FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County ST LUCIE

Station I. D. 1110000055

Date 12/8/88 Well No. STL APT-1 PW-1

Latitude 27° 23' 08" Longitude 80° 22' 36.32"

__ ¼ __ ¼ __ ¼ __ Section 31 Township 35S Range 40E

Owner S.F.W.M.D. Phone

Driller T. LUBRANO Date Drilled 12/8/88

WELL CONSTRUCTION

Drilling Method: Rot. X Air __ CT __ Auger __ Other

T. Depth - Driller 142' T. Depth - Logger 142'

Casing Depth Driller Casing Depth Logger

Bit Size Casing Dia. I.D.

Hole Dia. 6" From 0' To 142' Dia. From To

Type of Casing OPEN HOLE Casing Thickness

Type of Screen Screen Int. From To

Type of Packing Well Use Pump TEST

Static Water Level Date

Yield Flow Pump

DATUM

K.B. L.S. 0.0 T.O.C.

FLUID QUALITY

Date Time Source of Sample

Cl mg/l Type of Fluid

Temp. °C Field Density @ °C

T.D.S. mg/l Spec. Cond. µmhos/cm

Logged By: E.P. DAUENHAUER Witnessed By: J. LUKASIEWICZ

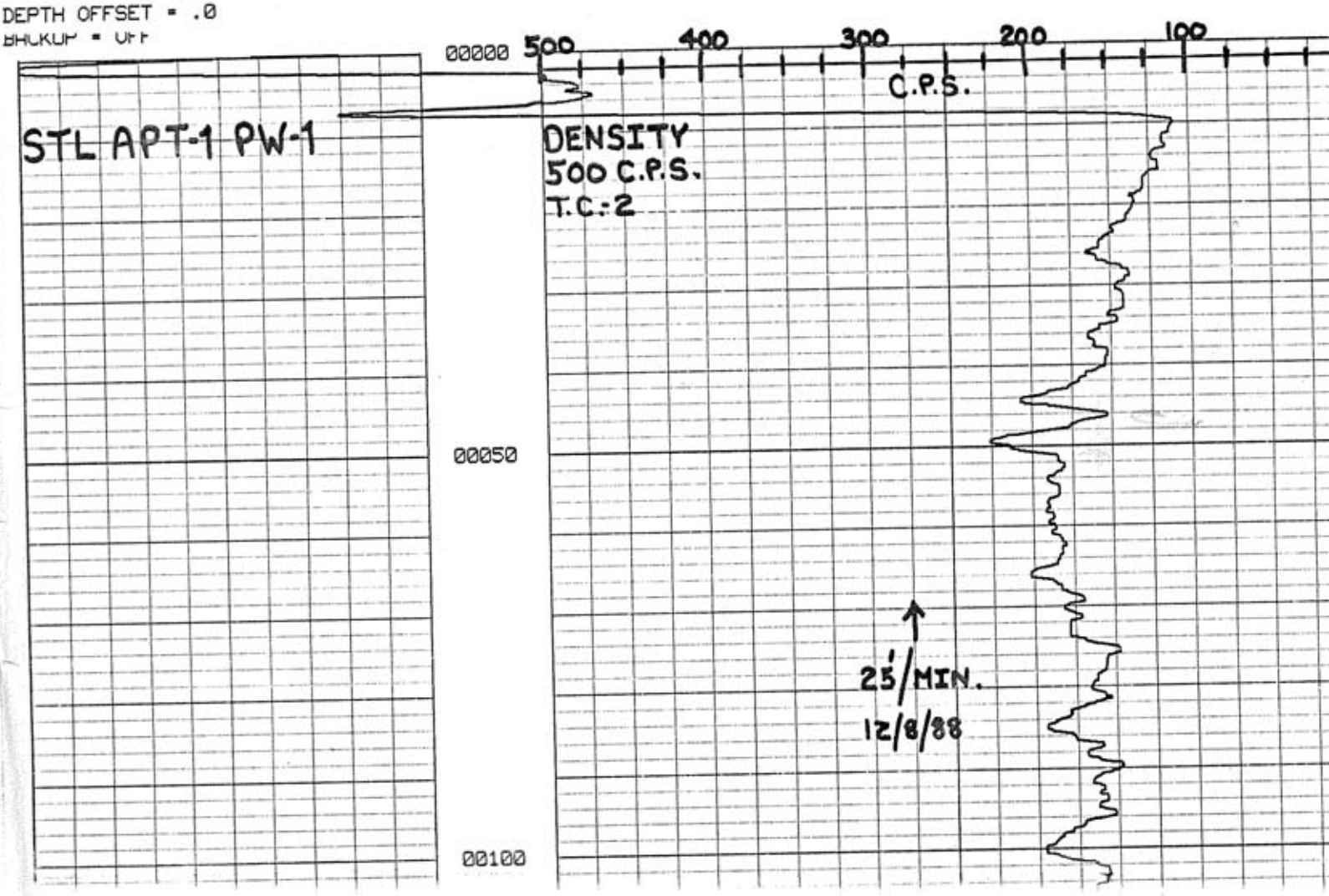
Comments: CASING & SCREEN SET AFTER logging.

TYPE OF SURVEYS RUN

Lateral 6'	X	Density	X
Caliper	X	ccl	( )
Flow meter	( )	Fluid Sampler	( )
16", 64" normals	X	Temperature	( )
Neutron	X	Delta Temp.	( )
Natural Gamma	X	SP	X
Fluid Resistivity	( )		

CHANNEL 2 CONFIGURATION:
SPAN = 193
OFFSET = 1
DOT CODE = SOLID
DEPTH OFFSET = .0
BACKUP = OFF

CPS



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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County ST LUCIE

Station I. D. 1110000055

Date 12/8/88 Well No. STL APT-1 PW-1

Latitude 27° 23' 08" Longitude 80° 22' ~~36~~ 32"

__ ¼ __ ¼ __ ¼ __ Section 31 Township 35S Range 40E

Owner S.F.W.M.D. Phone

Driller T. LUBRANO Date Drilled 12/8/88

WELL CONSTRUCTION

Drilling Method: Rot. X Air __ CT __ Auger __ Other

T. Depth - Driller 142' T. Depth - Logger 142'

Casing Depth Driller Casing Depth Logger

Bit Size Casing Dia. I.D.

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TYPE OF SURVEYS RUN

Lateral 6'	(X)	Density	(X)
Caliper	(X)	ccl	( )
Flow meter	( )	Fluid Sampler	( )
16", 64" normals	(X)	Temperature	( )
Neutron	(X)	Delta Temp.	( )
Natural Gamma	(X)	SP	(X)
Fluid Resistivity	( )		

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Caliper	(X)	ccl	( )
Flow meter	( )	Fluid Sampler	( )
16", 64" normals	(X)	Temperature	( )
Neutron	(X)	Delta Temp.	( )
Natural Gamma	(X)	SP	(X)
Fluid Resistivity	( )		

50 M.V. 0 - 0' -

S.P.

STL APT-1 PW-1

00050

00100

M.V.

50 0 140'

0 25 50 75 100

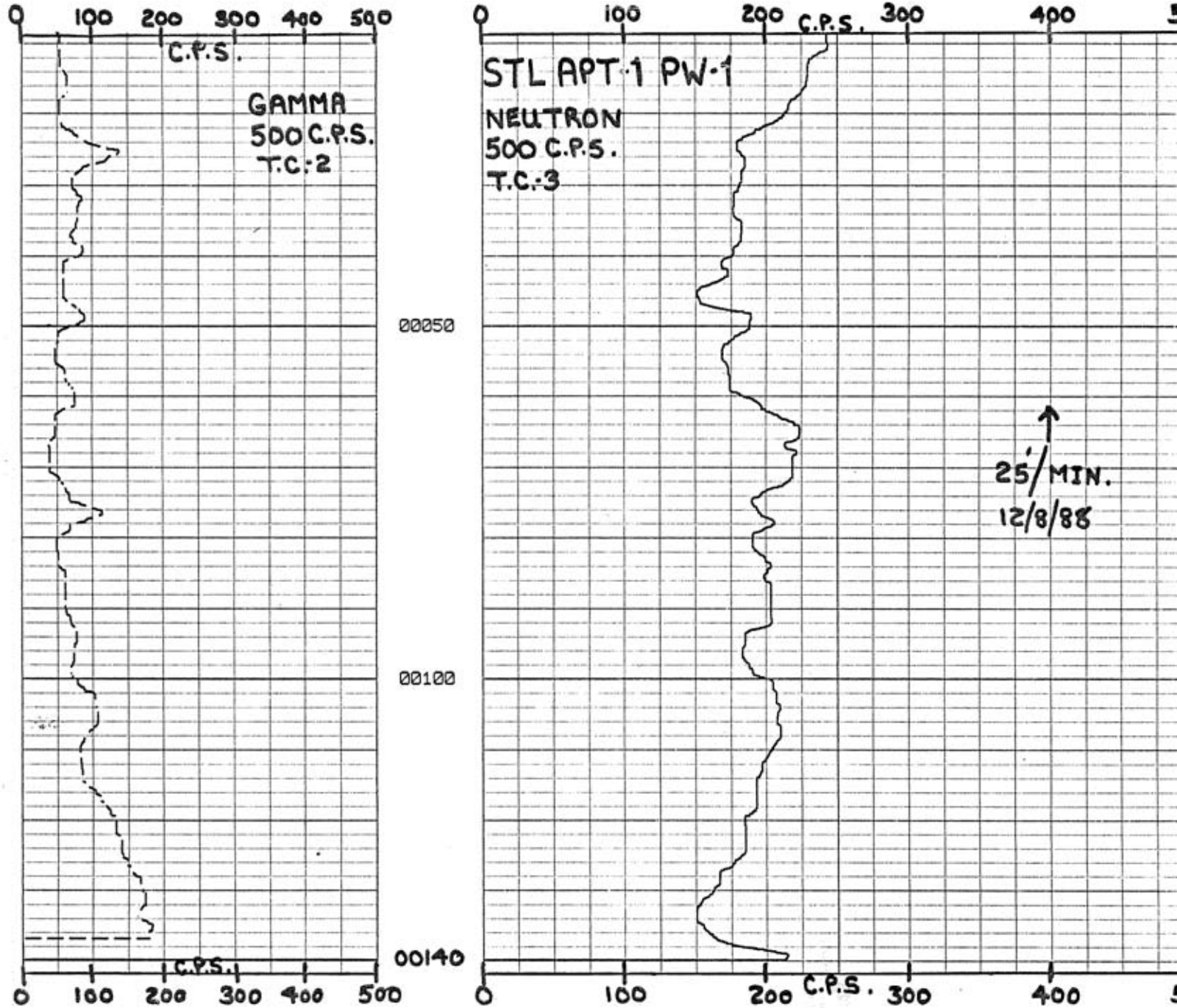
6' LATERAL OHM-METERS RESISTIVITY

20'/MIN.

12/8/88

OHM-METERS

0 25 50 75 100



SYSTEM CONFIGURATION:

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL APT 2 (STLC2) → core hole #1 WELL NO. ~~CORE 1~~ CORE 1 DATE Tues 9/19/89

24" SPLIT SPOON BARREL - MUD ROTARY

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1030	ON SITE - PREP'D TO START SPLIT SPOON
1055	0-2.0' 10 blows 85% recovery
1100	2.0-3.2' 95% recovery (1st clayey lens) + (filled cap) .2'
1105	4.0-6.0' 100% (4-4.5' = Probable fill)
1115	6-8' 100% 7-8' (sample) - 6-7' fill -
1125	Cleaned hole ~~to~~ to 8'
1131	adding 5 gal drill mud to hole to help keep it open & keep spoon from sticking
1138	8-10 (100%) (8-9' Prob. Fill) 9-10' grey fine sand
1145	10-12 (100%) all fine compacted grey sand clay >
	core barrel delivered to site
	stop drilling
1200	Driller off-site to call his office
1457	Start rig
1300	12'-14' 100% - grey sand (well compacted) (as above)
1305	14-16' - 100% grey sand → clayey sand
1315	16-18' - 100% upper 1' (15-16) Probable SPOIL grey sand
1330	18-20' 100% grey sand
1335	20-22 100% brn grey sand grading into lt. grey
1345	22-24 as above (100%)
1350	24-26 (100%) as above
1403	spoon hung in hole
1410	26-28 - 100% as above → last 2" black sandy organic layer
1430	Have re-rigged to drill mud-rotary to 28' depth
START 1445	in order to clean out the hole. (6" diameter.)
1525	Desanding attempted (pump problem ~~doesn't function~~). Slowly mixing
	mud and circulating
1550	Still circulating.
1620	Stop circulation - prep. to resume split spoons. Tripping out
1640	28-30 - 85% recovery - Soupy black organic sand
	grading into dk. grey sandy ~~shell~~ yellow shell hash at bottom
1650	75% recovery 30-32' med grey clayey sand
	with fine shell hash

(2)

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT _____ WELL NO. STL C1 DATE TUES 9/19/89

SPLIT SPOONS

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1700	32-34 60% recovery ~ grey sand w/ fine shell hash ...
	noted horizontal shell layering ~ 33'-33.5' (possible
	storm settle out) grading into dark grey sand
	(phosphorite sand noted 33-34')
1710	34-36' 100% med. grey sand and fine shell → grey
	sand (34-35 possible spoil)
1725	36-38 - 50% recovery 36-37' doubtful..
	37-38' - med grey sand & fine shell as above
1730	38-40' (hard hitting on toward 40') as above ~100% recovery
	Will now run down hole with 6" bit & clean hole. circulating
1750	Kelly hose springs a leak @ kelly.
1800	Shut down for repairs (tomorrow)
1900	OFF SITE

(3)

WELL DRILLERS

SOUTH FLORIDA WATER MANAGE NT DISTRICT

PROJECT STL APT 1 WELL NO. CORE #1 DATE 9/20/89 WED.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0745	ON SITE AWAITING DRILLERS.
0930	HYDROWELL TECH. DRILLERS ON SITE WITH RENTAL
	PUMP... BEGIN SET UP. (FIXED KELLY HOSE)
1015	RUNNING IN 6" DIA TRICONE BIT & STRING TO TAG @ 40'
1030	HOLE IS OPEN ALL THE WAY TO 40'... CIRCULATING..
	& DESANDING.
1110	STOPPED CIRCULATION. TRIPPING OUT.
1120	RESUME SPLIT SPOON SAMPLING AT 40' DEPTH.
	HARD GOING @ 42' - ~~[illegible] [illegible] TO BEGIN~~
	~~[illegible]~~
1130	70% recovery 40-42' (70% DUE TO BACK HAMMERING)
	TOTAL CORE IS FINE TO VERY FINE MED GREY SAND
1145	42-44 → 60%, SHELL BED (2-3") @ 42' - REST
	IS FINE MED GREY SAND,
1205	44-46' - 75%. FINE, ~~MED~~ MED. GREY SAND & BROKEN SHELL (44-5
	45-6 - MED. GREY SAND.
1210	HAVE DECIDED TO RUN AUGERS @ THIS POINT TO ~~CASE~~ OFF UNCONSOLIDATED SEDS. TRIPPING OUT.
1230	1ST 5' AUGER FLIGHT DOWN.
1250	5 FLIGHTS IN HOLE (25')
1305	ALL 8 FLIGHTS DOWN - NOW HAVE ~37' OF CASED HOLE
1320	TRIPPING IN DRILL STRING TO CLEAN HOLE TO 46'
1330	CIRCULATING & DESANDING @ 30'
1400	" @ 46' mixing mud & cleaning hole.
1520	PREPARING TO RUN 1ST CORE BARREL ~~8~~ DOWN HOLE.
1535	BARREL DOWN - ESTABLISHED CIRCULATION
1545	START CORING 1ST FOOT = 1 min 25 secs
1555	E.T. = 10 MIN FOR 6' CORE
1610	CORED 6' - LOST 1ST 5' 16% recovery → 1 FOOT
☆	OF SANDY CLAY (5") GRADING INTO shelly LS (4") to BLACK
	SOLN'D LS. (3")
1620	TRIPPING IN WITH 6" BIT TO CLEAN OUT HOLE TO 52'
1625	CIRCULATING @ 52' - BRINGING UP LOTS OF SHELL
	& SOME BLACK LS.

(4)

WELL DRILLERS

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL APT I WELL NO. CORE #1 DATE 9/20/89 WED.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1645	RUNNING CORE BARREL (13'2" LENGTH) DOWN HOLE
	FOR CORE #2
1700	BEGIN 6.0' CORE RUN
1707	END RUN #2 (7 min / 6.0') ENCOUNTERED
	SEVERAL "SOFT" SPOTS DURING CORE RUN – MAY AFFECT
	RECOVERY. TRIPPING OUT.
1710	CORE RUN #2, 52'-58', 0% RECOVERY ...
	RETURNS ON HOLE CLEAN OUT SHOW SHELL, LIME MUD
	SAND & POORLY CONSOLIDATED LS. WILL ATTEMPT ONE
	MORE CORE RUN TODAY USING LESS THAN HALF THE MUD
	CIRCULATION PRESSURE OF BEFORE...
1800	ALL SET FOR RUN #3 (58'-64') FAIRLY HIGH RPMS
	ENCOUNTERING MORE SOFT MATERIAL @ TIMES
1800 – 1809	58-64' SPORADIC RECOVERY – ESTIMATE 60-62'
	interval recovered – TOTAL ~ 18" OF MED HARD–HARD
	LS. (~25%) OF 6'
1830	BOXING CORE REMNANTS & BEGINNING TRIP OUT
1900	OFF SITE.

(5)

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE SITE #1 DATE Thursday 9/21/89

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0820	TRIPPING IN TO CLEAN OUT HOLE AT 64'
	W/ 6" BIT.
0830	CIRCULATING, DESANDING & MIXING MUD @ 64'
0930	TRIPPING OUT TO PREP. FOR CORE RUN #4.
0950	CORE RUN #4 (4.5') 64-68.5'
0956	@ 65-66' (LOSING MUD RETURNS) CORING SLOWLY W/ Some chatter.
1000	CONTININUING TO TAKE WATER (~3 BBLS)
1005	CORE BARREL DOWN... (9 min/4.5') "SOFT" @ THE END.
1008	ON TRIP OUT, STRING GOT STUCK IN THE HOLE - HAD TO
	BRING STRING UP/DOWN RAPIDLY SEVERAL TIMES – MAY HAVE
	LOST THE CORE.... TRIPPING OUT OK, FINALLY...
1025	50% RECOVERY (64-68.5) – LOOKS LIKE TOP 2': HIGHLY SOLN'D
	LIMESTONE (2'). WILL TRIP BACK IN WITH THE
	BIT TO TAG BOTTOM & DETN IF WE HAVE DROPPED
	ANY CORE.
1045	HAVE 2' OF CORE DOWN HOLE.. TAGGED @ 66'
1050	DRILL BACK DOWN TO 68' AND CIRCULATE HEAVY MUD
	TO BRING OUT CUTTINGS.
1145	TRIPPING OUT AND RUNNING IN CORE BARREL.
1200	CORE RUN #5 FROM 68' PLUGGED OFF. TRIPPING OUT.
	RINSE BARREL W/ CLEAN WATER AND TRIP BACK IN
1230	CIRCULATING @ 68' AND THINNING MUD.
1235	START CORE #5 @ 68' 120 RPM (AS YESTERDAY)
	and 1400 LBS BIT WEIGHT.
1254	7' OF CORE 68-75' in 19 min.
1300	STOP ROTATION & BEGIN TRIP OUT
1310	CORE RUN #5 – ~29% RECOVERY 2' OF 7' (100% grey Ls.)
1315	CLEAN OUT BARREL AND RUN BACK IN.
1325	START RUN #6 75-84'
1337	STOP (9'/12' minutes) CORED VERY FAST...
1345	0% RECOVERY
1400	TRIP OUT BARREL FROM 84' AND DRILL
	BACK DOWN THRU RUBBLE TO 84'

(6)

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #1 DATE Thurs. 9/21/89

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1430	CIRCULATING AND CLEANING/CONDITIONING HOLE
1520	TRIP OUT BIT AFTER 40 MIN OF CIRCULATING
	- PREPARE TO RUN CORE #7.
1600	CORE RUN #7 (84'-94') BEGINS ~700 lbs on BIT
	~100 RPM, VERY LITTLE MUD PRESSURE - WILL TRY
	FOR A FULL 10' USING 5' DRILL PIPE ABOVE ROTARY
	(CORE 6' STROKE AND CONTINUE ON THRU) DRILLERS LOG
	FOR PW-1 SHOWS HARD LS. AT 94-95 - WILL TRY
	TO SET BARREL INTO IT...
1615	@ ~89-90' SLOW CORING - GOING TO TAKE THE
1621	CONSERVATIVE APPROACH AND STOP AT 90' (HARD LS.)
STOP.	- CHECK OUR RECOVERY & CONTINUE... 21 MINUTES/6' CORE
	TRIPPING OUT.
1630	RECOVERY @ 25% (1.5' OF 6') VERY FINE GRAINED
	MEDIUM GREY LIMESTONE W/SHELL → SILTY, SANDY MED. GREY LS.
	@ 90'...
1645	TRIP BIT BACK IN AND DRILL DOWN TO 90'
	LOTS OF CHATTER THRU UNRECOVERED RUBBLE...
1700	BEGIN TO CIRCULATE & CLEAN HOLE.
1800	HOLE FINALLY COMING CLEAN. ABOUT OUT OF MUD.
1815	TRIPPING OUT FOR LAST CORE RUN OF THE DAY...
1830	START CORING @ 91' LOST ~1 FT (SLIGHT OVERDRILL
	& COMPACTION) 5' OF CORE 91'-96'
1845	STOP CORING: 15 MIN/5'
1700	2" RECOVERY (3% RETURN)
"	CLEAN UP & OFF SITE

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

(2) PROJECT SL WELL NO. SLCH-1 DATE 9/22/89

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0830	Don & Mike on site. Circulating for coring
0850	Bill & Dave off site. @ 95'
0900	Tripping to add core barrel. Hole conditions good
0923	coring ~~@~~ PR = ≈ 1 ft/min @ 95', Run #9
	97 @ ~~[illegible]~~' semi-hard layer
0931	98.5 @ ~~[illegible]~~' hard layer ~~[illegible]~~ 99-100 mod-to very soft
~~[illegible]~~ 0945	KD @ ~~[illegible]~~ 100 add 5' section of pipe for full barrel out. Temporary pipe plugged @ 102'
0950 ~~1050~~	103 @ Shell & Limestone – whole shell fragments in drill mods.
0952 ~~1052~~	105 @ KD pulled. – stopped. – core barrel sample 95'-105'
	tripping barrel out.
1043	Core recovery ≈ 10%, Limestone, sand and
	shell washes into drill mud. Bit had clay
	on end, lot of shell & sd in returns tr. limestone
1114	Coring @ 105', having plugging problems
1135	Plugging problems, tripping out one pipe
	Circulating to clean hole
1157	Adding ~~joint~~ pipe back on, circulating, desander on, cleaning hole & mixing mud
1233	Coring @ 105
	105-107 washing down
1236	107-110 as above
	a little harder @ 110'
	@ 112 washing down rapidly, clay in returns
1240	KD @ 115, tripping out
1257	Core recovery 20% hard LS ap top grading
	down to very soft on bottom, grey clay on core bit
1305	~~Coring @ 115~~ Cleaning hole.
1320	grease in returns, core barrel plugging, tripping
	out,
1350	Adjusting bearing ~~nut~~ position nut on core barrel
1420	Tripping back into hole
1433	On bottom @ 115' coring, washing down rapidly
	> 1' per min

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT ______ WELL NO. ______ DATE 9/22/89

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1437	KDC 123'
	Core recovery 30% limey, clayey sd on top
	limestone on bottom
1537	Drillers + SFWMD off site

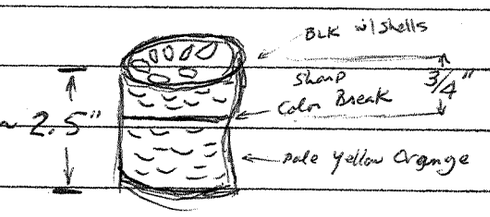
WELL DRILLER'S

(1)

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL APT-1 WELL NO. CORE #2 DATE Tues 9/26/89

2½" CORE BARREL ; 6" TRICONE DRILLING BIT ; BENTONITE MUD

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1145	B.B. ON SITE. DRILLERS HAVE SET AUGERS
	TO 28' ON NEW CORE LOCATION (~ 50' NORTH OF LAST
	WEEKS LOCATION). PREVIOUS HOLE GROUTED BACK TO
	SURFACE. (I COUNT 13* EMPTY PORTLAND CEMENT BAGS)
1205	BOBBY TINSLEY (V.P.) ON SITE TO ASSESS STUATION.
1215	RIGGING KELLY & SWIVEL CONNECTION, - PREPARATORY TO DRILLING
	BACK DOWN TO ~46' AND THE START OF CORING.
1220	MARTY & PETE ON SITE. MIXING MUD & RUNNING
	40' OF D.P. DOWN HOLE
1300	DRILLED 6" DIA. BIT TO 30'
1320	DESANDING & MIXING MUD.
1345	DRILLED DOWN TO 1ST CORE DEPTH (48'). STEVE ON SITE
1405	CIRCULATED & CONDITIONED HOLE. TRIP OUT
1410	ONE LAST CHECK OF DIAMOND CORE BIT AND CATCHER
	THAT WAS USED LAST WEEK. TRIPPING IN.
	BARREL TIP @ 48'
1423-28	RECIPROCATING (UP & DOWN) MOTION ON CORE BARREL TO
	PUSH THRU SOFT SEDS THEN ROTARY CORE THRU
	SOMEWHAT HARDER LS. WASHED BARREL DOWN FROM 48-56'
	AND CORED @ ~ 80' RPM'S FROM 56'-58'. RECOVERY ~ 10'.
	(2½" OF BLACK SHELLY, SILTY LS WITH DISTINCT COLOR
	CHANGE TO PALE YELLOW ORANGE SHELLY LS.
	
1430-1500	DISCUSSION ABOUT HOW TO PROCEED NEXT TO IMPROVE RECOVERY,
	BOBBY, STEVE BRYAN & MARTY AGREE TO USE EASY MUD
	ADDITIVE W/ LITTLE OR NO QUICK GEL & TO USE EXISTING
	CORE CATCHER. (NEWLY ARRIVED CATCHER LIKELY TO DISPLACE SOFT SEDS.)
1500	STEVE OFF SITE TO FT. MEYERS TO GET 5 GALS EASY MUD
	MARTY & PETE OFF SITE TO WPB AS WE CLEAN UP & SECURE SITE
1600	TRAVEL BACK TO MOTEL. (DRIVING RAIN)

* DRILLER (DAVE FLETCHER) USED 15 BAGS TO GROUT OLD HOLE

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #2 DATE 9/27/89 WED.

2½" NOMINAL I.D. CORE BARREL

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0700	DISCUSSION W/ CREW ABOUT DAY'S ACTIVITIES. STEVE
	BRYAN (DRILLING SUPT.) RECAPS HYDROWELL TECH.'S AIM
	TO DO WHATEVER IT TAKES TO GET GOOD RESULTS ON
	THE JOB. EFFORTS TO INCLUDE:
	1) USING EASY MUD APPROACH: 1 QT/100 GALS
	FRESH WATER WITH 'MINIMAL' QUICK GEL.
	2) TAKE DELIVERY OF UPPER SUB THAT WILL ALLOW
	SPLIT SPOONING @ DEPTH SHOULD IT BECOME NECESSARY
	3) SHORT TRIPS WITH CORE BARREL SO AS TO
	MAXIMIZE RECOVERY WITH AS LITTLE FOOTAGE
	LOST AS POSSIBLE. (UNTIL SUCCESSFUL TECHNIQUE
	FOR CORING CAN BE ACHIEVED)
~0800	CLEANING MUD BOX AND CHECKING EQUIPMENT ON RIG.
0830	STEVE OFF SITE TO PICK UP FITTING FOR MUD PUMP GAUGE etc.
0900	CREW TRIPPED IN W/ 6" BIT TO 58'. CIRCULATING & CONDITIONING
	HOLE WHILE FILLING ALUM. CEMENTING TANK W/ FRESH H2O
0930	RADIO IN REPT. TO FT. PIERCE F.S. FOR MARTY. BETTY CALLS
	BACK TO SAY MARTY WILL BE ON-SITE ~ NOON.
1000	CONTINUING TO CONDITION HOLE AND MIX QUIK GEL IN ALUM TANK.
1045	RIG MAINTENANCE, CIRCULATING, WAITING FOR STEVE... OVERCAST & DRIZZLING
1105	STEVE ON SITE, BRIEFLY TO DROP OFF MUD SYS. GAUGE. HEADING
	BACK TO MOTEL TO PICK UP SPLIT SPOON SUB.
1130	EASY MUD PREP'D IN MAIN MUD TANK VISCOSITY: 40 secs / 32oz.
1210	MARTY ON SITE → 1220 STEVE ON SITE
1230	TRIPPING IN CORE BARREL TO 58' FOR 1ST RUN EASY MUD & CONVENTIONAL CAKING
1240	WASH DOWN TO 58' FROM 46'.
1247'	BEGIN RUN #2
1300	STOP CORING ‖ 58-60 2' in 13 min. ‖ TRIP OUT..
1315	18" OF CORE (75%) DK. GREY LS. @ 58 W/ SHELL GRADING INTO MED GR FINE SAND.
1320	TRIP BACK IN W/ 6" BIT TO CLEAN HOLE
1340	TRIP OUT FOR RUN # 3
1350	START → 60'-65'
1418	STOP : RECOVERY: 60% 5' in 28 minutes
	(3' of 5') TOOK ~ 75 gallons of fluid

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT I WELL NO. CORE #2 DATE 9/27/89 WED.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1435	TRIPPED BACK IN w/ 6" BIT - CLEAN & CONDITION HOLE
1450	START RUN #4 1ST FOOT in 20 Seconds
1450-1	LOST RETURNS @ 66'
1508	INTERRUPT CORING TO MIX MORE EASY MUD. FM TAKING
	FLUID FASTER THAN THEY CAN MIX IT LOST RETNS
1510	RESUME CORING @ 68.5-69. WILL CORE 65'-70'
1512	STILL MIXING POLYMER FAST & FURIOUS - OVER 2000 GALS
	TO FM SO. FAR. (DIAMOND BIT DOESN'T PRODUCE ENOUGH
	CUTTINGS TO STEM THE FLOW TO FM.)
1523	STOP CORING @ ~ 69'9" RUNNING OUT OF FLUID.
	WATER TRUCK DEPLETED AND REFILLING NOW
1530 →	4'9" in 33 minutes (Fast drilling last ~1 ft)
	3.0 RECOVERED FEET OF 4.75' cored (63%) recovery med. grey sandy
	silty ls. (Fm. Fractured into cobbles, rocks)
	MARTY OFF SITE TO W.P.B.
1545	SLOW FILLUP OF WATER TRUCK
1645	CIRCULATING & CONDITIONING HOLE; MIXING EASY MUD..
1700	DRILLED DOWN TO ~70'
1715	TRIP IN CORE BARREL FOR RUN #5
1720	START @ 69.75' (USING HYBRID CATCHER)
1747	STOP @ 74.75' 5' in 27 min 3' of 5' (60%)
	MEDIUM GREY BIOMICRITE → BIOSPARITE
1810	TRIP BARREL BACK IN AFTER INSTALLING CONVENTIONAL CORE CATCHER
1820	START CORE RUN #6 (75-82) NO RETURNS .... FM CONTINUING
	TO TAKE FLUID AFTER 5 MINS.
1826	BEGINNING TO GET FLUID RETURN 3' into CORE (~78')
1835	STOP CORING MOMENTARILY TO GET 3' MORE STROKE... RESUME
1842	TOTAL TIME 22 min → 7' OF CORE (3' BACK) 43% (3 of 7)
	STOPPED @ 82'
1900	BOXING CORE SAMPLE AND ORGANIZING / SECURING SITE
	CREW OFF SITE
1930	BB OFF SITE

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #1 DATE 9/28/89 THURS.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0730	CREW FILLING WATER TRUCK FROM POWERLINE DRAINAGE
	DITCH. B.B. & STEVE BRYAN OFF SITE TO SCOUT
	SPITERI SITE.
0750	@ SPITERI SITE: 2-4" OF STANDING WATER ON
	MAJORITY OF PROPERTY. LOOKS LIKE ROAD ALONG
	EASTERN FENCE LINE BEST BET FOR RIG & WATER
	TRUCK ACCESS. MR & MRS. SPITERI AGREEABLE TO
	WHATEVER HYDROWELL WILL NEED TO DO TO SETUP & DRILL.
0925	BACK ON SITE @ STL-APT 1. DRILLER HAS ENCOUNTERED
	SOME HOLE SQUEEZING AND IS IN PROCESS OF DRILLING
	BACK TO 82'.
1000	CURRENTLY @ 50' AND PICKING UP LOTS OF FINES & SILTS
	IN RETURNS. 5 GALS OF EASY MUD IS NEARLY USED UP
	FROM YESTERDAY.
1030	STEVE OFF SITE TO MAKE ARRANGEMENTS FOR MORE POLYMER.
1100	B.B. - CALL IN PROGRESS REPT. TO DON PADGETT.
1130	DRILLERS CONTINUING TO CLEAN OUT HOLE @ ~ 60'
1200	LOST CIRCULATION – PLUGGED OFF MOMENTARILY @ ~ 69'
1205	CIRCULATION REESTABLISHED AFTER PULLING UP STRING
	SLIGHTLY.
1220	MUD PUMP ON RIG NOT PUMPING W/ ENOUGH CAPACITY.
	REPLACE IT (BYPASS) WITH PORTABLE PUMP * IN ORDER
	TO GET BETTER RETURNS.
1300	PLUGGED OFF..... HAVE TO TRIP OUT BIT.
1330	BIT & SUB PLUGGED OFF W/ DARK GREY SANDY MUD & SHELL.
1345	CIRCULATION FINALLY REESTABLISHED. WASHING BACK DOWN @
	~ 40 FT.
1350	FLUID LOSS DOWN HOLE TAKES THE LAST OF THE POLYMER
	MIX. PULL STRING BACK INTO AUGERS AND ALL 3 HEAD OFF
	SITE TO CANAL TO REFILL WATER TRUCK. RIG SHUT DOWN.
1400	NEED TO MIX UP QUIK GEL IN TANKS → GO BACK &
	CLEAN OUT / CONDITION HOLE. (HOPING WE WON'T HAVE
	TO RUN 4" CASING)

(5)

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGE NT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #2 DATE 9/28/89 Thurs.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
~~1~~ 1430	WATER TRUCK BACK ON SITE - USING FRESH WATER TO
	RINSE POLYMER FROM HOLE. EASY MUD (2-5 GAL CONTAINERS) ON SITE.
1500	MIXING QUIK GEL IN TANKS & CIRCULATING - PLUGS UP LINES.
1600	SOME WHERE IN PIPING ON MAST - PLUGGED OFF.. (THEY THINK)
	RUNNING STEEL CABLE THRU LINES .. ROTO ROOTER CITY ....
1630	HOSE CLAMP ON MUD PUMP LINE SNAPS.. PROGRESS STOPS.
1700	BB OFF SITE TO MAKE REPORT / NOTES. TOMORROW -
	WE'LL TRY AGAIN
	* PORTABLE PUMP DIDN'T HAVE ENOUGH CAPACITY TO
	CIRCULATE MUD - GAVE GOOD PRESSURE THRU
	A WATER HOSE BUT HAD NO REAL OOMPH.

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #2 DATE 9/29/89 FRIDAY

TIME	DESCRIPTION -- ROCK TYPE, COLOR, HARDNESS, OTHER
0700	DRILLERS ON SITE
0730	PHONE IN MORN. REPORT TO MARTY - LEAVE MESSAGE.
0800	MIXING MUD* AND RUNNING STRING W/ 6" BIT
	BACK DOWN TO OPEN THE HOLE * QUIK GEL
0900	STEVE OFF SITE TO GATHER EQUIPMENT TO
	RUN 4" CASING DOWN TO CORE DEPTH (~82')
1000	CLEANING / COND. HOLE TO 82' USING ON-RIG MUD PUMP.
1100	STEVE ON SITE WITH GEAR TO RUN CASING STRING
	TRIPPING OUT D.S. TO RUN CASING.
1110	START CASING RUN (4" I.D., 21' LENGTH each)
1135	4 LENTHS IN HOLE : TOTAL CASING = 84" WITH 2'
	PROTRUDING ABOVE GROUND LEVEL = 82' DEPTH
1140	WILL ATTEMPT A 2' CORE RUN USING EXISTING QUIK
	GEL MUD SETUP TO SEE WHAT SORT OF RECOVERY CAN
	BE ACHIEVED.
1145	CORE BARREL PLUGS OFF ; MUD PUMP HOSE BLOWS OFF...
1150	CAN'T TRIP OUT - FEED TABLE JAMS - LOOSEN; LUBRICATE
1215	TRIP OUT CORE BARREL AND BREAK IT DOWN / CLEAN
1240	BEGIN TRIP BACK IN W/ 4" BIT TO CLEAN OUT
	CASED HOLE ... FULL OF FINES & SHELL HASH @ DEPTH.
1300	WATER TRUCK FILL UP - STILL CLEANING HOLE
1350	BEGIN EXPERIMENTAL 2' CORE RUN USING ONLY
	VERY THIN QUIK-GEL 82-84' CORE RUN #8
1412	STOP 22 min / 2' 6" recovery (25%) med grey
	well cemented shelly biomicrite...
1430	OFF SITE.

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 2 WELL NO. CORE #2 DATE 10-2/89 MON.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1430	B.B. ON SITE AWAITING DRILLERS
1630	DRILLERS ON SITE
1700	OFF LOADING MATERIALS (AQUAGEL & POLYMER
	ADDITIVE) & GEAR
1730	SETTING UP FOR DRILLING & CORING
1800	REVIEW CUTTINGS & CORING PROGRESS w/ DRILLERS
	IN PREPARATION FOR FINAL LEG OF CORING
1900	OFF SITE.

SUMMARY OF WORK & MATERIALS

10/2 (MON) — 10/6/89 (FRIDAY)

STL APT 1

CORED FROM 84'-127' = 43' TOTAL

P/A HOLE @ COMPLETION OF CORING : 12 SACKS CLASS II CEMENT

(DRILLERS ALSO PURCHASED 2 - 5 gallon DRUMS OF EASY MUD POLYMER on 10/2)

ALSO SPLIT SPOONED 0-20' @ SPITERI SITE 10/6

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE # 2 DATE 10-3-89 TUES.

	TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	0730	MIXING MUD (AQUAGEL)
	0830	CIRCULATING AND CLEANING HOLE w/ 4" BIT
		@ ~82'. ADD EASY MUD POLYMER
	0845	MIXING MORE MUD – 4" CASING DROPS DOWN ~1 FT.
		WILL HAVE TO TRIP OUT AND ANCHOR (CHAIN OFF) 4"
		CASING BEFORE PROCEEDING.
	0915	HAULING UP ON CASING w/ CATHEAD & ROPE. WRAP IT
		w/ CHAIN FORMING A "COLLAR" ON TOP OF AUGERS.
		TRIPPING IN 3⅞" O.D. CORE BARREL.
#9	0928	START CORE RUN #9 (84'–89') w/ AQUAGEL & EASY MUD.
	0933	GET WHT. SHELL HASH IN RETURNS – SED² SOFT CORING FASTER @ END
	0936	STOP CORING ET = 8.5 min. / 5' CORE
		RECOVER 3' = (60%) MED GREY, SANDY, SHELL LIMESTONE –
		FM. FRIABLE & QUITE SOFT IN PLACES
	0955	TRIP BACK IN w/ BARREL
#10	1005	START CORE RUN # 10 89–98'
	1030	CORED 5' SO FAR IN 25 MINUTES – GOING FOR ANOTHER 4'
		IN SAME RUN. (1ST TWO FEET CORED FAIRLY QUICKLY; FEET
		3-5 TOOK ~20 MIN) FINE SAND & SHELL IN RETURNS
	1035	CONTINUING TO GET GOOD FLUID RETURNS. TAKING SOME WATER...
	1040	STOP CORING → TOTAL TIME: 35 MIN. FOR 9'
		3' RECOVERED (33%) MED GREY SANDY SHELLY LS AS
		ABOVE. WELL CEMENTED @ ~87' OTHERWISE FRIABLE – VERY SOFT.
	1100	ERNESTO (MECHANIC) OFF SITE TO FT. MEYERS TO GET
		ANOTHER CLUTCH ASSY FOR RIG POWER TRAIN. TRIP IN.
#11	1127	START CORE RUN # 11 @ 98'
	1150	STOP ROTATION 2' into CORE RUN – CIRCULATING THEN WILL
		TRIP OUT TO CHECK OUT WHY PROGRESS SO SLOW
	1200	TRIPPED OUT 2' in 23 MIN (100% RECOVERY)
		SANDY GREY LS & SAND...
#12	1240	START CORE # 12 @ 100'
	1252	CORED 1ST 5' – CONTINUING FOR ~4' MORE
	1300	STOP CORING –

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #2 DATE 10-3-89 TUES.

	TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
#12	1315	27" OF 9' RECOVERED : 25% RECOVERY (≈ 20 MIN.) ; A LOT
		OF FINE UNCONSOLIDATED SAND & SILT WASHED OUT
		OF CORE BARREL W/ FLUID AS WE RETRIEVED SAMPLE
		FOR THE CORE BOX...
	1330	CURRENTLY @ ~109' AND TRIPPING BARREL BACK INTO
		HOLE, TURNS OUT WE ONLY TAG BACK AT 103'
		LOST ~ 6' IN LAST CORE RUN
	1345	WASHING BARREL DOWN ; MIXING MORE AQUAGEL & EASY
		MUD.
#13	1415	START CORE RUN #13 @ 109' OLD FIG.
★	1424	STOP: 9 MIN / 2' CORE RUN 109-111 10" OF 2'
	WAS 40%	*75% RECOVERY. WELL CEMENTED GREY SHELLY LS. (SOLUTIONED)
	1510	AFTER CONDITIONING HOLE AND MIXING MORE
		AQUAGEL & POLYMER, START CORE RUN #14 @ 111'
#14	1515	STOP @ 116 5' CORED IN 5 MIN. PICKED UP
→		AN EXTRA FOOT FROM RUN #13 ... (100% recovery)
		WELL CEMENTED @ 111 GRADING IN GREY SANDY LS
#15	1550	START CORE RUN #15 @ 116 CORING RAPIDLY
	1554	THRU SOFT MATERIAL → STOP 4 MINUTES / 4'
		116-120' AS ABOVE WELL CEMENTED SANDY SHELLY LS
		→ SANDY SHELLY FRIABLE LS. & SAND. 92% recovery (44" of 48")
	1615	HAVE PUT CORE BARREL ON PIPE RACK FOR
		EXAMINATION & MAINTENANCE. TOP END PLUGGED → CLEARED
		CLEANED & GREASED.
	1640	TRIPPING IN TAGGED BACK AT 118' WASHING DOWN
		ANOTHER 2'.
#16	1705	START RUN #16 (1ST 3' CORE VERY FAST)
	1708	STOP RUN 5' / 3 min (green clay in returns) 120'-125'
		WE ARE INTO THE HAWTHORN – GOT 0% RETURN ON THIS
		RUN – WILL TRY ONCE MORE W/ REDUCED NO MUD PUMP PRESS.
	1730	PUNCHED DOWN ~ 3 FEET – 0% RETURNS AGAIN
	1800	NO COMBINATION OF TECHNIQUES WILL GET US FURTHER
		THAN 120' → CORE RECOVERY AVG FOR THE DAY 84-120=69.3%
	1830	PULLING 4" CASING. *CORED TO 127'
	1900	CLEAN UP

WELL DRILLERS

SOUTH FLORIDA WATER MANAGE[illegible]NT DISTRICT

PROJECT STL-APT 1 WELL NO. CORE #2 DATE 10/4/89 WED

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
730	TRIP OUT OF HOLE WITH 6 FLIGHTS OF 5'
	AUGERS
0900	TRIP INTO HOLE WITH 2" GALV. PIPE TO ~ 100'.
	DISPLACED DRILLING FLUID WITH 12 SACKS OF
	CLASS II CEMENT. 100% RETURNS.
1200	SITE CLEAN UP & LOAD VEHICLE(S) IN PREP.
	FOR MOBILIZATION AS MECHANIC WORKS ON
	CLUTCH.
1600	REPAIRS ON RIG MAY BE COMPLETED AT ANY
	TIME...
1830	WON'T BE MOBILIZING TODAY. CLEAN UP SITE
	& SECURE GEAR

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGE DISTRICT

(5)

PROJECT STL-APT 1 WELL NO. Core #2 DATE 10/5/89 Thurs.

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
730	DRILLERS FINISH ALL RIGGING DOWN
830-1500	CLUTCH FINALLY IN AFTER MUCH EFFORT.
	BEGIN MOBILIZATION.
1530	ON SITE @ SPITERI'S (STL-APT 2)
1600	SETTING UP RIG OVER MARKED STAKE
	AND RIGGING/UNLOADING GEAR.
1830	SECURE LOCATION FOR THE NIGHT

WELL DRILLER'S

SOUTH FLORIDA WATER MANAGE[illegible]T D.STRICT

(6)

SPITERI SITE

PROJECT STL - APT 2 WELL NO. CORE SITE 1 DATE 10/6/89

TIME	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
[illegible]	RIGGING UP FOR SPLIT SPOON SAMPLING.
1030	0-2' - 75% Recovery - Pale brn sand : stop to adjust rope
1100	2-4' → 100% " → med brn sand → dark brown
	clay plug @ 2'-2.25
1110	4-6' → 100% (clay @ top 4") dark brn sand → med brn sand.
1115	6-8' → 100% lt grey sand → dark brn. sand (organics)
1122	8-10' → 100% → dark brn sand.
1130	10-12' → 100% : dark brn to med. brn sand (wet)
1135	12-14 → 100% : dark - med brn sand (all wet)
1145	14-16 → 100% : (hard hitting) as above
1200	16-18 → 85% : (67 blow count) as above
1215	18-20 → 100% sand as above
1220	PULL OUT OF HOLE WITH SPLIT SPOON. HOLE IS SQUEEZING
	AND DRILLER WILL GO BACK IN WITH 4" BIT & CLEAN IT.
1225	MIXING MUD (AQUAGEL & EASY MUD POLYMER)
1250	CIRCULATING
1315	DRILLING DOWN TOWARD 20' ... CLEANING & CONDITIONING HOLE.
1330	CIRCULATING / COND @ 20'
1400	PREPARE TO RUN 20' OF 4" CASING TO KEEP HOLE OPEN
	OVER WEEKEND.
1430	20' CASING SET IN ... SHUTTING DOWN & CLEANING UP.

FORM RP-59
July 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. TW APT-1 (PW-1) DATE 12-6-88

TIME — 5 5/8" drag bit, bentonite mud w/ some polymers

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
0900	0'-3' sd. fine grained
	@ 4' dark brown, slightly consolidated (organic ~~layer~~ sdy, muddy layer.
0911	@ 5' clayey sand, brown – grey, started raining hard
	@ 10' clayey sand, lots of fines suspended in mud 5'-10' sample from desander
0917	@ 15', sandy grey clay
0922	KD @ 22' 20'-22' was mostly fine sand, poor samples due to suspension of sd. circulating till rain lets up.
0937	addind DP # 1, a 20' stabilizing rod w/ a 6" dia drag bit on the end. DS=47'
0940	drilling @ 22', fine sd.
0944	22'-28' was fine sd., bit washed down through this interval. no sample as sand passed through strainer and sieve
28' ↓ 42' good pz? 0947	@ 28' shell sand w/ clay.
	@ 37' sd, sandy clay, w/ small amount of shell
0950	@ 40', black shell w/ sand, sandstone and limestone, well worn shell and pebbles, beach deposit? Good production zone probably
0951	KD @ 42', circulating
0958	add 20' DP #2, DS=67'
1003	@ 44', Shell w/ sand and limestone
	44'-52' limestone % increases w/ depth
1011	@ 52' sd, clay, fine shell, some sand pockets
	@ 55' bit chatter, grey sandstone w/ sd clay and shell
1017	@ 57', % sandstone decreased, more white limestone, w/ shell and clay, bit chatter

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July 1979

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. TW APT-1 (PW-1) DATE 12-6-88

Time

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
	57' to 62' sandstone, Limestone clay w/ shell
1018	KD @ 62', sandstone layer @ 62'
1021	add 20' DP #3, DS=87'
	@ 64' white shell bed w/ sandstone + clay
1028	@ 65' sandsstone (Limestone?)
	@ 66' sandy Limestone w/ shell, hard drilling
1033	@ 67' Formation taking lots of mud Limestone/sandstone
1040	@ 69' fine cuttings, hd drilling bit chatter regain circulation, sandy Limestone
1046	Stop drilling @ 75' to mix mud, Formation still taking a little fluid
1103	Drilling @ 75' hard grey sandstone/limestone @ 79', shell w/ some sandstone/limestone easier drilling
1110	KD @ 82', shell + sandstone, good shell bed @ 82'
1116	Add 20' DP #4, DS=107'
1119	Drilling @ 82'
	82'-87' shell and Limestone
	87' silty Limestone easier drilling
1128	@ 90' Limestone and Large shell fragments
	90'-94' as above
1132	@ 94', soft clayey Limestone
	@ 95' hard limestone
	@ 96' Limestone, clay, shell
	96'-100' alternating beds of Limestone, sand clay shell w/ grey limestone
	100'-102' Lots of shell w/ Limestone, sand and trace of clay
1140	KD @ 102'
1144	Add 20' DP #5 DS = 147', mixing more mud

Fm took fluid very slowly

(3)

WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. PW-1 TW APT-1 DATE 12-6-88

TIME

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1203	drilling @ 102' Limestone and shell
	102'-105' as above
	105'-109' increase in shell %, shell & Lime-
	stone
	109'-111' clay stringers in Limestone
	111' formation is softer, Limestone is
	more friable
	@115' increase in clay content, soft
	Limestone
	115'-122' increase in grey clay % in Limestone
	w/ depth
	122'-125' clayey sandy grey & green
	limestone
	125'-130' Top of Hawthorn, green
	clayey sand & silt
	@ 127' ~~pebb~~ black pebble phosphate layer
	130'-142' green clayey sandy silt
1226	RD @ 142' TD.

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WELL DRILLER'S LOG

Pg 1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL 3612 WELL NO. APT-1 D DATE 12/20/88

TIME — 5 5/8" Tricone bit bentonite mud R=30'

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1034	@ 0' Fine sdnd
	@ 3' thin layer of brown, semi-consolidated sand
	3'-7' sand with a trace of clay
1040	@ 14' brown sand with some clay
	15'-20' sand No sample
1044	@ 20' sand with a trace of clay
1048	KD @ 22' sand. Add 20' DP#1 with
	stabilizers, D.S.=47'
1052	@ 23' brown sandy clay
	@ 25' grey shell and sand 50/50
1059	@ 28' more shell than sand. Formation taking
	a little mud
1102	@ 30' 28'-30' sand with small amount of
	shell
1104	@ 34' 30'-34' as above
	34'-35' as above
	35'-38' sand with a trace of shell } No
1109	@ 40' as above } Sample
1114	KD @ 42' grey shell + ss + limestone
	40'-42' sand with a trace of shell
	add 20' DP#2; DS=67'
1118	@ 42' shell + ss + limestone
1120	@ 44' shell, clay with sandstone and limestone
1122	@ ~~with~~ 45' white limestone with small amount shell
1126	@ 48' clay with limestone and lime mud
	45'-46' white limestone
	46'-48' clay and Limestone (green)
1128	@ 51' fine shell with limey clay
	48'-50' clay and limestone
	50'-52' fine shell
1130	@ 53' Limestone 52'-53' limestone
1136	@ 55' limestone but no bit chatter.
1139	@ 59' sandy greenish Limestone. bit chatter

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WELL DRILLER'S LOG

Pg 2

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL 3612 WELL NO. APT-1 D DATE 12/20/88

TIME 5 5/8" tricone rotary bit bentonite mud R=30'

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1142	KD @ 62'. hard Limestone and clay with clay lenses @ 62'. Adding Polymer to mud. Add 20' DP #3. DS = 87'
1155	@ 66' Limestone with shell and clay
	@ 67.5' Formation taking lots of fluid
~~1200~~	~~@ 70'~~ ~~Lime~~ No returns
1200	@ 70' Limestone recrystallized, grey
1206	@ 75' hard Limestone, ~~fo~~ calcite crystals and stringers of Micrite
1214	KD @ 82' shell from 80'-82'. Add 20' DP #4 DS = 107'
1237	@ 96' Limestone, hard, bit chatter
	92'-96' Limestone shell with some lime mud and clay
1244	KD @ 102' shell and Limestone
	96'-100' hard limestone
	101-102' shell and Limestone
	TD = 102'
	0'-92' 2" PVC CSG
	92'-102' 2" PVC screen .020 slot
	12 bags sand.

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July 1979

WELL DRILLER'S LOG

pg 1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. APT-1 D-2 DATE 12/14/68

TIME 5 5/8" Tricone bit, mud rotary, bentonite mud w/ some polymers

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER r=250'
1025	Drilling @ 1', fine sd.; goes through sieve
1021	@ 4', brown, semi-consolidated ~~sand~~ sand.
1030	@ 15' 5'-15' sandy clay
1031	brown sandy clay @ 17"
1034	KD @ 22'
	17'-19' brown sandy clay
	19'-22' clayey sand, fine; No sample, washes through screen
1040	add 20' DP#2, DP #2 has stabilizers (*)
	23'-25' brown clayey sand
	25'-29' sand
	29'-30' dark grey sand
	30'-35' sand with shell
	35'-37' sand, shell with trace of clay
1100	@ 42' KD 37'-42' sand; No sample
	add 20' DP#2, DS=67'
	@ 42' just starting to get grey shell
1108	@ 44'
	42'-44' grey shell with trace of limestone (this interval is thicker in PW-1 & D-1)
	@ 44'-46' white Limestone
	46'- Limestone with trace of clay
	@ 47' Clay with limestone, interbedded
	@ 48' Clay
	@ 49' sandy clay
	@ 50' sand, shell and clay
1119	@ 52' sand, shell, clay and Limestone
1123	52'-55' as above, hard layer @ 55'
1126	@ 57' 55'-57' clay with Limestone
	shell bed @ 57'.
	57'-60' clay with Limestone and shell
	60'-62' interbedded clay and limestone

(*) stabilizers promote sample contamination from upper clay layers as this clay sticks to the stabilizers until removed by ~~mate~~ abrasion from deeper samples rising up annulus. ∴ beware large anomalous

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WELL DRILLER'S LOG

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. APT-1, D-2 DATE 12/14/88

DEPTH	DESCRIPTION -- ROCK TYPE, COLOR, HARDNESS, OTHER
1130	KD @ 62', Add DP #3 (20'), DS=87'
	62'-63' as above
	63'-64' shell w/ limestone and clay
	64'-66' recrystalized limestone with shell and x-tal calcite
1143	· Formation taking fluid @ 66'
	66'-68' as above, formation taking fluid
	68'-74' ~~for~~ denser limestone, Formation taking a little fluid
1150	@ 74' ~~74'-77'~~
	74'-77' shell bed in limestone
	@ 77' shell - adding water to mud pit
	@ 80' Formation gets hard
1157	KD @ 82'
	80'-82', Layers of shell and Limestone
1200	@ 87'
	82'-85' shell and Limestone
	85'-88' Limestone
	88'-90' Limestone w/ clay + shell
1212	@ 92'
	@ 95' 90'-95' Limestone with shell, clay content increasing w/ depth : hard layer @ 95'
1218	@ 97' hard layer ; 95'-97' Limestone
	97'-100' hard limestone
	100'-102' Limestone and shell, soft
1220	KD @ 102' TD (actual depth 103')
	Completed well 0-93' 2" PVC csg
	93'-103' 2" PVC screen 0.020 slot
	13 bags of sand

FORM RP-59
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WELL DRILLER'S LOG

Pg 1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. APT-1 D-1 DATE 12/12/88

TIME 5 5/8" dia bit, mud rotary Bentonite w/ polymer mud, r=90'

DEPTH	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1108	drilling @ 0', very thick mud
	0'-3' fine sand goes through strainer + sieve. sample from mud pit tailings.
	@ 4' dk, slightly consolidated br organics + sand
1116	@ 4.5' greyish clay w/ sand
	@ 5', fine sand w/ trace of clay, No sample
	@ 5.5' sandy clay
	5.5'-10' sandy clay
1133	@ 10'
	@ 12', clay gets sandier and lighter in color.
1147	@ 14' sand No Sample
1203	@ 20' 15'-17' sandy clay
	17'-20' sand No Sample
1208	20'-21.5' clayey sand
	@ 21.5' sand
1209	KD @ 22'; add 20' DP #1, drill rod with stabilizers
1215	22'-26' grey sand No Sample
	@ 26' sand and shell
1219	@ 28' mostly sand w/ trace of shell; No Sample
	28'-30' sand w/ trace of clay; No Sample
	30'-32' shell and sand
	32'-35' sand w/ trace of shell; No Sample
1225	@ 35'
	35'-39' sand w/ trace of shell, No Sample
	shell bed @ 39'
1230	@ 40' sand with trace of shell and clay
	40'-41' sand No Sample
	@ 41' Shell, sandstone sandstone and Limestone black-grey

FORM RP-59
July 1979

WELL DRILLER'S LOG

Pg 2

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. APT-1 D-1 DATE 12/12/88

TIME

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1232	KD @ 42' shell and Limestone
1399	add 20': DP #2 : DS = 67'
1247	@ 44' white Limestone ; 42'-44' shell and
	limestone (black to grey)
	44'-46' white Limestone
	46'-50' clay (light green) and white limestone
	50'-55' grey limestone w/ light green clay
1317	KD @ 62' grey green clay and Limestone
1320	add 20' DP #3 : DS = 87'
	~~@ 62'~~ ; 62'-64' grey limestone + green clay
	64'-65' white shell and trace LS
	65'-66' grey-green Limestone
1330	Stop drilling @ 66' to thicken mud
	66'-68' rextalized Limestone w/ calcite
	@ 68' formation taking mud
	68'-70' granular limestone
1344	@ 70' bit chatter
	70'-75' granular and recrystallized Limestone
1350	@ 75' Limestone w/ shell
1353	@ 77' Limestone and shell
	77'-80' Limestone ~~and~~ w/ shell
	80'-81' sand No sample
	81'-82' shell and Limestone
1401	KD @ 82'
1405	Add 20' DP #4 : DS = 107'
	Mixing more mud
1410	Drilling @ 82'
	82'-85' Limestone, shell with lime mud
1415	85'-89' as above
	@ 89' Lots of lime mud and clay
	@ 95' clay and Limestone
	@ 97' Bit chatter
	97'-99' hard limestone

FORM RP-59
July 1979

WELL DRILLER'S LOG

Pg 3

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT STL WELL NO. APT-1 D-L DATE 12/12/88

TIME

~~DEPTH~~	DESCRIPTION – ROCK TYPE, COLOR, HARDNESS, OTHER
1432	@ 100' shell bed
	100'-102': green soft limestone
	add 20' DP #5, DS = 127'
	102'-105' green granular limestone and clay
	@ 105' shell in green limestone
	@ 107' as above – Stop drilling TD
1441	100'-TD looks low perm
	will try & screen 90-105'
	15' screen 2" .020 slot, PVC
	≈ 98.5' csg 2" PVC
	113.5
	- 6' csg above ground
	Total 107.5'
	-15.0
	92.5
	Screen 92.5' – 107.5'
	17 bags sand.

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: 111-17 WELL CONST. PERMIT NO.: _____

WELL NAME: STL APT-1 D-1 GEOPHY. LOG AVAIL. ____ Yes ✓ No

COUNTY St Lucie SFWMD GEOPHY.# _____

LOCATION: ____ 1/4 of NE 1/4 of SW 1/4 of Sec. 31 Twp. 35S Rge. 40E

Latitude 27° 23' 08" Longitude 80° 22' 32" (32 struck through)

Planar X _____ Planar Y _____

DRILLER: SFWMD DATE DRILLED 12/12/88

DEPTH (ft) 107.5 ELEVATION (NGVD) _____ ( ) TOPO ( ) SURVEY

NO. OF SAMPLES 37 NO. OF SPLITS _____ DATE SENT _____

SENT TO: ( ) BOG ( ) USGS _____ ( ) OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY ____ Yes ____ No
PUMP TEST ✓ Yes ____ No

COMPLETION INFO: ( ) PLUGGED ( ) TEST (X) MONITOR ( ) PRODUCTION

DRILLING METHOD: ( ) CABLE TOOL ( ) JET ( ) AUGER
(X) ROTARY: [X] Mud [ ] Air [ ] Reverse [ ] Dual Wall

CASING: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 0 - 92.5'

SCREEN: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 92.5-107.5

GEOLOGIST DESCRIPTION: ( ) NO (X) YES _____

COMMENTS: Monitor Well For APT-1
Missing samples 17'-20', 28'-30', 32'-39', 42'-46',

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: 111-18 WELL CONST. PERMIT NO.: _____

WELL NAME: STL APT-1 PW-2 GEOPHY. LOG AVAIL. ____ Yes X No

COUNTY St. Lucie SFWMD GEOPHY.# _____

LOCATION: ___1/4 of ___1/4 of ___1/4 of Sec. 31 Twp. 35S Rge. 40E

Latitude 27° 23' 08" Longitude 80° 22' ~~36~~ 32"

Planar X _____ Planar Y _____

DRILLER: SFWMD DATE DRILLED 12/8/88

DEPTH (ft) 51' ELEVATION (NGVD) _____ ( ) TOPO ( ) SURVEY

NO. OF SAMPLES 9 NO. OF SPLITS _____ DATE SENT _____

SENT TO: ( ) BOG ( ) USGS _____ ( ) OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY ____ Yes ____ No
PUMP TEST X Yes ____ No

COMPLETION INFO: ( ) PLUGGED (X) TEST ( ) MONITOR ( ) PRODUCTION

DRILLING METHOD: ( ) CABLE TOOL ( ) JET ( ) AUGER
(X) ROTARY: [X] Mud [ ] Air [ ] Reverse [ ] Dual Wall

CASING: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 6" INTERVAL: 0-31'

SCREEN: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 6" INTERVAL: 31'-51'

GEOLOGIST DESCRIPTION: ( ) NO (X) YES _____

COMMENTS: PW-2 For APT-1 Shallow Zone Test well Missing 0'-20'

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: 111-19

WELL CONST. PERMIT NO.: _____

WELL NAME: STL APT-1 O

GEOPHY. LOG AVAIL. _____ Yes _____ No

COUNTY: ST Lucie

SFWMD GEOPHY.#: _____

LOCATION: ___ 1/4 of NE 1/4 of SW 1/4 of Sec. 31 Twp. 35S Rge. 40E

Latitude: 27° 23' 08" Longitude: 80° 22' 32" (36)

Planar X: _____ Planar Y: _____

DRILLER: SFWMD DATE DRILLED: 12/20/88

DEPTH (ft): 102' ELEVATION (NGVD): _____ ( ) TOPO ( ) SURVEY

NO. OF SAMPLES: 35 NO. OF SPLITS: _____ DATE SENT: _____

SENT TO: ( ) BOG ( ) USGS _____ ( ) OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY _____ Yes _____ No
PUMP TEST ✓ Yes _____ No

COMPLETION INFO: ( ) PLUGGED ( ) TEST (✓) MONITOR ( ) PRODUCTION

DRILLING METHOD: ( ) CABLE TOOL ( ) JET ( ) AUGER
(X) ROTARY: (X) Mud [ ] Air [ ] Reverse [ ] Dual Wall

CASING: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 0 - 92'

SCREEN: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 92' - 102"

GEOLOGIST DESCRIPTION: ( ) NO (X) YES _____

COMMENTS: Monitor Well For APT-1

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: LL-20 WELL CONST. PERMIT NO.: _____

WELL NAME: STL APT-1 D-2 GEOPHY. LOG AVAIL. ____ Yes X No

COUNTY St Lucie SFWMD GEOPHY.# _____

LOCATION: ___ 1/4 of NE 1/4 of SW 1/4 of Sec. 31 Twp. 35 S Rge. 40 E

Latitude 27° 23' 07" Longitude 80° 22' 33 36"

Planar X _____ Planar Y _____

DRILLER: SFWMD DATE DRILLED 12/14/88

DEPTH (ft) 103' ELEVATION (NGVD) _____ ( ) TOPO ( ) SURVEY

NO. OF SAMPLES 31 NO. OF SPLITS _____ DATE SENT _____

SENT TO: ( ) BOG ( ) USGS _____ ( ) OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY ____ Yes ____ No
PUMP TEST ✓ Yes ____ No

COMPLETION INFO: ( ) PLUGGED ( ) TEST (✓) MONITOR ( ) PRODUCTION

DRILLING METHOD: ( ) CABLE TOOL ( ) JET ( ) AUGER
(X) ROTARY: [X] Mud [ ] Air [ ] Reverse [ ] Dual Wall

CASING: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 0-93'

SCREEN: TYPE: (X) PVC ( ) GALV. ( ) STEEL
DIAMETER: 2" INTERVAL: 93'-103'

GEOLOGIST DESCRIPTION: (X) NO ( ) YES _____

COMMENTS: Monitor Well for APT-1
Missing 37'-42'

Coastline Distributing
could not Find

Page Concrete Corp

GP 85-282-W

B.K.P.W Partnership

GP 85-260 W

3021 004PL

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

Southern Eagle Dist. | 5300 Glades Cut-off Rd. | Ft. Pierce
Owner | Address | City | State | Zip

Port St. Lucie Water | 2031 | 3/15/88 | 65 | 75
Contractor's Signature | License No. | Completion Date | Casing Depth | Total Depth | Well #

Ron | 41019
Driller's Name | Registration No.

Ronnie

TYPE OF WORK: Construct (x) Repair ( ) Abandon ( )
WELL USE: Domestic Well (x) Public ( ) Monitor ( ) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD ( ) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL 10 Ft. below top of casing
PUMPING WATER LEVEL 8 Ft. after 1 Hrs. at 35 GPM
PUMP SIZE 3 H.P. CAPACITY 100 GPM
PUMP TYPE cen INTAKE DEPTH 20
From top of ground

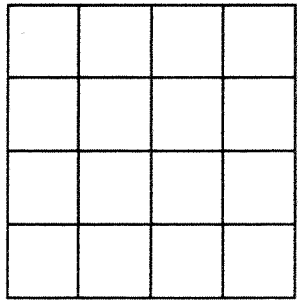
LOCATION

Located Near Midway

County St. Lucie

31 | 35S | 40E
¼ ¼ Section | Township | Range

Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or as formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
2"	2"	75	0	20	Brown Sand
60'			20	40	Sand & clay
			40	60	shell & sand
			60	75	shell
Number of bags					
8½					

Casing: Black Steel ( ) Galv. ( ) PVC (x) Fiberglass ( )
Screen: Type PVC Slot size 010
Screened from 65 (ft.) to 75 (ft.)
Type of grout with % additives neat
Water: Clear (x) Colored ( ) Sulphur ( ) Salty ( ) Iron ( ) ½
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

Southern Eagle Dist. (Owner) 5300 Glades Cut-off Rd. (Address) Ft. Pierce (City) (State) (Zip)

Port St. Lucie Water (Contractor's Signature) 2031 (License No.) 3/15/88 (Completion Date) 65 (Casing Depth) 75 (Total Depth) (Well #)

Ron (Driller's Name) 41019 (Registration No.)

Ronnie

TYPE OF WORK: Construct (x) Repair ( ) Abandon ( )
WELL USE: Domestic Well (x) Public ( ) Monitor ( ) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD ( ) or Air (x), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL 10 Ft. below top of casing
PUMPING WATER LEVEL 8 Ft. after 1 Hrs. at 35 GPM
PUMP SIZE 3 H.P. CAPACITY 100 GPM
PUMP TYPE cen INTAKE DEPTH 20 (From top of ground)

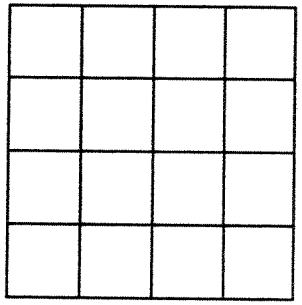
LOCATION

ocated Near Midway

County St. Lucie

31 (Section) 35S (Township) 40E (Range) (¼ ¼)

Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes ( ) No

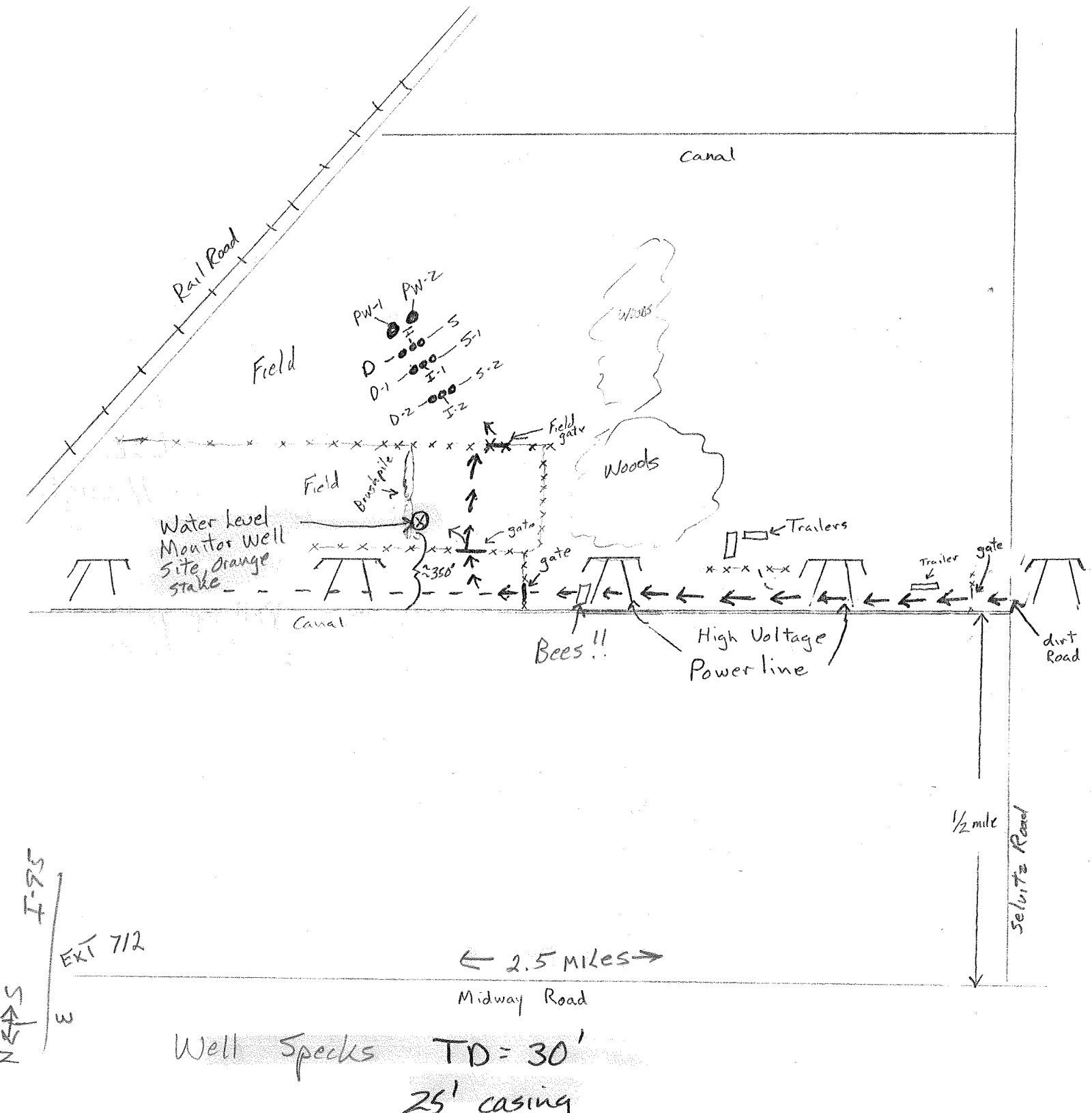
Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
2"	2" 75	0	20	Brown Sand
60'		20	40	Sand & clay
		40	60	shell & sand
		60	75	shell
Number of bags				
8½				

Casing: Black Steel ( ) Galv. ( ) PVC (x) Fiberglass ( )
Screen: Type PVC Slot size 010
Screened from 65 (ft.) to 75 (ft.)
Type of grout with % additives neat
Water: Clear (x) Colored ( ) Sulphur ( ) Salty ( ) Iron (2½
Conductivity _____ Chlorides _____ mg/l

SITE MAP STLAPT-1

Instructions on back



Well Specks TD = 30'

25' casing

5' screen

1) Take I-95 North to Midway Rd (712) Exit.

2) Go East on Midway Rd ≈ 2.5 miles to Selvitz Road.

3) Go North (left) on Selvitz Rd ≈ ½ mile to where the large Powerlines cross East + West.

4) Turn West (left) on the dirt road on the north side of the canal and follow the powerlines West.

5) There is a gate ≈ 50' off of Selvitz Road which has a snap chain on it. Leave open gates open and close gates closed once you are through them.

6) Proceed West past the trailers. Roll up your windows before you get to the behives!!

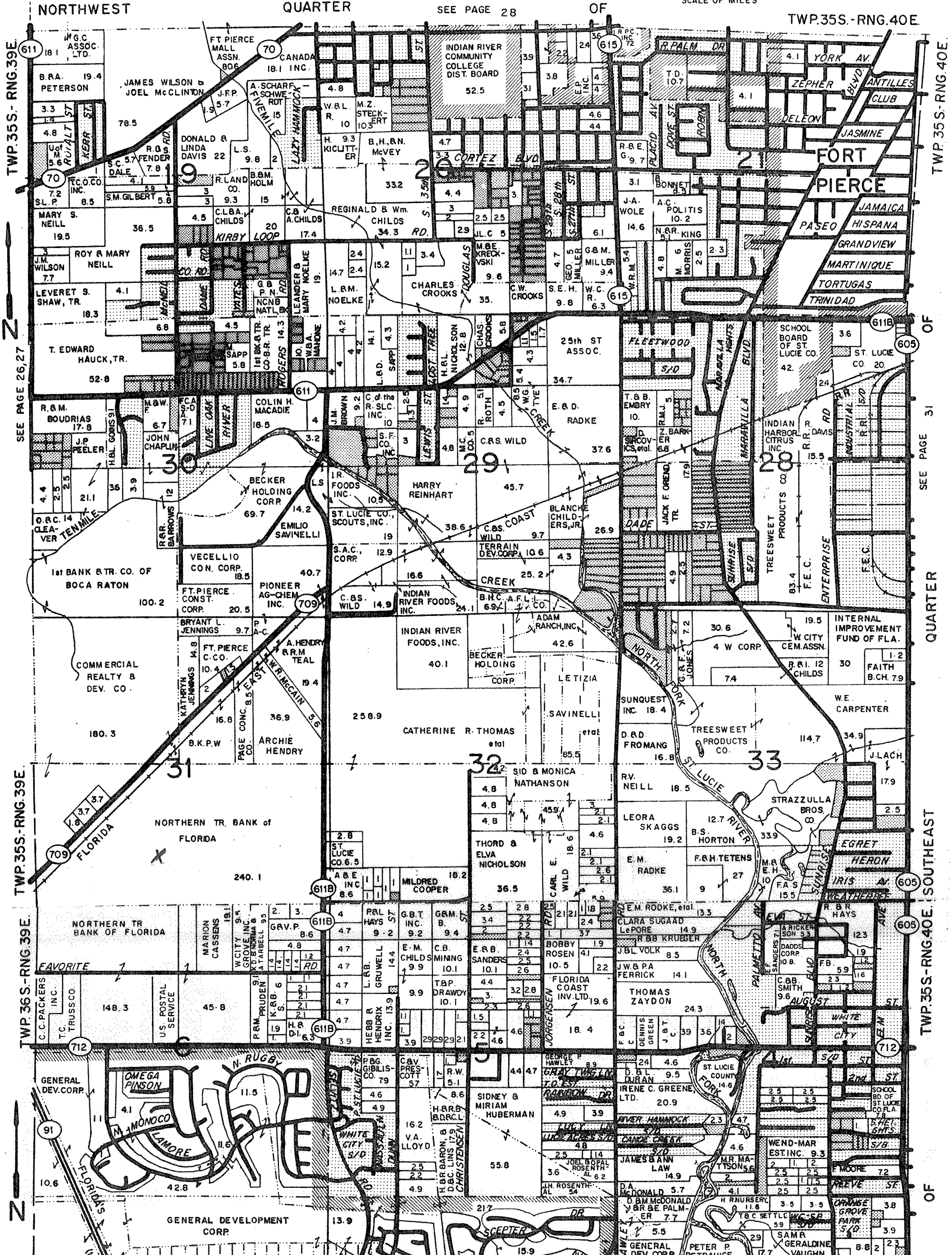
7) Cross through the second gate then turn North (right) through the third gate into the field.

8) The Monitor well stake is about 200' to the West (left) near the brushpile.

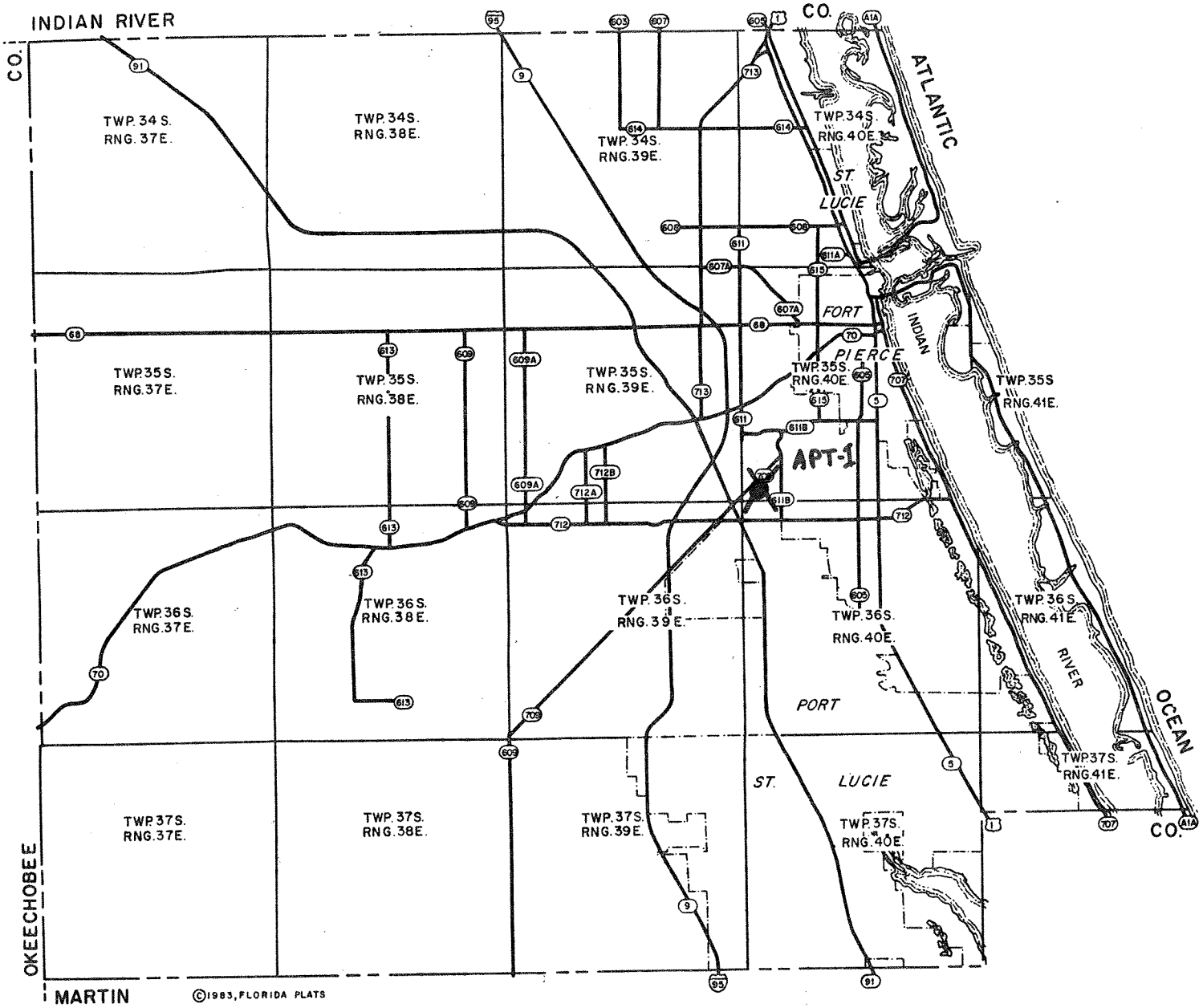
9) You can move the well a very few feet away from the brushpile if you need room.

TWP. 35S. - RNG. 40E.
SOUTHWEST QUARTER

0 1/2 1
SCALE OF MILES



1988
ST. LUCIE CO. FLORIDA



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NAME _____

ADDRESS _____

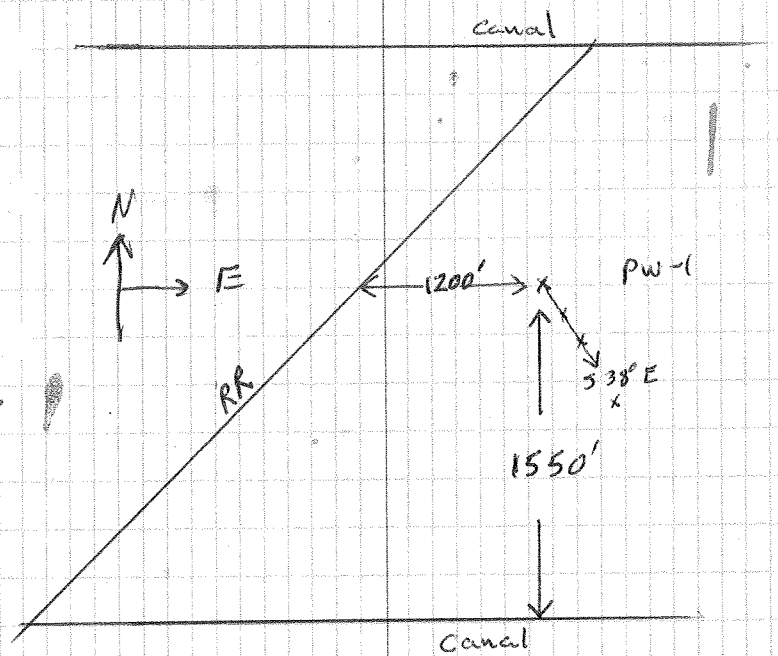
CITY _____ STATE _____ ZIP _____

COUNTY _____ TWP. & RNG. _____

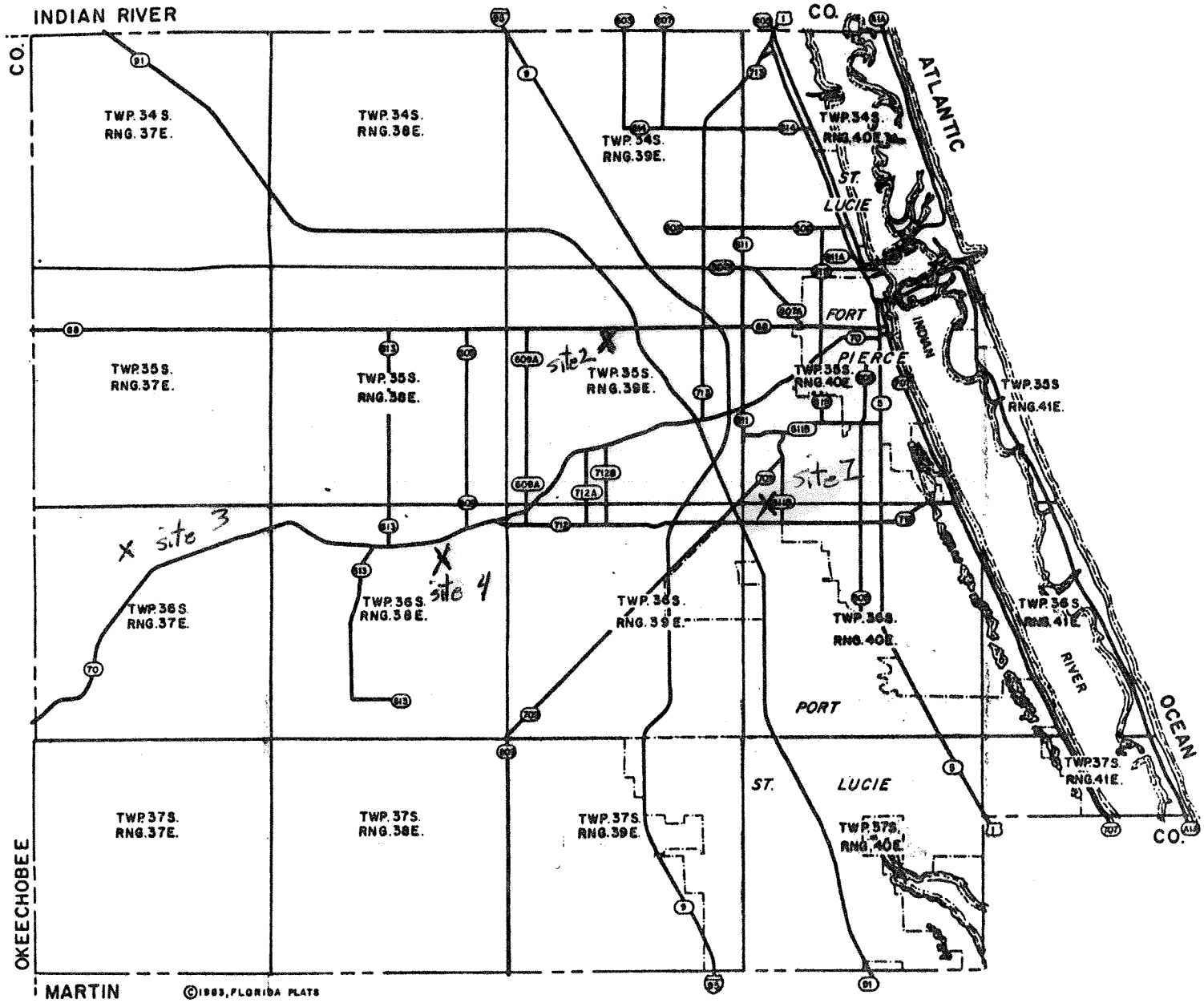
SECTION _____ AMOUNT OF ACREAGE _____

We convey sincere thanks to your county officials for their participation. Your county plat directory has been made possible with their cooperation and support.

STL APT - 1



1988
ST. LUCIE CO. FLORIDA



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ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTY _____ TWP. & RNG. _____

SECTION _____ AMOUNT OF ACREAGE _____

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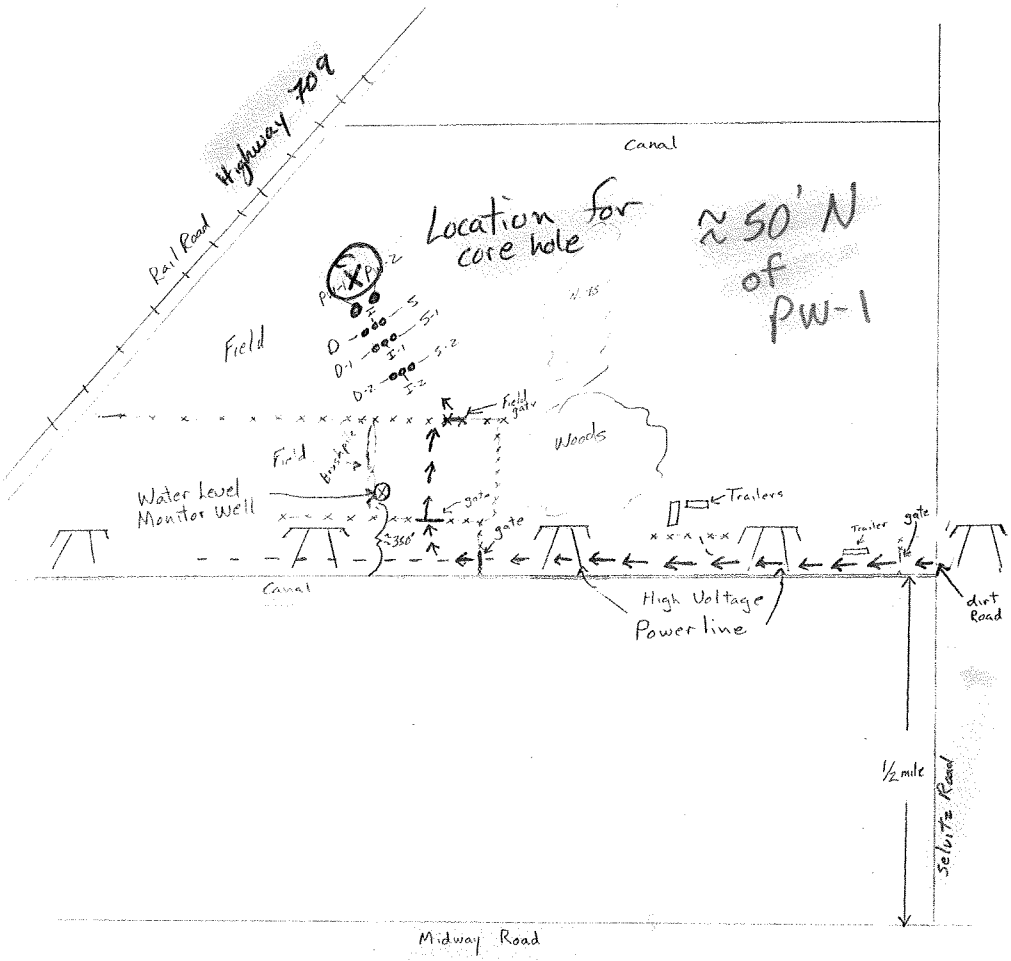
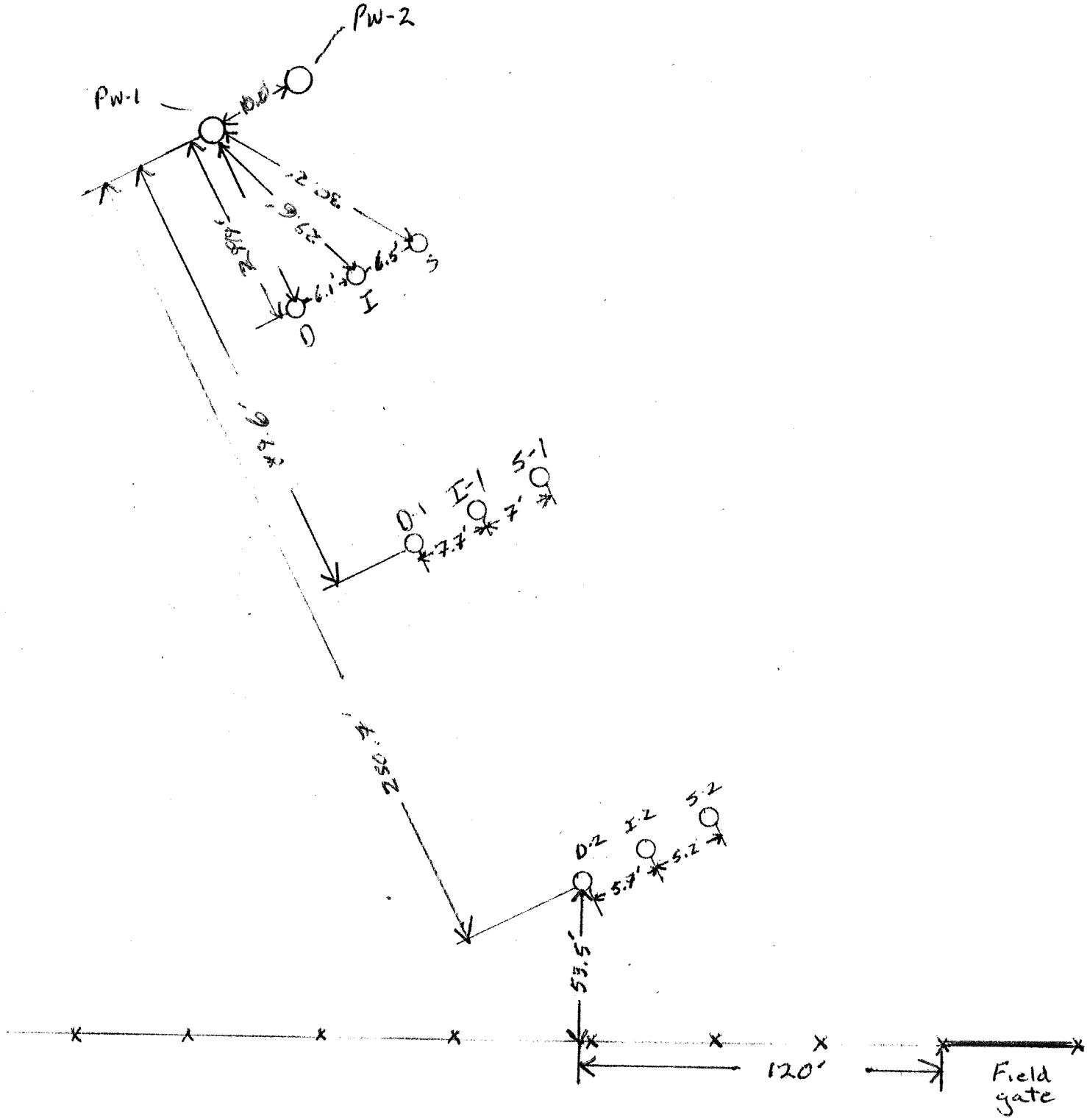
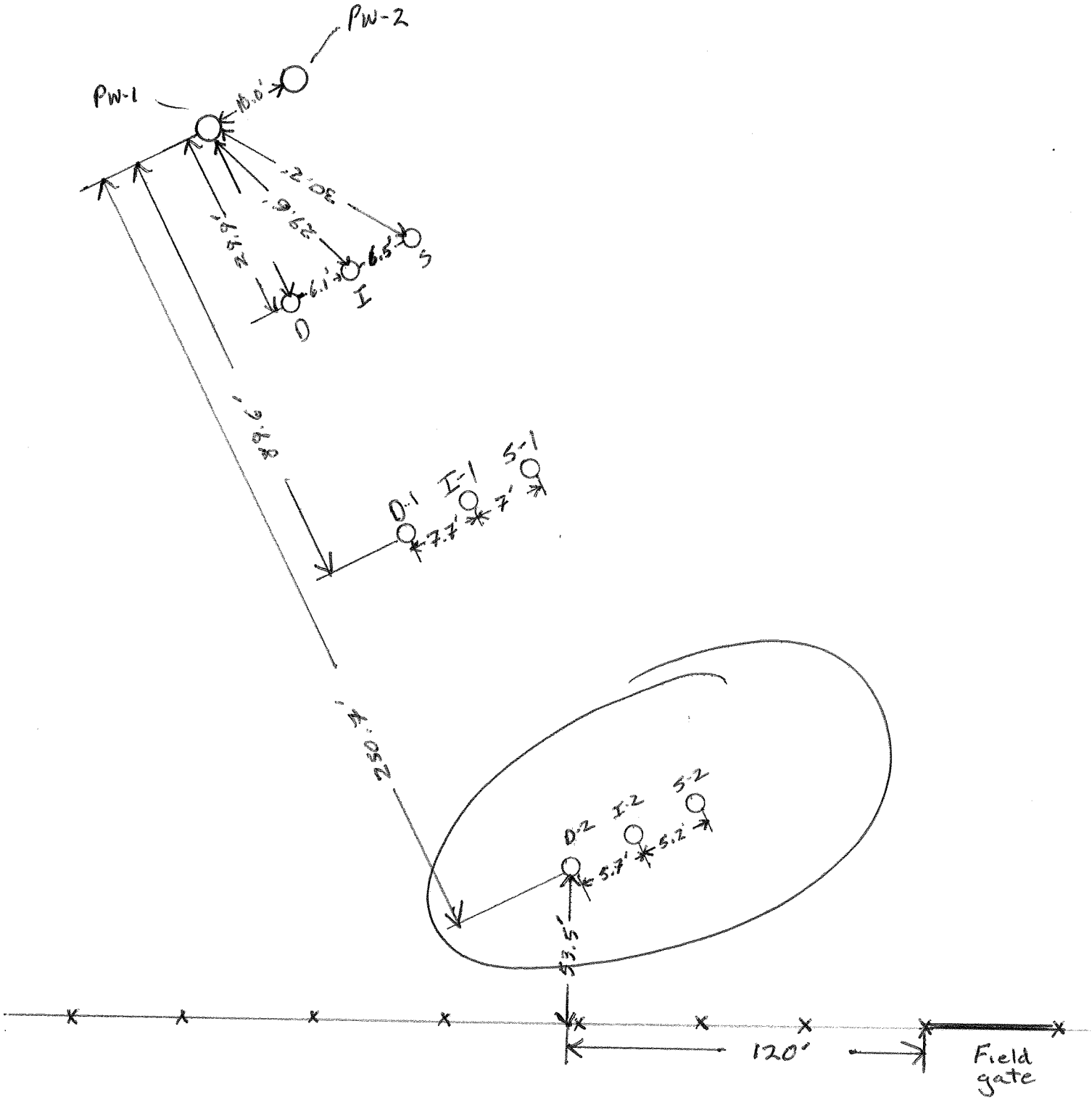
SITE MAP STLAPT-1



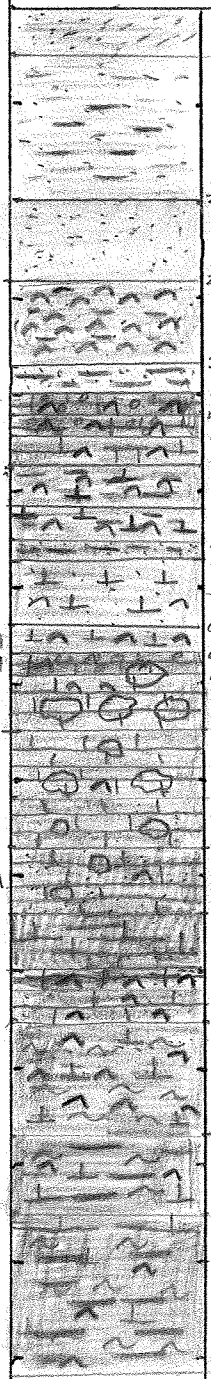
Attachment 2



Attachment 3

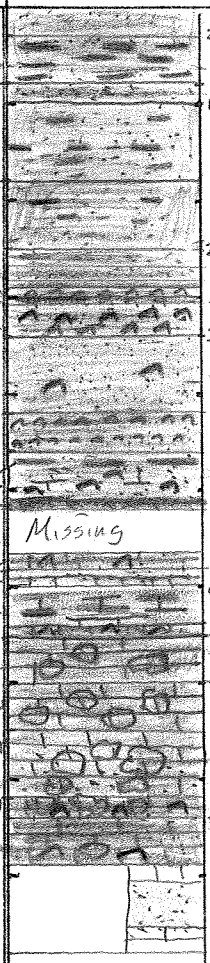

PW-2
PW-1
16.0'
30.2'
29.6'
29.5'
6.5'
6.1'
S
I
O
89.6'
O-1
I-1
S-1
7.7'
7'
250.4'
O-2
I-2
S-2
5.7'
5.2'
53.5'
120'
Field gate

Well Name: PW1
Location: Lat/Long
X/Y
GL: TD:
Owner:



L
Black silt + org mud w/ sd
4'
L-VL
Brown clayey sd + silt w/ some cohesive layers
20
L
Sample missing. drillers log says fine sd
28
M
Bluish shell w/ clayey sd
37
L
40
M-H
Fine clayey sd
42
L-M
LS + ss w/ shell + worn pebbles
44
a.a. w/ small amt sdy clay
L
47
Soft chalky LS w/ mud, shell + pebbles
L-VL
52
Clayey lime mud + broken shell
L
Lime mud w/ small amt clay,
55
L
57
Slightly soln calc ss, limey clay, LS + shell
L
Semi consol lime mud, calc LS to shell
64
L-M
67
Lime mud + soln LS w/ shell + ss pebbles
M-H
69
Soln sdy shelly LS
H
75
Soln., shelly, xtaline LS
M
79
Mildly soln grey granular LS
82
Soln xtaline LS w/ shells + pebbles
M
Mildly soln xtaline sdy LS
87
+ ss, shell, small amt lime mud
L-M
Massive calc ss, small amt soln., lime mud some shell
94
L
Calc. ss, sdy clayey LS
100
L-M
Lime mud
102
Sandy LS w/ shell + clayey lime mud
L
105
Sandy LS, massive; coarse shell + mud
L
Lime mud, coarse shell; sdy LS at top, small amt shell throughout
117
Phosphate increases w/ depth
L-VL
Limey silt + clay, phosphatic small amt LS + shell
125
Green phosphatic clayey silt w/ LS pieces @ top + small amt shell
UL
142

Well Name: CH-1
Location: Lat/ Long
X/Y
GL: TD:
Owner:



L
2.7
Sand, black silt + mud
L-VL
8'
Silt + sd to clayey silt + sd org + fe stain
L
10
brown silt + sd, org + fe stain
L-VL
brown to grey silt + sd w/ clay small clay lenses throughout
18
L
Brown silt, mud, sand tr clay + Fe stain
25
L-VL
27
L
28
L-VL
L
L-M
31
L-M
33.6
Silty sd w/ blue shell hash
L-VL
Very fine sd w/ silt + scattered shell slightly phosphatic w/ shell beds @ 42 + 44'
42
44
CORE #1 20% Brown clay + fn sd grading into limey silt + shell, soln LS @ base
UL
L
M-H
52'
Missing
56'
#1, 2, 20% Sdy LS containing whole shell
58
L-M
60
#2, 2, 75% Fine brown sd w/ LS
L
L-VL
#3, 2, 60% Lime mud + clay w/ micrite stringers
65
dens fg LS stringers bottom, Bottom is limey sd
H-VH
shell + sdy LS
70
#4, 2, 65%, Highly soln sdy LS
H-VH
#5, 2, 60% as above
75
H-VH
#6, 2, 45% as above w/ highly sdy fractured pieces near bottom
82
84
#8, 2, 25% Sandy shelly LS very soln.
89
#9, 2 60%
98

@B 4/3/90

ST , APT-1, PW-1

mud rotary. missing samples 20'-28'

L	0-4'	Sample missing (not taken). Notes from field say fine sand.
L	4-5	Black silt/mud (organic) and sand.
L-VL	5-6	Brown mud, sand, small amt. clay. Darker organic streaks occur in lumpy sample.
L-VL	6-17	Brown clayey sand + silt, w/ cohesive lumps containing organics
L-VL	17-20	As above, w/ more cohesive lumps. Color can be id'ed at this interval as coming from Fe.
	20-28	MISSING
L (M)	28-37	Bluish shell (80%) w/ clayey sand (which is Fe stained)
L	37-40	Fine clayey sand + small shell (~35%)
M-H	40-42	Solution LS + calcareous SS w/ shell + worn pebbles. Entire sample is blue
L-M	42-44	As above, w/ small amt sandy clay + soft white LS pieces (bryozoan/coral pieces?)
L	44-47	Soft, chalky LS, lime mud, large shell, + blue shell/beach pebble/SS (as in 40-44 interval)
L-VL	47-52	Clayey lime mud, broken shell
L-M*	52-55	Lime mud w/ small amt. clay, solutioned granular LS + poorly sorted shell pieces
L	55-57	Slightly solutioned calcareous SS, limey clay, white, chalky LS, small amt. shell
L	57-64	Semi consolidated lime mud, massive calcareous SS (or sandy LS?), trace shell
L-M	64-66	Lime mud/silt, shell (bleached) (50%), massive calcareous SS
L-M	66-67	Solutioned sandy LS, Lime mud, small amt shell + SS pebble (one)

M-H	67-69	Solutioned, sandy shelly LS w/ some xtalline faces, small amt lime mud. Thin stringer(s) of very fine grained → micritic LS
H-	69-75	Solutioned, shelly, crystalline LS
M	75-79	mildly solutioned gray granular LS w/ much less crystallinity than above. Contains stringers of micrite
H	79-82	Solutioned, crystalline shelly LS w/ lots of coarse shell + a few eroded pebbles
M	82-87	mildly solutioned crystalline sandy LS, calcareous SS, coarse shell, small amt. lime mud.
L-M	87-90	massive calcareous SS (or sandy LS) w/ some solutioned portions, lime mud, small amt shell
L-M	90-94	As above, less solutioning, only a trace of shell
L	94-100	Calcareous SS; sandy clayey LS, lime mud (increasing w/ depth) + small amt shell
L-M	100-102	Sandy LS, bleached + natural shell (~40%) + clayey lime mud (semi consol)
L	102-105	Sandy LS (or calcareous SS), fairly massive, w/ coarse shell, lime mud, + clay (small amt)
L	105-109	Semiconsol. lime mud, soft LS, coarse shell
L	109-117	Lime mud/silt, increasing in amt + in phosphate content w/ depth. Sandy LS at top + small amt shell throughout
L-VL	117-125	Limey silt + clay, phosphatic. Small amt. LS + shell
VL	125-142	Green phosphatic clayey silt, w/ LS pieces at top + small amt shell. Darker w/ depth.

ST LUC Core # 1 (SLC-1)

split spooned to 46'
cored (2 different sites, 50' N)

L	0 - .5 Sand and black silt/mud w/ organic mat'l, roots
L	.5 - 1 As above, more sand, less silt
L	1 - 2.7 Poorly sorted sand, small amt. black silt
L-VL	2.7 - 3.2 Very black silt/mud + sand (~50%). Fe stained, but difficult to see due to blackness of mud
L-VL	3.2 - 4 Clayey silt + sand, Fe stained. Roots + black organic streaks present in clumped sample.
L-VL	4 - 5.2 Silt + sand (50/50) w/ trace clay. Iron & black organic mat'l occurring in streaks.
L-VL	5.2 - 5.8 Fe stained silt & sand w/ small amt. organic mat'l. Trace clay
L	5.8 - 6 Sand & silt, minor Fe staining
X	6 - 7 Missing. Field notes say this sample was fill
L-VL	7 - 8 Mud, silt, + sand w/ small amt clay. Fe stained,
L	8 - 9 DK brown silt & sand (50/50). Fe stained.
L	9 - 10 Lt. brown silt + fine - med sand. Some organic streaks occur. Small amt. iron staining
L-VL	10 - 14 Brown/gray silt + sand. Large amts of Fe staining in streaks. Small amt clay present in lenses throughout, more in 13' - 14' interval
L-VL	14 - 17 Brown silt + sand, heavily Fe-stained, small amt clay
L-VL	17 - 18 Grayish silt + sand streaked & spotted w/ Fe. Some clay.
L	18 - 21.5 Gray silt + poorly sorted sand, trace clay. Small amt of Fe-staining
L	21.5 - 25 Brown silt, mud, + sand. Fe stained, trace clay
L - VL	25 - 26 Brown silt, mud + sand, trace Fe + clay. Some darker organic (?) mottling.

L 26-27 As above, lighter color

L 27-27.9 Very dark silt, mud, + sand. Lots of organics; very cohesive, but doesn't feel "clayey" when wet.

L 27.9-28 Black mud & silt w/ sand. Highly organic

L-VL 28-29 Gray silt, Fe stained, w/ fine sand. Black organic lumps present

L-M 29-30 Gray clayey sand w/ shell hash. Amt + size of shell pieces increases w/ depth

L 30-31 Calcareous silt & fine sand, coarse shell. Found one bit of calcareous ss

L-M 31-33.6 Silty sand w/ blue shell hash. Field notes indicate horizontal shell layering

L-VL 33.6-38.8 Very fine sand w/ small amt silt + small shell. May have small amt phosphate.

L-VL 38.8-39.3 As above, w/ a bit more coarse shell

L-VL 39.3-46 Fine to v. fine silty gray sand, phosphatic (slightly) Coarse shell @ ~ 42' + 44'

1st Cores

Core #1

VL → M-H 46-52' 20% rec. Brown (VY) clay + fine sand grading into limey silt + shell. (L) Dark, solution LS at bottom (M-H)

Core #2

52-58' 0% rec.

Core #3

M 58-64' 25% rec. Dense, lt gray micrite interbedded w/ darker, granular solutioned LS. Some sections of weakly consol lime mud.

SL-1 (continued) 1st Cores

Core #4

H-VH 64-68.5 50% rec. Highly solutioned granular gray LS containing rextallized shell

Core #5

H 68-75' 29% rec. Solutioned, grainy LS w/ crystallized shell. Few stringers of fined grained, less solutioned LS

Core #6

75-84' 0%

Core #7

M 84-90 25% Fine grained gray, shelly LS. Sand incorporated in LS, particularly in shelly sections. Appears somewhat solutioned but this is obscured by chalky stuff.

Core #8

L 91-96 3% recov. fine grained, shelly LS

L-M 96-105 Core #9 10% Dense Sandy LS w/ shell & LS Intraclasts. Shelly portions solutioned, but denser, non shelly parts are not.

L→H→L 105-115 Core #10 20% Top is dense, sandy (L) shelly LS grading down into solutioned moldic sandy LS (H) w/ very sandy LS (or fine cemented sand) at bottom (L)

L 115-123 Core #11 40% Clayey, calcareous Sand & Shell. A few more coarse shells at bottom.

2nd Cores

L-M 56-58' Core #1. 10%. Sandy LS containing whole shell

L 58-60 Core #2. 75% Fine brown sand w/ stringers of hard black LS.

L-VL 60-65 Core #3 60% Lime mud & clay w/ micrite stringers at top & dense fine grained gray LS lower. Bottom 6" is limey sand, shell & hard, sandy LS

H-VH	65-69.75' Core #4 65% Highly solutioned, sandy limestone, more crystalline towards bottom
H-VH	69.75 - 74.75 Core #5 60% Solutioned, crystalline sandy limestone & sand.
H-VH	75 - 82'. Core #6. 43%. Sandy solutioned, crystalline limestone. Top of core is small, pebbly pieces - larger pieces towards bottom
H-VH	82-84' Core #8. 25%. Sandy shelly LS, very solutined. ↑ misnumbered in field notes.
M	84 -89 Core #9 60%. Soft, sandy LS at top alt w/ harder LS. Sandy, shelly LS towards bottom, w/ some solutioning + some unconsolidated parts
H→L-M→L	89-98 Core #10 33% Top of core - solutioned, sandy LS w/ some large xtallized shell pieces. (H) Middle of core - medium gr. sand + shell w/ stringers of LS. (L-M) Bottom of core - fine gray sand w/ stringers of fine grained limestone (L)
L-M	98-100 Core #11 100%. Med sand + shell w/ dense sandy LS at bottom.
L	100-109 Core #12 25% Dense, sandy massive LS at top w/ coarse loose shell. Grades down into sandy shelly LS interbedded with sand + shell.
H→L	109-110 Core #14 75% Top is highly solutioned sandy LS w/ moldic porosity (m)→(H). Grades into sandy shelly LS w/ some interbedded sand. (L)

* Note - Cores are labeled as they appear in the core boxes.

SLC-1 (Continued) 2nd Cores

L-M* cat contacts 110-116' 100% Core #14 Interbedded sandy LS + sand w/ lime mud (consol + unconsol. sections appear to have same composition)

L-M* 116-120 Core #15 92% Interbedded Sandy limestone and sand. Some coarse shell in both consol. + unconsol. sections. (Permeability may be higher in LS w/ large shell)

120-125' Core #16 0%.

Description: C Bevier 4-2-90

WELL COMPLETION REPORT FORM 0124 Rev. 4/85 **WELL PERMIT NO.** _____

Owner	Address	City	State	Zip
SFWMD	P.O. Box 24680	West Palm Beach	FL	33416

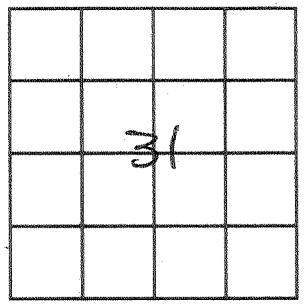
Contractor's Name	License No.	Completion Date	Casing Depth	Total Depth	Well #
Tony Lubrano		12/15/88	34'	45'	S-2

Driller's Name _____ Registration No. _____

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (X) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Rd & Turnpike
County St Lucie

NW ¼ SW ¼ Section 31 Township 35S Range 40E
27° 23' 06" 80° 22' 35" Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes (X) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
	0				
	2"	Dia			
	PVC	Csg			
		34'			
	34'				
	2"	Dia			
	PVC	Scr			
		44'			
Number of bags					

Casing: Black Steel ( ) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type PVC Slot size 0.020
Screened from 34' (ft.) to 44' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT FORM 0124 Rev. 4/85 **WELL PERMIT NO.** _____

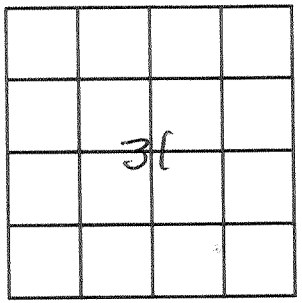
SFWMD — Owner
P.O. Box 24680 — Address
West Palm Beach — City
FL — State
33416 — Zip
[redacted] I-2 — Well #

Contractor's Name — License No. — Completion Date: 12/15/88 — Casing Depth: 0'-64' — Total Depth: 75'

Tony Labrano — Driller's Name — Registration No.

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (X) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Rd and Turnpike
County St Lucie
NW SW 31 35S 40E
¼ ¼ Section Township Range
27° 23' 06" 80° 22' 35"
Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes (X) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0			
	2" Dia			
	PVC Csg			
	64'			
	2" dia			
	PVC Scr			
	74'			
Number of bags				

Casing: Black Steel ( ) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type PVC Slot size 0.020"
Screened from 64' (ft.) to 74' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT FORM 0124 Rev. 4/85 **WELL PERMIT NO.** _____

SFWMD — P.O. Box 24680 — West Palm Beach — FL — 33641
Owner — Address — City — State — Zip

12/13/89 — 0-64.1' — 75' STL APP-1 (I-1)
Completion Date — Casing Depth — Total Depth — Well #

ANTHONY LUBRANO
Driller's Name — Registration No.

TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (✓) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (✓) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Rd + FL Turnpike
County St Lucie Co
NE SW 31 35S 40E
¼ ¼ Section Township Range
Latitude-Longitude

LOCATE IN SECTION

Cuttings sent to District? ( ) Yes (X) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
	0				
	2"	Dia			
	PVC	Csg			
		~~74.1'~~ 64.1'			
	64.1'				
	2"	Dia			
	PVC	Scr			
		74.1'			
Number of bags					

Casing: Black Steel ( ) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type 2" PVC Slot size .020
Screened from _____ (ft.) to _____ (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

SFWMD — Owner
P.O. Box 24680 — Address
West Palm Beach — City
FL — State
33416 — Zip

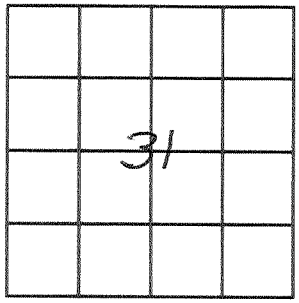
Contractor's Name — License No. — Completion Date — Casing Depth — Total Depth — Well #
12/14/88 — 0'-9[illegible] Ft — 103' — D-2

Driller's Name: Tony Lubrano — Registration No.

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (X) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Road and Turnpike
County St Lucie

NE SW 31 35S 40E
¼ ¼ Section Township Range
27° 23' 06" 80° 22' 35"
Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? (X) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0			
	2" Dia			
	PVC Sch			
	40 [illegible]			
	[illegible]			
	2" Dia			
	PVC Scr			
	10'			
Number of bags	Sd 13 bags			

Casing: Black Steel ( ) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type PVC Slot size 0.020"
Screened from 93' (ft.) to 103' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

SFWMD — Owner
P.O. Box 24680 — Address
West Palm Beach — City
FL — State
32416 — Zip

Contractor's Signature — License No. — 12/8/88 Completion Date — 50' Casing Depth — 50' Total Depth — STL APT-1 PW2 Well #

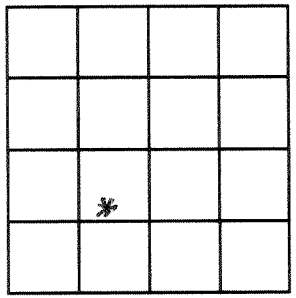
Tony Lubrano — Driller's Name — Registration No.

TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor ( ) Test (✓
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (✓) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Rd & Turnpike
County St Lucie Co

NE ¼ SW ¼ Section 31 Township 35S Range 40E

Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? (✓) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0			
	6" dia PVC Csg 30'			
	30' 6" Dia PVC Screen 50'			
Number of bags				

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type PVC 6" Slot size _____
Screened from 30' (ft.) to 50' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT FORM 0124 Rev. 4/85 **WELL PERMIT NO.** _____

SFWMD	P.O. Box 24680	West Palm Beach	FL	32641
Owner	Address	City	State	Zip

		12/7/88	58.5'	142'	STL APT-1 PW-1
Contractor's Signature	License No.	Completion Date	Casing Depth	Total Depth	Well #

Tony Lubrano
Driller's Name Registration No.

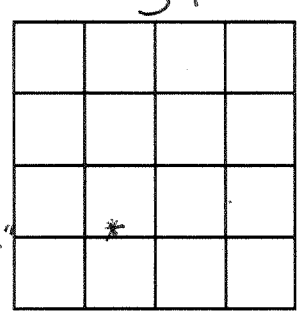
TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor ( ) Test (✓)
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (✓) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL 10.31 Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway road and Turnpike
County St Lucie

NE SW 31 35S 40E
¼ ¼ Section Township Range

27° 23' 08" 80° 22' 36" (32")
Latitude-Longitude

31



LOCATE IN SECTION

Cuttings sent to District? (✓) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
	0			
	6" dia			
	PVC Csg			
	58.5			
	58.5			
	6" dia			
	PVC			
	Screen			
	108.5			
Number of bags	2" dia			
	Pilot			
	TD 142'			

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type PVC Slot size _____
Screened from 58.5 (ft.) to 108.5 (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

SFWMD — Owner
P.O. Box 24680 — Address
W.P.B. — City
FL — State
33416 — Zip

3/29/89 — Completion Date
25' — Casing Depth
30' — Total Depth
STLAPT-1 WL — Well #

Contractor's Signature — License No.
Arthur Tassinari
Driller's Name — Registration No.

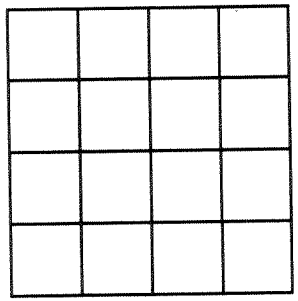
TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor ( ) Test (X)
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0				
	2"	Dia			
	PVC	Csg			
		25'			
	25'				
	2"	Dia			
	PVC	Scr			
		30'			
Number of bags					

LOCATION
Located Near Midway Rd & Turnpike
County St. Lucie

¼ Section Township Range

Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Casing: Black Steel ( ) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type PVC Slot size 0.020
Screened from 25 (ft.) to 30' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

SFWMD — Owner
P.O. Box 24680 — Address
West Palm Beach — City
FL — State
33416 — Zip

Contractor's Signature
License No.
12/13/88 — Completion Date
34' — Casing Depth
45 — Total Depth
ST2 APT-1 S-1 — Well #

ANTHONY LUBRANO — Driller's Name
Registration No.

TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (✓) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____
From top of ground

LOCATION

Located Near MIDWAY Rd and FL Turnpike
County ST Lucie Co

NE ¼ SW ¼ 31 Section 35S Township 40E Range

Latitude-Longitude

Cuttings sent to District? ( ) Yes (X) No

LOCATE IN SECTION

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0				
	2"	Dia			
	PVC	Csg			
		34'			
	34'				
	2"	Dia			
	PVC	Scr.			
		44'			
Number of bags					

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type 2" PVC Slot size .020
Screened from 34' (ft.) to 44' (ft.)
Type of grout with % additives NEAT
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT FORM 0124 Rev. 4/85 **WELL PERMIT NO.** _____

SFWMD | P.O. Box 24680 | West Palm Beach | FL | 33641
Owner | Address | City | State | Zip

Contractor's Signature | 2334 | 12/20/88 | 92' | 102' | STL APT-1, 0
License No. | Completion Date | Casing Depth | Total Depth | Well #

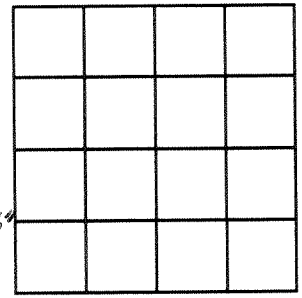
Tony Lubrano
Driller's Name | Registration No.

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (X) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (X) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____ From top of ground

LOCATION
Located Near Midway Rd & Turnpike
County St Lucie

31 | 35 S | 40E
¼ ¼ Section | Township | Range

27° 23' 08" | 80° 22' 36"
Latitude-Longitude


LOCATE IN SECTION

Cuttings sent to District? (X) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout	Casing & Screen		Depth (ft)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
Thick-ness & Depth	Diameter & Depth		From	To	
	0				
	2" dia				
	PVC csg				
	9	92			
	92				
Number of bags	2"	Dia			
	[redacted]	PVC			
		102			12 bags sand

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type PVC Slot size .020
Screened from 92' (ft.) to 102' (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

SFWMD P.O. 24680 — West Palm Beach — FL — 33641
Owner — Address — City — State — Zip

Contractor's Signature — License No. — 12/12/88 Completion Date — 91.5 Casing Depth — 108' Total Depth — STL APFI D-1 Well #

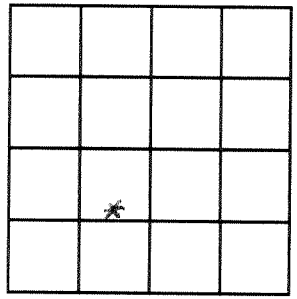
Tony Lubrano
Driller's Name — Registration No.

TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (✓) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD (✓) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other _____
STATIC WATER LEVEL _____ Ft. below top of casing
PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
PUMP SIZE _____ H.P. CAPACITY _____ GPM
PUMP TYPE _____ INTAKE DEPTH _____
From top of ground

LOCATION
Located Near Midway Rd
FL Turnpike
County St Lucie

NE ¼ SW ¼ Section 31 Township 35S Range 40E

Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? (✓) Yes ( ) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
	0				
	2"	Dia			
	PVC	Csg			
		91.5'			
	91.5'				
	2"	Dia			
	PVC	Scr			
		106.5'			
Number of bags					17 bags sand

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type 2" PVC Slot size .020
Screened from 92.5 (ft.) to 107.5 (ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity _____ Chlorides _____ mg/l

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: 111-51 WELL CONST. PERMIT NO.: _____

WELL NAME: SLC-1 GEOPHY. LOG AVAIL. ____ Yes ✓ No

COUNTY St. Lucie SFWMD GEOPHY.# _____

LOCATION: ___ 1/4 of ___ 1/4 of ___ 1/4 of Sec. 31 Twp. 35S Rge. 40E

Latitude 27°23'08" Longitude 80°22'32"

Planar X _____ Planar Y _____

DRILLER: Hydrowell DATE DRILLED 10/6/89

46' (split spoon)

DEPTH (ft) _____ ELEVATION (NGVD) _____ ( ) TOPO ( ) SURVEY

NO. OF SAMPLES 54 NO. OF SPLITS 2 DATE SENT _____

SENT TO: (✓) BOG ( ) USGS _____ ( ) OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY ____ Yes ____ No
PUMP TEST ✓ Yes ____ No

COMPLETION INFO: (✓) PLUGGED ( ) TEST ( ) MONITOR ( ) PRODUCTION

DRILLING METHOD: ( ) CABLE TOOL ( ) JET ( ) AUGER split spoon / core
( ) ROTARY: [✓] Mud [ ] Air [ ] Reverse [ ] Dual Wall

CASING: TYPE: ( ) PVC ( ) GALV. ( ) STEEL
DIAMETER: _____ INTERVAL: _____

SCREEN: TYPE: ( ) PVC ( ) GALV. ( ) STEEL
DIAMETER: _____ INTERVAL: _____

GEOLOGIST DESCRIPTION: ( ) NO (✓) YES _____

COMMENTS: This hole was cored from 46'-123' with difficulties
Another hole ~~50'~~ 48' north of this was cored from 48'-127'
missing 6'-7' (fill)

Coring Package sent to Marty + Dave 8/30/89

FORM 0428
6/86

RIGHT OF ENTRY AGREEMENT/WELL CONSTRUCTION

The SOUTH FLORIDA WATER MANAGEMENT DISTRICT and/or _____ and the agents, employees or assigns of each, (Permittees) are hereby granted the right to enter upon property ~~owned~~ Leased by BETTY J. MORSE (Leaseholder) (~~owner~~), and described herein, for the following purposes:

1. To construct water well(s) for the purpose of gathering lithologic data.
2. To conduct aquifer performance and step drawdown test(s) to determine water availability.
3. To collect geophysical logs on selected well(s). * SEE ATTACHMENT "A".
4. To periodically be allowed access to the well(s) for the purpose of monitoring water levels and/or water quality sampling.

Such equipment as may be needed to accomplish the above purposes may be brought upon, over and across the property, which is described as follows:

The south half of Section 31, Township 35 South, Range 40 East;
St Lucie County, Florida.

The permittees, and each of them, warrant to the undersigned that upon completion of the above purposes, the property will be left in, or restored to, the same condition as it was when the permittees or their contractor(s) first entered upon the land to begin their work.

The permittees, and each of them, separately and severally, to the extent permitted by law, shall save and hold harmless the undersigned owner from claims for damages or injury caused by the permittees, their agents, servants, employees, or contractors, during the time this permit for access and use is in effect.

Betty J. Morse
~~OWNER~~ LEASEHOLDER
Leaseholder

Date: 11-16-88

Executed by ~~owner~~ in presence of:

Don B. J. Padgett

_____

COUNTERSIGNED BY PERMITTEE(s)

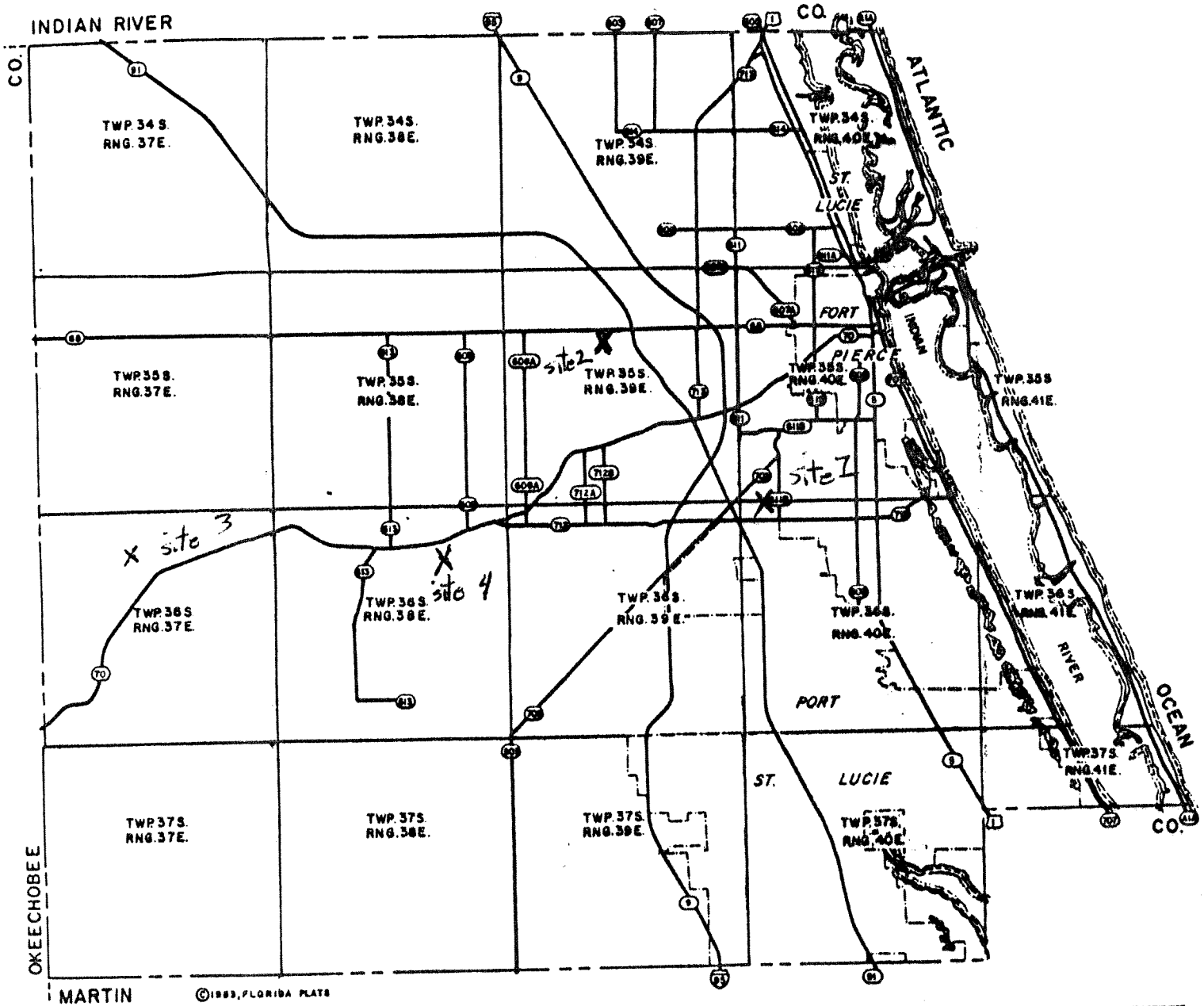
_____
for SFWMD

Date: 11/30/88

_____
for

Date: _____

1988
ST. LUCIE CO. FLORIDA



This directory has been published as a county ownership reference guide. The data contained herein has been compiled from the official city, state, and county public records. Constant property sales and transfers make it impossible for us to guarantee 100% accuracy; errors and omissions are inevitable. If you should notice an error in the Index of Owners or on a map, we would appreciate it if you would mail the correction to us on the coupon provided.

NAME _____

ADDRESS _____

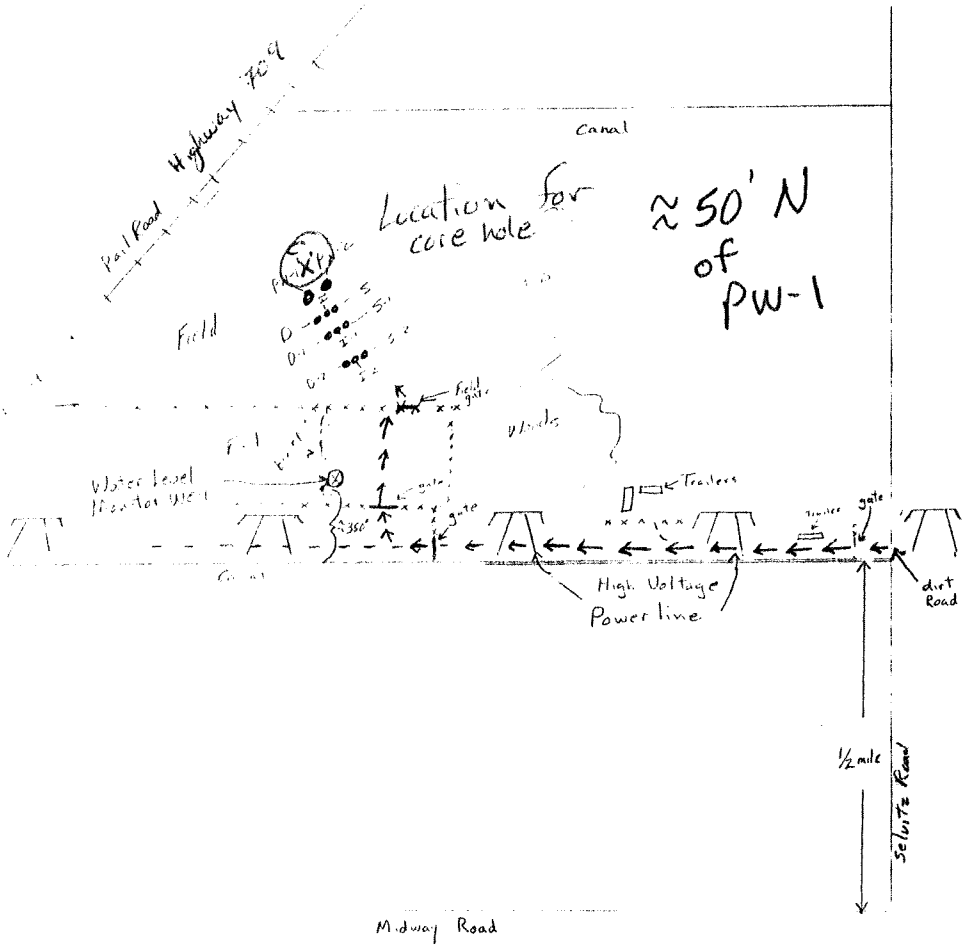
CITY _____ STATE _____ ZIP _____

COUNTY _____ TWP. & RNG. _____

SECTION _____ AMOUNT OF ACREAGE _____

We convey sincere thanks to your county officials for their participation. Your county plat directory has been made possible with their cooperation and support.

MAP STEAPT-1


Rail Road
Highway 70
canal
Location for core hole
≈ 50' N of PW-1
Field
Water level Monitor Well
gate
gate
Trailers
High Voltage Power line
dirt Road
½ mile
Selwitz Road
Midway Road

SITE #1 (ST. LUCIE)

BID FORM
CONTRACT NO.C89-0182-R

If this bid is accepted, the undersigned bidder agrees to complete all work under this contract within 160 calendar days from the date established in the "Notice to Proceed with Contract Work".

	QUANTITY	UNIT PRICE	TOTAL
1. Mob. & Demobilization. St. Lucie County	6 (estimated)	Lump sum $1800.00	
2. Mob. & Demobilization. Broward County	6 (estimated)	Lump sum	
3. Mob. & Demobilization. MartinCounty	3 (estimated)	Lump sum	
4. Drill nominal 6" ± Borehole (Per Foot)	3,000'	$12.75	
5. Core 2" Nominal Borehole (Per Foot)	2600'	$15.00	
6. Splitspoon Sample 2" Nominal Borehole (Per foot)	400'	$7.20	
7. Furnish/Install Casing, 2" PVC, Schedule 40 (Per Foot)	3,000'	$1.50	
8. Furnish/Install 2" PVC, Schedule 40, .020 Slot Screen (Per Foot)	260'	$3.00	
9. Furnish/Install Gravel Pack, 8/20 Gr. Silica (50 lb. bg.)	200 bgs.	$6.00	
10. Furnish/Install Grout Type I Portland (100 lb. bgs.)	600 bgs.	$8.50	
11. Standby Time (P/hr.)	50 hrs.	$65.00	
12. Well Development (P/hr.)	30 hrs.	$80.00	
13. Other Work (P/hr.)	20 hrs.	$90.00	
TOTAL			

Grand Total Price for Contract $_____

Written Amount _____

Site S1

8 hrs Thurs 3/23 set up rig

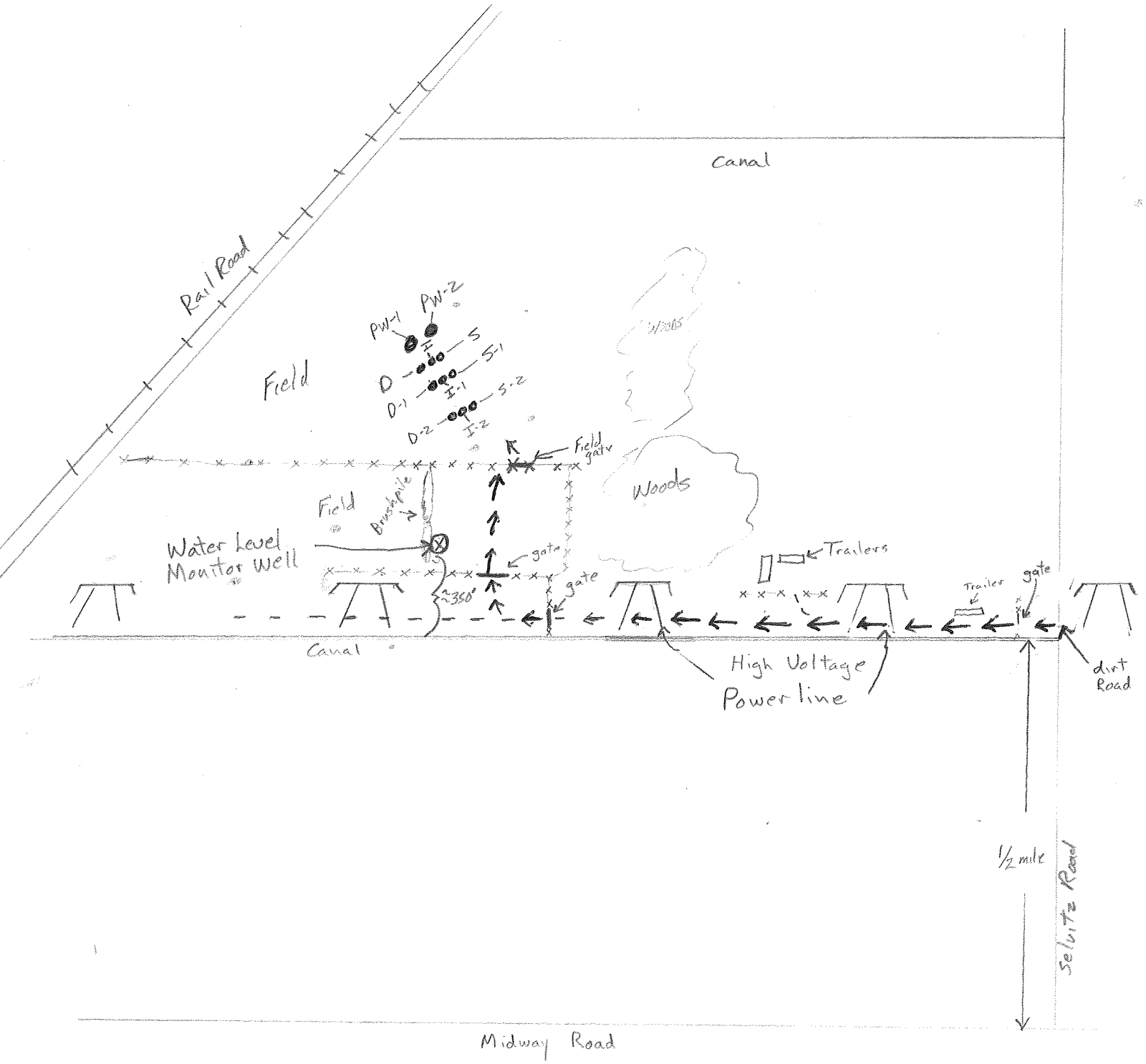
8 hrs Fri 3/24 rig pump went out 10 AM appx 40' hole

8½ hrs Mon 3/27 Fix rig pump @ 45' well in plus repair hoppers discharge funnel 13 bags sand 2 bags hole plug 2 bags cement

10 hrs Tues 3/28 Site S2 14 bags sand 1 bag cement Site S4, 10 bags sand 2 bags hole plug 1 bag cement

9 hrs Wed 3/29 STL APT-1 7 bags sand, 1 bag hole plug, 1 bag cement

SITE MAP STLAPT-1



FORM 0428
6/86

RIGHT OF ENTRY AGREEMENT/WELL CONSTRUCTION

The SOUTH FLORIDA WATER MANAGEMENT DISTRICT and/or _____ _____ and the agents, employees or assigns of each, (Permittees) are hereby granted the right to enter upon property ~~owned~~ Leased by BETTY J. MORSE (Leaseholder) (~~owner~~), and described herein, for the following purposes:

1. To construct water well(s) for the purpose of gathering lithologic data.
2. To conduct aquifer performance and step drawdown test(s) to determine water availability.
3. To collect geophysical logs on selected well(s). * SEE ATTACHMENT "A".
4. To periodically be allowed access to the well(s) for the purpose of monitoring water levels and/or water quality sampling.

Such equipment as may be needed to accomplish the above purposes may be brought upon, over and across the property, which is described as follows:

The south half of Section 31, Township 35 South, Range 40 East;
St Lucie County, Florida.

The permittees, and each of them, warrant to the undersigned that upon completion of the above purposes, the property will be left in, or restored to, the same condition as it was when the permittees or their contractor(s) first entered upon the land to begin their work.

The permittees, and each of them, separately and severally, to the extent permitted by law, shall save and hold harmless the undersigned owner from claims for damages or injury caused by the permittees, their agents, servants, employees, or contractors, during the time this permit for access and use is in effect.

Betty J. Morse
~~OWNER~~ LEASEHOLDER
Leaseholder

Date: 11-16-88

Executed by ~~owner~~ in presence of:

Don W. J. Padgett

_____

COUNTERSIGNED BY PERMITTEE(s)

M. P. Gostel
for SFWMD

Date: 11/30/88

_____
for

Date: _____

Well Depths
Sounded 4/24/89

Well	TD below TOC
PW-2	50.60'
D	100.66'
I	71.8'
S	43.8'
D-1	106.42'
I-1	74.11'
S-1	43.94'
D-2	100.6'
I-2	74.21'
S-2	43.76'
WSW	33.32'

ATTACHMENT A
USE OF RADIOACTIVE MATERIALS IN TEST WELL

1. Property ~~owner~~ leaseholder authorizes use of sealed nuclear source for geophysical logging purposes in test well construction.

2. In the event the sealed source is lodged downhole, every effort at recovery of said source will be utilized.

3. If a decision is made to abandon the sealed source downhole, it will be done so in compliance with Florida Administrative Code Section 10D-91.1200, Control of Radiation Hazard Regulations.

4. In the event the said source is <u>lost</u> downhole, South Florida Water Management District will be responsible for the protection from any contamination of the well and surrounding formation water from said source.

5. The Radiation Safety Officer of this agency is responsible for compliance with the above-mentioned Department of Health and Rehabilitative Services regulations.

Betty Morse 11-16-88

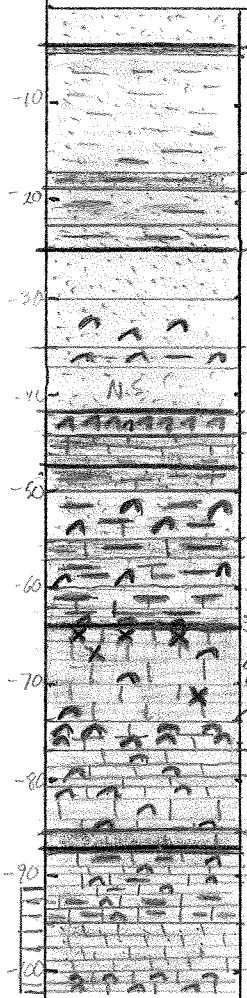
~~OWNER~~ Leaseholder DATE

[signature] 11/17/88

SFWMD RADIATION SAFETY OFFICER DATE

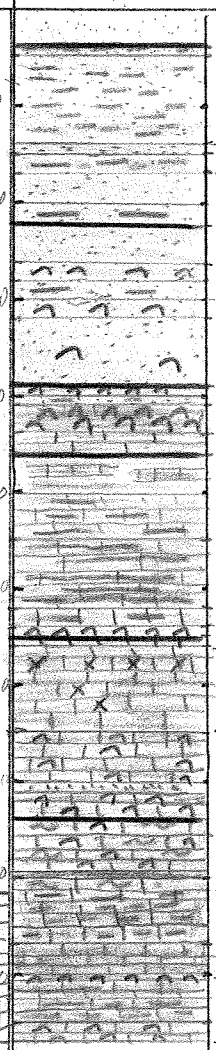
From Drillers logs

Well Name: STL APT-1 D-2
Location: Lat/Long
X/Y
GL: TD:
Owner:



sd fine
Brown semi-consolidated sd
sdy clay
3 brown sdy clay
clayey sd
brown clayey sd
sand
sand w/ shell
sd w/shell, tr clay
sand
grey shell w/ sd + LS
White Limestone
clay, Limestone, sd.
sand shell clay & Limestone
clay with limestone
clay with limestone and shell
interbedded clay and limestone
shell w/ limestone and clay
Limestone w/ xtal calcite & shell
fluid loss
shell beds in limestone
shell beds in limestone
Limestone
Limestone with shell and clay
clay content increases w/depth
hard sandy limestone
Limestone and shell
102' TD

Well Name: D-1
Location: Lat/ Long
X/Y
GL: TD:
Owner:



fine sd
dk brown semi-consolidated organics? + sand
Sandy clay
Sand (NS)
sandy clay
Sand (NS)
Clayey sand
grey sand (NS)
sand and shell
Sand w/ tr clay
sand and shell
Sand with trace of shell
NS
shell bed
sand trace shell relay
Shell w/ small amt ss. + LS, grey
White limestone
Clay + white Limeston
grey Limestone w/ light green clay
grey green clay + limestone
grey limestone + green clay
white shell w/ tr clay
grey green limestone
Limestone w/ xtal calcite
FLUID LOSS
Limestone and shell
sand
shell and limeston
limestone shell and lime mud
lots of lime mud and clay
lime mud clay and limeston
hard limestone (sdy?)
shell bed
Soft green limestone
green granular limeston and clay
107' TD Shell in soft green limeston

FORM 0499
5/87

South Florida Water Management District

BEG. PERMIT NUMBER 85-0282W

South Florida Water Management District

John R. Wodraska, Executive Director
Tilford C. Creel, Deputy Executive Director

Post Office Box V 3301 Gun Club Road
West Palm Beach, Florida 33402
Telephone (305) 686-8800
Florida WATS Line 1-800-432-2045

IN REPLY REFER TO:

September 19, 1985

Page Concrete Corp.
c/o E.R. Dike & Assoc., Inc.
2375 N.E. Ocean Boulevard, Apt. 104-D
Stuart, FL 33494

RECEIVED
SEP 26 1985
RESOURCE CONTROL DEPARTMENT

Gentlemen:

Subject: Page Concrete Corp., General Permit Application

Please provide the information requested below as indicated by the check mark in the box. When this information is received we will resume processing of your general permit application. If you have any questions on your application please don't hesitate to call Maureen F. Miller, at extention 529.

- [X] Complete all parts of the application. (see attached)
- [ ] Indicate estimated average amount of water (Gallons per day).
- [ ] Indicate estimated maximum amount of water (Gallons per day) excluding frost protection.
- [ ] Indicate Section(s), Township and Range of the property.
- [ ] Indicate the location of your property using the enclosed section map.
- [ ] Attach a map which shows: 1) dimensions of property in feet; 2) distance and direction from a known point or intersection of two designated streets; 3) location of wells or pumps on property. The map may be hand-drawn. Plat maps must be accompanied by another map which shows distance and direction from a known point or intersection of two streets.

Sincerely,

Maureen F. Miller

MAUREEN F. MILLER
Water Resource Technician
Water Use Division
Resource Control Department

MFM:njg
ATTACHMENT

85282

10. A SPECIFIC CAPACITY TEST SHALL BE PERFORMED ON ONE WATER WELL AND THE DATA PROVIDED TO THE DISTRICT WITHIN SIX MONTHS OF WELL COMPLETION.

11. IF THE PERMITTED USE IS LOCATED WITHIN ONE MILE OF A BRACKISH OR SALT WATER BODY THEN WITHIN 5 DAYS AFTER EACH WELL HAS BEEN PLACED IN SERVICE, A SAMPLE OF WATER SHALL BE TAKEN AND SUBMITTED TO AN INDEPENDENT LABORATORY FOR CHEMICAL ANALYSIS FOR CHLORIDE ION CONCENTRATION. THE RESULTS OF THE ANALYSIS SHALL BE PROVIDED TO THE DISTRICT WITHIN SIX MONTHS OF WELL COMPLETION.

85282

EXHIBIT 1

LIMITING CONDITIONS

1. THE PERMITTEE SHALL OBTAIN ALL NECESSARY FEDERAL, STATE AND LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS PRIOR TO THE USE OR WITHDRAWAL OF WATER.

2. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

3. PERMITTEE SHALL MITIGATE TO THE SATISFACTION OF THE DISTRICT ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE: A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL TO PRODUCE WATER (AN ADJACENT WELL MAY BE DOMESTIC WELL, LAWN IRRIGATION WELL, PUBLIC WATER SUPPLY WELL, ETC.), B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, WETLAND OR A CANAL SYSTEM, C) SALINE WATER INTRUSION OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND D) CHANGE IN WATER QUALITY THAT CAUSES IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE TO THE SATISFACTION OF THE DISTRICT ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE: A) SIGNIFICANT REDUCTION IN WATER LEVELS IN AN ADJACENT WATER BODY (SUCH AS A LAKE, POND, WETLAND OR A CANAL SYSTEM), B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS, C) DAMAGE TO CROPS AND OTHER VEGETATION, CAUSING FINANCIAL HARM TO THE LANDOWNER, AND D) DAMAGE TO HABITAT OF RARE, ENDANGERED OR THREATENED SPECIES.

5. PERMITTEE SHALL NOT REFUSE IMMEDIATE ENTRY OR ACCESS TO ANY AUTHORIZED REPRESENTATIVE OF THE DISTRICT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION AND PRESENTS APPROPRIATE CREDENTIALS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7. APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2.

9. A DRILLERS LOG SHALL BE FURNISHED TO THE DISTRICT WITHIN 30 DAYS OF COMPLETION OF EACH NEW WELL. THE LOG SHALL SHOW TOTAL DEPTH AND CASING DEPTH.

85282

The General Permit is subject to the Limiting Conditions on Exhibit 1.

Sincerely,

PATRICK J. GLEASON, Ph.D.
Director, Water Use Division
Resource Control Department

PJG:ixt
cc: Mr. Tiner E. Powers
bcc: Groundwater
Inspection

85282

South Florida
Water Management District
Post Office Box V 3301 Gun Club Road
West Palm Beach, Florida 33402
Telephone (305) 686-8800
Florida WATS Line 1-800-432-2045

John R. Wodraska, Executive Director
Tilford C. Creel, Deputy Executive Director

QUAD 5
ITEM 1
POSTAL

IN REPLY REFER TO:

General Permit
St Lucie

GP #85-282W

September 30, 1985

Page Concrete Corp. c/o E.R. Dike & Associates
2375 N.E. Ocean Blvd., Apt. 104-D
Stuart, FL 33494

Dear Mr. Acker:

SUBJECT: Water Use General Permit: 85-282W
Project: Page Concrete Corporation
Type of Use: Industrial
County: St. Lucie; Sec. 31, Twp. 35S, Rge. 40E.
Permittee: Page Concrete Corp. c/o E.R. Dike & Associates

This letter is to acknowledge receipt of your Intent to Use Water pursuant to Rule 40E-20.042, Florida Administrative Code. Based on the information provided, District rules have been adhered to and a General Water Use Permit is in effect for this project.

This permit is for use of 6000 gallons per day on the average or 7000 gallons per day on a maximum day. Groundwater withdrawals will be by two-2-inch X 74-foot Shallow Water Table Aquifer wells cased to 70 feet and pumped at 120 GPM, and one-4-inch X 74-foot Shallow Water Table Aquifer well cased to 70 feet and pumped at 120 GPM. Prior to exceeding these quantities, a modification to this permit will be necessary.

It may be necessary for you to obtain a well construction permit from a local or county governmental agency prior to drilling the well.

Unless otherwise revoked or modified, for each withdrawal authorized herein, the duration of the General Permit shall be for twenty years, determined as follows:

1. For uses in existence on the effective date of this rule, the 20 year period begins on the effective date of this rule (January 29, 1979).

2. For uses not in existence on the effective date of this rule, the 20 year period begins with the date of filing the Notice of Intent to Use Water.

Page
Concrete
Corp.

Ready Mixed Concrete

RECEIVED

AUG 19 1985

RESOURCE CONTROL DEPARTMENT

July 18, 1985

Mr. Ernest Dike P.E.
2375 N.E. Ocean Blvd.
Stuart, Fl 33494

Re: Page Concrete Corp.
Wells & Septic System

Dear Sir:

The following is the information you requested on the above referenced systems.

Wells: We have a total of three wells approximately seventy (70) feet deep.
Two are 2" Diam. wells with a 2½ HP pump pumping from both wells. These supply our production needs of under 7000 gal. per day.
One is 4" Diam. backup well with a 2½ HP pump for emergency use, if trouble occurs in our primary system.

Septic System: St. Lucie County Health Dept Permit #003347 applied for 1/19/82, and inspected and approved by Mr. Sumpter 3/2/82. We are unable to obtain a copy of the permit as the county files for 1982 have been misplaced.

I trust this data satisfies your requirements.

Very truly yours
Page Concrete Corp

G. J. Acker

George Acker
Vice President

85282

194X ROUTE 4 SELVITZ ROAD • FORT PIERCE, FLORIDA 33450
TELEPHONE 305/466-0411

APPLICATION TO SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR A PERMIT FOR

(X) WATER USE
(X) SURFACE WATER MANAGEMENT (DRAINAGE) ([ ] CONCEPTUAL APPROVAL)
( ) UTILIZATION OF DISTRICT WORKS
( ) MODIFICATION OF EXISTING PERMIT NUMBER _____

OWNER'S NAME: PAGE CONCRETE CORPORATION

ADDRESS: c/o E. R. Dike & Associates, Inc., 2375 N.E. Ocean Blvd. Apt 104D

CITY: Stuart STATE: Florida ZIP: 33494 PHONE: 225-0431

DEVELOPER'S NAME: PAGE CONCRETE CORPORATION

ADDRESS: Same as Above

CITY: _____ STATE: _____ ZIP: _____ PHONE: _____

PROJECT ENGINEER E. R. Dike & Associates, Inc.

ADDRESS: Same as Above

CITY: _____ STATE: _____ ZIP: _____ PHONE: _____

GENERAL PERMIT
NOTICE OF INTENT REC'D 8-9-85
REVIEWED BY
APPROVED BY
APPROVAL LTR SENT

PROJECT NAME: PAGE CONCRETE CORPORATION

LOCATION: N/A (CITY) St. Lucie (COUNTY) NE 1/4 of (SECTION(S)) ---- (TOWNSHIP(S)) ---- (RANGE(S)) E

PURPOSE: Industrial (RESIDENTIAL, AGRICUL., PUB. WTR. SUPPLY, ETC.) ZONING: IH (Industrial, Heavy)

PROJECT SIZE: 10.71 ACRES

PROJECT IS: ( ) PROPOSED (X) EXISTING (X) TO BE MODIFIED G.P. 81-498

IF THIS APPLICATION IS FOR WATER USE, WHAT IS THE SOURCE OF WATER? See attached letter dated July 18, 1985, from George Acker, Page Concrete Corporation

IF THIS APPLICATION IS FOR DRAINAGE, WHERE WILL THE WATER DISCHARGE? No Discharge

IF THIS IS A REQUEST TO MODIFY AN EXISTING PERMIT, DESCRIBE THE REQUESTED CHANGES

Enlarge retention Area

IF THIS APPLICATION INCLUDES USE OF DISTRICT WORKS, DESCRIBE THE USE

N/A

(CULVERT, BOAT DOCK, FENCE, BEAUTIFICATION, ETC. NOTE! INCLUDE CANAL NAME)

NOTE! IN ALL CASES AN ACCURATE LOCATION MAP WITH THE PROJECT BOUNDARIES CLEARLY SHOWN MUST BE SUBMITTED. ALSO, IF THIS IS A PROPOSED OR EXPANDED PROJECT SUBMIT A CURRENT AERIAL PHOTOGRAPH SHOWING THE PROJECT BOUNDARIES

RULES 40E-2.101, 40E-4.101, and 40E-6.101, F.A.C. SPECIFY DATA REQUIREMENTS TO CONSTITUTE A COMPLETE PERMIT APPLICATION. A LIST OF THE REFERENCED RULES IS PROVIDED ON THE BACK OF THIS FORM. ANY NECESSARY CHECKLIST MAY BE OBTAINED FROM THE DISTRICT AT THE ABOVE ADDRESS.

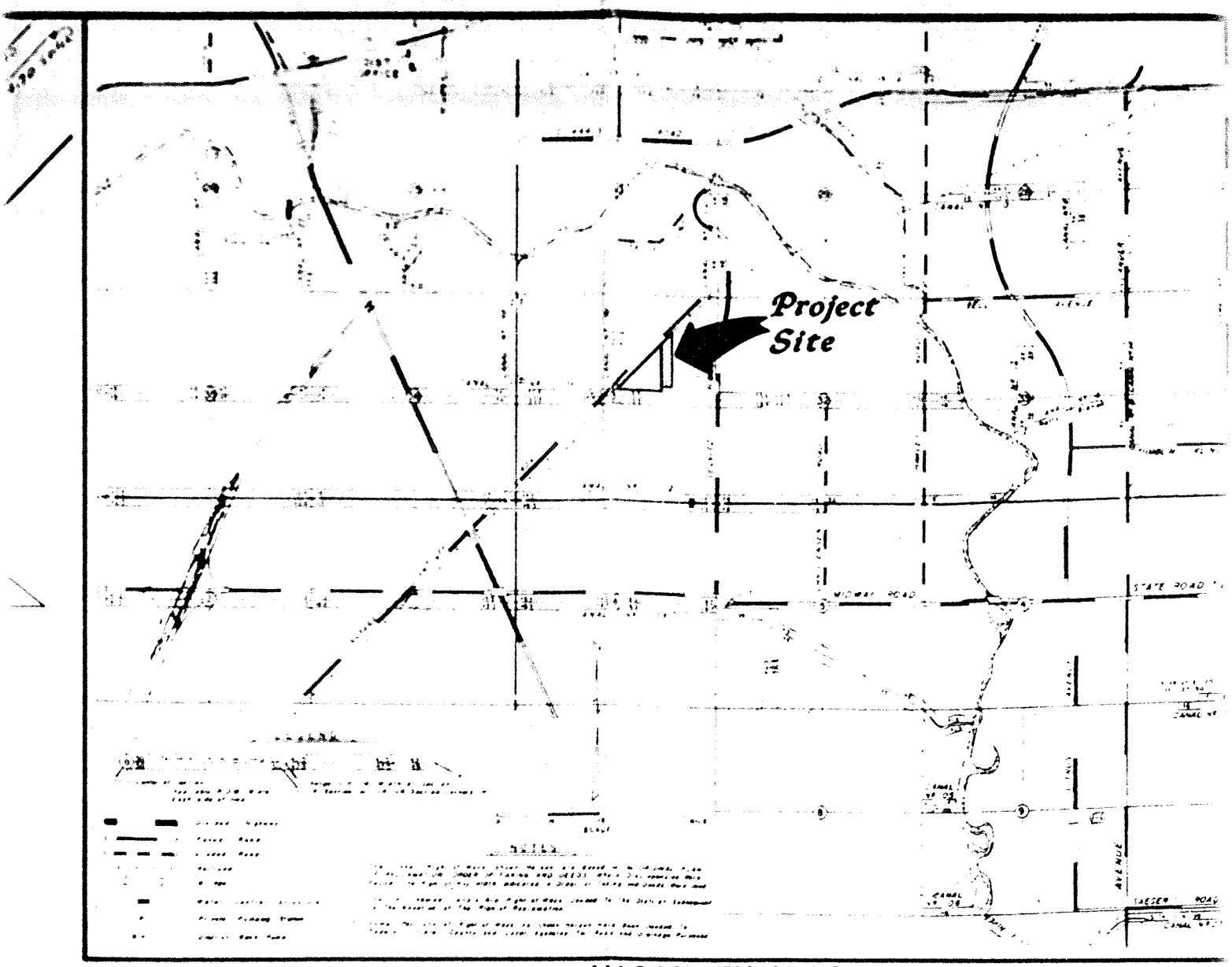
George Acker V.P. DATE 8/8/85

OWNER'S SIGNATURE (IF NOT THE OWNER, CERTIFY BELOW)

I HEREBY CERTIFY THAT I AM AN AUTHORIZED AGENT OF THE OWNER.

_____ TITLE _____

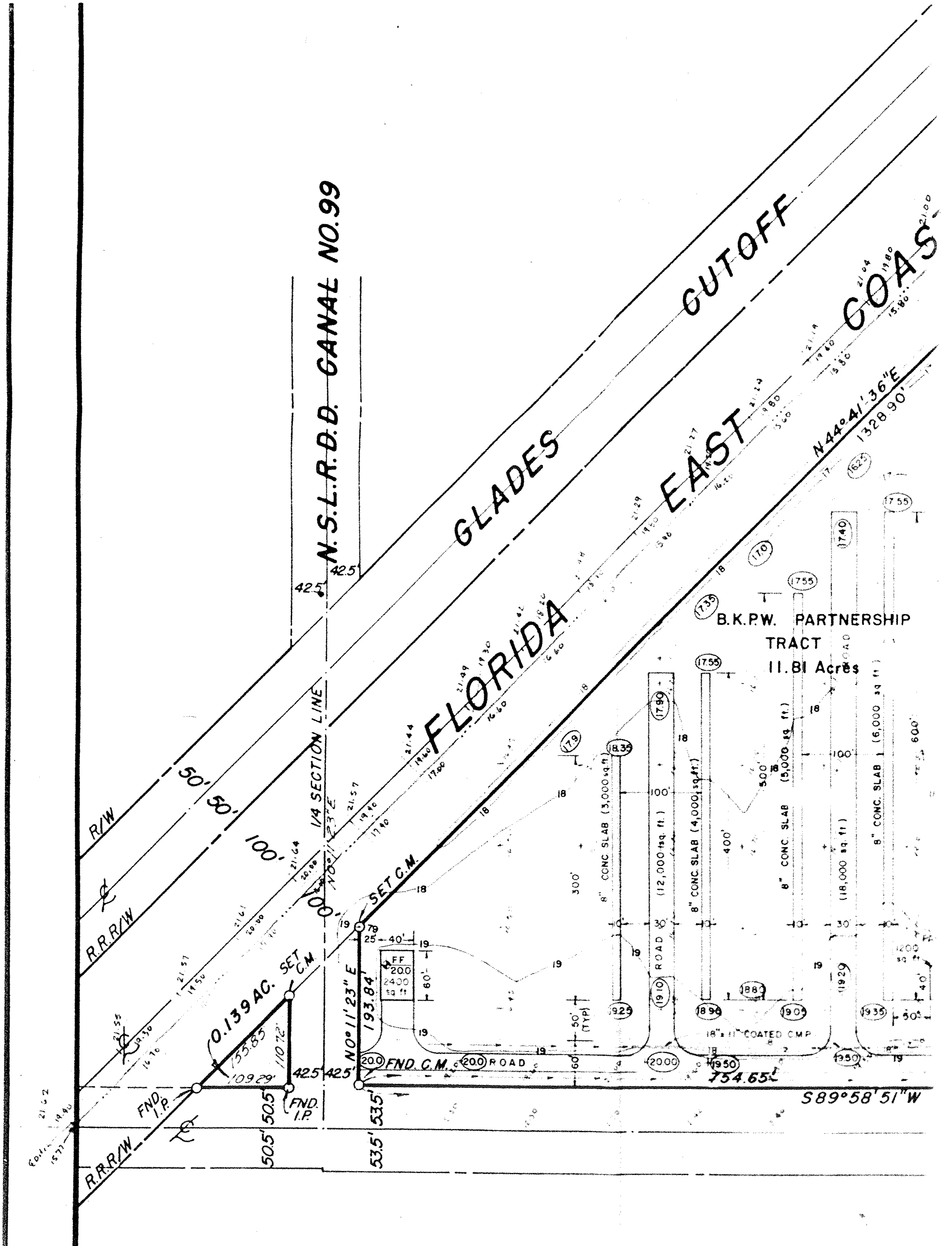
NOTE! MANY PROJECTS ALSO REQUIRE APPROVAL BY OTHER STATE AND FEDERAL AGENCIES. SFWMD



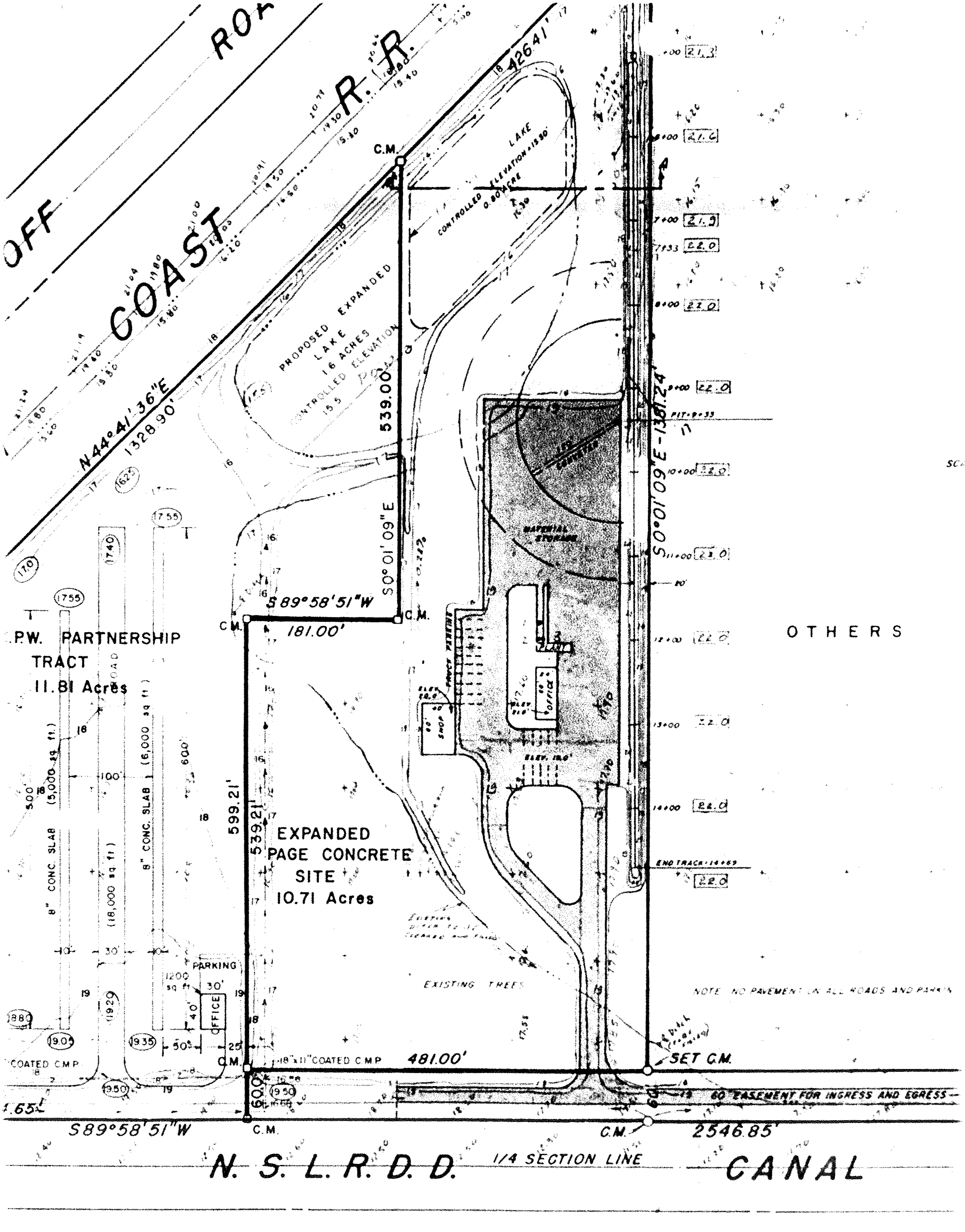
VICINITY MAP

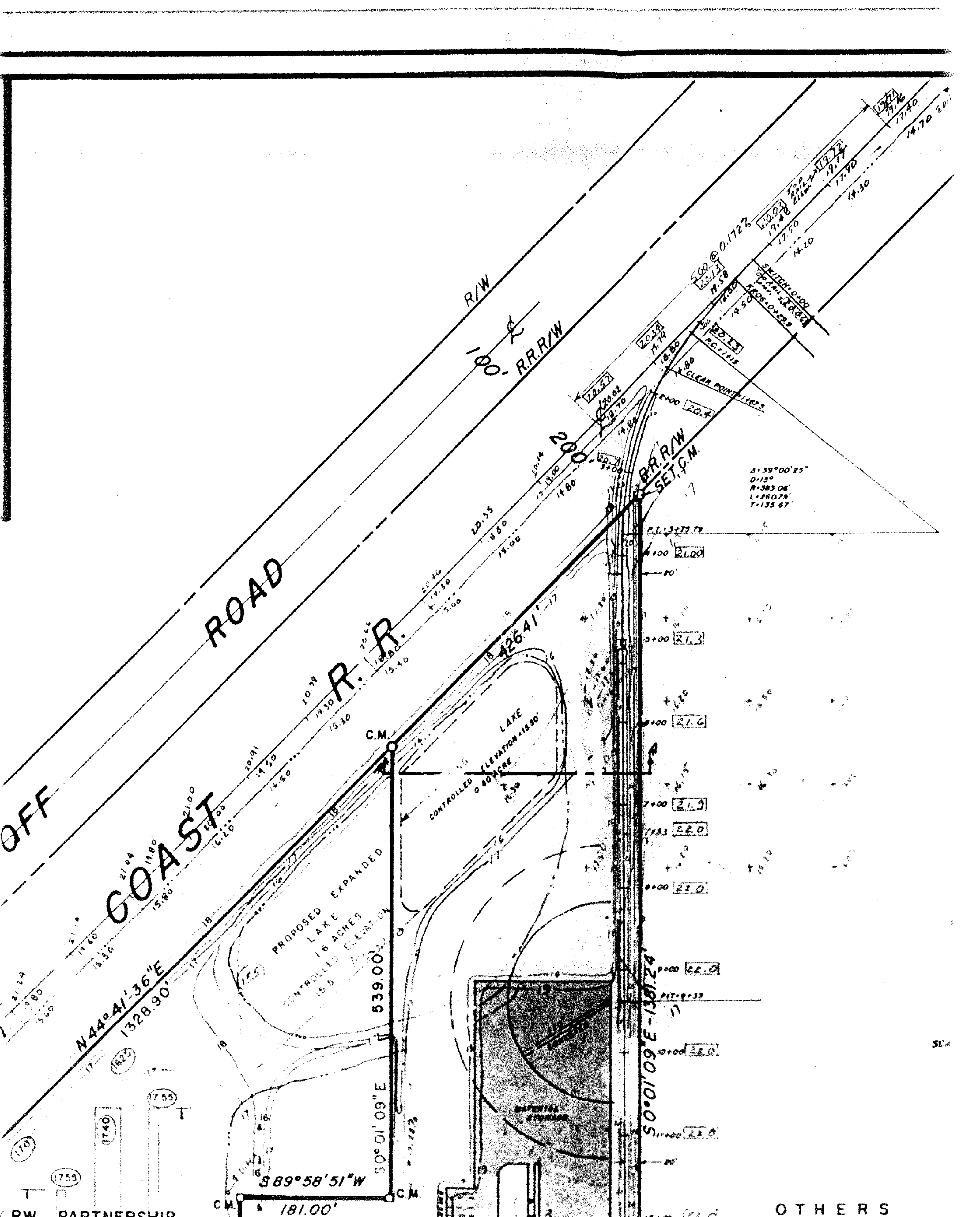
N

SCALE: 1" = 100'



N.S.L.R.D.D. CANAL NO.99
GLADES CUTOFF
FLORIDA EAST COAS
R/W
R.R.R/W
50'
50'
100'
1/4 SECTION LINE
N44°41'36"E
1328.90'
B.K.P.W. PARTNERSHIP
TRACT
11.81 Acres
0.139 AC.
SET C.M.
FND. I.P.
FND. C.M.
155.85
109.29'
110.72'
42.5'
50.5'
53.5'
N0°11'23" E
193.84'
754.65'
S89°58'51"W
ROAD
8" CONC SLAB (3,000 sq ft)
(12,000 sq ft)
8" CONC SLAB (4,000 sq ft)
8" CONC SLAB (5,000 sq ft)
(18,000 sq ft)
8" CONC SLAB (6,000 sq ft)
FF 20.0 2400 sq ft
18" x 11" COATED CMP
50' (TYP)


OFF
COAST
R. R.
C.M.
N44°41'36"E
1328.90'
1426.41'
PROPOSED EXPANDED LAKE 16 ACRES CONTROLLED ELEVATION 15.5
LAKE CONTROLLED ELEVATION=15.50 0.80 ACRE
539.00'
S0°01'09"E
S0°01'09"E-1381.24'
S89°58'51"W
181.00'
C.M.
P.W. PARTNERSHIP TRACT 11.81 Acres
8" CONC. SLAB (5,000 sq ft)
(18,000 sq ft)
8" CONC. SLAB (6,000 sq ft)
100'
30'
600'
500'
PARKING
1200 sq ft
30'
40'
OFFICE
50'
25'
599.21'
539.21'
EXPANDED PAGE CONCRETE SITE 10.71 Acres
MATERIAL STORAGE
TRUCK PARKING
SHOP
OFFICE
EXISTING TREES
18"x11" COATED CMP
COATED CMP
481.00'
SET C.M.
60' EASEMENT FOR INGRESS AND EGRESS
OTHERS
NOTE NO PAVEMENT IN ALL ROADS AND PARKIN
END TRACK=14+69
S89°58'51"W
C.M.
2546.85'
N. S. L. R. D. D.
1/4 SECTION LINE
CANAL



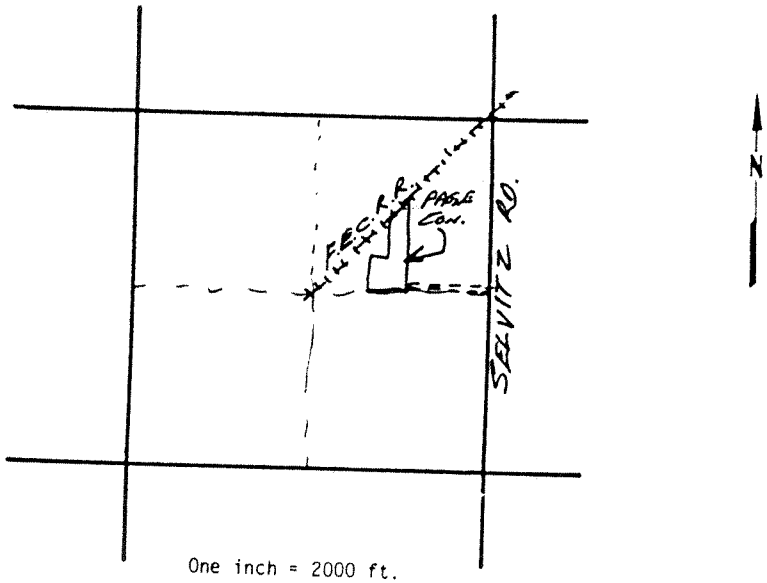
R/W
100' R.R.R/W
200' R.R.R/W
ROAD
COAST R.R.
OFF
N44°41'36"E
1328.90'
426.41'
SET C.M.
C.M.
539.00'
S0°01'09"E
S0°01'09"E - 1381.24'
S89°58'51"W
181.00'
LAKE
CONTROLLED ELEVATION = 13.80
0.80 ACRE
PROPOSED EXPANDED LAKE
16 ACRES
CONTROLLED ELEVATION 15.5
MATERIAL STORAGE
CLEAR POINT
SWITCH = 0+00
P.T. = 3+73.79
Δ=39°00'25"
D=15°
R=383.06'
L=260.79'
T=135.67'
OTHERS
PARTNERSHIP

Applicant PAGE CONCRETE CORP.

Section Map

Locate your property as well as possible on the section below. (A section is one square mile). Indicate the Section, Township and Range of your property. Information on the Section in which you are located is available from county general highway maps, U.S. Geological topographic maps, Notice of Taxes, Dolph County Street Atlases, the Florida Department of Transportation and other sources.

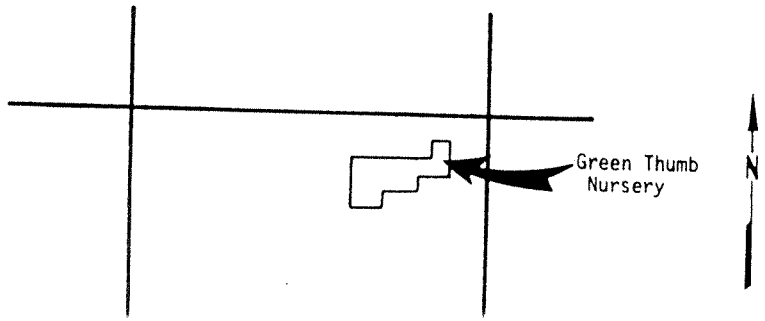
Section 31 Township (Twp) 35 S. Range (RG) 40 E.



One inch = 2000 ft.

Example

Section 23 Township (Twp) 44 Range (RG) 43



SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX "V"
WEST PALM BEACH, FL 33402

*****NOTICE OF INTENT TO USE WATER (CHAPTER 40-20, F.A.C.)*****

APPLICANT'S NAME: PAGE CONCRETE CORPORATION
PROPERTY OWNER'S NAME (IF SAME): C/O E.R. DIKE AND ASSOCIATES, INC.
MAILING ADDRESS: 2375 N.E. OCEAN BLVD. APT. 104-D
CITY STUART STATE FL. ZIP 33494 PHONE (305) 225-0431
PROJECT NAME: PAGE CONCRETE CORPORATION
PROJECT LOCATION CITY N/A COUNTY ST. LUCIE
SECTION (S) NE¼ OF 31 TOWNSHIP(S) 35 SOUTH RANGE(S) 40 EAST
ADDRESS OF PROJECT 199 X ROUTE 9 SELVITZ RD.
CITY FT. PIERCE STATE FL. ZIP 33450
USE IS: (X) EXISTING ( ) PROPOSED ( ) A PERMIT TO BE MODIFIED
IF EXISTING, HOW LONG HAS IT EXISTED? 4 YRS ±
~~IF PROPOSED~~, HAS A SURFACE WATER MANAGEMENT PERMIT BEEN APPLIED FOR? YES
ACREAGE IS: (X) OWNED ( ) LEASED NUMBER OF ACRES ? 10.71 ACRES
PURPOSE CONCRETE PLANT
(PASTURE GROVE, MOTEL, SWIMMING POOL SUPPLY, ETC.)
TYPE OF WATER USE INDUSTRIAL
(IRRIGATION, PUBLIC WATER SUPPLY, ETC.)
IF IRRIGATION, ACRES IRRIGATED? N/A ACRES
GIVE ESTIMATED AVERAGE AMOUNT OF WATER TO BE USED 6000 GPD
GIVE ESTIMATED MAXIMUM AMOUNT OF WATER TO BE USED 7000 GPD
IF A PUBLIC WATER SUPPLY, WHAT IS THE N/A
TREATMENT PLANT CAPACITY
ESTIMATED POPULATION SERVED
NUMBER OF UNITS SERVED

SOURCE DATA

(X) SHALLOW WELLS ( ) FLORIDAN AQUIFER WELLS
70 FT. DEEP
( ) PUMPED
( ) FLOWING

( ) LAKE (SPECIFY NAME) N/A
( ) CANAL, STREAM (SPECIFY NAME) N/A
( ) OTHER (SPECIFY) N/A

RECEIVED
SEP 12 1985
RESOURCE CONSERVATION DEPARTMENT

NOTE
NOTICE OF INTENT REC'D 9-13-85
REVIEWED BY
APPROVED BY
APPROVAL LTR SENT

WELL DATA (IF APPLICABLE)

WELL NO.	DIAMETER (INCHES)	DEPTH (FT.)	CASING DEPTH	PUMP TYPE	PUMP INTAKE DEPTH	PUMP CAPACITY (GPM)
ONE	2	70	74 FT.	SUBMERSIBLE		
TWO	2	70	74 FT.	SUBMERSIBLE	74 FT.	120 @ 43 PSI
THREE	4	70	74 FT.	SUBMERSIBLE	74 FT.	120 @ 43 PSI
					74 FT.	120 @ 43 PSI

A11-1 9/25/85

SURFACE WATER INTAKE PUMP DATA

PUMP TYPE N/A PUMP CAPACITY N/A GPM

NOTES
1. INCLUDE AN ACCURATE MAP SHOWING PROPERTY BOUNDARIES, MAP SCALE, WELL LOCATIONS AND DISTANCE IN FEET FROM KNOWN LANDMARKS.
2. INCLUDE A WELL DRILLER'S LOG FOR EACH WELL. [illegible] BE

FORM 0499
5/87

South Florida Water Management District

BEG. PERMIT NUMBER GP 0260W

8-19-85

Nick.

Please note the water use application included as part of the response to my 30 day letter.

If you need more information or have any questions - give me a call. BKPW + Page Concrete - sent 30 day letter

RE: App # 05205-E (SWM)
Page Concrete Offi

85260

8-19

ROUTING — REQUEST

Please

- ☐ Read
- ☒ Handle
- ☐ Approve

AND

- ☐ Forward
- ☒ Return
- ☐ Keep
- ☐ Destroy
- ☐ Review With Me

To: Joni:
Please review
for SWM-
paragraph?
Maureen,
No, para.
not needed.
Thanks,
Joni

Date: 9/13/85

FROM: Thanks, Maureen

FORM 0098 Rev 5.84

85260

BKPW Partnership-
Came in with
Page Concrete
No paragraph
needed

Waiting 30 Day letter

-this was re-~~do~~ submitted
9-13-85 85260

10. A SPECIFIC CAPACITY TEST SHALL BE PERFORMED ON ONE WATER WELL AND THE DATA PROVIDED TO THE DISTRICT WITHIN SIX MONTHS OF WELL COMPLETION.

11. IF THE PERMITTED USE IS LOCATED WITHIN ONE MILE OF A BRACKISH OR SALT WATER BODY THEN WITHIN 5 DAYS AFTER EACH WELL HAS BEEN PLACED IN SERVICE, A SAMPLE OF WATER SHALL BE TAKEN AND SUBMITTED TO AN INDEPENDENT LABORATORY FOR CHEMICAL ANALYSIS FOR CHLORIDE ION CONCENTRATION. THE RESULTS OF THE ANALYSIS SHALL BE PROVIDED TO THE DISTRICT WITHIN SIX MONTHS OF WELL COMPLETION.

85260

EXHIBIT 1

LIMITING CONDITIONS

1. THE PERMITTEE SHALL OBTAIN ALL NECESSARY FEDERAL, STATE AND LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS PRIOR TO THE USE OR WITHDRAWAL OF WATER.

2. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

3. PERMITTEE SHALL MITIGATE TO THE SATISFACTION OF THE DISTRICT ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE: A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL TO PRODUCE WATER (AN ADJACENT WELL MAY BE DOMESTIC WELL, LAWN IRRIGATION WELL, PUBLIC WATER SUPPLY WELL, ETC.), B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, WETLAND OR A CANAL SYSTEM, C) SALINE WATER INTRUSION OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND D) CHANGE IN WATER QUALITY THAT CAUSES IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE TO THE SATISFACTION OF THE DISTRICT ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE: A) SIGNIFICANT REDUCTION IN WATER LEVELS IN AN ADJACENT WATER BODY (SUCH AS A LAKE, POND, WETLAND OR A CANAL SYSTEM), B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS, C) DAMAGE TO CROPS AND OTHER VEGETATION, CAUSING FINANCIAL HARM TO THE LANDOWNER, AND D) DAMAGE TO HABITAT OF RARE, ENDANGERED OR THREATENED SPECIES.

5. PERMITTEE SHALL NOT REFUSE IMMEDIATE ENTRY OR ACCESS TO ANY AUTHORIZED REPRESENTATIVE OF THE DISTRICT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION AND PRESENTS APPROPRIATE CREDENTIALS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7. APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2.

9. A DRILLERS LOG SHALL BE FURNISHED TO THE DISTRICT WITHIN 30 DAYS OF COMPLETION OF EACH NEW WELL. THE LOG SHALL SHOW TOTAL DEPTH AND CASING DEPTH.

85260

The General Permit is subject to the Limiting Conditions on Exhibit 1.

Sincerely,

Patrick J. Gleason

PATRICK J. GLEASON, Ph.D.
Director, Water Use Division
Resource Control Department

PJG:ixt
Enclosure
cc: Department of Environmental Regulation
Mr. Timer E. Powers
bcc: Groundwater
Inspection

85260

South Florida
Water Management District
Post Office Box V 3301 Gun Club Road
West Palm Beach, Florida 33402
Telephone (305) 686-8800
Florida WATS Line 1-800-432-2045

John R. Wodraska, Executive Director
Talbot C. Creel, Deputy Executive Director

QUAD 5
ITEM 2
POST 60

IN REPLY REFER TO

General Permit
St. Lucie

BP 885-260W

September 18, 1985

B.K.P.W. Partnership c/o E.R. Dike & Associates
2375 N.E. Ocean Blvd., Apt. 104-D
Stuart, FL 33494

Dear Mr. Kennedy:

SUBJECT: Water Use General Permit: 85-260W
Project: B.K.P.W. Partnership (B.K. Marine, Inc.)
Type of Use: Public Water Supply
County: St. Lucie; Sec. 31, Twp. 35S, Rge. 40E.
Permittee: B.K.P.W. Partnership c/o E.R. Dike & Associates

This letter is to acknowledge receipt of your Intent to Use Water pursuant to Rule 40E-20.042, Florida Administrative Code. Based on the information provided, District rules have been adhered to and a General Water Use Permit is in effect for this project.

This permit is for use of 400 gallons per day on the average or 500 gallons per day on a maximum day. Groundwater withdrawals will be by one-2-inch X 60-foot Shallow Water Table Aquifer well. Prior to exceeding these quantities, a modification to this permit will be necessary.

It will be necessary for you to obtain a well construction permit prior to drilling the well. The attached sheet contains the address of the appropriate agency.

Unless otherwise revoked or modified, for each withdrawal authorized herein, the duration of the General Permit shall be for twenty years, determined as follows:

1. For uses in existence on the effective date of this rule, the 20 year period begins on the effective date of this rule (January 29, 1979).

2. For uses not in existence on the effective date of this rule, the 20 year period begins with the date of filing the Notice of Intent to Use Water.