API# 15-065-24042-00-00

GEOLOGICAL REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Baird Oil Company, LLC.
LEASE David Worcester # 2-24
FIELD Wildcat
LOCATION 900'FNL & 2195'FEL
SEC 24 TWSP 7s RGE 22W
COUNTY Graham STATE Kansas

ELEVATION
KB 2163'
DF 2161'
GL 2155'
Depths Measured From
Log KB Drilling KB

CONTRACTOR WW Drilling Rig #12
SPUD 5-19-14 COMP 5-25-14
SAMPLES SAVED FROM 3100' TO R.T.D.

CASING
Surface 8 5/8" @ 221'
Production 5 1/2" @ 3722'

ELECTRIC LOGS
Nabors

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	E. LOG	DATUM	A	B	C	D
				●			
Anhydrite	1783	1781	+ 382	+ 392			
Base Anhydrite	1816	1812	+ 351	+ 362			
Topeka	3157	3154	- 991	- 985			
Heebner	3367	3363	- 1200	- 1195			
Toronto	3388	3385	- 1222	- 1216			
Lansing	3402	3399	- 1236	- 1231			
Base Kansas City	3591	3588	- 1425	- 1419			
Arbuckle	3684	3681	- 1518	- 1522			
Total Depth	3729	3727	- 1564	- 1535			
T.D. after logging	3780						

REFERENCE WELLS

A Baird Oil Co.; David Worcester #1-24, 1880'FNL & 1360'FEL Sec. 24-7s-22w
B
C
D Port Collar @ 1790'

REMARKS

This well ran 5 feet lower on the Lansing top and 4 feet higher on the Arbuckle top than the reference well. Encouraging D.S.T. results warranted the cementing of production casing to further test the well. The following zones should be tested; 3695'-3706'; 3681'-3686' and 3472'-3478'

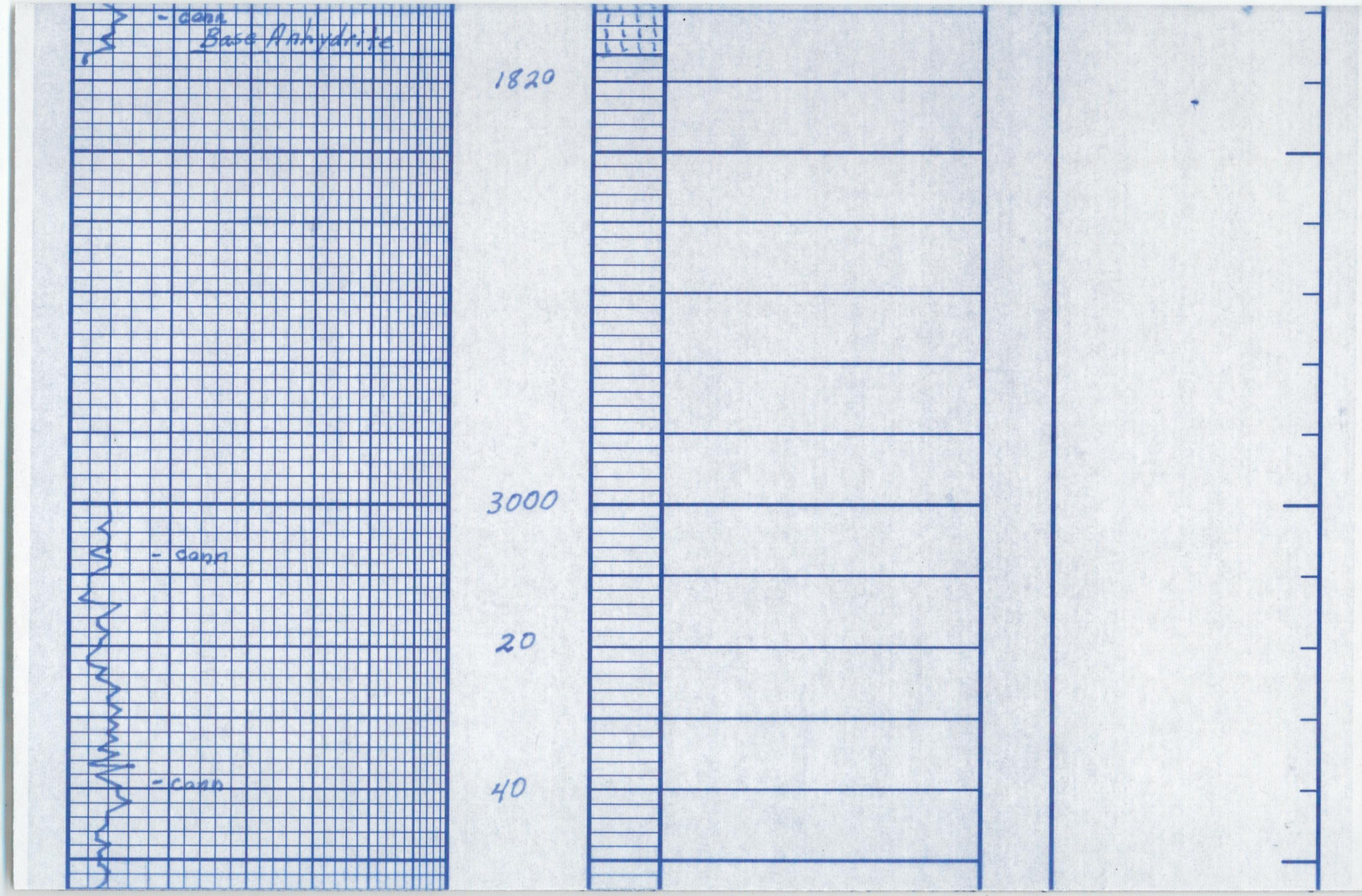
Richard B Ball
5-25-14

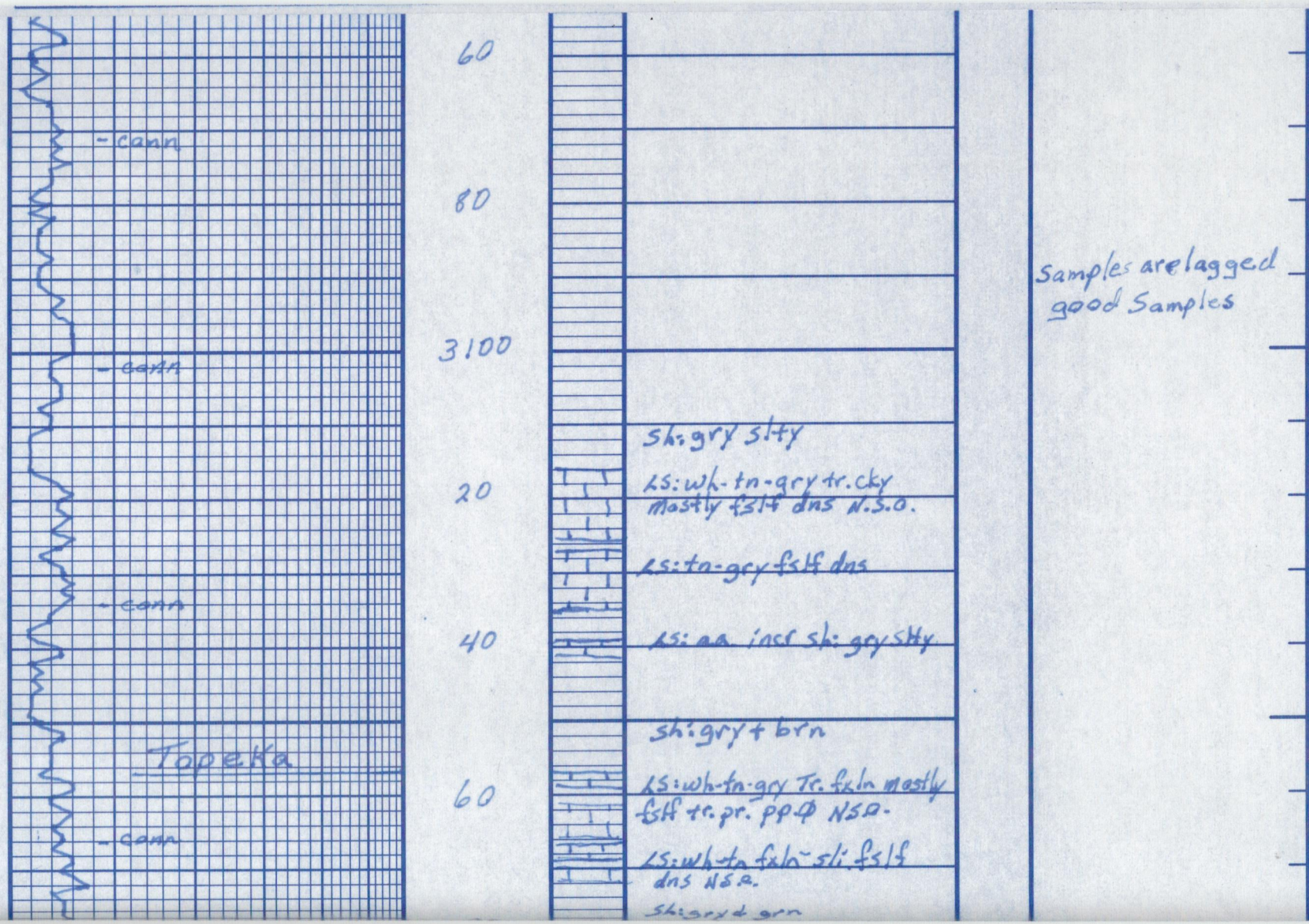
7502

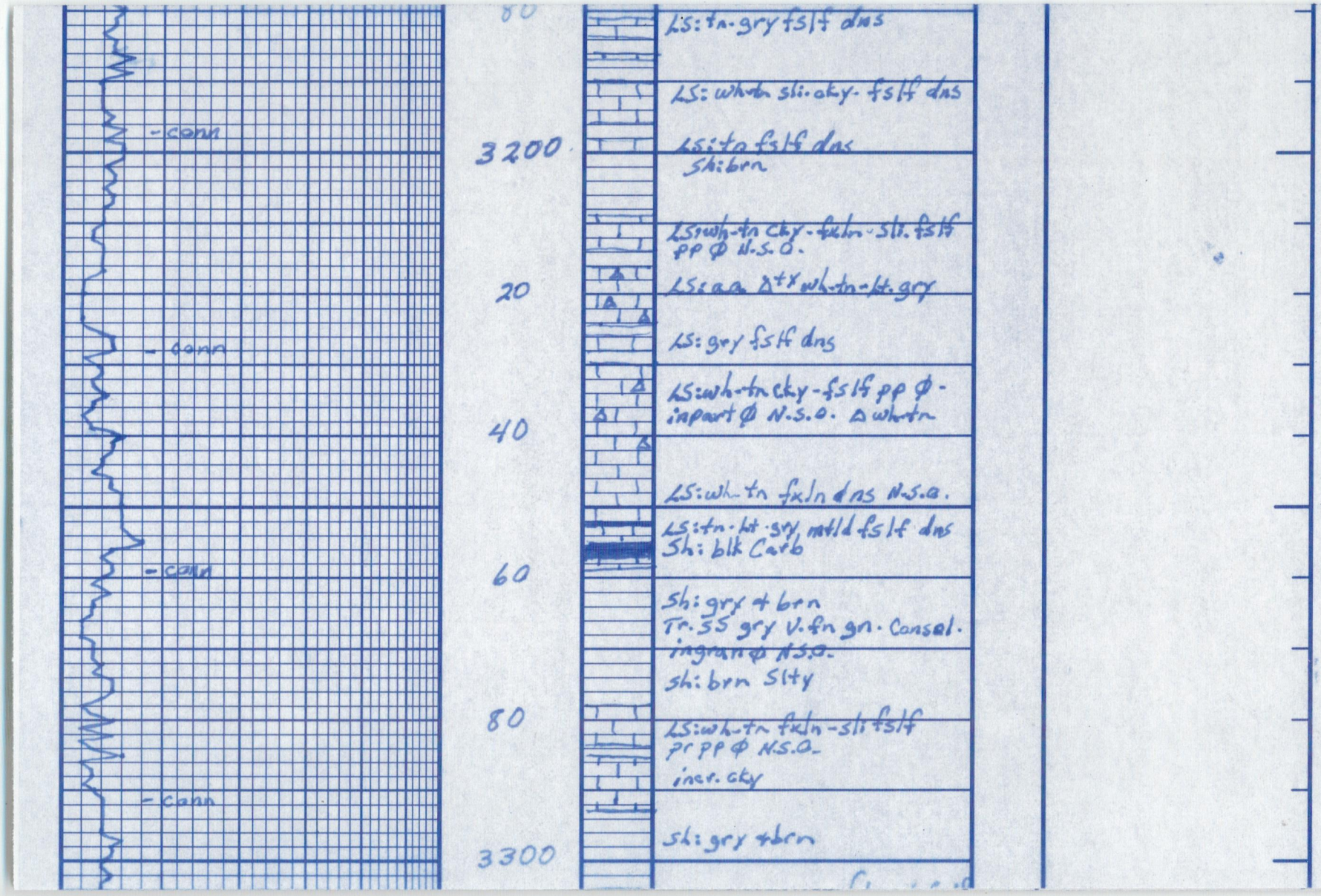
LOG 7710

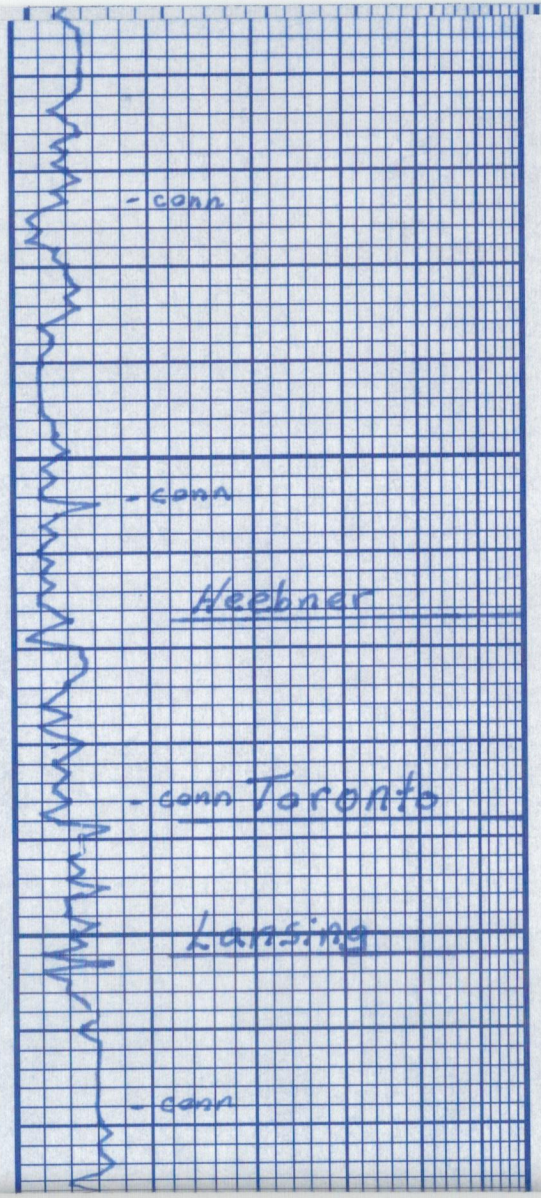
LEGEND

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases 5" 10" 15" 20" 25"	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
Anhydrite	1780				
	1800				


- Conn.
Base Anhydrite
1820
3000
- Conn
20
40
- Conn


60
80
3100
20
40
60
- conn
- conn
- conn
- conn
Topeka
Sh: gry slty
LS: wh-tn-gry tr. cky mostly fslf dns N.S.O.
LS: tn-gry fslf dns
LS: aa. incr sh: gry slty
sh: gry + brn
LS: wh-tn-gry Tr. fxln mostly fslf tr. pr. pp Φ NSO.
LS: wh-tn fxln-sli. fslf dns NSO.
sh: gry + grn
Samples are lagged good Samples


- conn
- conn
- conn
- conn
80
3200
20
40
60
80
3300
LS: tn-gry fs/f dns
LS: wh-tn sli. cky- fs/f dns
LS: tn fs/f dns
Sh: brn
LS: wh-tn cky - fx/n - sli. fs/f
pp ϕ N.S.O.
LS: a a Δ tr wh-tn-lt. gry
LS: gry fs/f dns
LS: wh-tn cky - fs/f pp ϕ -
in part ϕ N.S.O. Δ wh-tn
LS: wh-tn fx/n dns N.S.O.
LS: tn-lt-gry mtld fs/f dns
Sh: blk Carb
Sh: gry & brn
Tr. SS gry V. fn gn. Consol.
in grain ϕ N.S.O.
Sh: brn Slty
LS: wh-tn fx/n - sli fs/f
pr pp ϕ N.S.O.
incr. cky
Sh: gry & brn



20

40

60

80

3400

'A'

20

LS: tn - Lt. gry ~~fxln - sli. fslf~~ dns

LS: tn - gry fslf dns

LS: tn fslf ppφ - inpart φ N.S.O. Δ tn

LS: wh-tn fxln - sli. fslf sli. oöl w/ abund foss incl ppφ - inpart φ N.S.O. Δ wh-tn

LS: wh-tn sli. cky - fxln dns Δ tn - Lt. gry

LS: wh - tn fslf Tr. vgy φ N.S.O. Δ wh-tn

~~Sh: brn & gry~~

Sh: blk Carb.

~~LS: tn - gry mtld fslf dns~~

Sh: brn, gry, grn

~~LS: wh-tn fxln - sli. fslf~~ dns N.S.O. Tr Δ wh fslf incr. Δ wh-tn

LS: wh-tn fxln sli. öol gd ppφ N.S.O. Δ wh-tn

LS: wh-tn fxln dns

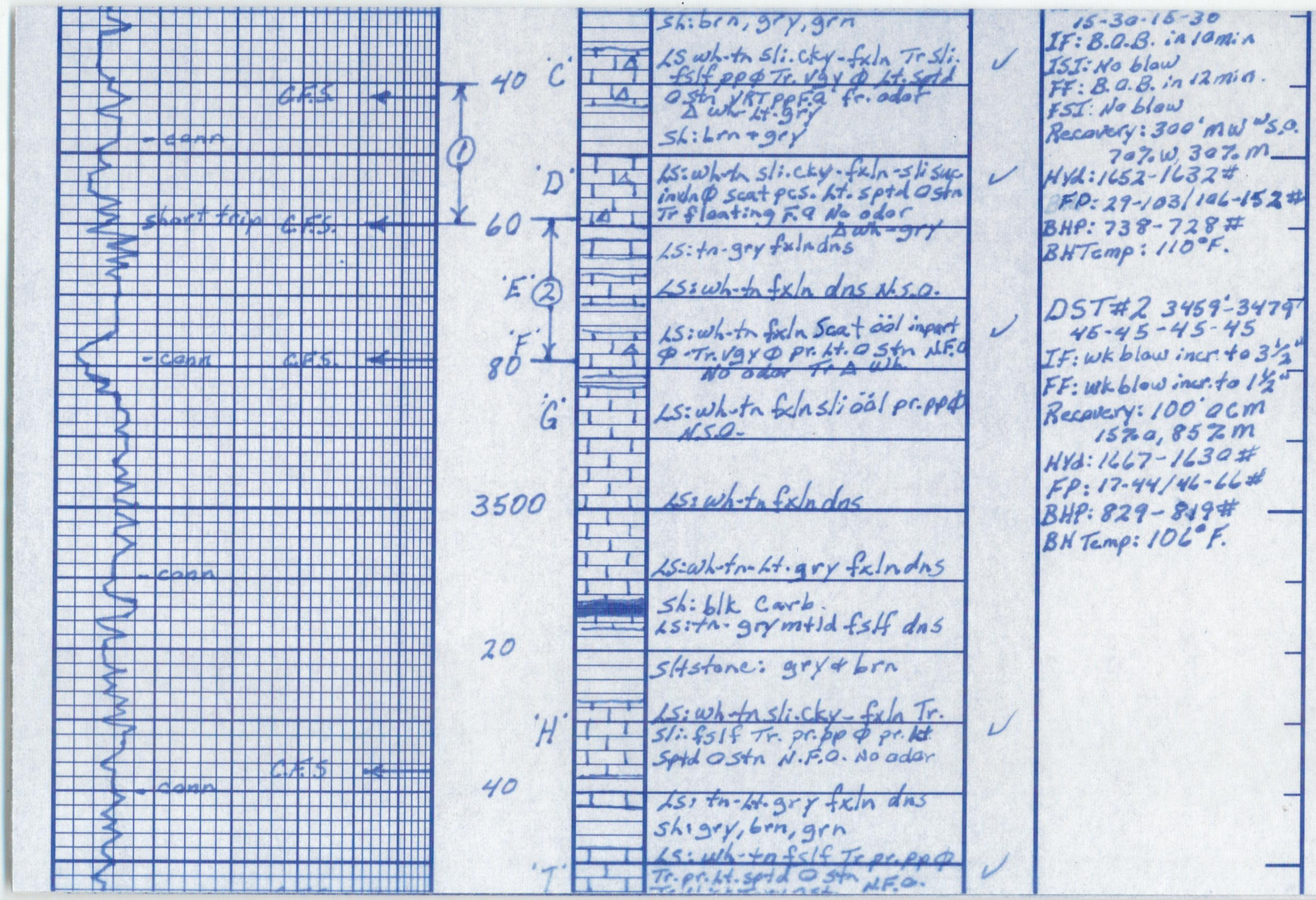
LS: gry fslf dns

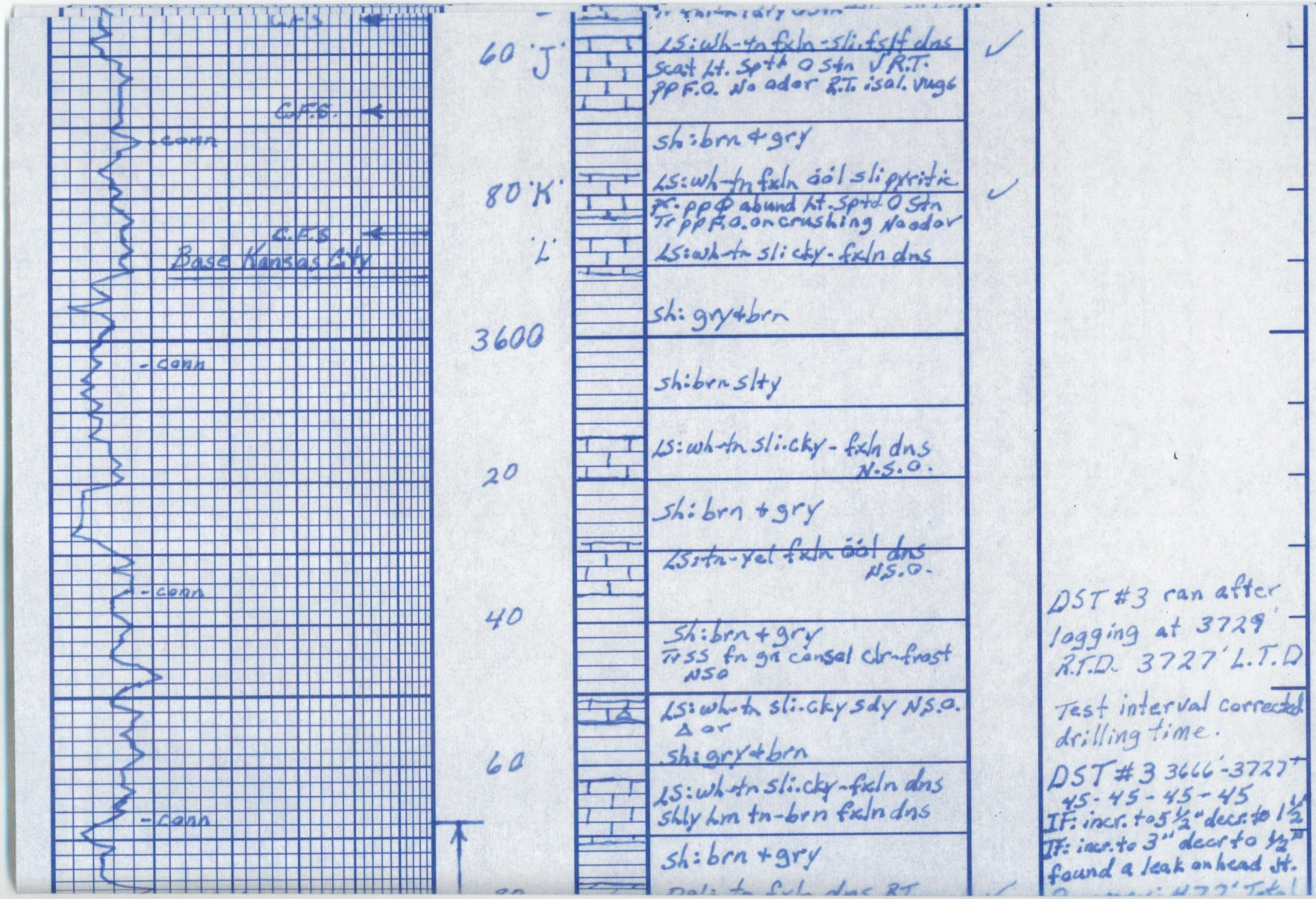
V.s. dropped from heavy rainfall poor samples for 4 samples

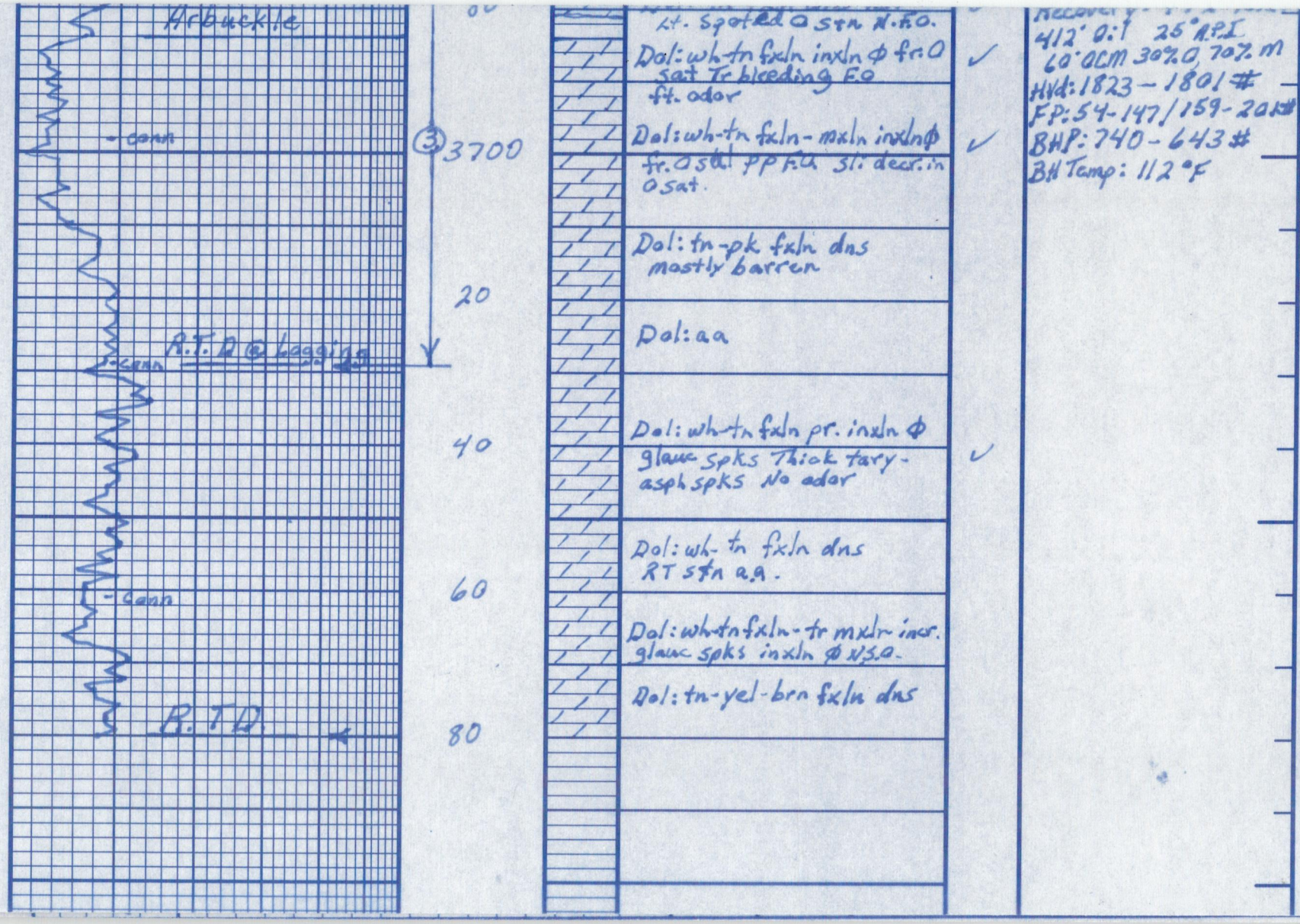
Board 3479.70
Strap 3478.92
Diff .78

Incline @ 3460' ½°

Trilobite Testing
DST #1 3440-3460


C.F.S.
- conn
short trip C.F.S.
- conn
C.F.S.
- conn
C.F.S.
- conn
40
60
80
3500
20
40
'C'
'D'
'E'
'F'
'G'
'H'
'I'
1
2
Sh: brn, gry, grn
LS wh-tn sli. cly-fxln Tr sli. fslf pp Φ Tr. vgy Φ Lt. spkd O stn YRT pp F.C fr. odor Δ wh-Lt. gry
Sh: brn + gry
LS: wh-tn sli. cly-fxln-sli suc. intxln Φ scat pcs. Lt. spkd O stn Tr floating F.C No odor Δ wh-gry
LS: tn-gry fxln dns
LS: wh-tn fxln dns N.S.O.
LS: wh-tn fxln Scat ool inpart Φ - Tr. vgy Φ pr. Lt. O stn N.F.O No odor fr Δ wh
LS: wh-tn fxln sli ool pr. pp Φ N.S.O.
LS: wh-tn fxln dns
LS: wh-tn-Lt. gry fxln dns
Sh: blk Carb.
LS: tn-gry mtld fslf dns
Siltstone: gry + brn
LS: wh-tn sli. cly-fxln Tr. sli. fslf Tr. pr. pp Φ pr. Lt spkd O stn N.F.O. No odor
LS: tn-Lt. gry fxln dns
Sh: gry, brn, grn
LS: wh-tn fslf Tr pr. pp Φ
Tr. pr. Lt. spkd O stn N.F.O.
15-30-15-30
IF: B.O.B. in 10 min
ISI: No blow
FF: B.O.B. in 12 min.
FSI: No blow
Recovery: 300' MW w/ S.O. 70% W, 30% M
Hyd: 1652-1632#
FP: 29-103/106-152#
BHP: 738-728#
BH Temp: 110°F.
DST #2 3459'-3479'
45-45-45-45
IF: wk blow incr. to 3½"
FF: wk blow incr. to 1½"
Recovery: 100' OCM 15% O, 85% M
Hyd: 1667-1630#
FP: 17-44/46-66#
BHP: 829-819#
BH Temp: 102°F.


C.F.S.
- Conn
C.F.S.
Base Kansas City
- Conn
- Conn
- Conn
60 'J'
80 'K'
'L'
3600
20
40
60
LS: wh-tn fxln-sli.fslf dns
scat Lt. Sptd O Stn √ R.T.
pp F.O. No odor R.T. isol. vugs
sh: brn + gry
LS: wh-tn fxln ool sli gyritic
pp abund Lt. Sptd O Stn
Tr pp F.O. on crushing No odor
LS: wh-tn sli cky - fxln dns
sh: gry + brn
sh: brn slty
LS: wh-tn sli. cky - fxln dns
N.S.O.
sh: brn + gry
LS: tn-yel fxln ool dns
N.S.O.
Sh: brn + gry
Tr SS fn gr consol clr-frost
NSO
LS: wh-tn sli. cky sdy N.S.O.
Δ or
sh: gry + brn
LS: wh-tn sli. cky - fxln dns
Sltly lm tn-brn fxln dns
sh: brn + gry
DST #3 ran after logging at 3729'
R.T.D. 3727' L.T.D
Test interval corrected drilling time.
DST #3 3666'-3727'
45-45-45-45
IF: incr. to 5½" decr. to 1½
IF: incr. to 3" decr to ½"
found a leak on head jt.


Arbuckle
- conn
3700
20
R.T.D @ logging
- conn
40
- conn
60
B. T.D.
80
Lt. spotted o stn N.F.O.
Dol: wh-tn fxln inxln ϕ fr. O sat Tr bleeding F.O ft. odor
Dol: wh-tn fxln - mxln inxln ϕ fr. O stn pp f.u sl. decr. in O sat.
Dol: tn-pk fxln dns mostly barren
Dol: aa
Dol: wh-tn fxln pr. inxln ϕ glauc spks Thick tary-asph spks No odor
Dol: wh-tn fxln dns RT stn a.a.
Dol: wh-tn fxln - fr mxln incr. glauc spks inxln ϕ N.S.O.
Dol: tn-yel-brn fxln dns
412' 0:1 25° A.P.I.
60' OCM 30% O, 70% M
HVd: 1823 - 1801 #
FP: 54-147/159-203#
BHP: 740 - 643 #
BH Temp: 112 °F