Executive Summary ROMP Site 48 Three Monitor Wells

<u>Location</u> - ROMP Site No. 48 is located on Hurrah Church Road which is 2.4 miles north of the intersection of SR 39 and SR 674 and on the east side of SR 39 in Hillsborough County. The site is approximately 950 feet east of SR 39 on Hurrah Church Road. ROMP 48 is located in Section 31, Township 31 South, Range 22 East and at latitude 27⁰44'27", longitude 82⁰08'37".

<u>Site Easement</u> - This site was obtained from Hillsborough County on March 6, 1974 for the sum of one dollar. The perpetual easement for this site is 80 feet by 80 feet and is recorded in O.R. Book 2851, Pages 547 through 549 at the Hillsborough County Courthouse. A temporary construction easement was not obtained for this site.

<u>Geology</u> - This site is located on the western edge of the Sunderland Terrace at an elevation of 102 feet above mean sea level (MSL). Geologic information was obtained from well cuttings from land surface to 925 feet below land surface datum (LSD). The general geology of this site is as follows:

0-40' Sand and Clay 40'-? Hawthorn Formation 7-300' Tampa Limestone 300'-535' Suwannee Limestone 535'-775' Ocala Group

775'-925' Avon Park Limestone

Hydrogeology - At least three separate artesian aquifers exist at this site. The first artesian aquifer is found in the Hawthorn Formation at a depth of ± 45 feet below land surface datum (LSD). It is separated from the water table aquifer by approximately 10 feet of clay, sand, and phosphate which might be remnant Bone Valley deposits. This first aquifer is separated

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from the second artesian aquifer by the sand, clay and limestone of the Hawthorn Formation which is approximately 110 feet in thickness. The second artesian aquifer exists at a depth of between \pm 170 and \pm 541 feet below LSD. The second artesian aquifer is separated from the third artesian aquifer by the Ocala Group which is considered to be a confining layer in this area. The Ocala Group is found at a depth of \pm 535 feet to \pm 775 feet below LSD. The third artesian aquifer is located in the Avon Park Limestone at a depth of \pm 780 to the monitor well total depth of 815 feet below LSD.

No pumping tests were conducted on these wells so there is not any information available on either permeabilities or transmissivities for this site.

<u>Well Construction</u> - Three artesian monitor wells have been constructed at this site since 1976 by the District owned and operated Portadrill. They are as follows:

- A. Well No. 1 The Avon Park well was constructed by using 54 feet of 14 inch steel work casing around 300 feet of 8 inch PVC casing from LSD to 300 feet below LSD. From this point the 8 inch casing was reduced down to 6 inch PVC and 480 feet of 6 inch PVC casing was strung from 300 to 780 feet below LSD. Once the casing was cemented in place and allowed to set up, the hole was drilled out to 848 feet below LSD. During development of this well the sub and bit were lost in the hole so the recorded depth is listed as 815 feet below LSD. This well was constructed between February 28, and May 18, 1978 at a cost of \$29,568 or \$34.87 per foot.
- B. Well No. 2 The Tampa-Suwannee monitor well was constructed by using 43 feet of 14 inch steel work casing around 215 feet of 8 inch PVC casing. The casing was cemented in place and then drilled out to

a total depth of 541 feet below LSD. This well was constructed between January 14 and February 11, 1976 at a cost of \$8,200 or \$15.16 per foot.

C. Well No. 3 - The Hawthorn monitor well was constructed with 45.5 feet of 8 inch PVC casing which was cemented in place and drilled out to a total depth of 61 feet. This well was constructed between February 13 and 17, 1976 at a cost of \$900 or \$14.75 per foot.

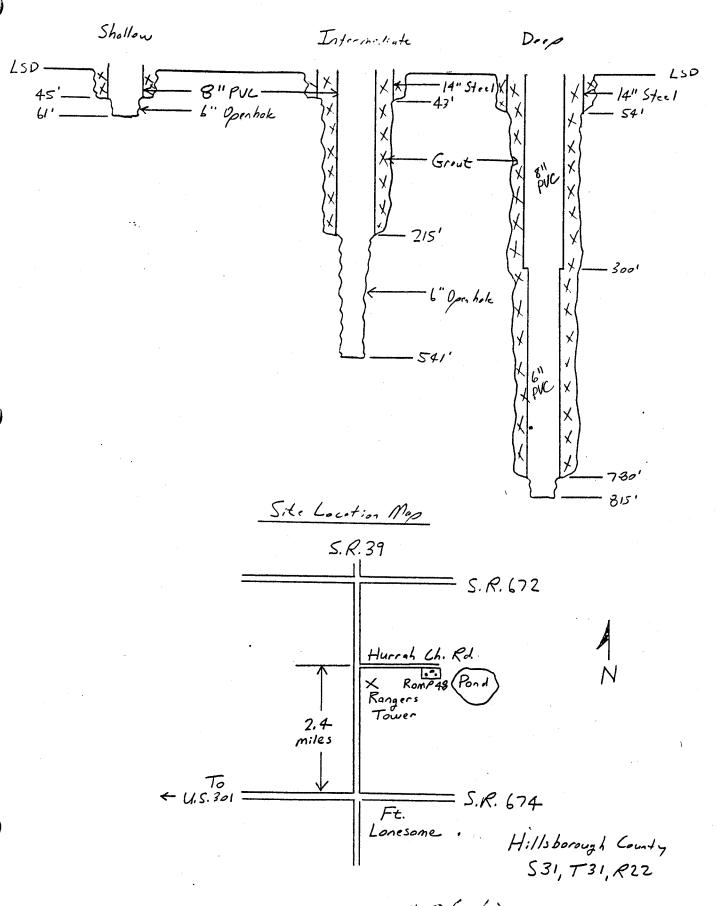
<u>Geophysical Logs</u> - Electric, caliper, gamma, and temperature logs were made on both the Tampa-Suwannee and Avon Park wells. In addition a fluid resistivity log was made on the Avon Park well.

<u>Type of Monitor</u> - All three wells are designed to monitor the potentiometric water levels at the aforementioned depths.

<u>Water Quality</u> - No water samples were obtained at this site but there are apparent changes in the water quality near the Tampa-Suwannee contact and at a depth of <u>+</u> 840 feet below LSD in the Avon Park Limestone. At both of these points the fluid resistivity decreases and there is a temperature rise. In the Avon Park the electric log also shows a change at the <u>+</u> 840 depth. These logs indicate apparent flow zones of ground water and increases in conductivity or dissolved solids. The degree of difference between these zones and whether or not any of them is unpotable water is not known since samples were not obtained.

U.S.G.S. Notification - SWFWMD Planning Section was notified during June,
1976 that the Hawthorn and Tampa-Suwannee wells were completed and they
were notified on ______ that the Avon Park well was completed.

As Built Well Diagram



#3(4/4)

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W- 14386 TOTAL DEPTH: 00925 FT.

LOCATION: T.31S R.22E S.31

COUNTY - HILLSBOROUGH

SAMPLES - NONE

LAT = N 27D 44M 27

LON = W 82D 08M 37

COMPLETION DATE - N/A

ELEVATION - 102 FT

OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: SWFWMD. ROMP SITE NO. 48

WORKED BY: CODED AND ENTERED BY RICHARD GREEN 8/90 FROM A GEOLOGIST'S (G. STRASSER) DESCRIPTION OF CUTTINGS.

LOCATED ON HURRAH CHURCH ROAD WHICH IS 2.4 MILES NORTH OF THE INTERSECTION OF S.R. 39 AND S.R. 674 AND ON THE EAST SIDE OF S.R. 39 IN HILLSBOROUGH COUNTY. THE SITE IS APPROXIMATELY 950 FEET EAST OF S.R. 39 ON HURRAH CHURCH ROAD.

THE TOP OF THE TAMPA LIMESTONE IS UNCERTAIN.

0. - 40. UNDIFFERENTIATED SAND AND CLAY

40. - . HAWTHORN GROUP

. - 300. TAMPA MEMBER OF ARCADIA FM.

300. - 535. SUWANNEE LIMESTONE 535. - 775. OCALA GROUP

775. - 925. AVON PARK FM.

0 - 5 SAND; REDDISH ORANGE TO BROWN; ROUNDNESS: ROUNDED; ACCESSORY MINERALS: IRON STAIN-%; CLEAN.

5 ~ 10 AS ABOVE

10 - 15 AS ABOVE

15 - 20 AS ABOVE

20 - 25 AS ABOVE SOMEWHAT LESS IRON STAIN.

25 - 30 AS ABOVE VERY CLEAN. NO IRON STAIN. 30 - 35 SAND;;

ROUNDNESS:ROUNDED;

MODERATELY SORTED, ROUNDED, CLEAN.

35 - 40 AS ABOVE

40 - 45 LIMESTONE; YELLOW TO TAN;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
ARENACEOUS LIMESTONE- 50% LS; 50% SAND AS ABOVE.

45 - 50 LIMESTONE; YELLOW TO CREAM;
GOOD INDURATION;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
PHOSPHATE GRAINS POORLY SORTED, SAND POORLY SORTED, CLEAN ROUNDED.

50 - 55 SAND; MODERATE GRAY;

GRAIN SIZE: FINE;

ROUNDNESS:ROUNDED;

ACCESSORY MINERALS: PHOSPHATIC SAND- %, LIMESTONE-%;

WELL ROUNDED, SORTED, EQUAL AMOUNTS OF LIMESTONE AND PHOSPHATE.

55 - 60 LIMESTONE; LIGHT GRAY TO MODERATE GRAY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND-%;
THIS INTERVAL (55-60') IS ACTUALLY LISTED AFTER 50-55' AS BEING FROM 44-60'. IT IS
DESCRIBED AS: ARENACEOUS LS-MICRITIC, CONTAINS POORLY SORTED PHOS.; SAND, CLEAN QTZ,
MODERATELY SORTED, ROUNDED, APPROX. 50%.

60 - 65 SAND; MODERATE GRAY;

ROUNDNESS:ROUNDED;

ACCESSORY MINERALS: PHOSPHATIC SAND- %, LIMESTONE-%;

GRAY MICRITE AROUND SAND GRAINS, ROUNDED, WELL SORTED, MINOR PHOSPHATE AND LIMESTONE.

65 - 70 SAND; MODERATE GRAY;
ACCESSORY MINERALS: CLAY-%;
SAND AND CLAY. GRAY CLAY, SAME AS 60-65'.

70 - 75 AS ABOVE

75 - 80 AS ABOVE

80 - 85 AS ABOVE

GRAYISH TO LIGHT TAN CALCAREOUS LIMESTONE.

85 - 90 LIMESTONE; MODERATE GRAY TO CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND-%;

ARGILLACEOUS LIMESTONE-GRAYISH TO CREAM, POORLY LITHIFIED; LIMESTONE, MICRITIC, POORLY

LITHIFIED, CREAM, PHOSPHATE AND SAND FRACTION.

90 - 95 CALCILUTITE; MODERATE GRAY TO CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %;

OTHER FEATURES: CALCAREOUS;

"CALCAREOUS LIME".

95 - 100 CALCILUTITE; LIGHT TAN TO CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: PHOSPHATIC SAND-%;

MINOR PHOSPHATE.

100 - 105 AS ABOVE

105 - 110 CALCILUTITE; LIGHT GRAY TO CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: CHERT- %, PHOSPHATIC SAND- %, QUARTZ SAND-%;

CACLAREOUS LIME, MINOR CHERT AND PHOSPHATE, SAND.

110 - 115 AS ABOVE

115 - 120 AS ABOVE

120 - 125 AS ABOVE

125 - 130 AS ABOVE

SOMEWHAT MORE PASTY.

130 - 135 AS ABOVE

135 - 140 AS ABOVE

140 - 145 AS ABOVE

145 - 150 AS ABOVE

150 - 155 AS ABOVE

LARGER FRACTION OF PHOSPHATE, ROUNDED, MOD. SORTING.

155 - 160 LIMESTONE; LIGHT TAN TO CREAM;
GRAIN TYPE: CALCILUTITE, CRYSTALS;
POOR INDURATION;

ACCESSORY MINERALS: CALCILUTITE- %, PHOSPHATIC SAND- %, QUARTZ SAND- %, SPAR-%; MINOR LIME MUD, VERY FINE PHOSPHATE, SOME SPAR AND QTZ SAND.

160 - 165 AS ABOVE

165 - 170 AS ABOVE

170 - 175 CALCILUTITE; CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %, LIMESTONE-%;

175 - 180 AS ABOVE

180 - 185 AS ABOVE
LIMESTONE-WEAKLY LITHIFIED, VERY FINE PHOSPHATE AND SAND GRAINS, SPARRY.

185 - 190 AS ABOVE

190 - 195 AS ABOVE

195 - 200 AS ABOVE

200 - 205 AS ABOVE

205 - 210 AS ABOVE

210 - 215 LIMESTONE; LIGHT TAN TO CREAM;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: SPAR- %, PHOSPHATIC SAND- %, QUARTZ SAND-%;
SPARRY, SOME PHOSPHATE AND SAND.

215 - 220 AS ABOVE

220 - 225 AS ABOVE

225 - 230 AS ABOVE

230 - 235 AS ABOVE

235 - 240 AS ABOVE

240 - 245 CALCILUTITE; TAN TO CREAM;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: QUARTZ SAND- %, LIMESTONE-%;
MINOR SAND AND LIMESTONE. SAND IS VERY FINE.

245 - 250 AS ABOVE

250 - 255 AS ABOVE

255 - 260 AS ABOVE

260 - 265 AS ABOVE

265 - 270 AS ABOVE

270 - 275 AS ABOVE

275 - 280 AS ABOVE

280 - 285 AS ABOVE

285 - 290 AS ABOVE

290 - 295 AS ABOVE

295 - 300 AS ABOVE

300 - 305 LIMESTONE; LIGHT TAN TO CREAM; FRACTURE;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: SPAR- %, QUARTZ SAND-%;
SAND VERY FINE, POOR-WEAKLY LITHIFIED, MINOR SPAR.

305 - 310 AS ABOVE

310 - 315 AS ABOVE

315 - 320 AS ABOVE

320 - 325 NO SAMPLES

325 - 330 AS ABOVE SAME AS 300-305'.

330 - 335 AS ABOVE

335 - 340 AS ABOVE

340 - 345 CALCILUTITE; CREAM;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: QUARTZ SAND-%;
MINOR SAND FRACTION.

345 - 350 CALCILUTITE; CREAM;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: FOSSILIFEROUS;

350 - 355 AS ABOVE

355 - 360 AS ABOVE

360 - 365 AS ABOVE
MINOR SPARRY FRACTION.

365 - 370 AS ABOVE SAME AS 345-350'.

370 - 375 AS ABOVE

375 - 380 AS ABOVE

380 - 385 AS ABOVE

385 - 390 AS ABOVE

390 - 395 AS ABOVE

395 - 400 AS ABOVE

400 - 405 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE, SKELETAL;

POOR INDURATION;

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %, LIMESTONE- %, SPAR- %; OTHER FEATURES: FOSSILIFEROUS;

FRIABLE, MINOR SAND AND PHOSPHATE, SAND IS VERY FINE AND ROUNDED, SORTED, SOME MINOR AMOUNTS OF GRAYISH LIMESTONE, SPARRY GRAINS.

405 - 410 AS ABOVE

410 - 415 AS ABOVE
PELECYPODS, MANY BROKEN FOSSILS, ECHINOID FRAGMENTS.

415 - 420 AS ABOVE

420 - 425 AS ABOVE

425 - 430 AS ABOVE

430 - 435 AS ABOVE

435 - 440 AS ABOVE

440 - 445 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %;

OTHER FEATURES: FOSSILIFEROUS;

LIMESTONE AND CALCAREOUS LIME- MICRITE, CREAM, WEAK TO POORLY LITHIFIED, FRIABLE,

FOSSILIFEROUS, MINOR SAND AND PHOSPHATE, SAME AS 400-405'.

445 - 450 AS ABOVE

450 - 455 AS ABOVE

455 - 460 AS ABOVE

460 - 465 AS ABOVE

465 - 470 AS ABOVE

470 - 475 AS ABOVE

FOUND THREE DICTYOCONUS COOKEI.

475 - 480 AS ABOVE

480 - 485 AS ABOVE

485 - 490 AS ABOVE

490 - 495 AS ABOVE

495 - 500 AS ABOVE

500 - 505 AS ABOVE

ALTERNATING LENSES OF LITHIFIED LIMESTONE THROUGHOUT FORMATION.

505 - 510 AS ABOVE

510 - 515 AS ABOVE

515 - 520 AS ABOVE

520 - 525 AS ABOVE

525 - 530 AS ABOVE

530 - 535 AS ABOVE

535 - 540 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: QUARTZ SAND- %, SPAR- %;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA;

LIMESTONE AND CALCAREOUS LIME- MICRITE, CREAM, WEAKLY LITHIFIED, FOSSILIFEROUS, (LEPS. AND DICTYOCONUS), LENSES OF WEAKLY LITHIFIED LIMESTONE, FRIABLE, FRACTURED, SPARRY, SOME MINOR SAND.

540 - 545 AS ABOVE

545 - 550 AS ABOVE

SOME CHERT?, MINOR SAND AND PHOSPHATE.

550 - 555 NO SAMPLES

555 - 560 AS ABOVE

SAME AS 545-550'.

560 - 565 AS ABOVE

565 - 570 AS ABOVE

570 - 575 AS ABOVE

FOSSILIFEROUS, LIMESTONE, LEPIDOCYCLINA, ECHINOIDS.

575 - 580 AS ABOVE

580 - 585 AS ABOVE

585 - 590 AS ABOVE

590 - 595 AS ABOVE

595 - 600 AS ABOVE

600 - 605 AS ABOVE

605 - 610 AS ABOVE

610 - 615 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: QUARTZ SAND- %, SPAR- %;

OTHER FEATURES: FOSSILIFEROUS;

CRUMBLY, SOME SPARRY, GRAINY, MINOR FRACTION OF SAND.

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615	-	620	AS ABOVE
620	-	625	AS ABOVE
625	-	63 0	AS ABOVE
630	-	635	AS ABOVE
635	-	640	AS ABOVE
640			AS ABOVE
645	-	650	AS ABOVE
650	-	655	AS ABOVE MICRITE, FOSSILIFEROUS, LEPIDOCYCLINA.
655	-	660	AS ABOVE
660	-	665	AS ABOVE
665	•	670	AS ABOVE
670	-	675	AS ABOVE MINOR AMOUNTS OF HARD BROWN LIMESTONE.
675	-	680	AS ABOVE SAME AS 650-655'. CALCAREOUS LIME MUD, MICRITE, BECOMING SOMEWHAT MORE PASTY.
680	-	685	AS ABOVE
685	-	690	AS ABOVE ABUNDANT NUMMULITES THROUGHOUT.
690	-	695	AS ABOVE
695	-	700	AS ABOVE
700	-	705	AS ABOVE LENSES SOMEWHAT LITHIFIED.
705	-	710	AS ABOVE CUTTINGS MUCH FINER AND FOSSILS MUCH SMALLER.
710	-	715	AS ABOVE

SAME AS 700-705'. MINOR GRAYISH-WHITE MICRITE.

715 - 720 AS ABOVE

720 - 725 AS ABOVE
UNIDENTIFIED SMALL BLACK FOSSILS OR SEEDS.

725 - 730 AS ABOVE SAME AS 720-725.

730 - 735 AS ABOVE

735 - 740 AS ABOVE

740 - 745 AS ABOVE CUTTINGS MUCH LARGER.

745 - 750 SAME AS 685-690'. MINOR AMOUNTS OF WELL LITHIFIED LIMESTONE, SOME CHERT FRAGMENTS.

750 - 755 AS ABOVE (SAME AS 745-750')

755 - 760 AS ABOVE
MINOR AMOUNTS OF GRAY AND YELLOWISH LIMESTONES.

760 - 765 AS ABOVE SAME AS 745-750'.

765 - 770 AS ABOVE

770 - 775 AS ABOVE

775 - 780 LIMESTONE; CREAM;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: DOLOMITE- %, SPAR- %, CHERT- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: BENTHIC FORAMINIFERA;
FRIABLE, SOME DOLOSTONE, SPARRY, DICTYOCONUS, SOMEWHAT FRACTURED, MINOR CHERT.

780 - 785 AS ABOVE

785 - 790 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: ORGANICS- %, QUARTZ SAND- %;

OTHER FEATURES: FOSSILIFEROUS;

ARENACEOUS, MINOR ORGANICS, GRITTY.

790 - 795 LIMESTONE; CREAM TO LIGHT BROWN;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: QUARTZ SAND- %;

OTHER FEATURES: FOSSILIFEROUS;

FRIABLE, FRACTURED, MINOR SAND, GRAINY, GRITTY.

795 - 800 AS ABOVE

800 - 805 LIMESTONE; CREAM TO WHITE;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

ACCESSORY MINERALS: SPAR- %, LIMESTONE- %;

OTHER FEATURES: FOSSILIFEROUS;

FRIABLE, FRACTURED, MINOR GRAYISH LIMESTONE, SPARRY. LOST CIRCULATION AT 805'. DRILLING ON

REVERSE AIR.

805 - 810 AS ABOVE

810 - 815 AS ABOVE

MINOR DARK BROWN CHERT AND BROWN LIMESTONE.

815 - 820 AS ABOVE

SAME AS 810-815'.

820 - 825 AS ABOVE

SOMEWHAT MORE LITHIFIED, HIGH POROSITY, INCREASE IN WEAKLY LITHIFIED MICRITE FRACTION.

825 - 830 AS ABOVE

SAME AS 820-825'.

830 - 835 AS ABOVE

835 - 840 AS ABOVE

840 - 845 AS ABOVE

845 - 850 SAME AS 820-825'. CUTTINGS APPEAR TO BE RECIRCULATED. CUTTINGS VERY FINE.

850 - 855 AS ABOVE

INCREASE IN SAND FRACTION, SORTED, ROUNDED, CLEAN QTZ WITH SLIGHT GRAYISH TINT.

855 - 860 SAME AS 820-25'. LS BECOMING SLIGHTLY MORE TANNISH WITH INCREASE IN BROWN

LIMESTONE.

860 - 865 AS ABOVE

865 - 870 AS ABOVE

870 - 875 AS ABOVE

875 - 880 AS ABOVE

880 - 885 AS ABOVE

BROWN LS LENSES AT ABOUT 879' APPROX. 1"-0.5" THICK.

885 - 890 LIMESTONE; WHITE TO CREAM; FRACTURE, POSSIBLY HIGH PERMEABILITY;

GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL;

POOR INDURATION;

ACCESSORY MINERALS: DOLOMITE-%;

LS AND DOLOSTONE- WHITE TO CREAM, POORLY LITHIFIED, FRIABLE, FRACTURED, HIGH POROSITY, SPARRY, FOSSILIFEROUS; DOLOMITE, HARD, BROWN, SUCROSIC TEXTURE, LENSES OF DOLOMITE VARIED

IN THICKNESS, LENSES ALTERNATING WITH LIMESTONE LENSES.

890 - 895 AS ABOVE

895 - 900 AS ABOVE

900 - 905 LIMESTONE; CREAM TO WHITE; FRACTURE;

GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL;

POOR INDURATION;

ACCESSORY MINERALS: DOLOMITE- %;

OTHER FEATURES: FOSSILIFEROUS;

FRIABLE, FRACTURED, MINOR DOLOMITE, SPARRY.

905 - 910 SAME AS 885-890'.

910 - 915 AS ABOVE

DOLOMITE, DARK BROWN TO LIGHT GRAY.

915 - 920 AS ABOVE

920 - 925 AS ABOVE

925 TOTAL DEPTH