

AWG

or 1001 Main St.

PO Box 1288, Fayetteville, AR (Ken Killgore)

501-521-5400

Gunter Test = to spud 1-10-89

NW Sec. 19 400-450' South of sec. line

In Big Spring Draw of Terrapin Cr.

Go through Barrett Ranch

Geologist:

(501) 925-1590^{E. End}

Hwy 12 -- Bridge @ Beaver Lake

Mose Hill - Hasty 7 1/2'

NE SW 33 T17N R19W

Elev 1030' (GL = 950 ± 5') -- Elev = 960 ± (P)

Bobbie Beck
Quinn Eber
Ben Clarky
Boyd Haley
Glick

Hardell Area A-2

Mbn 66 + 3' Cong SS = BMSS

1050
- 69 BMSS
+ 981 oe

oe 379 Newton - 191 - 255
Opw Basal. oe Cong + s/sdy dol 376 -
two 3/4"

#474 (tr chert but none below)

oc 747' + 350 = 824 (913 Xlls below 692)

Company calls 22' + 700 = 1174
199'

oe 1420' 895 = To Brown Ool
1153 ± Top of sdy dol layer
m. c sdy units below
(25% sand)

oe 1572 (1404 = or/og)
1363 - still sdy
1453 - still sdy over chert

oe 1853
1516 still sdy
1524 " " - sand to 1578 ±
1578 Top of variegated dol

oe 1872 - 1st sd - ~~tr~~ sdy dol below w/

(895 (or s1 higher) 3' lost core at this general interval

oe Basal Sand matrix
Cong

+ some red dolomite

2075
1050
1025 = 0.3125
May conglomerate
+ TD

REVole 1991 Sand matrix to 2021 +

2015 " " 2065 + K

Volc buff agglom Scott PK dol. In Vags + PMS
01142-1100

Viola = #5 T20 N R 9W Sec 25
GL = top Oct
Start NE NESW Ele 900'
- some ch

1648 - in vuggy Dol = Emence

2500 - Banded

2522 - Shaley = Davis Top?

2533 - 2684 > 50% Shale (crin) + Ls

2684 Glauc ls + some sh
pelletal ls

To 2756 + to 2775[±] Still poker-chip shaley

2775 → Less shaley - solid ls + dlt sh,
+ silts?

2793 = Marked base glauc

2793 → Solid banded core
silty carbonate

2950 → Top Bonne Terre Dol
Glauc above 2950

3333
1648

1685408€

3111.8 Top Lamotte ss

3165+ → shaley ss

Below 3225 less shale = white ss

Below 3265 More shale

Below 3285 Little sh - Purple-br ss
interbedded w/ wh ss

TD - 3333 - Lowermost ss m-c
- 900

- 2433 heavy purple to chocolate

- 0.742 Km color in some layers

#2
Heart NEA-5-1
T 19N R 7W Sec 18 SE 5W
Ele 830

Core starts @ 1515 in Emence

1st ls to 2502

sh + glauc ls to 2725

Below 2725 glauc ls + dol

= Bonne terre T.

2942 Top Ls w/ pebbles
to 3050

3006 Top of basal Cong
limy matrix

3043.5 Top of igneous

830

2213.5

0.675 Km.

3043.5

1515

1528.5'

0.4659 Km

M-5A-1-1 (Missouri Hole)
Bottom Lane He 2035

Dalton #3

82-1

~~T19N R7W Sec 18 SE SW~~

T20N R2W Sec 1 NESWSE

E1E 335"

Samples

1586 - 3290

335

1245

Starts in Emmanence

Vuggy Dol w/ some druse

2221 - Top ls (beginning of banded ls + sh)

2341 - Oolite + sh - banded

2490 Top of mostly ls sequence some wispy shale

~~255~~ 2522 - Top of Dol, end of Ls

2722 - Tr oolite

2777 Ls →

* 3025 → 60% glauc

3055 ss + Glaucoi X-bd

3201 → Clean ss

Purple banding

3253 → ³²⁸² granules = feldspar ??

3282 → coarser (3/4") cong

3287 Igneous

TD 3289

335

Marshall A-3 (Zack)

NE $\frac{1}{4}$ 10-15N-16W

Elev 680'

TD: 2500

2' sdy ls

27 OP 27 middle Osp well developed sh, dol etc

IXI Osp 108
oe

648 647 1/2
ospw - 741-743 Chert, sl bonded? mostly earthy

805 oc

Oj'c

OR -1539 1st ss
1918 last sd

2405 Oges

2490 Ogun

No sand seen in last box

2490-2500 - Look like vuggy

Emmenence

Basement Top of ϵ

	Depth	Alt	Depth	Alt	
① "Hasty" Alt Mose Hill ^{960'} NE SW 33-17N 19W	2070	-1020 -1140 -3383 -3347	Similar		No ϵ
② "Viola" Alt NENE SW 25-20N 9W	(TD in Lamotte) > 3333	-2433 > -0.7416	0-1648 NS \bar{c} @ 1648 < 1648	\bar{c} = -748' < 0.228	Core starts in ϵ (\bar{c} = > 0.5136)
③ "Heart" Alt SE SW 18-19N 7W	3040	-2210' -0.6736	0-1550 NS \bar{c} @ 1550 = 472.44 KM	< -720 < 0.2195	Core starts in ϵ (0 @ G.L.) (\bar{c} = -0.4541)
④ "Zack" Alt NE 10-15N 16W	-	-	2490	-1825' -0.55626	TD in Eminence
⑤ "Dalton" Alt NE SW SE 1-20N 2W	3286	-2951 -0.8995	0-1580 NS \bar{c} @ 1580 < 1580	< -1245 < -0.3795	Core starts in ϵ (\bar{c} = > 0.520)
⑥ Place Amer Hole 44 SE-NW 20 19N 18W			\bar{c} = -1519 TD in ss 2646	\bar{c} = 3599 = -599 -1726	BOTH in Lamotte
⑦ Place Amer Hole 13 SE SE SE SW 2-16N 10W			\bar{c} = 2179 TD 3123	-1029 -1973	sdg, volcanic- cobble cong clay sd & silt matrix

① Randolph C Hole 82-1 ^{Topo} GL = 350 ±
 NESW SE 1-20N-2W
 Ig 3287 - 3289 TD
 Sed/Ig R. Ig 3284 - 87
 -2934
 (0.894 Rm)

② NEA-5-1 Fulton ^{GL} 830 ±
 SESW 18-19N-7W
 Samples { 3039 - 3040 Ig
 3043 - 3045 TD
 3041 - 3043

W. S. King #1 Lee
 N E SW 24-18N-21W
 Elev: 2186
 TDI: 1451

Hale 158 —
 MFr 321
 MBV 605
 Mbn 680
 Oe 1055
 OFW 1255
 Oc 1425

284'
 75'
 375'
 200'
 170'

Base Caprock
 Base P_{hp} = 305+?
 Base P_{hc} = 325+??

2186
 158
 +2028
 2186
 153
 2033

= silty, mic. siltstone
 that looks like P_{hc}
 +20-25 much siltstone
 May be P_{hc} to 500
 Good clays sh, esp
 below 550

Jsonly 145
 150
 1st 15
 in 150-55

Ark-Western #1 Bryan (Byron P)
24-18N-22W
0-200 - NS

Elev 1884 Grd
1897 KB (est)

200-210 - Bone Fr

400 - 10 " "

410 - 20 Tr v f ss = B Mass?

420 - 30 M-c ss

430 - 40 " " Free daly

440 - 520

520 - 30 Mixture fine sd & dol

530 - 40 " ^{crumby} v f xlln dol ^{or 1/2} 5% sdy dr

540 - 550 Similar \leftarrow 550 $\frac{op}{opw}$

550 - 60 Med lt gy v f xlln dol - scatt sd grs

560 - 70 f-c rd + fr sd dol as above

570 - 580 Med - gy v f xlln dol, but fine sd

580 - 590 Dol, lt-gy salt gr-gy, v f xlln

590 - 600 Similar but 5% wh cl

600 - 610 wh - v f xlln dol = sucrose

610 - 620 M-gy v f xlln dol

620 - 40 " + lt br gy v f xlln dol / it sdy dol

640 - 50 lt-gy v f sucrose + dol

650 - 60 Similar but sl sdy salt grs

660 - 70 lt br gy v f xlln dol

Tr sl grs in some pieces

Ark - west Bign

670-680 Dol, br-gy, rf-f xlls;
tr free sand

680-90 Dol, lt-gy, rf sucrose

690-700 Similar - tr floating sd

700-720 Dol, lt-gy, med-gy, gr-gy

720 ^{of w} _{oc} Dol, lt-br-gy, rf xlls;
tr gr sh; pyrite
to xlls

abundant wh, lt-gy, lt-br ch

740-50 Dol, lt-gy, rf sucrose
sl tr wh ch

750-60 Dol, lt-br, rf xlls; lt-br ch

760-800 Similar; much ch

some R-gy dol in lower 10'

800-1300 Not examined

1300-1330 Dol, lt-gy to med lt-gy f-xlls
tr sd in some pieces

< 5% ds ch, mostly wh

1330-50 Dol, lt-br-gy, f-xlls
little or no ch

1350-570 Dol, Br-gy, f to m xlls

1370-1380 Dol, lt-br-gy, f-m xlls;

5% lt-br-gy & lt-gy ch

1380-1400 Similar - 10% ch

Ark-west Bryan 24-18-22

- 1400 - 1420 Dol, lt-br-gy, f-xlln; fr f-m
gr ortho quartzite
wh ch, lt br ch, vlt "purple" ch;
tr br ools
- 1420-30 Dol, lt-br-gy, v f xlln
- 1430-40 Similar; 10% lt-gy
ch w/ fr ools & f-m sd
- 1440-50 Dol, br-gy, v f - f xlln;
5% lt-gy & lt "purple" ch
- 1450-60 Dol, br-gy, v f xlln; < 5% ch
- 1460 - 70 Dol, lt-br-gy, v f xlln;
5%+ ds ch, mostly wh & lt-gy
- 70 - 80 Similar; < 5% ch, mostly clear & ds
- 80 - 1500 Dol, lt-br, v f sucrose;
5% lt-gy to wh ds ch
scattered f sd in dol & ch
- 1500 - 10 Dol, lt-gy, v f sucrose;
scattered f-c sd grs; 5% ch,
f. sd in part; clear & ds ch
- 1510 - 20 Dol, lt-gy, v f sucrose;
10% ch, lt-gy ds
- 1520 - 30 Dol, lt-br-gy, v f sucrose;
only tr ds ch & no sd seen

Ark West Bryan

- 1530 - 5 Dol, br-gy f-m xls; 10%
ch, mostly wh, ~~incl~~ included
med del xls; sum ds. + brecciated
to cong ch -- resubstituted
lt-purple ds ch
- 1550 - 60 Dol br-gy, m-rhombic;
wh silica matrix; tr free fm sds
Tr lt "purple" ds ch
- 1560 - 80 Dol, br-gy, m-rhombic
20% ch; lt-gy ds, wh dolerhombic,
clear f-m sds; tr br sil ch;
- 1580 - 90 Dol, lt-br, f-m rhombic
- 1590 - 1600 Similar - 10% wh & lt "purple" ch
- 1600 - 10 Dol, lt-br, f-rhombic
20% lt-gy & lt "purple" ch
- 1610 - 20 Dol, lt-br, f-m rhombic;
dolerhombic ch; clear; large, ^{3%}_{100%}
doubly terminated qtz xls; 5% ds or
- 1620 - 30 Dol, lt-gy, f-med rhombic;
30% lt-gy ds, wh dolerhombic, +
clear f-sds ch
- 1630 - 40 Dol, lt br gy f-med xls;
20% ch, lt-gy ds, wh dolerhombic,
clear f-m sds

Ark west Bryan

- 1640-50 Similar; 20% clear to wh
f-m sdy & sl col orthoqtzite
- 1650-1677 Dol, lt-br gy, f-m xlls;
30% lt-gy to lt "purple" ds ch
tr clear to wh orthoqtzite w/ tr rls
tr free arls & f-m sd
- 1670-80 Dol, lt br gy, f-m rhombic;
>30% ch, mostly wh to lt
br col & f-m sdy;
lt-gy to lt-br ds
- 1680-1691 Similar but more sdy,
sdy ^{part} ch; several free
f-m rd & fr grs at sd
- 1690-1700 Dol, lt-br gy, ^{f-m} sdy,
f-m rhombic; <5% ch
as above; many free sd grs
but <1%
- 1700-10 ss, wh, sil, f-c gr;
loosely cemented orthoqtzite
- 1710-1720 Similar & 20% lt-br f-rhombic
dol; <5% gy ds ch
- 1720-30 sil, wh f-c-gr; mostly
drills free but some
silica cement throughout; idd fr grs

Ark - west Bryan

1730-2198 NS

2198-226 Dol, lt-gy, f rhombic)

Z wh ch matrix; 5% lt-gy
ds ch, free f-vc sd grs

2216-2219 $\frac{1}{2}$ Dol, lt-gy, f-m-x 1) $\frac{1}{2}$ '30% ch
clear drilling thru grs, xlls
2219 $\frac{1}{2}$ lt-gy ds; wh earthy & rhombic,
Gunter poorly sorted

2219 $\frac{1}{2}$ -25 Ss, wh, siliceous, vf-vc; fine
rd & fr grs & silicified layers
(Samples = short intervals but
not of consistent ^{or matching} intervals)

2225-36 Ss, lt gy, free drilling,
vf-c gr; rd & fr

2236-2266 Ss, wh, vf-vc gr; lightly
cemented - mostly free drilling
rd & fr grs

2266-74 Ss, wh, vt-m gr; ^{poorly sorted} tr-c grs;
lightly cemented - drills free
in large part rd & fr grs

2274-2290 Similar but sl coarser
wh clay or granular silica matrix

2290-2310 Ss, wh, poorly sorted vf-vc ^{tr-vc} grs;
wh matrix - mostly free drilling
^{locally}

2310-2315 Similar, but abundant fine to
lf grs = matrix to coarser grs

Ax - West Bryan

2315-16 ss, lt-gr to med lt gr,
vf to f gr;

2316-26 NS

2326-2331 ss, wh, vf - vc gr, irregularly
sorted; much wh vf matrix -
may be silica

Gunt 2331
e

2331-33 Dol, lt-gr, m-c rhombic
c xls with calcite (20%)

2333-38 Dol, lt-gr, f-c xls
wh matrix

2338-40 Probably similar
Fe stained & drilled
fine - to rd & fr sd
(Junk sample)
TD, 2340

Sample 2328-31 junky =
Fe stained & mixed
sl, ch, dol, etc
Base of sl may
be @ 2328 = base of
clean sd sample

Arkansas - Western Roberts 25-18-22

Elev 2100 KB

1st Hole lost @ 65' in PPh ls

2d Hole Air drill

0-60' NS

60-70' Sdy Ls (PPh)

70-100 NS

100-110 (Regular cuttings - not air)

Sh, med-gr, mic

siltst - med-gr

ss, med-gr of f gr

110-140 ss, of gr, sh, dk-gr, siltst
some sdy ls; crin, etc

140-150 Ls, med-br gr, of sdy, silts
f-xlln; oriented matrix

150-170 NS

170-180 Ls, ^{mbn} cream, wh, pink, f-m xlls (crin frags?)
in of xlln matrix; crin;

dull wh chert (from above?)

Looks like Ms; but is upper Mbn

180-200 Ls, pinkish wh to lt-gr
siliceous, foss, f-xlln
wh dull ch; Abund Crin
& brachs

AWG Roberts

- 200-215 } ss, lt-gr, ool, fose,
 short f-gr; fose frags & xls?
 mixed with ools in vfxls
 matrix
- 215-230 - mostly ds wh & lt-gr ch
 some f-xls, lt-gr ls
- 230-500 Not expressed
- 500-540 - St Joe-like ls w/
- 545-Bmss 20% lt-gr & wh ds ch
- 540-51 1st sand, f-gr in
 lt-gr streak w/ pyrite
 May be thin black-shale
 = MDC - some in 540-50
 (or slump?) 550-60
 560-70
- 550-60 ss, wh, free-drilling, f-m gr
 rd & fr - bright
- 560-600 ss as above vf-c gr
 poorly sorted - mostly
 vf-f gr
- 600-70 ss, wh, vff gr to med. f-dvll
 rd & fr
- 640-50 ss, wh f-med gr; free-drill
- 630-60 ^{LS} dot (or ls) cream, f-xllz
- 660-~~70~~⁷²⁰ Powdered carbonate; sandgrains
- 720-40 ss, powdered, f-m-gr; tr & ls
 as above

AWG - Roberts

740-50 Dol, med lt gy, vP rhombic
to granular; tr free sd
but none seen in del.

750-1200 NS

1200-1240 Powdered

1240-1300 Dol, lt-br, vP rhombic;
wh & gy ds ch
tr gy-gr clay partings

1300-10 Dol, br-gy, vP rhombic
wh ds ch; trool ch

1310-1330 Dol, lt-br-gy, vP rhombic
gr-gy clay; few sd grs

1330-50 Dol, lt-gy to lt-br-gy,
f-m xls; pores
& Dol lt-br vP rhombic
tr gy ds ch

1350-1400 Dol, vP gran, lt-br-^{lt-gy to}gy

1400 = last sample

TD: 2320

Ark-Western #) Clyde E. Bray

24-18N-22W

Elev: 2158 Gnd. (KB-2170' Est)

0-50 NS

50-60 Sand, fine-drilling, f-vc gr,
angular

60-70 Sand as above & SS; tr grains
? ^{zC. druck} 65 = PHP is ls, lt-br-gy, f-xlls

70-81 Slump? mostly SS as above

80-170 SS as above - many granules

170-180 SS, br-gy, v ffg, limy, foss

180-310 Sh, med-dk-gy, vf mic, siderite

(-Good clay sh = MFP.)

^{mf} 315 ±
310-320 Sh as above & vf-fgrs (Mbr?)

320-30 NS

330-40 SS, med-lt-gy, vf-fgr, limy

340-360 SS as above & ls, many foss, flls

ool,

360-70 Mixture - ls & SS (as lts)

370-80 ^{mbv} 375
mbn Sh, med-gy, v silty
in part; ls, cream, vf xlls
clast, lt-gy, ds

AWG - Bray

- 380-40 Ls, cr, siliceous, vfxlls
- 390-400 Similar, v cherty earthy
- 400-410 Ls, lt-gy, sil, vfxlls
- 410-20 ^{part} Ls, lt-gy, ool, vfxlls matrix
 foss frags + xllsⁱⁿ ool
- 420-⁴⁰30 Similar in fragments in
 earthy matrix, but v few ool
- 440-70x Not examined
- 700-30 Ls, cream, m-xlls; foss
 = msj(?) crin in f-xlls matrix
- 730-780 Ls, cream vfxlls; crin;
 lt-gy ds ch
 dk-gy sh fragments 740-50
 = slump? yes
- 780-90 Crin Ls = msj
- 790-800 Cherty mds-like ls
- 800-10 " " " "
- 810-20 Cherty crin ls
- 820-30 Lss ch - looks like msj
- 830-40 mds-like ls
- 840-50 Crinoidal ls = msj?
- 850-60 " " "
- 860-70 " " ; pyrite
- 870-20 " " "

AWG - Bray

- 880-90 Ls, creamy, vfxlln; many Crin Pyrite
- 890-90v Mostly lt-gy to med-gy ds ch; sweep crin ls
- 900-10 Ls, lt-gy to cream, vfxlln; crin; 5% wh to lt-gy ch
- 910-40 Ls, lt-gy to cream, vfxlln; 30%^{-40%} wh to lt-gy ds ch
- 940-70 Ls, lt-gy to dk pinkish-gy crinoidal; vfg matrix = Ms; (?)
- 970-80 Similar; pyrite; ds-gy clay
- 980-90 Ls, lt-gy, vfxlln 40% lt-gy & swirly-gy ^{ds} ch
- 990-1000 Similar - much of ch is lt-br (sl rusty)
- 1000-1010 Ls, lt-gy to lt pinkish-gy, earthy vfxlln; crin; 20% lt-pink ^{lt-br} & swirly-gy ch
- 1010-1020 (?) - ^{As} maxed on envelope Mixed sample; Crinoidal (Ms?) ls; dk-gy sh, in part f-sdy; sand ~~ss~~, f-gr; some rd & fr; some bright?

Ms
MPC 13492 1015
OR

AWG - Bray

1018(?) - 22 SS, bright, f-cgr;
tr sandy to lt-gy chert/pyrite;
tr black shale

1025 - 30 v small sample rusty
f-m rd & fr sd

1030 - 35 Rusty f-c rd & fr sd

1035 - 40 sd, wh, v f-f (similar)
free drilling

1040 - 45 SA, rusty, v f-c

1045 - 55 SS, bright, v f-c;
drills free except when
sil cement is stronger

1055 - 75 SS, wh, v f-fgr - tr m
drills free - but bright

1075 - 80 SS as above + 5%

Dol, lt-gy, slsdy, v fr hemb

1080 - 90 SS, silicified, r-cgr

1090 - 95 Ls, lt-gy, f-m sdy, v f gran;

1095 - 1100 Similar but much more
med-c rd & fr sd

1100 - 1130 Ls, lt-gy, v f gran, scatt f-m sd

1130 - 1140 ss, free drilling v f - med gr

1140 - 1155 Ls, lt-gy to lt-br-gy, sandy,
v f gran; f-m sd

AWG - Bray

- 1155 - 60 Powder - some sd grs
- 1160 - 80 Ls, ~~alt-br-gy~~, vf green
sandy, f-m sd
- 1180 - 85 Dol, br-gy, vf rhombic
slsdy; <5% wh dsch
- 1185 - 1195 Dol, br-gy, vf rhombic
- 1195 - 1205 Dol as above & Dol, lt-gy
(Cream) vf rhombic (sucrose)
- 1205 - 1225 Dol, br-gy, vf rhombic
lt-gy sucrose dol, gr-gy
pyritic clay
- 1225 - 30 Dol, lt-gy to lt-br-gy,
vf rhombic (dull sucrose)
- 1230 - 1240 Dol, as above & in part
f-m slsdy, gr-gy clay,
br clay; pyrite
- 1240 - 1260 Dol, lt-gy + br-gy,
vf rhombic - some
common rhombic @ 1250
- 1260 - 65 Dol, br-gy, f-m rhombic
- 1265 - 70 Similar dol & Dol, lt-gy
vf rhombic (dull sucrose)
- 1270 - 1300 Dol, dull lt-br-gy, ^{to br-gy} vf rhombic

AWG - Brny

two colors
each from distinct
layers

1300 - 1325 Dol, lt-gy & br-gy, rf rhombic (dull surface) pyrite

1325 - 1370 Dol, lt-br-gy, rf rhombic (sacchar) ; 5% lt-gy ds ch some br-gy & greenish-gy (clayey?) dol
Some ch in every sample

1370 - 1870 Not examined
1870 - 1940 little if any sand or m-xlls dol

1940 - 2030 Tr sd, & med-xlls dol (much to little or none) sdy dol ch

2050 - 60 Dol, lt-br-gy, m-xlls; f-c rd & fr sd in dol

2060 - 2075 Dol, lt-br-gy, m-c xlls; little if any sd

2075 - 2090 Dol, lt-br-gy, f-m xlls; mesh sdy clear ch & gy-dsch - partly sdy f-m sd

2090 - 2105 Dol, br-gy, f-rhombic cherty in part

AWG B Ray

- 2105 - 2115 Sdy, cherty dol;
f-m gr orthoqtsite
ds lt "purple" ch
- 2115 - 3A Dol, br-gy, rhomb
(drilled fine)
- 2130 - 2184 Mostly siliceous
Clear f-m orthoqtsite
lt-br dol ch; free sb
- 2184 - 2200 Ss, bright (ed granitic)
free dol; f-m med gr
some c-grs
- 2200 - 05 VS
- 2205 - 2212 Core
- 05-06 Dol, med-sz, rhomb
f-m sdy in part
- 06-07 Similar & dk-gy
clayey (rhombic to
vs granular dol
- 07-08 Ss wh, f-c;
delic matrix;
dk-gy clay parting
- 08-09 Ss, wh, vs f-gr^m
- 9-10 ..
- 10-11 + 11-12 ..

Aug - Bray

- 2212 - 18 Core 2212-13 - Dol, lt-gy, freshw
2213 - 17 Similar - no sd
2217 - 18 Dol, vagg, m-c xlls
No sd seen in dol, but
free sd grs in sample
(out of place?)
- 2218 - 2281 NS
- 2281 - 90 Dol, lt-gy, m-xlls
f-m sd
- 2290 - 2295 Similar, f-c sd
- 2295 - 2305 Dol, lt-gy, f-m xlls
tr f-m sd (fine cuttings)
- 2305 - 15 Powdered
m-xlls dol & even sd
- 2315 - 2330 Dol, lt-gy to lt-br-gy
m-xlls (fine spongy)
Tr free sd
- 2330 - 50 Dol as above
20% lt-gy ch; tr free sd
Some m-c grs
- 2350 - 60 Little sd but gt 3 xlls,
ool ch, etc
- 2360 - 2400 Mostly xlls lt-br-gy
(fine sample)

AWG - Bray

- 2400 - 2650 Not examined
- 2650 - 2670 Dol, lt-gy, f-m) $\frac{1}{2}$ (Powdered)
- 2670 - 85 As above & lt-gy ch (some ools)
- 2685 - 2700 Mostly dol
- 2700 - ss, free drilling C-VC grs; rd & fr (esp coarser grs)
- 2710 (core) Quartz ss - f-cgr (Poorly sorted) (much fine matrix)
- 2717-12+13. wh vf-c grs; f-matrix = tight
- 2715 2722, 2723 Similar - darker & ~~much~~ finer 2722 -
- 17
- 18 - Porous
- 19 2726-30 mid-lt-gy vf-vc
- 20
- 21 2726-27 = tight in part

- 2803-2805 Core - ss, dull lt-gy, vf-vc gr; poorly sorted tight hard & coarser grains scattered in matrix of vf sd, Al? silica?
- TD-2805(?) Last sample 2805 = junky

Arkansas Western Gas Co #1 Ladd
E/o 1837 grd 18-18N-21W
1848 RB TD-2270

Reported
O gun 2137-2237

Large samples
& Coarse cuttings

- 0-20 Decalc Mn ch
- 20-30 Ls, lt-gy to pinkish-gy sil,
Crim, vfxlln; much ch
- 30-~~40~~⁵⁰ ^{short} ^{crust} Ls, wh-earthyn, vfxlln;
Crim xlls & ools in
fine matrix
- 50-60 Similar but no ools seen
- 60-300 Not examined
- 300-10 Ls, lt-gy vfxlln; trds ch
- 310-20 Ls, lt-gy & red-br, crin, vfxlln
- 320-30 Similar, less red
- 330-40 Red & gray-green
- 340-50 Ls, lt-gy, vfxlln; <10%
lt-gy & sandy-gy dsch
- 350-60 Similar - less ch
- 360-70 Ls, lt-gy, vfxlln; v little if
any chert

AWG - 22d

370-80 Mixed lithology

(MS) Ls, med lt-gr, crin, v f xlls

(MC) Sh, dk-gr; v f sly in some pieces

378⁺/_{oe}

BMSS SS, clayey, glauc^{phs}, dirty, v f to med-gr

Oe SS, f-m gr, free drlg.

380-430 NS rd tfr

430-470 SS, free drlg, v f-m gr (Poorly sorted but mostly v f-f)

470-80 Similar but coarser ^{small} K-grs

480-90 Powder = ls?

490-560 Ls, ^{lt-gr to} Cream, v f gray, sl sly (some may be sludge)

560-600 Powdered carbonate -- still a few free sd grs

600^{oe}/_{opw}

600-630 No sd gra noted in powdered to fine samples

630-710 Coarser cuttings = separate layers

Dol, sucrose lt-gr to med-gr v rhombic - most seen in rock -- vsl trace Prec sd = slump

1873^{oe}/_{opw}

710-30 Dol, ^{med} lt-gr to lt br-gr f-rhombic; < 5% ds gr ch tr gtz xlls; fine cuttings

hint of br ools in ch

730-1400

Not examined

AWG Ladd

1400 - 1490 Dol, H-br-gy, f-rhombic
10% H-gy f-ool & f-sd ch
some f-sd nuclei

1490 - 60 Dol, H-br-gy, f-rhombic
only sl trace sly, ool ch
(f-sucrose)

1460 - 70 Similar - 5% H-gy ds ch

1470 - ~~80~~¹⁵⁰⁰ 10% ch; some wh^d rhombic^{ch}
& wh matrix of m-rhombic

1500 - 1520 Dol, H-br-gy, f-rhombic
sl tr ch

1520 - 1550 Similar 5% H-gy ch
tr wh silica matrix

1550 - 1569 Dol, H-br-gy & f-rhombic
tr wh silica matrix

1560 - 80 Similar - 10% wh
ool & f-rhombic chert
to clear orthoqtzite

1580 - 1620 30%^t ool ch & orthoqtzite
f-c sd; free C sil grs,
some coated

1620 - 1650 Powdered - many free,
some broken, gtz grs f-c -
frags orthoqtzite; ool ch
med-x/ln dol (in part) (may be ss)

AWG - Ladd

1650-1670 Powdered - Dol, ^{lt br gy} m-xlln,
sandy - ^{free} f-c sand abundant

1670-1695 Dol, lt-br-gy, m-xlln
5% lt-gy ds ch; tr f-c sil
tr sdy ch

1695-1705 Dol, lt-br-gy, f-r rhombic
(sub-surface)

1705-1710 Similar; < 5% wh earthy ch

1710-15 ss, drills free, ^{criss siliceous} r f-f gr
tr med gr - some dol
as above

1715-25 Dol lt-br-gy m-c rhombic
tr ch & siliceous f-gr ss

1725-1740 Dol lt-br-gy, f-m xlln;
< 5% lt-gy ds ch
tr free f-r med grs

1740-50 Dol as above
10% ch, f-m ^c sil, stool
some ds; some f-m sil dol

1750-1775 Only tr ch & sand

1775-1785 1 or 2 free grains of sand
noted in each sample
< 5% lt-gy ds ch in
lower part - tr sdy, tr ch

Arkansas Western - Bradley 27-18-22

TD: 2393 Elev 1866 - grad 1873 NB
sd 2276-2364 Report

0-1030 NS

^{2 in 0.2}
1030-40 Dol, lt br gy, v f rhombic
tr sd in some pieces
1% ch

1040-2200 Not examined

2200-2215 Dol, med lt-gy, c-rhombic
wh silica matrix in part

2215-2235 As above < 2% gy ds ch

2235 to 2393 (TD) = No samples

Top € 2366'

- 1873

- 493

2366

493

1873' = 0

AWG Bray (Recheck)

8-501-925-1390

Alexander #1 Hay thorn

5-16N-24W

Madison Co, Ark

KB=1325

TD=2858

- 1533

= -0.467

660 FSL; 2140 FWL

240 msj

40' = Fault

548

Set pipe

607

Roub SS ————— 1500

Massive SS ————— 1560

1600

very sdy ————— 1700

1783

Air Drill

run

2092

Gunter

65' SS 2158 (- 0.32
= -0.253

Lamotte

TD

2858 - No Fe

Drilled summer of 1989 11-28-89

Alexander - #1 Haythorn Ele KB-1325
5-16N-24W (660' FSL; 2140' FWL)
Madison Co., Ark. TD: 2858

Samples from AGC, via UPS
well drilled by Russell Alexander
et al; samples washed
by Glick.

Lower part of set examined
first to sample white clay.

2700-2710 Dol, lt-br gy to br-gy, ^{limy fxl in matrix}
R: sil silt matrix _{pyrite} vfto f-rhombic; ^{added} large flakes of
qtz xll muscovite = in mud?
dk-gy claystone

① 2710-2720 Similar - etched facet in
ziplock.

② 2720-2730 Similar; less limy; 1 cluster
R: sil silt; tr ^{tr} clear qtz xlls; no sand or glau seen
dk-gy clay, pyrite

③ 2730-2740 Similar; ^{tr} sand, ^{tr} glauconite.
R: sil silt ^{tr} sand grs are rare - none seen
tr transl ch. in R.; ^{seen} but 1 in dol: in place
dk-gy to br sil clay

(Cont on 5th page)

A. H. Purdue and H. D. Miser, 1916

Eureka Springs - Harrison Folio #202

Area = 1,925² square miles

P. 2

Springfield Plateau

"Springfield Structural Plain"

"Springfield Plain"

"Springfield Upland"

Salem Plateau

"Salem Upland"

"Salem Platform"

Eureka Springs escarpment (New)

"Burlington escarpment"

250' to 400'

St. Francis Mountains

Town Sank Mountain 1,750'

"Granitic dike near mouth of Spawman

Creek (NE Okla.)

It seems probable, however, that the region was uplifted near the ~~end~~ close of the Tertiary period, and that the innumerable ravines that now dissect the surface were begun and largely cut during the era of renewed erosion thus brought about."

"The surface of the Springfield Plateau -
- at most places conforms with that
of the underlying Boone limestone -"
Eureka Springs quad 1,350 to 1,700
Harrison quad 1,250 - 1,350 (but to 1,500)

Salem Plateau

1250' above SL

Fall in Feet / Mile

White R	2.5
War Eagle Cr	4
Kings R.	6
Buffalo	10

Outcrops

17 Formations = 3,200'

Cotter - named by E.O. Ulrich
(In FS quad 1911 Ulrich called
Jefferson City but back to
Cotter in 1912)
Banded chert @ top

P. 12 Batesville ss - named by J.C. Branner
(Introduced by F.W. Simonds &
R.A.F. Penrose 1891)
100' thick
Terrazin Creek = 60'
Green Forest = 75'
Burlington = 75-100'

Fayetteville - named by F.W. Simonds
Thickness 10-400'

(20-30' near E 5' probably
only lower part below Wellington)

Thickest = Green Forest & Vandelle.
(commonly 350')

"Deserves special mention".

Abrupt Changes in MF thickness

- ① Carrollton dome 40' = by it dome ^{East} → 40'
- ② 2-3 mi N Osage PO 25-30' ^{East} → 300'
- ③ Sueds Creek dome (SE George) 40' ³⁵⁰ →

MF (cont) Foss ls @ base (=Huntsville?)
 Sec. 15, T. 20N., R. 28W., oolite, brachs.

Upper ^{MS} (above Webrington) - some ls
 Webrington ESquad 4-10'
 Gaither Mtn = 45'
 Harrison Quad generally 6-10'

P, + Kin - 50' near Huntsville
 50-100' Beat Mtn, etc

Structure (p 26)

Osage anticline; Oc near crest is
 more arched than Mtn.
 (= no Powell thin [ES Beat Mtn
 E W - NW Green Forest])

Smeade Cr dome -

Mbr arched 400'
 Ph " 250'

Carrollton dome

Mtn " 500' (to 1700')
 Ph " 150'
 Per " much less"

Boone Fm p 9-12

Named by J. C. Branner

(Introduced by Semons & Penrose)

Top of Pension Mts - heavy ledge
of chert 80' above Msj.

Toasted - bluff 12' high

52 cu mi ch in ES-17 quadr

1,925 sq mi = average 193' ch

St Joe 20-25' generally

Some < 10 - Some 40-50'

Boone = without Msj

300-350'

Near Ponca = 400'

2186	2186	2186	1506	1894	1894	2331	2219½
680	1055	158	1131	420	720	1894	1894
1506	1131	2028	375	1174	1174	437	325½
321	2186	2186	2186				
1865	605	1255	1425				
	1581	931	761				

Ladd - Comp 4-1-64
 ran GR - 12, run CDM
 set csg, run GR

Bradley - comp 10-14-60
 Run GR ESL to TD

Lee - - -

Bray - No logs noted
 430' FWL
 860' FWL SE ¼

Duld → 1028' test hole
 see record -
 sit 10 3/4" x 8" csg
 Crd 2200-15 to 61m
 7" csg 25 1/2" to 61m
 perf 2206-96 test SW
 25-78N-22W

Roberts - Comp 5-6-66 1550' S, 970' E of Cen
 ran IEL to TD 2320
 pulled 7; ts 10 3/4" csg

City of Green Forest TD 1587

Logged by FEG

NE NW 4-19N-23W

E/e 1349

1349	1349	1349	1349	1349	1413
127	515	530	545	640	1349
1222	834	819	804	1709	-64
827					
388					

MhV 127
 mbn
 525
 MJC 530
 Oe 543
 opu

OC 640
 1413
 Oroub

TD 1587 in Oroub

W S King
SE NE 19
19N 22W

1375 (top)

NE 17
BRM 147

Mb 522
MDC 528

OC

TD 553 in OC

Cecil Barnes 30-21 N-20W (est 1000)

Mb 135

OPW 210?

OC

TD 571'

Frank Andrews

Sec 26
C NW NW 21^N 21^W

Mb 228

1275² (top) ^

OPW 250

OC

TD - 310

AWG - Barney

360-370 lt br-gy MBY SS & lt-br-gy
to cream Mhr ls - sdy, ool, crin, etc

370-380^{=370²} Mbr ls & ch

380-400 Cream, dull, sl vf glauc, cherty ls
wh ds ch

400-415⁺ Dull lt cream earthy ls & ch

415-20⁺ Short creek dol; ools & foss (P)
frag in vf gr to earthy matrix

420-70 Dull lt cream cherty^{earthy} ls
f-med xls in earthy matrix; crin
br chs

470-80 Similar but more foss frags -
larger pieces of foss

490-510 lg lt-gy, f xls & foss frags
in f-gr, earthy matrix; crin

510-530 granular - 40% lt-gy earthy ch

530-40 lg lt-yel-gy to lt cream; 75% ch
lt-yel-gy earthy & wh ds

540-70 70% ch, mostly ds wh; crin in fs

570-80 mostly ch; first med-gy ds
& wh ds

AWG - Bony

590 - 00 60% Ch, lt-gel-gy to cream; ds ch
40% ls, lt cr, earthy, frags ^{of ls} in
earthy matrix

610 - 20 Quartz - free sand consistent
ls + ch as above

620 - 30 60% ch, dull but ds blue-gy -
40% ls, lt-br-gy, vf xlls

630 - 40 Similar ↓ br-gy ls = darker sample

640 - 50 Similar but lighter -

650 - ~~40~~⁷⁰ Similar - earthy gray ls

670 - 80 20% Ch, lt-gy to dk-smoky-gy, ds
80% dull lt-br-gy earthy, vf xlls ls

680 - 90 Similar - ds ch is lighter
pyrite in ls

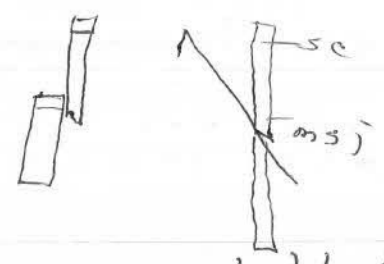
690 - ⁷³⁰ msj ls, med lt-br-gy (some darker = clays)
vf xlls; little if any ch;

Fault 735±

730 - 40 ls med-lt-gy; fine fss frags in
vf xlls matrix - Nearly all msj
5% lt smoky-gy ds ch - cross

740 - 50 60%
Ch, lt-cream turb, ds; ls lt-smoky
ls, cr, vf xlls; cross
splinters of mf sh

735	735	1012
415	370	735
<hr/> 750 - 320	<hr/> 365	<hr/> 277



but probably by

- 750-60 - Ls, much like Msj ; 1% ds ch
pyrite
- 760-70 Crin ls; msj ?; fr smoky gy ch,
- 770-80 similar; sl more ds ch
- 780-90 Crin ls ($=msj$)? - little or no ch
some y ls is sl clayey; crin
- 790-800 Mbr ls - 10% ds ch - some smoky
- 800-820 30%+ smoky gy ds ch
70% dull lt-gy earthy ls
- 820-890 Ls, lt-gy to cr, f-m ed xlln;
70' Crin - little or no ch
Crin frags in rf xlln matrix
pyrite "foss hash"
- 890-900 60% ch lt br-gy to wh, ds
Ls, wh, earthy
- 900-10 Ls lt-gy ^{crin} to wh, earthy
30% ch, wh to lt-gy ds
- 910-20 40% ch as above
- 920-30 70% wh ds ch; lt-cr w xlln ls
- 930-40 similar
- 940-60 msj ? Pink com ls; free crins
m-xlln; v little ch; fr greenish clayey
ls
- 960-70 similar; fr lt-br ds ch
- 970-80 Red ^{pink} crin ls, little, if any ch; fr clayey
- 980-90 90 ls - Rusty ^{sample}
Abrupt change - 40%+ ^{lt-gy} smoky gy ds
ch in dull lt-gy rf xlln ls
- 990-1000 70% lt-br-gy (cream) w xlln ls
30% lt smk. to wh ds ch

7000 - 10

similar - pyrite:
dend ls = not msj

1010 - 20[?] = on bog

Mixture - tr smoky gy ds ch;

msj? ls (some clayed)

DK-gy sh (or Oc?)

Rd & fr^{fm} sd

Dirts f-gu ss = BMSS

Pyrite

1010[?] to 22

Mostly Oc free dalg bright sd

tr blk shale

tr BMSS?

tr Crin

Haythorn (Cont.)

④ 2740-2750 Dol, lt-br-gy to br-gy,
(In all samples,
much Fe stain = from bit?)
vf to f rhombic; 5% rd sd
w/ tr 2^{dry} growth;
Ri sil silt matrix -- mostly
soft, but some cherty;
sl tr vf glauc & vf pyrite.

⑤ 2750-60 Dol, lt-br-gy, sandy, vf-f rhombic;
<10% vf-f sd; 2^{dry} growth;
Res; less sil silt; sl tr
vf glauc & vf pyrite.

⑥ 2760-70 Dol, lt-br-gy, v sdy; vf to
f rhombic; <40% vf to m sd;
2^{dry} growth; 1st white clay med. size
Ri vf-f sd in sil silt matrix;
med-grs mostly free; sl tr
vf glauc & vf pyrite.

⑦ 2770-80 SS, med-lt-gy, (60%) v. dolic, vf to
c grs; grs rd & fr to 2^{dry} growth;
Res; ~~60%~~ sd; dk-gy "film"
fragments = trilobites??
no glauc noted
(wh clay)

Hay thorn (cont)

vf-c

⑧ 2780-90 SS as above; 70% sd; 2^{dry}
white clay sampled
gtz to ortho gtzite; ^{str} vf glauc;
(sampled)
R; sd; much wh clay mudcake

⑨ 2790-2800 SS as above -- more pyrite
R; sd

(30%)

⑩ 2800-2810 SS, lt-br-yy, v dolic, vf to
white clay sampled
med-gr, ^{pyrite} 2^{dry} growth to
semi-ortho gtzite; probably
beds of dol, lt-br-yy, vf to f
rhombic; sd y.
R; sd, tr c g v s

⑪ 2810-20 Similar; small sample, mostly
vf
Tr glauc
sand.

⑫ 2820-30 Similar; mostly SS -- < 1mm =
white clay sampled
mostly free vf - med sand
w/ 2^{dry} growth; chips > 1mm =
mostly dolomite & sandy dol
probably, in part, from above.

Haythorn (cont)

⑬ 2830-2840 SS (t-br-gr), dolitic,
vf ^{= v. poorly sorted} to med-gr; 2^{dry} growth
but mostly free drilling
R: sd + white-clay mudcake

⑭ 2840-2850 SS, free drilling to orthoqtzite
White clay sampled
(2^{dry} growth), dolitic,
vf to med-gr (poorly
sorted;
R: sd + wh clay

⑮ TD
2850-2858 (TD) SS, mostly free drilling,
vf to f-gr; relative to
samples above, decrease
in grain-size and in
carbonate content.
R: vf-f sd

TD 2858 in Reagan-Lamotte SS.

#6, Bray, Clyde E.
24-18N-22W

430' FNL, 860' FNL ^{SE 1/2}
- Ele (est) 2150 ^{grd}
2100
2170

Tops O sp 2040'
Arbuckle 1105' No logs noted
on top card

#5 Roberts

Comp 5-6-66 (Location in doubt)
25-18N-22W

1550'S, 940'E of Center sec 25
Ele 2090' ^{grd}
2100 KB

Ran IEL to TD
Pulled 7, its 10 3/4 csg

TD: 2320

Miss Li 170 = + 1930

? O sp 545

? Oe 650

? Arb 780

? O Round 2070

Ord top to TD

2320

2320

2100

557

TD - 220 - But

1763

only if
GL is
Correct --
Probably not

Hugh Willson
Exp Geologist 10772 Trenton Ave
Newmont Exp Ltd
PO Box 28927
SL, Mo - 63132

24-18N-22W

- 1 Lee Mr. Surrency #934)
- 2 Byron - Bryan
- 3 Ladd - 18-18N-21W 1020' FSL, 150' FWL
18-18N-21W
- 4 Bradley - 24-18N-22W
- 5 Roberts 25-18N-22W
- 6 Bray 24-18N-22W
1. Lee 660' W, 160' S of SEC NW $\frac{1}{2}$
TD: 1456, Ele 2186

✓ A West

3. Ladd - Ele 1837 grnd 1848 KB

Comp 4-1-64

GR-1L

CDM

TD 2270

Top Gun 2137 - to 2237

(Show of storage gas)

Shea A West

2. Bryan 24-18N-22W - 375' FNL, 475' FEL

Comp

A West

12-10-58

Ele: NA TD: 2343'

4 Bradley

TD: 2393
24-18N-22W

1600' FNL, 1000' FEL

(over)

Ele 1866 grnd 1873 KB

Arbuckle 290; sd 2276-2356