CUTTINGS SAMPLE LIST

W-9,332 Humble Oil & Refining Company Core Test #2 C.C. Travers NWNE Sec.35 T44S R25E Fort Myers SE Quad, Lee County $GL:\pm20'$ TD:1,445'

Cuttings samples are available from the Florida Geological Survey in Tallahassee.

Sample Interval			Missing Interval
	Interval	Interval	
(Ft.)	(Ft.)	(Ft.)	(Ft.)
0-10		300-310	
10-20		310-320	
20-30		320-330	
30-40		330-340	
40-50		340-350	
50-60		350-360	
60-70		360-370	
70-80		370-380	
80-90		380-390	
90-100		390-400	
100-110		400-410	
110-120		410-420	
120-130	·	420-430	
130-140		430-440	
140-150		440-450	
150-160		450-460	
160-170		460-470	· · · · · · · · · · · · · · · · · · ·
170-180		470-480	
180-190		480-490	
190-200		490-500	
200-210		500-510	
. 210-220		510-520	
220-230		520-530	
230-240		530-540	
240-250		540-550	
250-260		550-560	
260-270		560-570	
270-280		570-580	
280-290		580-590	
290-300		590-600	

Sample Interval	Missing	Sample	Missing Interval
	Interval	Interval	
(Ft.)	(Ft.)	(Ft.)	(Ft.)
600-610		1030-1040	
610-620		1040-1050	
620-630		1050-1060	
630-640		1060-1070	
640-650		1070-1080	
650-660		1080-1090	
660-670		1090-1100	
670-680	,	1100-1110	•
680-690		1110-1120	
690-700		1120-1130	
700-710		1130-1140	
710-720		1140-1150	
720-730		1150-1160	
730-740		1160-1170	
740-750		1170-1180	
750-760		1180-1190	
760-770		1190-1200	
770-780	· · · · · · · · · · · · · · · · · · ·	1200-1210	
780-790		1210-1220	
790-800		1220-1230	
800-810		1230-1240	
810-820		1240-1250	
820-830		1250-1260	
830-840		1260-1270	
840-850		1270-1280	
850-860		1280-1290	
860-870		1290-1300	
870-880		1300-1310	
880-890		1310-1320	
890-900		1320-1330	
900-910		1330-1340	
910-920		1340-1350	
920-930		1350-1360	
930-940		1360-1370	
940-950		1370-1380	
950-960		1380-1390	
960-970		1390-1400	
970-980		1400-1410	
980-990		1410-1420	
990-1000		1420-1430	
1000-1010		1430-1440	
1010-1020		1440-1445	
1020-1030			

W-9332

Humble Oil & Refining Company (H.O.R.C.) Core Test #2 C.C. Travers NWNE

Sec.35 T44S R25E Fort Myers SE Quad, Lee County GL:±20' TD:1445'

Brief lithlog of washed/unwashed cuttings. Cuttings available at the Florida Geological Survey in Tallahassee. Lithlog by R.S. Caughey, March, 1997.

Remarks: When no unwashed description is given it is the same as the washed description.

<u>Depth</u>	<u>Description</u>
(<u>Ft</u>) 0-10	Ls, moderate orange pink, moldic, por, fg, v sltly sdy, numerous mollusks (molds/casts), some gastropods; a little yel gray, rexal, sltly sdy & phos Ls; some gray shell fragments
10-20	Ls, moderate orange pink as above, minor yel gray Ls as above & 25% Ls, wh, v fg, some bryozoa; a few gray shell fragments
20-30	Ls mix as above, gray shell fragments more common & $10\text{-}15\%~\mathrm{Qz}$ sand, v fg-fg, clear, subang-ang, minor "satin spar" calcite
30-40	Shell bed, largely mollusks fragments, yel gray to wh Unwashed: same with 5-10% pale olive silts
40-50	Shell bed as above & 10-30% wh-v lt gray, v calc, phos, sltly silty Ss; overall phos 1-3% as grs/grns/fossil fragments Unwashed: As above with more Ss & pale olive silts
50-60	Ss as above; 10-20% shell fragments, mostly mollusks, phos 1-3% as grs/grns/fossils fragments Unwashed: As above, with more Ss & more pale olive silts
60-70	Ss as above, 2-4% phos grns/pebbles/grs, some loose fg-v fg Qz sand, a few shell fragments Unwashed: 50-60% olive gray, calc Sltst, remainder is Ss, minor wh Ls & some shell fragments
70-80	Qz sand, loose, v fg-fg, clear, subang-ang; 1-2% phos as v fg grs; some shell fragments, minor Ss Unwashed: 100% pale olive, calc, sltly sdy & phos, clayey Sltst
80-90	Ls, gray-yel, sdy, sltly phos, fos, sltly moldic, part rexal; some wh & moderate orange pink Ls as at 0-20', probable contamination
90-100	Ss, yellowish gray, calc, bears large shells & common molds & casts of mollusks, trace-minor phos grs, a little Ss is silty

Depth (FA)	Description
(<u>Ft</u>) 100-110	Ss as above & yel gray, v sdy Ls, numerous large mollusk fragments, minor phos grs/grns
110-120	As above, large mollusks fragments more common
120-130	As above, more wh & v lt grays, less yel gray Ss
130-140	Ss, yel gray, v lt gray, lt gray, wh, calc, trace phos, common mollusk fossils Unwashed: As above w/minor pale olive silts & minor silty Ss
140-150	Ls, wh, fg, sdy, trace phos, moldic to v moldic, numerous mollusk molds/casts, some shell fragments, minor bryozoa & echinoid spines; minor wh, calc Ss, minor yel gray, calc Ss Unwashed: As above with 5% grayish olive, clayey Sltst
150-160	Ls, wh, sdy, trace-minor phos grs, moldic, mollusks, bryozoa(?)
160-170	Ls as above, minor wh, v calc Ss & silty Ss Unwashed: As above w/trace-minor yellowish gray silts
170-180	Ls as above, some loose Qz sand, v fg-fg & 10% phos as grs/grns/pebbles/fossil fragments & irregular "lumps" Unwashed: 10-20% Ls as above & 80% pale olive, sltly calc, v phos, sdy dolosilt(?)
180-190	Mix of Ls as above, loose Qz sand & phos grs/grns/fossil fragments, loose mollusk fragments & some up-hole contamination Unwashed: nearly all pale olive, calc, phos, fos clays
190-200	Largely about equal mix of loose Qz sand, fg-v fg, clear, subrnd-subang, & phos grs; 5-10% wh, sdy, fos Ls Unwashed: 10% Ls as above, 90% pale olive to greenish gray, sdy, phos, silty clays
200-210	As above, now 40% Qz sand, 60% phos grs Unwashed: 100% dk greenish gray, v phos, sdy, calc, clayey Sltst
210-220	40/60% Qz sand/phos grs/grns/fossils Unwashed: 100% lt olive gray, phos, sdy, clayey, calc Sltst
220-230	Ls, wh & yel gray, v fos, sdy, phos, some is silty, rarely sltly dolomitized, common mollusk shell fragments, numerous bryozoa & common cheilostome bryozoa
230-240	Ls/fossils as above; overall sltly more sand, phos & silt; phos as small bl (fewer brn) grs & specks @ $3\text{-}6\%$

Depth	Description
(<u>Ft</u>) 240-250	As above, mollusks, bryozoa & cheilostome bryozoa still abundant
250-260	As above, minor dolomitization of some bryozoa
260-270	As above, with 5-15% yellowish gray & lt gray, sdy, phos, fos Ls which is weak-moderately rexal
270-280	Ls, yel gray & lt gray, sdy, phos, fos, part rexal, cheilostome bryozoa common
280-290	As above, minor sparry calcite
290-300	Qz sand, loose, v fg-fg & 5-10% phos grs; common shell fragments & Ls with cheilostome bryozoa Unwashed: largely Sltst, phos, sdy, fos, calc, pale olive
300-310	Mix of loose Qz sand as above, wh, sdy, phos, fos Ls & mollusk fragments Unwashed: Largely Sltst, calc, pale olive, phos, sdy, fos & some Ls as above
310-320	Ls, wh to yel wh, abundant bryozoa, common-numerous cheilostome, bryozoa numerous mollusk shell fragments, some coarsely xln calcite, phos grs @ 1-3%
320-330	Ls, v lt gray, sdy, phos, fos; some Ls as above; overall phos 2-5% as small bl/brn grs
330-340	Ls, wh & v lt gray, sdy, phos, fos, numerous bryozoa, some cheilostome bryozoa, common large mollusk shell fragments; phos 2-4%
340-350	Ls as above, more mollusk shell fragments, some Ls is sltly silty Unwashed: as above & 5-10% Sltst, pale olive, phos
350-360	Ls as above, rare stgly dolomitized Ls Unwashed: as above w/5-10% Sltst, phos. pale olive
360-370	Ls as above; numerous mollusk shell fragments, minor coarsely xln to sparry calcite, numerous bryozoa, some cheilostome bryozoa, some Ls is silty
	Unwashed: as above w/minor silts
370-380	Ls as above, numerous bryozoa, some cheilostome bryozoa, shell fragments, phos grs @ 1-3%
380-390	Ls as above; numerous bryozoa & cheilostome bryozoa, Ls is more silty; phos2-6% as small bl/brn grs

Depth	<u>Description</u>
(<u>Ft</u>) 390-400	Ls/fossils as above, overall more silty & a little Ls weak-moderately dolomitized
400-410	Ls as above & loose Qz/phos small grs Unwashed: Ls as above & 40-60% wh-v lt gray, calc, phos, sdy, sltly clayey Sltst
410-420	Ls, wh, yel gray, sdy, phos, fos, common bryozoa & cheilostome bryozoa Unwashed: As above & much v crumbly, silty, clayey(?) Ls as above
420-430	Largely loose Qz sand & phos grs, minor Ls as above Unwashed: Ls, wh, crumbly, sdy, phos, silty, clayey(?), no bryozoa, some echinoid spines & mollusks, common minute forams
430-440	As above, possibly minor fragments of phosphatic crusts(?) Unwashed: as above
440-450	Ls, wh & yel wh, sdy, phos, fos, numerous bryozoa & mollusk shell fragments; 2-5% phos grs/grns/fossil fragments; minor fg, gray, brn gray Ls (possible phosphatic crust?); trace pale olive, silty clays Unwashed: as above w/more silty clays(5-15%)
450-460	Ls as above, a few cheilostome bryozoa, a little Ls has been weakly to stgly dolomitized; some loose Qz sand & phos grs Unwashed: as above w/30-50% pale olive, silty, sdy, phos clays
460-470	Ls, wh, fg, sdy, phos-v phos, fos, some mollusk, a few bryozoa; 20-30% loose phos grs/fossil fragments & 5-10% loose Qz sand, fg, subang, clear Unwashed: Ls as above w/10-25% clays & silts
470-480	Ls/fossils as above, some echinoid spines, a few gastropods, loose phos & Qz sand as above Unwashed: Ls as above w/5-15% wh silts & clays
480-490	Ls, wh, some w/yellowish tint, fg, fos, sdy, phos, some bryozoa, mollusks, echinoid spines, overall phos less than above, now 1-2% as small bl/brn grs; trace Dol Unwashed: As above w/5-20% wh silts/clays
490-500	As above, minor Ls, v fg, phos, sdy, v lt gray to wh w/ bluish tint
500-510	Ls/fossils as above, phos now 2-5%, including some loose phos/Qz grs; 2-4% of Ls has been weak-stgly dolomitized by pale olive to gray orange sucrosic Dol; mollusks common & cheilostome bryozoa present Unwashed: as above w/5-15% wh silts & clays

Depth (Ft)	Description
510-520	Ls as above, minor loose phos/Qz grs; 1-2% calc, phos Ss Unwashed: As above, minor silts & clays
520-530	40% Ls as above; 60% Ls, grayish yel, silty, por, sdy, sltly phos, carries barnacles, mollusks Unwashed: as above, minor silts
530-540	Ls, wh, sdy, phos, fos, numerous large mollusks fragments, common echinoid spines, some bryozoa, phos 2-4%; trace-minor xln Dol; fossils commonly coarsely rexal Unwashed: as above w/some silts
540-550	About 50/50 mix of Ls as above & phos/Qz grs Unwashed: as above w/25-45% wh silts/clays
550-560	85% phos/Qz grs & 15% Ls as above Unwashed: Largely Ls as above & silts/clays
560-570	Mix of loose Qz/phos grs & Ls as above Unwashed: largely wh, clays & silts, some Ls as above
570-580	Largely loose Qz sand, v fg-fg, ang-subang, clear; 5-10% phos grs; some Ls/fossils as above Unwashed: largely wh-lt gray, silts & clays & some Ls
580-590	Largely loose Qz sand as above & 5-10% phos grs, small brn/bl & small fossil fragments; some Ls/fossils as above
590-600	Ls, wh, fg, sdy, phos, numerous large mollusks fragments, common bryozoa & echinoid spines, some cheilostome bryozoa Unwashed: as above, some silts/clays
600-610	Ls/fossils as above; 2% very pale orange (vpo), fg, euhedral Dol; minor loose Qz sand/phos Unwashed: as above & 5-10% pale olive clays; some silts
610-620	Dol, vpo & yellowish gray, fg-medium, euhedral, some is phosphatic, some is brecciated, some vuggy; 20% phos grs/grns/pebbles/fossils; common phosphatic crusts(?) Unwashed: as above with 15-30% pale olive clays & dolosilts
620-630	Ls, wh, fg, sdy, phos, fos, numerous cheilostome bryozoa & mollusks; 10% Dol as above; 15% phos crusts(?) as above; 5-10% phos grs/grns/fossil fragments Unwashed: as above & some silts & clays

<u>Depth</u> (Ft)	Description
630-640	As above, less Dol & phos crusts Unwashed: as above, some silts & clays
640-650	Ls, wh, fg, sltly sdy & phos, fos, abundant cheilostome bryozoa, most Ls is weakly to stgly dolomitized; 10-20% Dol, yellowish gray, fg, sucrosic, some w/cheilostome bryozoa remaining undolomitized Unwashed: as above & 10-20% wh-lt gray clays & silts
650-660	As above, washed & unwashed
660-670	As above, sltly more Dol, some w/small vugs; 5-15% phosphatic crusts(?), a few phos fossils/grns Unwashed: as above w/some wh silts & clays
670-680	Dol as above; 10-20% Ls as above, minor phos crusts(?), a few phos fossils/grns Unwashed: as above w/some wh silts & clays
680-690	Ls, wh, fg, fos, v little sand or phos; Ls, wh to yel gray, gran, por, sltly moldic, little to no sand or phos (this Ls was totally dolomitized in 670'-680' sample); 5% phos crusts(?); 5% Dol as above; possible red algae Unwashed: as above, minor silts & clays
690-700	Mix of Ls described above, common cheilostome bryozoa, some echinoid spines, possible red algae; overall v little phos & sand; minor Dol & phos crusts(?) Unwashed: as above, minor silts & clays
700-710	Ls/fossils as above, some mollusk shell fragments Unwashed: as above w/significant wh silts & clays
710-720	Ls/fossils as above, 10-15% mix of Dol & phos crusts & phos fossils/grns; rare Ls, v sdy & phos Unwashed: as above w/some silts & clays
720-730	Ls, sdy, phos, fos, wh, some w/yellowish tint, common shell molds/casts, some echinoid, some cheilostome bryozoa, rare sparry calcite in vugs, overall phos 3-8% as small brn/bl grs; minor Dol & phos crusts(?)
730-740	Ls mix, some sdy, phos as above, some wh, yellowish wh, fg, little to no phos & sand, v fos, por, shell fossils common, rarely sparry calcite in vugs Unwashed: as above

<u>Depth</u> (<u>Ft</u>)	Description
740-750	Ls, grayish yel, gran, fos, chalky, little to no sand or phos, sparry calcite in vugs common; 10-20% Ls mix of wh, fg, fos & v lt gray, fg, sdy, phos, these Ls carry bryozoa, mollusks, echinoid spines
750-760	Ls, whito vilt gray, fg, sdy, phos, fos; some wh, fg, fos Ls, some gray yel, gran Ls; 30% Dol, yel gray, fg, sucrosic, phos, small vugs; some cheilostome bryozoa, echinoid spines, mollusks & possible red algae Unwashed: as above
760-770	Ls, wh & v lt gray, fg, sdy, phos fossils, common, small mollusks, some sparry calcite in vugs, overall phos 1-4% as small grs; minor Dol & Ls as above Unwashed: as above
770-780	As above, overall somewhat more sdy & phos
780-790	Ls, v lt gray, sdy, phos as above & wh, yel wh, fg, chalky, fos, sltly moldic, sometimes with sand & phos, generally without; these Ls grade into one another; sparry calcite common
790-800	Ls, v lt gray, wh, sdy, phos, fos, some wh, fg, chalky; sparry calcite present
800-810	As above
810-820	Ls, wh & v lt gray, sdy, phos, fos, fg, some mollusks, gastropods & Sorites present; overall phos 1-3% as small grs; minor sparry calcite
820-830	As above
830-840	As above, overall phos now 2-4%
840-850	As above, overall phos 2-5%; minor wh, fg, fos Ls with little to no phos/sand
850-860	Ls, v lt gray, sdy, phos, fos & Ls, yellowish wh, sltly sdy, phos, fos, por, common sparry calcite in vugs & minor wh, fg, fos Ls; Sorites present, cheilostome bryozoa present, mollusks, echinoid spines
860-870	As above, overall an increase in sand & phos
870-880	Mix of v lt gray & grayish yel, sdy, phos, fos Ls, phos 2-6% as small grs; some mollusks, gastropods & occasional crab claw
880-890	Ls, v lt gray, sdy-v sdy, phos, fos, overall phos 3-10% as small bl & some brn grs
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<u>Depth</u> (<u>Ft</u>)	<u>Description</u>
890-900	Ls, v lt gray & yel gray, sdy, phos, fos & some yel gray, fg, fos Ls; Sorites present, a few crab claws; overall phos 2-5%
900-910	Ls, wh & yel gray, fg to gran, fos, sltly sdy & phos, some sparry calcite, <i>Sorites</i> present, mollusks, echinoid spines, cheilostome bryozoa; overall phos at 1-3% as small grs
910-920	Ls as above, now only minor phos & sand, por, crab claws, echinoid spines, mollusks, gastropods; some sparry & coarsely xln calcite; trace grayish orange, sucrosic Dol
920-930	Ls, wh, fg, fos, sdy, phos; minor pale olive phos, clayey Sltst; minor moderate orange pink, fg, moldic, fos Ls; trace loose sand, some grs FeO _x stained Unwashed: as above, with 5% silts/clays
930-940	Ls, wh, lt gray, yel gray, sdy, phos, fos; 5% Dol, yel gray, sucrosic, phos; 5-10% wh, lt gray, calc, phos Ss; echinoid spines, mollusks, bryozoa
940-950	Ls, vpo, por, sdy-v sdy, rarely phos, v fos, moldic, common mollusks, gastropods, echinoid spines, some small forams & crab claws; minor lt gray & wh, calc, phos Ss
950-960	Ls as above; minor Ss as above
960-970	Ss, wh, yel wh, lt gray, calc, phos, fos, grades to a v sdy-sdy, fos Ls; common to numerous crab claws
970-980	Ls, vpo, sdy, sltly phos, fos, some is silty, some Ss as above; common rexal mollusk fragments, some crab claws
980-990	Ls, vpo to grayish orange, sdy, sltly phos, fos, por, part rexal; a little wh, sdy, phos Ls; minor grayish orange, sucrosic Dol
990-1000	Ls, vpo, sdy-v sdy, little to no phos; some Ls, wh, sdy, sltly phos, fos; common crab claws; trace-minor Dol as above
1000-1010	Ls, vpo, fg, silty, fos, rare to no phos; some crab claws, common bryozoa
1010-1020	Ls, vpo to wh, some silty as above, most is part rexal, por, moldic, little to no sand, rare to no phos; common gastropods, crab claws, some mollusks
1020-1030	Ls, vpo, part rexal, fos, pelloidal, some forams, gastropods, bryozoa, little sand, no phos

<u>Depth</u>	<u>Description</u>
(<u>Ft</u>) 1030-1040	Mix of Ls as above & Ls, vpo, micritic, sdy-v sdy, no phos; bryozoa, some mollusks, forams
1040-1050	Ls, vpo, sdy, med-stgly rexal, fos, no phos, overall more rexal than above, common sparry calcite; crab claws common
1050-1060	Mix of Ls, vpo, sdy, fos as above & wh to v lt gray, sdy, sltly phos, fos; both are part rexal, some sparry calcite, common rexal mollusk shells; 20% loose Qz sand, clear, fg, subang-ang Unwashed: as above w/20% silts, rare clays
1060-1070	Ls mix, vpo, sdy as above; lt gray, sdy, micritic; wh, sdy, sltly phos, fg; mollusks, echinoid spines, gastropods; phos 1%, some loose Qz sand
1070-1080	Ls, vpo, pelloidal, foram rich, part rexal, little sand, no phos; some vpo, sdy w/forams, some v lt gray, micritic, sdy; some sparry calcite, echinoid spines, gastropods, bryozoa
1080-1090	Ls, vpo, v lt gray, wh, foram rich, some pelloidal, por, part rexal, echinoid spines, mollusks, little sand, no phos
1090-1100	Ls, vpo, pelloidal, foram rich, part rexal, some wh, lt gray as above
1100-1110	Ls, wh to vpo, gran, microfos, chalky, some part rexal, no sand, no phos
1110-1120	Ls mix, about 40% as wh Ls as above & 60% Ls, vpo, part rexal, por, v fos, pelloidal, foram rich, carries a little sand, no phos
1120-1130	Ls mix as above (very small sample)
1130-1140	Ls, vpo, part rexal, por, pelloidal, foram rich, some carries sand, rarely minor phos; echinoid spines, gastropods, some mollusks; minor lt gray, fos Ls; rare vpo, sucrosic Dol
1140-1150	Ls/fossils as above, occasional crab claw
1150-1160	Ls/fossils as above; minor fg, wh, chalky Ls & lt gray, fg-micritic, fos, moldic Ls; rare v sdy, fos Ls w/minor phos
1160-1170	Ls as above & 20% is v sdy, grading to a foram rich Ss (small sample)
1170-1180	Ls as above & 15-25% sdy Ls as above & minor, v lt gray, micritic, sdy, fos Ls
1180-1190	Ls mix as above, some vpo, micritic, sdy Ls
1190-1200	Ls, vpo to wh, part rexal, v fos & 20% loose Qz grs (small sample)

Depth (Ft)	Description
1200-1210	Ls mix, mostly vpo, part rexal, foram rich & some is sdy, some wh, fg, chalky & some vpo, micritic fos; rare to no phos in any; echinoid spines, mollusks
1210-1220	Ls as above, mostly vpo, foram rich & some wh, chalky
1220-1230	Ls, vpo, part rexal, foram rich, some carries sand; Ls wh, chalky, gran, microfos; numerous echinoid spines
1230-1240	Ls, vpo, foram rich as above, echinoid spines common, crab claws (small sample Unwashed: as above w/5-10% silts
1240-1250	Ls, stgly rexal, vpo, v fos, forams, no sand, no phos, echinoid spines, mollusks, some crab claws Unwashed: as above w/≤5% silts
1250-1260	Ls as above, echinoid spines common-numerous, rare phos grs; a little sand; trace sucrosic Dol
1260-1270	As above
1270-1280	As above, sltly less rexal
1280-1290	As above; some wh, sdy, phos Ls (contamination?); a few phos grns/fossil fragments; bryozoa, echinoid spines
1290-1300	Ls, vpo, part rexal, gran-microgran, no sand, no phos, echinoid spines, some gastropods, some mollusk fragments
1300-1310	55% Dol, grayish orange, most is fg-med xln, sucrosic, vuggy, a little is v fg xln, no sand, no phos; 45% Ls, wh, v fg, chalky, fos, no sand, no phos
1310-1320	Dol as above, minor wh Ls as above
1320-1330	Dol as above, most is fg, sucrosic, a little medium grained, sucrosic, some small vugs
1330-1340	Dol as above, minor (1-2%) Ls, most is wh, sdy, phos, fos & clearly is contamination, a little is vpo, gran, microgran, v fos, foram rich Ls (typical Suwannee)
1340-1350	As above
1350-1360	As above
1360-1370	As above

Depth (TV)	<u>Description</u>
(<u>Ft</u>) 1370-1380	As above
1380-1390	As above
1390-1400	As above
1400-1410	As above
1410-1420	As above
1420-1430	As above
1430-1440	Dol as above; 3% Ls, most is wh, fg, chalky, fos, gran-microgran, v fos; a few large, wh <i>Lepidocyclina</i> fragments, some <i>Camerina</i>
1440-1445	Dol as above, 5% Ls/fossils as above, a few <i>Lepidocyclina</i> fragments are weakly dolomitized

W-9332, HORC Core Test #2 C.C. Travers NWNE Sec. 35, T44S R25E Lee County (Fort Myers SE Quad) GL ±20', TD 1445'

Stratigraphic formations picked by F. San Juan, Jr. 8/9/76

0-30	Caloosahatchee formation
30-175	Tamiami formation
175-980	Hawthorn formation
980-1100	St. Marks formation
1100-1310	Suwannee limestone
1310-1445	Ocala group

Lith log by F. San Juan, Jr. 8/9/76

Depth

- 10 Ls, gray orange, gray yel, pp vugs, 1% Qz sand, 1% limonite, foss frag, mollusks, echinoids, foss mold.
- Ls, gray orange, gray yel, pp vugs, 1% Qz sand, 1% limonite, mollusks, bryozoa, foss mold, echinoids.
- Ls, v lt orange, gray orange, 1% Qz sand, 1% limonite, mollusks, forams, echinoids.

 Shell bed, gray orange, yel gray, 5% Qz sand, 1% limonite, 1% gypsum, mollusks, forams, echinoids, ostracods.
- Shell bed, Ls, gray orange, It ol gray, 3% Qz sand, 3% phos sand, 3% phos gravel, mollusks, vertebrate, foss frag.
- 50 As above.
- 60 Ls, gray orange, lt ol gray, 7% Qz sand, 5% phos sand, 3% phos gravel, mollusks, forams, foss frag. Small forams, possibly miliolids, Valuuleria floridara, Virgulina fosiformis, Elphidium incertum, Pyrulina albatrossi.
- 70 As above.
- 80 As above.
- Ls, yel gray, v lt orange, pp vugs, 7% Qz sand, 1% phos sand, 1% clay, lo recrys, mollusks, forams, echinoids, foss mold, foss frag. Possible cavings of grayish orange Ls from top 30 feet.
- 100 Ls, yel gray, lt ol gray, 30% Qz sand, 1% phos sand, 1% clay, 1% phos gravel, md recrys, foss frag, mollusks.

- 110 As above.
- 120 As above.
- Ls, yel gray, it ol gray, pp vugs, 30% Qz sand, 1% phos sand, 1% clay, 1% phos gravel, md recrys, foss frag, mollusks, forams.
- 140 As above.
- Ls, v lt gray, yel gray, pp vugs, 15% Qz sand, 1% phos sand, lo recrys, foss frag, mollusks, foss mold.
- 160 Ls, v lt gray, yel gray, pp vugs, 3% Qz sand, 1% phos sand, lo recrys, foss frag, mollusks, foss mold.
- 170 As above.
- 180 As above.
 Ls, yel gray, gray orange, pp vugs, 15% Qz sand, 10% phos sand, mollusks, echinoids, forams, bryozoa.
- 190 As above.

 Sand, dk yel br, v lt orange, 45% phos sand, 5% Ls, forams, foss frag, vertebrate, echinoids, shark teeth, small forams including Asterigerina.
- 200 As above.
- 210 Phosphate, dk br, dk yel br, 45% Qz sand, 25% Ls, forams, foss frag, vertebrate, echinoids, shark teeth.
- 220 Sand, dk br, dk yel br, 45% phos sand, 25% Ls, forains, foss frag, vertebrate, echinoids, shark teeth.
- 230 Ls, lt gray, gray yel, pp vugs, 1% Qz sand, 1% phos sand, 1% phos gravel, mollusks, bryozoa, vertebrate.
- 240 As above.
- Ls, lt gray, yel gray, pp vugs, 10% Qz sand, 5% phos sand, mollusks, bryozoa, coral, echinoids.
- Ls, v lt orange, yel gray, pp vugs, 10% Qz sand, 5% phos sand, mollusks, bryozoa, coral, echinoids.
- 270 As above.
- 280 Ls, v lt orange, yel gray, pp vugs, 5% Qz sand, 5% phos sand, lo recrys, mollusks, bryozoa, coral, echinoids.

<u>Depth</u>

- 290 As above.
- 300 Ls, v lt orange, yel gray, pp vugs, 3% Qz sand, 3% phos sand, lo recrys, mollusks, bryozoa, echinoids, ostracods.
- 310 As above.
- 320 As above. 20-30% of rock are bryozoans.
- 330 As above.
- Ls, v lt orange, yel gray, pp vugs, 3% Qz sand, 3% phos sand, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams.
- 350 As above.
- 360 As above.
- Ls, v lt orange, gray yel, pp vugs, 3% Qz sand, 3% phos sand, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams.
- 380 As above.
- Ls, gray orange, It gray, pp vugs, 3% Qz sand, 3% phos sand, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams.
- 400 As above.
- Ls, v lt gray, yel gray, pp vugs, 5% Qz sand, 3% phos sand, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams, small Operculinoide-like forams.
- 420 As above.
- 430 As above.
- Ls, v lt orange pp vugs, 5% Qz sand, 5% phos sand, 1% phos gravel, 1% Dolomite, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams, a few pieces of dark gray microxin Dolomite.
- As above.

 Dolomite makes up around 10% of rock.
- Ls, yel gray, gray yel, pp vugs, 5% Qz sand, 5% phos sand, 1% phos gravel, 1% Dolomite, lo recrys, mollusks, bryozoa, echinoids, ostracods, forams.
- Ls, v lt gray, lt br, 1% Qz sand, 5% phos sand, mollusks, echinoids, bryozoa, shark teeth.

- 480 As above.
- Ls, v lt orange, yel gray, 1% Qz sand, 5% phos sand, mollusks, echinoids, bryozoa, forams, foss frag.
- 500 As above.
- Ls, v lt orange, gray br, 1% Qz sand, 3% phos sand, lo recrys, mollusks, echinoids, bryozoa, forams, foss frag.
- Ls, v lt orange, yel gray, 1% Qz sand, 1% phos sand, 1% phos gravel, lo recrys, mollusks, echinoids, bryozoa, forams, shark tooth.
- Ls, v lt orange, yel gray, 1% Qz sand, 1% phos sand, 1% phos gravel, lo recrys, mollusks, echinoids, bryozoa, forams.
- 540 As above.
- 550 As above.
- Ls, v lt orange, gray yel, pp vugs, 3% Qz sand, 3% phos sand, mollusks, echinoids, bryozoa, vertebrate, forams.
- 570 As above.
- 580 As above.
- 590 As above.
- 600 Ls, v lt orange, pp vugs, 1% Qz sand, 1% phos sand, 1% phos gravel, 3% Dolomite, lo recrys, mollusks, bryozoa, echinoids, forams, foss frag.
- 610 As above.
- Dolomite, yel gray lt ol gray, 1% Qz sand, 1% phos sand, 3% phos gravel, 15% Ls, md recrys, mollusks, bryozoa, crustacea, echinoids, some Dolomite (5-10% dark gray microxln variety) Dolomitic fracture zone.
- As above.

 Ls, v lt orange, v lt gray, pp vugs, 1% Qz sand, 1% phos sand, 1% phos gravel, 1% Dolomite, lo recrys, poor samp, mollusks, bryozoa, echinoids, foss frag, forams.
- 640 As above.
- 650 As above.
- 660 Ls, v lt orange, pp vugs, 1% Qz sand, 1% phos sand, lo recrys, mollusks, bryozoa, echinoids, foss frag, forams.

<u>Depth</u>

- 670 Ls, v lt gray, yel gray, pp vugs, 1% Qz sand, 1% phos sand, 10% phos gravel, 12% Dolomite, lo recrys, mollusks, bryozoa, echinoids, shark tooth.
- Dolomite, yel gray, it gray, 1% phos sand, 15% Ls, 5% phos gravel, md recrys, sucrosic, mollusks, bryozoa, echinoids, shark tooth. Dolomite unfossiliferous, phosphatic gravel all in Ls (possible cavings).
- 690 Ls, v lt orange, yel gray, pp vugs, 1% Qz sand, 1% phos sand, 1% phos gravel, 5% Dolomite, lo recrys, chalky, mollusks, bryozoa, foss mold, forams, foss frag.
- 700 As above.
- Ls, v lt orange, yel gray, pp vugs, 1% Qz sand, 1% phos sand, 15% phos gravel, 5% Dolomite, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- 720 As above.
- Ls, v lt orange, yel gray, pp vugs, 5% Qz sand, 5% phos sand, phos gravel, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- Ls, v lt orange, pp vugs, 3% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- Ls, v lt orange, gray orange, pp vugs, 1% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- Ls, v lt orange, lt gray, pp vugs, 1% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- 770 As above.
- Ls, v lt orange, lt gray, pp vugs, 3% Qz sand, 3% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- Ls, v lt orange, lt gray, pp vugs, 1% Qz sand, 1% phos sand, phos gravel, lo recrys, chalky, mollusks, bryozoa, echinoids, forams, foss frag.
- 800 As above.
- 810 No sample.
- 820 As above.
- Ls, v lt orange, lt gray, pp vugs, 1% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams.
- 840 As above.

- 850 Ls, v lt orange, lt gray, pp vugs, 5% Qz sand, 3% phos sand, lo recrys, chalky, mollusks, bryozoa, forams, ostracods.
- 860 As above.
- 870 As above.
- 880 As above.
- 890 As above.
- Ls, v lt orange, lt gray, pp vugs, 7% Qz sand, 5% phos sand, lo recrys, chalky, mollusks, bryozoa, forams, ostracods.
- Ls, v lt orange, lt gray, pp vugs, 3% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, forams.
- 920 Ls, v lt orange, gray br, pp vugs, 1% Qz sand, 1% phos sand, mollusks, bryozoa, ostracods, forams, echinoids.
- 230 Ls, v lt orange, yel gray, pp vugs, 5% Qz sand, 3% phos sand, lo recrys, chalky, mollusks, bryozoa, ostracods, forams, echinoids.
- Ls, v lt orange, gray orange, pp vugs, 5% Qz sand, 3% phos sand, lo recrys, chalky, dolomitic, mollusks, bryozoa, ostracods, forams, echinoids.
- Ls, v lt orange, gray br, pp vugs, 7% Qz sand, 1% phos sand, lo recrys, chalky, mollusks, bryozoa, echinoids, foss frag.
- 960 As above.
- Ls, v lt orange, gray br, pp vugs, 12% Qz sand, 1% phos sand, 1% phos gravel, mollusks, crustacea, vertebrate, bryozoa, forams.
- 980 As above.
- 990 Ls, v lt orange, gray br, pp vugs, 3% Qz sand, 10% phos sand, 1% phos gravel, 1% Dolomite, lo recrys, poor samp, mollusks, bryozoa, echinoids, forams, vertebrate. Two types of Ls, dominant one is light tan with 1-3% sand, calcarenitic, one white-gray with sand and phosphate (possible cavings)
- 1000 As above.
- 1010 Ls, v lt orange, gray br, pp vugs, 3% Qz sand, 1% phos sand, 1% phos gravel, 3% clay, lo recrys, poor samp, mollusks, bryozoa, echinoids, forams, foss frag.

<u>Depth</u>

- 1020 Ls, v lt orange, yel gray, pp vugs, 1% Qz sand, 1% phos sand, 1% Dolomite, lo recrys, coquina, mollusks, bryozoa, echinoids, forams, ostracods. Partly miliolid with a few grains of sand, cavings of grayish Ls with sand and phosphate.
- 1030 As above.
- 1040 Ls, v it orange, gray br, pp vugs, 1% Qz sand, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods.
- 1050 As above.
- 1060 Ls, v lt orange, gray br, pp vugs, 3% Qz sand, 1% phos sand, 3% phos gravel, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods.
- 1070 Ls, v lt orange, gray br, pp vugs, 1% Qz sand, 1% pyrite, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods.
- 1080 As above.
- 1090 Ls, gray orange, It ol gray, pp vugs, 1% Qz sand, 1% phos gravel, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods.
- 1100 Ls, gray orange, It ol gray, pp vugs, 1% Qz sand, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods.
- 1110 Ls, v lt orange, pp vugs, md recrys, mollusks, bryozoa, echinoids, forams, ostracods.
- 1120 Ls, v lt orange, gray br, pp vugs, 1% Qz sand, md recrys, coquina, mollusks, bryozoa, echinoids, forams, ostracods.
- 1130 As above.
- 1140 As above.
- 1150 As above.

 Miliolid coquina, Rotalia mexicana noted. Sand present in some (less than 1%)
- 1160 As above.
- 1170 As above.
- 1180 Ls, v lt orange, gray br, pp vugs, 1% Qz sand, md recrys, coquina, mollusks, bryozoa, echinoids, forams, ostracods, Rotalia mexicana present.
- 1190 As above.

- 1200 As above.
- 1210 As above.
- 1220 As above.
- 1230 As above.
- 1240 As above.
- 1250 Ls, v lt orange, gray br, pp vugs, md recrys, coquina, mollusks, bryozoa, echinoids, forams, ostracods.
- 1260 Ls, v lt orange, gray br, pp vugs, 1% Qz sand, 1% phos sand, 1% phos gravel, md recrys, coquina, poor samp, mollusks, bryozoa, echinoids, forams, ostracods, spicules common, cavings.
- 1270 As above.
- 1280 As above. Sand and phosphate not in matrix of Ls, cavings.
- 1290 Ls, yel gray, v lt orange, pp vugs, 1% phos gravel, 1% phos sand, 1% Qz sand, lo recrys, poor samp, mollusks, bryozoa, worm trac, echinoids, forams.
- 1300 Ls, v lt orange, gray br, pp vugs, lo recrys, coquina, mollusks, bryozoa, worm trac, echinoids, forams.
- 1310 Ls, v lt orange, lo recrys, mollusks, bryozoa, crustacea, foss frag.

 Dolomite, md yel br, dk yel br, hi recrys, sucrosic, mollusks, echinoids.
- 1320 Dolomite, md yel br, dk yel br, 10% Ls, hi recrys, sucrosic, mollusks, echinoids.
- 1330 Dolomite, md yel br, dk yel br, hi recrys, sucrosic, mollusks, echinoids.
- 1340 Dolomite, gray orange, md yel br, 1% Ls, 1% phos gravel, hi recrys, sucrosic, poor samp, no fossil.
- 1350 As above.

 A few fragments of Ls and phosphate from cavings.
- 1360 As above.
- 1370 As above.
- 1380 As above.
- 1390 As above.

Description

1400 As above.

1410 As above.

1420 As above.

1430 As above.

1440 As above.

1445 Ls, v lt gray, v lt orange, pp vugs, mollusks, forams, first appearance of large Lepidocyclina and Operculinoides.