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Permit # 387

SAMPLE DETERMINATIONS
MOBIL OIL COMPANY #1-C FLORIDA STATE LEASE 224-A
FARM "C"
WILDCAT
FRANKLIN COUNTY, FLORIDA

Samples run from 11,000' (Cotton Valley) to 13,450' (Haynesville-Buckner). In general, samples were fair to poor with locally abundant cavings.

- 11,000 - 11,020 Sandstone, dark reddish-brown to pink, fine grained, subangular to angular, tite, clay matrix, dolomitic in part (30%); interbedded with siltstone, reddish-brown, slightly calcareous, blocky.
- 11,020 - 11,030 As above, with trace greenish-gray, silty, fissile, shale.
- 11,030 - 11,040 As above, with siltstone increasing and sandstone tending more towards pink, medium grained, subangular, fair to poor sorting (approx. 10%) non-calcareous.
- 11,040 - 11,050 As above, with very poor sorting.
- 11,050 - 11,070 Sandstone, white to pink, fine to medium grained, subangular to sub-rounded, very tite, clay-silica cement matrix, trace heavy minerals (hornblende - ? olivine) fair sorting, 10-20%; siltstone as above, very tite.
- 11,070 - 11,080 As above, with trace greenish-gray waxy shale.
- 11,080 - 11,090 Sandstone, white to pink, medium to coarse grained, subangular, possibly dolomitic cement, poor sorting, hard and tite, some black heavy minerals (20-30%); siltstone, as above.
- 11,090 - 11,120 As above, sandstone, grading to white (30-40%).
- NOTE: Lag would appear to be 20 feet off when compared to electrical log - samples are 20 feet deep.
- 11,120 - 11,130 As above, grading to pink, very slightly porous.
- 11,130 - 11,150 Shale, reddish-brown, varigated to greenish-gray and black, silty in part, trace sandstone, as above.
- 11,150 - 11,170 Siltstone, reddish-brown, very tite, micaceous in part.
- 11,170 - 11,180 As above, with greenish-gray waxy siltstone.
- 11,180 - 11,200 As above, with sandstone, white, fine to medium grained, subangular, silica cement, very poor sorting, very hard and tite (10%).
- 11,200 - 11,210 Siltstone, reddish-brown, hard and tite, with sandstone, as above, (less than 10%).
- 11,210 - 11,220 As above, grading to very fine to fine grained, dark red, hard and tite, sandstone.
- 11,220 - 11,230 As above, with abundant dark greenish-gray siltstone.
- 11,230 - 11,240 As above, with 10% lignite.
- 11,240 - 11,260 As above, no lignite.
- 11,260 - 11,270 As above, with 10% sandstone, white to buff, fine to medium grained, subangular, quartzitic, fair sorting, hard and tite.
- 11,270 - 11,290 Sandstone, white to pink, very fine to medium grained, subangular to sub-rounded, fair to poor sorting, very hard and tite, quartzitic, silica cement (50%); siltstone, reddish-brown to greenish-gray, as above.

- 11,290 - 11,300 Sandstone, as above, with trace light green (olivine ?) inclusions.
- 11,300 - 11,310 As above, sandstone less than 10%.
- 11,310 - 11,320 As above, sandstone greater than 30%.
- 11,320 - 11,330 Sandstone, as above, less than 10%; siltstone; dark gray; siltstone, reddish-brown, hard and tite; trace lignite.
- 11,330 - 11,350 As above, no lignite.
- 11,350 - 11,360 Sandstone, white, very fine to medium grained, subangular to subrounded, poor sorting, very hard and tite, 20-30%; dark gray and red siltstone, as above.
- 11,360 - 11,400 Siltstone, reddish-brown, hard, micaceous, tite; intercalated with grayish-green blocky shale; trace sandstone, as above.
- 11,400 - 11,410 As above, with sandstone, pink, medium grained, subangular, clay to silica cement, very hard and tite, dolomitic in part. (It would appear to belong to lacustrine environment)
- 11,410 - 11,450 Siltstone, reddish-brown, hard, micaceous, tite; intercalated with grayish-green blocky shale; trace sandstone, as above.
- 11,450 - 11,460 Sandstone, light gray to cream, subangular, very fine to fine grained, very hard and tite (30%). Siltstone, reddish-brown, hard and tite.
- 11,460 - 11,510 Sandstone, as above, 60%; with trace green heavy minerals.
- 11,510 - 11,520 As above, sandstone less than 20%.
- 11,520 - 11,530 Siltstone, reddish-brown to dark gray; piece of Gastropod shell.
- 11,530 - 11,540 As above, with sandstone, light gray to cream and pink, medium grained, subangular to angular, very hard and tite, dolomitic in part (10%).
- 11,540 - 11,550 As above, with sandstone becoming white and 50% of sample.
- 11,550 - 11,570 As above, with sandstone less than 10%.
- 11,570 - 11,590 Sandstone, white to cream, very fine to medium grained, subangular to subrounded, fair sorting, very quartzitic, very hard and tite (40%); siltstone, reddish-brown and green, as above.
- 11,590 - 11,610 As above, sandstone 60%.
- 11,610 - 11,620 As above, with trace black heavy minerals.
- 11,620 - 11,640 Siltstone, red and gray; trace sandstone, as above.
- 11,640 - 11,650 Sandstone, white to pink, fine grained, subrounded, very hard and tite, dolomitic cement (60%) probable lacustrine environment; siltstone, as above.
- 11,650 - 11,680 As above, sandstone 70-80%.
- 11,680 - 11,690 Siltstone, as above; trace sandstone, as above; limestone, white to pink, microcrystalline, very hard and tite.
- 11,690 - 11,710 As above, trace limestone, trace sandstone; siltstone, red and gray (95%).
- 11,710 - 11,720 As above, no limestone.
- 11,720 - 11,740 Siltstone, reddish-brown, variegated with dark gray, micaceous, siltstone which grades to greenish-gray.
- 11,740 - 11,750 As above, with trace light gray, fine grained, subangular, very hard and tite, glassy, sandstone (10%).
- 11,750 - 11,780 As above, sandstone 20%.

11,780 - 11,790	Siltstone, as above; with trace sandstone, as above.
11,790 - 11,800	As above, with trace white, mottled to pink, limestone, microcrystalline, very hard and tite.
11,800 - 11,820	As above, sandstone, 30%, white to pink, fine grained, subrounded to subangular, fair sorting, slight porosity, trace green minerals; siltstone, reddish-brown to chocolate.
11,820 - 11,830	Siltstone, as above; trace sandstone, as above; trace lignite.
11,830 - 11,850	As above, with sandstone, pink, medium grained, subangular to subrounded, silica cement, very hard and tite, dolomitic in part (40%); limestone, white to light gray, microcrystalline to cryptocrystalline, very dolomitic.
11,850 - 11,860	As above, with sandstone decreasing to 10%.
11,860 - 11,870	Siltstone, as above, with trace of sandstone, as above.
11,870 - 11,880	Sandstone, white to light greenish-gray, fine to medium grained, subrounded, fair sorting, trace porosity, generally tite, dolomitic in part (30%); siltstone, as above.
11,880 - 11,890	Sandstone (40%), as above; siltstone, as above.
11,890 - 11,900	Sandstone (10-20%); siltstone, as above.
11,900 - 11,910	Sandstone, red to pink, dolomitic, fine to medium grained, subrounded to subangular, poor sorting, hard and tite (20%); siltstone, as above.
11,910 - 11,930	Sandstone, grading to white, medium grained, subangular, quartzitic (40%).
11,930 - 11,940	Siltstone, reddish-brown to gray, micaceous in part, sandstone, as above (10-20%).
11,940 - 11,970	As above; with sandstone, 10% or less.
11,970 - 11,980	Sandstone, white to buff, subangular to subrounded, very fine to medium grained, poor sorting, tite, trace green and black heavy minerals, dolomitic in part, trace limestone, white, cryptocrystalline; trace clear quartz shards (5%); siltstone, as above.
11,980 - 11,990	Siltstone, as above; trace sandstone, as above (less than 10%).
11,990 - 12,020	As above, with trace light gray to white, sucrosic dolomite.
12,020 - 12,040	Sandstone, white to cream, fine to medium grained, subrounded, fair sorting, hard and tite, slightly dolomitic cement, abundant heavy minerals; siltstone, as above (60%).
12,040 - 12,050	As above, sandstone, (less than 20%); 20% coal.
12,050 - 12,060	Siltstone, as above; sandstone, 10%, no coal.
12,060 - 12,070	Sandstone, pink, very fine to fine grained, subangular, trace grayish-green clay inclusions, tite (20-30%); siltstone, as above.
12,070 - 12,080	As above, with sandstone grading to white and light gray.
12,080 - 12,110	Siltstone or mudstone, reddish-brown to chocolate, hard and tite.
12,110 - 12,120	As above, with trace of sandstone, white to light gray, very fine to fine grained, subangular, tite.
12,120 - 12,130	As above; sandstone, greenish-gray, very fine to fine grained, hard and tite (20%).
12,130 - 12,140	As above, with trace of coal.
12,140 - 12,170	As above, sandstone (10%), no coal.
12,170 - 12,180	As above, with trace waxy green shale.

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12,180 - 12,220 As above, with no green shale or sandstone.

12,220 - 12,230 As above, with trace sandstone, pink, medium grained, subangular to angular, some heavy minerals (10%).

12,230 - 12,240 As above, sandstone 30%.

12,240 - 12,250 Siltstone, as above; sandstone, as above 10%.

12,250 - 12,260 As above, with sandstone becoming very quartzitic.

12,260 - 12,270 Sandstone, white to light gray, fine grained, subrounded, fair sorting, clay matrix, trace green heavy minerals (20-30%); siltstone, as above.

12,270 - 12,280 Sandstone, pink, fine to medium grained, subangular to subrounded, poor sorting, dolomitic cement, tite (60%); siltstone, as above.

12,280 - 12,300 As above, with trace of green minerals in sandstone.

12,300 - 12,310 Sandstone, pink, as above (20%); siltstone, as above; siltstone, dark red to chocolate.

12,310 - 12,320 Sandstone, as above (30%) with abundant green minerals; siltstone, dark red to chocolate.

12,320 - 12,330 Sandstone, pink, as above (30%); siltstone, dark red to chocolate.

12,330 - 12,350 Sandstone, pink, as above (10%); siltstone, dark red to chocolate.

12,350 - 12,390 Siltstone, dark red to chocolate.

12,390 - 12,420 As above, with 10% sandstone, mottled pink to white and red.

12,420 - 12,430 Siltstone, as above, with sandstone, pink, as above (20-30%).

12,430 - 12,470 Sandstone, as above (50%); siltstone, as above.

12,470 - 12,480 Siltstone, reddish-brown, grading to chocolate, trace sandstone, as above (10%) friable in part.

12,480 - 12,520 As above, with trace light green waxy shale.

12,520 - 12,540 As above, with sandstone mottled red and white, very fine to medium grained, subangular to angular, friable in part, poor porosity (20%); siltstone, as above.

12,540 - 12,580 Siltstone, reddish-brown, hard and tite; trace sandstone, as above.

12,580 - 12,590 Sandstone, pink, fine grained, subrounded, fair sorting, dolomitic in part (20%); siltstone, as above; trace waxy green shale.

12,590 - 12,600 As above, sandstone 30%.

12,600 - 12,610 As above, sandstone 20%.

12,610 - 12,630 Siltstone, as above; trace sandstone, as above.

12,630 - 12,650 Sandstone, pink mottled white and red, fine to medium grained, subangular to angular, clay matrix, slight porosity ? (10%); siltstone and shale, as above.

12,650 - 12,670 Sandstone, as above 40%.

12,670 - 12,680 Siltstone, as above; sandstone, trace.

12,680 - 12,690 As above, sandstone (10%).

12,690 - 12,700 Sandstone, pink, very fine to coarse grained, rounded to subangular, very poor sorting, clay matrix, slight porosity (60%); siltstone, as above.

12,700 - 12,740 Siltstone, reddish-brown, blocky; trace sandstone, pink.

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12,740 - 12,780	Sandstone, pink, fine to medium grained, angular to subrounded, fair sorting, possible slight porosity, silica cement, some well developed quartz crystals (50%); siltstone, as above.
12,780 - 12,790	As above, with sorting becoming poor, fine to coarse grained.
12,790 - 12,800	As above, with sandstone down to 10-20%.
12,800 - 12,810	Siltstone, reddish-brown, micaceous in part, hard and tite.
12,810 - 12,820	As above, with sandstone, pink, fine to medium grained, angular to subrounded, fair sorting, slight porosity, silica cement (30-40%) locally abundant, pink feldspar inclusions.
12,820 - 12,830	Sandstone, 50%.
12,830 - 12,840	Sandstone, 80%.
12,840 - 12,860	Sandstone, 60%.
12,860 - 12,900	Sandstone, 80% - conglomeratic in part.
12,900 - 12,910	As above, sandstone 40%.
12,910 - 12,930	As above, sandstone becoming very hard and tite with a silica cement.
12,930 - 12,940	Sandstone, (20-30% becoming conglomeratic); siltstone, as above.
12,940 - 12,950	As above, trace white to orange chert.
12,950 - 12,960	As above, sandstone 50%; no chert.
12,960 - 12,980	As above, sandstone 20%.
12,980 - 12,990	Sandstone, as above; siltstone, as above; interbedded in part with light green siltstone.
12,990 - 13,000	Siltstone, as above; sandstone, as above (less than 10%).
13,000 - 13,020	Siltstone, as above; sandstone, as above (20-30%).
13,020 - 13,060	As above, sandstone increasing to 50%.
13,060 - 13,070	Sandstone, 10%; siltstone, as above.
13,070 - 13,090	Sandstone, 20%; siltstone, as above.
13,090 - 13,100	Sandstone, 40%; siltstone, as above.
13,100 - 13,150	Sandstone, 70%; siltstone, as above.
13,150 - 13,160	Sandstone, 40%; siltstone, as above.
13,160 - 13,180	Sandstone, 20%; siltstone, as above.
13,180 - 13,190	Siltstone, as above, with sandstone, as above, trace 10%.
13,190 - 13,200	Siltstone, as above, grading to mudstone; few pieces of quartz and plagioclase.
13,200 - 13,210	Sandstone, pink, fine to medium grained, angular to subrounded, poor sorting, very quartzitic, very hard and tite (30%); siltstone, as above.
13,210 - 13,230	Sandstone, as above (60%).
13,230 - 13,320	Siltstone, as above, micaceous in part, with trace of glassy, conglomeratic sandstone; trace of plagioclase.
13,320 - 13,330	As above, with trace of cherty, orange to pink, conglomeratic sandstone, quartzitic, very hard and tite.
13,330 - 13,370	As above, sandstone (20-30%).

- 13,370 - 13,390 As above, with sandstone less than 10%.-
- 13,390 - 13,400 Siltstone and mudstone, reddish-brown, micaceous, hard and tite; pink conglomeratic sandstone, as above (30%).
- 13,400 - 13,420 Sandstone, white, fine grained, subangular to subrounded, fair sorting, dolomitic cement, slight porosity (50%); red siltstone, as above.
- 13,420 - 13,430 As above, with trace of lignite (sand 60%).
- 13,430 - 13,440 Sand becoming greenish-gray (70%).
- 13,440 - 13,450 As above, sand 80%.

The samples from 11,000 to 13,450' were examined using a conventional 10X-30X binocular microscope. There was no evidence of marine or strand line deposition, and only one fossil fragment (a gastropod) was noted. There was local evidence of shallow water lacustrine deposition. All sandstones were of the orthoquartzite classification with those in the first fifteen hundred feet (11,000 - 12,500') having the appearance of metaquartzite due to the high degree of silica cementation (probably due to an abundance of ground-water percolation). There was no evidence of aeolian deposition. With the exception of the lacustrine deposition noted above, all deposits can be assigned to a continental-fluviatile environment. Degree of angularity, presence of abundant feldspar, and the low sorting coefficient tend to indicate a close proximity to an igneous and/or possibly metamorphic mother terrane. The possibilities of hydrocarbon accumulation in these beds is extremely poor.

It is impossible to predict the relative position of these deposits to their time strands. Knowledge of the overall basement grain in this area leads to a conclusion that the strands lie in a southwesterly direction from this test, possibly at quite some distance (this is based on an assumption of a low relief basement terrane similar to that found in central Florida. However, more definitive studies of basement configuration need to be made in this particular area.).

The sequence described by Mr. Burkett, below, yields evidence which could be interpreted as indicating the presence of a continental margin, Triassic, graben similar to those present on the Atlantic coast. Nothing in the samples described above would discount this possibility, in fact, the interpretations would tend to compliment such a hypothesis. If this were the case, it is possible that a marine Cotton Valley or Haynesville sequence could be in much closer proximity than discussed above.

B. C. Groenewold

SAMPLE DETERMINATIONS
 MOBIL OIL COMPANY #1-C FLORIDA STATE LEASE 224-A
 FARM "C"
 WILDCAT
 FRANKLIN COUNTY, FLORIDA

Samples run from 13,450' (Haynesville-Buckner) to TD 14,364' (Paleozoics ?).

13,450 LOG TOP HAYNESVILLE-BUCKNER

NOTE: Sample lag still appears to be 20' off as noted by B. Groenewold - samples are labled 20' too deep.

- 13,450 - 13,500 Siltstone, reddish-brown, medium grained, blocky, earthy with micaceous zones (60%); interbedded with sandstone, white to light pink, fine grained, angular to sub-rounded, fair sorting, dolomitic cement, slight porosity (40%).
- 13,500 - 13,540 Siltstone, dark grey, fine grained, blocky to assicular, micaceous, non calcareous, (30%); interbedded with red siltstone, as above, (35%), and with sandstone as above, (35%).
- 13,540 - 13,590 Decrease in sandstone to about 10%.
- 13,590 - 13,600 ¹⁰ Limestone, dark greenish brown, extremely fine crystalline (micrite), surface fractured, with shaley zones (40%); siltstone as above (50%); sandstone as above (10%).
- 13,600 - 13,620 ²⁰ Limestone, white, finely particulate almost sucrosic (calcarenite), (30%); crystalline limestone as above (15%); siltstone as above (45%); sandstone as above (10%).
- 13,620 - 13,640 Decrease in limestone fraction to less than 10%.
- 13,640 - 13,700 Siltstone, dark grey and reddish-brown, blocky to assicular, earthy to micaceous, (80%); sandstone as above (20%).
- 13,700 - 13,710 ¹⁰ Dolomite, brownish grey, fine grained crystalline, calcareous (40%); siltstone as above (35%); sandstone as above (15%).
- 13,710 - 13,740 ³⁰ Limestone, dark grey to white, fine crystalline to very fine particulate, thinly layered, (60%); siltstone as above (35%).
- 13,740 - 13,750 ¹⁰ Increase of white, fine calcarenite, interbedded with dark crystalline micrite.
- 13,750 - 13,760 Tripolitic chert, white to grey, crystalline, slight porosity, (30%); limestone as above (20%); siltstone as above (35%); sandstone, variable color, fine grained, angular to sub rounded, moderate sorting, siliceous cement, slight porosity.
- 13,760 - 13,770 Percentages as above, sandstone becoming medium grained with fair to poor sorting.
- 13,770 - 13,790 Rhyolitic volcanic debris, pink to reddish, medium crystalinity, slight porosity (35%); mixed with great variety of cavings.
- 13,790 - 13,800 Rhyolitic material as above (10%); chert as above (15%); limestone as above (20%); siltstone as above (35%); sandstone as above (20%).
- 13,800 - 13,810 Siltstone, dark grey, fine grained, mostly assicular, moderately hard (50%); siltstone, reddish-brown, medium grained, blocky, (10%).
- 13,810 - 13,820 Rhyolitic volcanic debris, white to reddish pink, medium grained, angular, strongly cemented, slight porosity (50%), siltstone as above (40%).

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- 13,820 - 13,830 Decrease in rhyolitic material (25%); increase siltstone to 50%; mixed cavings (25%).
- 13,830 - 13,870 Rhyolitic volcanic debris, white to reddish, fine to medium grained, angular, poorly sorted, silicic cement, moderate porosity (80%), siltstone as above (20%).
- 13,870 - 13,880 Siltstone, dark grey, fine grained, dolomitic, brittle (30%); siltstone, reddish-brown, fine to medium grained, blocky, (cavings ?), (30%); rhyolitic material (30%).
- 13,880 - 13,890 Decrease in rhyolitic material.
- 13,890 - 13,900 As above with 5 to 10% bentonite and grey shale appears more blocky.
- 13,900 - 13,910 As above with no bentonite.
- 13,910 - 13,920 Limestone, white, fine grained calcarenite, sucrosic, trace porosity, (30%), siltstone as above (60%).
- 13,906 LOG TOP SMACKOVER (?)
- 13,920 - 13,930 Calcarenite as above, contains about 20% impurities mainly quartz (60%), cavings (40%).
- 13,930 - 13,940 Calcarenite is increasingly coarser with poor sorting and impurities, also interbeds of cryptocrystalline limestone (10%); a 5% fraction of diorite igneous material appears.
- 13,940 - 13,950 Diorite igneous material, greenish black, fine grained to glassy, contains inclusions of siltstone and limestone; many cavings.
- 13,950 - 13,960 Increased crystallinity of igneous material.
- 13,960 - 13,970 Diorite in a poor sample, many cavings.
- 13,970 - 13,980 Siltstone, dark grey, fine, hard, non-calcareous (30%); diorite fragments as above (30%); cavings (30%).
- 13,980 - 13,990 Sandstone, pink, very fine grained, crystalline, tite, includes a few large angular quartz grains, dolomitic in part, (25%), diorite as above (5%), siltstone as above (45%).
- 13,990 - 14,000 Sandstone, as above with 10-20% plagioclase (35%) grading into light orange red siltstone (40%), diorite as above (25%).
- 14,000 - 14,010 Decrease in sandstone, diorite, and reddish siltstone, dominant portion is dark grey siltstone, fine grained, blocky, micaceous.
- 14,010 - 14,020 Siltstone, dark grey as above interbedded with limestone, dark grey, argillaceous to earthy (70%); red siltstone as above (30%).
- 14,020 - 14,030 Diorite igneous material, coarse crystalline, dark minerals in light ground mass (70%); remainder are red and grey siltstones.
- 14,030 - 14,040 Poor sample, cavings from entire section.
- 14,040 - 14,050 Diorite material becomes coarser (60%); increase in siltstone, grey, micaceous, assicular to platy (25%); bentonite (15%).
- 14,050 - 14,070 Siltstone, reddish-brown, blocky (70%), interbedded with siltstone, grey, as above (30%), dolomitic in part, no bentonite.
- 14,070 - 14,080 As above with a trace of limestone, dark grey brown, cryptocrystalline.
- 14,080 - 14,100 As above with limestone locally blocky and earthy (15%), increase in the grey siltstone.
- 14,100 - 14,120 As above with an increase in limestone and reddish siltstone.
- 14,120 - 14,130 As above with some pink calcareous siltstone (10%).

- 14,130 - 14,140 As above with rhyolite volcanic material (15%), and some free quartz.
- 14,140 - 14,150 Poor sample, appears to be altered rhyolite material, earthy, light grey to light greenish brown, very soft (20%).
- 14,150 - 14,160 Rhyolite volcanic material (25%); altered material as above (20%); siltstone, reddish-brown, medium grained, blocky (30%); also one small coral fragment.
- 14,160 - 14,180 Siltstone, red, as above (80%) with occasional quartz vein or inclusion and rhyolite material (20%).
- 14,180 - 14,200 As above with 10% dark igneous rock and 5% bentonite.
- 14,200 - 14,210 As above with no dark igneous material, bentonite increases, and the siltstone is calcareous in part.
- 14,210 - 14,220 Siltstone, reddish-brown as above (70%); siltstone, dark grey to greenish brown, assicular, (20%), and rhyolitic material (10%).
- 14,220 - 14,230 As above with a decrease in dark siltstone.
- 14,230 - 14,240 As above with shale partings common, 5 fragments of plagioclase; and bentonite (5%).
- 14,240 - 14,270 Decrease in bentonite and rhyolite.
- 14,270 - 14,280 As above with 10% dark igneous material.
- 14,280 - 14,290 Diorite, black to dark green in light ground mass (40%), siltstone as above (60%). Dated by fission track method indicates Triassic age (furnished by Continental Oil Co.).
- 14,290 - 14,300 Siltstone as above (80%); siltstone, dark purple, fine grained, blocky, hard, with inclusions of angular to rounded limestone fragments (10%); rhyolitic material (10%).
- 14,300 - 14,310 Dark igneous material (30%) reddish siltstone (40%); rhyolite material (10%); and some very mixed materials.
- 14,310 - 14,320 Fractured limestone mudstone breccia to reddish siltstone (70%); dark igneous fragments (10%).
- 14,320 - 14,330 Siltstone, red, as above with increased inclusions of quartz (80%), and dark igneous material which is more coarse, and greenish black (10%).
- 14,330 - 14,350 Igneous and/or metamorphic basement, dark black to green, includes altered micaceous material (60%); siltstone as above (40%).
- 14,350 - 14,364
TD As above with some calcareous portions.

Cores were studied from 14,263 1/2' to 14,271 1/2' at 1' intervals and then at 14,276 1/2' and 14,277 1/2'.

- 14,263 1/2 Diabase, general appearance is black and fine grained with light green surface fractures, numerous quartz and plagioclase phenocrysts are visible.
- 14,264 1/2 As above with no phenocrysts but with an increase of crystallinity in the ground mass.
- 14,265 1/2 As above with possible flow structures, some alteration, and possible included sedimentary materials.
- 14,266 1/2 As above.
- 14,268 1/2 Increased crystallinity of diabase with some flow or shear structures.
- 14,269 1/2 As above with plagioclase laths visible.

- 14,270 1/2 As above.
- 14,271 1/2 As above.
- 14,276 1/2 Siltstone, pinkish grey, very fine, dense, scattered small pyrite crystals throughout, containing limestone fragments, white to grey, rounded to sub angular, fine crystalline, up to 1/2" in diameter but most much smaller.
- 14,277 1/2 Siltstone as above with no limestone

The sediments of the Haynesville-Buckner and older ages appear to be intimately associated with volcanic activity at or near this location. This fact plus the non-marine nature of the sediments make interpretations difficult as to any regional trends associated with this time interval.

Previous comments by Mr. Groenewold cover the general interpretations.

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D. H. Burkett