic
dub. lt. yel. fluor.; No Cut; No Vis Por.

Lms. hvy. fus. wht. to cream-chalk and tan,
grayish. IP's; crypto. to v. v. fu. xlu; very
to ext. oolitic for faly to very
oolitic; matrix sub-sucro to packstn;
dub. lt. to lt. yel. fluor.; No Cut;
abu. pr. fu., gd. to trs. excel oolitic
por.; Quest. Perm

Lms. H. gry, tanish IP's; crypto xlu, packstn;
trs. phantom oolitic; v. dub. lt. yel. fluoell's
No Cut; No Vis Por.

Lms. similar 4962-4996 w/sli. trs.
chert gry. - opaque

Lms. lt. to med. gray; faly to v. shly.
crypto to trs. v. v. fu. xlu. traces
sub-chl for shly, trs sub-sucro. +
packstn; scattered trs. v. dub. lt.
yel. fluor.; No Cut; No Vis Por;

RECYCLE SOL

5000

36 U

45 3 12 1

CN GAS 35U

Sh med to v. drk gray. & trs black
w/ prob. interbeds Lms. similar 5040-5098

Lms. H. gray, tanish gray, grayish tan to tan
crypta to trs v.v. fine. No. j. trs sub-dark
trs sub-succro., p. l. str. to sub-lithogr.
dyl. yel. to trs. yel. fluor., No cut
No Vis. per.

5100

Maxmaton
5116-2398

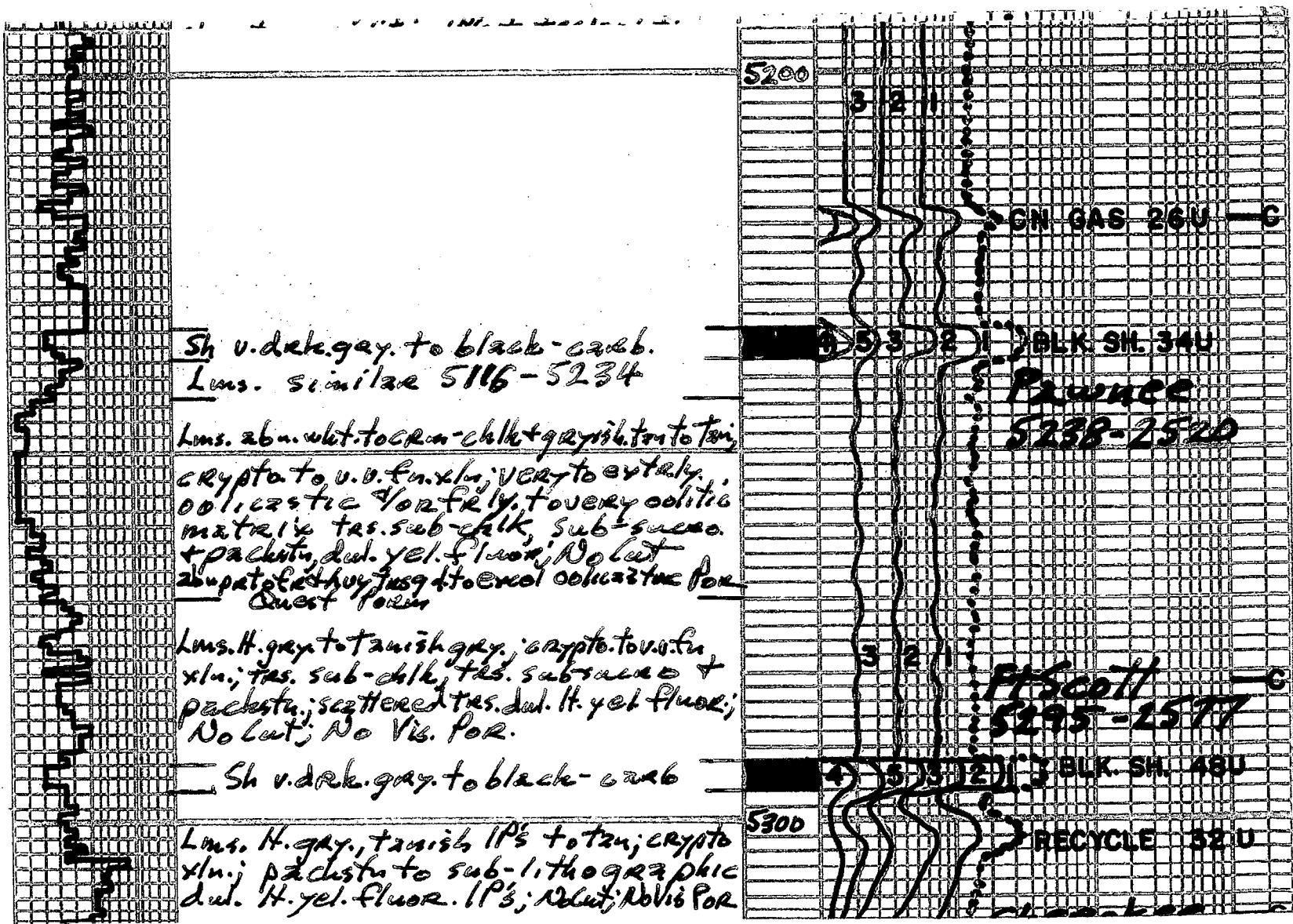
3 2 1

3 2 1

CES

AGITATOR PLUGGED OFF

TRAP CHECK



Sh v. drk. gray. to black - carb.
Lms. similar 5116-5234

Lms. abn. wht. to cream - chlk + grayish tan to tan;
crypto. to v. v. fin. xln; very to ext. oolitic
oolitic for. tr. ly. to very oolitic
matrix trs. sub-chlk, sub-succo.
+ packstn, dul. yel. fluor; No cut
abundant glauconite to coarse oolitic for
Quest for

Lms. lt. gray to tanish gray; crypto. to v. v. fin.
xln; trs. sub-chlk, trs. sub-succo +
packstn; scattered trs. dul. lt. yel. fluor;
No cut; No Vis. Por.

Sh v. drk. gray. to black - carb

Lms. lt. gray, tanish lps to tan; crypto
xln; packstn to sub-lithographic
dul. lt. yel. fluor. lps; No cut; No Vis Por

5200

5300

GN GAS 26U - C

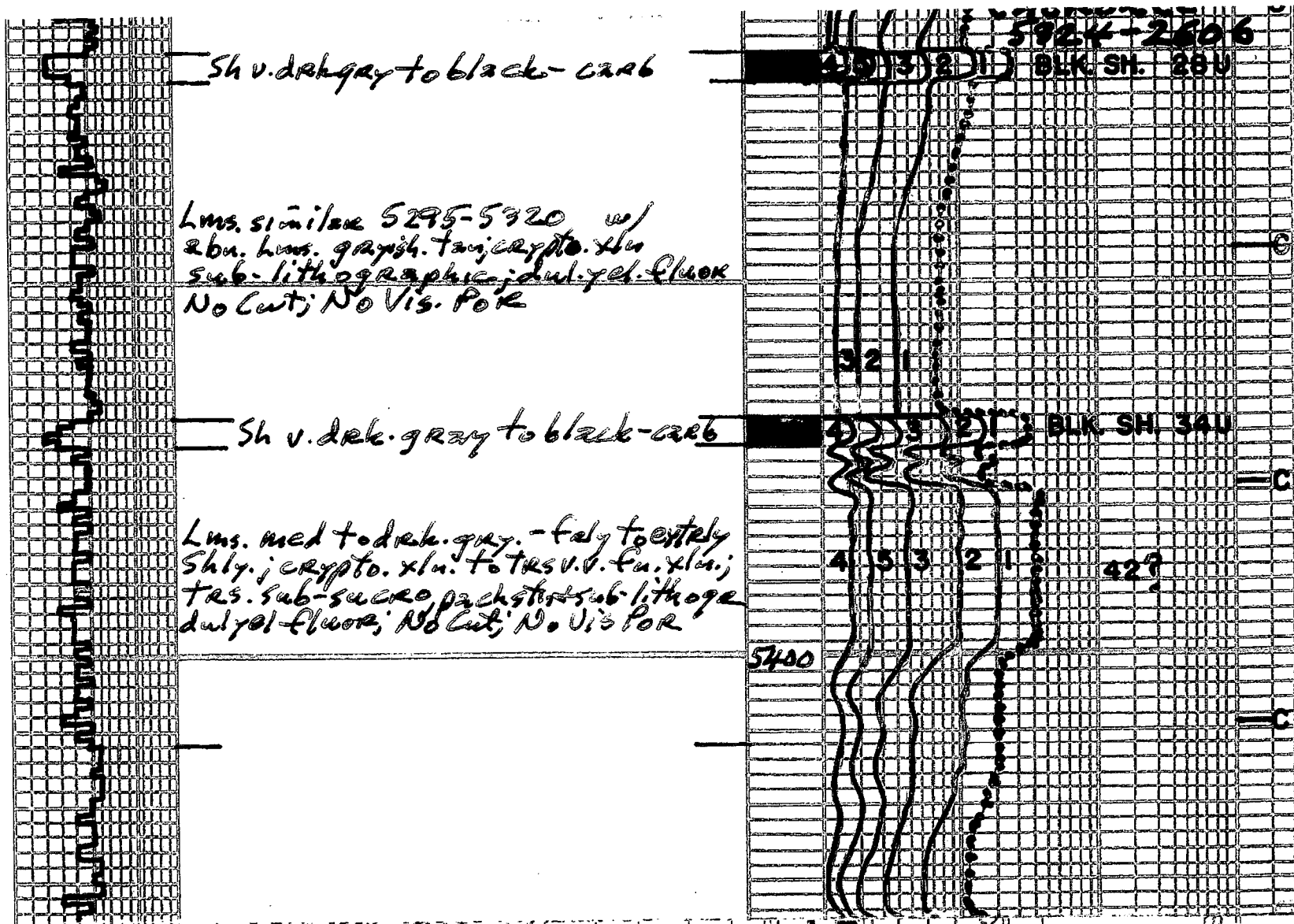
BLK SH. 34U

Pawnee
5238-2520

Scott
5295-2577

BLK. SH. 48U

RECYCLE 52U



Interbedded Limestones and Shales

① Lms. H. gray, grayish. tan to tan; crypto to v.v. fn. xln.; sub-chlk, sub-succo, pecten & sub-lithogr.; phantom oolitic lps; dul. yel. fluor; No cut No vis Por

② Lms. med to dk. gray - v. to extaly Shly; gaduq. to calc. shs.; crypto. flu.; sub-chlk to Shly, pecten and trs. sub-lithogr.; No fluor; No cut No vis Por

③ Sh. med to v. dk. gray; sl. to extaly. calc lps
a sl. dol. seen to black-rock

AGITATOR PLUGGED OFF

TRAP CHECK

5500

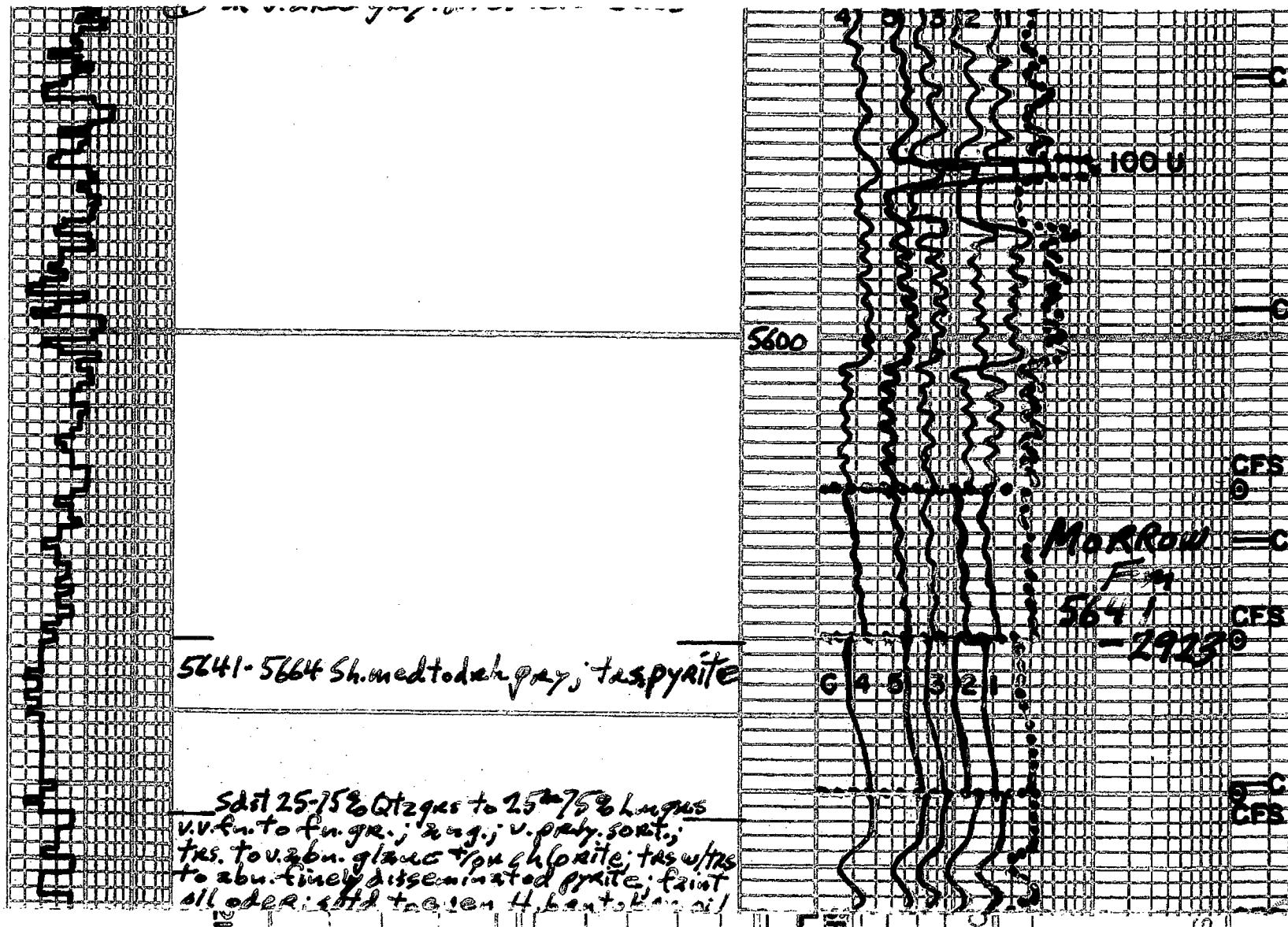
40 U

40 U

50 U

55 U

50 U



Stn; ddk. yel. fluor.; flush to gd stn cuts
No Vis POR.

5680-5700 Lms. lt. brn; crypto. xlu;
pachstu to sub-lithog.; ddk. yel. fluor.; No lat
No Vis POR

5704-5713 Qtz Sdct tas. gray rest

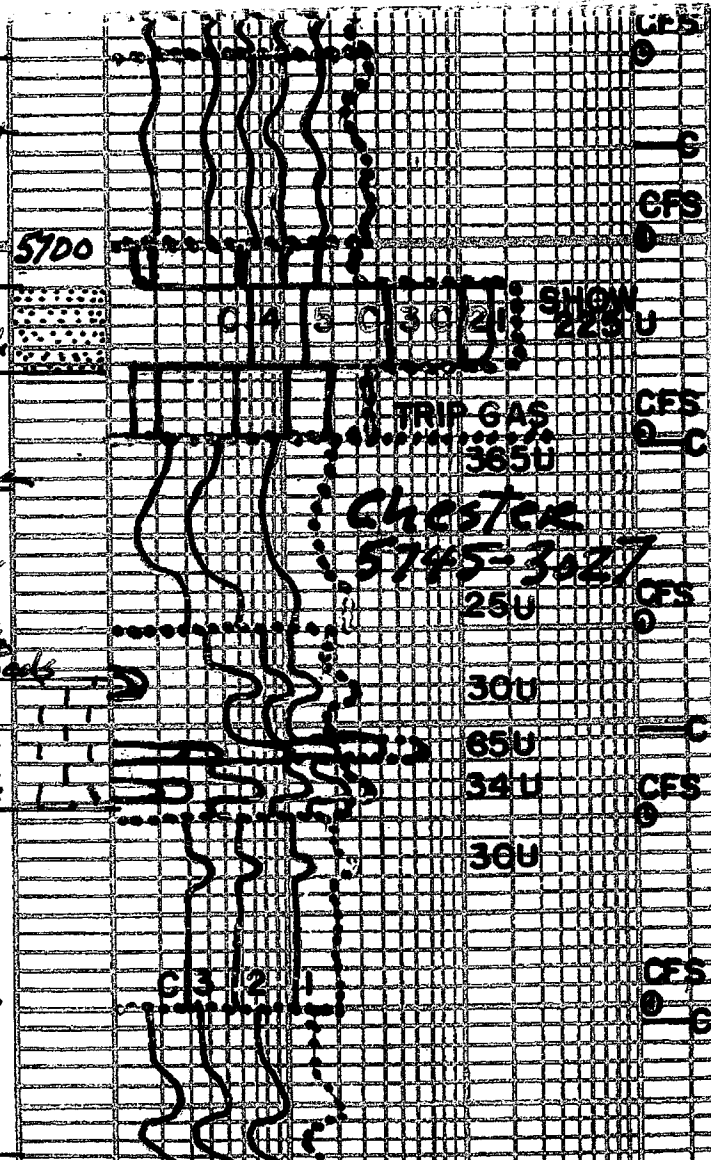
dkhtan to ban. tan oil stn; v.v. tan
fou. fu. ga.; aug.; pr. tot. sdct
silt filled lps; tas. to huytes glauc. and/or
chlorite; ta. oil odes; glauc. yel. fluor.; flush
to eucal. stn; aug. cut; aug. pr. tot. tas. gl.
micao. pp to inter. aug. pora.

Lms. lt. gray to tan; crypto. to v.v. l. xlu. tas
sub. ddk. tas. sub. sdct to pachstu; ddk. yel.
fluor.; milky cuts to aug. cuts No Vis POR

silt to med. gray tanish lps; Qtz Sdct. lps.
v.v. fu. ga. - aug.; pale sort.; shale filled;
tas. to huytes glauc. or chlorite; tas. w/
tas. to huytes. pyrite; huy. tas. spid. to even
dkhtan oil stn. w/ greenish. yel. fluor.; flush to
gd stn cuts; No Vis POR, v. d. west POR in interbeds
or gradational silt. to sh. to sh.; med. to ddk
gray

5745-59 Fragm. Lms. tan; v. fu. to med. & tas
comp. gal. composed of lms. & ss. lms. & ss. &
oolites) crypto. to v.v. l. xlu. med. to sub. ddk.
sub. sacc. to sacc. & tas. pachstu
sub. spid. to tas. even dkhtan to ban. oil
stn; w/ glauc. yel. fluor. & flush to gd
stn cuts; tas. pr. micao. pp
POR.

5759-5796 Lms. med. to ddk. gray -
v. to ext. sh. crypto. xlu.; pachstu
No fluor. No cut; No Vis POR



Composed of lms. & ss. frags & oolites (crypto to v. v. fine); matrix of rock sub-dk, sub-sand, packstone; d. yel. fluor; No cat; No v. l. por

Lms. H. to med. gray, tanish lps; crypto. xly; v. to ext. shly, grading to calc. shs. sub-dk. & just shly to packstone; scattered tes. v. d. yel. fluor; No cat; No v. l. por

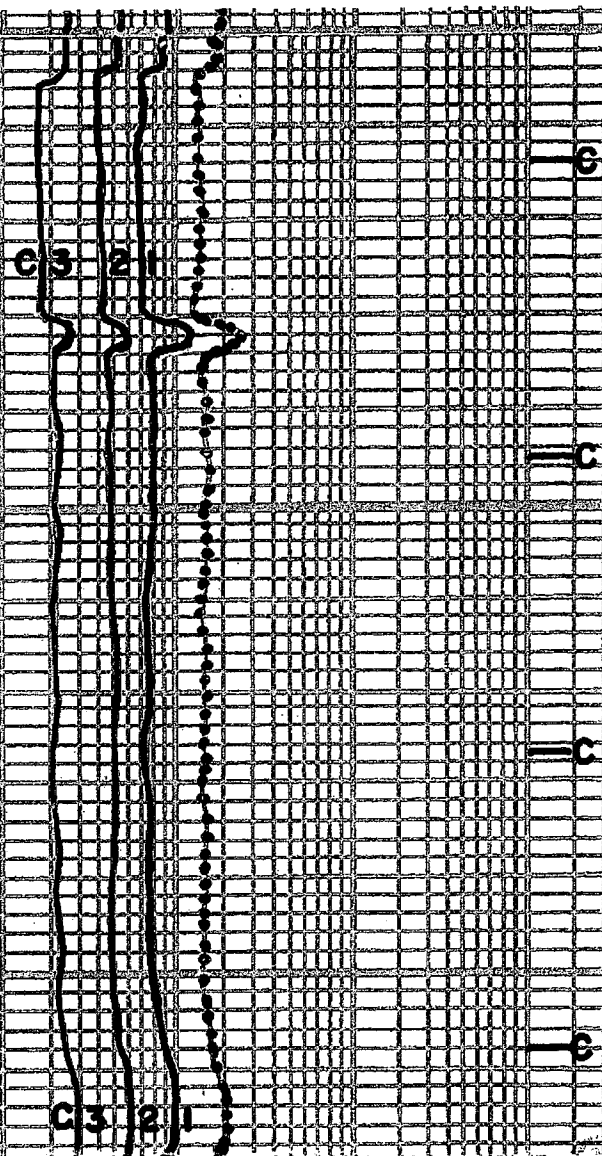
w/ scattered tes lms similar 5796-5810 pos from above

Interbedded & Conglomeritic

① Lms. H. gray to tan, tes greenish lps to greens & tes pinkish; crypto to xly. tes. sub-dk. & tes sub-sand or packstone & v. d. yel. fluor; No cat; No v. l. por

② Shs. grays, reds, purples & greens, tes yel to tes. siltst. H. gray to H. greens, dense

5900



tite + hard w/ Si. t. as brn. tho oil stn
well sorted, glau. yel. fluor. w/ flash to
qd staining cuts; No Vis Por (5880 to
5890 samp.)

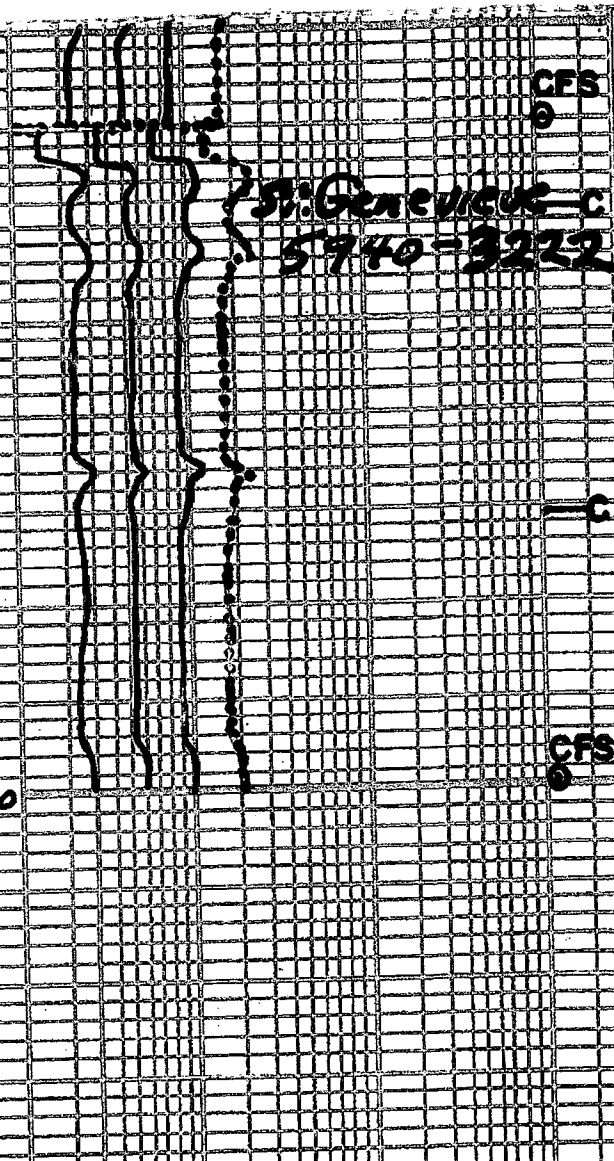
Interbedded with conglomeratic similar 5881-5930
w/ t. as lms grayish tan, crypto to v. stn. w/ m.
v. to ext. micro-oditic for sl. to l. y. Qtz
Sdy. v. to f. gr-ang. matrix sub-obl.
to sub-sucro; hdy. t. as sp. d. to t. as eva
dark tan oil stn. w/ w. dul. dec. glau. yel
fluor. w/ slow flash cut to qd staining cuts
No Vis Por

Lms. grayish. tan to tanish gray, greenish l. s.
v. to ext. micro-oditic for sl. to l. y.
Qtz Sdy. v. to f. gr-ang. matrix
t. as sub-obl., sub-sucro;
t. as dead black oil stn. No fluor.
w/ slow milky cuts to qd staining cuts;
abund. yel. mineral fluor.;
No Vis Porosity

TD 6000

7 7/8 inch Bit Info
#1 PDC Bit Baker-Hughes DP 506F
in 1655 out 4200
#2 New Tricone Button Baker-Hughes GX 28C
in 4200 out 6000 TD

Deviation Ser. V.
11 1/2 310 - 11 1/2 310



1. 1010 74° 2. 5111 74°
 2. 1709 1/4° 6. 5188 1/2°
 3. 2772 1/8° 7. 5720 1/4°
 4. 4200 1/2° 8. 6000 13/4° TD

Cir Points

1. 4480 8. 5700
 2. 4717 9. 5720
 3. 5120 10. 5740
 4. 5620 11. 5760
 5. 5640 12. 5780
 6. 5660 13. 5930
 7. 5680 14. 6000 TD

Daily Drlg. Progress

1. 4200	At 12:23 AM	7-19-12
2. 4200	At 7:00 AM	7-19-12
3. 4440	At 7:00 AM	7-20-12
4. 4480	At 7:00 AM	7-21-12
5. 4717	At 7:00 AM	7-22-12
6. 4801	At 7:00 AM	7-23-12
7. 5164	At 7:00 AM	7-24-12
8. 5465	At 7:00 AM	7-25-12
9. 5685	At 7:00 AM	7-26-12
10. 5720	At 7:00 AM	7-27-12
11. 5843	At 7:00 AM	7-28-12
12. 6000	At 7:00 AM	7-29-12

DST #1 Lausing "A" 4470-4480
 IO BOB 1min GTS 23 min

FF 1000 1 min Flowing 9025 15117
Rec: 3948 ft gas in Pipe
94ft GCO 10%G; 9020
177ft GCMO 10%G; 7520; 152M
178ft MCGO 10258530; 52M
Total fluid Rec 449 ft Oil Gravel 36 API
BHT 115°F
IHP 2185 #
IFP 48-74# in 30 min
ISIP 1003# in 60 min
FFP 63-139# in 60 min
FSIP 1002# in 120 min
FHP 2157#

DST #2 Lansing "G" 4690-4717
ID weak surf. blow built to 1 1/4" in 30 min
FO No Blow
Rec 90 ft 100% Mud
BHT 115°F
IHP 2245 #
IFP 23-52# in 30 min
ISIP 1369# in 60 min
FFP 57-76# in 30 min
FSIP 1369# in 60 min
FHP 2211

DST #3 Morrow Sd. 5698-5720
ID surface blow built to 8 in. in 30 min.
FO surface blow built to 6 1/4 in. in 60 min.
Rec 15 ft OCM 10% oil 90% mud
BHT 130°F
+10 27112 # FHP 22112 #

TFP 19 to 28# in 30 min FHP 320# in 120 min
 15/P 197# in 60 min FHP 2685#

Mud Info:

Date	7-18 10:15A	7-19 10:00A	7-20 8:30A	7-21 11:15A	7-22 11:00A	7-23 11:00A	7-24 2:00P	7-25 11:00A
Depth	3623	4200	4467	4480	4718	4863	5261	5508
Wt.	9.0	9.1	9.2	9.1	9.0	9.0	9.0	9.0
Vis	40	49	46	49	54	53	62	63
PV	10	14	16	17	19	18	27	26
YP	18	8	5	11	15	14	11	18
BS	10/22	6/14	4/10	8/14	10/24	10/19	8/15	6/12
WL	44.0	14.8	11.4	10.2	8.4	8.0	8.0	8.0
Cake	3/32	2/32	2/32	2/32	2/32	1/32	1/32	1/32
pH	9.0	10.5	11.0	11.0	11.0	11.0	11.0	11.0
Chl	9000	4100	4000	4000	3500	3800	3500	3100
Ca	480	100	60	120	120	100	60	100
LCM	4	4	4	8	8	10.0	8.0	10.0

Date	7-26 9:00A	7-27 10:00A	7-28 1:00A	7-29 8:30A				
Depth	5700	5720	5873	6000				
Wt.	9.0	8.9	8.9	9.0				
Vis	74	64	56	70				
PV	29	23	17	26				
YP	23	17	13	18				
GS	11/25	10/18	8/14	11/24				
WL	7.4	8.8	8.0	8.0				
Cake	1/32	1/32	1/32	1/32				
pH	12.0	11.0	11.0	11.0				
chl	2800	4200	3200	3400				
C2	80	100	80	100				
LCM	10.0	10.0	8.0	8.0				

OPERATOR RAYDON EXPLORATION, INC. LOCATION 1485FSL @ 1535FWL
 LEASE FOX NO. 1-30 SEC. 30 TWP. 33S RANG. 30W
 ELEVATION 2718 RTD 6000 COUNTY MEADE STATE KANSAS