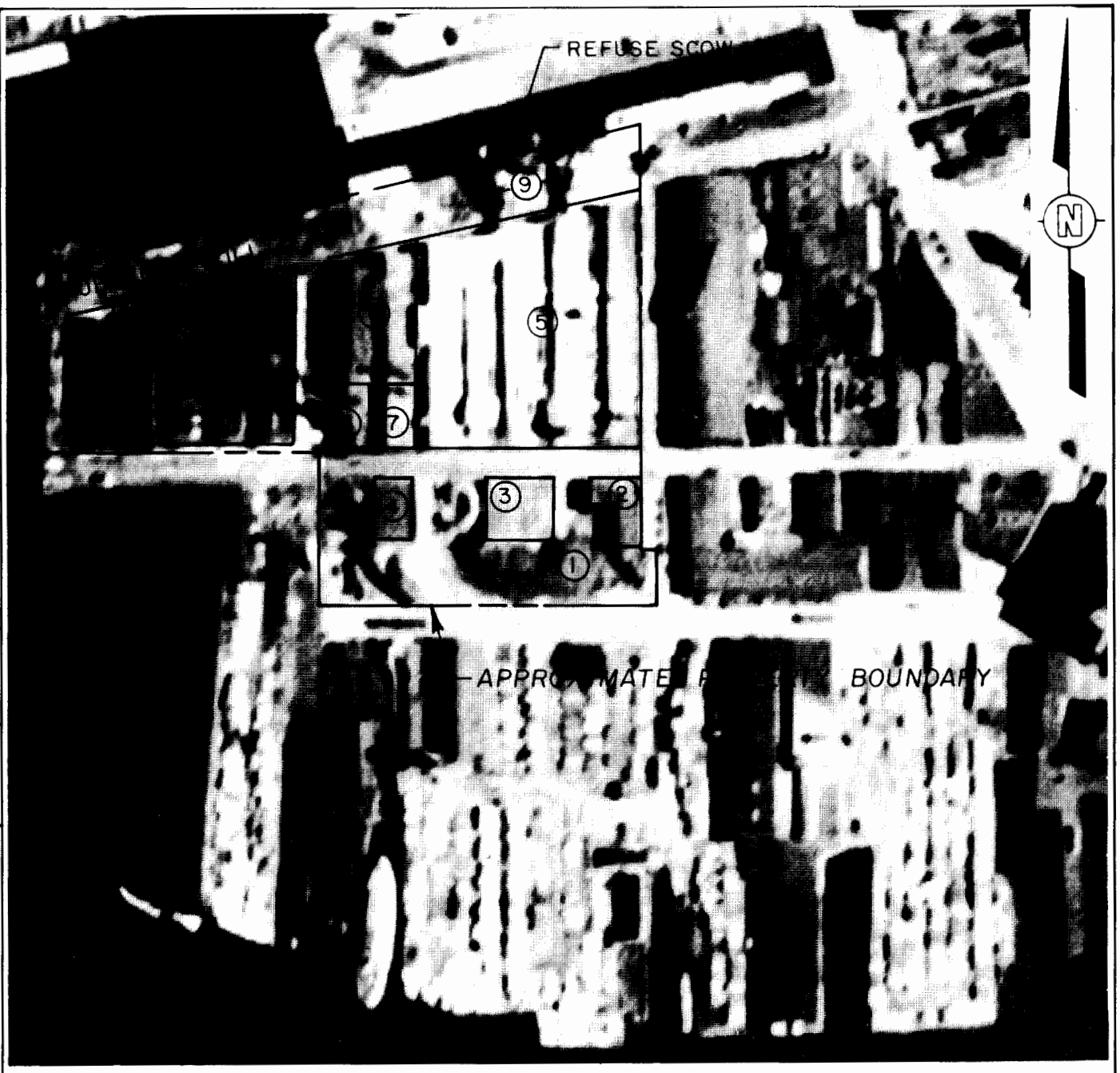
APPENDIX A

SITE HISTORICAL AERIAL PHOTOGRAPHS

DRAWN BY	RW	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A1
	1-10-85	APPROVED BY			



KEY

1. ORE STOCKPILE
2. MAIN OFFICE BLDG.
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. BICHROMATE PLANT
6. WAREHOUSE
7. MACHINE SHOP
8. BOILER ROOM
9. REFUSE LOADING FACILITIES
10. SULFATE PLANT
11. POTASH BICHROMATE PLANT
12. BISULFATE PLANT
13. SODA BICHROMATE UNIT
14. CHROMIC ACID UNIT
15. KOREON UNIT
16. SPECIAL PRODUCTS PLANT
17. CHROMIC ACID WAREHOUSE
18. LEAD-LINED WOODEN ACID STORAGE TANK

FIGURE A-1

BALTIMORE CHROME WORKS SITE AERIAL PHOTOGRAPH AND MAIN FACILITIES 1938

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	RW	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A2
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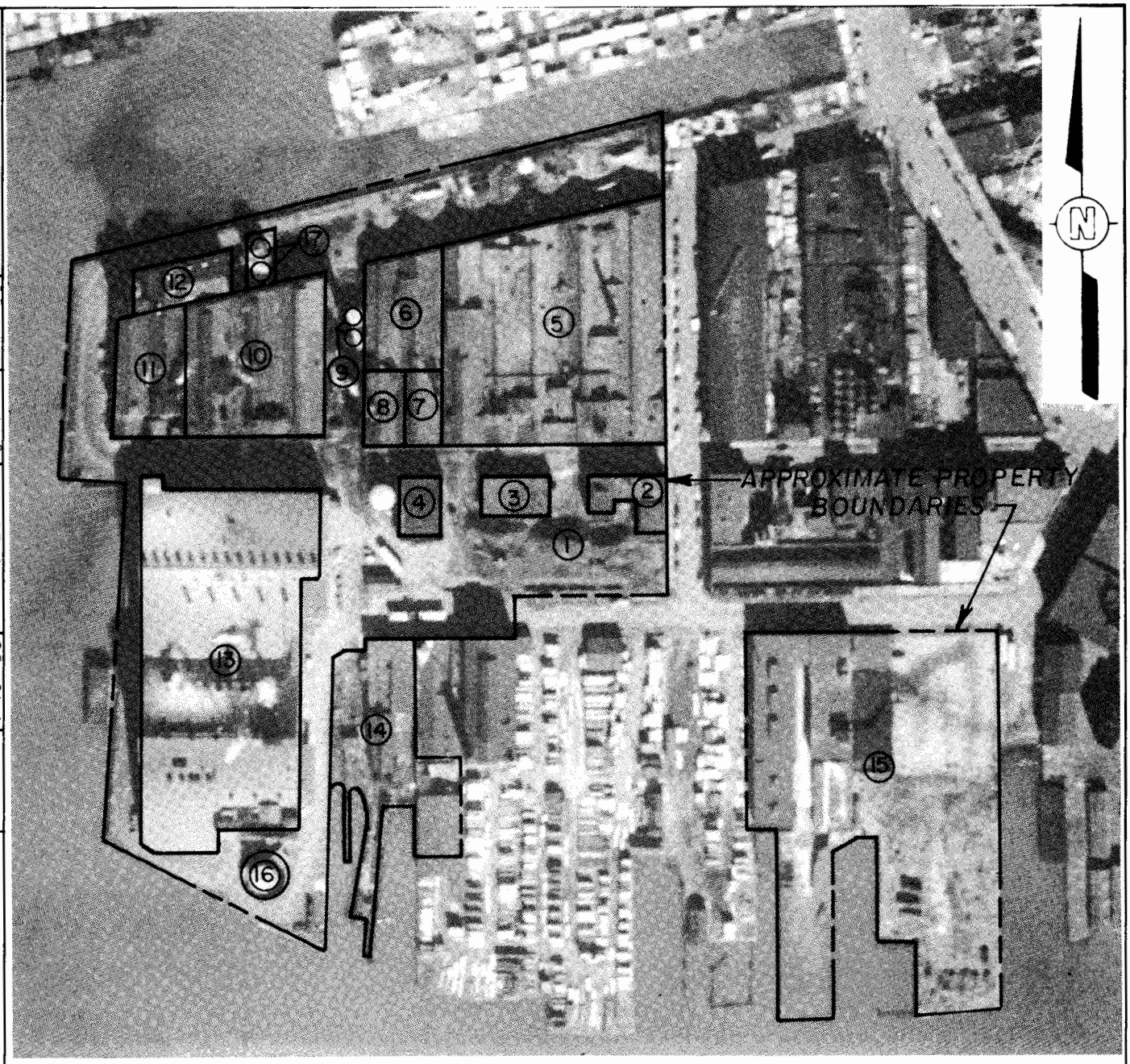


KEY

1. ORE STOCKPILE
2. MAIN OFFICE BLDG.
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. OLD BICHROMATE PLANT (OFFLINE SINCE 1951)
6. WAREHOUSE
7. MACHINE SHOP
8. BOILER HOUSE
9. LIQUOR TANKS
10. SPECIAL PRODUCTS WAREHOUSE
11. CHROMIC ACID PLANT
12. POTASH AND KOREON PLANTS
13. NEW BICHROMATE PLANT (COMPLETED 1950)
14. MARINE RAILWAY PROPERTY (PURCHASED 1950)
15. SHYROCK, MILLER AND GRAFFLIN PROPERTIES (PURCHASED 1946 – 1947)
16. FUEL OIL STORAGE TANK
17. ACID STORAGE TANKS

FIGURE A-2
BALTIMORE CHROME WORKS
SITE AERIAL PHOTOGRAPH
AND MAIN FACILITIES
1952

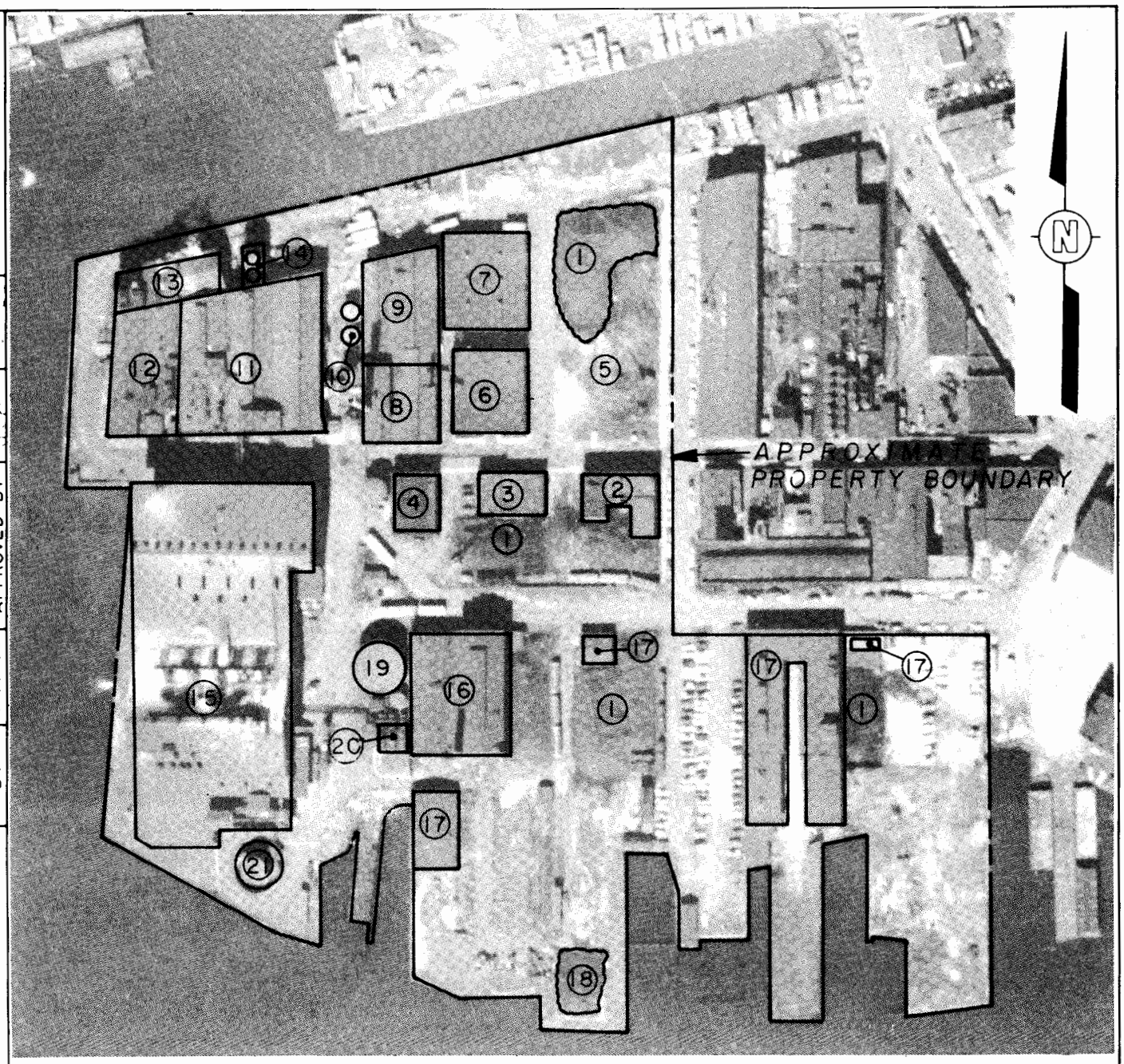
PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO 1-11-85	CHECKED BY	LPS 4-29-85	DRAWING NUMBER	846502-A3
		APPROVED BY			



KEY

1. ORE STOCKPILES
2. MAIN OFFICE BLDG.
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. VACANT (OLD PLANT DEMOLISHED 1953)
6. MACHINE SHOPS
7. STORES BLDG.
8. BOILER HOUSE
9. WAREHOUSE
10. LIQUOR TANKS
11. SPECIAL PRODUCTS WAREHOUSE
12. CHROMIC ACID PLANT
13. POTASH AND KOREON PLANTS
14. ACID STORAGE TANKS
15. BICHROMATE PLANT
16. BOWIE SMITH BLDG. (PROPERTY PURCHASED 1955)
17. STORAGE BLDGS.
18. COAL STOCKPILE
19. BICHROMATE TANK
20. CHROMATE SHIPPING TANKS
21. FUEL OIL STORAGE TANK

FIGURE A-3

BALTIMORE CHROME WORKS SITE AERIAL PHOTOGRAPH AND MAIN FACILITIES 1957

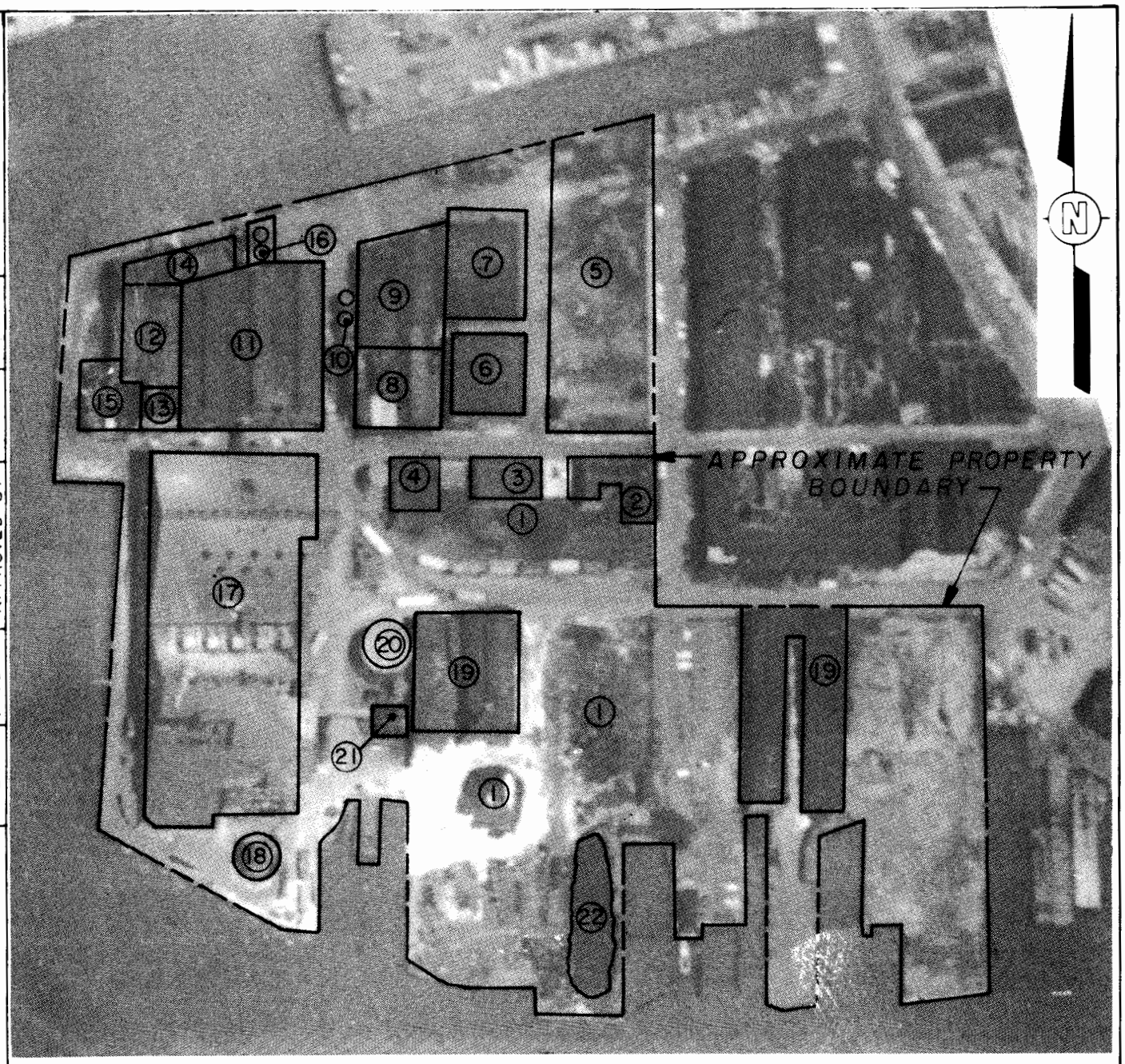
PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO 1·12·85	CHECKED BY		4-29-85	DRAWING NUMBER 846502-A4
		APPROVED BY			



KEY

1. ORE STOCKPILES
2. MAIN OFFICE BLDG
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. VACANT
6. MACHINE SHOPS
7. STORES BLDG.
8. BOILER HOUSE
9. WAREHOUSE
10. LIQUOR TANKS
11. SPECIAL PRODUCTS WAREHOUSE
12. SODIUM CHROMATE PLANT
13. CHROMIC ACID PLANT
14. POTASH AND KOREON PLANTS
15. TANK FARM
16. ACID STORAGE TANKS
17. BICHROMATE PLANT
18. FUEL OIL STORAGE
19. STORAGE BUILDINGS
20. BICHROMATE TANK
21. CHROMATE SHIPPING TANKS
22. COAL STOCKPILE

FIGURE A-4
BALTIMORE CHROME WORKS
SITE AERIAL PHOTOGRAPH
AND MAIN FACILITIES
1964

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

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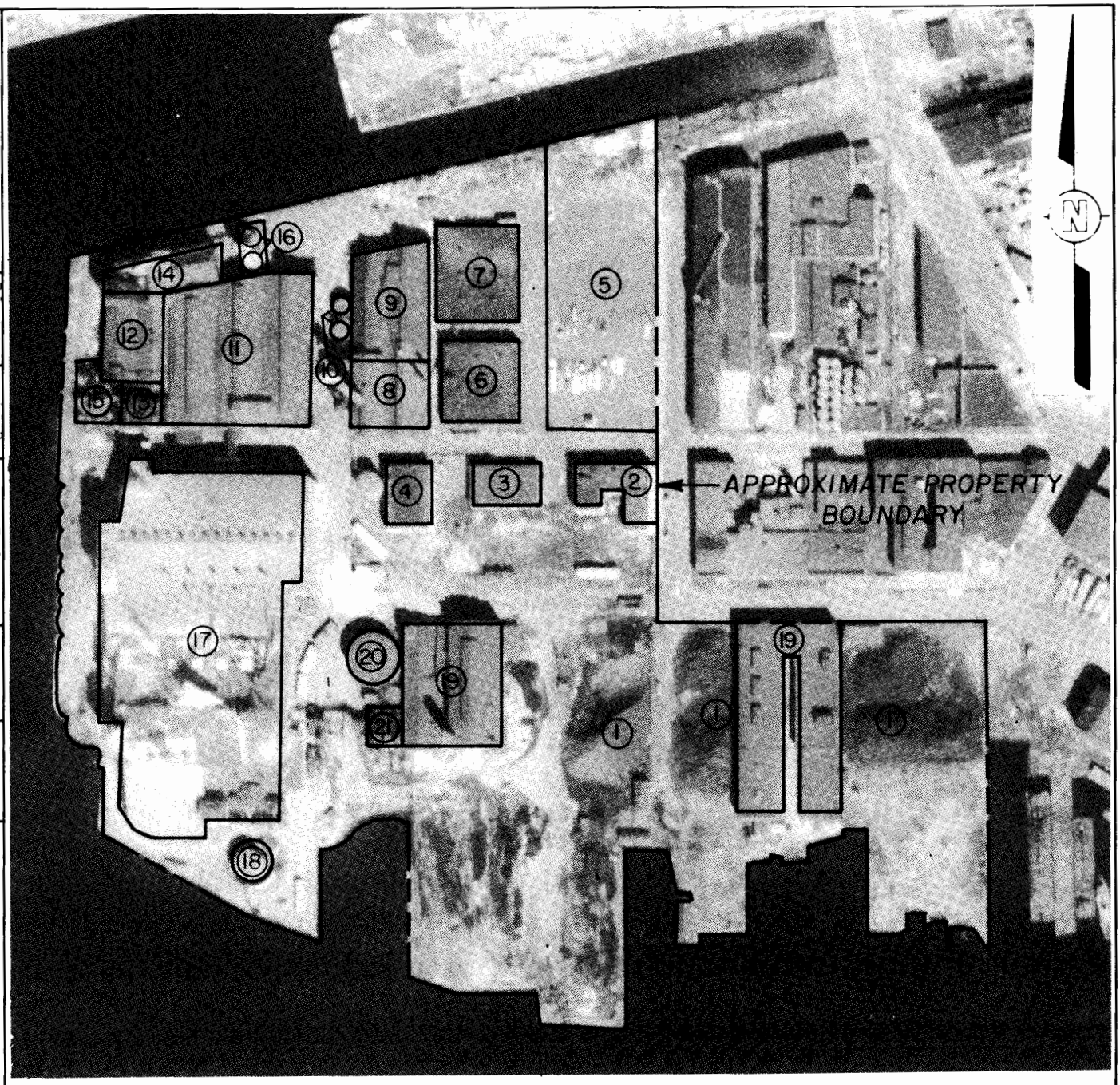
		APPROVED BY		



KEY

1. ORE STOCKPILES
2. MAIN OFFICE BLDG.
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. PARKING LOT
6. MACHINE SHOPS
7. STORES BLDG.
8. BOILER HOUSE
9. WAREHOUSE
10. LIQUOR TANKS
11. SPECIAL PRODUCTS WAREHOUSE
12. SODIUM CHROMATE PLANT
13. CHROMIC ACID PLANT
14. POTASH AND KOREON PLANT
15. TANK FARM
16. ACID STORAGE TANKS
17. BICHROMATE PLANT
18. FUEL OIL STORAGE
19. STORAGE BUILDINGS
20. BICHROMATE TANK
21. CHROMATE SHIPPING TANKS

FIGURE A-5

BALTIMORE CHROME WORKS SITE AERIAL PHOTOGRAPH AND MAIN FACILITIES 1971

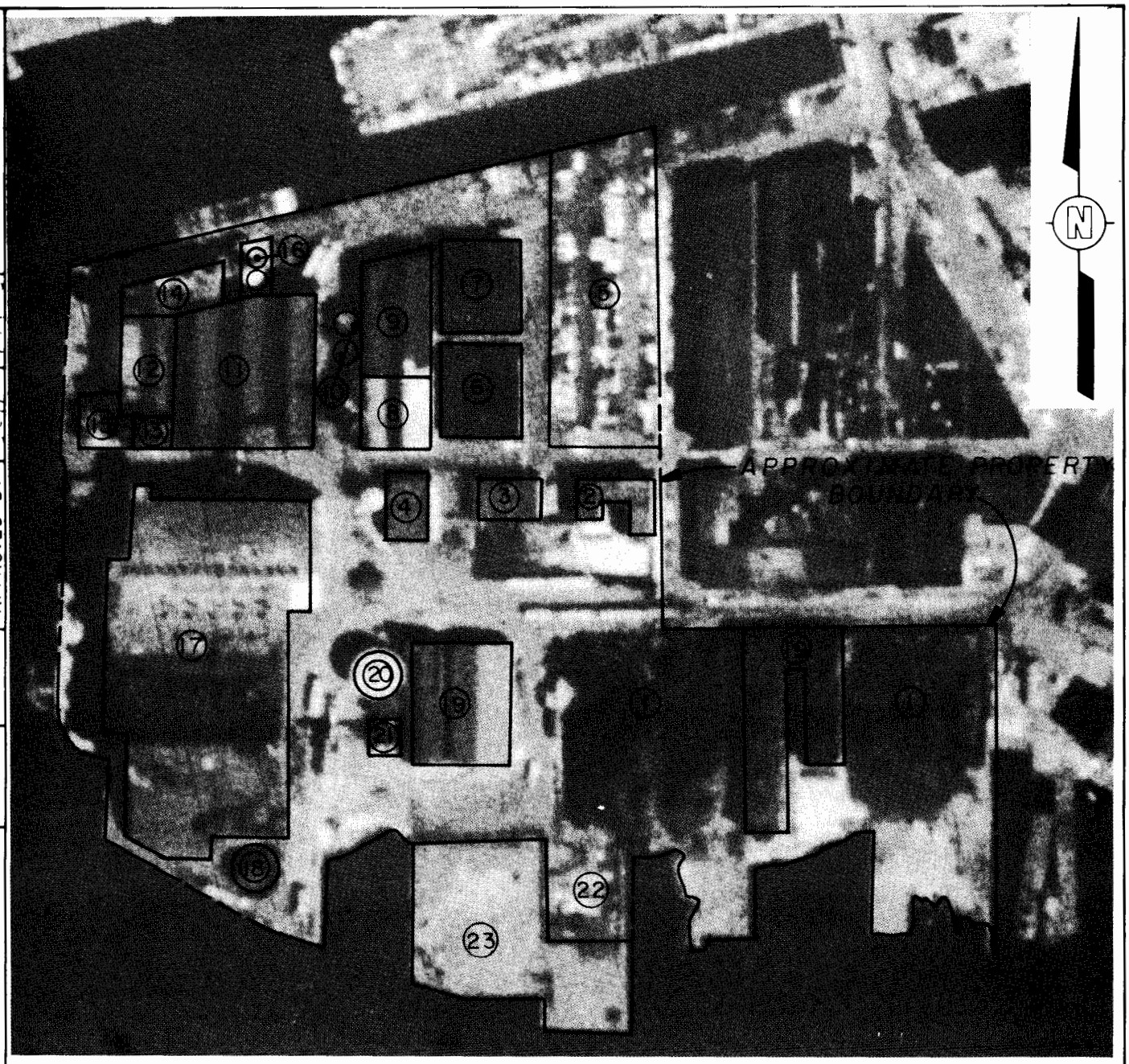
PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	CHECKED BY	DRAWING NUMBER
J. LOGRECO 1-11-85	APPROVED BY	846502-A6



KEY

1. ORE STOCKPILES
2. MAIN OFFICE BLDG.
3. PERSONNEL AND MEDICAL
4. LOCKER FACILITIES
5. PARKING LOT
6. MACHINE SHOPS
7. STORES BUILDING
8. BOILER HOUSE
9. WAREHOUSE
10. LIQUOR TANKS
11. SPECIAL PRODUCTS WAREHOUSE
12. SODIUM CHROMATE PLANT
13. CHROMIC ACID PLANT
14. POTASH AND KOREON PLANT
15. TANK FARM
16. ACID STORAGE TANKS
17. BICHROMATE PLANT
18. FUEL OIL STORAGE
19. STORAGE BLDGS.
20. BICHROMATE TANK
21. CHROMATE SHIPPING TANKS
22. STORAGE YARD
23. HELICOPTER PAD

FIGURE A-6
BALTIMORE CHROME WORKS
SITE AERIAL PHOTOGRAPH
AND MAIN FACILITIES
1981

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

APPENDIX B

BORING LOGS

GENERAL NOTES AND LEGEND

Symbols to be used for designation of subsurface materials on all boring logs and subsurface sections

GRAVEL
SAND
SILT
CLAY
ORGANIC MATTER
SLAG
WOOD
COBBLES
WATER
APPROXIMATE EXISTING GROUND
APPROXIMATE TOP OF ROCK

2" O.D. SPLIT BARREL SAMPLE

75/0.5' PENETRATION REFUSAL RESISTANCE AND FRACTIONAL INCREMENT DRIVEN IN FEET

1-8-81 GROUND WATER LEVEL AND DATE

U.S.C.S. UNIFIED SOIL CLASSIFICATION SYSTEM (CAPITAL LETTERS INDICATE LAB TEST CLASSIFICATION, LOWER CASE letters INDICATE VISUAL FIELD CLASSIFICATION).

TRACE — INDICATES PRESENCE OF 5 TO 12% OF SUBJECT MATERIAL BY WEIGHT.
SOME — INDICATES PRESENCE OF 12 TO 30% OF SUBJECT MATERIAL BY WEIGHT.
AND — INDICATES APPROXIMATELY EQUAL PORTIONS OF SUBJECT MATERIAL BY WEIGHT.

STANDARD PENETRATION RESISTANCE IS THE NUMBER OF BLOWS REQUIRED TO DRIVE A 2 INCH O. D. SPLIT BARREL SAMPLER 12 INCHES USING A 140 POUND HAMMER FALLING FREELY THROUGH 30 INCHES. THE SAMPLER WAS DRIVEN 18 INCHES AND THE NUMBER OF BLOWS RECORDED FOR EACH 6 INCH INTERVAL. THE RESISTANCE TO PENETRATION IS INDICATED ON THE DRAWING AS BLOWS PER FOOT.

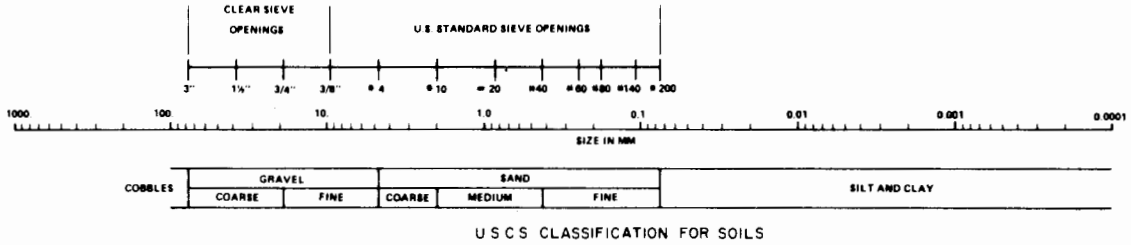
THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. ALSO THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE BORING LOCATIONS.

CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH TONS PER SQUARE FOOT
VERY SOFT	LESS THAN 0.25
SOFT	0.25 TO 0.50
MEDIUM STIFF	0.50 TO 1.0
STIFF	1.0 TO 2.0
VERY STIFF	2.0 TO 4.0
HARD	MORE THAN 4.0

DENSITY OF GRANULAR SOILS

DESIGNATION	BLOWS PER FOOT
VERY LOOSE	0-4
LOOSE	5-10
MEDIUM DENSE	11-30
DENSE	31-50
VERY DENSE	OVER 50



U.S.C.S. CLASSIFICATION FOR SOILS

DATE BEGAN: 11-14-84
DATE FINISHED: 11-15-84
GROUND SURFACE EL.: 104.28

BORING NO. W-1

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	DESCRIPTION	U.S.C.S.	REMARKS
			COBBLESTONES (GRANITE) 1.0'		SLIGHT GRAVEL VENEER (2") COBBLESTONES ARE GRANITE BLOCKS - 4" x 9" x 6"
	2.5	S 1	MEDIUM DENSE LIGHT BROWN AND GREENISH YELLOW MEDIUM SAND, MOIST TO DRY 3.0'	* sp	
100.0	5.0	S 2	LOOSE LIGHT BROWN CLAYEY FINE SAND, MOIST 5.5'	sc	S-1: FILL WITH LARGE AREAS OF CHROME STAININGS
	7.5	S 3	MEDIUM DENSE BROWN MEDIUM TO COARSE SAND WITH TRACE GRAVEL, MOIST 8.0'	* sp	S-3: SLIGHT REACTION WITH D.C.
11-14-84	10.0	S 4	STIFF BROWN CLAY WITH SOME FINE SAND, MOIST 11.5'	cl	WATER AT 8.98'
	12.5	S 5	MEDIUM DENSE BROWN FINE TO MEDIUM SAND WITH TRACE GRAVEL, WET 13.0'	cl / sp	
90.0	15.0	S 6	MEDIUM STIFF BROWN SILTY CLAY WITH SOME FINE SAND, WET 14.5'	cl	
			MEDIUM DENSE YELLOW MEDIUM SAND, WET 15.5'	sp	
	17.5	S 7	VERY DENSE WHITE TO LIGHT YELLOW TO REDDISH BROWN FINE SAND, WET	sp	
			GRADING TO		
	20.0	S 8	VERY DENSE WHITE VERY FINE SAND WITH TRACE TO SOME SILT, WET	* sp	65
			GRADING TO		
	22,5	S 9	VERY DENSE WHITE VERY FINE SAND, WET	* sp	162/0.9'
			GRADING TO		
80.0	25.0	S 10	VERY DENSE WHITE (WITH SOME LIGHT BROWN STAININGS) FINE TO VERY FINE SAND, WET	* sp	75

PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-1
SHEET 1 OF 2

DATE BEGAN: 11-14-84
DATE FINISHED: 11-15-84
GROUND SURFACE EL.: 104.28

BORING NO. W-1

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
	27.5	S 11		VERY DENSE WHITE (WITH SOME LIGHT BROWN STAINING) FINE TO VERY FINE SAND, WET	sp*	105	
	30.0	S 12		VERY DENSE WHITE WITH SOME LIGHT BROWN STAINING) FINE TO VERY FINE SAND, WET	sp*	101	
	32.5	S 13		MEDIUM DENSE WHITE FINE SAND WITH TRACE CLAY AND TRACE GRAVEL, WET 33.0'	sp*		
70.0	35.0	S 14		VERY DENSE GRAYISH WHITE TO YELLOWISH GRAY VERY FINE SAND WITH TRACE SILT, WET 34.6'	sp*	130/0.9'	S-14: CHROME-STAINED
				HARD GRAYISH WHITE SILT WITH TRACE TO SOME VERY FINE SAND, MOIST 35.5'	mh*		
	37.5	S 15		VERY DENSE IGHT GREENISH YELLOW FINE TO VERY FINE SAND, WET	sp*	158/0.9'	S-15: CHROME-STAINED
	40.0	S 16		40.5'	sp*	88	S-16: CHROME-STAINED
	42.5	S 17		VERY DENSE LIGHT GRAYISH BROWN FINE TO MEDIUM SAND WITH SOME GRAVEL, WET 43.8'	sp*	116	S-17: CHROME-STAINED
60.0	45.0	S 18		HARD LIGHT GRAY TO DARK REDDISH BROWN TO PINK SILT WITH SOME CLAY, DRY 45.0'	ml*	76	
57.78	46.5	S 19		HARD DARK PINK AND GRAY SILT WITH SOME CLAY AND TRACE TO SOME VERY FINE SAND, DRY	ml*	157/0.9'	
				BOTTOM OF BORING 46.5'			

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-1
SHEET 2 OF 2

DATE BEGAN: 11-21-84
DATE FINISHED: 11-21-84
GROUND SURFACE EL.: 98.84

BORING NO. W-2

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 0.3'			
	2.5	S 1		MEDIUM STIFF BLACK TO REDDISH GRAY SILT WITH SOME CLAY AND SOME FINE TO MEDIUM SAND, MOIST 2.2'	ml		
11-21-84				GREENISH GRAY MEDIUM DENSE FINE TO MEDIUM SAND WITH SOME CLAY, MOIST 3.0'	sp*		WATER AT ~3.5'
	5.0	S 2		STIFF BLACK SILT WITH SOME CLAY AND TRACE MEDIUM SAND, MOIST TO DRY 4.8'	ml* sp*		3.5-4.8': SLIGHT REACTION WITH DIPHENYL CARBAZIDE (D.C.)
	7.5	S 3		MEDIUM DENSE LIGHT BROWN FINE TO MEDIUM SAND, MOIST 5.5'	ml		
90.0	10.0	S 4		SOFT BLACK TO DARK GRAY SILT WITH SOME FINE SAND, MOIST 10.5'	ml		S-4: TRACE SHELLS IN SAMPLE
	12.5	S 5		SOFT BLACK SILT WITH SOME CLAY AND TRACE VERY FINE MICACEOUS SAND, MOIST	mh		
	15.0	S 6		SOFT BLACK SILT WITH SOME CLAY AND TRACE VERY FINE MICACEOUS SAND, MOIST	mh		
	17.5	S 7		SOFT VERY DARK BROWN SILT AND SOME CLAY, MOIST 18.0'	mh		
80.0	20.0	S 8		SOFT BLACK TO DARK BROWN SILT WITH SOME CLAY AND SOME FINE TO MEDIUM SAND, MOIST TO WET GRADING TO	* ml		
	22.5	S 9		SOFT BLACK SILT WITH SOME CLAY, MOIST 22.0'	mh		
				LOOSE GRAY FINE SAND WITH SOME CLAY, WET 23.0'	sp		
	25.0	S 10		SOFT BLACK SILT WITH SOME CLAY; LARGE (2") PIECE OF WOOD, WET 24.0'	mh		
				MEDIUM DENSE BROWN COARSE SAND AND GRAVEL, WET	sp		

PROJECT NO. 846502

BORING NO. W-2
SHEET 1 OF 2

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-21-84
DATE FINISHED: 11-21-84
GROUND SURFACE EL.: 98.84

BORING NO. W-2

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				MEDIUM DENSE BROWN COARSE SAND AND GRAVEL, WET 25.5'			
	27.5	S 11		SOFT BLACK TO DARK BROWN SILT WITH SOME CLAY, WET 28.0'	mh		S-12: CHROME STAININGS
70.0	30.0	S 12		MEDIUM DENSE GREENISH YELLOW TO FINE MEDIUM SAND, WET 30.5'	sp*		
66.34	32.5	S 13		VERY STIFF PINK WITH GRAY MOTTLES CLAY WITH TRACE SILT AND TRACE INTERBEDDED VERY FINE SAND, MOIST	cl*		S-13: SLIGHT REACTION WITH D.C.

BOTTOM OF BORING
32.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-30-84
DATE FINISHED: 11-30-84
GROUND SURFACE EL.: 99.61

BORING NO. W-3

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	DESCRIPTION	U.S.C.S.	REMARKS
			ASPHALT 0.4'		
	2.5	S 1	MEDIUM STIFF BLACK SILT WITH SOME SAND AND SOME GRAVEL, TRACE CLAY, MOIST	ml*	S-1: - SLIGHT REACTION WITH DIPHENYL CARBAZIDE (D.C.)
			GRADING TO		
	5.0	S 2	MEDIUM STIFF BLACK TO LIGHT BROWN SILT WITH TRACE TO SOME CLAY, SOME SAND AND TRACE GRAVEL 5.5'	ml*	
11-30-84					WATER AT ~6'
	7.5	S 3	WOOD 6.75'	-*	
			MEDIUM STIFF DARK BROWN TO BLACK SILT WITH SOME CLAY AND SOME SAND, WET 8.0'	ml*	
			WOOD 8.75'	-*	
90.0	10.0	S 4	MEDIUM STIFF DARK BROWN SILT WITH TRACE CLAY AND TRACE SAND, MOIST	ml*	
			GRADING TO		
	12.5	S 5	STIFF DARK GRAYISH BROWN SILT WITH TRACE CLAY AND SOME INTERBEDDED SAND, MOIST	ml*	S-5: IODINE STAINING ON SPOON
			GRADING TO		
	15.0	S 6	STIFF DARK BROWN SILT WITH TRACE TO SOME CLAY, MOIST	ml*	S-6: IODINE-COLORED MUD ON SPOON
			GRADING TO		
	17.5	S 7	MEDIUM STIFF DARK BROWN SILT WITH SOME CLAY, WET 16.8'	ml*	
80.0	20.0	S 8	VERY SOFT BROWN TO BLACK CLAYEY SILT, WET 20.5'	mh	
	22.5	S 9	VERY SOFT BLACK MICACEOUS SILT, WET	ml*	
	25.0	S 10		ml*	S-10: ph 5 (PAPER)

PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-3
SHEET 1 OF 2

DATE BEGAN: 11-30-84
DATE FINISHED: 11-30-84
GROUND SURFACE EL.: 99.61

BORING NO. W-3

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				VERY SOFT BLACK MICACEOUS SILT, WET 26.3'	ml*		
	27.5	S 11		MEDIUM STIFF DARK GRAY TO BLACK SANDY SILT, MOIST 27.4'	ml* cl*		S-11: ph ~5 (PAPER)
				STIFF LIGHT GRAY CLAY WITH SOME SILT, MOIST 28.0'			
70.0	30.0	S 12		SOFT BLACK MICACEOUS SILT WITH SOME CLAY, MOIST 29.7'	mh sp		29.7-30.0: ph ~1 (PAPER)
				DENSE GRAY TO YELLOW COARSE SAND AND GRAVEL 30.5'			S-13: ph ~5 (PAPER) 1/8" GRAY FINE DENSE SAND IN TIP OF SPOON
	32.5	S 13		STIFF DARK GRAY SANDY SILT WITH SOME CLAY, MOIST 33.0'	ml		
	35.0	S 14		MEDIUM STIFF INTERBEDDED LIGHT GRAY SILT AND FINE TO MEDIUM SAND, MOIST 35.5'	ml* sp		S-14: SLIGHT REACTION WITH D.C. YELLOW MED. SAND IN TIP OF SPOON. ph ~5 (PAPER)
62.11	37.5	S 15		VERY STIFF WHITE CLAY WITH SOME SILT, MOIST	cl		S-15: ph ~5 (PAPER)

BOTTOM OF BORING
37.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-26-84
DATE FINISHED: 11-26-84
GROUND SURFACE EL.: 101.95

BORING NO. W-4

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 0.5'			
100.0	2.5	S 1			sw*		S-1: FILL
	5.0	S 2		LOOSE TO MEDIUM DENSE ORANGE WELL SORTED SANDS WITH SOME GRAVEL AND TRACE SILT, DRY	sw*		S-2: FILL
	7.5	S 3			sw*		S-3: FILL
	10.0	S 4		10.5'	sw*		S-4: FILL
90.0	12.5	S 5		LOOSE ORANGISH BROWN FINE TO MEDIUM SAND WITH SOME SILT AND SOME GRAVEL AND TRACE CLAY, MOIST 13.0'	sp		S-5: FILL
11-26-84	15.0	S 6		MEDIUM DENSE BROWNISH ORANGE SILTY FINE SAND WITH TRACE TO SOME GRAVEL, MOIST TO WET 15.5'	sp	170/0.7'	WATER AT ~15.5'
	17.5	S 7		NO RECOVERY	-		
	20.0	S 8		MEDIUM DENSE BROWN WELL SORTED SAND, WET 21.0'	sw*		S-8: SLIGHT MOTHBALL ODOR
80.0	22.5	S-9		WOOD 21.2'	sp*	100/0.5'	S-9: "MOTHBALL" ODOR
				LOOSE DARK GRAY TO BLACK SILTY SAND WITH SOME GRAVEL, WET 23.0'			
	25.0	S 10		MEDIUM DENSE YELLOWISH GRAY FINE SAND, WET	sp*		S-10: CHROME STAINING

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-4
SHEET 1 OF 2

DATE BEGAN: 11-26-84
DATE FINISHED: 11-26-84
GROUND SURFACE EL.: 101.95

BORING NO. W-4

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				GRADING TO			
	27.5	S 11		VERY DENSE GREENISH YELLOW FINE SAND WITH SOME INTERBEDDED GRAVEL WET	sp *	71	S-11: CHROME STAINING
				28.0'			
	30.0	S 12		MEDIUM DENSE BRIGHT YELLOWISH GREEN FINE TO MEDIUM SAND, WET	sp *		S-12: CHROME STAINING
71.45	30.5						

BOTTOM OF BORING
30.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

PROJECT NO. 846502

BORING NO. W-4
SHEET 2 OF 2

DATE BEGAN: 11-27-84
DATE FINISHED: 11-27-84
GROUND SURFACE EL.: 100.41

BORING NO. W-5

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
100.0				ASPHALT 0.75'			FILL
	2.5	S 1		MEDIUM DENSE LIGHT BROWN TO BLACK SAND AND GRAVEL WITH SOME SILT, DRY	sw/gw *		
	5.0	S 2		NO RECOVERY	-		
11-27-84	7.5	S 3		LOOSE LIGHT BROWN TO BLACK SILTY SAND WITH SOME GRAVEL, MOIST TO WET	sw *		WATER AT ~6' S-3: FILL, SOME SEASHELL FRAGMENTS
				9.0'	sw		
	10.0	S 4		WOOD 10.5'	-		S-4: 9" WOOD IN SPOON, GRAIN RUNS HORIZONTAL. TIE BACK? PINE SMELL.
90.0	12.5	S 5		MEDIUM DENSE DARK BROWN AND BLACK SAND AND GRAVEL WITH SOME SILT AND SOME WOOD FRAGMENTS 13.0'	sw/gw *		
	15.0	S 6		VERY SOFT BLACK CLAYEY SILT, WET 15.5'	mh		
	17.5	S 7		VERY LOOSE BROWN FINE TO MEDIUM SAND WITH SOME SILT, WET 16.7'	sp * - *	91	S-7: PINE SMELL, HORIZONTAL GRAINS.
80.0	20.0	S 8		WOOD 20.5'	- *		
	22.5	S 9		VERY SOFT BLACK CLAYEY SILT, WET	mh		
	25.0	S 10			mh		

PROJECT NO. 346502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-5
SHEET 1 OF 2

DATE BEGAN: 11-27-84
DATE FINISHED: 11-27-84
GROUND SURFACE EL.: 100.41

BORING NO. W-5

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				VERY SOFT BLACK CLAYEY SILT, WET 25.5'			
	27.5	S 11		NO RECOVERY	-		
				MEDIUM DENSE SILTY FINE SAND, WET 28.8'	sp		
	30.0	S 12		SOFT BLACK CLAYEY SILT, WET	mh		
70.0							
	32.5	S 13		NO RECOVERY	-		
	35.0	S 14		VERY SOFT BLACK SILT WITH SOME CLAY, WET 35.5'	mh		
	37.5	S 15		MEDIUM DENSE GRAY COARSE SAND AND GRAVEL WITH TRACE SILT, WET	gp/* sp		
				GRADING TO			
	40.0	S 16		LOOSE TO MEDIUM DENSE GRAY COARSE SAND AND GRAVEL, WET	sp/* gp		S16: SLIGHT REACTION WITH DIPHENYL CARBAZIDE
60.0							
	42.5	S 17			sp/* gp		
56.91	43.5						
				BOTTOM OF BORING 43.5'			

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-5
SHEET 2 OF 2

DATE BEGAN: 11-28-84
DATE FINISHED: 11-28-84
GROUND SURFACE EL.: 99.84

BORING NO. W-6

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	DESCRIPTION	U.S.C.S.	REMARKS
			ASPHALT 0.5'		
	2.5	S 1	LOOSE COARSE GRAY GRAVEL, DRY 1.0'	ml*	S-1: BRICK FRAGMENTS
11-28-84	5.0	S 2	MEDIUM STIFF GRAVELLY SILT WITH SOME SAND, DRY TO MOIST	ml*	S-2: FILL, SOME CINDER AND BRICK
			GRADING TO		WATER AT ~ 5.5'
	7.5	S 3	SOFT GRAVELLY SILT WITH SOME SAND, WET	ml*	S-3: FILL
90.0	10.0	S 4		ml*	S-4: FILL
			10.5'		
	12.5	S 5	LOOSE COARSE RED GRAVELLY SAND WITH TRACE SILT, WET	sw*	S-5: BRICKS AND FILL
	15.0	S 6		sw*	S-6: BRICKS AND FILL
			15.5'		
	17.5	S 7	VERY LOOSE LIGHT BROWN TO RED FINE TO MEDIUM SAND WITH TRACE GRAVEL, WET	sp*	S-7: FILL
			18.7'		
80.0	20.0	S 8	SOFT BLACK CLAYEY SILT WITH TRACE GRAVEL, WET	sp* mh*	
			20.5'		
	22.5	S 9	LOOSE DARK GREENISH BLACK WELL SORTED SAND WITH SOME SILT, WET	sw*	S-9: MANY SEASHELL FRAGMENTS
			23.0'		
	25.0	S 10	SOFT DARK GREENISH BLACK SILT WITH SOME CLAY AND SOME FINE SAND, WET	mh*	

PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-28-84
DATE FINISHED: 11-28-84
GROUND SURFACE EL.: 99.84

BORING NO. W-6

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
	27.5	S 11		SOFT DARK GREENISH BLACK SILT WITH SOME CLAY AND SOME FINE SAND, WET	mh*		
				28.0'			
	30.0	S 12		VERY SOFT DARK GREENISH GRAY CLAYEY SILT, WET	mh*		
				29.4'			
70.0					mh*		29.4-30.0': SULPHUR ODOR
	32.5	S 13		SOFT BLACK CLAYEY SILT; MANY WOOD FRAGMENTS AND ORGANICS, WET	mh*		
				33.0'			
	35.0	S 14		VERY SOFT DARK GREEN GRAY CLAYEY SILT, MOIST TO WET	mh*		
64.34	35.5						

BOTTOM OF BORING
35.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-16-84
DATE FINISHED: 11-16-84
GROUND SURFACE EL.: 98.46

BORING NO. W-7A

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 1.0'			FILL MATERIALS
	2.5	S 1		BLACK MEDIUM DENSE SILTY SAND AND SOME GRAVEL, MOIST TO DRY	sw*		S-1: FILL MATERIALS
				GRADING TO			
	5.0	S 2		MEDIUM DENSE GRAYISH BLACK TO GRAY SANDY SILT WITH SOME GRAVEL, MOIST TO WET	mh*		S-2: FILL WATER AT 5.9'
11-19-84				GRADING TO			
	7.5	S 3		MEDIUM STIFF BLACK TO DARK BROWN SILT WITH SOME SAND AND TRACE CLAY, MOIST 8.0'	mh*		S-3: FILL, SOME CHROME STAININGS.
90.0	10.0	S 4		VERY SOFT DARK GRAYISH BLACK SILT WITH TRACE TO SOME CLAY, WET 10.5'	mh		S-4: SLIGHT HYDROCARBON ODOR AND OILY SHEEN.
	12.5	S 5		VERY SOFT BLACK SILT WITH TRACE CLAY AND TRACE TO SOME INTERLAYERED FINE SAND, WET	mh		S-5: OILY SHEEN, A FEW WOOD FRAGMENTS
	15.0	S 6			mh		S-6: A FEW WOOD FRAGMENTS
				GRADING TO			
	17.5	S 7			mh		
80.0	20.0	S 8		VERY SOFT BLACK SILT, WET	mh		
	22.5	S 9		21.5'	mh		
				VERY SOFT BLACK SILT WITH SOME FINE MICACEOUS SAND, MOIST TO WET	mh		
	25.0	S 10		24.6'	mh		
				VERY SOFT BLACK SILT WITH TRACE CLAY, WET			

PROJECT NO. 846502

BORING NO. W-7A
SHEET 1 OF 2

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-16-84
DATE FINISHED: 11-16-84
GROUND SURFACE EL.: 98.46

BORING NO. W-7A

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				VERY SOFT BLACK SILT WITH TRACE CLAY, WET 25.5'			
	27.5	S 11		VERY SOFT BLACK TO GRAY SILT WITH SOME CLAY AND SOME VERY FINE SAND, TRACE GRAVEL, MOIST TO WET 28.0'	mh		
70.0	30.0	S 12		DENSE BROWN WELL SORTED SAND WITH SOME GRAVEL, WET 30.5'	sw*		
	32.5	S 13		VERY DENSE BRIGHT GREENISH YELLOW FINE TO MEDIUM SAND WITH TRACE SILT, WET 33.0'	sp*	72	S-13: CHROME STAINING S
	35.0	S 14		VERY DENSE BRIGHT GREENISH YELLOW AND BROWNISH RED FINE TO MEDIUM SAND, WET 35.5'	sp*	88	S-14: CHROME STAINING S
	37.5	S 15		VERY DENSE GRAYISH YELLOW TO REDDISH BROWN SILTY VERY FINE SAND, MOIST 38.0'	sp*	124/1.0'	S-15: CHROME STAINING S
60.0		S-16		HARD LIGHT GRAY SILT, MOIST 39.0'	mh*	157/0.8'	AUGER REFUSAL AT 39.0'
57.96	40.0 / 40.5	S 17		HARD LIGHT GRAY SILT AND TRACE VERY FINE SAND, DRY	mh*	175/0.9'	S-17: VERY SLIGHT REACTION WITH DIPHENYL CARBAZIDE

BOTTOM OF BORING
40.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 11-29-84
DATE FINISHED: 11-29-84
GROUND SURFACE EL.: 100.94

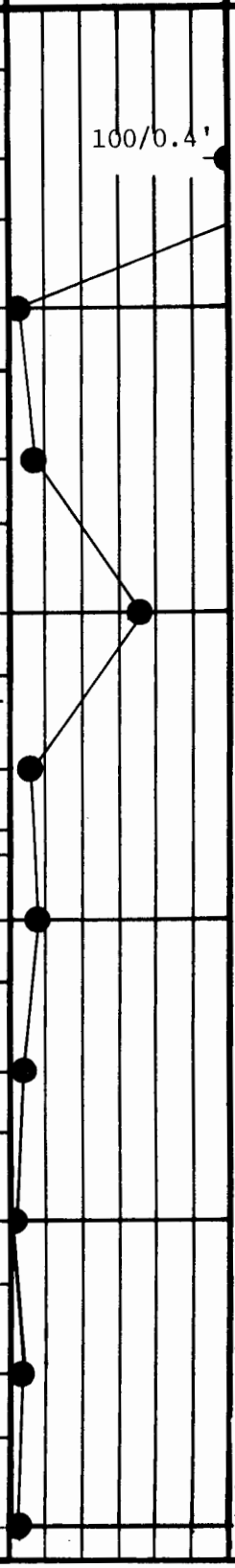
BORING NO. W-8

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	DESCRIPTION	U.S.C.S.	REMARKS
100.0			ASPHALT 0.9'		
	2.5	S 1	VERY DENSE DARK GRAY TO LIGHT BROWN SANDY SILT WITH SOME GRAVEL, DRY 3.0'	ml *	S-1: FILL
			ASPHALT 3.2'		
	5.0	S 2	LOOSE BLACK TO WHITE TO DARK RED SILTY SAND WITH SOME GRAVEL, MOIST 6.0'	sw	S-2: SOME BRICK FRAGMENTS
11-29-84	7.5	S 3		ml	WATER AT 6.5' S-3: SOME SEASHELL FRAGMENTS
	10.0	S 4	SOFT DARK GRAY CLAYEY SILT WITH SOME SAND AND TRACE TO SOME GRAVEL, WET	ml	S-4: OILY SHEEN TO WATER IN SPOON
90.0	12.5	S 5	13.0'	ml *	S-5: SOME SEASHELL FRAGMENTS, OILY SHEEN TO WATER IN SPOON, SLIGHT REACTION WITH DIPHENYL CARBAZIDE
			DARK GRAY FINE SAND WITH SOME SILT, WET 13.9'	sp	
	15.0	S 6	WOOD 15.5'	-	S-6: AUGERS SINKING IN HOLE
	17.5	S 7	VERY SOFT DARK GRAYISH BLACK SILT WITH SOME CLAY, TRACE TO SOME SAND AND TRACE GRAVEL, WET 18.0'	mh	S-7: SULFUR ODOR
	20.0	S 8	VERY SOFT BLACK MICACEOUS SILT, WET	ml	S-8: SULFUR ODOR
			GRADING TO		
80.0	22.5	S 9	VERY SOFT BLACK MICACEOUS SILT WITH TRACE COARSE SAND, WET	ml	S-9: SAND IS SEASHELL FRAGMENTS
			GRADING TO		
	25.0	S 10	VERY SOFT BLACK MICACEOUS SILT WITH TRACE GRAVEL, WET	ml	S-10: GRAVEL IS SEASHELL FRAGMENTS, TRACE WOOD FRAGMENTS
75.44	25.5				

PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50



PROJECT NO. 846502

BOTTOM OF BORING 25.5'

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-8
SHEET 1 OF 1

DATE BEGAN: 12-1-84
DATE FINISHED: 12-1-84
GROUND SURFACE EL.: 100.85

BORING NO. W-9

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
100.0				LOOSE WHITE GRAVEL, DRY 1.0'			
	2.5	S 1		MEDIUM STIFF DARK BROWN SILTY CLAY AND RED GRAVEL WITH SOME SAND, MOIST 3.0'	ml/gw		S-1: BRICK FRAGMENTS, FILL
	5.0	S 2		LOOSE BROWN COARSE SAND AND GRAVEL, MOIST	sp/gw		
12-1-84	7.5	S 3		8.0'	sp/gw		WATER AT ~ 7.5'
	10.0	S 4			sw/gw		
90.0	12.5	S 5		MEDIUM DENSE BROWN TO BLACK WELL SORTED SAND AND GRAVEL, WET	sw/gw		
	15.0	S 6		15.5'	sw/gw		
	17.5	S 7		MEDIUM DENSE BROWN WELL SORTED SAND AND GRAVEL, TRACT SILT, WET	sw/gw		S-7: WOOD FRAGMENTS
	20.0	S 8			sw/gw		
80.0	22.5	S 9		21.5' LOOSE BLACK WELL SORTED SAND WITH SOME GRAVEL AND TRACE SILT, MOIST 23.0'	sw/gw sw		S-10: WOOD FRAGMENTS, CLAM SHELL FRAGMENTS, SULFUR ODOR
	25.0	S 10		SOFT BLACK MICACEOUS SILT WITH SOME FINE SAND AND TRACE TO SOME CLAY, MOIST	mh		

PROJECT NO. 846502

NOTE: ALL SAMPLES-NO REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 12-1-84
DATE FINISHED: 12-1-84
GROUND SURFACE EL.: 100.85

BORING NO. W-9

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				GRADING TO			
	27.5	S 11		SOFT BLACK MACACEOUS SILT WITH TRACE FINE SAND AND TRACE CLAY, MOIST	mh		S-11: WOOD AND CLAM SHELL FRAGMENTS, SULFUR ODOR
	30.0	S 12			mh		S-12: WOOD AND CLAM SHELL, FRAGMENTS, SULFUR ODOR
70.0				31.6'	ml		
	32.5	S 13		LOOSE DARK GRAY FINE SAND, WET 33.0'	sp		
				LOOSE DARK GRAY FINE SAND WITH TRACE TO SOME SILT, WET 34.5'	sp		
	35.0	S 14		SOFT BLACK MICACEOUS SILT WITH SOME FINE SAND, MOIST 35.5'	ml		34.5-35.5': WOOD FRAGMENTS, SULFUR ODOR
	37.5	S 15		SOFT BLACK MICACEOUS SILT, MOIST 38.7'	ml		S-15: WOOD FRAGMENTS
	40.0	S 16		SOFT GRAY CLAY WITH TRACE SILT, MOIST 40.5'	cl		
60.0							
	42.5	S 17		LOOSE LIGHT GRAY FINE SAND WITH SOME INTERBEDDED CLAY, WET 44.0'	sp		
	45.0	S 18			sp/gp	77	
				VERY DENSE BROWNISH YELLOW COARSE SAND AND GRAVEL WITH SOME SILT 46.2'	sp/gp		
	47.5	S 19		VERY DENSE LIGHT BROWN AND YELLOW FINE SAND, WET	sp	64	
52.35	48.5						
				BOTTOM OF BORING 48.5'			

PROJECT NO. 846502

NOTE: ALL SAMPLES - NO REACTION WITH DIPHENYL CARBAZIDE

BORING NO. W-9
SHEET 2 OF 2

DATE BEGAN: 1-28-85
DATE FINISHED: 1-28-85
GROUND SURFACE EL.: 101.73

BORING NO. W-10

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P.E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 1.0'			FILL MATERIALS (BRICK, CONCRETE, ETC)
	2.5	S 1		DENSE DARK RED TO BLACK WELL SORTED SILTY SANDS - DRY	sw*		FILL MATERIALS SOME VISIBLE CHROME
	5.0	S-2		VERY DENSE DARK GRAY TO RED WELL SORTED SILTY SANDS WITH SOME GRAVEL, MOIST TO WET	sw*	100/0.2'	
				GRADING TO			
1-30-85	7.5	S 3		MEDIUM DENSE DARK BROWN FINE TO MEDIUM SAND WITH SOME SILT AND TRACE GRAVEL, WET	sp*		LAYER OF 3" THICK BRICKS AT 6' FILL MATERIALS
	10.0	S 4			sp*		SOME VISIBLE CHROME; FILL MATERIALS BOTTOM OF FILL @ 11.3 FEET
				11.3'			
	12.5	S 5		STIFF DARK GREENISH GRAY FINE SANDY SILT WITH TRACE GRAVEL AND TRACE INTERBEDDED ORGANICS, MOIST 13.0'	ml*		LOTS OF VISIBLE CHROME
	15.0	S 6		HARD DARK GREENISH GRAY SILT WITH TRACE FINE SAND AND TRACE ORGANICS, MOIST TO DRY 15.5'	ml*	103	
				WOOD 16.3'			
	17.5	S 7		MEDIUM STIFF DARK BROWNISH GRAY SILT WITH SOME CLAY AND TRACE ORGANICS, MOIST	mh*		
				GRADING TO			
	20.0	S 8		VERY SOFT BLACK SILT WITH SOME CLAY, MOIST TO WET	mh*		
				GRADING TO			
	22.5	S 9		VERY SOFT BLACK SILT WITH TRACE CLAY, MOIST	ml*		SULFUR ODOR
	25.0	S 10			ml*		

PROJECT NO. 846502

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

BORING NO. W-10
SHEET 1 OF 2

DATE BEGAN: 1-28-85
DATE FINISHED: 1-28-85
GROUND SURFACE EL.: 101.73

BORING NO. W-10

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P.E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				AS ABOVE 25.5'			
	27.5	S 11		VERY DENSE LIGHT GRAY TO YELLOW WELL SORTED SAND AND GRAVEL, WET	sw*		CHROME STAININGS
				GRADING TO			
	30.0	S 12		DENSE ORANGISH-YELLOW WELL SORTED SAND WITH SOME GRAVEL, WET 30.5'	sw*		
	32.5	S 13		VERY DENSE LIGHT ORANGISH-YELLOW TO BEIGE FINE SAND WITH TRACE GRAVEL, WET	sp*	89	
	35.0	S 14			sp*	113	
	37.5	S 15		VERY DENSE DARK REDDISH BROWN TO LIGHT GRAY FINE SAND WITH TRACE GRAVEL, WET 37.0'	sp		NO REACTION WITH D.C.
				VERY DENSE DARK GRAY AND BLACK FINE SAND, WET 38.0'	sp	143/0.9'	
	40.0	S 16		VERY DENSE REDDISH BROWN TO LIGHT GRAY FINE SAND WITH TRACE TO SOME INTERBEDDED SILT, WET	sp	156	NO REACTION WITH D.C.
	40.5			BOTTOM OF BORING 40.5'			

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

DATE BEGAN: 12-3-84
DATE FINISHED: 12-3-84
GROUND SURFACE EL.: N/A

BORING NO. B-1

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 0.5'			
		S 1		DENSE GRAY COARSE GRAVEL, DRY 1.0'	ml * sw		S-1: FILL - BRICK FRAGMENTS
	2.5			MEDIUM STIFF DARK BROWN SILT AND SAND WITH SOME CLAY AND SOME GRAVEL, DRY 1.7'	sw * gw		
		S 2		MEDIUM DENSE DARK RED SAND AND GRAVEL WITH TRACE SILT, DRY 3.0'	ml		S-2: TRACE WOOD FRAGMENTS
12-3-84	5.0			SOFT BLACK SILT WITH TRACE TO SOME FINE SAND AND TRACE CLAY, MOIST 5.5'			WATER AT ~5.5'
		S 3		LOOSE GRAY SILTY FINE SAND, WET 8.0'	sp		S-3: FILL
	7.5						
		S 4		MEDIUM DENSE GRAY FINE TO MEDIUM SAND WITH TRACE SILT AND TRACE GRAVEL, WET 10.5'	sp		S-4: FILL
	10.0						
		S 5		MEDIUM DENSE BROWN WELL SORTED SAND WITH TRACE TO SOME SILT, WET 11.7'	sw		S-5: FILL
	12.5			MEDIUM DENSE LIGHT YELLOWISH BROWN FINE SAND WITH SOME INTERBEDDED CLAY, WET 13.0'	sp		11.7': BOTTOM OF FILL
		S 6		MEDIUM DENSE LIGHT YELLOWISH BROWN TO GRAY FINE SAND, WET 15.5'	sp *		
	15.0						
		S 7		MEDIUM DENSE LIGHT YELLOWISH BROWN TO GRAY FINE SAND WITH TRACE GRAVEL, WET	sp *	83	
	17.5						
		S 8			sp *		
	20.0						
				BOTTOM OF BORING 20.0'			

*INDICATES POSITIVE REACTION TO DIPHENYL CARBAZIDE

PROJECT NO. 846502

BORING NO. B-1
SHEET 1 OF 1

DATE BEGAN: 12-4-84
DATE FINISHED: 12-4-84
GROUND SURFACE EL.: N/A

BORING NO. B-2

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 0.4'			
				DENSE WHITE COARSE GRAVEL, DRY 1.0'	sw		
	2.5	S 1		DENSE BLACK SILTY SAND WITH SOME WHITE COARSE GRAVEL, DRY 2.3'	sw		S-1: FILL - WATER AT ~ 3.5'
12-4-84				DENSE YELLOWISH BROWN SILTY SAND, DRY 3.0'			S-2: FILL
	5.0	S 2		LOOSE BROWN FINE SAND WITH TRACE SILT, WET 5.5'	sp		
	7.5	S 3		DENSE DARK GRAY FINE SAND WITH SOME GRAVEL, WET 8.0'	sp		S-3: FILL
	10.0	S 4		VERY DENSE GRAY TO BROWN FINE SAND WITH SOME GRAVEL AND TRACE SILT, WET 11.2'	sp	66	S-4: FILL
	12.5	S 5		MEDIUM DENSE WHITE VERY FINE SAND WITH TRACE SILT, MOIST 13.8'	sp / sp		BOTTOM OF FILL 11.2'
	15.0	S 6		DENSE ORANGISH BROWN FINE SAND, WET 15.5'	sp / sp		
	17.5	S 7		VERY DENSE LIGHT GRAY TO LIGHT ORANGISH BROWN FINE TO MEDIUM SAND, WET	sp	67	
	20.0	S 8			sp	85	
				BOTTOM OF BORING 20.0'			

NOTE: ALL SAMPLES - NO REACTION WITH DIPHENYL CARBAZIDE

PROJECT NO. 846502

BORING NO. B-2
SHEET 1 OF 1

DATE BEGAN: 12-5-84
DATE FINISHED: 12-5-84
GROUND SURFACE EL.: N/A

BORING NO. B-3

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				ASPHALT 0.4'			
	2.5	S 1		DENSE COARSE WHITE GRAVEL, DRY 0.8'	ml		WATER AT 3.7'
12-5-84				MEDIUM STIFF DARK BROWN TO BLACK SANDY SILT WITH TRACE TO SOME CLAY, MOIST 3.7'			
	5.0	S 2		LOOSE BLACK SILTY SAND WITH TRACE GRAVEL, WET 5.5'	ml sw		
	7.5	S 3		WOOD 6.5'	—		S-3: SPOON BROKE THROUGH WOOD AT 6.5'
	10.0	S 4		VERY SOFT BLACK TO GRAY MICACEOUS SILT WITH SOME CLAY, WET 10.5'	mh mh		
	12.5	S 5		STIFF BROWN SILT WITH TRACE CLAY, MOIST 11.2'	mh		
				MEDIUM DENSE GRAY SAND WITH SOME GRAVEL, WET 11.6'	sp mh		
	15.0	S 6		STIFF BROWN SILT WITH TRACE CLAY, MOIST 13.0'	mh		
				VERY SOFT BLACK CLAYEY SILT, WET 15.5'			
	17.5	S 7		VERY SOFT DARK GRAY MICACEOUS SILT WITH TRACE CLAY, WET	mh		
				GRADING TO			
	20.0	S 8			ml		
	22.5	S 9		VERY SOFT DARK GRAY MICACEOUS SILT, MOIST 23.0'	ml		
	25.0	S 10		LOOSE DARK GRAY FINE TO MEDIUM SAND, WET	sp		

PROJECT NO. 846502

*NOTE: ALL SAMPLES - NO REACTION WITH DIPHENYL CARBAZIDE

BORING NO. B-3
SHEET 1 OF 2

DATE BEGAN: 12-5-84
DATE FINISHED: 12-5-84
GROUND SURFACE EL.: NA

BORING NO. B-3

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				LOOSE DARK GRAY FINE TO MEDIUM SAND, WET 25.5'			
		S		VERY DENSE LIGHT BROWN COARSE SAND WITH SOME GRAVEL, WET 26.2'	SW sp		
	27.5	11		VERY DENSE LIGHT GRAY VERY FINE SAND, WET 26.5'		100	S-11: SLIGHT LAYER OF (1/2") IODINE STAINNGS AT TOP OF COARSE SAND LAYER
		S		MEDIUM DENSE LIGHT GRAY TO LIGHT BROWN FINE TO VERY FINE SAND WITH TRACE GRAVEL, WET	sp		
	30.0	12					

BOTTOM OF BORING
30.0'

NOTE:

ALL SAMPLES - NO REACTION WITH DIPHENYL CARBAZIDE

DATE BEGAN: 12-4-84
DATE FINISHED: 12-4-84
GROUND SURFACE EL.: NA

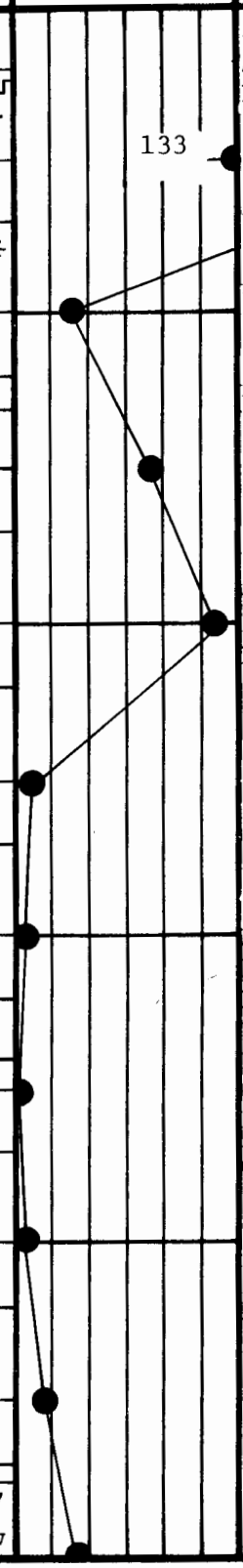
BORING NO. B-4

N _____ E _____

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	DESCRIPTION	U.S.C.S.	REMARKS
			ASPHALT 0.3'		
	2.5	S 1	VERY DENSE DARK GREENISH BLACK FINE SAND, MOIST 1.2'	sp*	S-1: GRAVELS ARE CLAM SHELL FRAGMENTS
			VERY STIFF BLACK SANDY SILT WITH SOME GRAVEL, MOIST 3.0'		
12-4-34	5.0	S 2	MEDIUM DENSE GRAY TO BLACK FINE SAND WITH SOME RED GRAVEL, WET 5.5'	sp*	S-2: GRAVELS ARE BRICK FRAGMENTS SLIGHT REACTION WITH DIPHENYL CARBAZIDE
			MEDIUM DENSE GRAY FINE SAND WITH TRACE SILT, WET 6.5'	sp	WATER AT ~ 5'
	7.5	S 3	WOOD	-	S-3: HORIZONTAL GRAINS, SLIGHT REACTION WITH D.C.
	10.0	S 4		-	
	12.5	S 5	VERY SOFT BLACK SILT WITH SOME CLAY AND SOME COARSE SAND, WET 13.0'	mh	S-5: SOME WOOD FRAGMENTS
	15.0	S 6	VERY SOFT BLACK AND GRAY CLAYEY SILT WITH TRACE GRAVEL, WET 15.5'	mh	S-6: TRACE WOOD FRAGMENTS
	17.5	S 7	VERY SOFT BLACK CLAYEY SILT, WET 17.0'	mh	
	20.0	S 8	VERY SOFT DARK GRAY MICACEOUS SILT WITH TRACE CLAY, MOIST 20.5'	ml	
	22.5	S 9	SOFT DARK GRAY MICACEOUS SILT WITH TRACE CLAY AND TRACE INTERBEDDED WHITE VERY FINE SAND, MOIST 23.9'	ml	S-9: TRACE WOOD FRAGMENTS
	25.0	S 10	MEDIUM DENSE BROWN TO BLACK SILTY SAND AND GRAVEL, WET	sw/gw	

PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50



PROJECT NO. 846502

*INDICATES POSITIVE REACTION WITH DIPHENYL CARBAZIDE

BORING NO. B-4
SHEET 1 OF 2

DATE BEGAN: 12-4-84
DATE FINISHED: 12-4-84
GROUND SURFACE EL.: N/A

BORING NO. B-4

N _____ E _____

FIELD ENGINEER: L.R.SWEENEY
CHECKED BY: P. E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
	27.5	S 11		MEDIUM DENSE BROWN TO BLACK SILTY SAND AND GRAVEL, WET	sw/gw		
				28.0'			
	30.0	S 12		MEDIUM DENSE LIGHT YELLOWISH BROWN WELL SORTED SAND AND GRAVEL, WET	sw/* gw		
				BOTTOM OF BORING 30.0'			

*INDICATES POSITIVE REACTION WITH DIPHENYL CARBAZIDE

DATE BEGAN: 1-29-85
DATE FINISHED: 1-29-85
GROUND SURFACE EL.:

BORING NO. B-5

N E

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P.E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
	2.5	S 1		MEDIUM STIFF DARK RED TO BROWN SANDY SILT, DRY GRADING TO	ml		FILL MATERIALS
	5.0	S 2		DENSE LIGHT ORANGISH-BROWN FINE TO MEDIUM SAND WITH SOME GRAVEL, TRACE SILT, DRY	sp		FILL MATERIALS
	7.5	S 3		8.0'	sp		FILL MATERIALS BOTTOM OF FILL 8 FEET
	10.0	S 4		SOFT LIGHT BROWN FINE SANDY CLAY WITH TRACE SILT, MOIST	cl		
	12.5	S 5			cl		
	15.0	S 6		MEDIUM STIFF LIGHT BROWN TO REDDISH-BROWN FINE SANDY CLAY, MOIST 14.5'	cl		
				DENSE LIGHT BROWN CLAYEY SAND AND GRAVEL, WET 15.5'	gw sw		
	17.5	S 7		MEDIUM DENSE YELLOWISH-BROWN TO DARK GREENISH-BROWN CLAYEY GRAVEL WITH SOME SAND, WET 18.0'	gp		
	20.0	S 8		DENSE BROWN FINE TO MEDIUM SAND, WET 20.5'	sp		OIL OR HYDROCARBON ODOR
1-29-85	22.5	S 9		VERY DENSE WHITE AND LIGHT YELLOWISH-BROWN FINE TO VERY FINE SAND, WET 21.9'	sp		
				VERY DENSE WHITE TO REDDISH-BROWN FINE SAND, WET	sp	135	
	25.0	S 10		VERY DENSE WHITE FINE SAND, WET	sp		

PROJECT NO. 846502

NOTE: ALL SAMPLES HAD NO REACTION WITH DIPHENYL CARBAZIDE

BORING NO. B-5
SHEET 1 OF 2

DATE BEGAN: 1-29-85
DATE FINISHED: 1-29-85
GROUND SURFACE EL.:

BORING NO. B-5

N E

FIELD ENGINEER: L.R. SWEENEY
CHECKED BY: P.E. NEMANIC

ELEV. (FEET)	DEPTH (FEET)	SAMPLE TYPE	PROFILE	DESCRIPTION	U.S.C.S.	PENETRATION RESISTANCE (BLOWS PER FOOT) 10 30 50	REMARKS
				AS ABOVE 25.5'			
	27.5	S 11		VERY DENSE WHITE FINE SAND WITH SOME INTERBEDDED CLAYEY SILT, WET	sp	135	
				29.0'	sp		
	30.0	S 12		VERY DENSE LIGHT BROWN FINE SAND, WET	sp	136	
				31.5'	sp		
	32.5	S 13			sp	141/0.9'	
	35.0	S 14		VERY DENSE ORGANISH-BROWN FINE SAND, WET	sp	121	
				36.7'	sp		
	37.5	S 15		VERY DENSE GRAYISH-WHITE FINE SAND, WET	sp	100/0.4'	
	40.0	S 16		VERY DENSE WHITE TO BROWN FINE TO MEDIUM SAND, WET	sp	100/0.4'	
	42.5	S 17		VERY DENSE LIGHT BROWN FINE SAND, WET	sp	185	
				44.1'	sp		
	45.0	S 18			sp	130	
	47.5	S 19		VERY DENSE FINE WHITE SAND, WET	sp	162/0.9'	
	50.0	S 20			sp	155	

PROJECT NO. 846502

BOTTOM OF BORING 50.0'

NOTE: ALL SAMPLES HAD NO REACTION WITH DIPHENYL CARBAZIDE

BORING NO. B-5
SHEET 2 OF 2

APPENDIX C

WELL CONSTRUCTION DETAILS

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	7-29-85	DRAWING NUMBER 846502-A7
	1-23-85	APPROVED BY	JLH	7-29-85	

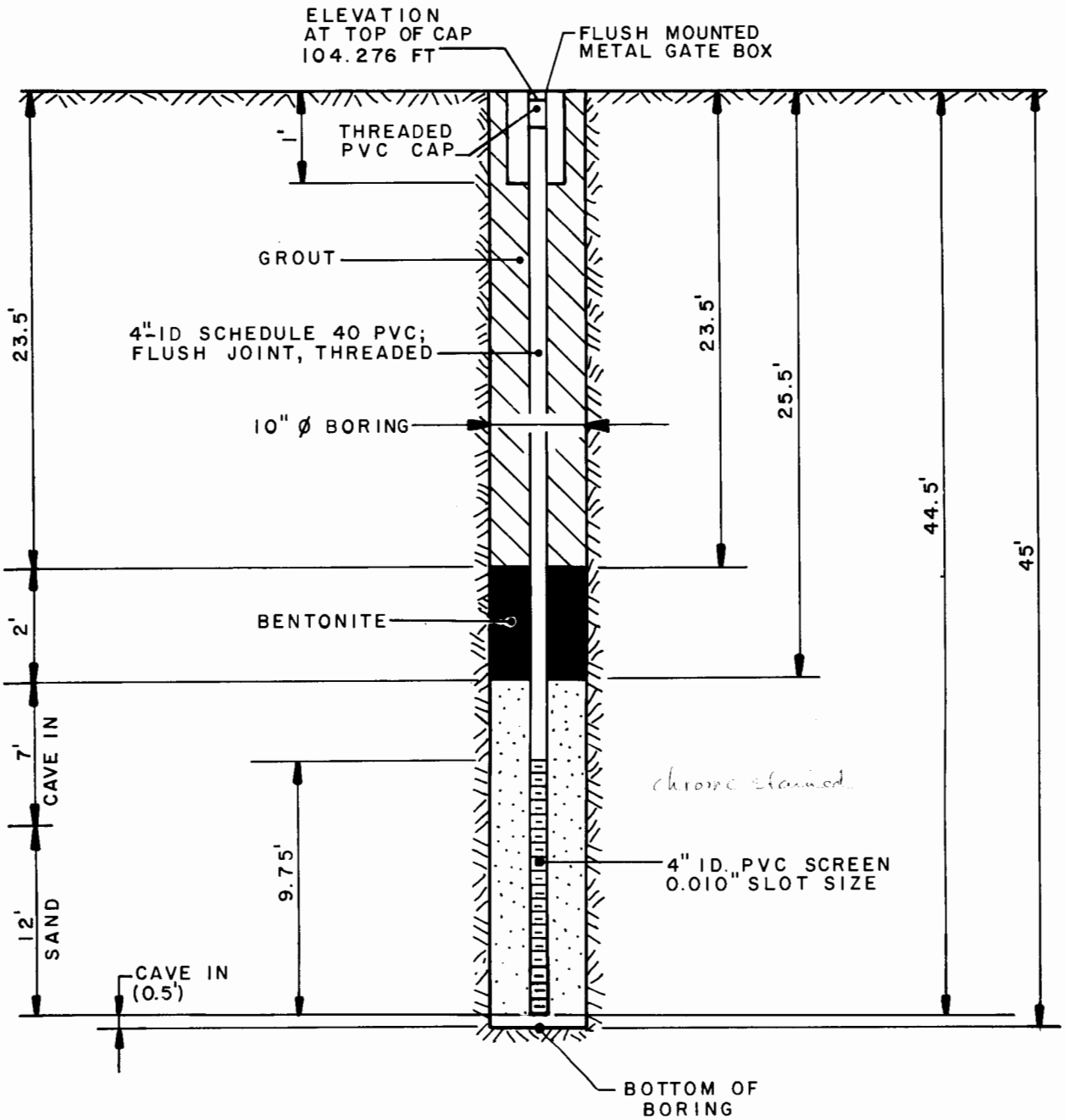


FIGURE C-I

WELL INSTALLATION DETAILS
MONITORING WELL W-I

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH. PA

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	7-29-85	DRAWING NUMBER 846502-A8
	1-23-85	APPROVED BY	JLH	7-29-85	

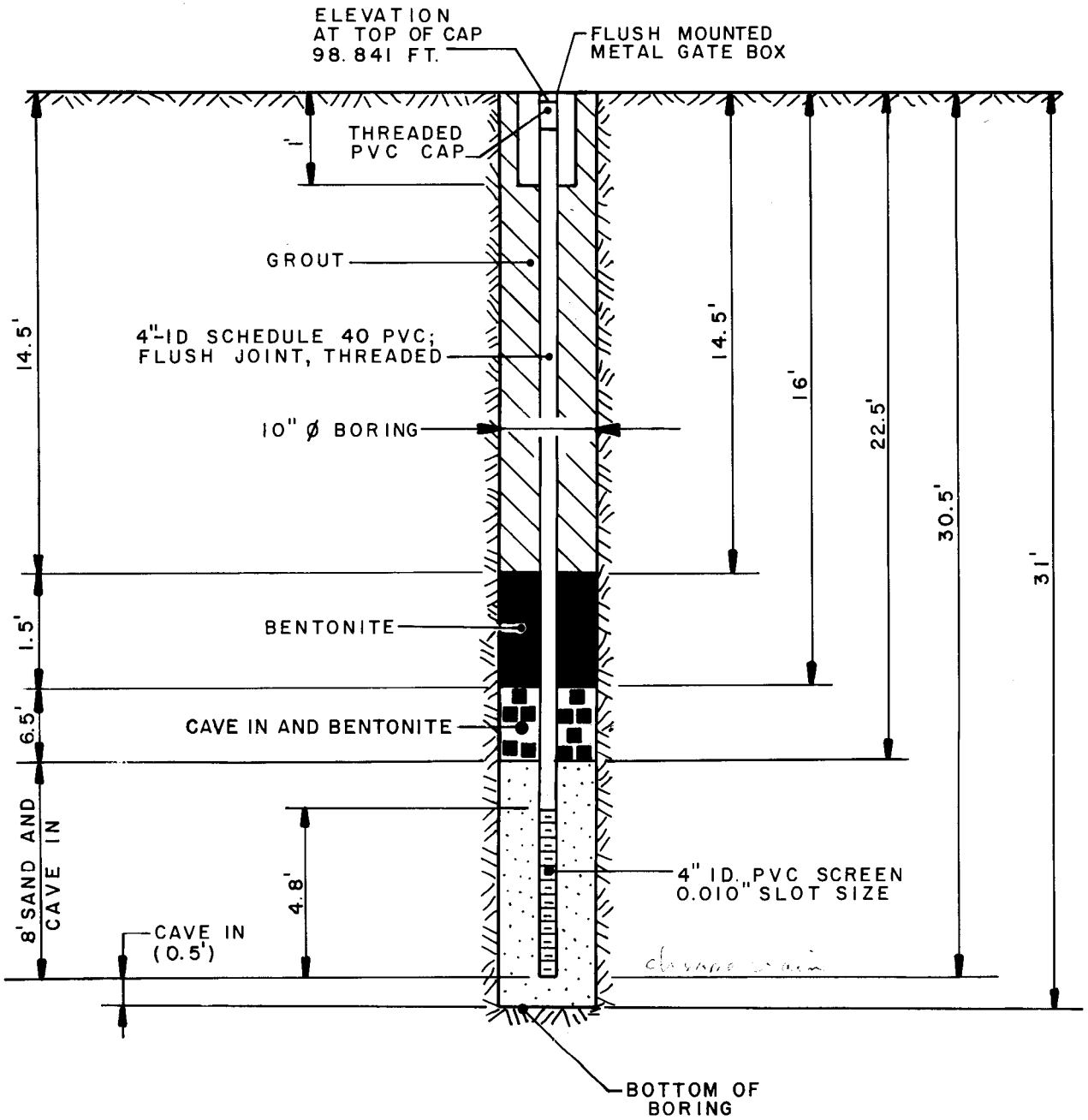


FIGURE C-2

WELL INSTALLATION DETAILS
MONITORING WELL W-2

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A9
	1-23-85	APPROVED BY	JLH	4-29-85	

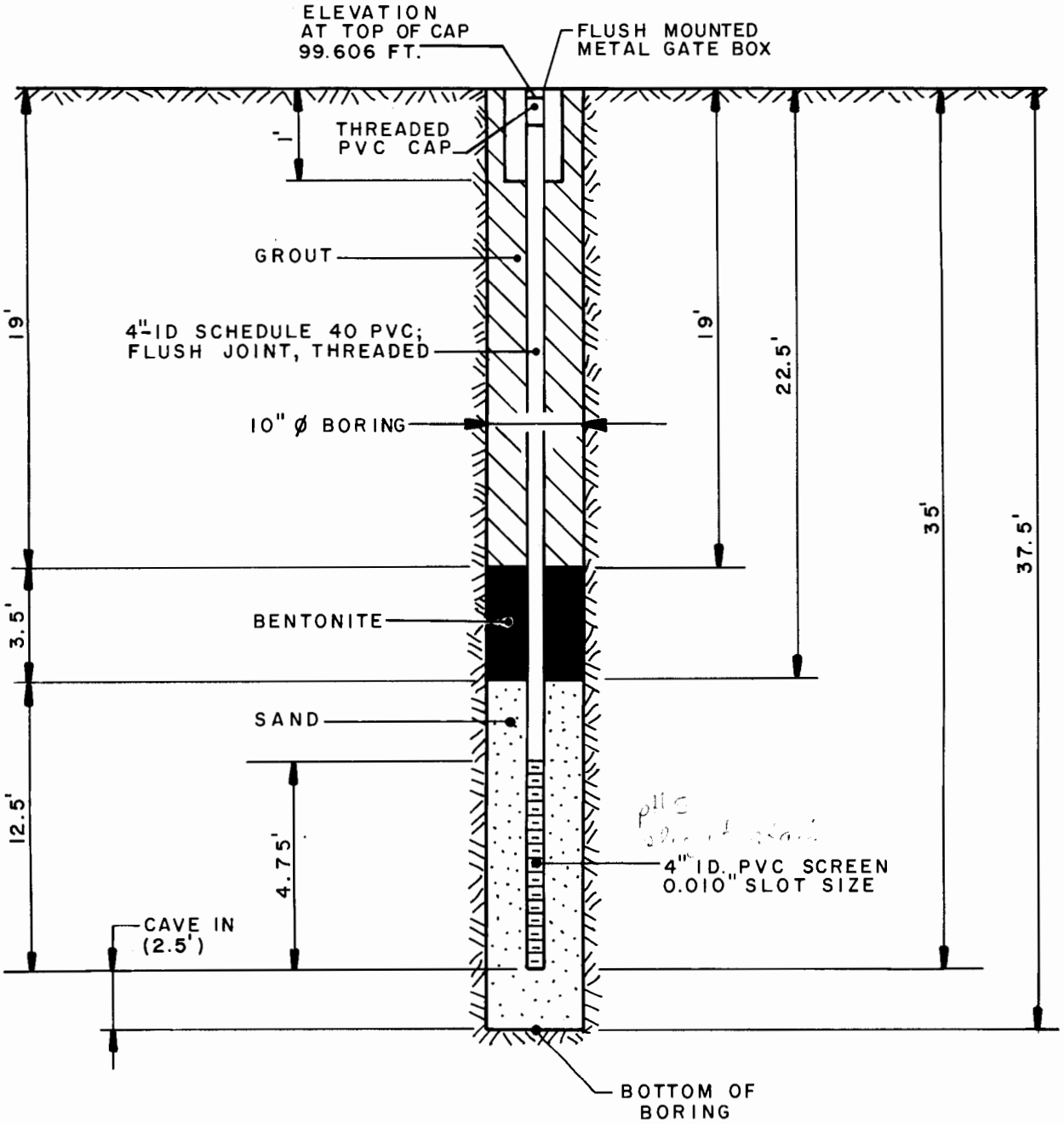


FIGURE C-3

WELL INSTALLATION DETAILS
MONITORING WELL W-3

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	1-23-85	CHECKED BY	LRS	4-29-85	DRAWING NUMBER	846502-A10
			APPROVED BY	JLH	4-29-85		

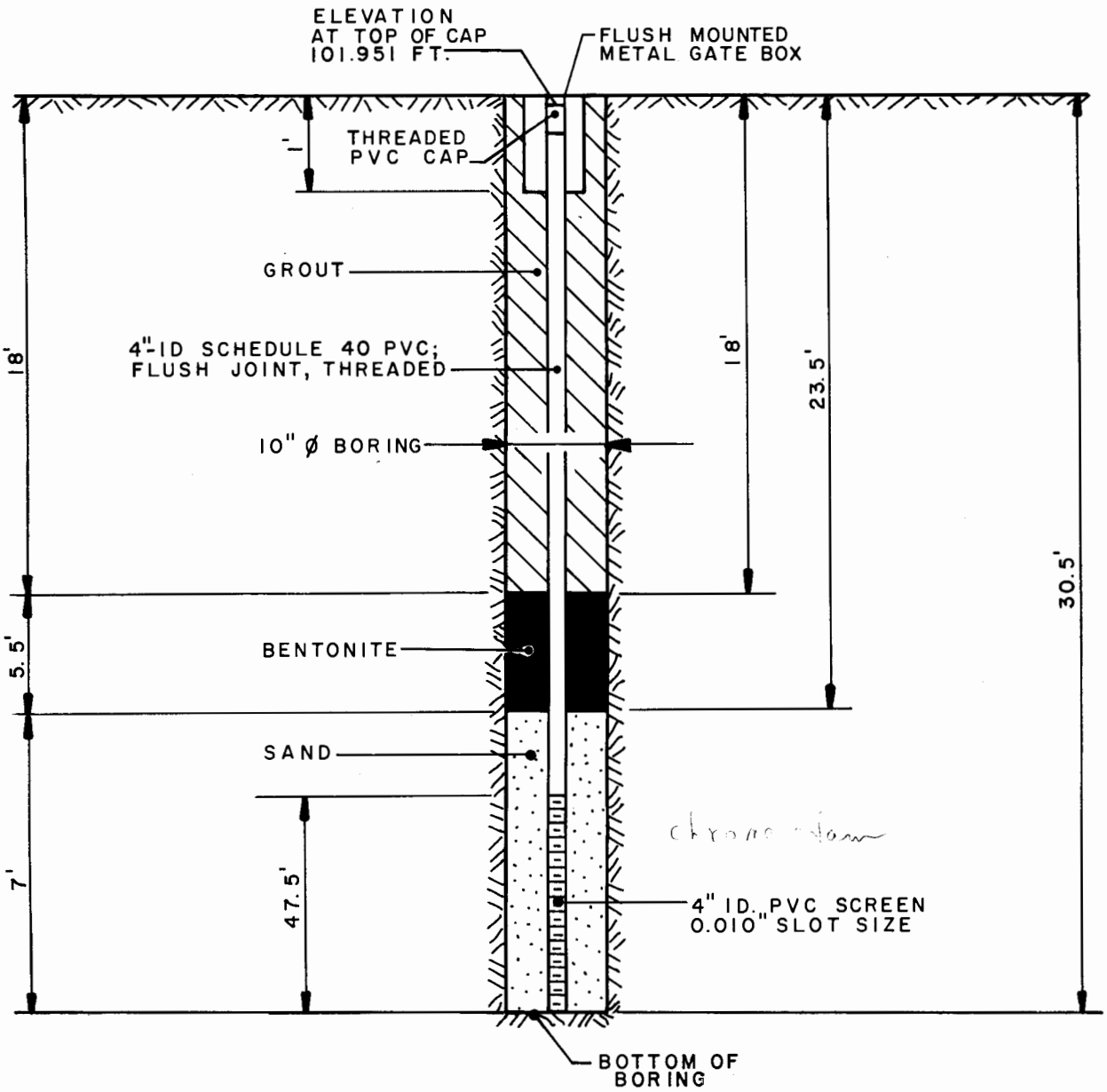


FIGURE C-4

WELL INSTALLATION DETAILS
MONITORING WELL W-4

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	1·23·85	CHECKED BY	LRS	4-29-85	DRAWING NUMBER	846502-A11
			APPROVED BY	JLH	4-29-85		

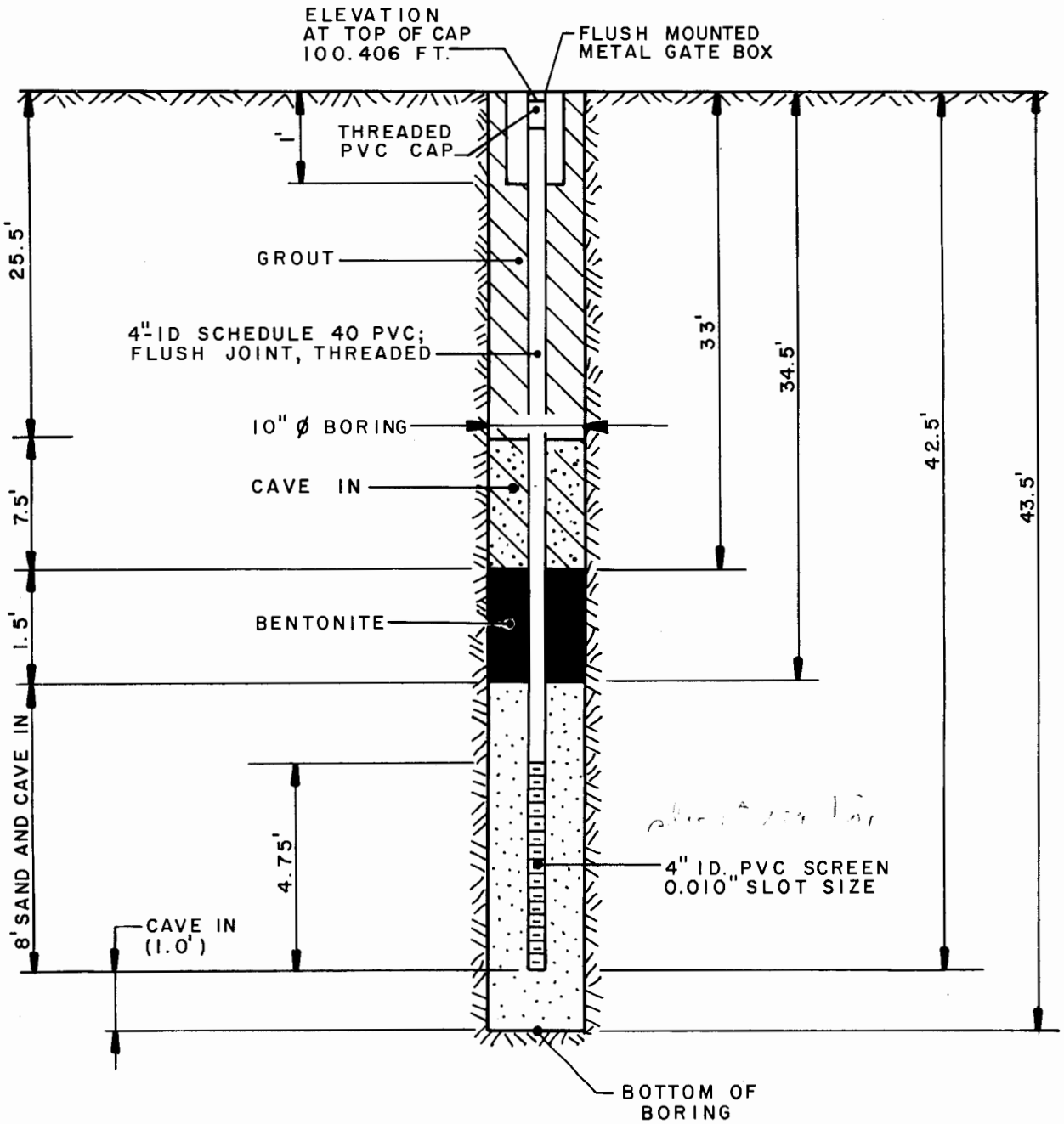


FIGURE C-5

WELL INSTALLATION DETAILS
MONITORING WELL W-5

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO. PGH PA

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A12
	1-23-85	APPROVED BY	JLH	4-29-85	

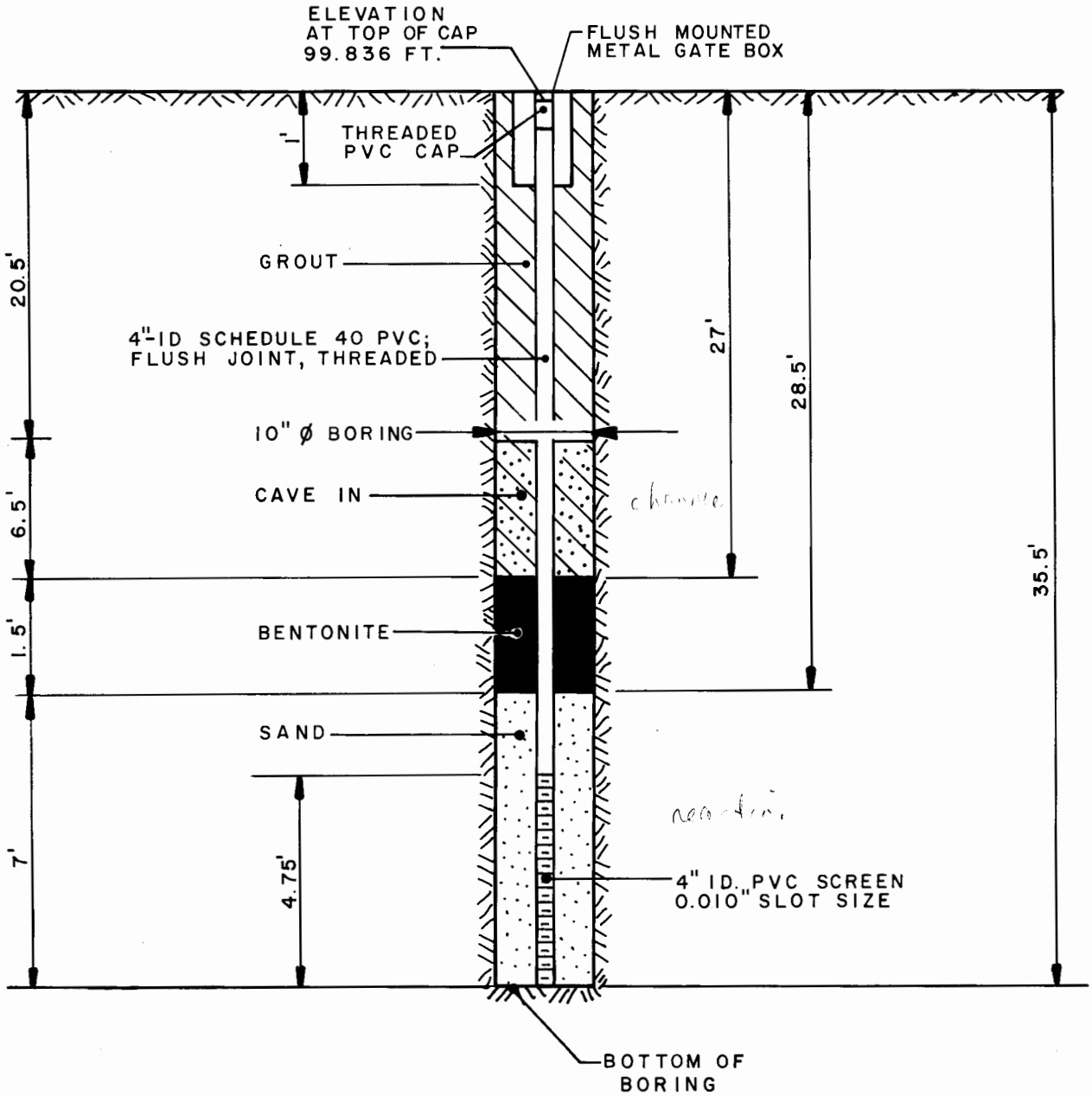


FIGURE C-6

WELL INSTALLATION DETAILS
MONITORING WELL W-6

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	1-23-85	CHECKED BY	LRS	7-29-85	DRAWING NUMBER	846502-A13
			APPROVED BY	JLH	7-29-85		

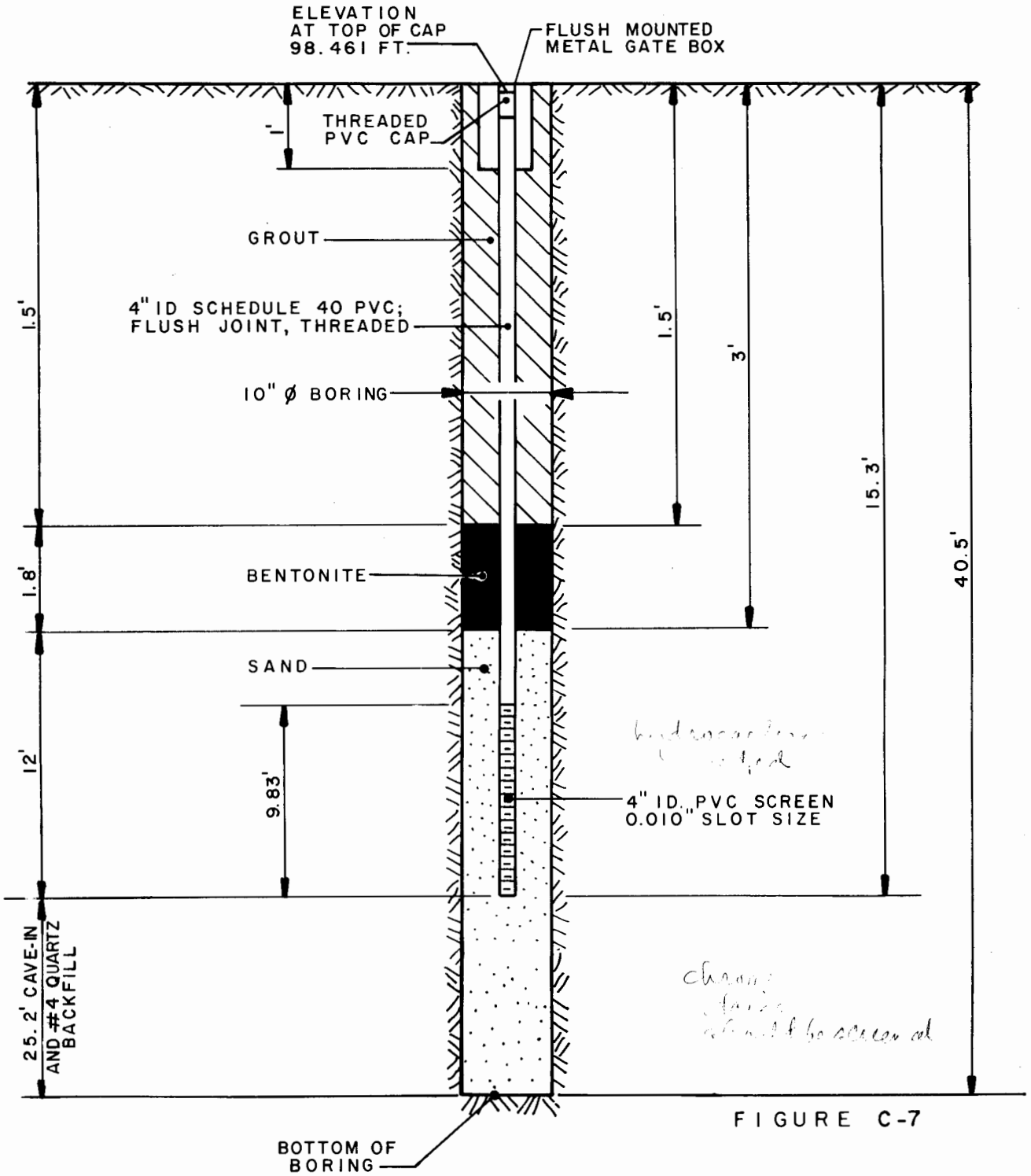


FIGURE C-7

WELL INSTALLATION DETAILS
MONITORING WELL W-7A

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGREGO	CHECKED BY	LRS	7-29-85	DRAWING NUMBER 846502-A14
	1-23-85	APPROVED BY	JLH	7-29-85	

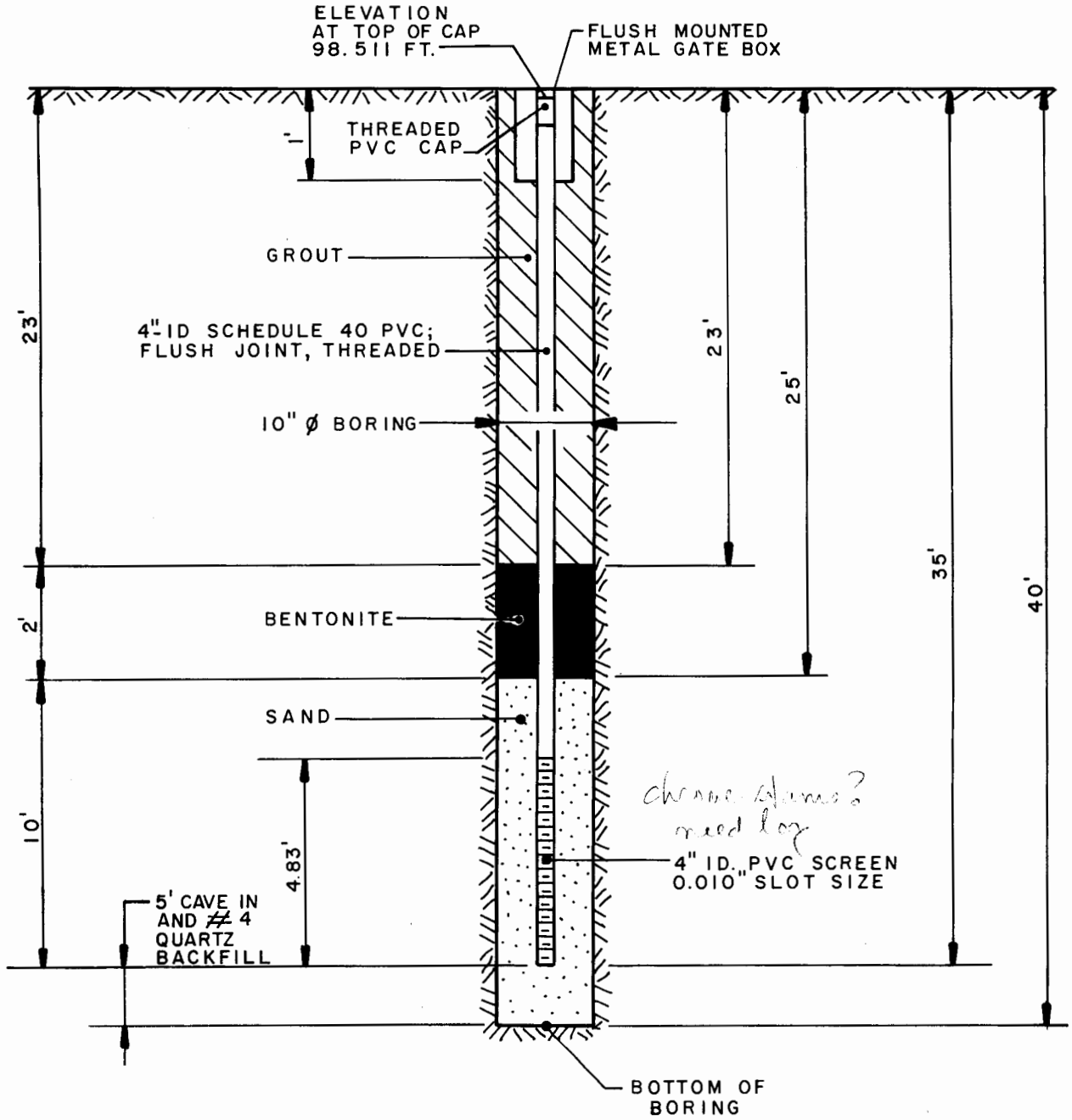


FIGURE C-8

WELL INSTALLATION DETAILS
MONITORING WELL W-7B

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A15
	1-23-85	APPROVED BY	JLH	4-29-85	

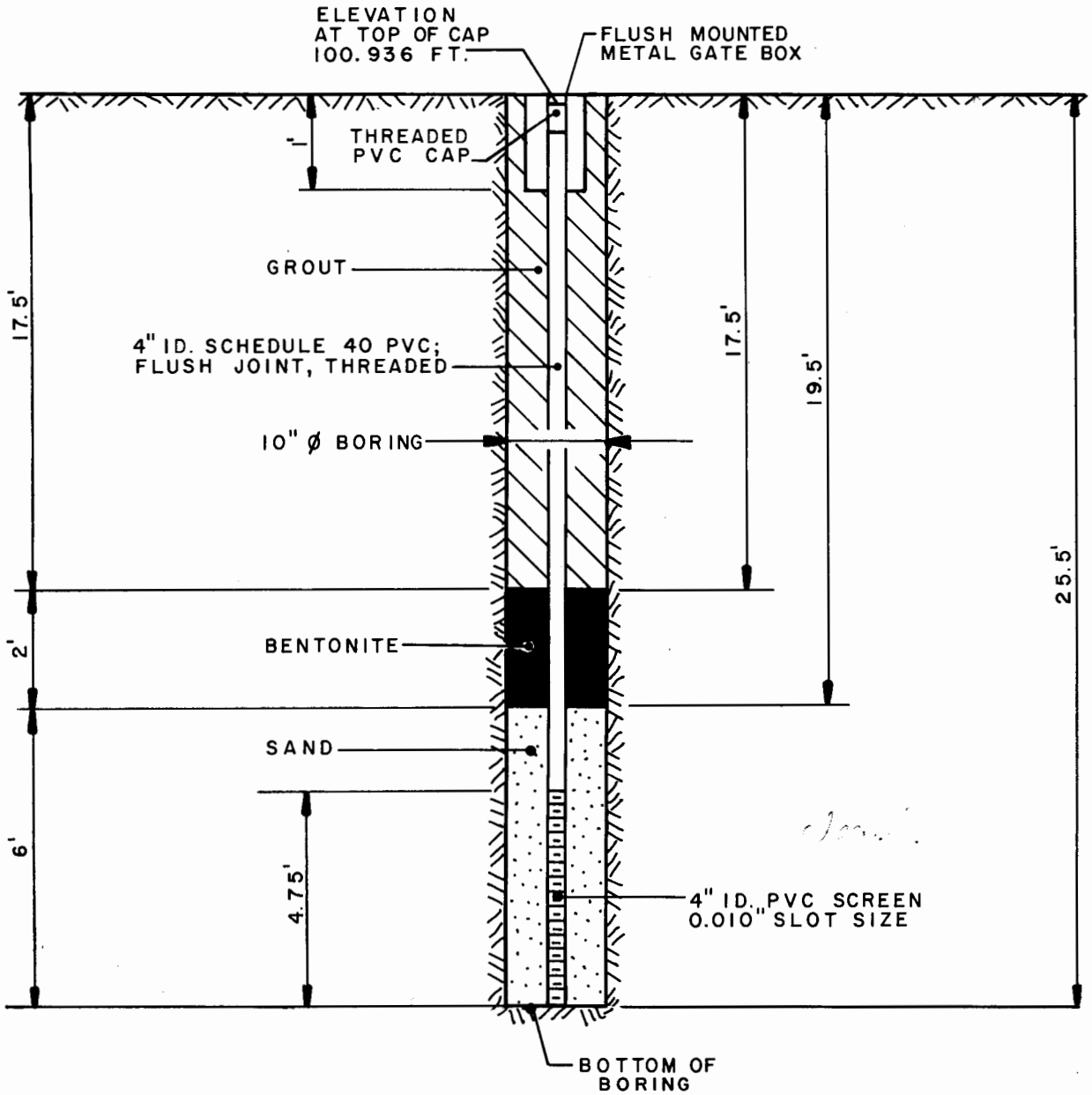


FIGURE C-9

WELL INSTALLATION DETAILS
MONITORING WELL W-8

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO	CHECKED BY	LRS	4-29-85	DRAWING NUMBER 846502-A16
	1-23-85	APPROVED BY	JLH	4-29-85	

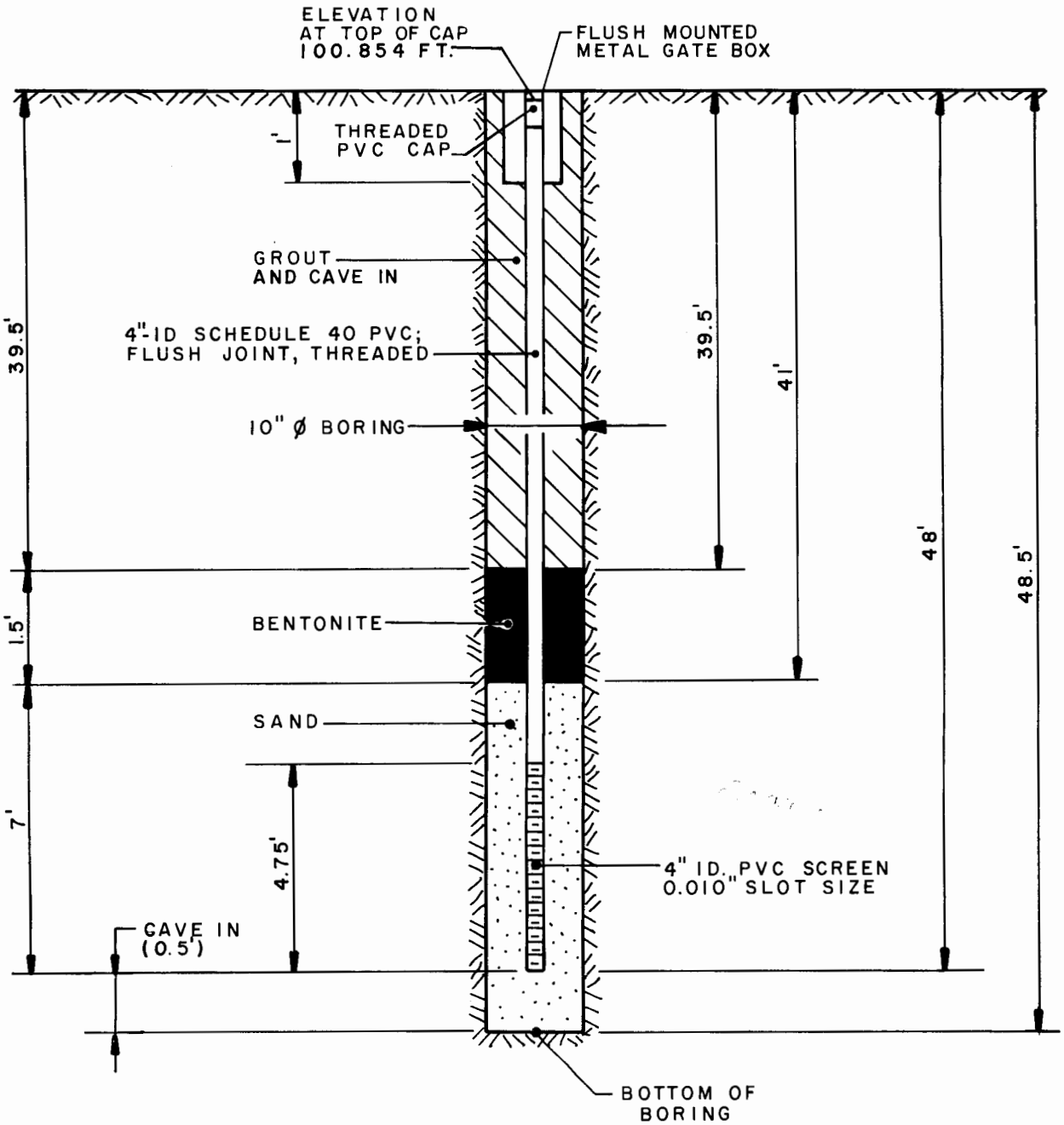


FIGURE C-10

WELL INSTALLATION DETAILS
MONITORING WELL W-9

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

NOT TO SCALE

IT CORPORATION

19 1253 HERCULENE. A&B SMITH CO., PGH., PA

DRAWN BY	J. LOGRECO 2-11-85	CHECKED BY	LRS 4-29-85	DRAWING NUMBER	846502-A18
		APPROVED BY	JLH 4-29-85		

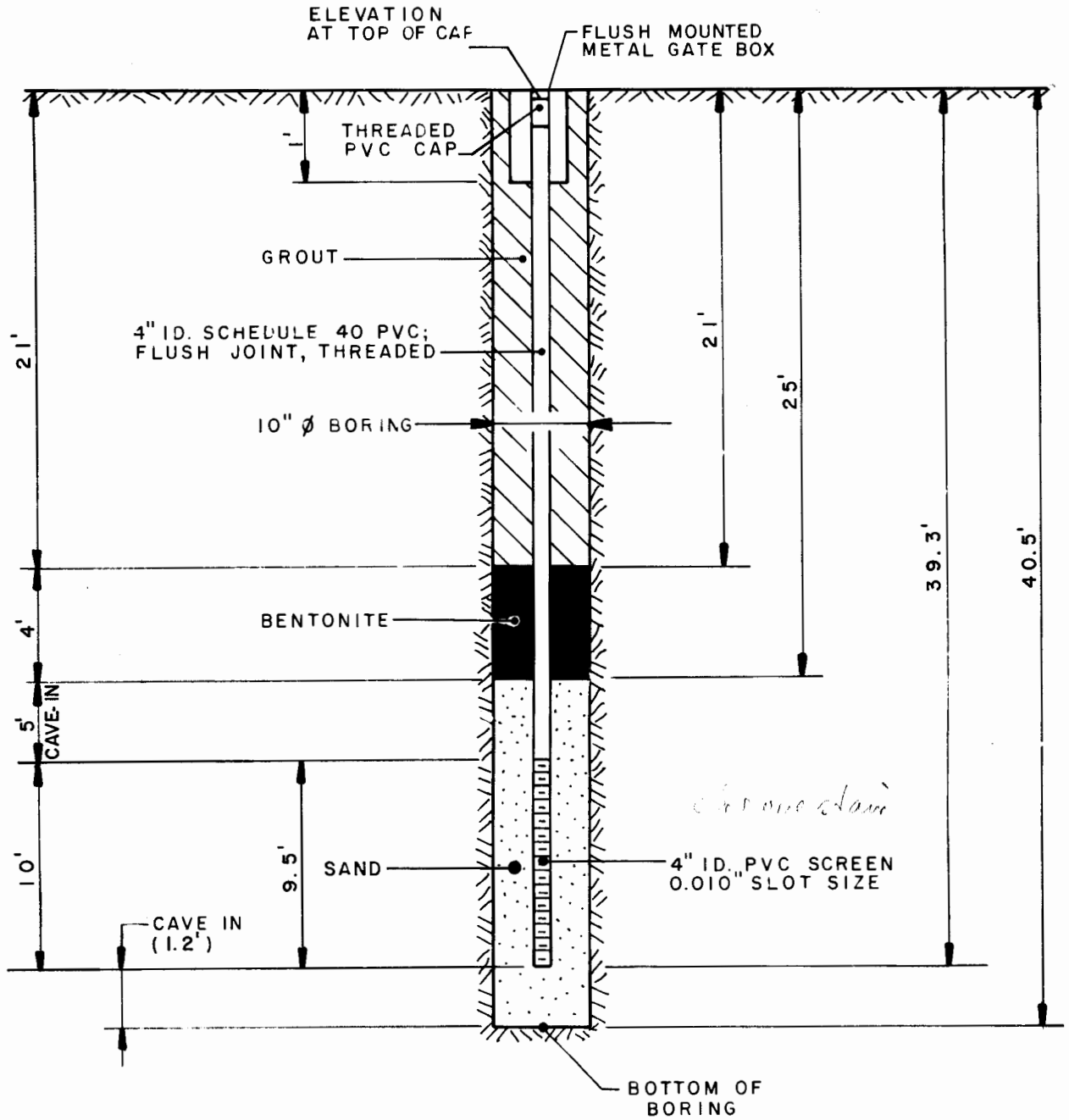


FIGURE C-11

WELL INSTALLATION DETAILS
MONITORING WELL W-10

PREPARED FOR

ALLIED CHEMICAL COMPANY
BALTIMORE, MARYLAND

IT CORPORATION

NOT TO SCALE

19 1253 HERCULENE A&B SMITH CO PGH PA