GEOLOGICAL REPORT

DRILLING TIME S.D. ANGLE - COPYRIGHT 2011 **SAMPLE LOG**

COMPANY Russell Oil, Inc.
LEASE Grecian Trust
WELL NO. 1-30
LOCATION 330' FNL + 330' FEL
SEC 30 TWN 10S RNG 21 W
COUNTY Graham STATE Kansas
POOL Wheeler South Extension
API NO. 15-065-23710-00-00

ELEVATIONS
KB 2260'
DF 2258'
GL 2250'

MEASUREMENT FROM
Top Kelly Bushing
PIPE STRAP 3696'
.48' short To Board

CONTRACTOR Southwind Drilling Rig 1
COMMENCED January 28, 2011
COMPLETED February 7, 2011
RTD 4000' @ 3:30 P.M. on 2-7-11
MUD Andy's Mud + Chemical
SAMPLES FROM 3200' TO 4000'
DRILLING TIME FROM 3200' TO 4000'
SUPERVISION FROM 3200' TO 4000'
GEOLOGIST Steven D. Angle

CASING RECORD
SURFACE New 8 5/8" set @ 239.84 w/ 160 sx comm. + 3% cc, 2% Gel, CDC

PRODUCTION None

REMARKS Deviation: 3696' - 1 1/4°, 4000' - 1°.

All formation tops, zones of interest, porosity, shows and sample time lag are based from the top of Kelly Bushing measurements. Any corrections in measurements during the drilling of this well have been incorporated into this report.

ORIGINAL COPY

Sincerely,

Steven D. Angle

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FORMATION TOPS

DATUM ELEVATION 2260'

FORMATION	SAMPLE	E LOG	DATUM	WELL A	WELL B
Anhydrite		1735	+ 525		
Base/Anhy		1785	+ 473		
Topeka		3292	-1032		
Heebner		3504	-1244		
Toronto		3527	-1267		
Lansing-KC		3543	-1283		
Base-KC		3760	-1490		
Arbuckle		3940	-1680		
RTD		4000	-1740		
LTD		4001	-1741		

CORRELATION WELLS

A.

B.

DAILY PENETRATION

DEPTH	@ TIME	ON DATE
Under Surface	8:15 A.M.	1-31-11
1762'	7:00 A.M.	2-1-11
2594'	7:00 A.M.	2-2-11
3234'	7:00 A.M.	2-3-11
3656'	7:00 A.M.	2-4-11
3760'	7:00 A.M.	2-5-11
3860'	7:00 A.M.	2-6-11
3945'	7:00 A.M.	2-7-11
4000'	3:30 P.M.	2-7-11

MUD RECORD

DEPTH	TYPE & AMOUNTS
2390'	85sx Gel, 8 soda Ash, 5/6 sx Drispac, 4sx Caustic Soda, 2sx lignite, 2sx R.H., 5sx hulls.
3030'	45sx Gel, 4sx Soda Ash, 1sx lignite, 1sx caustic Soda, 1/3sx Drispac, 1sx RHVS.
3860'	1/2sx Drispac, 1sx lignite, 1sx Caustic Soda.
4000'	hulls 15sx in @ 3950 for Arbuckle

DRILLING INFORMATION

DRILLING CONTR: Southwind Drilling, Rig #1
RIG PHONE: 620-794-0275
TOOL PUSHER Frank Rome
PHONE: 620-566-7324
DRILLERS - DAYLIGHT TOUR: Kevin Belcher
EVENING TOUR: Jimmy Little
MORNING TOUR: Ken Thompson
SPUD DATE 1-28-2011 DATE OF RTD: 2-7-2011
SITE DIRECTIONS: Approx 17 miles north of Ellis, Ks. To CC Rd, West 7 miles, south into location.
SURFACE PIPE: New 20# 8 5/8" set @ 239.84' w/160 sx Comm, 3% CC, 2% Gel. Cement Did circ to Surface.
WELL STATUS: Dry + Abandoned
PRODUCTION CASING: None —

DRILLING MUD CONTR: Andy's Mud, SWG: Ken Rupp cell # 785-635-6445
DRILL STEM TESTING: Trilobite Testing, 800-728-5369 Engineer: Dustin Rash, cell - 785-623-0475
CEMENTING: Surface Pipe: Allied Cementing,

ELECTRIC LOGGING: Log-Tech, Logs: Dual Induction, Sonic, Microresistivity, Compensated Neutron Density. Ph. 785-625-7313, Engineers: J. Schuler

BIT RECORD

NO.	PURPOSE	SIZE	MAKE	TYPE	IN	OUT	JETS	PUMP
1	Surface	12 1/4"	Reed	HA11	0'	242'		300#
1	Bore	7 7/8	REED	S-52	242'	3696'	15-15-14	950#
2	Bore	7 7/8	REED	S-52	3696	4000'	15-15-14	950#

DST NO. 1 INTERVAL 3628 TO 3696 TYPE Anchor 68' TIMES 25-60-15-30
Blow: Weak blow built to 1/4", Died in 22 minutes, SI. No return. No blow. Flushed tool. No blow. SI. No return.
Rec: 5' of MUD.
IF/FF 28-33 SIF/SFF 33-33 ISI/FSI 696-529 IH/FH 1775-1756 Temp: 104°F

DST NO. 2 INTERVAL 3696 TO 3760 TYPE Anchor 64' TIMES 45-60-15-60
Blow: Very weak blow. Surface bubbles. Died in 47 minutes. SI. No return. No blow. Flushed. No help. SI. No return.
Rec: 5' MUD.
IF/FF 32-34 SIF/SFF 32-34 ISI/FSI 325-440 IH/FH 1835-1794 Temp: 107°F

DST NO. 3 INTERVAL 3760' TO 3860' TYPE Anchor 100' TIMES 30-30-15-30
Blow: Weak surface bubbles. Died in 4 minutes. Flushed tool. SI. No return. No blow. SI. No return.
Rec: 12' MUD.
IF/FF 50-57 SIF/SFF 57-57 ISI/FSI 295-242 IH/FH 1905-1878 Temp: 105°F

DST NO. 4 INTERVAL 3860 TO 3945 TYPE Anchor 85' TIMES 30-30-15-30

Blow: Very weak surface bubbles. Died in 10 minutes. S.I. No return. No blow. SHUT-IN. No return blow.

Rec: 8' of MUD

IF/FF 50 - 53 SIF/SFF 52 - 55 ISI/FSI 423 - 400 IH/FH 1958 - 1932 Temp: 107°F

DST NO. N/A INTERVAL _____ TO _____ TYPE _____ TIMES ___-___-___-___

Blow:

Rec:

IF/FF ___-___ SIF/SFF ___-___ ISI/FSI ___-___ IH/FH ___-___ Temp: _____

DST NO. N/A INTERVAL _____ TO _____ TYPE _____ TIMES ___-___-___-___

Blow:

Rec:

IF/FF ___-___ SIF/SFF ___-___ ISI/FSI ___-___ IH/FH ___-___ Temp: _____

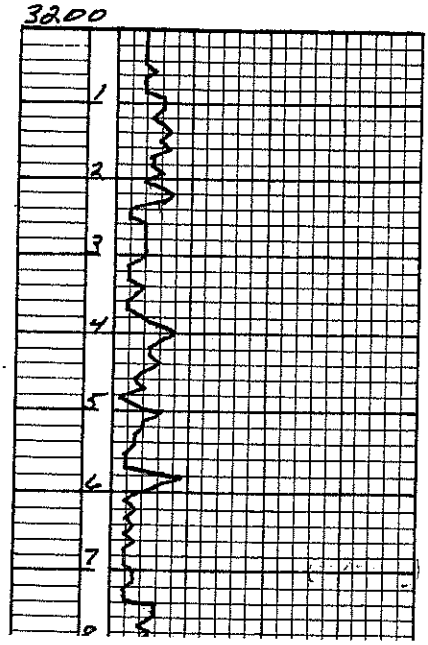
LEGEND

Anhydrite, Salt, Sandstone, Shale, Carb Sh, Limestone, Ool. Lime, Chert, Dolomite

ELV. 2260 KB

X = oil OR ODOR

LOG Tops MARKED



50

Tan - Buff Foss LS
Some Xln + Fn Sdy LS
Tan - Brn - Foss - Xln
Sdy. LS.

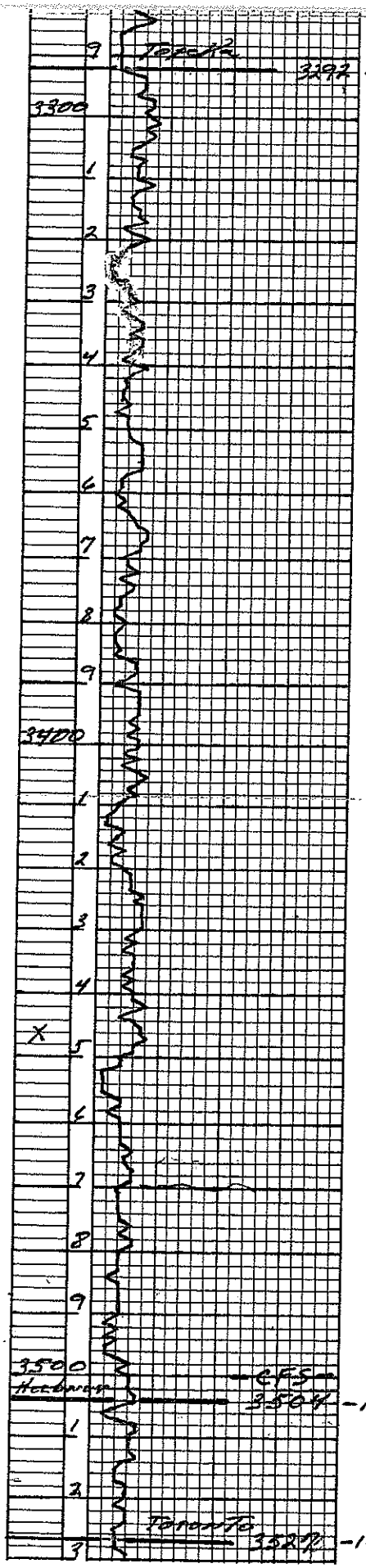
Same as above

Mottled Tans - Greys LS
w/ Foss - Scat Xln + Sdy LS

Same as above

Tan - Brn - Gray Xln - Foss
LS - Foss LS - White - Grey Soft gummy Sh's - clays

Same as above w/ Scat Grey
Micr Sand
Tan - Brn - Mottled
Soft To Hard Xln - Chalky LS
Some Dengl. LS - Few Sdy LS w/
Show Bitumen
Tan Fn Sdy LS -



Varied Tan - Grey Xyn + Foss - Sandy LS.

Varied Tan - Grey Xyn + Sdy LS.

Same as above.

Same

Same

Varied Tan Xyn - Foss LS.

Varied Tan weathered Xyn Sdy + Foss Limes. 50

Tan - buff Xyn weathered Foss LS.

Tan - buff weathered Xyn Foss LS.
Buff - Tan weathered Xyn Foss LS.

Varied Tan weathered Sl. Foss + Sdy LS.

Same as above
Tan - Lt. Grey Sl. Silty - Xyn Sl. Foss - Sl. Sandy Limes

Buff weathered - Fine Xyn Sandy Limes.

Same as above

Buff dense + weathered Sdy Tan LS.
X 1 piece white Xyn weathered Am w/ Good Poor F-Gs Fere Bea Oil NO ODOR 50

Varied Tan Silty - Sl. Sandy Oolitic LS.

Tan - buff Xyn - Sl. Foss some weathered
White Chk - Scat Lt. Tan - white Fn Xyn + Foss-lite LS.

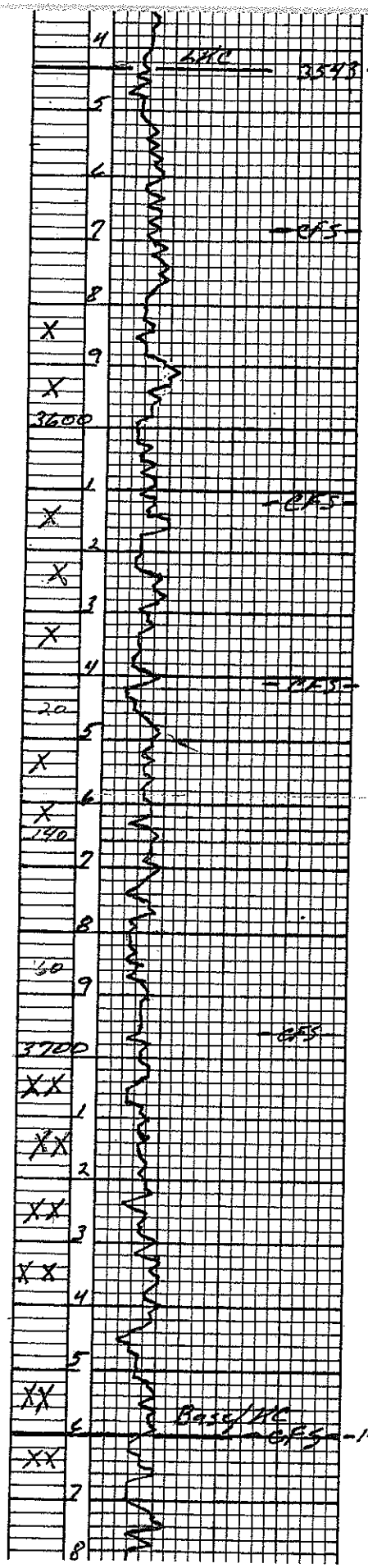
Scat Blk Sh + Buff - Brn Xyn Sandy LS.

Scat Blk Shs - white - Lt. Tan - Tnt Fn Xyn - Scat Foss LS.

Buff Tan Xyn LS.

Tan dense - Tan Xyn Foss LS.

White - Tan - Grey Xyn + Xyn Foss LS.



w/ SCAT Foss ls.
Tan + white xgn + Foss ls
+ SCAT Brn ctty ls.

50

white dense + xgn ls
+ SCAT Grey chents
BRFF dense - Fine xgn ls.
white xgn + Tan Fine Fossilif ls.
white dense xgn ls.
Red soft shs - SCAT Tan - Grey xgn ls.
white weathered Foss ls + Fn xgn ls
Both w/ SCAT Traces Free oil - no odor
Few pieces white weathered loose
sl. sdty Foss ls w/ss Free oil - no odor
white dense + Tan xgn ls.
white + lt. Grey xgn ls.
2 pieces white sl. ctty lm
w/ Trace of oil
white - Tan xgn ls.
Few pieces SCAT Dk stn in Dol
1 piece white - sl. uvgy xgn lm
+ multiple Floating small lt. Brn oil Droplets
white xgn - Foss - sl. sdy ls.

50

Varied - Dense xgn - Foss ls
1 piece lt. Tan xgn lm w/ Traces
wet oil stn
white xgn - Foss ls. 1 piece
Tan xgn Foss ls. poor inter Foss ϕ.
white Brn Fine dense
xgn ls. Few Brn ctty ls.

Few pieces white xgn ls
w/ show wet oil stains
1 piece dolomitic white lm
w/ Fe show Blk wet oil stn
Blk oil Rims
SCAT pieces - white to lt.
Tan xgn ls w/ Fair inter xgn ϕ
SSFO Faint odor
Few white sl. ctty - sl. xgn
ls w/ss lt. clr oil Faint od
Number pieces white xgn
some ctty w/ Blk oil stn. Inf.
Faint odor
white ctty ls. w/s lt. oil
Tan ctty xgn ls w/ss wet stn
Faint odor
Tan ctty xgn Foss ls.
w/ ss Blk wet stn - some total
saturation - Faint odor
SCAT white ctty xgn - Fe inter stn
To uvgy poor Fes Blk - Tan oil
To Grey white Faint odor

Base/RC

-1490

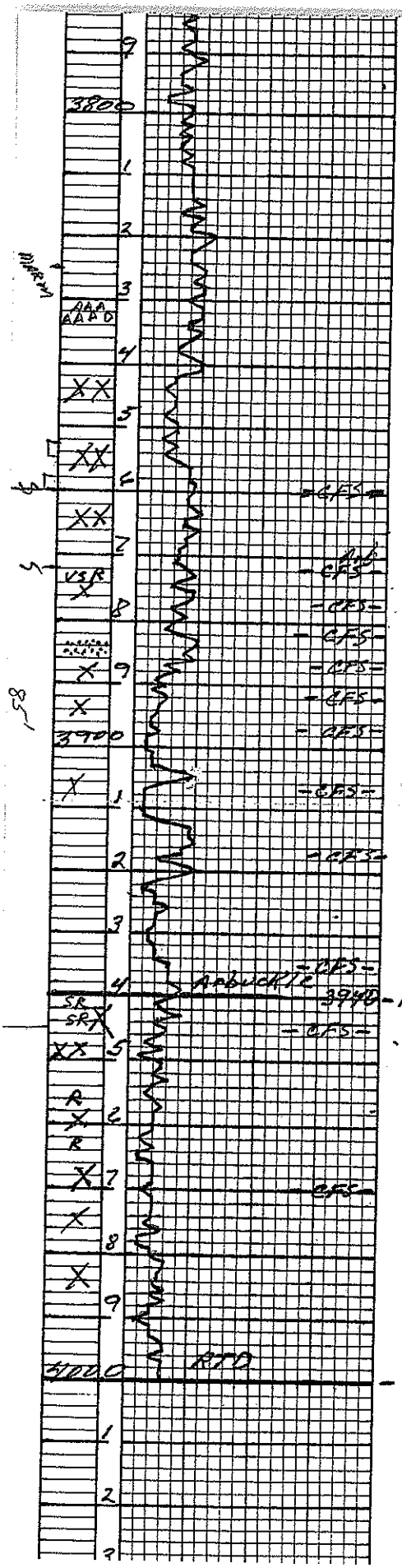
white xgn ls - Tan ctty
hd Foss ls 2 small pieces white
sl. uvgy lm w/SFO v. Ft. odor
Varied white lt. Grey
xgn ls.

1 in. = 50

9698-9698 1 in. = 50

9698-9698 1 in. = 25

150



Some Varied Colored Shales

Varied Xgn LS & Soft reddish Brn Shs.

Same as above w/ white soft chts

Soft Red-Brn Shs - Multi col Shs
Seat white Xgn & chty LS - Some Multi col loose Sd Grains
Red Gummy Shs - Some Grey gummy Shs
Few Multi col loose Sd Grns.
Seat Grey chts & limey orange chts
white Xgn & chty LS.
orange & white dolomitic fn Xgn chts - Sucrosic dolomite orange wht chts
FSFO - F-odor - Some Fairly loose clr Arg qtz grns
Brn & org - red fn chts - orng sucro dolomitic chts 1 drop Float oil
Varegt chty LS w/ BS - VGSFO F-G odor
Multi-col Shs.
Tan sucro dolomitic Lm w/ shear fn. odor
Few buff sucrosic dolomitic Ls w/ Few RT2 Sd w/ SO
Red soft Sh - Varicol col Shs.
Multi col. Shs
Fair Amount Multi col loose Sd
1 piece Lm w/ SFO - cht grns
Multi-col. Sh, long Sh. w/ SFO & Dolomitic piece gilsonite. Blk dolomitic Blks
chts Dark - S Tary oil + gilsonite
white & orng F-Sh chts FS Oils & Blk dol oil Fms

Multi-col chts - Some Sl. wxgn w/ Blk Tan Sh - Multi col Shs.

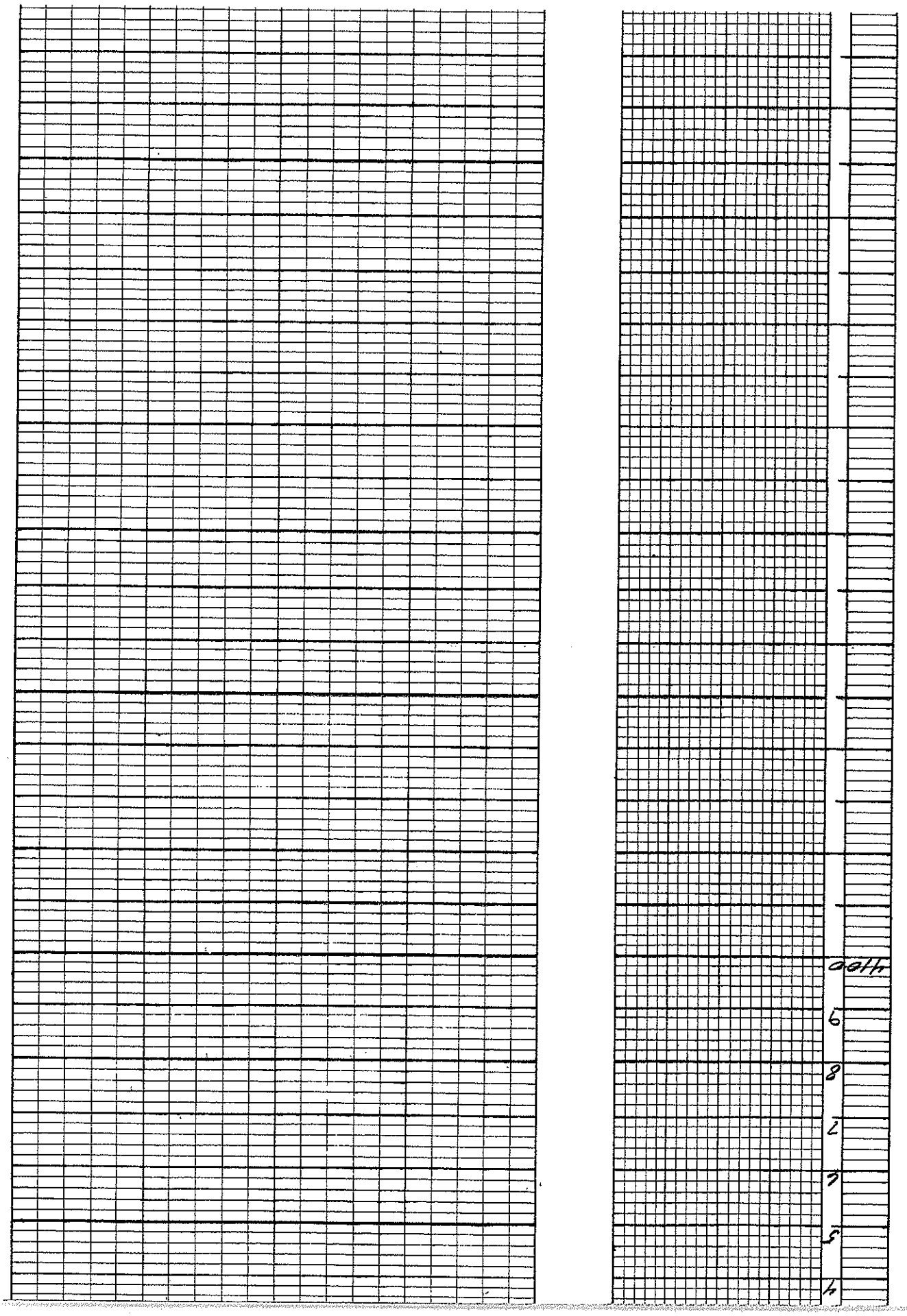
Brn - reddish grey - green Shs
Seat Tan - wht - yellow chts
white - orng - yellow - grey chts
grey oolitic chts - 1 med xgn Dolo cht
Tan fn xgn & LS
Grey Med xgn dolomitic chts QTZ grns
Multi col chts NS oil Sd chst
Tan-LT. Brn Med xgn dolo Fair odor
F-OD FS Blk Free oil
Buff - Tan fn med xgn dolo
Few pink dolo - med chts
F-OD - NSFO

Multi - buff - Tan fn - med xgn dolo
some weathered - Few Red chts
Fair odor
Same w/ Sl. wxgn
Seat Brn & Blk Shs - wht chts
Fair odor

Mostly Tan Transluc oolitic chts
Seat white - Tan fn xgn & Med xgn dolo. Fair odor

Lg Amount Tan Transluc oolit chts & weathered oolic cht
Seat white dolomitized LS
Tan & LT Grey Med xgn dolo.
1 piece Red chert.

Arbuckle = 1150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