

Plio-Pleist ~~270~~ - 270

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270-720

11/11/79

02014
WELL DRILLER'S LOG

720-880

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0844	ON-SITE Tony, Paul, Bill & MILTON P. Swtanek
0906	DP #8 "8 inch casing" BIT=7 7/8"
0929	145'-150' Fragmented shell approx. 1mm in length Comprising of a pink coloration
	150'-155' shell debris in a grey soupy mixture
0945	155'-160' Shell fragments enlarged 2mm to 4mm NOTING: "Tiger Paw" shells. Trace cementation of shell nodules.
0950	DP #9
1004	160'-165' shell fragments ranging 2-3mm in length comprising of "Floridan's Augers" & "Lucine buttercups" in a green clay
	165'-170' Shell fragments distributed in a greenish to grey clay nodules
	170'-175' same as above
1015	175'-180' green clay nodules increasing in size 2-3 to 4 mm with 1 to 2 mm "Lucine shells & Augers"
1018	DP #10
1038	180'-185' green phosphatic clay nodules with shell fragments
	185'-190' cockle shells & Lucine shell fragments mixed in a green nodular clay
	190'-195' 90% grey shell composition ranging 1 mm to 2 in size with trace grey clays

FORM 49
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OFF-82 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
1040	195'-200' same as above; However, NOTE! 19% Lucine shell fragments ⇒ probable cause upper layer cuttings inter-mixed in lower level strata cuttings
1049	DP #11
1119	200'-205' same as above
	205'-210' same as above with trace 4mm green phosphatic platy clays
	210'-215' grey shell fragments turning green less than 5% lighter colored shells.
	215'-220' "Floridana lettered olive shells" mixed in a green soup mixture of grey fragmented shell with phosphatic pebbles (nodules)
	DP #12
1139	220'-225' light colored shell fragments ≈ 1mm in length mixed in a green soup.
	225'-230' 10% shell fragments in a green phosphatic thin clay nodules
	230'-235' green clay nodules increasing in size to 4mm
	235'-240' *desander sample fine phosphatic green finer sands
1150	235'-240' green clay nodules ranging

FORM 99
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
1150	235'-240' 5 to 6 mm in length with less than 5% shell fragment distribution.
1154	DP #13
1218	240'-245' trace ss. nodules with shell frag. in a green clay
	245'-250' shells Frag; Floridana augers comprising only 5% with rest being green phosphatic clays
	250'-255' 10 mm to 20 mm globular green clay with miniscule shell particulates
1222	255'-260' 20 mm green clay globular with trace shell by products; introducing 4mm trace phosphatic pebbles pebbles
1230	DP #14
1246	260'-265' green consistency of clay nodules with minute shell cuttings
	265'-270' Elongated phosphatic particulates
	270'-275' Floridana auger trace in large green clay nodules.
1329	275'-280' Platy green clay with a slimy texture encompassing less than 3% 4mm shell fragments.

FORM 979
1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. ORF-42 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
1333	DP # 15
1340	280'-285' green phosphatic clay with less than 10% shell contents
	285'-290' same as above
	290'-295' green phosphatic clay with less than 5% 1mm shell fragments
1355	295'-300' Abundant "tiger paws" ranging 1mm to 4mm in a green chunky clay More shell fragment content approx 40% distribution
1405	DP # 16
1409	300'-305' Fine cuttings of shell mixed in a green clay
	305'-310' Diminishing shell fragments
	310'-315' shells increasing in size intermixed with green clay nodules
1417	315'-320' Rather large shell fragments compared to last 10 Feet. However, definite increase in shell content
1419	DP # 17
1421	320'-325' Green clay darkening with trace grey silty clay nod.
	325'-330' green clay with 2% shell fragments
	330'-335' mixture of large & small shells in green clay
1451	335'-340' 8mm of whole "Lucine Bittercup" in a dark green clay

FORM 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
1454	DP #18 ** Raining Heavily **
1515	340'-345' green to muddy clay with <1% shell fragments
	345'-350' green pellet size nodules of clay with trace auger contents
	350'-355' "Buttercups" in a green pellet size clay
1520	355'-360' L.S. chips <2% intermixed in a green phosphatic large nodular clay zone
1530	DP #19
1540	360'-365' grey green clay with <30% shell fragments
	365'-370' same
	370'-375' L.S. or Dolomitic chips in a greenish grey clay
1552	375'-380' L.S./S.S./ shell fragments in a TANNISH marly soap
1601	DP #20
	380'-385' Light green to tan color of L.S. chips & shells
	385'-390' TAN coloration of L.S. & SS. chips
	390'-395' Tan to dark tan color with larger SS/LS
1633	395'-400' L.S. chips increasing in size to near 6mm in a tan cluster of shells.

FORM 99
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-17-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
1640	DP #21
1652	'400-405' uniform grain size of soft L.S.
	405'-410' same as above
	410'-415' same as above
1655	415'-420' subrounded rather large L.S.
	chips intermixed with grey & green
	clay (elongated & platy clay) with
	3mm phosphatic elongated particulate
1659	DP #22
1717	420' - 425' uniform L.S. chips in a green clay soap
	425' - 430' same
	430' - 435' green & grey elongated phosphatic clays
1732	435' - 440' with L.S. chips 215% same as above
1745	DP #23 Extremely slow penetration
1755	Drill NOT progressing
1820	NOT PENETRATING
1855	SECURE SITE! Resume drilling
	tomorrow!

FORM 99
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9/18/91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0723	Crew ON-SITE
0725	Circulating
0733	D.P. #23 Resume Drilling
0810	20'43" PER LINEAR FOOT (slow Drilling)
	440'-445' Platy elongated
	445'-450' less than 2% platy silty grey clay
	450'-455' Blue-green phosphatic clays "Blue Gumbar"
0906	455'-460' Elongated; Platy Blue clay (Texture slimy; extremely adhesive)
	intermixed with green 3mm phosphatic clays with trace shell fragments; Foss may originate from above.
0910	D.P. #24 Drill speed increasing
	460'-465' phosphatic olive green clays with 1% shell fragments
	465'-470' same as above
	470'-475' Phosphatic pebbles in a olive green clay Phosphatic
0946	475'-480' TRACE L.S. pebbles; Trace 1mm shell fragments in a olive green heavily concentrated phosphatic clay

FD-101 (Rev. 5-8-64)
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-18-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0952	D.P. #25
1025	480'-485' angular pebble size L.S. (Hard) with dark grey clay paste
	485'-490' Single "Tiger paw" in a granular phosphatic grey clay
	490'-495' Dark grey clay having 80% phosphatic pebbles
1034	495'-500' Light grey pasty clay with contents resembling that of a MARL. L.S./S.S./ LIGHT & dark color grey clays
1036	D.P. #26 DRILL PIPE CHATTERING @ 505'
	500'-505' Light shades of grey clayey phosphatic PASTE
	505'-510' Marly phosphatic light & greys PASTE with angular L.S. chips
	510'-515' SAME AS ABOVE
1112	515'-520' L.S. FRAGMENTS are white & MAKING UP @ least 50% OF TOTAL DISTRIBUTION THAT ELSE, BEING grey clayey phosphatic pebbled PASTE
1120	D.P. #27 1 hr. 30 min to DRILL 20 FEET
1120	520'-525' Light grey clayey paste with subrounded L.S. granules
	525'-530' grey rather thick soupy clay

FORM 89 59
1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-18-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
	530'-535' pebble size L.S. in a grey clay paste with clay pellets
1307	535'-540' slightly olive green & light color greys phosphatic granules & specs intermix with shell fragments & L.S. chips all content show uniform distribution
1342	DP #28 Slow Drilling 20 ^{MIN} PER 1 FT
1510	540'-545' Dark grey platy clays
1512	RAINING Heavily
1513	545'-550' Light color greyish clay with L.S. & Phosphoric pebbles
	550'-555' same as above with Phosphorite pebbles diminishing
1517	555'-560' Light grey color clay
1530	D.P. #29 DRILL RATE INCREASING
1603	560'-565' Dark grey & white clays containing angular white shell fragments ranging in size: 1 to 3 mm in length
1644	565'-570' grey to tannish brown clays with approx 40% distribution of shell fragments
1651	570'-575' Brown to light grey clayish soup with 45% miniscule shell fragments

FORM 99
1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 9-19-91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0714	ON-SITE cleaning slurry pit (MIXING IT)
0807	DP #30
0842	580'-585' 30% phosphorite pebbles mixed in a Brown & Light color clay paste
	580-590 Circulating 6 minutes
	585'-590' same as above clays turning Light color
	590'-595' - Light grey phosphatic clay-granules mixed with <20% pebbles of Phosphorite
0853	595'-600' 20% white L.S. angular chips with <10% phosphorite <10% subrounded L.S. pebbles in a Light grey clayey paste
0855	DP #31 chattering slightly @ 600'-605'
	600-605 Light grey pasty clay with L.S. granules 60% make-up
	605-610 same as above & phosphatic pebbles
	610-615 Increase in L.S. by 25%
1005	615-620 Light color grey paste mixed with platy 2mm length pancake phosphorites, 3mm L.S. angular edged. Comprise of 30% phosph 30% L.S. lost clay. Dark silty clay, STONES
1007 1030	Tony spoke to Marty .. T.D. 620 FEET open hole Pete commenced logging

27° 18' 10"
80° 43' 00"

FORM 53
JULY 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT OKF-82 WELL NO. OKF-82 DATE 10/21/91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
	Notes: Cuttings are to begin at 620'
	Casing set at 430' drilled to 620 with mud, tried reverse air, but the hole did not make enough water, problems with sand heaving, had to shut down on 10/18/91 to switch back to mud rotary
	Stopped on 10/21/91 after Re mudding the hole
	=
10/22/91	began drilling at 0800 on site at 0700
	620 TO 640 Took 28 min
620-625	Gray Green clay with some phosphorite and Limestone (shell fragments, phosphorite grains 1-2 mm in diameter, clay friable
625-630	Same as above with increased Limestone
630-635	Grayish white, plastic clay, phosphorite pebbles up to 1mm in diameter, little Limestone
635-640	Same as above only less phosphorite, and increased LS (still spell 90 LS 570)
	note cond 899
	0850 new Rod
	Bit at 3' 30 sec
640-645	20 min of drilling, sticky clay slowed rate

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 10/22/91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
* 680-685	String on at 1443 10 min to drill Tan green phosphatic ^{silty} clay with shell with some shell fragments frags
685-690	Same as above with increasing silt
* 690-695	light tan silty clay no phosphorite with shell frags
695-700	Same as above, note some rig bouncing and increasing shell frags, small amount of phosphate 55 min for 680-700
OK	
X	begin 700 at 1540 end at 1620
700-705	"white" clay, light tan silty clay with shell frags
705-710	Same as above
↑	710-715 Rig bouncing, limestone, light tan, 1% phosphate
* 715-720	limestone mixture of white, tan, and gray blue shell fragments, very little phosphorite, tan fragments had a microcrystalline structure
* 720-725	

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 10/23/91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
	Tony Lubrano - Driller, Arthur Tassinari, Bill McAndrews Helpers, Jeff Herr collecting cuttings
720'	720' string lowered into the well at 0752. Finished at 740 by 0802, only 10 min required
720-725	Light ^{to medium} gray sandy silty clay non plastic clay with some shell frags.
725-730	Transition: medium to light gray limestone with common shell frags
730-740	Light tan limestone common shell frags up to 5 mm in diameter first common occurrence of leps; leps increase with depth, some poorly cemented calcarenite. A few dark green clay fragments at close to 740
740-760	20 minutes to drill 20 ft - 8 min for stops Light tan to tan poorly indurated highly fossiliferous micritic limestone at 745 found first large lep 2 cm in diameter, at 752 found first Echinoid test. 755 Echinoid spine, leps were extremely abundant at 755 30% of all cutting size was .2-.5 cm in diameter, bryozoan or coral at 755
↓ Plus 20 760-780	Fast Drilling 10 min for 20 ft Light tan fossiliferous micritic LS same as above leps 2 mm in diameter with projections at center to saddle shaped leps 1.25 cm, Echinoid spines

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 10/27/91

Plus
↑

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
780-800	same as above
800-820	Light Tan fossiliferous limestone poorly indurated, 10 min for 20 ft fossil content decreasing along
20	with all cutting, too fine grained, leps, Echinoid stems, bryozoans
840-860	bouncing at 848 light Tan fossiliferous limestone, micritic cement common leps .3 cm to 1 cm some echinoid stems, bryozoans tip bottoms, at bottom about 860
860-880	start at 1430 bouncing at 870, more of a crunching type noise from the rig cones found at 870, light Tan moderately indurated fossiliferous LS calc arenite matrix with micrite, some echinoids also. coral frequent at 875, 1mm round balls present throughout the interval, significant decrease in leps from above, some calcite present from 870-880
880-898	Harder material, some bouncing esp at 898. but relatively fast drilling 12 min 20 ft light tan limestone similar to above only fewer fossils, some leps, polycarp shell fragments and coral



WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. OKF-82 DATE 10/27/91

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
878-900	Rig bouncing moderately
	Dark Tan cryptocrystalline limestone
	small amount of phosphate present 1% few fossils, some lepis

