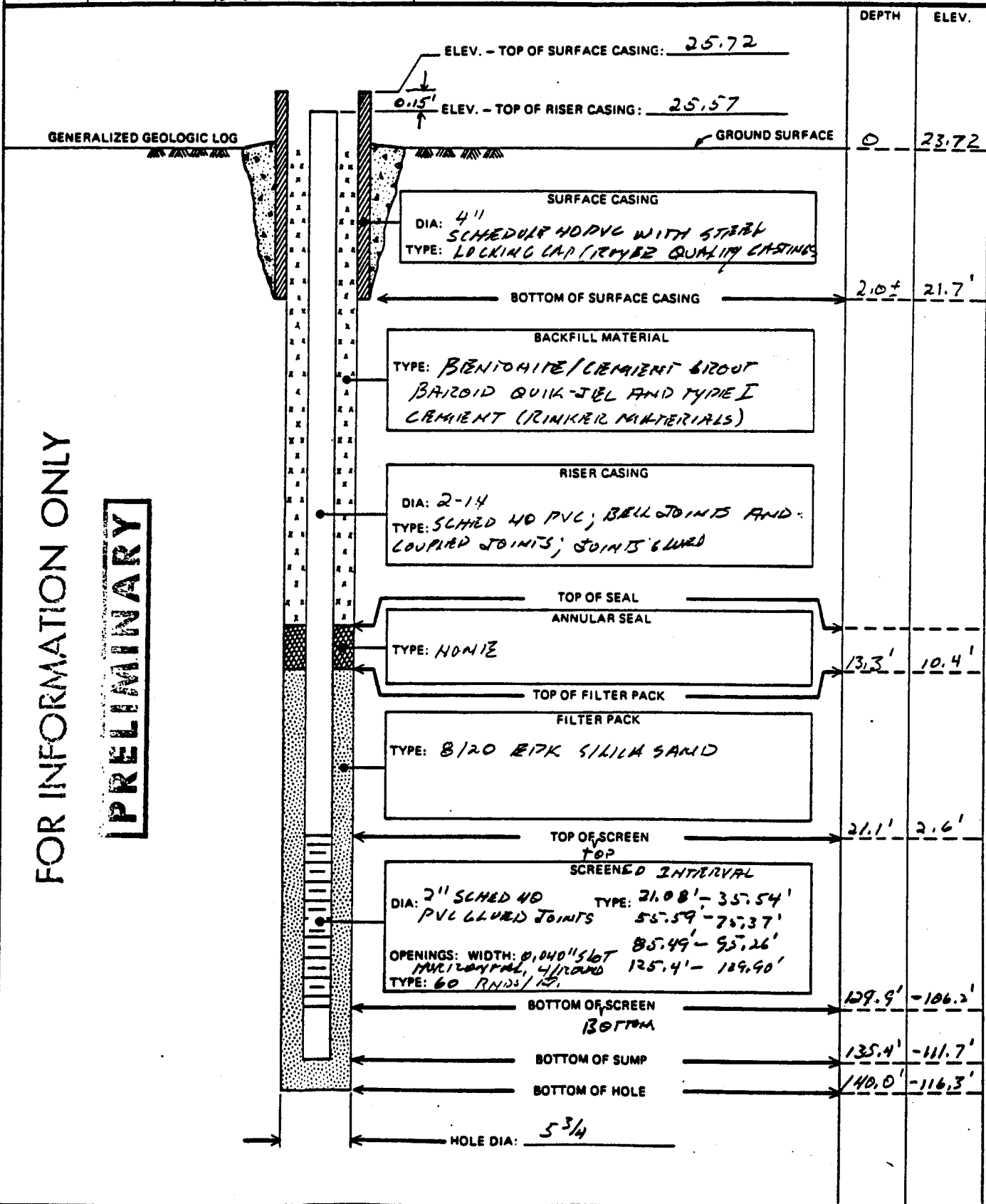




OBSERVATION WELL

PROJECT *FP&L MARTIN CC/CG*WELL NO
*BTW-2015*JOB NO.
19720 SITE *TRANSMISSION
LINE CORRIDOR*COORDINATES
*N 977049.10 E 652203.07*BEGUN
2/29/89 COMPLETED
3/29/89 PREPARED BY
*12013812
BLODMILKAZ*REFERENCE POINT FOR MEASUREMENTS
TOP OF 2" DIA PVC 121512 PIPE

PRELIMINARY

FOR INFORMATION ONLY



WELL LOG				PROJECT	JOB NO	SHEET NO	WELL NO	
SITE				FPL MARTIN CC/CG	19720	1 OF 4	BTW-2 obs	
COORDINATES				LOGGED BY				
N 977049.10, E 652203.07				Robert Blodnikar				
BEGIN	COMPLETED	DRILLER	DRILL MAKE AND MODEL	HOLE SIZE	CASING DIAMETER/LENGTH	TOTAL DEPTH		
3/24/89	3/29/89	Drilling Services, Inc. David Spencer	Mobil B-40L	5 3/4"	2-IN/137.25'	170.0'		
CUTtings (IN/FT) (FIRTH/SLT)				FL TOP OF CASING	GROUND EL	DEPTH/EL GROUND WATER		
2-IN/50 FT. TOTAL / 0.040"				23.57'	23.72'	AQUIFER		
				SHALLOW				
ELEVATION	DEPTH	THICKNESS	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION				NOTES ON WATER LEVELS, WATER RETURN, CHARACTER OF DRILLING, ETC
	0			0.0 - 5.0 ft. Brown, fine-coarse, SAND, most fine-medium, subrounded-rounded, quartz; little fines, silty; few organics and roots; trace shells.				Start drilling at 0900 hrs. using 5-3/4" dia. tricone bit. Drilling fluid Baroid Quik-Jel and water from drainage canal. Samples obtained at 5' intervals. Desander run periodically to clean fines from drilling fluid.
	5			5.0 - 10.5 ft. Gray, fine-coarse, SAND, most fine-medium, subangular-subrounded, quartz; little shell fragments, sand sized to 1/16"; little fines, silty.				
	10			10.5 - 15.0 ft. Gray, hard, SANDY LIMESTONE, fine-coarse grained sand, subrounded-rounded, well cemented with calcareous cement; with lenses of shells and shell fragments; few sand, fine.				10.5 - 14' Rig chatters - hard drilling.
	15			15.0 - 19.0 ft. Gray, hard, SANDY LIMESTONE, same as 10.5 - 15.0 ft. with interbedded lenses of shells and shell fragments, sand size to 3/8".				
	20			19.0 - 25.0 ft. Gray and tan, SHELLS and SHELL FRAGMENTS, sand size to 3/16", loose; little sand, gray, fine-medium, subrounded-rounded; few fines, silty; scattered dark gray to black sandy clay balls.				
	25			25.0 - 30.0 ft. Gray, fine-medium, SAND, most fine, subrounded-rounded, quartz; little shells, tan, sand sized to 1/4", most 1/16"; little fines, silty.				
	30			30.0 - 35.0 ft. Gray, fine-medium, SAND, most fine, subrounded-rounded, quartz and black grains; few shells, sand sized; trace angular limestone fragments; trace fines, silty.				
	35							
SITE						WELL NO BTW-2 obs		

PRELIMINARY

FOR INFORMATION ONLY



WELL LOG				PROJECT FPL MARTIN CC/CG	JOB NO 19720	SHEET NO 2 OF 4	WELL NO BTW-2 obs
ELEVATION	DEPTH	THICKNESS	SAMPLE GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION	NOTES ON WATER LEVELS, WATER RETURN, CHARACTER OF DRILLING, ETC		
	35			35.0 - 40.0 ft. Gray, fine-medium, SAND, most fine, subrounded-rounded, quartz; some shells and shell fragments, coarse sand size to 3/8"; few fines, silty; scattered black sandy clay balls.			
	40			40.0 - 45.0 ft. Gray, fine-medium, SAND, most fine, subrounded-rounded, quartz; little fines, silty; trace shells.			
	45			45.0 - 50.0 ft. Gray, fine-medium, SAND, most fine, subrounded-rounded, quartz; little fines, silty; few shells and shell fragments.			
	50			50.0 - 55.0 ft. Gray, CLAYEY SAND and tan SHELLS and SHELL FRAGMENTS, clayey sand fine-medium, fines medium plastic; shells, sand sized to 1/4"; little sandy limestone fragments, angular.			
	55			55.0 - 60.0 ft. Gray and tan SHELLS and SHELL FRAGMENTS, sand sized to 1/8"; few sandy limestone fragments, angular; few clayey sand, gray, fine-medium sand, fines medium plastic; few sand, fine, loose; interbedded shells, sand and clayey sand.			
	60			60.0 - 65.0 ft. Gray and tan, SHELLS and SHELL FRAGMENTS, sand sized to 1/8", most 1/16" to 1/8"; little sandy limestone fragments; few clayey sand, gray, fines medium plastic, sand fine.			
	65			65.0 - 70.0 ft. Gray and tan SHELLS and SHELL FRAGMENTS, sand sized; little sandy limestone fragments, gray, angular; few sand, fine.			
	70			70.0 - 75.0 ft. Gray and tan SHELL and SHELL FRAGMENTS, fine-coarse sand size, most coarse sand size; few sandy limestone fragments, gray, angular; few sand, fine.			
	75						
BTE					WELL NO BTW-2 obs		

PRELIMINARY

FOR INFORMATION ONLY



WELL LOG				PROJECT FPL MARTIN CC/CG	JOB NO 19720	SHEET NO 3 OF 4	WELL NO BTW-2 obs
ELEVATION	DEPTH	THICKNESS	SAMPLE GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION	NOTES ON WATER LEVELS, WATER RETURN, CHARACTER OF DRILLING, ETC		
	75			75.0 - 80.0 ft. Light greenish-gray, SHELLS and SHELL FRAGMENTS, sand sized to 1/4", shells slightly bleached appearance; few sandy limestone fragments, angular; few fines, calcareous, milky, marly.			
	80			80.0 - 85.0 ft. Light greenish-gray and tan SHELLS and SHELL FRAGMENTS, sand sized to 1/4"; some sand, fine-coarse, most fine, subrounded-rounded; little fines, calcareous, milky, marly.			
	85			85.0 - 90.0 ft. Light greenish-gray and tan, SHELLS and SHELL FRAGMENTS, sand sized to 3/16", most medium-coarse sand size; some sand, fine-medium, subrounded-rounded; little fines, calcareous, milky, marly.			
	90			90.0 - 95.0 ft. Light greenish-gray and tan, SHELLS and SHELL FRAGMENTS, sand sized to 5/8", most 3/16" to 3/8"; some sand, fine-medium, most fine, slightly cemented; little fines, calcareous, milky, marly.			
	95			95.0 - 100.0 ft. Light greenish-gray, SHELLS and SHELL FRAGMENTS, sand sized to 3/16", most medium sand size to 1/8", moderately bleached; little sandy limestone fragments, angular; little fines, calcareous, milky, marly; interval partially cemented.			
	100			100.0 - 105.0 ft. Light greenish-gray, fine-coarse, SAND, most fine-medium, subrounded-rounded, weakly cemented into open angular fragments; some shells and shell fragments, fine-coarse sand size, most fine sand size; little sandy clay, gray, slightly plastic; few fines, calcareous, milky, marly.			
	105			105.0 - 110.0 ft. Light greenish-gray, fine-coarse, SAND, weakly cemented, same as 100.0 - 105.0 ft.			
	110			110.0 - 115.0 ft. Light greenish-gray, fine-coarse, SAND, weakly cemented, same as 100.0 - 105.0 ft.			
	115						
BTE					WELL NO BTW-2 obs		

PRELIMINARY

FOR INFORMATION ONLY



WELL LOG				PROJECT FPL MARTIN CC/CG	JOB NO 19720	SHEET NO 4 of 4	WELL NO BTW-2 obs
ELEVATION	DEPTH	THICKNESS	SAMPLE	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION	NOTES ON WATER LEVELS, WATER RETURN, CHARACTER OF DRILLING, ETC	
	115				115.0 - 120.0 ft. Light greenish-gray, fine-coarse, SAND, weakly cemented, same as 100.0 - 105.0 ft. except slightly larger fragments.		
	120				120.0 - 125.0 ft. Light greenish-gray, fine-coarse, SAND, weakly cemented into open angular fragments; few shells, weakly cemented; few sand, white, phosphatic, milky.		
	125				125.0 - 129.0 ft. Light greenish-gray, fine-coarse, SAND, weak to moderate cementation; same as 120.0 - 125.0 ft.		
	130				HAWTHORN GROUP 129.0 - 135.0 ft. Light olive-green, SANDY CLAY, clay medium plastic, soft; little sand, fine; few shell and fine cemented sand fragments.		130 - 135' Very soft, rapid penetration.
	135				135.0 - 140.0 ft. T.D. Olive-green, SANDY CLAY, clay medium plastic, soft; little sand, fine; trace shell fragments, fine sand size; trace sandy limestone fragments, angular.		
	140				Total depth of boring 140.0 ft. Hole geophysically logged by Florida Geophysical Logging on March 29, 1989. Two-in. dia. observation well installed on March 29, 1989.		T. D. 140 ft. at 1115 hrs. Circulate hole and condition drilling fluid for geophysical logging.
SITE						WELL NO BTW-2 obs	