

W-9336
Humble Oil & Refining Company
Core Test #1 Tamiami Land Co.
NWNE sec 4, T46S R32E
Hendry County, LaBelle 4 SW Quad
GL: ±32' TD: 1008'

Washed & unwashed cuttings are available from the Florida Geological Survey cuttings library in Tallahassee. Brief lith log of washed cuttings by R.S. Caughey in November 1998.

<u>Depth in feet below GL</u>	<u>DESCRIPTION</u>
0-10	Loose Qz sand, vf-f-m-a little coarse, clear, subang-rnd, some of the larger grs are ltly frosted, otherwise no frosting.
10-20	Loose Qz sand as above, now med & coarse are more common; 3-6% phos material as fos, grs, grns; trace phos Ss; trace Ls.
20-30	45% Loose Qz sand as above; 10-20% phos material as fos frags, irregular shaped small to large masses, most are pale yel brn, lt to med brn, peach, brn orange; 35-45% Dol, pale yel orange, fg xln, sltly sdy(f).
30-40	Mollusk shell frags; minor loose vf-f Qz sand.
40-50	Ls, lt to med gray, sdy to v sdy, sltly phos, fos-v fos, numerous mollusks, some gastropods, echinoid spines; ±½% phos as small bl grs.
50-60	As above.
60-70	As above.
70-80	As above, with common f drusy calcite.
80-90	Ls/Ss, wh, sltly phos, mollusks, gastropods, grades between a sdy to v sdy Ls and a calc Ss.
90-100	As above.
100-110	As above, with numerous shell frags, bryozoa, gastropods.
110-120	As above.
120-130	Largely mollusk shell frags; 15-25% pale yel brn, fg sdy, sltly phos, silty(?) Ls.
130-140	As above, overall more phos material; minor wh, fg, sdy, phos Ls.

Depth in feet below GL	DESCRIPTION
140-150	(small sample) 60% Loose Qz sand, vf thru coarse; some shell frags, some wh, fg, sdy, phos Ls & 15-30% cement.
150-160	(small sample) As above, more cement.
160-170	65% Shell frags; 35% loose Qz sand, vf thru coarse; minor phos grs.
170-180	As above, less loose Qz sand.
180-190	Ss/Ls, pale olive, sltly phos to phos, carries large mollusk shells, grades between a v sdy Ls to a calc Ss; most sand is vf-f, some med, a little coarse.
190-200	As above.
200-210	85% Loose Qz sand, vf thru coarse; 2-4% phos grs, grns, fos frags; ±5% shell & fos frags; 20% dusky to grayish red, sdy to v sdy, fos, silty(?) claystone; some Ss as above. This loose Qz & fos material is probably what remained after washing the claystone.
210-220	80% Loose Qz sand as above; 10% shell frags; 10% pale yel brn, fg, sltly phos Ss & minor dusky red claystone as above.
220-230	As above, rnd/coarse Qz grs are more common than above, & some are ltly frosted; minor clayey, fg Ss & dusky red, clayey dolosilt.
230-240	As above, common yel gray, fg, sltly phos Ss, bearing mollusks; trace claystone.
240-250	As above, with 30% Ss, grayish brn, yel gray, fg, sltly phos.
250-260	Loose Qz sand, vf-f(v little med & coarse), clear, ang-subrnd, mollusk shell frags & minor yel brn, fg Ss.
260-270	As above.
270-280	As above, more shell frags, more coarse Qz sand & a rare pebble.
280-290	As above, with a few Qz pebbles; minor siltstone and claystone.
290-300	As above, with 30-35% pale yel brn, clayey, fg sdy siltstone.

Depth in feet below GL	DESCRIPTION
300-310	(small sample) As above, with some yel gray, clayey, sdy siltstone & some yel gray, calc, fg sdy Ss.
310-320	(small sample) 30-40% Phos material as small grs, grns, fos frags, most are bl, some brnsh bl; 30-40% loose Qz sand, vf-f-a little med & coarse; 30-40% Ss, yel gray, fg & some yel gray, clayey, fg sdy siltstone. [This sample was probably a clayey, sdy, v phos siltstone, before being washed.]
320-330	(small sample) 40-50% Qz sand as above; 40-50% shell frags; 4-8% phos material as above; a little olive gray, sdy claystone.
330-340	(small sample) 45% Loose Qz sand; 45% loose phos material as above; 10% lt olive gray, sdy, phos claystone; some shell frags.
340-350	70% Loose Qz sand, vf thru coarse, most are med to coarse, most clear, some larger grs are cloudy to gray, rnd & some are ltly frosted; 20% phos material as above; 10% shell/fos frags.
350-360	Ls, yel gray, dirty wh, sdy-v sdy(fg), phos(small bl grs), fos, mollusks, encrusting bryozoa, minor cheilostome bryozoa, crab claws; overall phos @ 1-2%.
360-370	Ls/fos as above; overall more sand & phos(2-4%); trace clayey, sdy siltstone.
370-380	80% Ls/fos as above; 20% Ls, v pale orange(vpo), clayey, silty, v sltly phos, made up entirely of encrusting & cheilostome bryozoa frags.
380-390	Largely encrusting & cheilostome bryozoa frags with a little clay, silt & phos sticking to some fos frags.
390-400	Ls, wh, sdy to v sdy(fg), phos(1-2% as small bl grs), fos, mollusks, echinoid spines, some bryozoa as above.
400-410	Ls/fos as above; trace fg, dolomitic Ls.
410-420	About equal mix of Ls/fos as above; large mollusk shell frags & yel wh, fg, moldic, fos, sltly sdy & fos Ls.
420-430	50-60% Large mollusk shell frags, rest is a mix of two Ls types as above.
430-440	Mix of cheilostome bryozoa frags(a few appear to be modly weathered?) & mollusk shell frags; some to common fg, silty, clayey(?) Ls.

Depth in feet below GL	DESCRIPTION
440-450	Largely cheilostome bryozoa frags, some-common mollusks frags, some echinoid spines; a little silty(clayey?) Ls as above; little to no phos.
450-460	Ls, wh, sltly phos & sdy, fos, numerous mollusk shell frags, common cheilostome bryozoa & echinoid spines, Ls & fos appear to be wkly to modly weathered(?); minor pale yel brn, sdy dolosilt; 10-20% Dol, pale yel brn & yel gray, fg xln, sltly phos; 5% Dol/phos crust(?), a few phos grns & pebbles.
460-470	Ls/fos as above, most Ls appears to be wkly to modly weathered; 2-5% Dol & 2-4% phos material as above.
470-480	Ls, wh, v phos, sdy, fos, mollusks, bryozoa, echinoid spines; 8-16% phos material as grns, fos, grs, a few shark teeth, colors are brn, brnsh orange, brnsh bl, bl.
480-490	Ls as above, with v abundant cheilostome bryozoa, some mollusk shell frags; phos material as above @ 5-10%
490-500	Ls, wh, fos, sltly phos to phos, mollusks, encrusting & cheilostome bryozoa; 10-20% phos material as crusts, fos, grs, grns(most phos is gray, grayish bl, grayish brn, brn bl, bl).
500-510	As above; trace pale yel brn siltstone.
510-520	As above; trace yel brn siltstone.
520-530	50-60% Ls, wh, phos, sdy, fos, mollusks, cheilostome bryozoa; 40-50% phos material, largely as mod brn, irregular shape grns/grs, common brnsh bl, grayish bl, grs/grns/fos frags; trace siltstone.
530-540	As above, with 15-25% phos material, including a little phos crust; 5% pale yel brn, sdy, phos dolosilt.
540-550	As above.
550-560	As above, with 20-30% phos material, most as small & med size, bl, brn, brnsh bl grs.
560-570	As above, with 8-16% phos grs & grns; 5-10% loose Qz sand (f-vf) & small phos grs. [This sample was probably a pale yel brn sdy, phos, clayey, poorly consolidated siltstone before being washed]
570-580	30-40% phos material as grs, grns, fos, crust; 10% Dol, yel gray, pale yel brn, f xln, sucrosic; 50-60% Ls/fos as above.

Depth in feet below GL	DESCRIPTION
580-590	As above.
590-600	As above, phos material now 20-30% as above.
600-610	Ls, wh, v fos, phos, sltly sdy, encrusting & cheilostome bryozoa, mollusks, echinoid spines; 10-20% phos material, largely fos frags(bl & brnsh bl), common grns & a little phos crust; minor Dol.
610-620	Dol, yel gray, pale yel brn, f xln, sucrosic, sltly phos; 1-3% phos material as above; ±10% Ls/fos as above.
620-630	85% Ls/fos as at 600-610', abundant mollusk-shell frags, common encrusting & cheilostome bryozoa & echinoid spines; 5-15% phos material, most is phos crust & phos/Dol crust; common phos fos & grns; 1-3% Dol as above.
630-640	Ls, wh to v lt gray, fg, phos to v phos, sdy, fos, some mollusks & crab claws; phos @ 2-6% as small bl & brn grs; minor Dol & phos material.
640-650	Ls, wh, v fos, sample is almost entirely cheilostome bryozoa frags, a few echinoid spines & mollusk frags.
650-660	Ls/fos as above, now also common encrusting bryozoa, a few small flat, relatively thick <u>Lepidocyclina(?)</u> .
660-670	Ls, lt to med gray, fg, little sand, v phos(10-20% as small & med, brn, tan, gray & some bl grs), <u>Sorites</u> present, a few mollusks, a few red algae frags.
670-680	Ls/fos/phos as above; overall sltly less phos & more mollusks & echinoid spines.
680-690	As above.
690-700	As above, overall less phos; 10-20% Ls, yel wh, fg, much less phos & sand, v fos, abundant mollusks(replaced med drusy calcite).
700-710	Ls, v lt gray, some yel gray, sdy to v sdy(f-vf), some mollusks & crab claws; 5-10% phos material, largely as irregular grns & fos and common sdy, phos crust.
710-720	75% Ls/fos as above; 20% Ls, wh & med gray, micritic, sdy & phos; 5% phos material as above; trace dk yel brn, med xln, sucrosic Dol; some echinoid spines.
720-730	Ss, yel gray & pale yel brn, fg-vfg, phos, dolomitic; minor micritic, dolomitic, gray to olive gray Ls; trace to minor dolomitic, blackish red siltstone.

Depth in feet. below GL.	DESCRIPTION
730-740	Ss as above; 1-1½% phos as small & minute specks & grs, most are bl color.
740-750	Ss as above, most yel gray color, some maybe sltly silty.
750-760	Ss as at 730-740'.
760-770	Ss as above, overall sltly more phos(1-2%).
770-780	Ss as above, sltly more pale yel brn thru yel gray; trace-minor blish red siltstone.
780-790	Ss, v lt gray, lt gray, yel gray, some pale yel brn, fg, phos, sltly dolomitic, a few mollusks impressions.
790-800	Ss as above, most yel grays & pale yel brns.
800-810	Ls, wh, v fos, sltly sdy & phos, mollusks, echinoid spines, crab claws, bryozoa; 5-10% Ss as above; minor micritic Ls.
810-820	Ss, pale yel brn, vfg-fg, sltly phos, sltly dolomitic.
820-830	Ls, v lt gray, wh, fg-vfg, phos(tan, brn, some bl grs), little sand, fos, abundant mollusks most replaced by xln calcite (commonly as med to coarse xls).
830-840	As above.
840-850	70% Dol, dk yel orange, pale yel orange, pale yel brn, med-coarsely xln; ±30% Ls, wh, granular, peloid rich (some forams?), generally 70-90% replaced by Dol as described above; some Ls & Ss as at 820-830' (cavings?).
850-860	Ls, v pale orange, granular, foram & peloid rich, v stgly rexal, commonly wkly dolomitized; 5-10% Dol as above.
860-870	Ls, vpo, wh, granular, commonly appears to be brecciated (erosional bx?) & recemented by xln calcite & sometimes minor Dol, some mollusks, echinoid spines, gastropods, no sand & no phos; minor Ls, wh, fg, "chalky", with red algae frags.
870-880	Ls/Ls bx(?) as above; 10-20% Ls, wh, vfg, "chalky" with common red algae frags.
880-890	Ls, vpo, granular, peloid & foram rich, v stgly rexal by calcite & rarely fine euhedral, yel to clear Dol; the Ls bx is gone, only minor wh, vfg Ls with red algae.
890-900	10-20% Ls, vpo, granular, v stgly rexal as above; 80-90% Ls, wh, vfg, "chalky", with abundant red algae frags.

Depth in feet
below GL

DESCRIPTION

900-910	About equal mix of granular & wh, vfg, "chalky" Ls as above, both units appear to carry <u>Lepidocyclina</u> (numerous, small to large, flat to nearly flat, yel yel gray to lt gray color), also numerous red algae frags; trace fine, euhedral Dol.
910-920	Ls/fos as above, <u>Lepidocyclina</u> (very abundant, generally med to large, flat to sltly saddle shape, yel gray & v lt gray), numerous red algae frags, a few echinoid spines.
920-930	Ls, v pale orange(vpo), microgranular, v fos, abundant <u>Lepidocyclina</u> (most vpo, large, sltly saddle shaped, some Leps as above), common red algae frags; trace silty, carbonaceous Ls.
930-940	Ls/fos as above, very abundant <u>Lepidocyclina</u> , some to common red algae frags.
940-950	As above; some small, flat, lt gray <u>Lepidocyclina</u> .
950-960	As above, some small flat, lt gray & common larger, saddle shape, lt gray <u>Lepidocyclina</u> ; overall some of the microgranular Ls appears to be v sltly silty & some takes on a lt gray tint.
960-970	As above; grayish tinted Ls is gone & little to no silt.
970-980	As above.
980-990	Ls/fos as above, with common <u>Operculinoides</u> .
990-1000	About half is Ls/fos as above & half is lt to med gray, microgranular Ls with lt-med gray <u>Lepidocyclina</u> and <u>Operculinoides</u> .
1000-1008	Ls, vpo, microgranular, numerous vpo <u>Lepidocyclina</u> & <u>Operculinoides</u> .

Total Depth: 1008'BGL.