GEORGIA
STATE DIVISION OF CONSERVATION

DEPARTMENT OF MINES, MINING AND GEOLOGY
GARLAND PEYTON, Director

THE GEOLOGICAL SURVEY
Bulletin Number 74

LOGS OF SELECTED WELLS IN THE COASTAL PLAINS OF GEORGIA

by

Esther R. and Paul L. Applin

ATLANTA
1964

ECHOLS COUNTY

Operator: Hunt Oil Company
Landowner: Superior Pine Products Co. Well 4
Location: Land District 13, Land Lot 219; from Northwest corner of Land Lot 219, go 1978 ft. east, thence 1106 ft. S. 8° W. to location.

GGS. No. 158
Elevation: 156 ft. (derrick floor)
Total depth: 3916 ft.
Completed: Mar. 16, 1948

Summary of Stratigraphy

	Depth (feet)	Thickness (feet)
Tertiary		
Paleocene	?	?
In beds containing Tamesí fauna at 2600 ft.		
Cretaceous		
Gulf		
Lawson Limestone, upper member	2610(?)	70
Beds of Taylor age	2680	270
Beds of Austin age	2950	322
Atkinson Formation, upper member	3272	168
lower member	3440	189
Comanche undifferentiated	3629	282
Ordovician		
Middle Ordovician[1] weathered(?) zone	3911	to total depth 5

Lithologic and paleontologic descriptions of cuttings and cores. Samples are cuttings unless otherwise stated.

Depth (feet)	Description
0-2620	Samples not studied.
	Cretaceous
	Gulf Series
	Lawson Limestone. Upper Member.
2610(?)	The top of the upper member of the Lawson Limestone (uppermost Cretaceous) is provisionally placed at 2610 ft. on the basis of electric log correlation.

[1]Bridge, Josiah and Berdan, J. M. 1951, U.S. Geological Survey open-file report, p. 5 and map.

Depth (feet)	Description
2620-2630	Sandstone, greenish-gray, fine and even grained, highly glauconitic, calcareous, containing many specimens of *Globorotalia velascoensis, Globigerina triloculinoides,* a small form of *Cibicides* sp.,
2600-2610 (est. depth)	and other small Foraminifera.[2]
2630-2640 (2610-2620 est. depth)	Limestone, cream, hard, calcitic, gypsiferous, containing poorly-preserved molds and fragments of molds of macrofossils and a few microfossils.
2640-2650	Limestone, cream, chalky, composed, mainly, of a mass of poorly-preserved molds of microfossils and a few macrofossils. The microfauna in this sample is unusual, and is somewhat similar to the fauna that has been reported from the "Upper Cretaceous" beds in Trinidad; also, it contains several species occurring in the upper member of the Lawson Limestone in a few wells in Florida, and even seems to have certain Tertiary aspects.
2650-2660	Limestone, light-cream, somewhat gypsiferous, containing fragments of poorly preserved molds of fossils. The character of the material is somewhat like sample at 2640-2650. Among the unusual features, is a mold of a *Borelis*-like form in a fragment of the limestone, and a fragment showing distinct coralline structure.
2660-2670	Like sample at 2650-2660 ft., but contains more traces of molds and impressions of microfossils.
2670-2680	Like sample at 2660-2670 ft. A few fragments are highly pyritic, and a few others show a trace of glauconite.
	Beds of Taylor age
2680-2690	Chalk, white, glauconitic. The fauna is composed of fragments of of *Inoceramus*, a few specimens of Ostracoda, and many specimens of *Anomalina sholtzensis, Anomalina cosdeni, Globotruncana arca, Bolivinoides decorata, Globorotalites conicus.*
2690-2700	Like sample at 2680-2690 ft. *Inoceramus* fragments and prisms abundant.
2700-2720	No change, but few well-preserved specimens of Foraminifera, and a decrease of glauconite.
2720-2730	Chalk, white, *Inoceramus* fragments and a few specimens of Foraminifera.
2730-2740	Chalk, white, containing much fragmental calcite material (*Inoceramus* prisms, specimens of Foraminifera, and fragments of

[2]This sample contains a foraminiferal assemblage closely resembling the Tamesi fauna that occurs in beds of Paleocene age in many wells in western Florida and southern Georgia. The sample that follows at 2630-2640 ft., is classified as the upper member of the Lawson Limestone, which is Navarro (Late Cretaceous) in age. As a possible explanation of the discrepancy between the depth shown by the electric log characteristics and the depth of the hole at the time the samples were taken, we suggest a lag in the returns amounting to about 20 feet. On this basis, the estimated corrected depth of this sample would be 2600-2610 ft. and the estimated corrected depth of the next deeper sample would be 2610-2620 ft.

Depth (feet)	Description
	molds of microfossils and macrofossils). The chalk is somewhat speckled with small grains of dark-green, glauconite and of pyrite; some fragments of chalk are highly pyritic.
2740-2750	Chalk, white; and a little gray marly chalk. The sample contains *Inoceramus* fragments and prisms, and a few specimens of long-ranging species of Foraminifera.
2750-2800	Like sample at 2740-2750 ft.
2800-2810	Chalk, white, *Inoceramus* fragments and prisms, many large nodules of pyrite, and a few specimens of Foraminifera.
2810-2820	Chalk, white, many fragments of *Inoceramus* and other fossil bivalves, a few specimens of Foraminifera, and a few fragments of light olive-gray marl.
2820-2830	Like sample at 2810-2820 ft.
2830-2840	Chalk, light olive-gray, and about 25 percent gypsum.
2840-2850	Chalk, light-gray, marly; abundant Inoceramus prisms, and a few specimens of Foraminifera and Ostracoda; also a few fragments of gypsum, which may be caving.
2850-2860	Like the sample at 2840-2850 ft.; *Anomalina* sp. is the common species of Foraminifera in the sample; no gypsum.
2860-2960	No change.
	Beds of Austin age
	The top of the beds of Austin age is placed at 2950 ft. on the basis of electric log correlation.
2960-2980	Chalk, white and light-gray, soft, and a few fragments of harder, light-speckled, olive-gray chalk. The sample contains abundant *Inoceramus* prisms, fragments of *Inoceramus* and other fossil bivalves and a few specimens of Foraminifera.
2980-2990	Chalk, dark-gray, marly; contains abundant *Inoceramus* prisms, abundant specimens of Foraminifera, and several species of Ostracoda. The common foraminiferal species are: *Globotruncana* spp. *Globigerina* sp., *Planulina* sp., *Planulina austiniana*, a few specimens of *Valvulineria infrequens*, *Planulina texana*, *Gümbelina* sp., *Robulus* sp., and *Kyphopyxa christneri*. The sample is definitely Austin in age.
2990-3000	Like the sample at 2980-2990 ft.; contains specimens of *Citharina texana*.
3000-3100	No change.
3100-3110	Chalk, gray, somewhat white-speckled, marly containing many *Inoceramus* prisms and Austin species of Foraminifera.
3110-3180	No change.
3180-3190	Core 5. Recovery 8 ft. Top 3 ft. Marl, gray, somewhat white-speckled (microfossiliferous). No change in fauna. Middle 2 ft. Marl, somewhat lighter in color.

Depth (feet)	Description
	Bottom 3 ft. No change.
3190-3200	Core 6. Recovery 4½ ft.
	Top 3 ft. Chalk, gray, marly, containing Austin species of Foraminifera; Gümbelina sp. common.
	Bottom 1½ ft. Like top part of core, but slightly darker.
3200-3210	Core 7. Recovery 4½ ft.
	Top 1½ ft. Chalk, light-gray, marly; no change in fauna.
	2nd 1½ ft. Marl, dark-gray.
	3d 8 in. No change.
	Bottom 10 in. Marl, lighter gray.
3210-3215	Core 8. Recovery 5 ft.
	Top 4 ft. Like the bottom part of Core 7 at 3200-3210 ft.
	Bottom 1 ft. Slightly darker marl; no change in fauna, but specimens of Foraminifera less abundant.
3215-3224	Core 9. Recovery 9 ft.
	Top 3 ft. Chalk, light-gray, moderately hard. No change in microfauna.
	2nd 3 ft. Marl, dark-gray, light-speckled, containing fragments of fish scales, a few fragments of *Inoceramus* and specimens of Foraminifera.
	3d 1 ft. Chalk, white, marly, moderately hard. No change in microfauna.
	4th 2 ft. Marl, gray, somewhat white-speckled, containing fragments of fish scales and a *Pecten*-like bivalve. Dominant species of Foraminifera are: *Gümbelina* sp., *Globigerina* sp., and a small *Anomalina* sp.
3224-3234	Core 10. Recovery 10 ft.
	Top 1 ft. Like the bottom part of core 10 at 3224-3234 ft. *Globotruncana* sp. common in the fauna.
	2nd 2 ft. Chalk, light and dark-gray, marly; contains fish scales; no change in microfauna.
	3d 3½ ft. Marl, dark-gray, light-speckled.
	Bottom 3½ ft. Chalk, white, moderately hard, no change in microfauna.
3234-3244	Core 11. Recovery 3½ ft.
	Top 2 ft. Like bottom part of core 10 at 3224-3234 ft.
	Bottom 1½ ft. Marl, gray, soft; no change in microfauna.
3244-3250	Core 12. Recovery 2 ft.
	Chalk, white, moderately hard, common species of Foraminifera are: *Globigerina* sp., *Gümbelina* sp., *Pleurostomella* sp.
3250-3255	Core 13. Recovery 5 ft.
	Top. Chalk, gray, somewhat light-speckled, marly; Microfauna like core 12 at 3244-3250 ft.
	Bottom. No change.

Depth (feet)	Description
3255-3265	Core 14. Recovery 3 ft.
	Top 1 ft. Like core 13 at 3250-3255 ft.
	Bottom 2 ft. No change.
3265-3272	Core 15. Recovery 3½ ft.
	Top. Marl, gray, white-speckled, and lens of light-gray chalk containing much comminuted calcitic, chalky debris of microfossils and macrofossils. No change in microfauna.
	Bottom. Chalk, light-gray, moderately hard, and dark-gray, white speckled marl.
	Atkinson Formation. Upper Member.
3272-3277	Core 16. Recovery 1 ft.
	Shale, dark greenish-gray, flaky, unctuous. Core seems to be contaminated with drilling mud; no definitely indigenous specimens of Foraminifera observed.
3277-3285	Core 17. Recovery 3 ft.
	Top. Shale, green, containing irregular vein-like silty streaks, and a few rounded, moderately coarse grains of quartz. The sample contains a few fragments of fine-grained, somewhat glauconitic sandstone, and a few fragments of *Ostrea*-like fossil bivalves.
	Middle. Shale, green, flaky, interbedded with light-gray, micaceous, slightly glauconitic siltstone; contains a few small specimens of *Planulina eaglefordensis*.
	Bottom. Siltstone, gray, soft, micaceous, interlensed with green shale; contains a few phosphatic fragments, a few shreds of carbonaceous material, and pyrite; a few small specimens of *Planulina eaglefordensis*.
3285-3287	Core 18. Recovery 2 ft.
	Shale, green and light greenish-gray, argillaceous, micaceous, and very fine and even grained, soft sandstone, in thin alternating layers. The material contains a little phosphatic material and glauconite; a few carbonaceous shreds. The fauna is composed of shell fragments. Ostracodes, abundant specimens of *Planulina eaglefordensis*, *Globigerina* sp., and others.
3287-3297	Core 19. Recovery 6 ft.
	Top. Sandstone, light greenish-gray, soft, very fine grained, argillaceous, micaceous, containing very thin partings and streaks of green shale; phosphatic nodules and traces of glauconite and pyrite.
	Middle. No change.
	Bottom. No change.
3297-3307	Core 20. Recovery 9 ft.
	Top 4 ft. Siltstone, light greenish-gray, micaceous, finely glauconitic, containing very thin lenses of green shale; a few frag-

Depth (feet)	Description
	ments of carbonaceous material, phosphatic material and worn shells.
	2nd 2 ft. Like the top part of the core, but containing much glauconite.
	Bottom 3 ft. Shale, green, flaky, and lenses of micaceous siltstone.
3300-3310	Shale, green, a little micaceous siltstone, and cavings from higher levels.
3310-3330	No change.
3330-3340	Shale, and many cuttings of moderately hard, fine-grained, somewhat glauconitic, micaceous siltstone that contains phosphatic nodules and fragments of lignite and shells of *Ostrea*-like bivalves.
3340-3350	Like sample at 3330-3340 ft.
3350-3360	Sandstone, greenish-gray, containing abundant fragments of *Ostrea*-like bivalves; glauconite and phosphatic nodules (fairly common); a little green shale.
3360-3370	Sandstone, shell fragments and phosphatic nodules; many fragments of green shale; a little glauconite and mica.
3370-3380	Sandstone and sand, fine-grained, quartz; many fragments of *Ostrea* sp.; a little shale, a little mica, and a few phosphatic nodules.
3380-3390	No change.
3390-3400	Sand, fine-grained, even-grained, micaceous; containing many fragments of *Ostrea* sp. and other fossil bivalves; a few fragments of green shale; a few phosphatic nodules and fragments of carbonaceous material.
3400-3410	Like sample at 3390-3400 ft.
3410-3430	Sand, mica, and fragments of green shale; shell fragments much less abundant; a few fragments of carbonaceous material, and a trace of glauconite.
3430-3440	Like sample at 3410-3430 ft., but green shale more abundant.
	Atkinson Formation. Lower Member.
3440-3450	Material like sample at 3410-3430 ft., but contains specimens of *Reophax pepperensis*, *Ammobaculites agrestis*, *A. junceus*, *Trochammina rainwateri*, and others.
3450-3460	Shale, green, micaceous, and fine-grained sand; a few fragments of carbonaceous material and a few shell fragments.
3460-3470	Shale, grayish-green, and a little silty, micaceous shale; a little fine-grained sand, probably caving. The sample contains a few fragments of carbonaceous material and of shells.
3470-3490	Like the sample at 3460-3470, and a few fish teeth and fish bones.
3490-3500	Similar to the samples at 3470-3490 ft., but fragments of very

Depth (feet)	Description
	fine grained sandstone are common. The sample contains fragments of shells and fish bones and specimens of *Reophax* sp., and many specimens of *Ammobaculites agrestis* and *Ammobaculoides plummerae*.
3500-3510	Like the sample at 3490-3500 ft., but shale is strongly dominant, and the sample contains very few specimens of the arenaceous species of Foraminifera.
3510-3560	Like the sample at 3500-3510 ft.
3560-3570	Shale, green; and a little light-gray, micaceous siltstone; a few shell fragments and a few fragments of carbonaceous material.
3570-3580	Like the sample at 3560-3570 ft.
3585-3595	Core 21. Recovery 2½ ft. Top. Sandstone, soft, light greenish-gray, fine-grained, even-grained, argillaceous, glauconitic, somewhat phosphatic. Bottom. No change.
3595-3602	Core 22. Recovery 6 ft. Top 4 in. Sand, unconsolidated, like the sandstone in core 21 at 3585-3595 ft. and fragments of gray and greenish-gray, micaceous shale. 2nd 4 in. Sandstone, greenish-gray, moderately hard, argillaceous, micaceous, glauconitic, very fine grained. 3d 4 ft. Like 2nd 4 inches of this core, but less firmly consolidated. Bottom 16 in. Shale, greenish-gray, silty, micaceous, glauconitic, containing specimens of *Ammobaculites advenus*, and fragments of phosphatized fish bones.
3602-3612	Core 23. Recovery 10 ft.[3] Top 1 ft. Clay, shaly, greenish-gray, silty to sandy (very fine grained sand), highly micaceous. Contains a few shreds of carbonaceous material, a little phosphatic material, a few specimens of Ostracodes, and small fragments of shells. 2nd 3 ft. Clay, shaly, greenish-gray, silty, somewhat glauconitic, highly micaceous, containing shreds of carbonaceous material, a few fragments of fish bones, a few specimens of *Ammobaculites advenus*, and a few specimens of ostracodes. 3d 8 in. Shale, greenish-gray, thinly laminated, slightly micaceous, silty, and carbonaceous; contains a few fragments of *Inoceramus*, specimens of *Trochammina wickendeni*, and very small specimens of *Globigerina* sp. and *Gümbelina* sp. 4th 10 in. Shale, greenish-gray, micaceous, silty, irregularly glauconitic; contains pyrite nodules, a little phosphatic material, a few shell fragments, and a few minute specimens of *Globigerina* sp.

[3]Two feet of core unaccounted for.

Depth (feet)	Description
	Bottom 2½ ft. Shale, green, unctuous, containing silty micaceous partings (mainly drilling mud?).
3612-3620	Core 24. Recovery 9 ft.
	Top 8 ft. Sandstone, gray, soft, fine-grained, argillaceous, highly micaceous; contains a trace of glauconite, a few phosphatic nodules, and a little dark-gray shale, possibly occurring in thin lenses. The shale contains specimens of very small Foraminifera, and a few shreds of carbonaceous material.
	Bottom 1 ft. An unsatisfactiory sample of greenish-gray shale, fine to coarse-grained quartz sand, and a little glauconite, mica, and phosphatic material.
3620-3629	Core 25. Recovery 5 ft.
	Top 3 ft. Sand, light grayish-tan, fine to moderately fine grained, etched, argillaceous, containing a few coarse-grains, fragments of gray shale, and a little mica.
	2nd 1 ft. Sand, greenish-gray, fine to coarse-grained, argillaceous, glauconitic, quartz. The glauconite occurs in crevices in some coarse grains, and one highly glauconitic plant fragment was observed.
	Bottom 1 ft. Sandstone, gray, soft, micaceous, argillaceous. The sandstone contains irregular partings of gray shale, and a few lenses of gray, flaky shale, in which occur faint traces of dwarf specimens of Foraminifera.
	Comanche Series undifferentiated
3629-3639	Core 26. Recovery 7 ft.
	Top 2 ft. Sandstone, light-gray, fine-grained, argillaceous (bentonitic?), micaceous, the sand grains are etched and angular.
	2nd 2½ ft. Clay, shaly, gray and red mottled highly micaceous, sandy (fine-grained sand).
	Bottom 2½ ft. Sandstone, greenish-gray, soft, fine-grained, highly argillaceous and micaceous.
3639-3648	Core 27. Recovery 1 ft.
	Top ½ ft. Sand, fine to coarse-grained (coarse grains common), etched, argillaceous, and a little light greenish-tan, unctuous, sandy (very fine grained sand) clay shale. The sand contains many lemon-yellow and a few pink grains of quartz and a few grains of feldspar.
	Bottom ½ ft. Mudstone, light-gray, mustard, and light-red, mottled, unctuous, sandy, somewhat micaceous.
3648-3658	Core 28. Recovery 4½ ft.
	Top 2½ ft. Clay, shaly, red and gray mottled, sandy, highly micaceous; the sand is fine to coarse-grained, and moderately fine grains are common.
	Bottom 2 ft. Mudstone, gray, reddish-brown and mustard, mottled, highly micaceous.

Depth (feet)	Description
3658-3668	Core 29. Recovery? Top. Sand, light-red, clay-stained, fine to coarse-grained, etched. Bottom. Sand, light-red and gray, mottled and stained, soft, argillaceous, quartz. The sand grains are mostly moderately fine and subangular.
3668-3678	Core 30. Recovery ½ ft. Sand, fine to very coarse-grained, containing many lemon-yellow, pink and a few rose quartz grains, and a little feldspar; a few fragments of purplish-red clay.
3680-3700	Mainly cavings of gray shale, brownish-red, purplish-red and mustard-yellow clay shale, sand and mica.
3698-3708	Core 33. Recovery 1½ ft. Top 1 ft. Sand, brownish-red stained, soft, fine-grained, subangular, argillaceous, highly micaceous; a few coarse grains of sand in the sample. Bottom ½ ft. Sandstone, red and gray, soft, fine to coarse-grained, argillaceous, highly micaceous.
3708-3718	Core 34. Recovery 1 ft. Sand, fine to coarse-grained, subangular to rounded, quartz, containing yellow and pink grains and a little feldspar.
3718-3728	Core 35. Recovery 3 in. Clay, red and gray mottled, silty, very highly micaceous.
3728-3738	Core 36. Recovery 2 ft. Top. Sand, light purplish-red, soft, fine to very coarse-grained (small pebbles), argillaceous, highly micaceous; yellow and pink-tinted grains abundant. Bottom. Sand, like top part of core, in a matrix of highly micaceous red clay.
3738-3748	Core 37. Recovery 1 ft. Top. Sand, light-red like core 36 at 3728-3738 ft., and mustard-yellow micaceous clay. The sand grains are moderately fine to moderately coarse. Bottom. Sand, light-red, fine to very coarse-grained, micaceous; many grains are tinted yellow and pink.
3748-3758	Core 38. Recovery 1 ft. Like core 37 at 3738-3748 ft. The sand is mainly quartz and a little feldspar.
3758-3768	Core 39. Recovery 2 ft. Top. Sand, light-red, mostly fine-grained, micaceous, argillaceous; a few moderately coarse grains, tinted yellow and pink. Bottom. Sand, red and gray mottled, fine-grained, even-grained, highly micaceous, quartz.
3768-3770	Core 40. Recovery ½ ft. Sand, red and gray, fine-grained, highly micaceous, argillaceous, quartz.

Depth (feet)	Description
3778-3788	Core 41. Recovery 3 ft. Top 2 ½ft. Sand, light-red and gray, soft, fine to coarse-grained, micaceous, argillaceous. Bottom ½ ft. Clay, brick-red, and gray mottled, silty to very finely sandy, micaceous.
3790-3800	Sand, fine to very coarse grained, a few fragments of red shale, and cavings of gray shale from much higher levels.
3798-3805	Core 43. Recovery 2 ft. Top. Sand, light-red, fine to moderately coarse grained, etched, somewhat micaceous, argillaceous. Bottom. Shale, dark-red, and some sand like top part of core. The appearance of the shale differs somewhat from the overlying red clay shale.
3805-3807	Core 44. Recovery 1 ft. Shale, red, like bottom part of core 43 at 3798-3805 ft.
3807-3817	Core 45. Recovery? Top. Shale, dark-red, somewhat gray spotted, somewhat silty. Bottom. Clay, shaly, red, silty.
3817-3827	Core 46. Recovery ½ ft. Shale, red, somewhat gray and mustard-yellow mottled, unctuous, somewhat silty.
3827-3837	Core 47. Recovery 3 in. Clay, red, and sand, unconsolidated.
3837-3840	Core 48. Recovery 3 in. Sand, fine to coarse-grained, roughly angular, and red shale.
3840-3850	Core 49. Recovery 2 ft. Sand, micaceous, and some red shale. The core seems to be contaminated.
3850-3860	Core 50. Recovery 1 ft. Sand, soft, fine to moderately fine-grained, micaceous, argillaceous; a few coarse grains of sand. The sand is similar to that in beds of definite Comanche age.
3860-3868	Core 51. Recovery 8 in. An unconsolidated lump of red shale and a little sand, as in the samples beginning at 3805 ft.
3870-3880	Sand, fine to very coarse-grained, red shale, and about 50 percent cavings from much higher levels.
3880-3900	No change.
3900-3903	Many cavings, and abundant fragments of bluish-green, fine-grained, sandstone; white and yellow, fine-grained quartzite; and fragments of an opaque green mineral. The sample may be from a bed of quartzite boulders and other material derived from the weathered surface of the underlying early Paleozoic rocks and redeposited in sedimentary beds near the base of the Mesozoic.

Depth (feet)	Description
3903-3905	Clay, shaly, red and greenish-gray, mottled, and many fragments of yellow and white quartzite, green sandstone, and the opaque green mineral like the sample at 3900-3903 ft.
3905-3912	Mainly fragments of quartzite and other kinds of material like samples at 3900-3905 ft.

Ordovician

Middle Ordovician Series

The top of the weathered(?) Paleozoic is placed at 3911 ft. on the basis of electric log correlation.

3912	Bit sample. Red and gray mottled irregularly silty shale, and fragments of quartzite.
3912-3916 T.D.	Core. Recovery? Top 3 in. Quartzite, light-green, very fine grained. Bottom. Shale, dull reddish-brown, thinly laminated, micaceous, somewhat silty.

ECHOLS COUNTY

Operator: Hunt Oil Company
Landowner: Superior Pine Products Co. Well 2
Location: Land District 13, Land Lot 317; southwest corner of Land Lot 317

GGS. No. 169
Elevation: 142 ft. (derrick floor)
Total depth: 4062 ft.
Completed: Apr. 7, 1945.

Summary of Stratigraphy

	Depth (feet)	Thickness (feet)
Tertiary		
Not studied		
Cretaceous		
Gulf		
Lawson Limestone(?) upper member(?)	2700?	85?
Beds of Taylor age (1st sample 2890)	2785?	285?
Beds of Austin age	3070	390
Atkinson Formation, upper member	3460	118
lower member	3578	152
Ordovician		
Lower Ordovician[1] quartzitic sandstone and shale	3770?	to total depth 292?

Lithologic and paleontologic description of cuttings and cores. Samples are cuttings unless otherwise stated.

[1]Bridge, Josiah, and Berdan, J. M., 1951, U.S. Geological Survey open-file report, p. 5 and map.