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July 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lwl Floridan WELL NO. IW3D-TW DATE 6-12-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0-5	Missing (Dug 5' hole w/ Backhoe to set 30' steel surface
	casing) :
5'-20'	Lt to medium gray fine-to medium grained frosted Qtz.
	sand w/ minor amount of organic material interspersed within
	the Qtz sand, unconsolidated, 1% heavy minerals
20-30	Lt gray silty clay or clayey silt w/ minor component of fine grained
	Qtz sand, unconsolidated; sample taken from Kelly no sample obtained
	from the shaker but color change of discharge noted @ 20'
	Kelly down @ 1955 hrs
Next Day 6-13-95	Started next Rod @ ~~2005~~ hrs 0800 6-13-95
30-60	Lt gray, unconsolidated ~~fine to~~ medium to coarse grained frosted Qtz sand
	w/ minor amount of organic material; w/ minor component of
	fine ~~coarse~~-grained Qtz sand; characteristic of "Beach sands" (Miocene coarse clastics)
NOTE:	Drilling w/ a 10 3/4" tooth Bit
	Kelly down @ 0840 hrs
	Started next Rod @ 0930 hrs
60-75'	Lt gray, unconsolidated medium to coarse grained Qtz sand
	(Miocene coarse clastics) possibly high permeability (primarily a medium sand)
75'-90'	"Same as above" possibly high permeability
	Kelly down to ~90 bls @ 0950 hrs (stopped to re-mix additional mud)
	Started Next Rod @ 1105
90-100	Same As above (possibly High permeability)
100-120	Lt-gray, fine to coarse grained unconsolidated Quartz sand
	this interval is slightly finer-grained than the interval from 30 to 100'
	(good permeability)
NOTE:	The formation continues to take drilling fluids
	Kelly down @ 1140 hrs @ ~120' bls. continue to clean-out borehole
~~100~~	Started Next Rod @ 12
~~120~~ –	NOTE: stopped drilling after this Rod due to slumping-caving
	of the Bore-hole – remixing of drilling muds from ~200hr to 1600hr.
–	and Re-circulation to Build up mud cake to stop caving.
	NOTE: Drilling stopped for the day due to Burned-out Air
	Filter on the mud pump.

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FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 6-14-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	started drilling @ 1143hrs @ -120 bls
120-135	Lt-gray, unconsolidated ~~coarse~~ fine to very coarse Qtz sand
	w/ minor heavy mineral component 1 to 2% (phosphate) (Miocene Coarse Clastics)
	good permeability (moderate to good sorting)
135-150	"same as above"
	Kelly down @ 1210hrs to -150' bls
	started next rod @ 1225hrs
150-165	"SAME AS Above"
165-180	"same as above"
	Kelly down @ 1243 hrs to depth of -180' bls
	started next Rod @ 1255hr
180'-195	Lt-gray, unconsolidated fine to coarse Qtz sand w/
	1 to 2% fine to medium grained phosphate (good permeability)
195'-210'	"same as Above"
	Kelly down @ 1320hrs to a depth of 210' bls.
	started next Rod @ 1330hrs.
210-230	Medium gray, unconsolidated fine to coarse-grain Qtz sand
	w/ 2 to 3% medium ~~to~~ coarse grained phosphate (good permeability)
230-240	Medium gray unconsolidated fine to coarse-grained Qtz sand
	w/ 2 to 3% medium ~~to~~ coarse grained phosphate w/ a stringer of moderate
	indurate tan sandstone ~~fine stone~~ from 230-235' ; good permeability
	Kelly down 1355hr. to depth of -240 bls ; let mud circulate
	for 15 min to clean-out bore-hole
	started next rod @ 1415hrs.
240-245	"same as above" (1% coarse grained phosphate)
245-255	moderately ~~to well~~ indurated tan colored ~~sandstone~~ fine-grained
	Sandstone w/ 30-35% coarse-grained Quartz sand (moderate to good perm)
~~255-270~~	Calciolutite matrix possibly tan fine sandy Limestone ? May have minor stringer of lt gray micritic mud interspersed ?
255-270	moderately to well indurated sandy Limestone tan to lt
	gray in color ; contain Approx 20% coarse-grained Qtz sands
	(significant bit chatter through this interval (Sandstone Aquifer?)
	Kelly down 1735hrs to a depth of -270' bls.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Floridan WELL NO. IWSD-TW DATE 6-14-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
270-280	medium tan to Lt-gray well indurated Limestone (good permeability) "sandstone aquifer" no visible Qtz within Interval
280-287	"Same as Above"
287-300	Lt-olivish gray, poorly to non indurated Lime mud "micrite" w/ few stringers of moderately indurated tan Limestone (good containment) Low permeability
	Kelly down @ 2015hrs. to depth of 300'
	Ended Drilling for the Day.
*	Date: 7-5-95 Wednesday
300-305	No sample taken due to mixture of sample from cement plug and material that had into and around the bottom of the 6th while running in the 24" steel casing.
305-315	Lt-gray poorly to non indurated Lime mud "micrite" w/ 10% fine to coarse grained Qtz sand interspersed within this interval; few stringers of cream/ish-tan poorly indurated mudstone Low permeability; good containment (fast Drill Rate)
315-324	"Same as Above"
324-335	Lt-gray poorly to moderately indurated sandy mudstone 10% fine to coarse-grained Qtz sands; few mollusk internal molds & casts; This interval is interspersed w/ moderate Amount of Lt-gray Lime mud; Low permeability
	Kelly down @ 1600 hRs
	Started next Rod 1620 hRs
335-343	Lt-gray poorly indurated Sandstone/Sand w/ calcilutite matrix w/ stringers of sandy Limestone, soft Abundant micrite matrix Qtz sand range from fine to coarse-grained Low permeability due to abundant matrix
343-357	Lt-gray poorly to nonindurated mudstone/micrite w/ 10 to 15% fine to coarse grained sandstone Low permeability
357-367	Lt-gray poorly indurated Limy sandstone; Matrix consist of Lt-grey micrite interspersed w/ fine to pebble size Qtz sands (fast drilling) moderate permeability
	Kelly down 1700 hrs

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. IWSP TW DATE 7-5-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
367-375	Lt gray poorly indurated sandstone to non-indurated sand w/ abundant lt-gray micrite matrix; Qtz sand range from fine to coarse-grained w/ some pebbles; few stringers of Lt-gray poorly indurated mudstone. (moderate to low permeability)
375-382	"same as above"
382-390	medium olive-greenish gray poorly to non-indurate sandy-brine mud (clay) w/ fine-grained phosphate "micrite" - plastic in nature - very low permeabil. ly good confinement; This interval appears to be the first good example of
390-398	"same as above" Hawthorn Lithology. The upper interval appears to contain no phosphate and abundant fine to pebble size Qtz grains.
	Kelly down @ 1800 hrs. to a depth 398' bls
	Started next rod @ 1815 hr (minor clogging problem within this 30' interval
398-410	medium gray to olive green non-indurated clay; very plastic in nature minor amount of fine grained phosphate (very good containment; very low permeabilty; very slow drilling
410-420	"same as above"
420-428	"same as above" . extremely slow drilling through the Last 4 ft. very minor amount of fine grained material
	Kelly down @ 19__ hr to total depth of -428' bls.
	Stopped drilling for the day 7-5-95
	Thursday 7-6-95
	Started drilling @ 0950 hrs @ depth of -428' bls
428-435	medium gray to olive-green non-indurated clay; very plastic sticky; minor amount of silt to fine sand size phosphate; w/ minor amount what appears to be moderately indurate limestone/shell fossil interbedded (very good containment)
435-448	"same as above" (very good containment)
448-459	medium to Dark olive gray; non to poorly indurated clay/claystone very sticky and plastic in nature; slightly more silt to fine-grand sand size phosphate 3 to 4%; interval contains few stringer of moderately indurated Biogenic limestone w/ few mollusk casts. (very good containment)
	Kelly down @ 1147 hr to depth of 459' bls
NOTE:	2 hours of drill time to penetrate this 30' interval.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 7-6-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
459-467	~~Started Next Rod @ 12~~ medium gray to olive green non-indurated clay; sticky somewhat soupy in nature; 1 to 2% silt to fine-grain sand size phosphate minor shell fragments. (Low to very permeability)
467-480	medium gray to olive green non to poorly indurated clay / claystone/siltstone w/ few stringers of moderately indurated siltstone & Biogenic Limestone Bit chatter @ 467'-469' mollosk shell fragment present; the clay is stiff in nature NOT AS soupy as above. contains 2 to 4% silt to medium phosphate (very Low permeability; good containment
480-490	medium gray to olive green, non-indurated clay (dolsilt) sticky somewhat soupy in nature; contains 1 to 3% silt to fine grained phosphate (very Low permeability; good containment; rather soft from 486-490' - faster drilling, some biogenic Limestone fragments. Stopped drilling @ 1400hrs @ 490' bls. Next Rod @ 1430hrs.
490-498	medium gray to olive-green non-indurated clay (dolosilt) w/ stringers of shell Hash interbedded; biogenic Limestone fragments. 5 to 7% silt to medium grained phosphate (Low permeability)
498-510	medium gray to olive-green non-indurated clay (dolosilt) contains 5 to 7% fine ~~to med~~ grained phosphate, minor amounts of shell fragments (soupy in nature) very Low permeability good containment; minor amount of marly clay.
510-523	"Same as above" Kelly down @ 1550hrs. to depth of -523 bls. Started Next Rod @ 1820 hr. Broken mud Line Repair.
523-535	medium gray to olive-green non-consolidated; non indurated clay dolosilt w/ approx 1 to 2% silt to fine sand size phosphate. This interval is very soupy in nature (very good containment) (Low permeability
Mike Hawthorn: 535-545	Lt-gray to medium tan; poorly indurated biogenic Limestone containing mollosk & bryozoan fragments; somewhat clayey probably due to mixing w/ clay cuttings in annulus (This interval, table drilling fluids moderate to... good permeability depending on true clay content.?
545-555	"Same as Above" Kelly down ~~to~~ -52[illegible] @ 2800 hrs Stopped drilling for the day.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lake Florida WELL NO. IWSD-TW DATE 7-7-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started Drilling @ 0915hrs. @ a depth 553' BLS
555 - 565	medium tan to Lt-gray poorly to moderately indorated Biogenic Bridge Limestone ("Biogenic grainstone) calcarenite matrix, contains 10 to 15 % mollusk(sic) shell fragments; 5 to 7% fine-grained phosphates
	(good permeability)
565 - 575	"Same As Above"
575 - 585	"Same As Above" (minor bit chatter @ 583' to 585'
	Kelly down @ 0950 hr circulated floids to 1030hrs. approx 22 min delay in cuttings Return
	Started next Rod @ 1055hrs
585 - 595	"Same As Above"
595 - 605	"Same As Above"
KD 1141 605 - 615	"Same As Above"
1230	Kelly Down @ 1141 hr. circulated floids to 1230hr. approx 23 min delay in cutting Return.
	Started next Rod @ 1237 hrs.
615 - 621	"Same As Above"
621 - 632	Lt-gray non indorated Lime mud interlayer w/ poorly indorated tan packstone; the majority of this interval is a calcareous clay
	1 to 2% silt size to fine-grained phosphate (Low permeability)
	The calcareous clay is very sticky in nature (good confinement)
632 - 647	medium tan (beige) to Lt-gray nonindorate Lime mud
	interlayer w/ tan packstone; the majority of the interval
	is comprised of the calcareous clay; 1 to 2 fine-grained phosphate
	minor shell fragments; The calcareous clay is very sticky in
	nature (Low permeability) good confinement)
	Kelly down @ 1337; circulated fluid to 1415 hrs.
	Started next rod @ 1430 hrs.
647 - 652	medium-gray non-indorated Micrite (Calculutite) w/ stringers
	of moderately indorated Limestone 1 to 3% fine grained phosphate
	the micrite is very sticky, plastic in nature (very low permeability)
KP 1337	(good confinement.)
652 - 665	Lt-gray non-indorated micrite (calculutite) w/ stringers
678 653	of moderately indorated Limestone 1 to 4% fine-grained phosphate
	the micrite is very sticky, plastic in nature (very Low permeability)
	good confinement.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. TWSD-TW DATE 7-7-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
665-678	"Same As Above"
	Kelly down @ 1537 hr. ~~circ~~ circulated fluid to 1600 hrs
	Started Next Rod @ 1610 hrs
678-688	"Same As Above" (Low permeability) (very good confinement)
688-698	"Same As Above"
698-708	"Same As Above"
	Kelly down @ 1735 hr. circulated fluids to 1800 hrs.
	Started Next Rod @ 1815 hrs.
708-711	Same As Above
711-720	Medium-gray to olive-green non indurated lime mud "micrite"
	w/ minor Limestone lens interbedded 5 to 7% phosphate ranging
	from fine to coarse-grained; The calculutite is very sticky
	and plastic (good confinement) very low permeability
720-728	Lt-gray to Lt olive-green non-indurated micrite w/ minor
	Limestone lenses interbedded 3 to 5% fine-grained phosphate;
	also contains dark ~~green~~ grayish-olive green dolosilt
	(Low permeability) good confinement
728-738	Lt-gray non-indurated micrite w/ minor limestone lenses
	interbedded toward base of interval 1 to 3% fine-grained
	phosphate; minor amount of grayish-olive green dolosilt within
	the interval.
	Kelly Down @ 1947 hrs to depth of -738' bls.
*	Ended Drilling for the day @ 2010 hrs.
***	7-10-95 Monday
	Started Next Rod @ 0830 hrs
738-750	Lt-gray non-indurated micrite (calculutite) w/ minor lenses
	interbedded w/ Lt-gray to tan color Limestone; minor amount of grayish
	olive-green dolosilt, 1% fine-grained to coarse-grained phosphate (micrite is
	very sticky in nature (very good confinement Low permeability ↔↕
750-760	"Same AS Above"
760-770	Same As Above
	Kelly down @ 0935 hr; circulated mud until 1010 hr to clean
	drill cuttings.

KDG 935 hr

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PROJECT LWC Florida WELL NO. IWSD-TW DATE 7-10-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started next rod @ 10 hr
770-773	"Same as above"
* 773-783 (Lower Hawthorn Aquifer)	Lt-tan to Buff colored, moderately indurated Limestone (wackestone) containing minor amount of white micrite, ~~Limestone~~ contains 1 to 2% silt to fine-grained sand phosphate, fast drilling through interval; minor molluscan and sponge spicules present (moderate to good permeability)
783-800	Lt-tan to ~~medium gray~~, moderately indurated Limestone wackestone – grainstone, contains 5 to 7% fine-grained sand size to coarse sand phosphate, minor amount of well indurated dolostone / mudstone minor amount of molluscan shell fragment (moderate to good permeability.
	Kelley down @ 1110 hr; circulated mud to 1200 hrs
	Started next rod @ 1217 hrs.
[illegible] 800-807	medium brownish-gray, moderately indurated Limestone wackestone; contains fine to coarse-grained phosphate minor molluscan shell fragments (good permeability)
807-820	Lt-gray, poorly to moderately indurated Limestone (mudstone to wackestone, interbedded w/ fine-grained moderately indurated sandstone, contains moderate volume of shell fragments and internal molds of Gastropods, contain minor amount of Lt-gray poorly indurated micrite, contain fine to coarse grained phosphate (moderate to good permeability) Interval took significant volume of drilling fluids.
820-831	"Same as above"
	Kelley down @ 1250 to depth of 831' bls.
	Started next rod @ 1438 hr
831-841	Lt-gray poorly to moderately indurated Limestone (mudstone to wackestone, interbedded w/ white soft to poorly indurated micrite interval contains 5 to 7% fine-grained phosphate in the Limestone; moderate volume of molluscan shell fragments and gastropod internal molds (moderate permeability due to micrite content. Minor pin-hole moldic porosity development.
841-852	"Same as above"
852-862	Same as above

Kelley down @ 1510 hr. circulated drilling fluids to 1605 hrs.
stopped Drilling for the Day!!

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Floridan WELL NO. IWSD-TW DATE 9-22-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	started drilling @ 1012 hr @ a depth of -870 w/ Reverse-air open-circulation Borehole interval 862-870 lost when drilling out fill material
870-880	medium tan to Lt-brown moderately indurated grainstone (sandy Limestone w/ 45 to 50% fine to medium Qtz sand matrix interbedded w/ well indurated medium brown crystalline dolostone ... dolomatic Limestone minor amount of pin-hole & moldic porosity development (moderate to good permeability
880 – 889	moderately to well indurated Lt-tan colored Limy sandstone; fine grained in nature intermixed w/ mollusk shell fragment; interbedded w/ fine-grained, unconsolidated Qtz sand; shell fragments; starting @ Approx 881 rapid drill rates occurred w/ the bit proceeding to -887 w/ Approx 1 min subsequently clogging the drill pipe w/ sand and longer cuttings of Qtz sandstone; sand is probably depositional in nature significant dredging occurring to void this zone; the majority of this interval seem to be the unconsolidated sand; hard to tell due to dredging of Borehole (stopped @ 1900 hr @ 889; still dredging)
9-22-95 889-896	Lt Brown; moderately indurated sandstone / grainstone interval w/ well indurated boundstone intervals; good moldic and pin-hole porosity development within this interval; contain 5 to 15% fine secondary Qtz sand maybe in-falling from above / good to excellent permeability development; minor amount of mollusk shell fragment & casts, possibly good intercrystalline porosity. few sponge spicules
	stopped drilling for the day @ 1227 hrs
*note	Due to the sand pouring in to the borehole; the borehole will be mudded up and interval squeezed w/ cement to seal it off.
	Time Temp Cond pH Redox Chloride
	1240 29.25°C 46500s 7.25 189 1120mg/L

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lime Florida WELL NO. IWSA-TW DATE 10-4-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
NOTE:	started drilling @ 1110hr @ a depth of -896.5' bls
	by closed circulation mud Rotary using a 8 3/4" Roller Bit
896-910	Lt-gray to Lt organish Tan moderately indurated limestone (wackestone to grainstone)
	w/ stringers sandy Limestone @ 898-900' corresponding to very fast drilling
	through this interval Allochems comprise approx 10% of Limestone consisting
	of mollosk shell fragment & sponge spicles; moderate pin-hole poros. by
	development & minor moldic poros visible due to small cutting fragments.
	(good permeability) fine-grained Qtz content within LS range 10 to 25%
	also few stringers of Sandstone, possibly reworked sands? Last in drilling mud
910-927	same as Above; slightly more sandstone stringers through interval fine to medium grained.
	especially toward base of this interval (good permeability).
	Kelly down @ -927 @ Approx 1335hrs. consistent drilling Rate through Interval
	Next Rod started @ 1410 hrs
927-940	Lt-gray to Lt organish Tan moderately indurated Limestone wackestone
	to grainstone; containing 5 to 10% Qtz Sand within matrix (Sandy
	Limestone (minor pin-hole porosity) Allochems consisting of primarily 5 to 10%
	molluscan shell fragment minor moldic porosity based on fragments
	moderate to good permeability) formation is only taking minor
	amount of drilling fluids, consistent drilling rate through 38' interval
	from 927-958' bls, few stringers of well indurated Limestone
940-958	"Same as Above"
	Kelly down @ 1508 Let mud circulate to 1620hr to clean
	drill cutting - depth 958' bls.
	Next Rod stated @ 1635hr.
958-968	Lt-gray to organish tan; moderately indurated Limestone (packestone
	to grainstone; grainy texture through this interval; very consistent
	Lithology; 5 to 10% Qtz sand within matrix; possibly minor stringers
	of Calcitic Sandstone (minor pin-hole porosity) Allochems primarily
	molluscan shell fragments (moderate to good permeability; consistent
	drilling speed through interval "Suwannee type lithology
968-978	"Same as above"
978-989	"Same as above"

Kelly down @ 1715hr; circulated drilling fluids to clean cuttings to 1825hr

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KD 40min
1021.
Circulated 1:05hr.

PROJECT LMC Florida WELL NO. IW3D-TW DATE 10-6-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started drilling @ 1145 hr @ a depth Q - 989.5' bls.
989-1001	Lt-organish Tan; moderately indurated Sandy Limestone (grainstone)
	interbedded W/ Lt gray moderately indurated fine to medium grained
	Calcic-sandstone; NO visible pin-hole porosity or secondary permeability
	development; minor amount of molluscian shell fragments (moderate to
	low permeability)
1001-1010	Lt to medium gray moderately indurated fine to medium grained Qtz
	Calcic-Sandstone interbedded w/ NON-indurated Lt-gray carbonate clay
	micrite and moderately indurate Sandy Limestone; minor amount of
	molluscian shell fragments (no visible pin-hole porosity or secondary permeability
	development (Low permeability due to carbonate clay content)
1010-1021	Lt-organish-tan moderately indurated Sandy Limestone (grainstone)
	interbedded w/ moderately indurated Lt-gray fine-grained Calcic- Qtz sandstone
	No visible pin-hole porosity & secondary permeability development; minor molluscian
	shell fragments (This interval could be classified as either a very sandy
	Limestone (packstone) or Calcic Qtz sandstone
NOTE:	variable drilling rates through interval seemable to a bit harder from
	1010-1021 due to slower drilling rates; approx 40 min drilling time
	through interval; circulated drilling muds for 1:05hr to clean cuttings
	Low volume of drill cuttings from 1001 to 1021 may indicate a higher
	volume of salt and fine sands be suspended in drilling muds; The
	drilling fluids seem to get a bit thicker after circulating through
	interval. KD @ 1340 hrs.
	Started POOH @ 1415 hrs.
1021-1028	Lt-organish tan; moderately indurated Limestone (grainstone) interbedded
30min	w/ minor stringers Calcic-Sandstone; no visible signs of pin-hole porosity or secondary
1.1hr.	permeability development; consistent drill through this interval moderate
	to low permeability)
1028-1040	Lt-organish tan; Moderately to well indurated Limestone (grainstone)
	interbedded w/ Lt to medium gray moderately to well indurated Qtz
	Sandstone and lt gray to buff colored carbonate mud (micrite)
	micrite content Approx 10 to 15% Very minor pin-hole porosity; minor
	Molluscian shell fragment content. clay; silt content may be higher
	than 10 to 15% but content lost in drilling fluid. (Low permeability
	due to micrite (silt micrite) content.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lake Okeechobee WELL NO. IW3B-TW DATE 10-6-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1040-1052	"Same as above" slightly harder toward base.
	Kelly down @ 1502 hrs to depth of 1052' bls, circulated mud for lithologic
NOTE:	no significant drilling fluid loss; primarily due to volume of B.H.
	Started next rod @ 1630 hrs.
1052 - 1064	Lt-organish tan moderately indurated limestone (grainstone) interbedded
	w/ well indurated medium gray wackestone to grainstone (sandy limestone)
	minor pin-hole porosity development in the gray LS. Also contain 10 to 15%
	non-indurated - lt gray carbonate mud (micrite) irregular drilling
	through this interval well indurated layers/soft zones
	minor amount of lt tan sandstone (?) (Low permeability) due to
	interbedded nature and carbonate clay content
1064-1074	Lt-organish tan moderately indurate limestone (wackestone to grainstone)
	interbedded w/ well indurated medium gray grainstone (sandy limestone) approx 50/50
	between the moderately & well indurated limestone units. minor pin-hole
	and vuggular porosity development. minor molluscian shell fragments.
	2 to 3 % non-indurated lt-gray carbonate mud (micrite) better
	permeability probably within the well indurated gray limestone
	moderate permeability (somewhat more consistent drilling rate through this interval.
1074-1083	"Same as Above"
	Drill time 1:00 hr through this interval; circulated drilling
	fluids for approx 1:00 hr
	stopped drilling @ 1845 hrs.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 10-10-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started drilling @ 0945hr @ depth of -1083' bls
NOTE:	consistent drilling rate for the 1st 20' Interval w/ only slight irregularities
	Approx 20 to 25 mins to drill through this interval w/ minor bit chatter
	Approx @ -1108' bls significant bit chatter started and persisted to end of
	drill rod. Hard interval from -1105' bls to -1115' bls approx 40 mins to
	drill this 10' interval. From -1105 the formation started to take
	drilling fluids. Drilling rate for 30' interval 1 hr 1 min. Recirculated
	muds for approx 50 mins then the drilling fluids drop below mud
	pump intake port, ceased drilling @ this time; took approx 20,000 gal of drilling fluids.
1083 - 1093	Lt organish tan to Lt olive gray moderately indurated packstone to
	grainstone; minor molloscian shell fragments, minor pin-hole; moldic
	porosity development. slight calcic-sandstone or sandy limestone content
	Qtz. silt or fine sand content within limestone difficult to determine (Ø to 2% combined)
	moderate permeability
1093 - 1103'	"same as above" slightly better pin-hole porosity development within this
	interval. (moderate to good permeability)
1103 - 1115'	Lt organish tan to Lt olive gray well indurated packstone to grainstone
	moderate pin-hole, moldic and vuggular porosity development; medium molloscian shell
	fragments few internal molds. Appear to contain minor volume of boundstone.
	and medium gray crystalline limestone; calcite (Excellent permeability)
	good secondary permeability development. Crystalline L.S. consist of large
	irregularly shaped fragments indicating possible channel porosity
	minor calcic-sandstone content.
Ed. 11 min circulate 30 min - take DF @ = 1146	- Mixed new batch of drilling fluids.
	Started drilling next rod @ 1405 hrs.
1115 - 1125'	Lt organish-tan to Lt olive gray moderately indurated packstone to
	grainstone; moderate pin-hole and moldic porosity development; moderate
	volume of molloscian shell fragments; few internal molds; replaced
	shell fragments 1 to 2% non-indurated Lt gray micrite (moderate to good permeability (moldic porosity development in the better indurated medium gray wackestone to packstone.)

next rode started @ 1102hr.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSA-TW DATE 10-10-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1125 - 1135	"Same as Above" (moderate to good permeability?)
1135 - 1146	"Same as Above"
NOTE:	Consistent drill rate through this 30' interval; interval Appears to be somewhat soft due to the ease of drilling; 17 minutes to drill this 30' section; recirculated drilling fluids for Approx 30 min before changing rods due to formation taking drilling fluids no observed micro-fossils.
	Started Next Rod
1146 - 1152	Lt-orgnish tan to white colored; moderately indurated wackestone to packstone; moderate pin-hole & moldic porosity development. 10-15% Allochem of molluscian shell fragments; interbedded well indurated medium gray wackestone to moldic and pin-hole better development in the white & medium gray LS contained within this interval; better indurated than Above 30' section; Moderate to good permeability. This interval contains 2 to 5% non-indurate Lt-gray ambiguate mud; possibly lower perm. potential
1152 - 1163	Lt-orgnish tan to Lt gray colored; moderately indurate weak packstone to grainstone minor pin-hole & moldic porosity development 5 to 10% Allochem of molluscian shell fragments 2 to 3% non-indurated Lt-gray micrite (moderate permeability)
1163 - 1169	"Same as Above" decrease micrite content 1 to 2% slightly better pin-hole & moldic porosity development; slowest the last 5' of this interval from 1169-1174. moderate permeability (possible top?) KD After 29 minutes of drilling; circulated drilling fluids for Approx 1 hr 30 min to clean cuttings.
	Stopped drill @ 1740 hrs

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

KB = 29 min
Circ. 1.25 hr.

PROJECT LWC Floridan WELL NO. IWSD-TW DATE 10-11-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started Drilling @ 0821 hr @ depth of – 1174' bls
NOTE	consistent drilling speed through 30 interval from – 1177 to 1209
	bls. Drilling Time 29 min for 30' section; circulated mud for
	1 hr 25 mins; minial fluid loss excluding B.H volume Loss.
1179 - 1188	pale organich Tan; moderately indurated Limestone (packstone to
	grainstone interbedded w/ white, moderately indurate mudstone &
	medium gray boundstone, minor pin-hole & moldic porosity development
	Allochems consist primarily of molluscian shell fragments; few replaced
	~~shell~~ Molluscian shell; few interval gastropod ~~molds~~ & clam internal
	molds. (Ocala Type lithology; few spicules present no visible phosphate
	(moderate permeability) very little fluid loss: few Leps present
1188 - 1198	"Same As Above"
1195 - 1208	"Same as above"
	Started Next Rod @ 1029 hr.
1208 - 1218	pale organich Tan; moderately indurated Limestone (packstone to
	grainstone interbedded w/ white, moderately indurate mudstone to wackestone.
	minor tan colored boundstone
	minor pin-hole porosity - moldic porosity; Allochems consist of molluscin
	shell fragments and microfossils (forams) few internal molds.
	NO phosphate (few replaced shells) Low permeability, NO fluid Loss
1218 - 1228	pale organich tan; moderately indurated Limestone (wackestone to packstone)
	Allochems consist primarily of microfossils (Leps) w/ few molluscin
	shell fragment (small drill cutting fragments over the majority of this
	interval) very minor pin-hole porosity development visible only on
	few of the longer fragments (Low permeability) NO fluid Loss.
	NO phosphate (Ocala Lithology)
1228 - 1238.5	"Same As Above"
	Kelly down @ 1100 hrs; circulated mud for Approx 1.5 hrs to
	clean cutting NO Apparent fluid loss over this interval.
	Started Next Rod @ 1245 hrs.

27 min
KB
Circ. 1.5

1270

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 10-11-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1238 - 1248	pale orangish-Tan poorly to moderately indurated Limestone
	(wackestone to packestone) Allochems consist Almost exclusively of
	microfossil (forams) comprise approx 25% of rock volume; This interval
	could Also be classified As a biomicrite According to Folk's classification
	(very minor pin-hole porosity development); minor external mollusca
	casts; chalky in nature, has a ~~[illegible]~~ cornmeal Texture; minor 2 to 3%
	volume of unindurated white to tan colored micrite interspersed within
	this interval (Low permeability)
1248 - 1258	"Same As Above"
1258 - 1270	"Same As Above"
NOTE	consistent but rapid drill rate through this 30' section; Drill
	time 18 mins. The drilling fluids thicken slightly due to carbonate
	clay & silt fraction contributed by the 30' section of B.H. Also causing
	a slight change in color in the drilling fluid to slight olive tan
	color.
	Kelly down 1307 hrs to depth 1270' bls.
	End drilling via mud Rotary method; well within the ocala to
	Hopefully Avoiding any Significant sand intervals.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Floridan WELL NO. IWSD-TW DATE 12-28-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started drilling @ 0745 hr @ a depth -1270' bls.
1270-1282	pale-organish tan poorly to moderately indurated Limestone
	wackestone; Allochems consist primarily of Leps w/minor sponge spicules.
	No visible pin-hole porosity development; significant fine in discharge
	waters "Low permeability"
1282-1292	pale-organish tan to Lt-gray poorly to moderately indurated Limestone
	mudstone to wackestone; allochems consist of Lepidocyclina; few fragment
	of microcrystalline calcite, no visible pin-Hole porosity development Low permeability
1292-1294	Lt-gray non-indurated to poorly indurated Limestone (micrite to mudstone)
1294-1299	pale-organish tan poorly to moderately indurated Limestone (wackestone
	allochems consist primarily of Leps; no visible pin-hole porosity development.
	signif. fine in discharge water (Low permeability) Allochem approx 20-25%
	Kelly down @ 0845 hr to a depth of -1299.04'
	Started NEXT Rod @ 0925 hrs.
1299-1310	Same As Above
1310-1314	Lt to medium gray non to poorly indurated mudstone ("micrite")
	very clayey in nature; slower drilling rates through this interval very Low perm
1314-1317	Lt-gray to pale-organish tan; moderately to poorly indurated Limestone
	mudstone to wackestone, no visible signs of porosity development
	20% Allochems consisting primarily of Leps.
1317-1330	Lt-pale organish tan; poorly to moderately indurated Limestone
	wackestone to packestone; sample consists primarily of Lepidiocyclinas 60-70%
	w/ minor sponge spicule; could be classified as a fossiliferous Limestone
	maybe grain support by Large % of Allochems; no visible signs of porosity
	development; Low permeability
	Kelly down @ 1025 hr. to depth of -1330' bls.
	Started NEXT Rod @ 1050 hr.
1330-1340	"Same As Above"
1340-1350	Lt-pale organish tan poorly to moderately indurated Limestone (wackestone
	to packestone; grainy texture Allochems consists primarily of Leps but represent
	Approx 10-15%, minor fragments of medium tan to Lt brown boundstone;
	no visible porosity development (Low permeability) minor of of what
	Appear to be a moderate gray ~~siltyclay~~ siltstone (cement?)

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florid— WELL NO. IWSP-TW DATE 17-28-55—

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1350- 1356	Lt-pale oramish tan; poorly indurated Limestone (wackestone) Allochems
	consist primarily of Leps; minor stringers of packstone; Minor phosphate?
	Content; no visible porosity development (Low permeability
1356- 1361	Lt-pale oramgish tan; poorly to moderately indurated limestone (packestone
	to grainstone; Allochem represent approx 5% and consist primarily of Lep
	minor moderately indurated-dark gray dolosilt; very minor pin-hole porosity
	development; discharge consistently milky white through this 30' section
	Kelly down @ 1200 hrs @ a depth ~1361'
	started next rod @ 1225 hrs.
1361- 1366	Lt-pale orangish tan poorly indurated limestone (wackestone to
	packstone; Allochems consist primarily of Lep representing Approx 60-70%
	of sample; minor phosphate content (check Gamma Log) This interval
	could be classified as a biomicrite or fossiliferous Limestone no visible
	porosity development (Low permeability)
1366- 1376	Lt-pale orangish tan; poorly to moderately indurated limestone (wackestone
	to packstone; Allochems consist primarily of Leps; better indurated packstone
	show minor pin-hole porosity development; Note if there is any change
	in the Sonic or density log; Allochems represent Approx 40% by volume.
	(Low permeability... maybe Moderate due to better induration
1376- 1386	"same As Above"
1386- 1393	"Same As Above"
	Kelly down @ 1345 hrs @ a depth of ~1393' bls
	Started Next Rod @ 1410 hrs
1393—1403	Lt to medium tan poorly indurated Limestone (wackestone)
	Allochems consist primarily of Leps representing About 10% to minor
	stringers of dark gray dolosilt @ Approx 1397' bls. few fragment of
	White spiny calcite; no visible porosity development (Low permeability)
1403- 1413	'same as Above'
1413- 1424	Lt to medium olive tan poorly indurated limestone (mudstone to wackestone)
	Allochem consist primarily of Leps representing about 2 to 5% of sample minor
	stringer of dark-gray dolosilt?; discharge very turbid through this interval
	no visible porosity development (Low permeability)
	Kelly down @ 1515 hrs to depth of 1424' bls.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

19
31

PROJECT LWR Floridan WELL NO. IWSB-TW DATE 12-28-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1424'-1439'	Lt to medium tan poorly to moderately indurated Limestone (mudstone: wackestone) No visible Leprodiocyclina's Minor Amount
	of nonindurated white to medium tan calcareous mudstone Approx 1 to 3% No visible
	porosity development (low permeability)
1439'-1444'	medium tan to medium brown moderately to well indurated
	Limestone (mudstone) interbedded w/ lt-gray to olive gray non-indurated
	micrite Approx 30% non-indurated micrite; no visible Allochems present
	No visible porosity development; (Low permeability)
Ocala Top ? Avon Park Fm ? 1444'-1455'	Lt-tan to medium brown moderately to well indurated Limestone (wackestone
	to grainstone; golden colored spongy calcite primarily from recrystallized
	echinoid (regular echinoderm) present @ approx 15%; Allochem consist predominately
	of echinoids shells & fragments (fast drilling through this Interval -
	possible Ocala - Avon Park Fm Contact? minor stringers of lt-gray micrite
	poorly indurated @ 1453') possibly moderate to good permeability?
	Check temperature & Flow Logs for this contact
	Kelly down @ 1700hrs to depth of 1455' bls.
	Stopped drilling for the Day 12-28-95
	Friday 12-29-95
1455'-1487'	Started drilling @ 0824hr @ a depth of 1455'
	Ended first Rod @ 0829 hr Total drilling time 105 mins
	This 30' section was highly variable in composition interlayered
	w/ Unconsolidated micrite & crystalline dolomitic Limestone and dolostone
	w/ beds of wackestone to grainstone Limestone
	Discharge Last 7' became more turbid.
1487'-1518'	Started Next Rod @ 0904hrs total drilling time 47.5 mins
	This 30' section was more consistent primarily consisting of pale orange/
	tan to Lt brown packstone to grainstone.
1518'-1548'	Started Next Rod @ 1025hrs
	- very uniform; consistent grainstone through the entire 31' section
	uniform drilling rate; moderately indurated Check geophysical logs
	for flow; permeability data; Look @ borehole camera video
	possibly good permeability Appeared to have increased flow from discharge
	Line during changing of the rods

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Flor. dem. WELL NO. IWSD-TW DATE 12-29-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started next rod @ 1200 hrs. total drilling time: 71 mins.
1548-1580	This 30' section was slightly variable in lithology ranging from a wackestone to the primary component of a grainstone w/ minor color variations (poorly to moderately indurated) moderate permeability due to grainstone texture; no truely visible sign of porosity development.
1580-1611	started next rod 1350 hr Total drilling time 73 mins moderately indurated grainstone from 1580-1592
	1592-1595- variable lithology medium gray to brown wackestone to packestone
	1595-1611 poorly to moderately indurate wackestone to packestone minor grainstone
1611-1642	Started next rod @ 1530 hrs Total drilling time 68 mins. poorly to well indurated packestone to grainstone w/ minor stringers of wackestone; minor amount of non-indurated lt-greenish gray clay in 1616 to 1621 interval; minor allochems some echinoids present. (moderate permability)

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Floridan WELL NO. Dusp-TW DATE 1-2-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	started drilling @ 0750hrs @ a depth of -1642' bls
1642-1649	Lt pale organish tan to Lt-gray; poorly to moderately indurated grainstones; Allochem consists of dictyoconus Americanus? echnoid shells; fragments; minor pin-Hole porosity development (moderate permeability)
1649-1654	Lt tan moderately to well indurated packestone to grainstone; minor Allochems; minor pin-hole porosity; some plucked fragment from better indurated fragments. (Low to moderate permeability)
1654-1663	Lt brown to pale organish tan; moderately to well indurated grainstone; Allochems consist of dictyoconcous & Echnoids moderate permeability; somewhat better indurated from 1660-1663
1663-1668	Lt brown to medium gray; moderately to well indurated packestone to grainstone; allochems consists of dictyoconcous, minor pin-Hole & moldic porosity development (moderate permeability)
1668-1670	Lt to medium gray; well indurated mudstone to wackestone better pin-Hole porosity than above; minor Lt brown grainstone stringers (good permeability)
1670-1678	Lt-gray to buff colored; moderately to well indurated wackestone interlayered w/ Lt brown grainstone minor pinpoint porosity developing better indurated (moderate permeability) NOTE: Discharge Less turbid from 1668; Less fines stopped drilling @ 0905hr to depth of -1673' bls started next rod @ 940 hr.
1678-1679	Tan to Lt brown; moderately to well indurated grainstone w/ stringers of Buff colored; well indurated wackestone; minor pin-Hole porosity Allochems consist primarily of Dictyoconcous Americanus (moderate permeability)
1679-1681	Dark gray; poorly to moderately indurated wackestone to packestone no visible porosity development (Low permeability)
1681-1693	Tan colored; moderately indurated grainstone; minor allochems present no visible porosity development but good grainstone texture (moderate to Low permeability)
1683-1688	Lt-gray; moderately indurated mudstone to wackestone w/ approx 20% Lt-gray non-indurated carbonate clay (micrite) slow drilling through this interval (Low permeability)

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSA-TW DATE 1-2-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1688-1693	Lt to medium brown moderately indurated grainstone; Allochems consist of diktyoconus americanus & minor echinoids; minor pin-hole porosity development (moderate permeability)
1693-1698	Tan colored moderately to well indurated packestone; to grainstone minor % of unconsolidated carbonate clay present Allochem consist primarily of diktyoconus Americanus; very minor pin-hole porosity develop Low to moderate permeability
1698-1706	Lt tan to grayish Lt brown moderately indurated (Limestone) grainstone allochems consist primarily of Dictyoconus & minor pin-hole porosity development (moderate permeability)
	Ended drilling @ 1115hr total drilling Time of 1hr 36mins
	Started drilling next rod @ 1200hr.
1706-1716	Lt tan to Lt-gray moderately indurated Limestone packestone to grainstone; primarily a grainstone; minor allochems minor pin-hole porosity development; minor thinly layered packestone (moderate permeability)
1716-1727	"Same As Above"
1727-1737	Lt to medium brown; well indurated Limestone packestone to grainstone; minor allochem consisting of dictyoconus & minor echinoid shell fragments; minor pin-Hole & moldic porosity development; minor well indurated medium gray dolostone or dolomitic limestone (moderate to good permeability) slow drilling through this interval.
	stopped drilling @ 1330hr. to depth of -1737 bls.
	started next rod @ 1353hr
1737-1742	Lt brownish-gray; moderately indurated Limestone (packestone to grainstone; primarily a packestone; minor pin-hole porosity contain approx 5 to 10% non-indurated - Lt gray carbonate mud micrite moderate to low permeability due to micrite content
1742-1750	Lt-grayish brown to tan colored; moderately indurated Limestone grainstone; w/ well indurated Lt-gray sandstone to wackestone from 1742-1744 Also contain some fragment of thinly bedded packestone to grainstone and medium gray grainstone; highly variable in color. minor pin-Hole porosity development (moderate permeability)

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC-Florida WELL NO. FWSA-TW DATE 1-2-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1750-1754	medium brown ; moderately indurated Limestone (grainstone)
	minor pin-Hole porosity development ; interlayer w/ stringer of
	medium gray wackestone (moderate permeability)
1754-1761	Lt tan moderately to well indurated Limestone (wackestone to
	packestone w/ stringer of grainstone ; very minor pin-hole porosity
	development (moderate to Low permeability
1761-1768	Lt brown moderately to well indurated limestone (packestone to grainstone)
	interbedded w/ non-indurate Lt gray to olive tan colored carbonate clay
	Micrite (Approx 10%) minor-pin-Hole porosity development (minor stringer of well
	indurated dolomitic wackestone or dolostone (moderate to Low due to
	micrite content
	stopped drilling @ 1548 hrs @ a depth of -1768' bls
	due to Lack of additional drill rod.
	Thursday 1-4-96
	started drilling @ 0742 hr
1768-1772	medium grayish brown moderately indurated packestone to grainstone
	contains Approx 5 to 10% unconsolidated medium gray micrite w/ stringers
	of well indurated Lt brown to medium gray cryptocrystalline Limestone/dolostone
	minor porosity development in well indurated rock fragments (moderate permeability)
1772-1778	Tan to Lt brown moderately to well indurated packestone to grainstone
	to crystalline Limestone ; stringer of tan color microcrystalline Limestone
	w/ moderate porosity development (moderate to good permeability)
1778-1782	Same As Above
1782-1784	medium to dark gray moderately indurated packestone to wackestone
	interbedded w/ well indurated crystalline Limestone / dolostone ; very
	minor porosity development
1784-1788	Tan colored well indurated crystalline to microcrystalline Limestone
	w/ minor stringer of Lt tan wackestone to packestone ; minor pin-Hole porosity
	development (moderate permeability development may be higher based on
	secondary permeability development (eg. fractures)
1788-1793	"Same As Above"
1793-1799	"Same As Above"
	Kelly down @ 0942 hr to depth of -1799' bls ; Total drilling Time

2 hr for this 30' section ; extremely slow drilling the Last 2'

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 1-4-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started next rod @ 1024 hr
1799 - 1801	Lt to medium gray well indurated grainstone w/ Approx 5 to 7%
	lt gray nonconsolidated micrite interbedded very minor pin-hole porosity.
	(Low to moderate permeability due to micrite content
1801 - 1804	Lt to medium brown moderately to well indurated grainstone w/
	Approx 10% lt brown non-indurated carbonate clay micrite; Last
	foot 1803-1804 primarily micrite (Low permeability)
1804 - 1807	Lt gray to buff colored well indurated mudstone; no visible
	porosity development (Low permeability)
1807 - 1809	Lt to medium brown moderately indurated packstone to grainstone
	minor pin-hole porosity development (moderate permeability
1809 - 1815	Lt-gray moderately to well indurate wackestone to packstone
	Allochem consist of dictyoconus Americanus (minor pin-hole porosity development
1815 - 1823	medium grayish brown moderately indurated grainstone w/ very minor
	allochem present; minor pin-hole porosity development (moderate permeability)
	minor fragments of medium gray well indurate / dolostone w/ better porosity
	development
1823 - 1831	Lt-gray to tan colored moderately to well indurated packstone to
	grainstone w/ few fragment of well indurated crystalline limestone (mudstone?)
	allochem consist primarily of dictyoconus; few in number (minor pin-hole
	porosity development (moderate permeability)
	Kelly down @ 1142 hr Total drilling time 1 hr 24 min
	Started next rod @ 1225 hr.
1831 - 1841	Lt-gray to tan colored moderately to well indurated packstone
	to grainstone; minor allochems, primarily consisting of dictyoconus
	moderate drilling rate from 1831-1836) Low to moderate permeability
1841 - 1851	"Same as Above"
1851 - 1862	"Same as Above"
	Kelly down @ 1557 hr Total Drilling time 1 hr 31 mins
	Started next rod @ 1630 hrs
1862 - 1868	Lt tan to Lt brown poorly to moderately indurate mudstone to
	wackestone w/ 2 to 3% Lt gray non-indurated carbonate clay micrite
	minor pin-hole porosity development (Low to moderate permeability

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSB-TW DATE 1-4-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1868-1873	Tan to Lt brown; moderately to well indurated grainstone; very grainy texture; friable; good pin-Hole porosity development (good permeability) NOTE check this interval on flow & Temp Logs
1873-1875	Lt-gray & buff colored well indurated mudstone to wackestone very minor pin-hole porosity develop. (low permeability)
1875-1882	Lt brown to tan, well indurated grainstone; friable; stringer of crystalline dolomitic LS or dolostone show vuggy porosity development. good to excellent pin-hole porosity development (good to very good permeability)
1882-1886	"Same As Above"
1886-1892	Tan to Lt brown; well indurated packstone to sub crystalline limestone moderate pin-hole porosity development (good permeability) NOTE: Changes in conductivity & chlorides @ this interval. chloride ↑ from 1224 to 1470 mg/L Kelly down @ 1614 hrs total drilling Time 1 hr 45 mins started NEXT Rod @ 1645 HRS
1892-1897	Lt-Tan to Med brown; well indurated grainstone w/ micro to crystalline dolomitic limestone; moderate pin-Hole porosity development minor vuggular porosity development within the crystalline limestone fragments moderate to good permeability (Excellent cuttings)
1897-1902	"Same as above" Stopped drilling for the day @ 1725 hrs. to depth of 1902' bls
1-SHE	Started drilling @ 0719 hrs @ depth of 1902' bls.
1902-1910	Tan to Lt to medium brown; well indurated packstone to grainstone w/ stringer of well indurated micro to crystalline limestone / dolostone minor pin-Hole porosity development (low to moderate permeability
1910-1918	medium brown to medium gray moderately to well indurated grainstone: moderate pin hole porosity development; granular Texture smaller cutting fragments (friable)
1918-1920	Tan ~~to~~ colored well indurated packstone grainstone to crystalline Limestone minor pin Hole porosity development (Low to moderate permeability)
1920-1923	medium to dark brown; well indurated crystalline Limestone to microcrystalline / dolostone minor grainstone texture minor pin-hole porosity development (Low to moderate permeability) ↑ conductivity & chloride concentrations Kelly down 0830 hrs.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lwe Floridan WELL NO. LWSA-TW DATE 1-5-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started drilling Next Rod @ 1007 hrs. Repair of broken Air Line 65 min lding.
1923-1928	Tan to Lt brown moderately to well indurated grainstone; rapid drill through this interval; possibly fractured darkened surface on rock fragment face; minor pin-hole porosity development. (Low to moderate perm)
1928-1934	Lt brown to medium brown; well indurated packstone to grainstone interlayered w/ stringers of microcrystalline dolostone; minor pin-hole porosity develop. (Low to moderate permeability)
1934-1937	Tan to Lt brown well indurated packstone interlayered w/ white crystalline Limestone; good pin-hole; minor vuguln porosity develop. in the crystalline Limestone
1937-1944	Lt brown to medium brown moderately to well indurated packstone to grainstone; interlayered w/ cryptocrystalline blackc dolostone minor pin-hole porosity (Low to moderate permeability) fast drilling time. 1938-1943
1944-1949	Lt-gray/tan well indurated wackestone to packstone; minor pin-hole porosity development; minor stringers of blackc granular dolostone (= Black - Tan) indicating some kind of contact.
1949-1954	Tan to Lt brown well indurated grainstone; moderate pin-hole porosity development; Allochems consist of dicyclomenus (moderate permeability; minor stringers of crystalline Limestone/dolostone. Kelly down @ 1148 hrs total drilling time 1 hr 37 mins started Next Rod @ 1225 hr
1954-1964	Lt brown moderate to well indurated wackestone to packstone; minor stringers of grainstone; very minor pin-hole porosity; (Low permeability)
1964-1967	Grayish Brown; moderately indurated grainstone; interbedded w/ w/ white to buff colored crystalline Limestone; crystalline Ls shows minor sucrosic texture; moderate pin-hole porosity; minor vuguln porosity (moderate to good permeability)
1967-1971	Lt Brown to medium brown; moderately indurate packstone to grainstone no visible pin-hole porosity in the packstone; minor pin-hole porosity in the grainstone (Low to moderate perm)
1971-1980	Lt-Tan colored; moderately indurated grainstone w/ stringers of packstone; moderate pin-hole porosity develop. (moderate ... good? perm) Allochems consists of Dictyoconus Americanus
1980-1985	Lt brown; well indurated packstone to grainstone; minor pin-hole porosity development (Low to moderate permeability). Kelly down @ 1642 Total Drilling Time 1 hr 44 mins.

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lwc Florida , WELL NO. TW38-TW DATE 1-5-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Stated next Rod @ 1500hr.
1985-1997	Tan colored; poorly to moderately indurated grainstone
	Allochems consist exclusively of Dictyoconus Americanus Approx 30 to 35%.
	Allochems: fast drilling through this interval; very minor visible
	pin-hole porosity development (Low to moderate perm.?)
1997-2000	grayish-medium brown poorly to moderately indurated grainstone
	Allochems of Dictyoconus 5 to 7%; minor pin-Hole porosity development
2000-2005	Lt Tan to Lt brown well indurated packstone to grainstone
	minor stringer of crystalline limestone; minor pin-hole porosity develop
	better from 2003-2005' (Low to moderate?)
2005-2010	Tan colored; moderately indurated packstone to grainstone; primarily
	a grainstone; minor pin-hole porosity develop; no visible Allochems
	(Low to moderate permeability)
2010-2016	"Same as above"
	Kelly down @ 1632hrs @ depth of ~2016' bls Total
	drilling Time 1hr 32 mins
	Stopped drilling for the day
1-8-96	Started drilling @ 1107hrs @ depth-2016
2016-2020	Tan to Lt brown moderately to well indurated wackestone to packstone
	No visible Allochems or minor pin-hole porosity development
	(Low permeability)
2020-2026	Tan colored moderately to well indurated packstone to grainstone
	no visible Allochems; minor to moderate pin-Hole porosity development
	(Low; maybe moderate perm due to better pin-Hole porosity develop
2026-2033	"Same as above"
2033-2036	Tan colored well indurated wackestone to packstone; no visible
	Allochems present; no visible pin-hole porosity development (Low permeability)
2036-2039	medium to dark brown; very well indurated crystalline dolostone;
	no visible secondary porosity or permeability; seem to show 90% dolomitization
	Low permeability
2039-2046	Tan to Lt brown moderately indurated grainstone; minor to
	moderate pinhole porosity develop. Allochems present consisting of Dictyoconus
	Americanus; ~~extremely~~ fast drilling rate through this interval.
1325	Kelly down @ 1258hrs – 1hr 46min drilling Time
	Stated next Rod @ 1325hrs

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. JWSD-TW DATE 1-8-95

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started Next Rod @ 1345
2046 - 2051	Tan to Light brown; moderately indurated grainstone; allochems present consisting of Dictyoconus Americanus, approx 20 to 30% allochems; moderate pin-hole porosity development; granular texture; friable (moderate permeability)
2051 - 2059	~~[redacted]~~ lt tan to lt brown; poorly to moderately indurated grainstone Allochems present consisting of Dictyoconus Americanus, 30 to 40% allochems moderate pin-hole porosity development; minor stringers of dk to dark grainstone from 2062-2063; (moderate permeability)
2059 - 2062	Tan colored moderately to well indurated wackestone to packstone; some crystalline well indurated Limestone; very minor pin-hole porosity development (Low permeability)
2062 - 2070	Tan to Lt gray; poorly to moderately indurated packstone to grainstone allochems present consisting of Dictyoconus Americanus; approx 20 to 30% allochems very minor vuguler porosity develop. minor pin-hole porosity; moderate permeability (grain-texture) friable
2070 - 2072	tan to medium brown to dark grayish black wackestone to dolostone to crystalline limestone; very highly variable in composition, color & texture No allochems present (Low permeability)
2072 - 2076	Tan to Lt brown; moderately indurated packstone to grainstone; allochems present consisting of Dictyoconus Americanus, minor pin-hole porosity development granular texture; friable in nature; Low to moderate permeability. Kelly down @ 1510 hr Total Drilling Time 1 hr 44 mins Started Next Rod @ 0918 hrs 1-10-95
2076 - 2081	Tan to Lt brown; moderately indurated packstone to grain; Allochems present consisting of D. Americanus, minor pin-hole porosity; partial dolomitic Dolomitized grainstone to dolostone; moderate to low permeability
2081 - 2083	medium to dark brown moderately indurated dolomitic ~~Limestone~~ crystalline / crystalline dolostone; minor pin-hole; very minor vuguler porosity development (Low to moderate permeability)
2083 - 2091	Lt brown to Lt gray; moderately indurated grainstone; minor pin-hole porosity develop. Allochems present consisting of D. Americanus, approx 5% allochems
2091 - 2096	tan to Lt brown moderately to well indurated packstone to grainstone; to subcrystalline Limestone; minor stringers of chocolate brown crystalline dolomite from 2094-2095; very minor pin-hole porosity development. good grainstone interval from 2095 to 2096 (Low permeability).

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC-Florida WELL NO. IWSD-TW DATE 1-10-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
2096 - 2102	Tan colored; well indurated packestone; minor pin-hole porosity
	minor stringers of tan to white crystalline limestone and chocolate brown
	sub to crystalline dolostone (Low permeability)
2102 - 2107	Lt-gray to tan colored; moderately to well indurated mudstone to
	wackestone; minor grainstone; very minor pin-hole porosity development
	minor crystalline limestone fragments (Low permeability)
	Kelly down @ 1118 hr Total drilling time 2.0 hrs.
	note: this 30' interval was highly variable in cutnology; color; thin layers
	of dolomatic limestone / dolostone and crystalline dolomite present; this
	interval could have been segmented in to much smaller sample intervals
	started next rod @ 1207 hrs.
2107 - 2114	Both colored to Lt tan moderately indurated wackestone to packestone;
	medium to chocolate brown crystalline dolostone @ 2108-2114'; minor to
	moderate pin-hole porosity; minor vugular porosity develop. fair drilling through
	this interval. (moderate to good permeability) better porosity development
	in the crystalline dolomite; no visible allochems.
2114 - 2119	Tan to Lt brown moderately indurated packestone to grainstone; primarily
	a grainstone; no visible allochems; minor pin-hole porosity development
	granular texture; Friable (Low to moderate?)
2119 - 2123	Tan to medium brown; well indurated micro to crystalline dolostone
	w/ stringers of well indurated packestone to crystalline limestone; minor
	pin hole porosity in the dolostone (Low to moderate?)
2123 - 2128	chocolate brown to brownish black very well indurated dolostone / dolomite
	micro to crystalline in nature; somewhat saccrosic in the chocolate brown
	dolomite; moderate pin-hole porosity; minor vugular porosity (moderate to
	good permeability; check flow; temp Log through this interval to see
	is any ↑ flow potential.
2128 - 2138	Tan to Lt gray; moderately to well indurated wackestone to grainstone
	w/ stringers of crystalline dolomitic limestone and dolostone; minor pin-hole
	porosity develop. minor vugular porosity; fair drill through this interval
	(Low to moderate permeability) no visible allochems.
	Kelly down @ 1347 Total drilling time 1 hr 40 mins

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC Florida WELL NO. IWSD-TW DATE 1-10-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started next Rod @ 1430 hrs
2139-2145	Tan to Lt brown; moderately to well indurated grainstone; no visible Allochems, very minor pin-hole porosity development; granular Texture friable in nature (Low to moderate permeability)
2145-2147	Lt to medium brown; well indurated crystalline dolostone & Limestone interbedded w/ moderately indurated mudstone to wackestone. Appear that the mudstone is partially dolomitized; very minor pin-hole porosity (Low perm)
2147-2149	Buff colored; moderately indurated mudstone to wackestone; no visible Allochems, ~~minor~~ no visible secondary porosity development (Low permeability)
2149-2155	Tan to Lt brown; moderately to well indurated packestone / dolomitic crystalline Limestone or dolostone; no visible Allochems; the Limestone Appears to be partial dolomitized w/ crystalline & non crystalline fragment ~~Adjacent~~
2155-2158	Dark chocolate brown to brownish black; very well indurated crystalline dolostone / dolomite; good pin-hole porosity develop; moderate vugular porosity, sucrosic in Texture (good permeability).
2158-2160	Tan to medium gray; moderately indurated wackestone to crystalline dolomitic Limestone or dolostone; no visible Allochems; no visible pin-hole porosity development. (Low permeability)
2160-2162	medium brown; ~~very~~ well indurated crystalline dolostone w/ golden brown moderately indurated sucrosic dolomite; minor pin-hole porosity develop. (moderate permeability)
2162-2164	Tan to Lt brown; moderately indurated wackestone to packestone. No visible Allochems; minor crystalline Limestone / dolostone; very minor pin-hole porosity development (Low permeability)
2164-2169	golden brown to brownish black; well indurated to very well indurated micro to crystalline dolostone; sucrosic in nature the golden brown dolostone while the brownish black dolostone is microcrystalline nature; moderate pin-hole porosity; minor vugular porosity $\frac{\text{sucrosic}}{\text{crystalline}}$ sucrosic (moderate to good permeability (check flow & temp log through this interval.
2169-2171	medium grayish; well indurated; packestone to cryptocrystalline dolomitic Limestone or dolostone; moderate vugular porosity in the cryptocrystalline dolostone; (moderate permeability)

kelly down @ 1635 hr; Total drilling time 2 hrs 5 mins
stopped for the day

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Lwc Florida WELL NO. IWSD-TW DATE 1-11-96

1c0>1016hr

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	Started drilling @ 0850 hr.
2171-2173	Lt to medium gray moderately to well indurated dolomitic Limestone/
dolostone	granular to crystalline in nature; some fragments are cryptocrystalline
	in nature; very minor pin-hole porosity develop. (Low permeability)
2173-2177	Golden brown; moderately indurated crystalline dolostone/dolomite
	sucrosic in nature; good pin-hole and vugular porosity development
	(good permeability)
2177-2180	golden brown to brownish-black very well indurated crystalline dolostone/
	dolomite; sucrosic to crystalline in nature; minor pin-hole & vugular porosity
	development (moderate to good permeability)
2180-2182	Lt to medium gray; moderately to well indurated dolomitic Limestone
	to dolostone; granular to crystalline in nature; Appears to be partially
	dolomitized; some fragmental dolostone are micro to cryptocrystalline
2182-2185	golden to medium brown; very well indurated; crystalline dolostone/dolomite
	sucrosic to microcrystalline in nature; moderate vugular porosity development in
	sucrosic dolomite; minor pin-hole porosity in micro to crystalline dolostone,
	(moderate permeability)
2185-2195	medium brown to brownish black very well indurated microcrystalline to
	crystalline dolostone/dolomite; very minor pin-hole porosity; very
	Little water discharge when penetrating this interval; good confinement
	(very Low to Low permeability
2195-2201	Lt gray to medium grayish brown; well indurated dolomitic Limestone to
	dolostone; granular to crystalline in nature; This interval Appears to
	partial dolomitized or recrystallized; very minor pin-hole porosity development
	minor stringer of medium Light brown crystalline dolostone @ 2196.
~~2201~~ -	Kelly down @ 1016hr Total drilling Time 2 hr 27 mins
*** NOTE	chloride & conductivity value increased significantly after this interval
	chloride went from 4400 mg/L to 15,500 mg/L & conductivity from 13000
	to 41,280 microseimens,
	Started ~~NEXT RUN~~ @ 1113 hrs.
2201-2204	Dark Brownish Black; verywell indurated crystalline dolostone;
	minor pin-hole porosity development; modrate vugular porosity development
	(Low to modrate) depends on secondary perm. development
2204-2205	Lt-gray moderately indurated mudstone to wackestone
	No visible Allochems; no visible porosity development (Low permeab.
2205-2208	medium golden brown; moderately indurated crystalline dolostone Sucrosic in nature interbedded w/ Lt-gray moderate indurated mudstone

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* 2202

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

2232 PROJECT LWC Floridan WELL NO. IW3D-TW DATE 1-11-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
2208-2215	Lt-gray moderately indurated mudstone to wackestone; no visible Allochems; no visible porosity development (low permeability)
2215-2226	Tan to Lt brown moderately to well indurated packstone to grainstone primarily a grainstone; minor to moderate pin-hole porosity develop in thin layers; granular Textone; friable (moderate permeability
2226-2229	dark brown to golden brown to white; well indurated microcrystalline to crystalline dolostone; minor vuguler porosity in sucrosic dolomite interbedded w/ minor tan colored grainstone (moderate .. good permeability)
2229-2232	Tan to Lt brown; moderately to well indurated packstone to grainstone minor crystalline limestone fragment; no visible Allochems; minor pin-hole porosity development (low to moderate permeability Kelly down 1332 hrs Total drilling Time 1HR 52 Mins Started Next Rod @ 1345hrs.
2232-2235	Lt-gray; moderately indurated mudstone to wackestone; minor pin-Hole porosity development (Low permeability) no visible Allochems
2235-2247	Tan to Lt brown; moderately indurated grainstone minor pin-Hole and vuguler porosity development; some section are partially crystallized minor wackestone stringer @ base of interval contain minor black dolostone.
2247-2252	medium to dark brown; very well indurated crystalline dolostone dolomite; good pin-hole & vuguler porosity development; sucrosic in Nature (good to very good permeability)
2252-2258	Lt. gray; moderately indurate wackestone to packstone interbedded golden brown well indurated sucrosic crystalline dolostone; this interval could be either a limestone or dolostone, moderate pin-hole & vuguler porosity develop. in sucrosic dolostone (moderate to good due to sucrosic dolo
2258-2263	Lt-grey to Lt tannish brown; moderately to well indurated packstone to grainstone; minor lens of mudstone & non indurated micrite @ 2260-2261; no visible Allochems; minor pinehole porosity development (Low to moderate)
1600	Kelly down @ Total drilling time 1hr 37mins Started next rod @ 1600hrs.
2263-2273	Lt-gray; well indurated packstone to grainstone; primarily a grainst minor stringer of sucrosic crystalline dolostone @ 2264-2265, 2268-2269, good vuguler porosity development in the Thin sucrosic dolostone, minor pinehole porosity development in the grayish grainstone (low to moderate permeability

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

2247

PROJECT Lwc Florida WELL NO. LWSD-TW DATE 1-11-96

DEPTH	DESCRIPTION -- ROCK TYPE, COLOR, HARDNESS, OTHER
2273-2278	Lt gray moderately to well indurated wackestone to packstone; No visible Allochems; very Minor pin-hole porosity development; Thin Layers of sucrosic dolostone @ 2273 & 2275; good vuggular porosity in the sucrosic dolostone (Low to moderate permeability depending on the dolostone layer.
2278-2283	Lt-gray to Buff colored moderately indurated mudstone to packstone, interbedded w/ dark brown sucrosic dolomite and crystalline dolomitic Limestone. No visible Allochems, very minor pin-hole porosity in the grainstone Limestone moderate pin-hole & vuggular porosity developed in the sucrosic dolomite. (Low to moderate depending on permeability of dolostone layers. Stopped drilling for the day @ 1742hr. Total drilling 1hr 42 min / 20 feet 1-12-96 Started drilling @ 0733 hrs.
2283-2289	golden brown to dark chocolate brown moderately to well indurated crystalline dolostone interbedded w/ well indurated partially dolomitized packstone/dolostone; Thin layer of grainstone to partially crystallized dolostone occur @ 2283 & 2287; Approx 0.5 to 1.0 thick. The crystalline dolomite is sucrosic and has moderate to good vuggular porosity develop. (good permeability)
2289-2291	Medium to lt brown; well indurated grainstone to partially crystallized dolomitic Limestone or dolostone; No visible allochems; No visible porosity development (Low permeability)
2291-2293	golden brown to brownish-Black crystalline dolostone; very well to moderately indurated; Sucrosic; Moderate vuggular porosity develop. Thin crystalline to microcrystalline dolostone w/ lower permeability. Kelly down @ 0830hr. Total Drilling Time Approx 2hr 15mins 30' foot started next rod @ 855hrs.
2293-2302	Lt gray to ~~lt brown~~ Tan colored; moderately to well indurated wackestone to grainstone/dolostone, to partially dolomitic/crystalline dolostone No visible Allochems; very minor pin-hole porosity development primarily grainstone in texture; Low permeability
2302-2312	Lt gray to tan colored; moderately to well indurated packstone to grainstone; minor stringers of partially crystalline to crystalline dolostone However primary a grainstone/dolostone?; minor pin-hole porosity develop Low to moderate permeability; No visible allochems,
2312-2318	Same as above

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT LWC-Florida WELL NO. IWSD-TW DATE 1-12-96

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
2318-2321	medium gray; well indurated crystalline dolostone; crystalline
	to microcrystalline in nature; minor pin-hole & vugular porosity
	development; (moderate permeability)
2321-2324	white to lt gray; moderately indurated; granular to crystalline
	dolostone / grainstone; minor pin-hole porosity; Low to moderate permeability
	partially crystalline / granular nature; small dolomite rhombs observed
	Kelly down @ 1200hr probably a dolostone.
2327-2331	medium to dark chocolate brown; cryptocrystalline to crystalline dolostone
	very well indurated approx 1:00hr through this interval; moderate pin-hole
	and vugular porosity @ base of interval 2330-2331; conchoidal fracturing; No porosity develop
	in the cryptocrystalline (Low to good permeability): Sour Gas odor observed.
2331-2334	medium gray; very well indurated crystalline dolostone; slight bit
	drop through this interval; good pin-hole & vugular porosity development
	(good permeability to excellent permeability
2334-2339	tan to medium brown to medium gray; well indurated crystalline to
	microcrystalline Dolomite; good pin-hole porosity; moderate vugular porosity development
	(excellent permeability)
2339-2344	light brown to medium gray; very well indurated crystalline dolostone/
	Dolomite; good pin-hole porosity; good to excellent vugular porosity develop
	minor sucrosic texture; bit drop through this interval (excellent permeability)
2344-2346	Dark to medium Tannish brown; well indurated crystalline dolostone; good
	pin-hole porosity; sucrosic to microcrystalline; minor vugular porosity
	good permeability
2346-2349	medium gray to lt brown; moderately indurated crystalline to microcrystalline
	dolostone; good to excellent pin-hole & vugular porosity development; fast drilling through this
	interval; (excellent permeability)
2349-2350	lt brown; moderately indurated; crystalline dolostone; very sucrosic
	excellent pin-hole & vugular porosity development; very fast drilling
	(excellent permeability)
2350-2354	medium brown; very well indurated crystalline dolostone; minor pin-hole
	porosity development; very crystalline in nature; moderate permeability
	very slow drilling through this interval; * Last at 2351.0 went back into the
	* granular to partially crystalline Dolostone.
	Kelly down @ 1715 hrs Total drilling Time 4. hrs
	Ending Drilling of IWSD-TW @ -2354 feet