

DRY SAMPLES

Appendix 4 1/7

COBIA-1

J. Black  
April 4, 1973

Drilling out from under 20" conductor set at 747' KB with 13-3/4" bit.

DEPTH	DESCRIPTION
800 - 30	30% Cement cavings. 70% Shell fragments - coral, turatella, mollusc.
830 - 60	40% Cement cavings. 60% Shell fragments.
860 - 90	50% Cement cavings. 50% shell fragments.
890 - 950	60% Cement cavings. 40% Shell fragments.
950 - 980	50% cement cavings. 50% shell fragments.
980 - 1100	40% cement cavings. 60% shell fragments.
1100 - 1130	30% cement cavings 70% shell fragments.
1130 - 1220	10% cement cavings 30% shell fragments 60% sandstone, grey, very fine to medium grained, friable, porous, subangular, with scattered shell fragments, very calcareous.
1220 - 1250	10% cement cavings. 10% shell fragments 80% sandstone, as above.
1250 - 1370	10% shell fragments. 90% Sandstone, grey, very fine to medium grained, poorly sorted, friable, very calcareous.
1370 - 1640	80% Sandstone, light gray, very calcareous, porous with scattered shell fragments. 20% Shell fragments.
1640 - 1670	80% Sandstone, as above, with trace medium gray platy limestone. 20% Shell fragments.
1670 - 1790	70% Sandstone 20% Limestone - Medium gray, platy, thin bedded. 10% Shell fragments.
1790 - 1940	80% Sandstone as above. 10% Limestone, as above. 10% Shell fragments.
1940 - 2000	60% Sandstone with trace limestone 20% Shell fragments.
2000 - 2060	70% Sandstone - as above. 30% Shell fragments.
2060 - 2270	90% Sandstone, light grey, very fine grained, very calcareous, cement matrix. 10% Shell fragments.

Cobia-1

DEPTH	DESCRIPTION
2270 - 2690	100% Sandstone, light grey, very fine grained, silty very calcareous firm, with scattered shell fragments and few large forams.
2690 - 2720	80% Marl - light to medium grey, argillaceous, silty, soft. 10% Sandstone, as above. 10% Shell fragments.
2720 - 2750	60% Marl. 30% Sandstone, with trace light grey limestone 10% Shell fragments.
2750 - 2810	90% Marl 10% Sandstone
2810 - 2870	80% Cement cavings 20% Marl- with some sandstone as above
2870 - 2900	20% Cement cavings. 80% Marl- light-medium grey, soft argillaceous silty, very calcareous.
2900 - 2990	100% Marl as above.
2990 - 3170	90% Marl 10% Limestone, tan-brown, fine grain to dense, slightly dolomitic.
3170 - 3530	100% Marl- as above, with few large forams and trace tan limestone.
3530 - 3710	90% Marl 10% Limestone, tan to brown, hard, fine grained, dense.
3710 - 4070	100% Marl as above with few large forams, trace tan limestone.
4070 - 4190	100% Marl, medium grey, firm to soft, very calcareous silty, trace brown limestone.
4190 - 4280	100% Shale, medium gray, very silty, very calcareous firm, trace fossiliferous.
4280 - 4460	90-100% Shale, as above with trace white fine grained sandstone, trace 10% bentonite limestone, dense, hard.
4460 - 4610	100% Shale, as above.
4610 - 4640	100% Shale, as above with trace coarse loose quartz grains.
4640 - 4700	No samples
4700 - 4970	100% Shale, as above
4970 - 5450	100% Shale - medium gray, platy, soft to firm, silty fossiliferous, occasional light to medium gray, platy dense limestone.
5450 - 5660	100% Shale, medium gray, very calcareous, soft to firm, scattered large forams, occasional fine mica and traces gray platy limestone.
5660 - 5930	100% Shale, as above, but forams are smaller.
5930 - 6080	100% Shale, medium gray firm, very calcareous, very small forams, fine mica, trace medium grained round quartz, very fossiliferous.

Dry Samples cont'd

Cobia-1

DEPTH	DESCRIPTION
6080 - 6260	100% Shale, as above with traces light grey platy, limestone and scattered secondary calcite.
6260 - 6410	100% Shale, medium gray, fossiliferous, small forams and occasional pyrite replaced fossiliferous, firm some fine micaceous, few thin medium grained limestone stringers, dense hard.
6410 - 6440	no sample.
6440 - 6590	Break over mud to lignosulphate. 100% Shale, as above with rare globular pyrite, scattered angular, medium to coarse lignite in samples are from lignosulphonate added to mud.
6590 - 6800	100% Shale, as above, with rare fill glauconite grains, trace pyrite, trace coarse white quartz, fossiliferous.
6800 - 7040	100% Shale, medium to dark grey, firm to hard, fissile, finely micaceous, fewer fossils, with medium to coarse well rounded white quartz grains.
7040 - 7070	Samples in hole at time of hang off for storm. Riser and hydril parted during storm. Resumed drilling after 8 days.

On bottom after 9 days. Riser parted. Hole in good condition.

7069-80 Shale - lt./med. grey, firm/soft, calcareous, trace pyrite, fossils

7080-7100 Shale as above

7100-40 Shale - as above, with slight trace glauconite

7140-80 Shale as above but slightly silty, slight trace glauconite and pyrite

7180-7220 Shale - medium grey, silty, firm, trace pyrite, trace fine grained sand.

7220-7260 Shale, medium grey, soft, trace tan dolomite, trace pyrite replaced fossils.

7260-80 Shale as above with trace light bentonitic marl

7280-7300 Shale as above with increase of light grey-white marl, trace detrital coal

7300-40 Shale - light grey soft, bentonitic calcareous with trace loose very fine grained sand  
Trace pyrite and slight trace detrital coal

7340-7400 Shale - as above with very slight trace sand, trace brown grey limestone.

7400-40 Shale as above with light grey white marl, bentonitic

7440-60 Shale as above

7460-80 Shale with abundant light grey marl (20%)

7480-7500 Shale - medium grey, platy. firm with abundant white bentonitic marl 50%

7500-20 50% shale as above  
50% marl - light grey-white, sticky soft bentonitic

7520-30 30% shale  
70% Marl

7530-40 40% shale as above with trace pyrite  
60% marl

7540-50 50% shale - as above, with trace pyrite and trace very fine grained sand.  
50% marl

7550-70 40% shale  
60% Marl

7570-80 30% shale  
70% Marl - white, very sticky, bentonitic

7580-90 60% shale - greenish grey slightly micaceous  
40% marl

7590-7620 60% shale  
40% marl

7620-7650 80% shale  
20% marl

.../2

J.R. Black  
21 August, 1972.  
Cobia-1

7650-7660 50% shale - green grey firm  
50% marl - grey-white, soft sticky, bentonitic

7660-70 40% shale - green grey firm  
60% marl - grey-white, soft, sticky, bentonitic

7670-80 60% shale  
40% marl

7680-7700 100% shale - medium grey. silty, fine micaceous, fossils

7700-30 100% shale - as above

7730-40 100% shale - as above

7740-50 100% shale - as above with trace very fine grained sandstone

7750-70 100% shale - as above with trace glauconite, trace calcite

7770-80 100% shale - medium grey, very silty, fossils

7780-90 70% shale  
30% siltstone - brown-grey, glauconitic, firm

7790-7800 50% shale  
50% siltstone, as above, very glauconitic.

7800-10 40% shale  
60% siltstone - tan, very glauconitic, firm

7810-20 40% shale  
60% siltstone - tan, very glauconitic, firm

7820-30 50% shale  
50% siltstone - as above

7830-40 20% shale  
70% siltstone, very glauconitic  
10% sandstone, very fine grained, tan firm, trace fluorescence,  
fair cut.

7840-42 20% shale  
40% siltstone, very glauconitic  
  
30% sandstone, tan, very fine to fine grained, very glauconitic,  
very pyritic, good fluorescence, fair cut  
  
10% Sand - white, well rounded quartz, ferruginous. stained,  
good fluorescence, abundant glauconite included in a pyrite matrix

Pulled out to Run Core Bbl. for Core # 1.

Strap out T.D. measured 7840'  
Ran very light weight on bit, drill break difficult  
to pick exactly.

COBIA-1

Sample Descriptions  
 A.J. Mebberson  
 23rd August, 1972.

7925-30	100% cavings (Lakes Entrance) Trace loose sand, coarse, well rounded
7930-60	100% cavings, trace sand as above
7960-90	60% cavings (Lakes Entrance) 40% coarse to medium grained, loose well rounded sand grains, trace spotty scattered fluorescence (caved)
7990-8000	80% cavings as above 20% sand, loose, as above, no shows.
8000-8040	100% sand, fine to very coarse generally coarse, sub-angular to well rounded, quartz, loose. No shows. Trace cavings of Lakes Entrance shale
8040-60	100% sand, coarse, loose as above
8060-70	100% sand as above
8070-80	100% sand as above, increasingly medium grained, white, frosted.
8080-90	100% sand, white frosted, generally medium grained (very fine grained to coarse), No shows
8090-8100	50% sand as above, No shows 50% shale, grey, fissile, slightly calcareous Trace coal, black, brittle
8100-10	90% shale as above 5% coal as above 5% sand as above
8110-40	70% shale as above 20% coal as above 10% sand as above, trace Fe stain
8140-70	80% sand as above 20% coal as above, trace Fe stain
8170-80	100% sand, medium coarse generally medium, frosted, Fe stained
8180-8220	80% sand as above, generally coarse, some Fe stain, trace pale brown mineral fluorescence 10% shale as above 10% coal as above
8220-30	90% sand as above, some very coarse, well rounded, frosted, generally medium to coarse 10% shale as above, trace coal as above
8230-60	100% sand as above, generally coarse grained some pebbles, rounded Fe stained, most clear to frosted, white, sub-angular to well rounded. Trace shale and coal as above
8260-8300	100% sand as above Trace shale as above

Cobia-1  
August 24, 1972.  
A.J. Mebberson

8300-20	60% sand as above, generally medium grained 40% shale as above
8320-30	50% sand as above 50% shale as above
8330-40	90% shale as above, 10% sand as above
8340-60	100% shale as above, trace sand as above
8360-70	100% shale as above
8370-8420	80% shale as above 20% sand as above
8420-30	80% sand as above, generally medium grained 20% shale as above
8430-40	90% sand as above 10% shale as above
8440-50	70% sand as above 30% shale as above
8450-60	100% sand as above, slightly coarser grained
8460-70	90% sand as above 10% shale as above, trace very fine grained to coarse grained
8470-8511	100% sand as above

T.D. 8511'