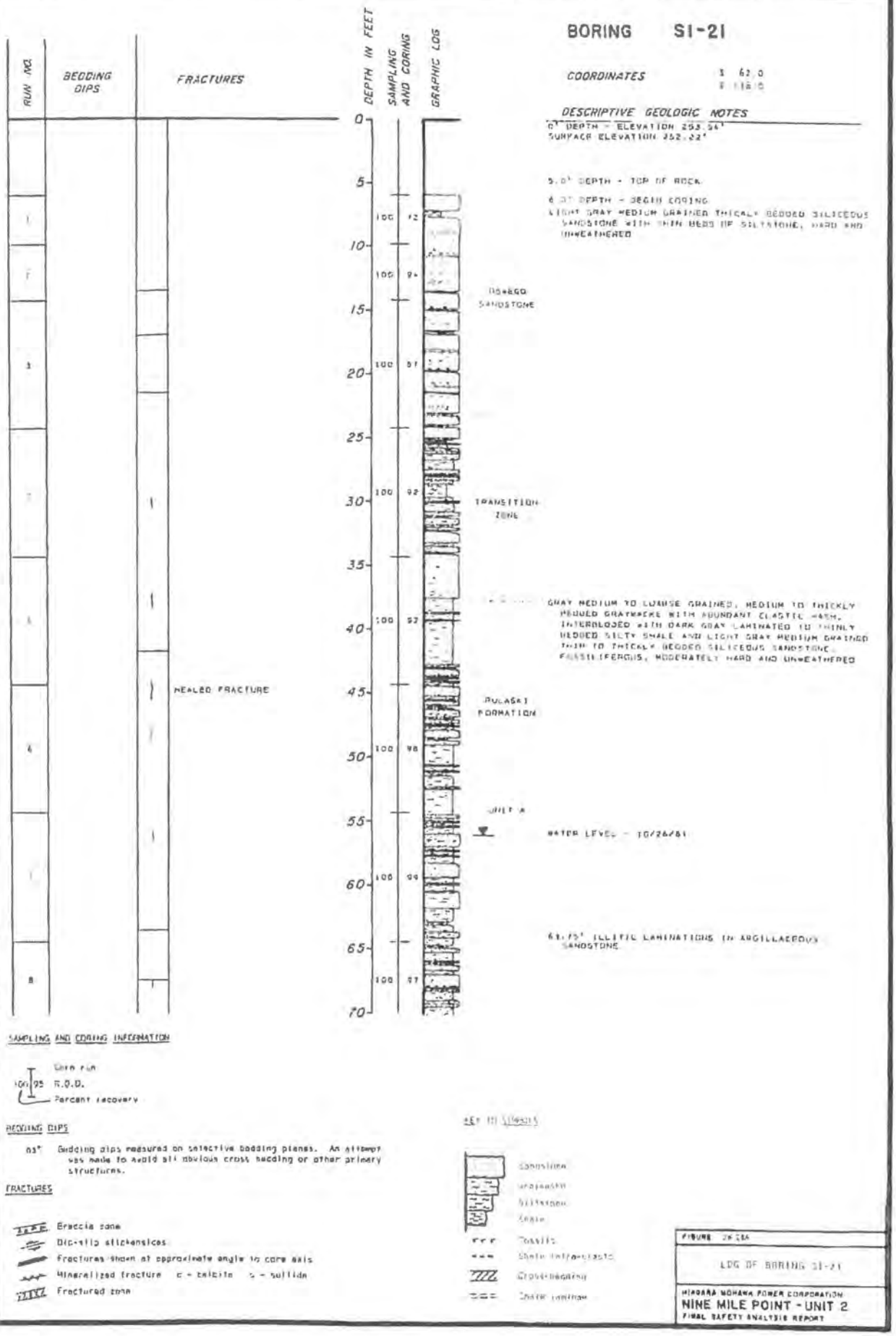

BORING S1-21
COORDINATES N 62.0 E 118.0
DESCRIPTIVE GEOLOGIC NOTES
0' DEPTH = ELEVATION 253.34'
SURFACE ELEVATION 252.22'
5.0' DEPTH = TOP OF ROCK
6.0' DEPTH = BEGIN CORING
LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED
OSWEGO SANDSTONE
TRANSITION ZONE
GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC MUDS, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE. FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
PULASKI FORMATION
UNIT A
WATER LEVEL - 10/26/81
63.75' ILLITIC LAMINATIONS IN ARGILLACEOUS SANDSTONE
RUN NO.
BEDDING DIPS
FRACTURES
DEPTH IN FEET
SAMPLING AND CORING
GRAPHIC LOG
HEALED FRACTURE
SAMPLING AND CORING INFORMATION
Core run
R.Q.D.
Percent recovery
BEDDING DIPS
83° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.
FRACTURES
Breccia zone
Dip-slip slickensides
Fractures shown at approximate angle to core axis
Mineralized fracture c = calcite s = sulfide
Fractured zone
KEY TO LITHOLOGY
Sandstone
Graywacke
Siltstone
Shale
Fossils
Shale interclasts
Cross-bedding
Shale laminae
FIGURE 2A-23A
LOG OF BORING S1-21
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-21

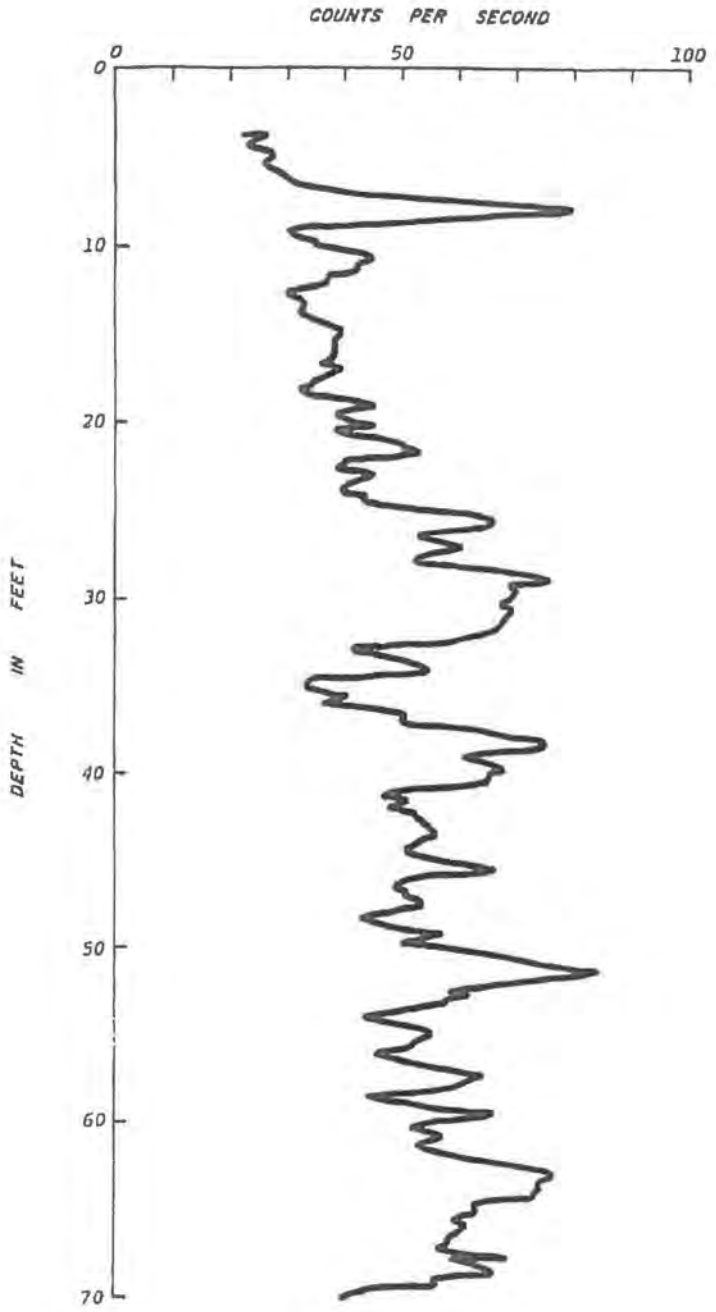
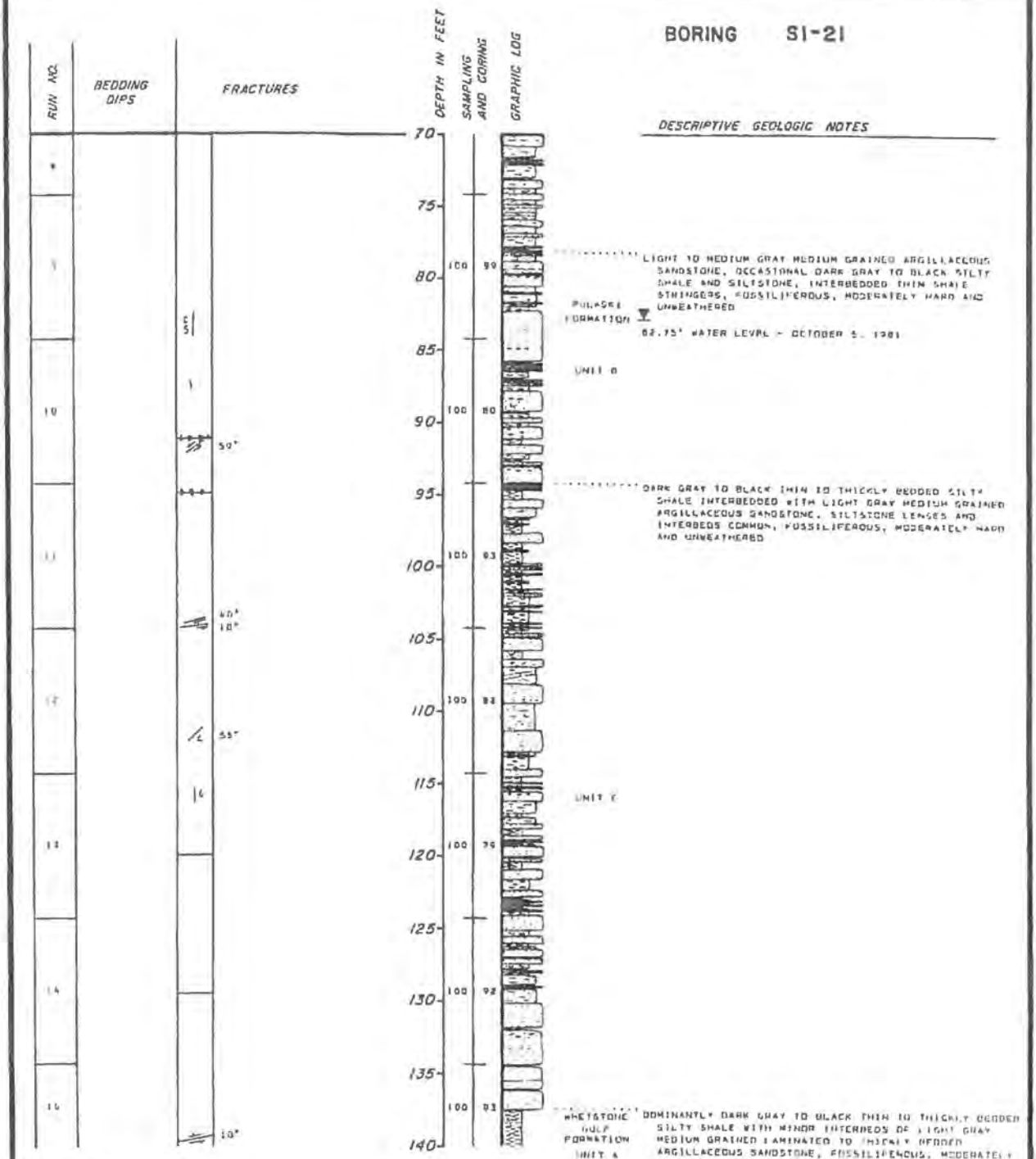


FIGURE 2K-28B

GAMMA RAY LOG OF BORING SI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



SAMPLING AND CORING INFORMATION

100 95 Core run
R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Slip-side slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-28C

LOG OF BORING SI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-21

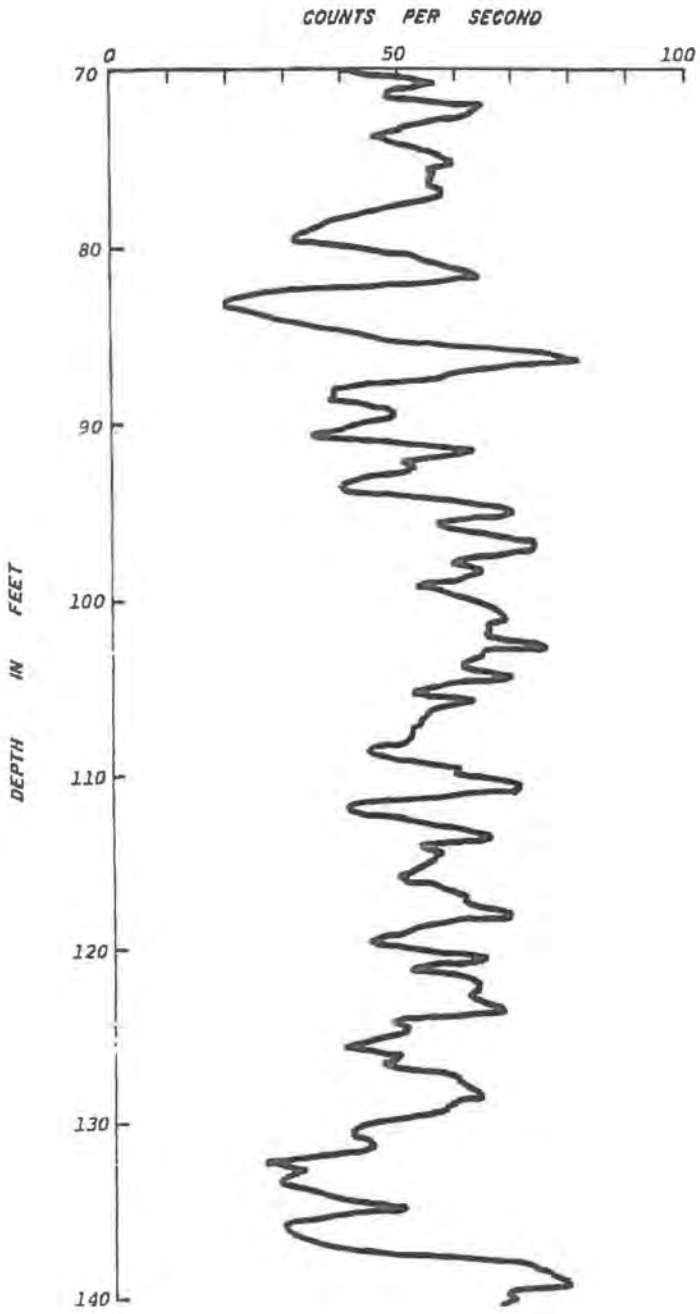
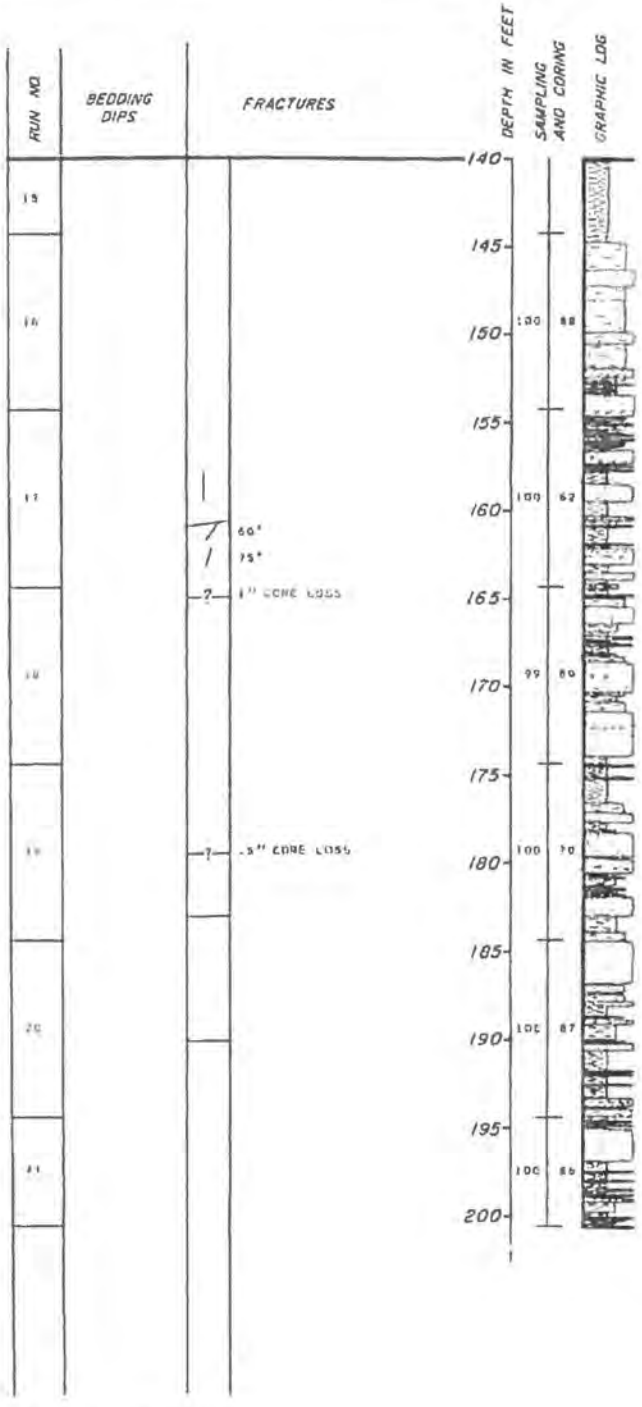


FIGURE 2K-28D

GAMMA RAY LOG OF BORING SI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-21



DESCRIPTIVE GEOLOGIC NOTES

173.5' LOSS OF DRILLING CIRCULATION

BORING TERMINATED AT A DEPTH OF 200.5 FEET ON 9/30/81 AND GEOPHYSICALLY LOGGED ON 10/5/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

Core run
100 95 R.Q.D.
Percent recovery

BEDDING DIPS

63° Bedding dips measured on selection bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Slip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO LOGGING

- Sandstone
- Greywacke
- Siltstone
- Shale
- Fossils
- Shale intraclasts
- Cross-bedding
- Shale laminae

FIGURE 2K-28E

LOG OF BORING SI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

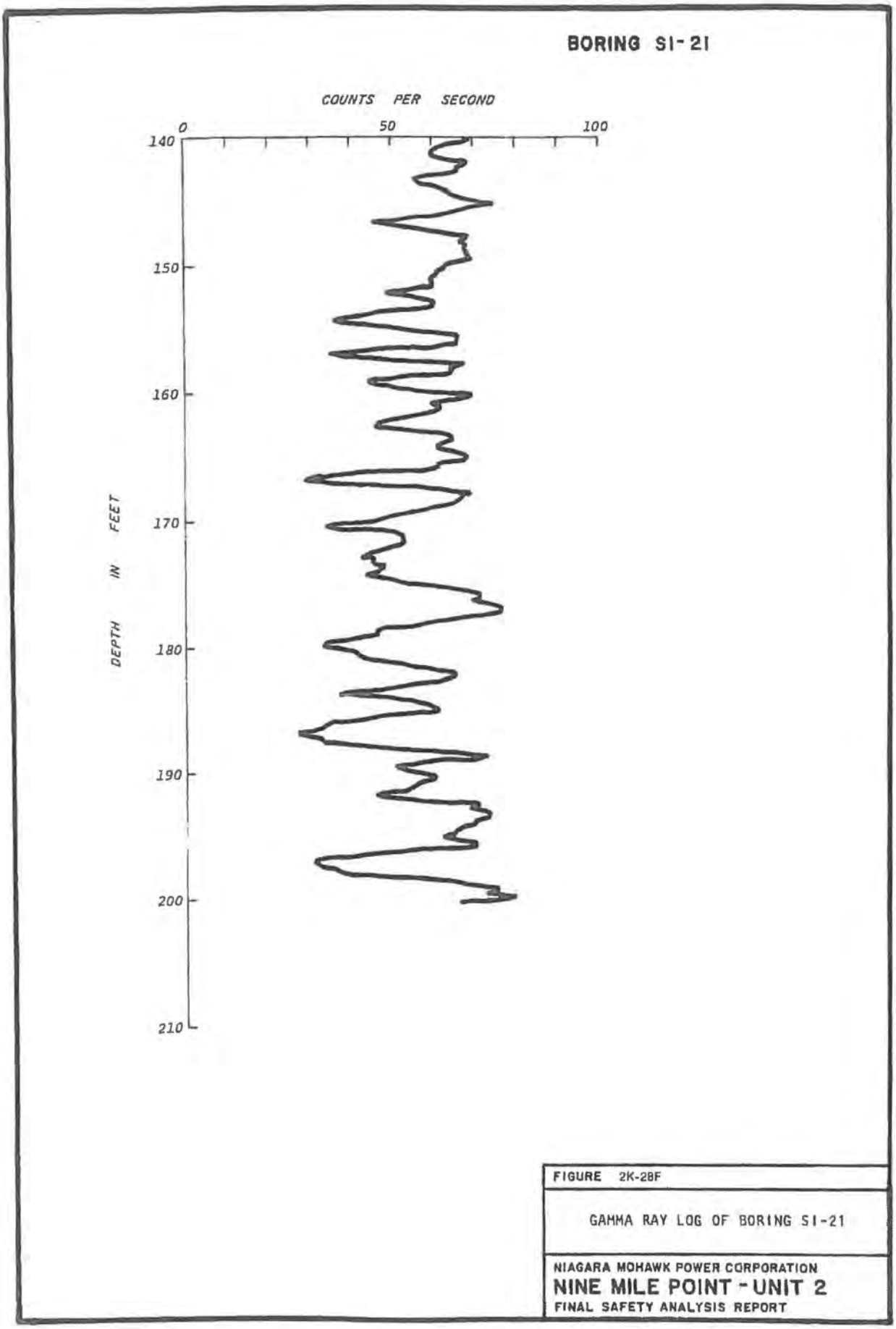
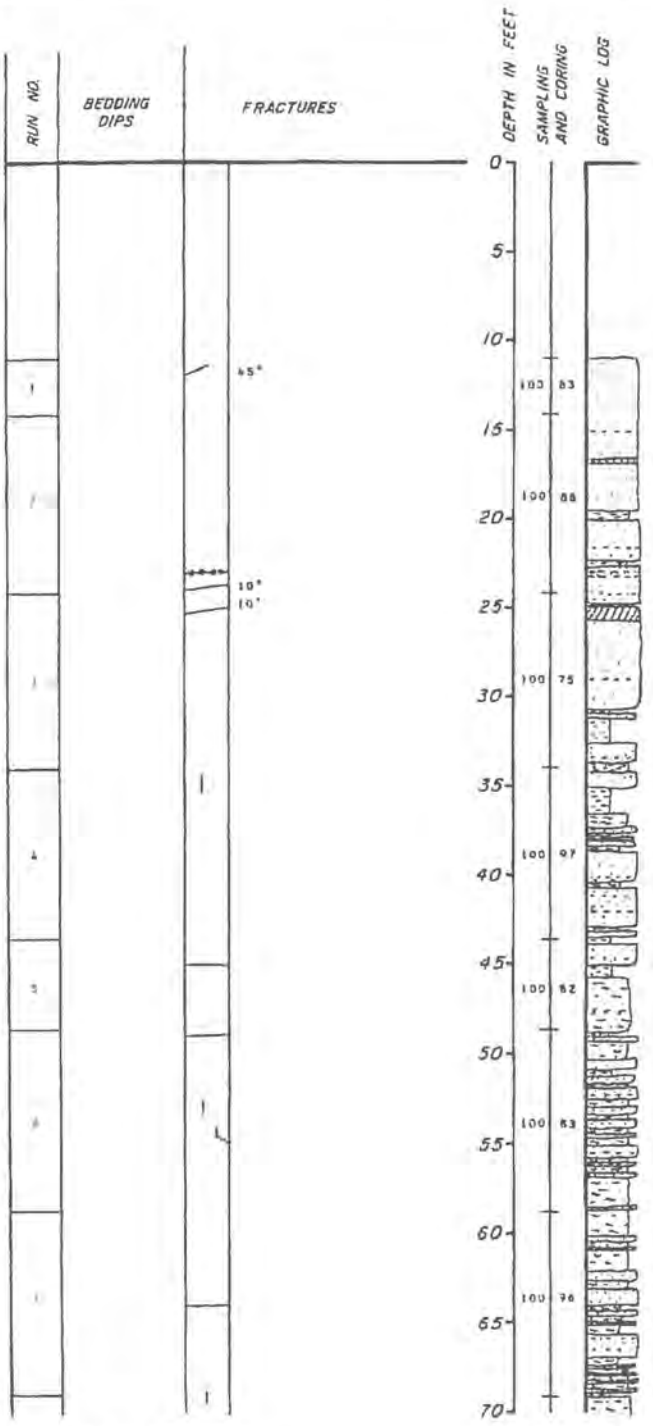


FIGURE 2K-28F

GAMMA RAY LOG OF BORING SI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



BORING SI-22

COORDINATES N 15 59
E 230

DESCRIPTIVE GEOLOGIC NOTES

0' DEPTH - ELEVATION 281.65'
SURFACE ELEVATION 280.57'

10' DEPTH - TOP OF ROCK
11' DEPTH - BEGIN CORING

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC MASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-29A

LOG OF BORING SI-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

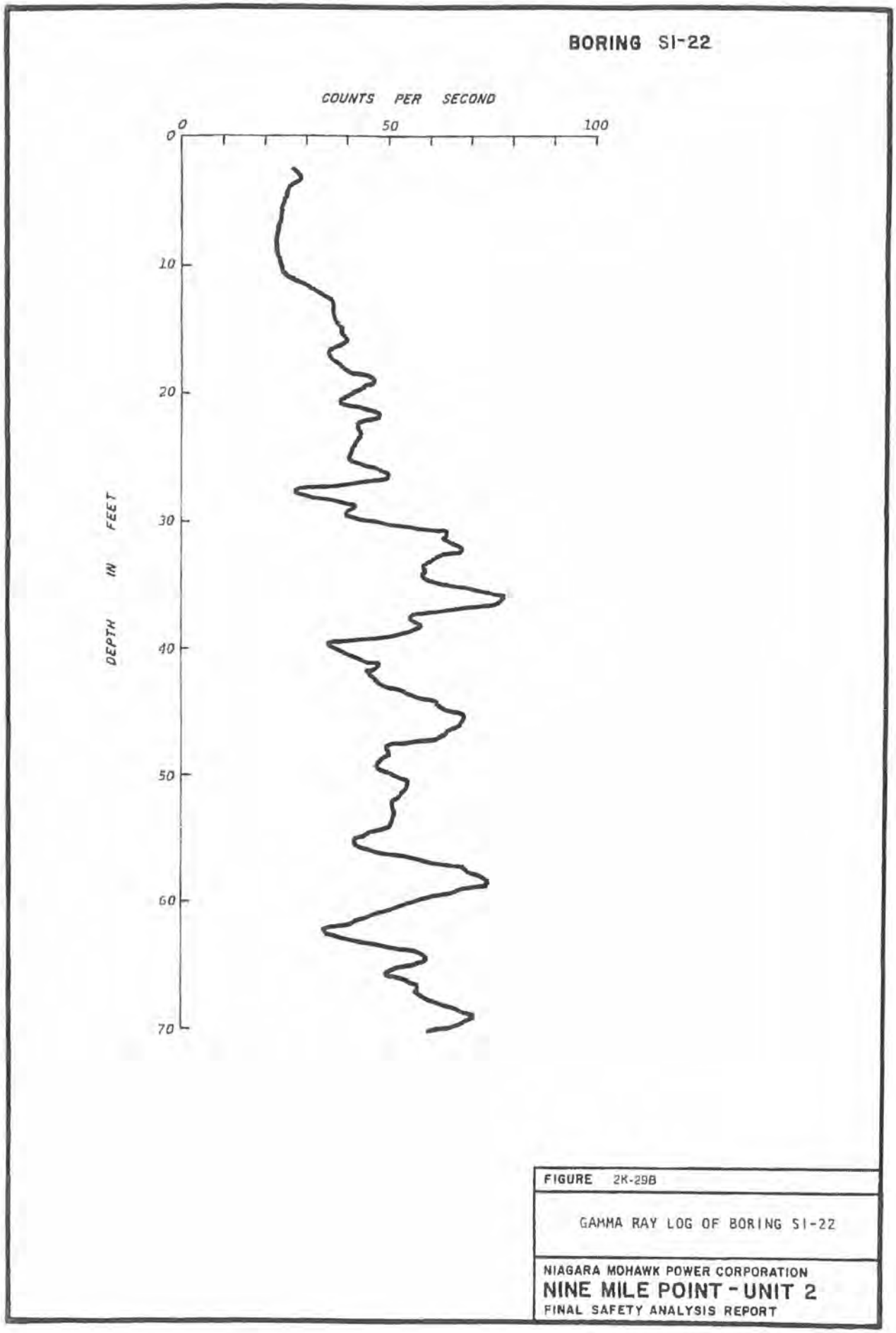


FIGURE 2K-29B

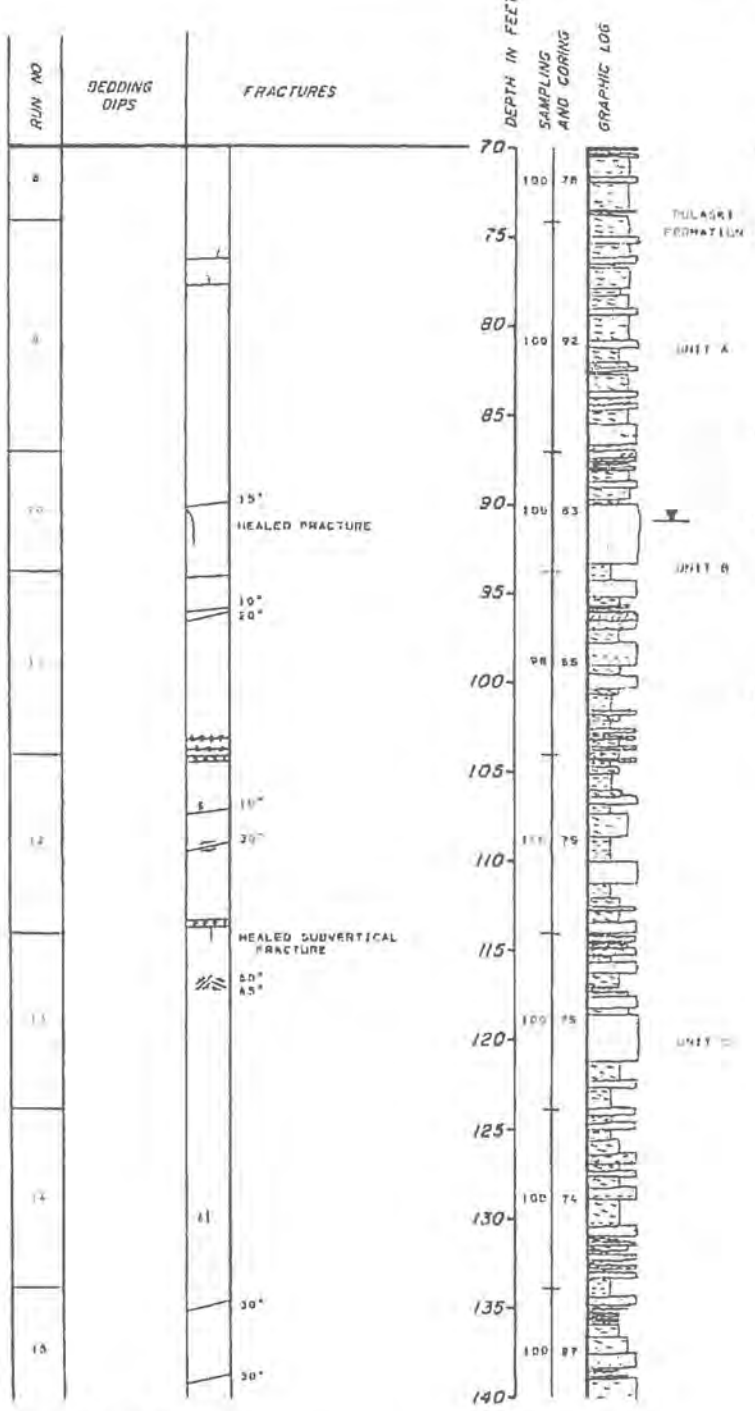
GAMMA RAY LOG OF BORING SI-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING S1-22

SURFACE ELEVATION
COORDINATES

DESCRIPTIVE GEOLOGIC NOTES



LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

WATER LEVEL 8/25/81

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Clay-silt slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Conglomerate
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-22C

LOG OF BORING S1-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

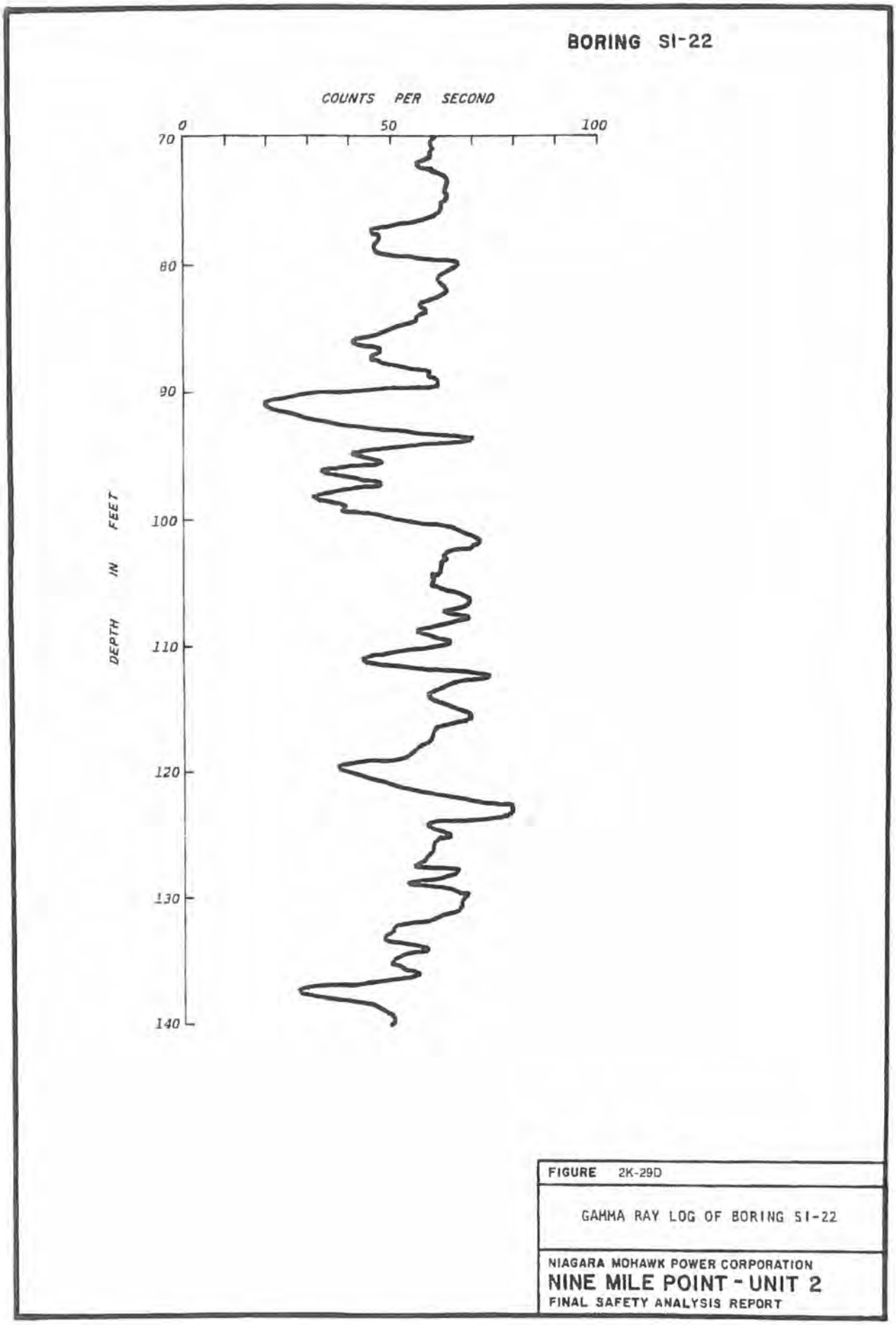


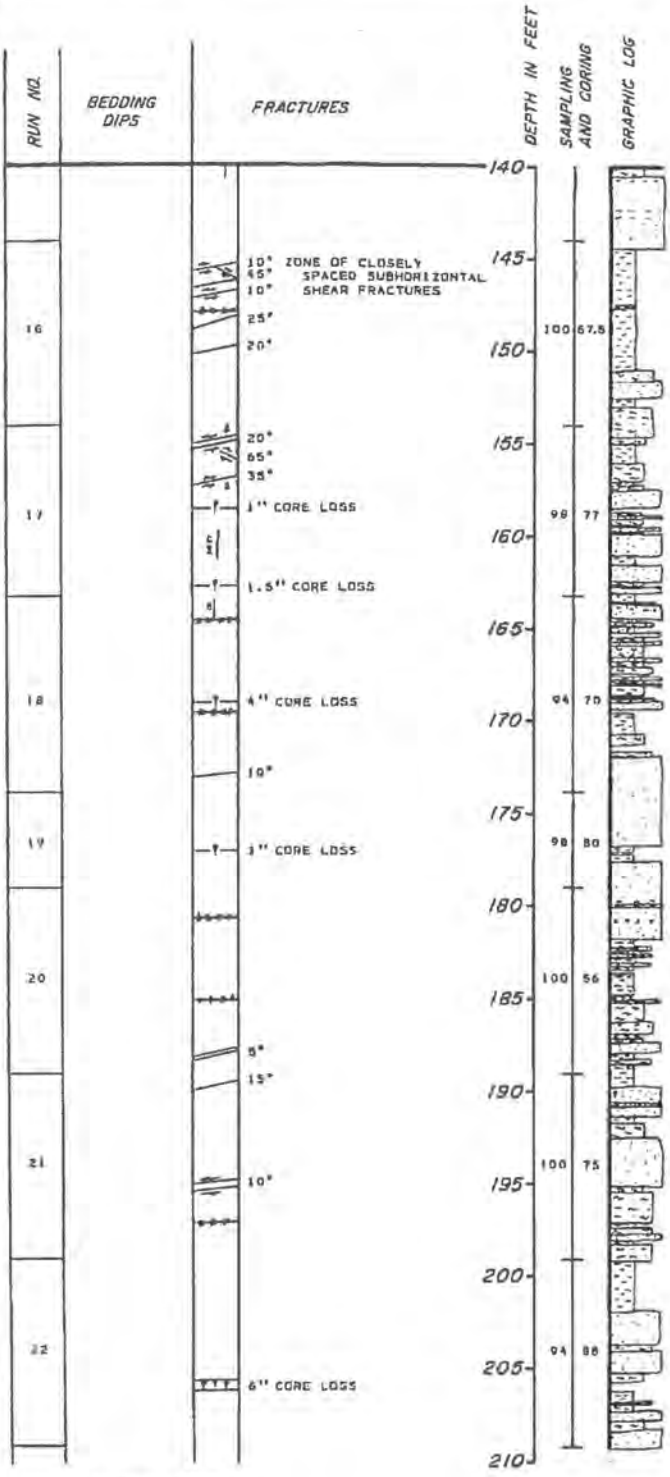
FIGURE 2K-29D

GAMMA RAY LOG OF BORING SI-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING S1-22

SURFACE ELEVATION
COORDINATES



DESCRIPTIVE GEOLOGIC NOTES

DOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

WHETSTONE GULF FORMATION

BORING TERMINATED AT A DEPTH OF 208.9 FEET ON 8/20/81 AND GEOPHYSICALLY LOGGED ON 8/21/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE ROD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Greywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2.5-29E

LOG OF BORING S1-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

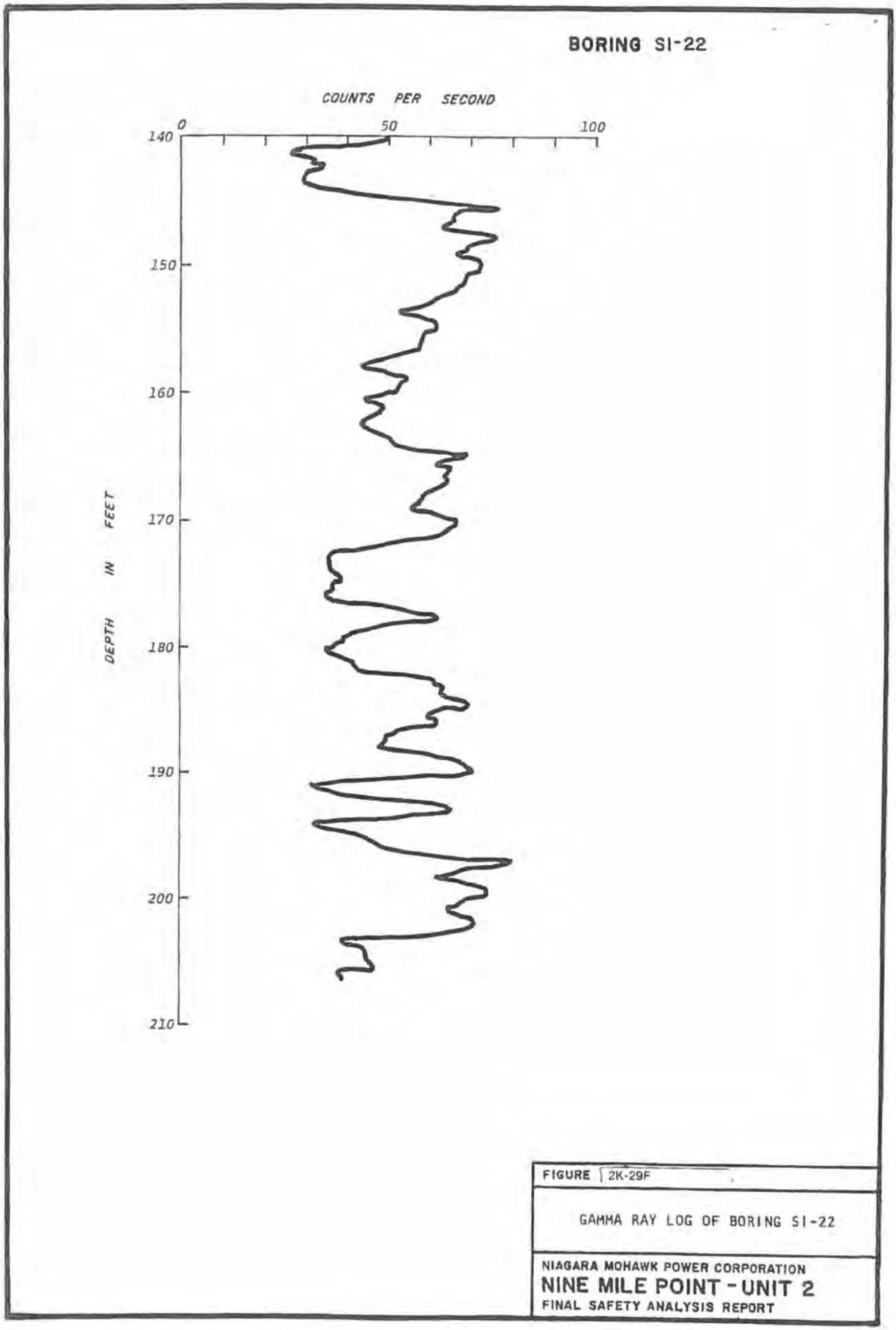


FIGURE 2K-29F

GAMMA RAY LOG OF BORING SI-22

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23

COORDINATES S 59.93
W 80.73

DESCRIPTIVE GEOLOGIC NOTES

0' DEPTH - ELEVATION 260.5'
1.5' DEPTH - TOP OF ROCK
GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT A

WATER LEVEL - AUGUST 25, 1981

WATER LEVEL - AUGUST 24, 1981

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
38.5' - PARTIAL LOSS OF DRILLING CIRCULATION

UNIT B

50.0' - LOSS OF DRILLING CIRCULATION
DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

RUN NO.	BEDDING DIPS	FRACTURES	DEPTH IN FEET	SAMPLING AND CORING	GRAPHIC LOG
1			0		
2		50°		100 100	
3		40°	5	97 59	
4				100 85	
5			10	100 92	
6				98 50	
7				100 59	
8			15		
9		60°		98 83	
10		80°	20		
		60°	25		
			30	100 59	
11		? 1.75" CORE LOSS		80	
12		ZONE OF CLOSELY SPACED SUBHORIZONTAL FRACTURES	35	76 78	
13		ZONE OF CLOSELY SPACED SUBHORIZONTAL FRACTURES		92 30	
		ZONE OF CLOSELY SPACED SUBHORIZONTAL FRACTURES	40		
14		ZONE OF CLOSELY SPACED SUBHORIZONTAL FRACTURES	45		
		60°		100 98	
		50°	50		
15		10°/40°	55		
				100 43	
		20°	60		
		70°			
		30°	65		
16				100 61	
		10°	70		

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 12K-30A

LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23

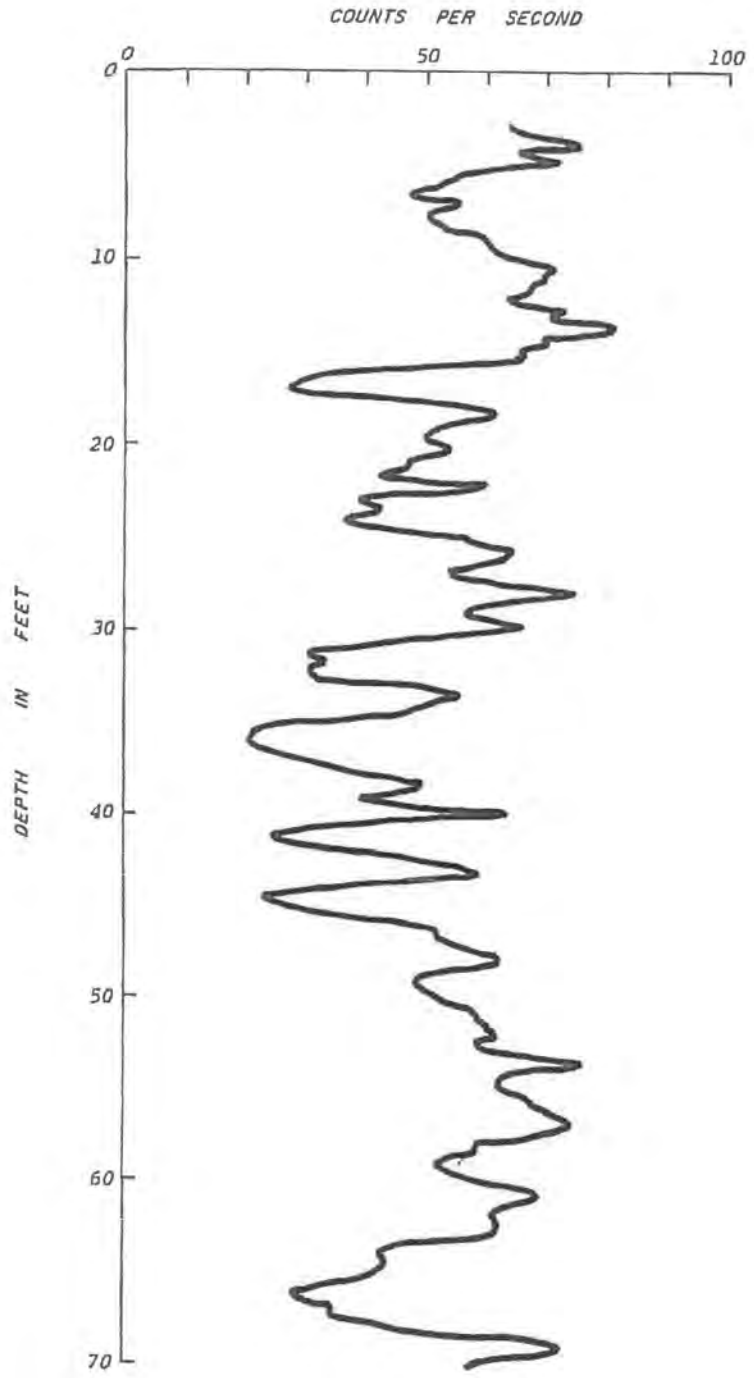
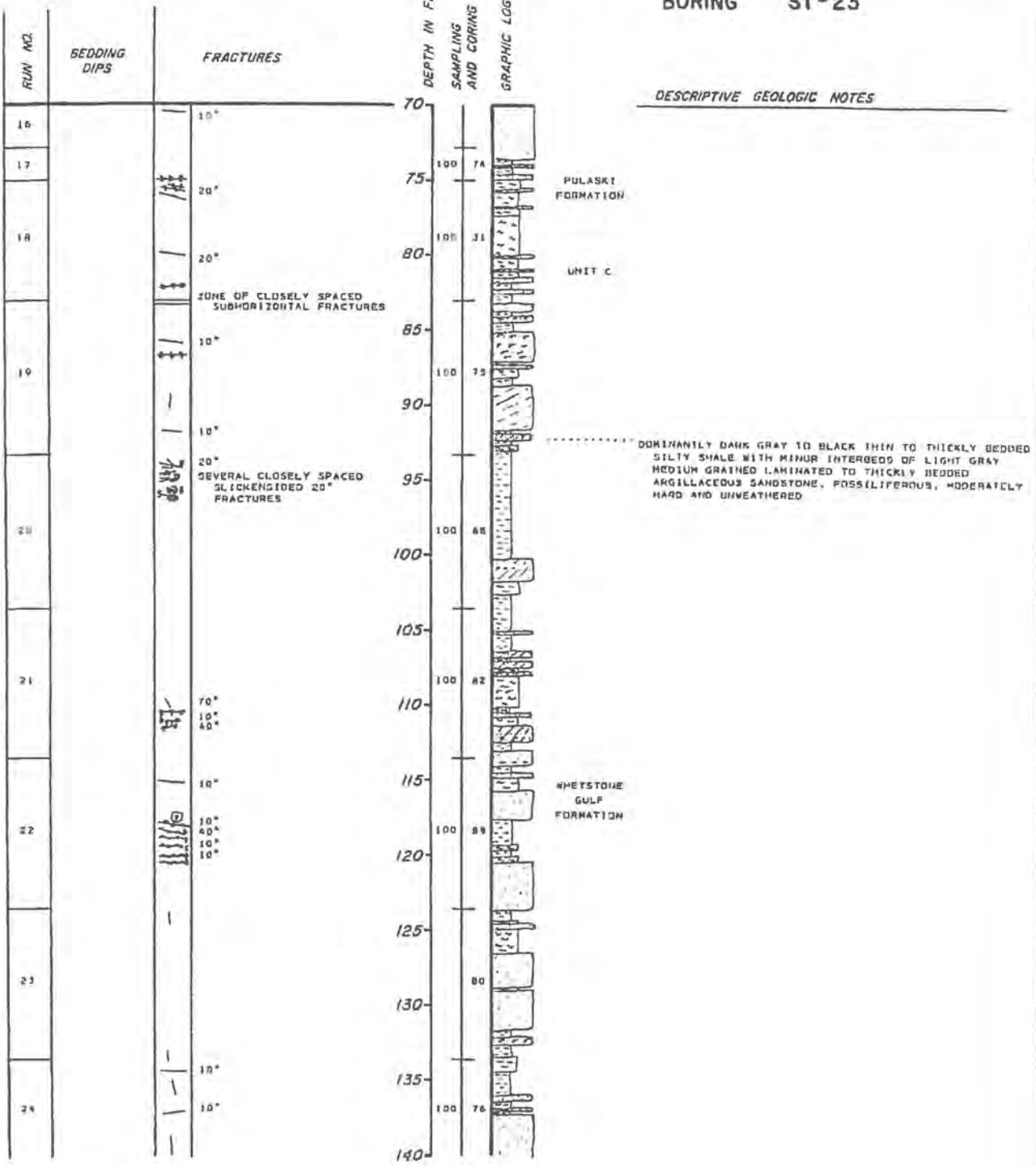


FIGURE 2K-30B

GAMMA RAY LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE [illegible]

LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23

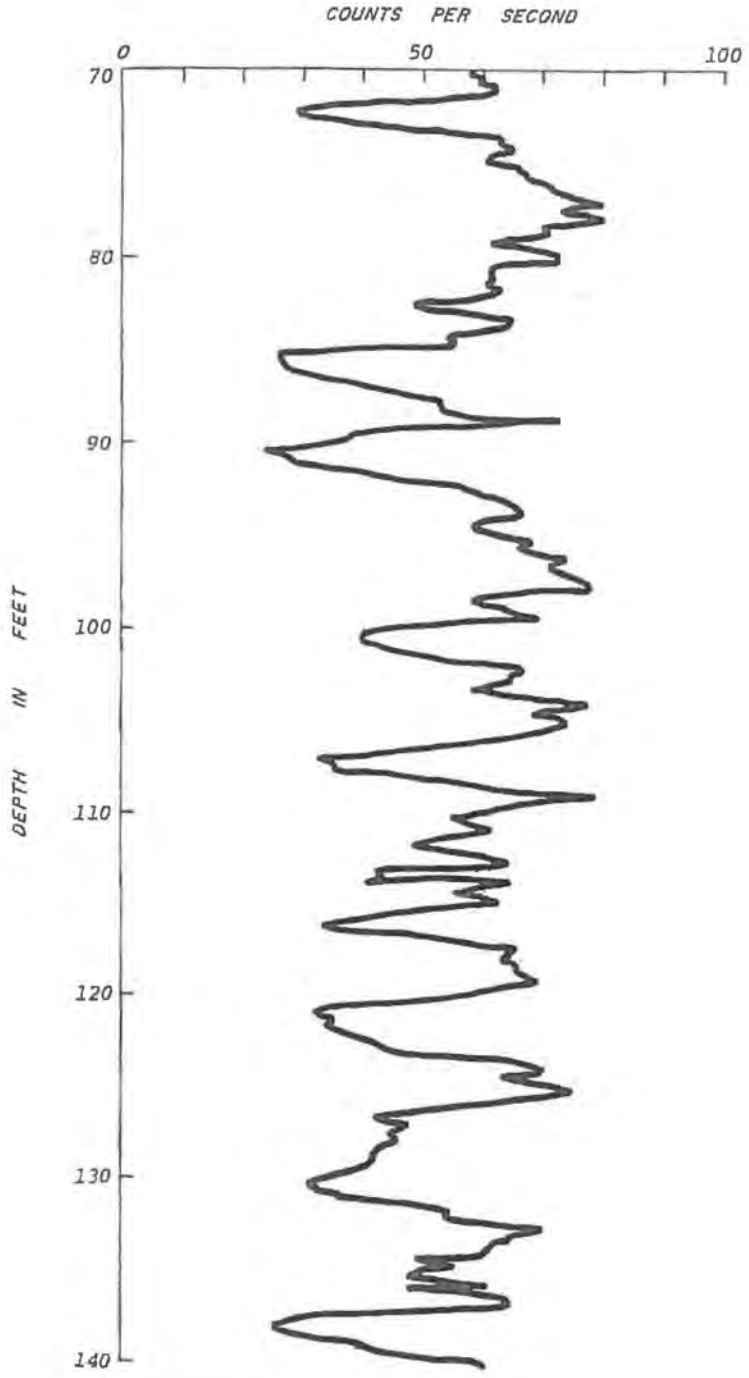
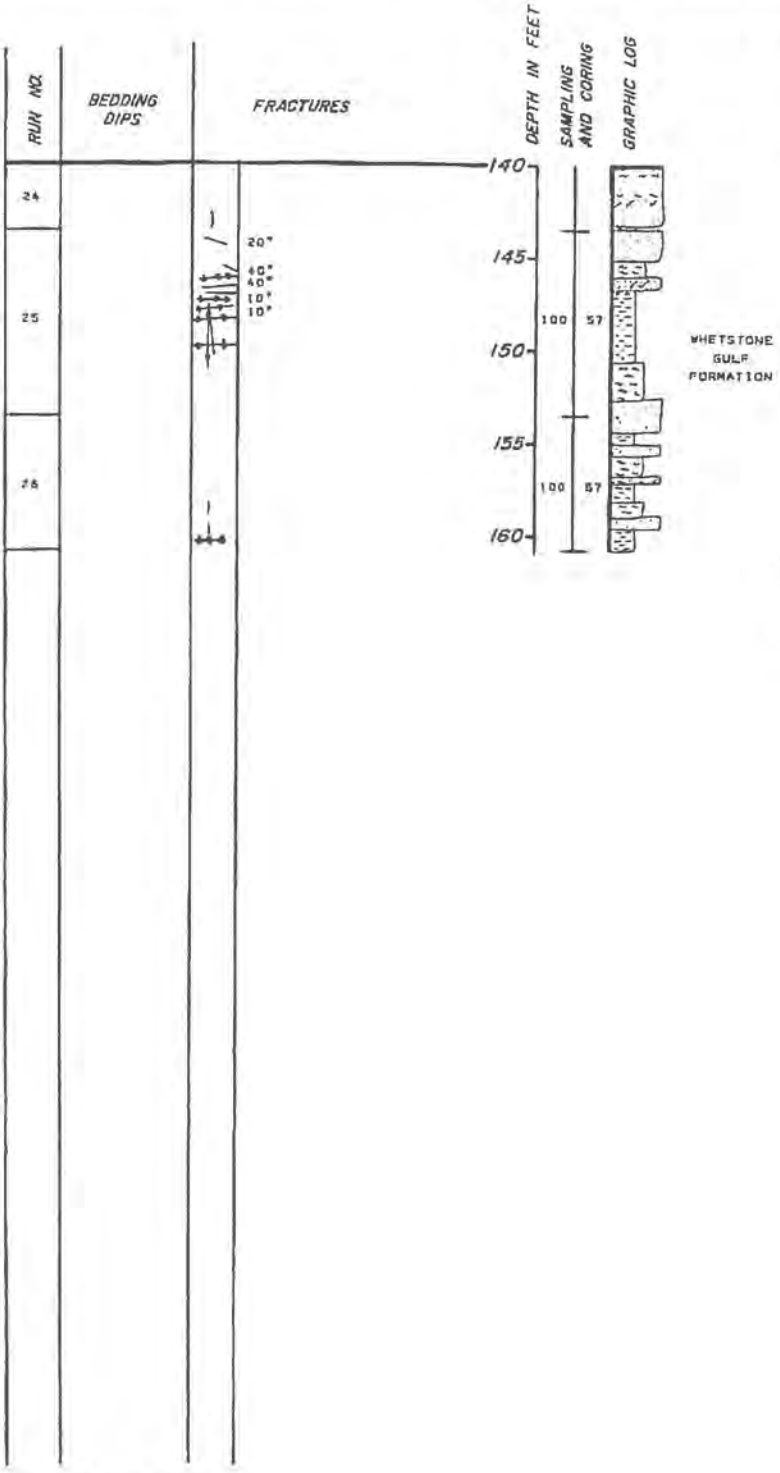


FIGURE 12K-30D

GAMMA RAY LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 160.7 FEET ON 8/26/61 AND GEOPHYSICALLY LOGGED ON 8/27/61

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE ROD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

63° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-30E

LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING SI-23

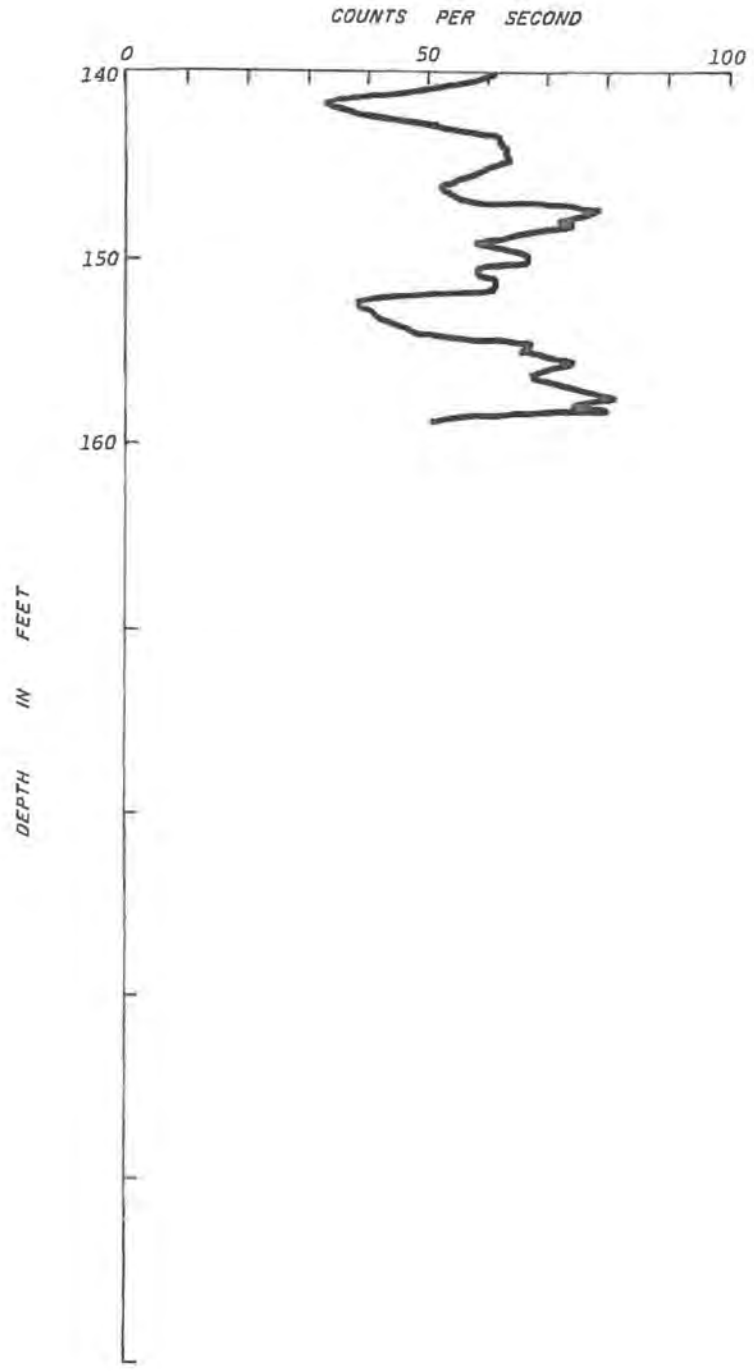
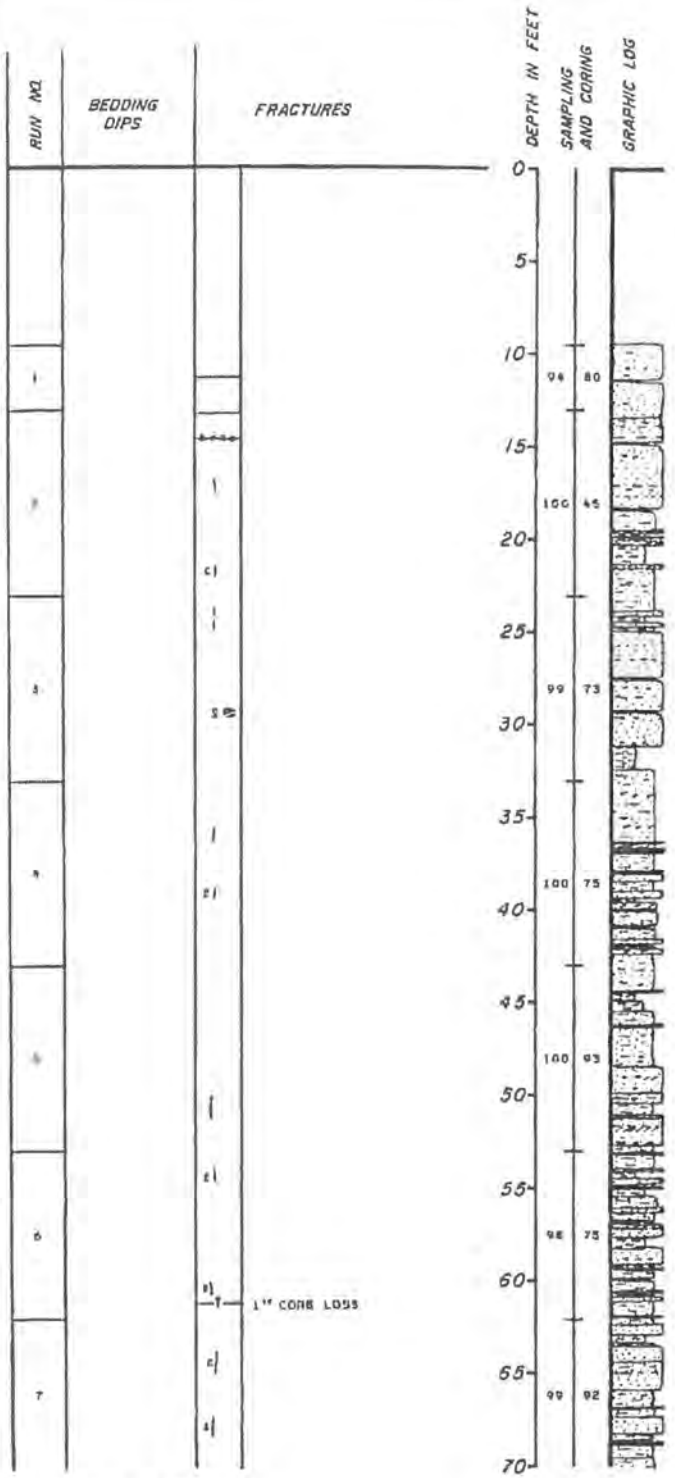


FIGURE 2K-30F

GAMMA RAY LOG OF BORING SI-23

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



BORING 820

COORDINATES N 298
E 50

DESCRIPTIVE GEOLOGIC NOTES

0' DEPTH - ELEVATION 248.9'

APPROXIMATE TOP OF ROCK

9.5' DEPTH - BEGIN CORING

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

OSWEGO SANDSTONE

TRANSITION ZONE

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT 8

▼ WATER LEVEL - SEPTEMBER 8,1981

▼ WATER LEVEL - AUGUST 31,1981

SAMPLING AND CORING INFORMATION

Core run
100 95 R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-31A

LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 820

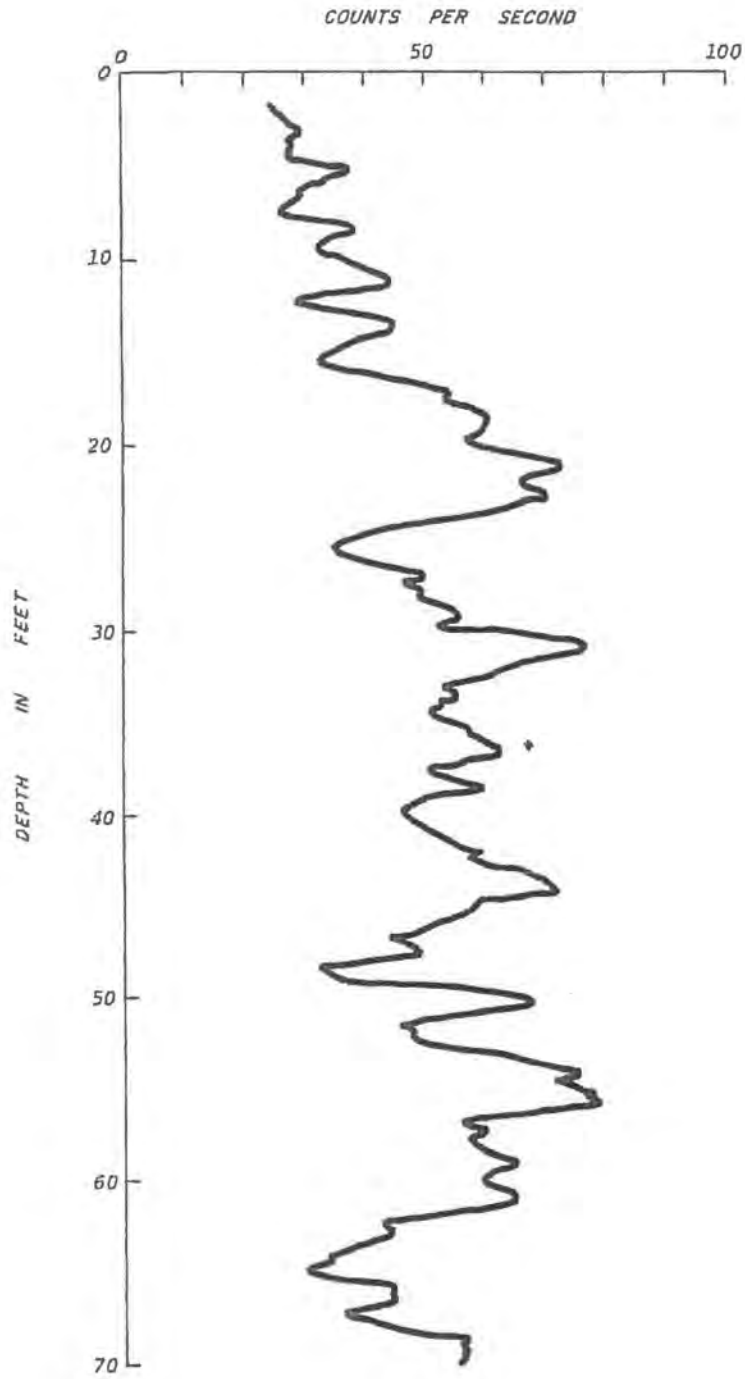
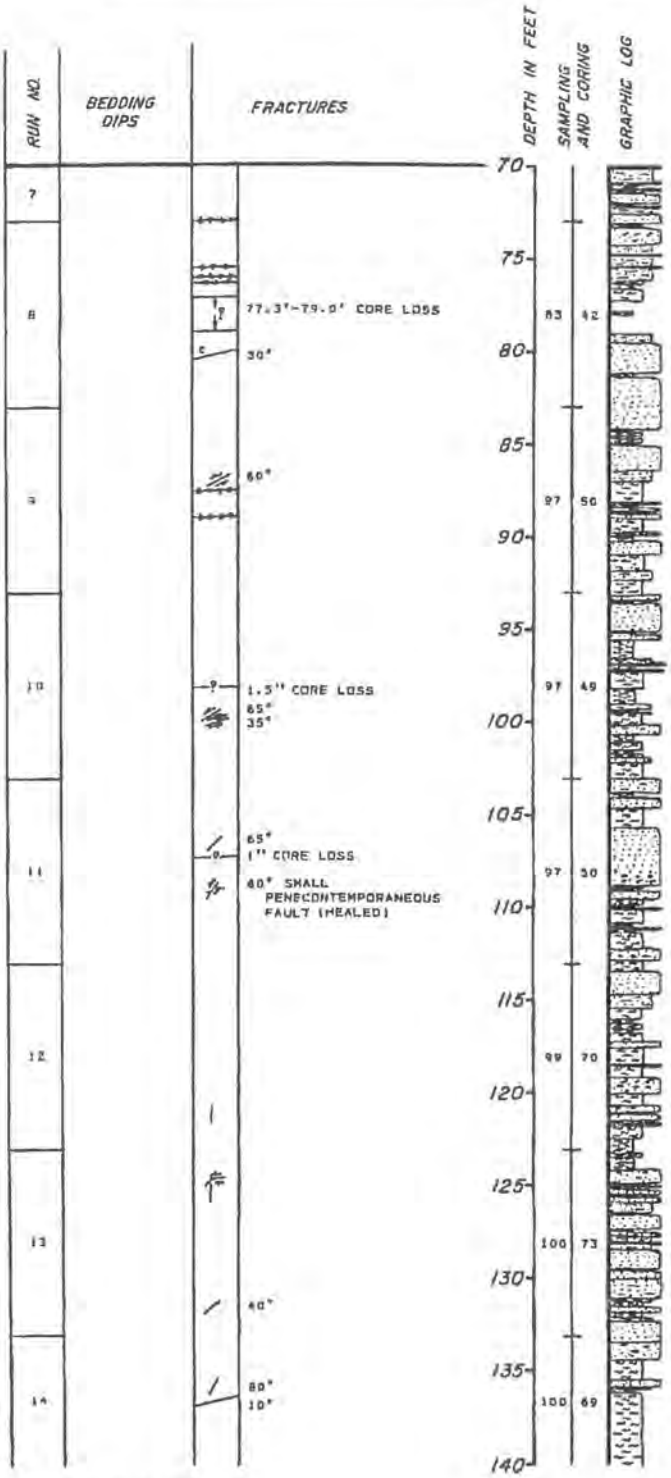


FIGURE 2K-31B

GAMMA RAY LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 820



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION

UNIT B

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

WHETSTONE GULF FORMATION

PREDOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-31C

LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 820

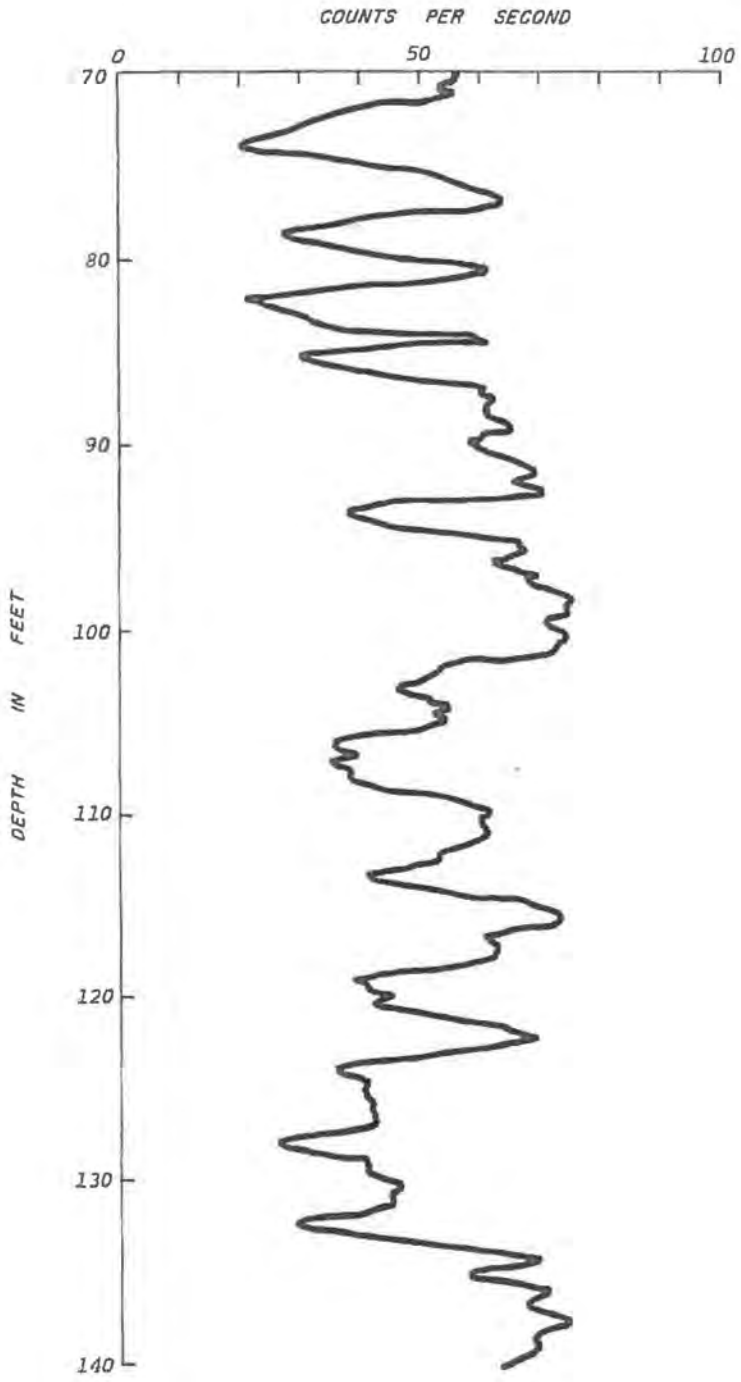
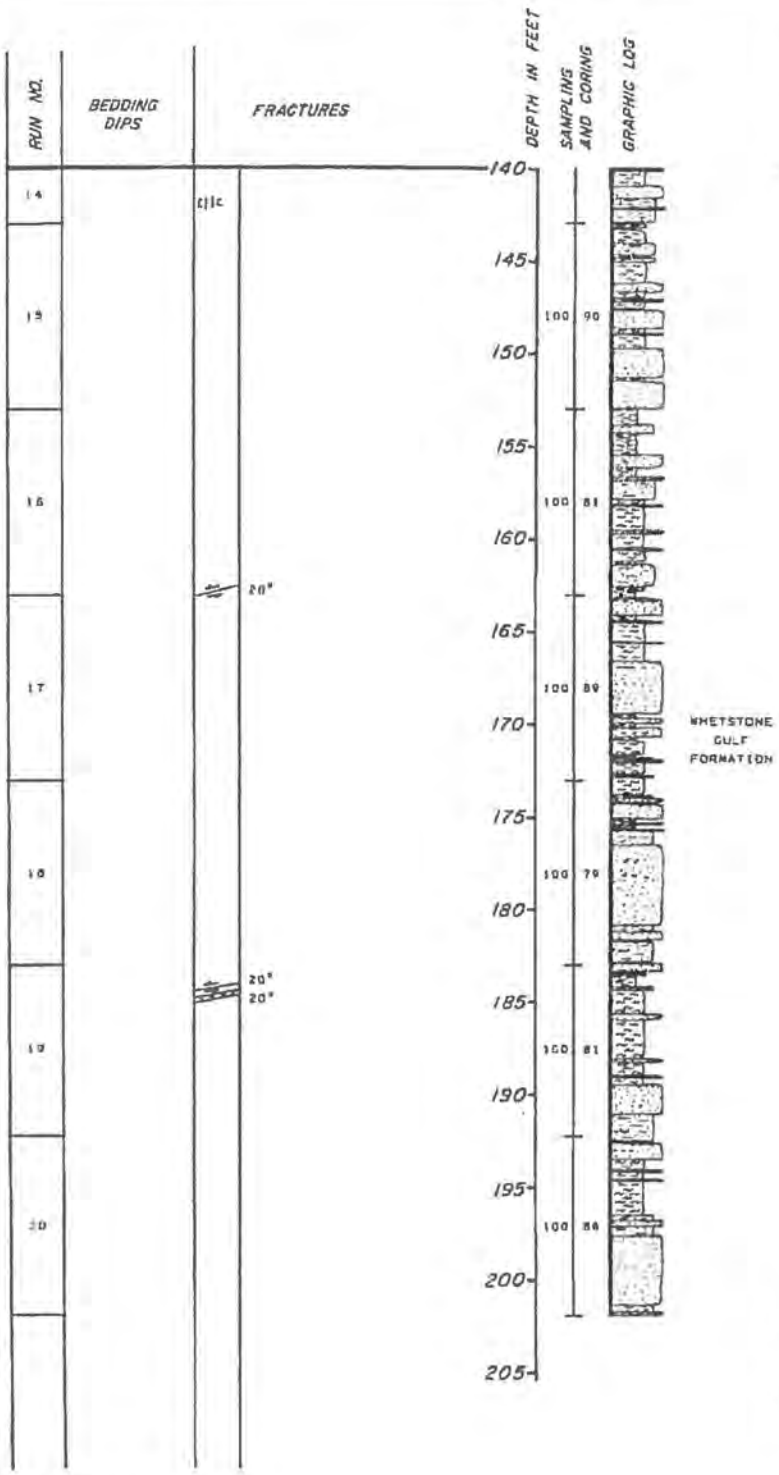


FIGURE 2K-31D

GAMMA RAY LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 820



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 201.9 FEET ON 9/8/81 AND GEOPHYSICALLY LOGGED ON 9/9/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE [illegible]

LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 820

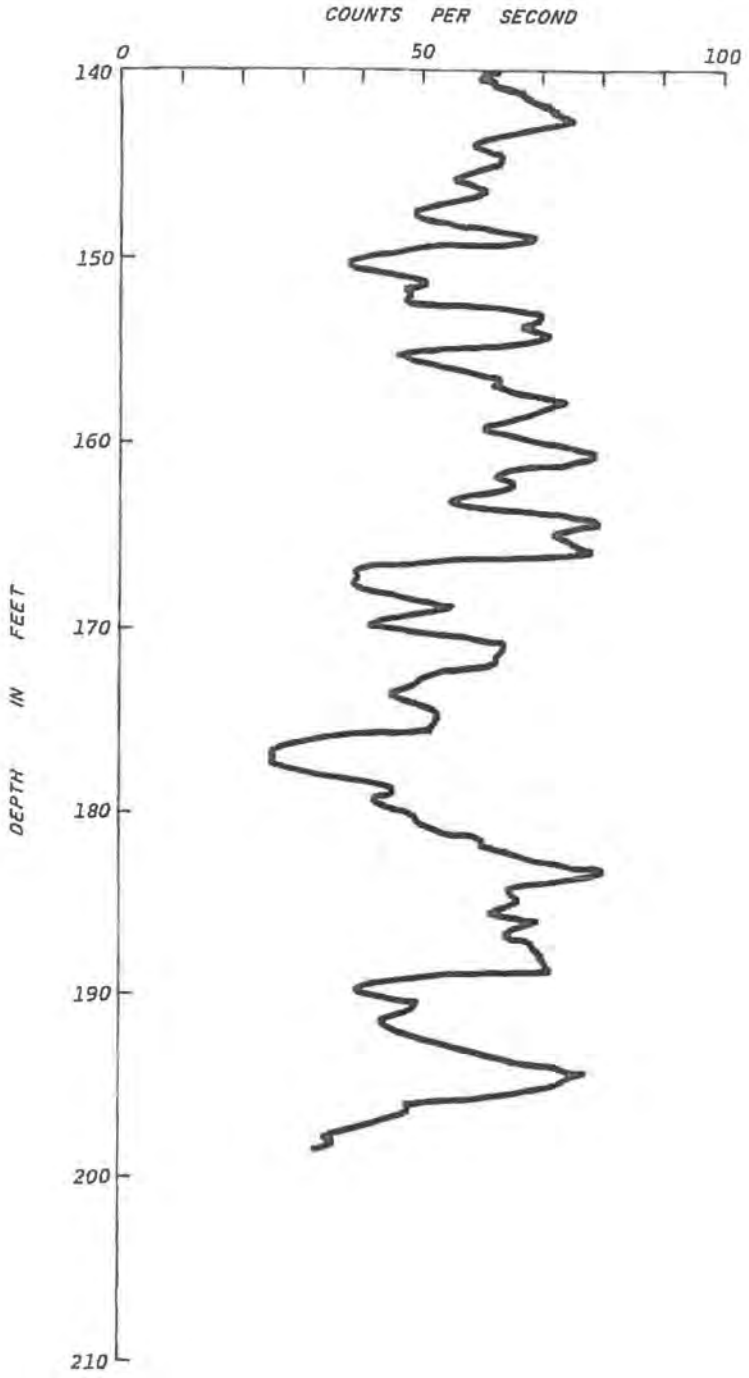
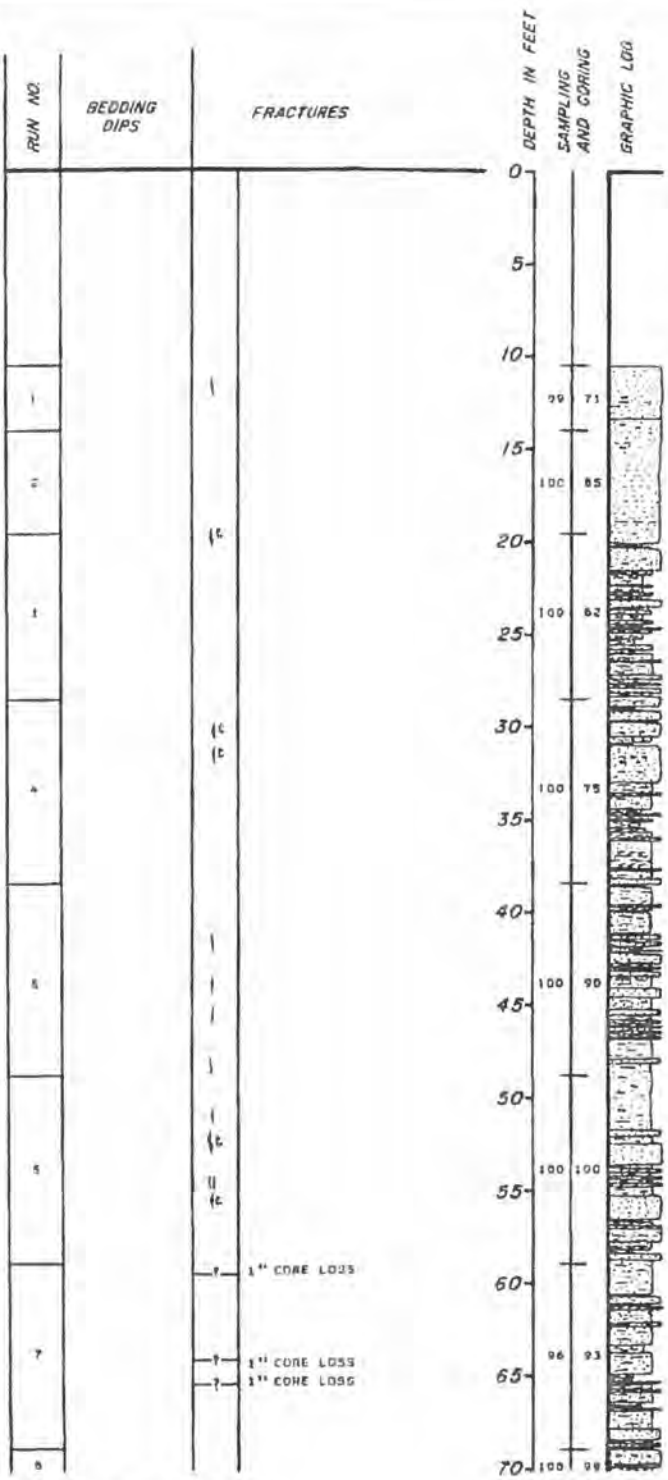


FIGURE 2K-31F

GAMMA RAY LOG OF BORING 820

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



BORING 821

COORDINATES N 263
E 106

DESCRIPTIVE GEOLOGIC NOTES

0' DEPTH - ELEVATION 252.3'

5.0' DEPTH - TOP OF ROCK

10.5' DEPTH - BEGIN CORING
LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

OSWEGO SANDSTONE

TRANSITION ZONE

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT 8

WATER LEVEL - 9/16/81

SAMPLING AND CORING INFORMATION

100 | 95 Core run
R.Q.D.
Percent recovery

BEDDING DIPS

05° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Slip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-12A

LOG OF BORING 821

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 821

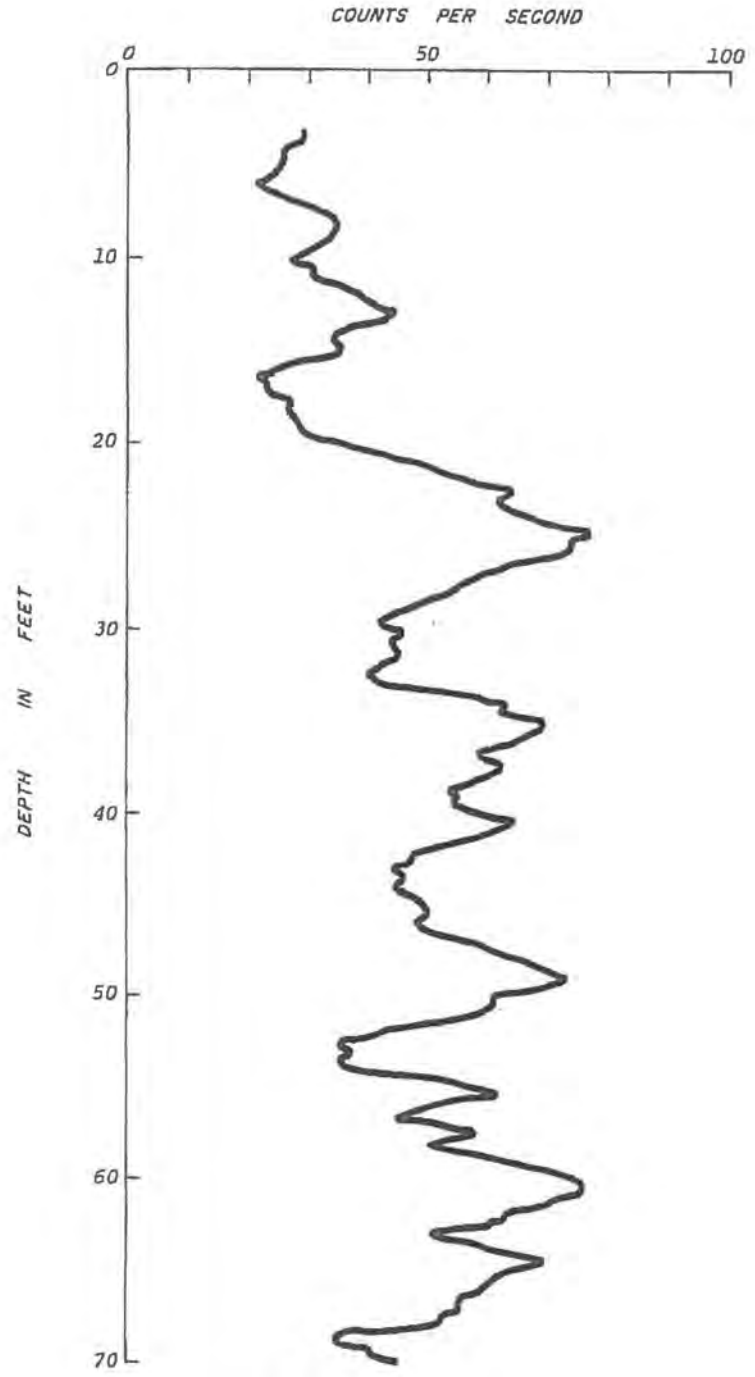
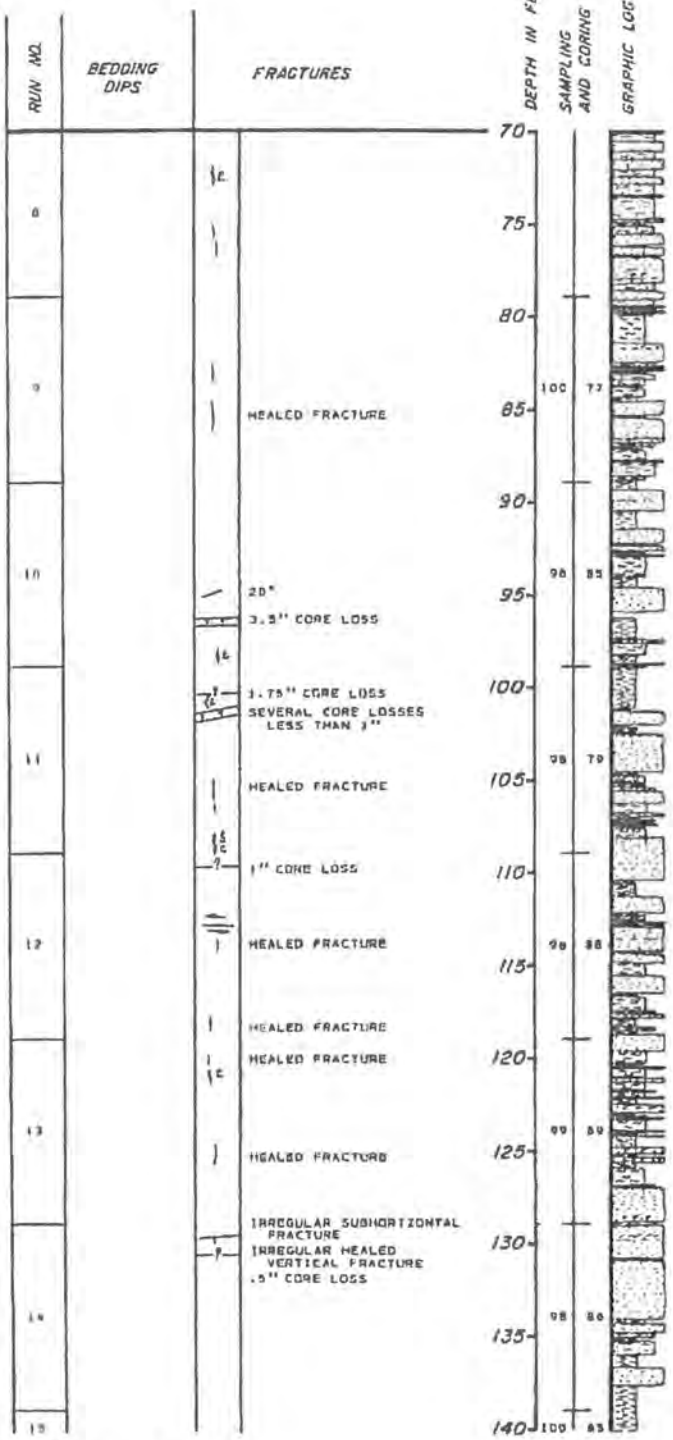


FIGURE 2K-32B

GAMMA RAY LOG OF BORING 821

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 821



DESCRIPTIVE GEOLOGIC NOTES

UNIT A

PULASKI FORMATION

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT B

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERMIXED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

WHETSTONE GULF FORMATION

DOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-32C

LOG OF BORING 821

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 821

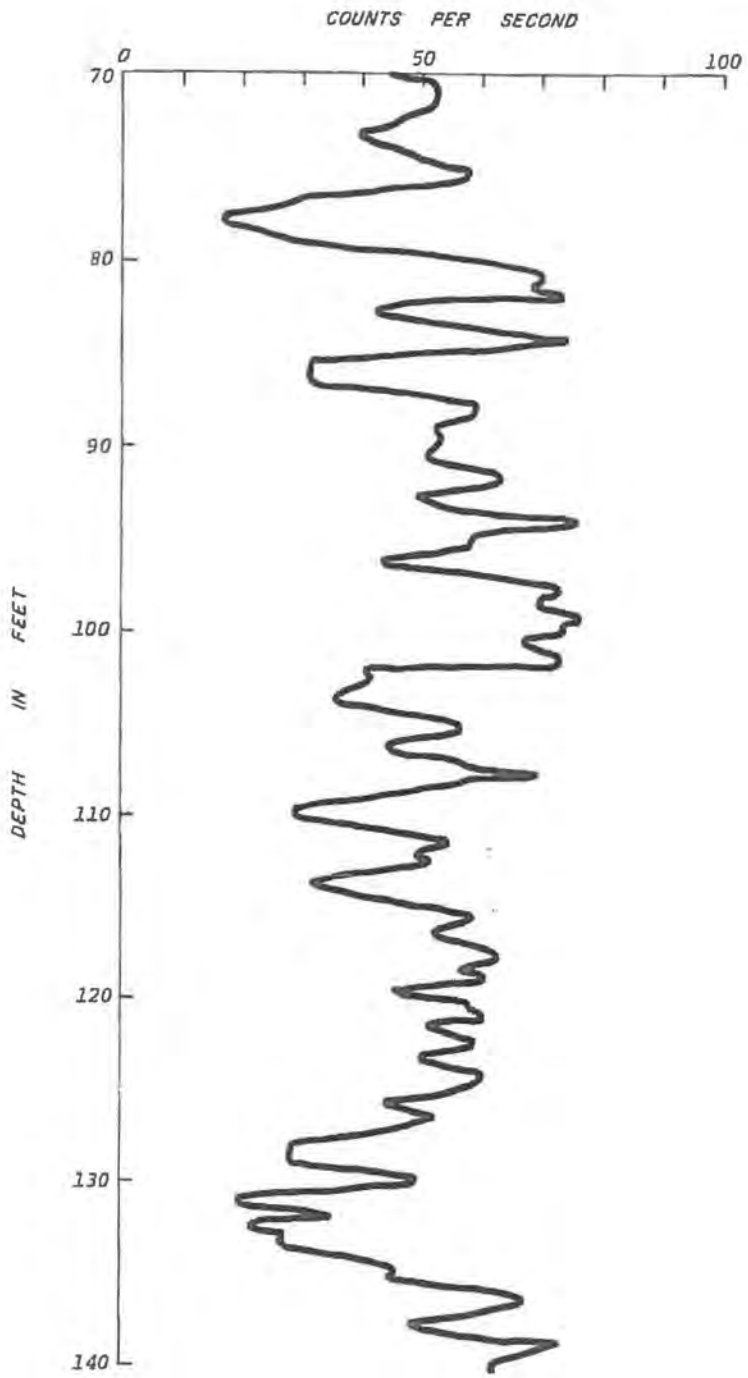
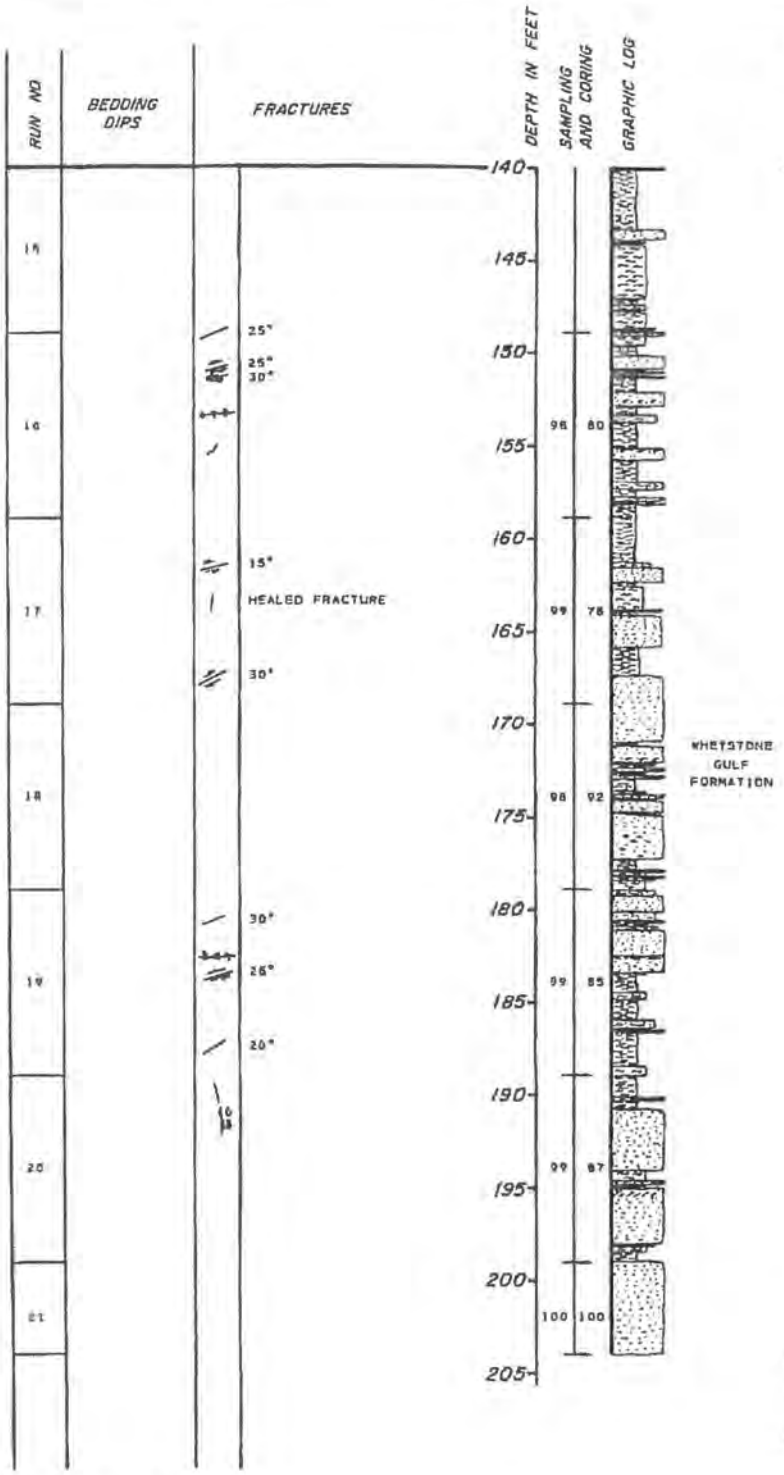


FIGURE 2K-32D

GAMMA RAY LOG OF BORING 821

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 821



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 203.8 FEET ON 9/16/81 AND GEOPHYSICALLY LOGGED ON 9/17/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-32E

LOG OF BORING 821

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING 821

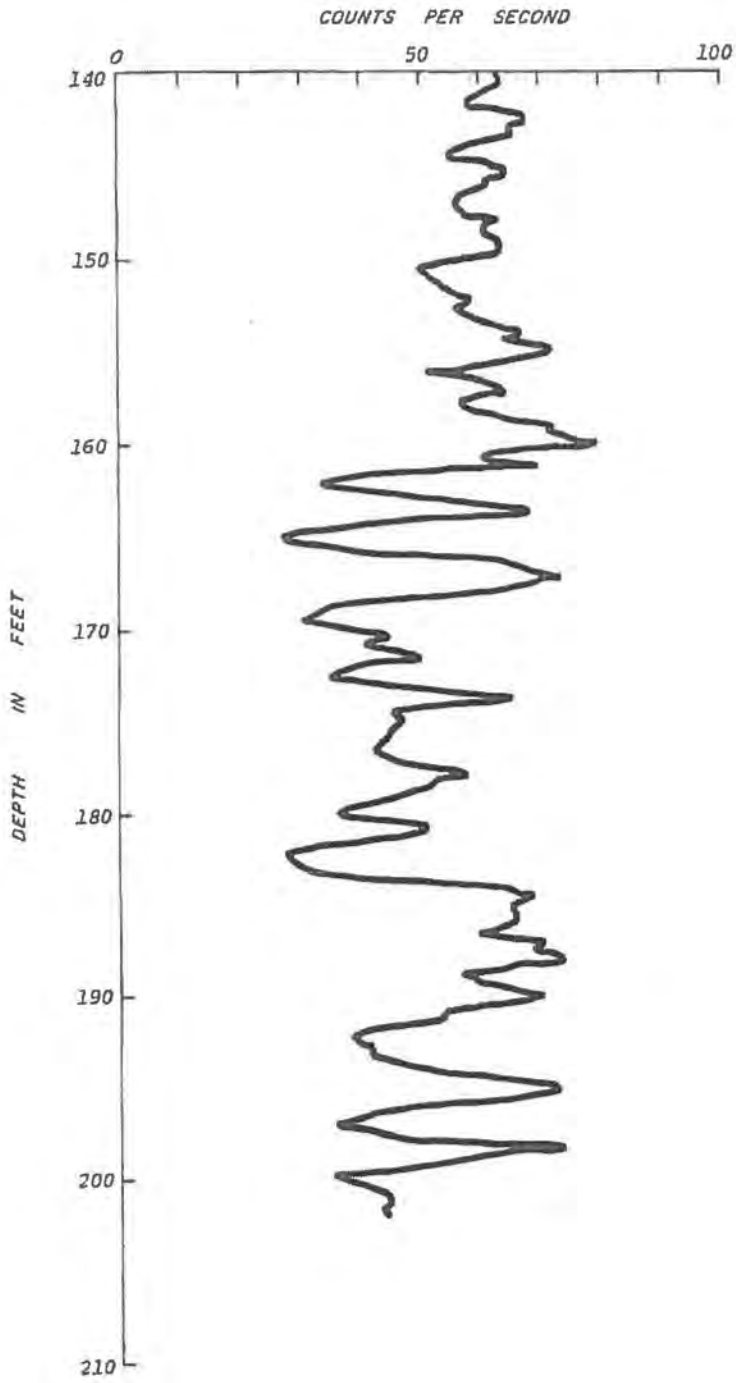


FIGURE 2K-32F

GAMMA RAY LOG OF BORING 821

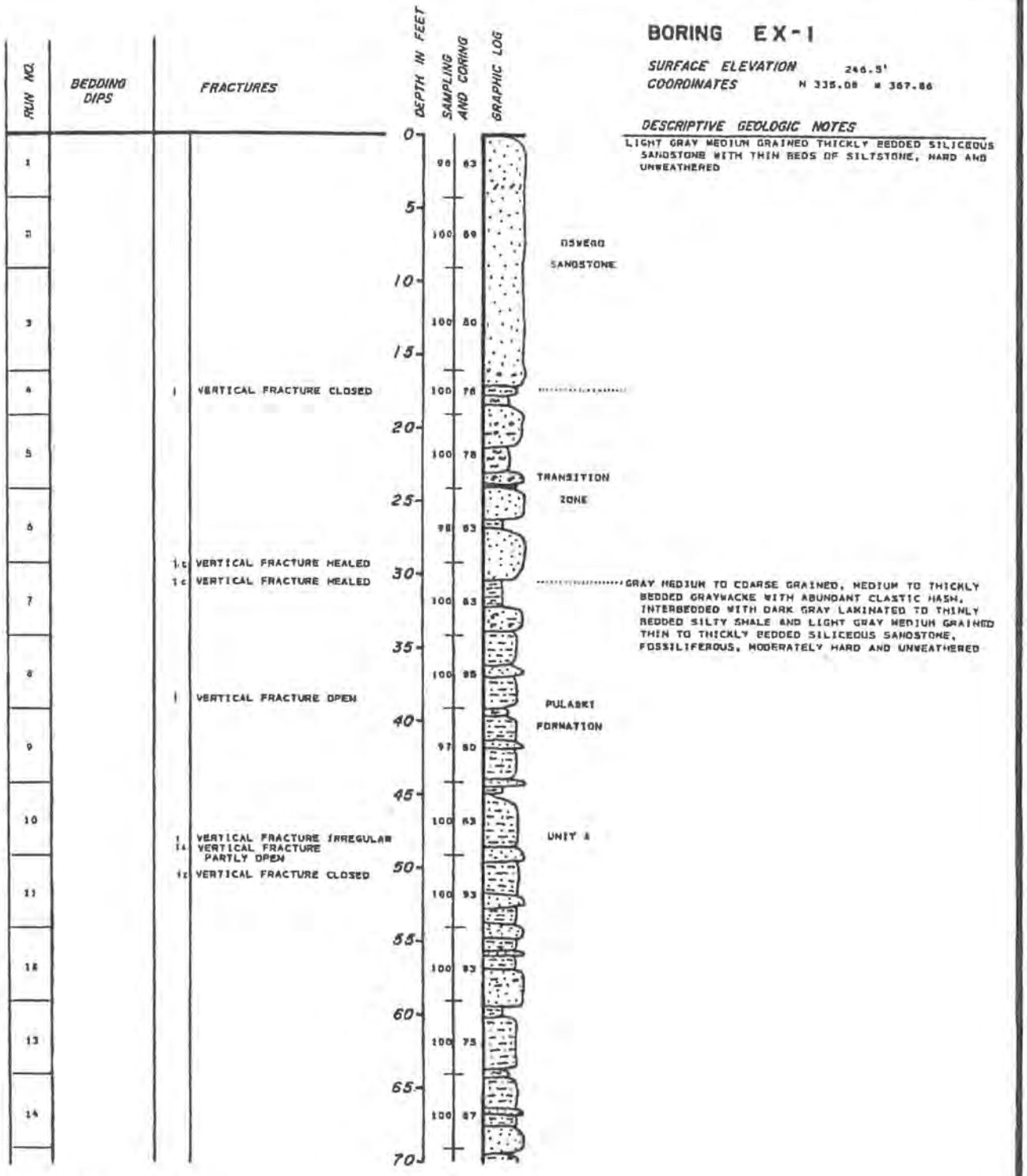
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-1

SURFACE ELEVATION 246.5'
COORDINATES N 335.08 E 367.86

DESCRIPTIVE GEOLOGIC NOTES

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

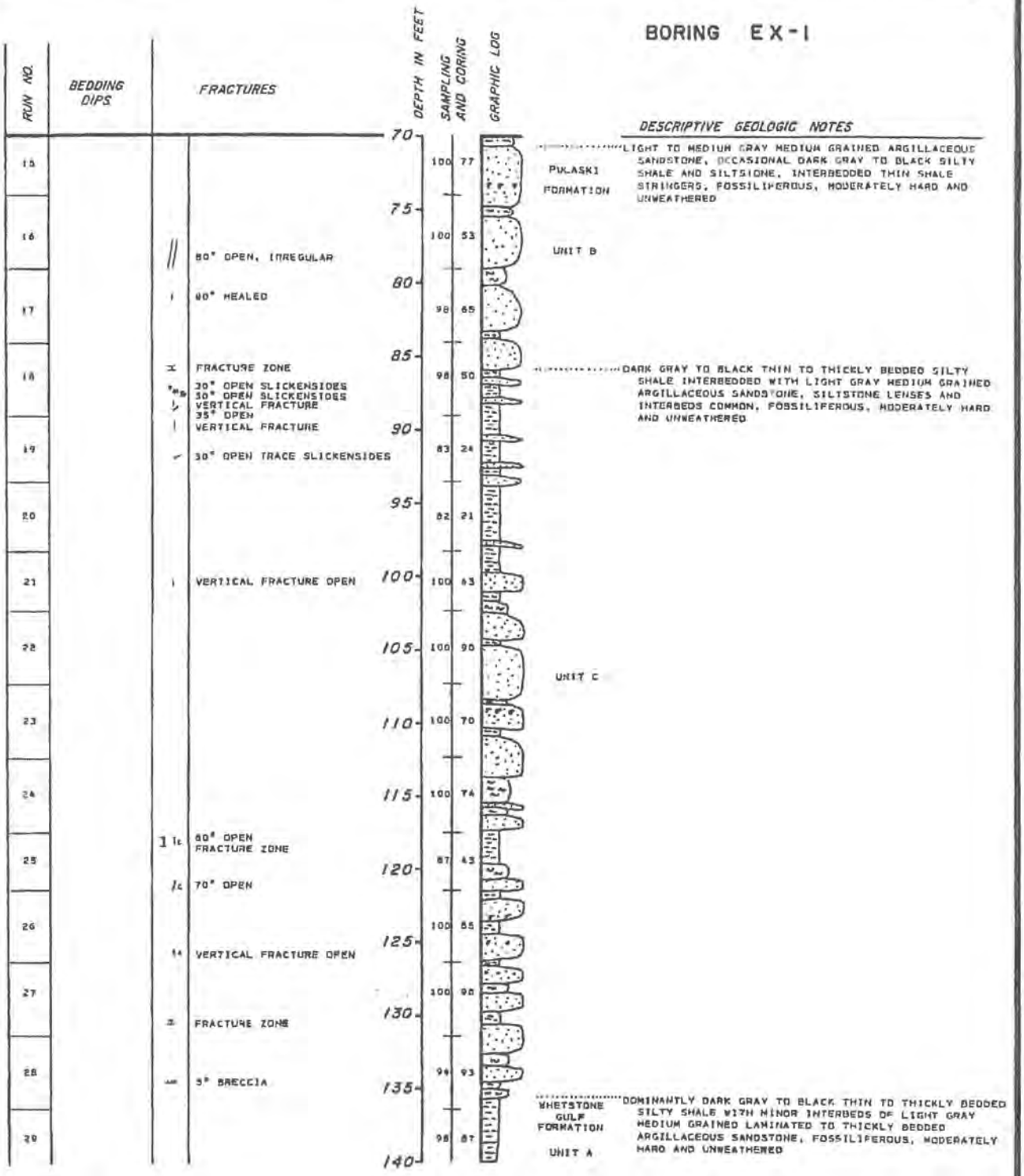
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-33A

LOG OF BORING EX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-1



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

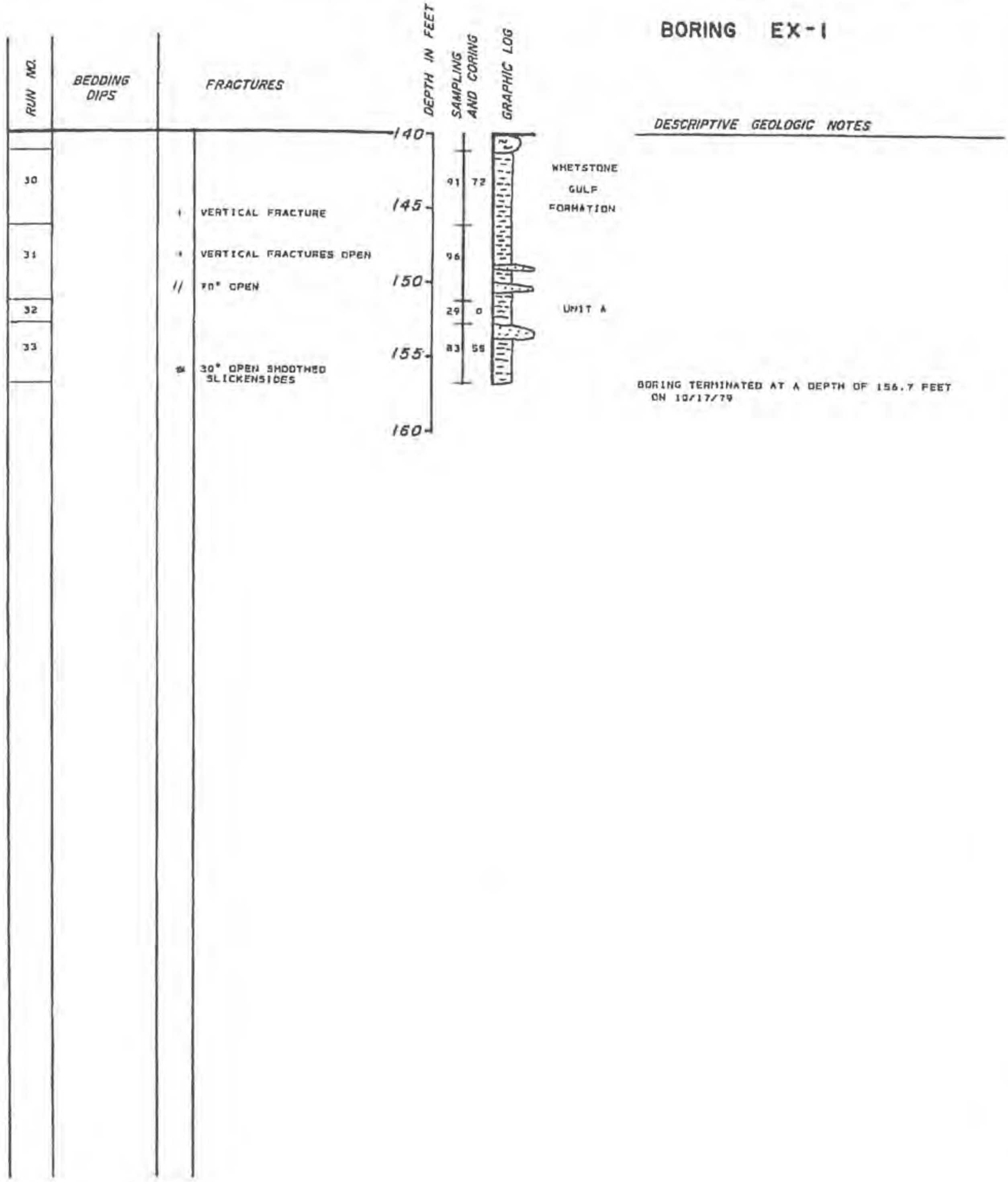
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K 338

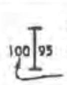
LOG OF BORING EX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-1



SAMPLING AND CORING INFORMATION



Core run
R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

Breccia zone
Dip-slip slickensides
Fractures-shown at approximate angle to core axis
inmeralized fracture = calcite s - sulfide
Fractured zone

KEY TO SYMBOLS

Sandstone
Graywacke
Siltstone
Shale
Fossils
Shale intra-clasts
Cross-bedding
Shale laminae

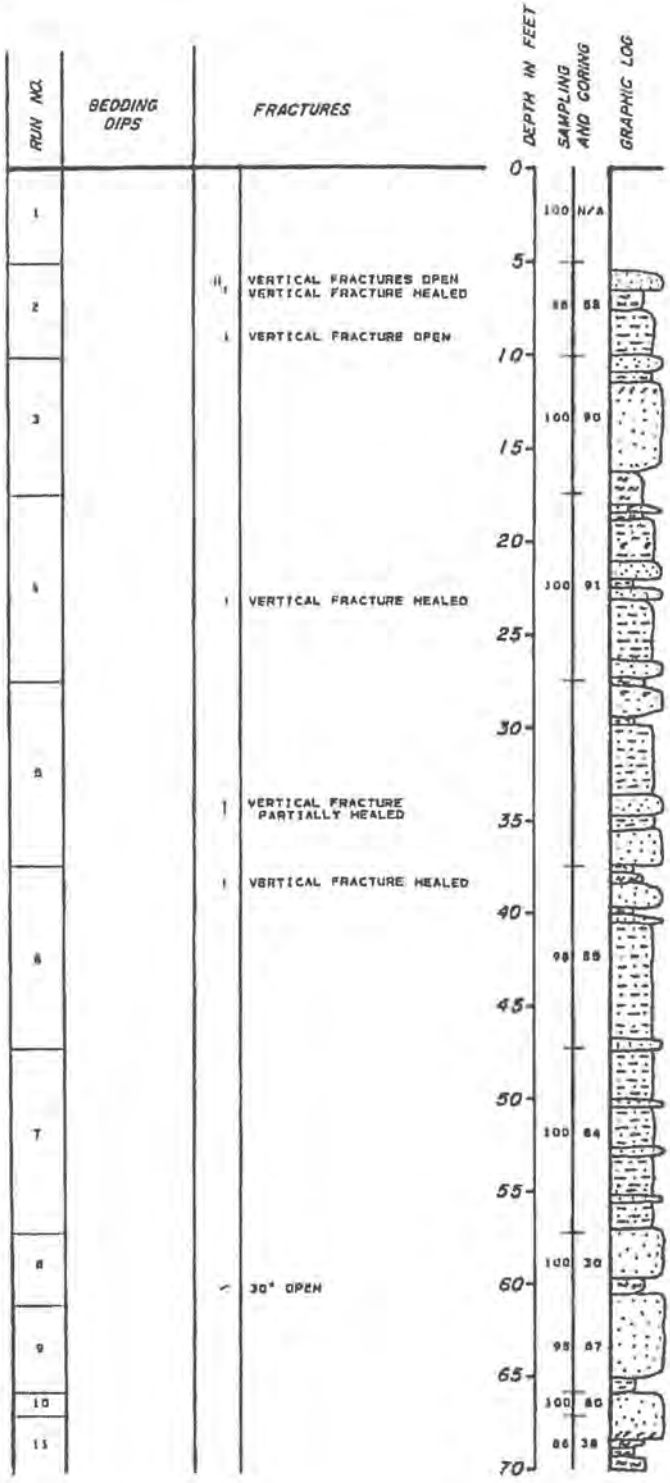
FIGURE 2K-35C

LOG OF BORING EX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-2

SURFACE ELEVATION 232.0'
COORDINATES N 339.08 E 310.58



DESCRIPTIVE GEOLOGIC NOTES

CONCRETE

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

OSWEGO SANDSTONE

TRANSITION ZONE

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT A

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT B

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

xx° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

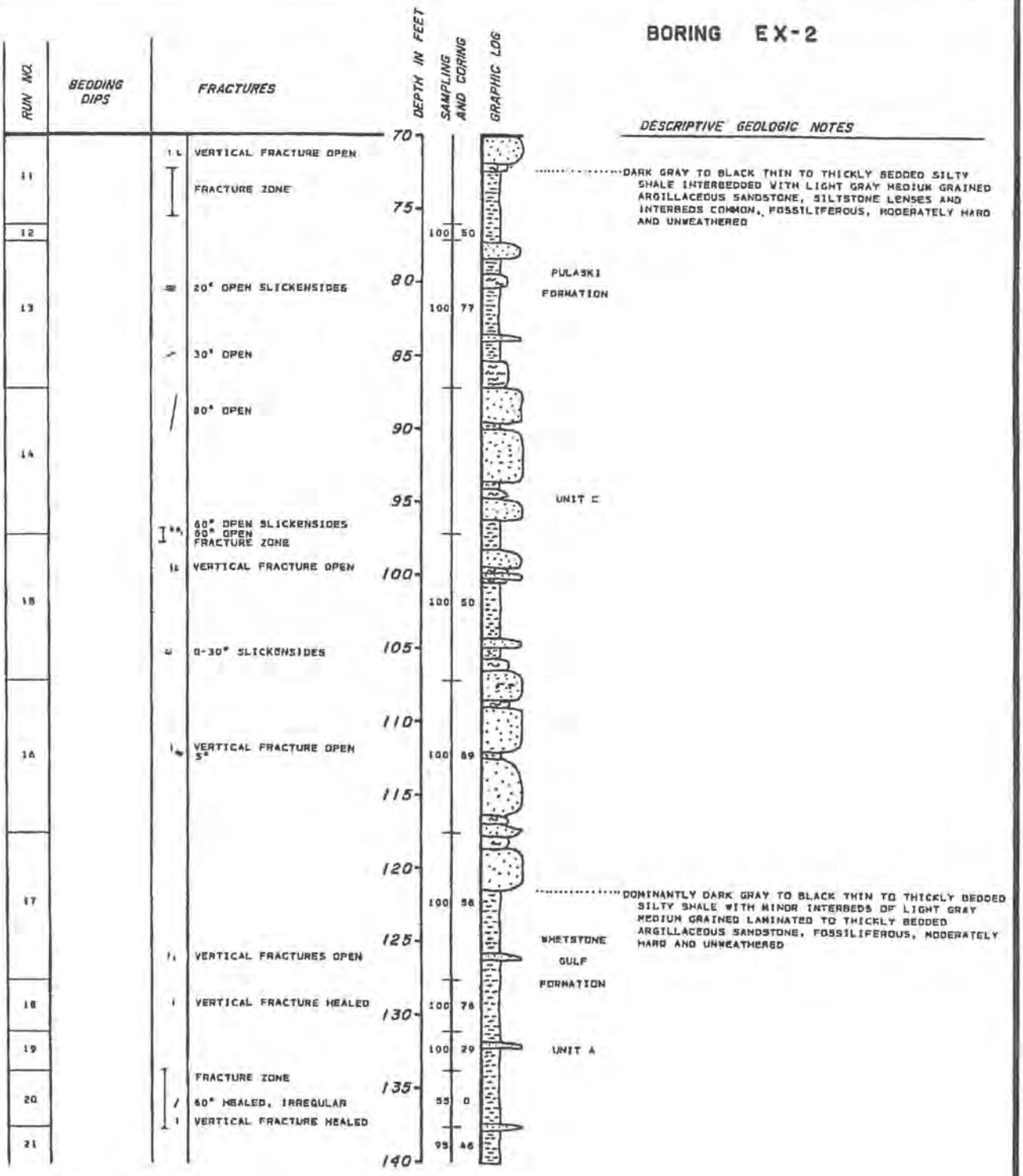
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2X-34A

LOG OF BORING EX-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-2



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

WHETSTONE GULF FORMATION

PREDOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT A

SAMPLING AND CORING INFORMATION

Core run
100 | 95 R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

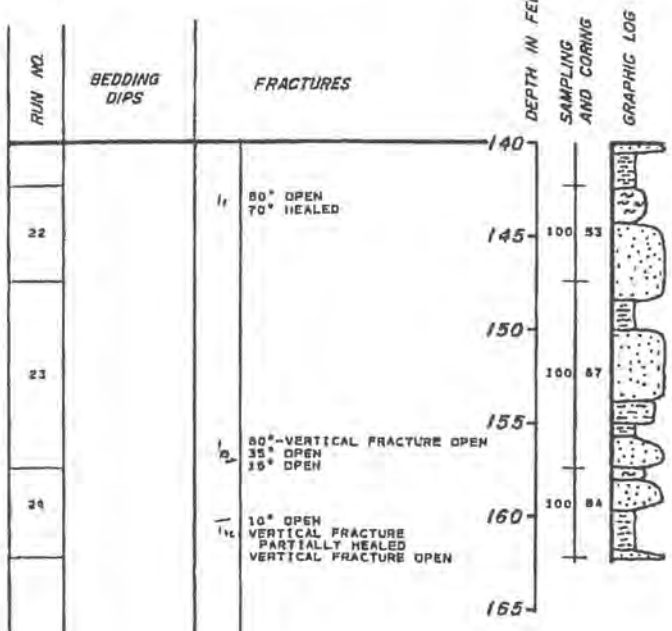
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2.6-540

LOG OF BORING EX-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-2



WHETSTONE GULF FORMATION UNIT B

DESCRIPTIVE GEOLOGIC NOTES

ALTERNATING THICKLY BEDDED LIGHT GRAY SANDSTONE AND DARK GRAY THIN TO THICKLY BEDDED SILTY SHALE OCCASIONAL SILTSTONE LENS & INTERBEDS, MODERATELY HARD AND UNWEATHERED, FOSSILIFEROUS

BORING TERMINATED AT A DEPTH OF 162.05 FEET ON 11/15/79

SAMPLING AND CORING INFORMATION

100 | 93 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

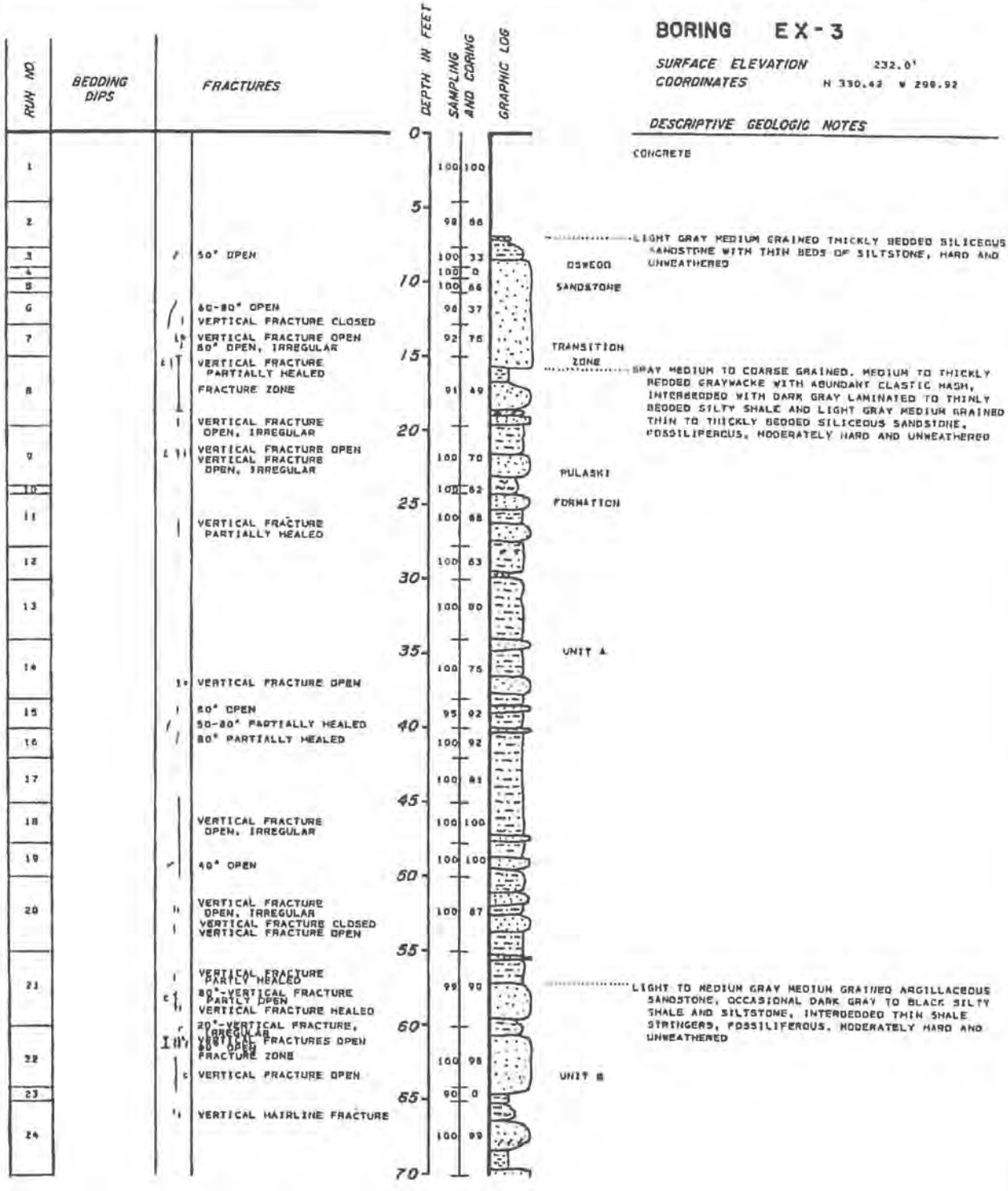
KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

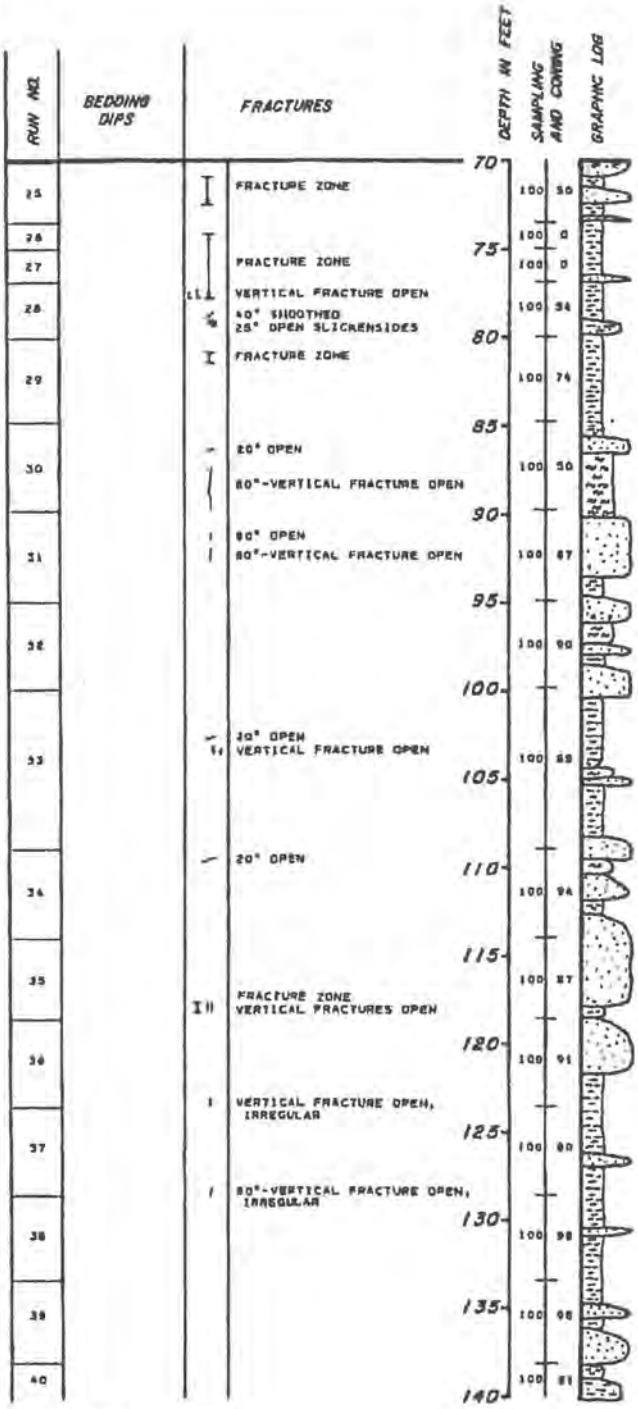
FIGURE 2K-340

LOG OF BORING EX-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT


RUN NO
BEDDING DIPS
FRACTURES
DEPTH IN FEET
SAMPLING AND CORING
GRAPHIC LOG
BORING EX-3
SURFACE ELEVATION 232.0'
COORDINATES N 330.42 W 298.92
DESCRIPTIVE GEOLOGIC NOTES
CONCRETE
LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED
OSWEGO SANDSTONE
TRANSITION ZONE
GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
PULASKI FORMATION
UNIT A
LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
UNIT B
50° OPEN
60-80° OPEN
VERTICAL FRACTURE CLOSED
VERTICAL FRACTURE OPEN
60° OPEN, IRREGULAR
VERTICAL FRACTURE PARTIALLY HEALED
FRACTURE ZONE
VERTICAL FRACTURE OPEN, IRREGULAR
VERTICAL FRACTURE OPEN
VERTICAL FRACTURE OPEN, IRREGULAR
VERTICAL FRACTURE PARTIALLY HEALED
VERTICAL FRACTURE OPEN
80° OPEN
50-80° PARTIALLY HEALED
80° PARTIALLY HEALED
VERTICAL FRACTURE OPEN, IRREGULAR
40° OPEN
VERTICAL FRACTURE OPEN, IRREGULAR
VERTICAL FRACTURE CLOSED
VERTICAL FRACTURE OPEN
VERTICAL FRACTURE PARTLY HEALED
80°-VERTICAL FRACTURE PARTLY OPEN
VERTICAL FRACTURE HEALED
20°-VERTICAL FRACTURE, IRREGULAR
VERTICAL FRACTURES OPEN
60° OPEN
FRACTURE ZONE
VERTICAL FRACTURE OPEN
VERTICAL HAIRLINE FRACTURE
SAMPLING AND CORING INFORMATION
Core run
100 95 R.Q.D.
Percent recovery
BEDDING DIPS
03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.
FRACTURES
Breccia zone
Dip-slip slickensides
Fractures-shown at approximate angle to core axis
Mineralized fracture c - calcite s - sulfide
Fractured zone
KEY TO SYMBOLS
Sandstone
Graywacke
Siltstone
Shale
Fossils
Shale intra-clasts
Cross-bedding
Shale laminae
FIGURE EX-3A
LOG OF BORING EX-3
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-3



DESCRIPTIVE GEOLOGIC NOTES

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT C

PREDOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

WHETSTONE GULF FORMATION

UNIT A

SAMPLING AND CORING INFORMATION

Core run
100 95 R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

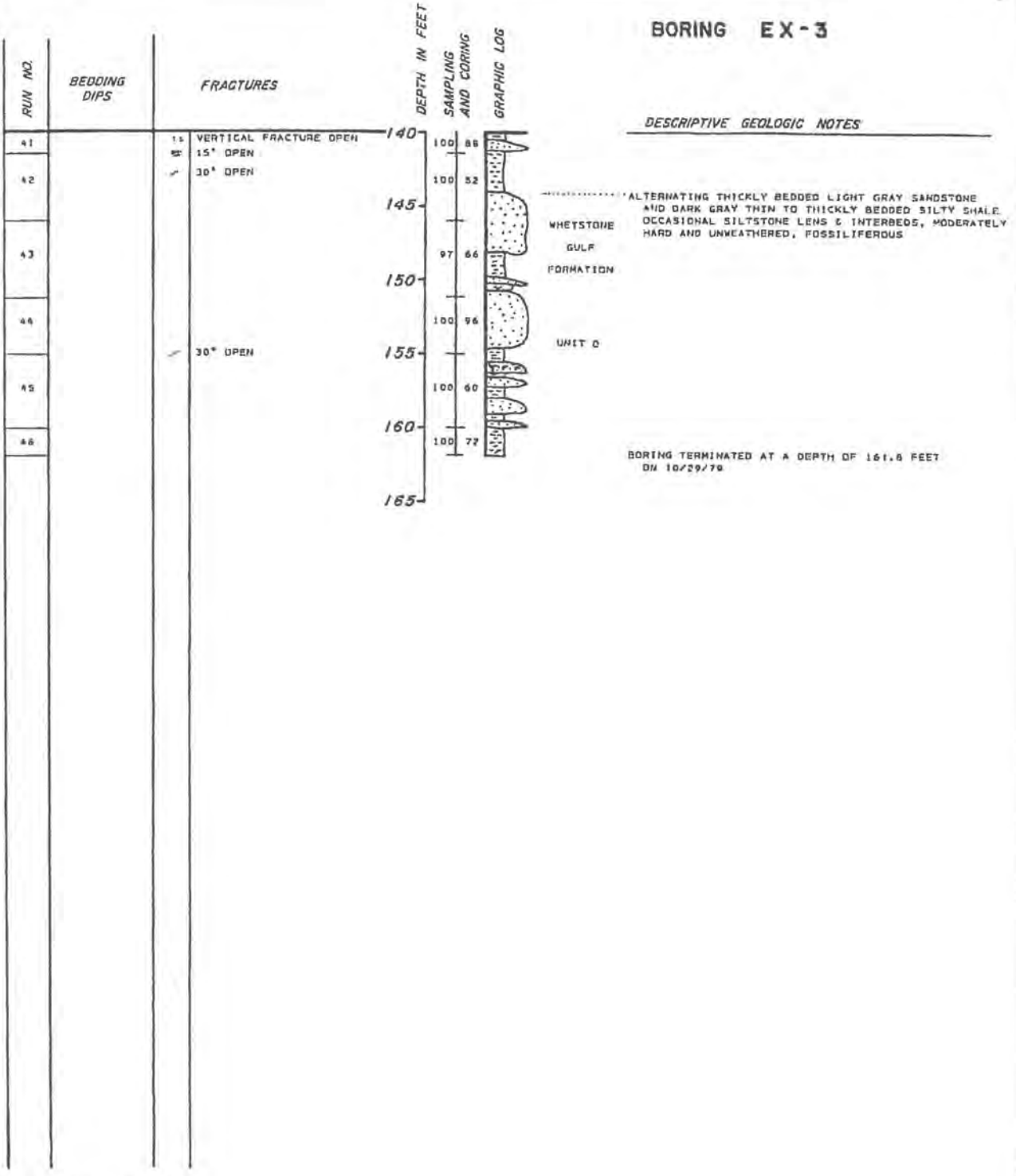
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-335

LOG OF BORING EX-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-3



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Slip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

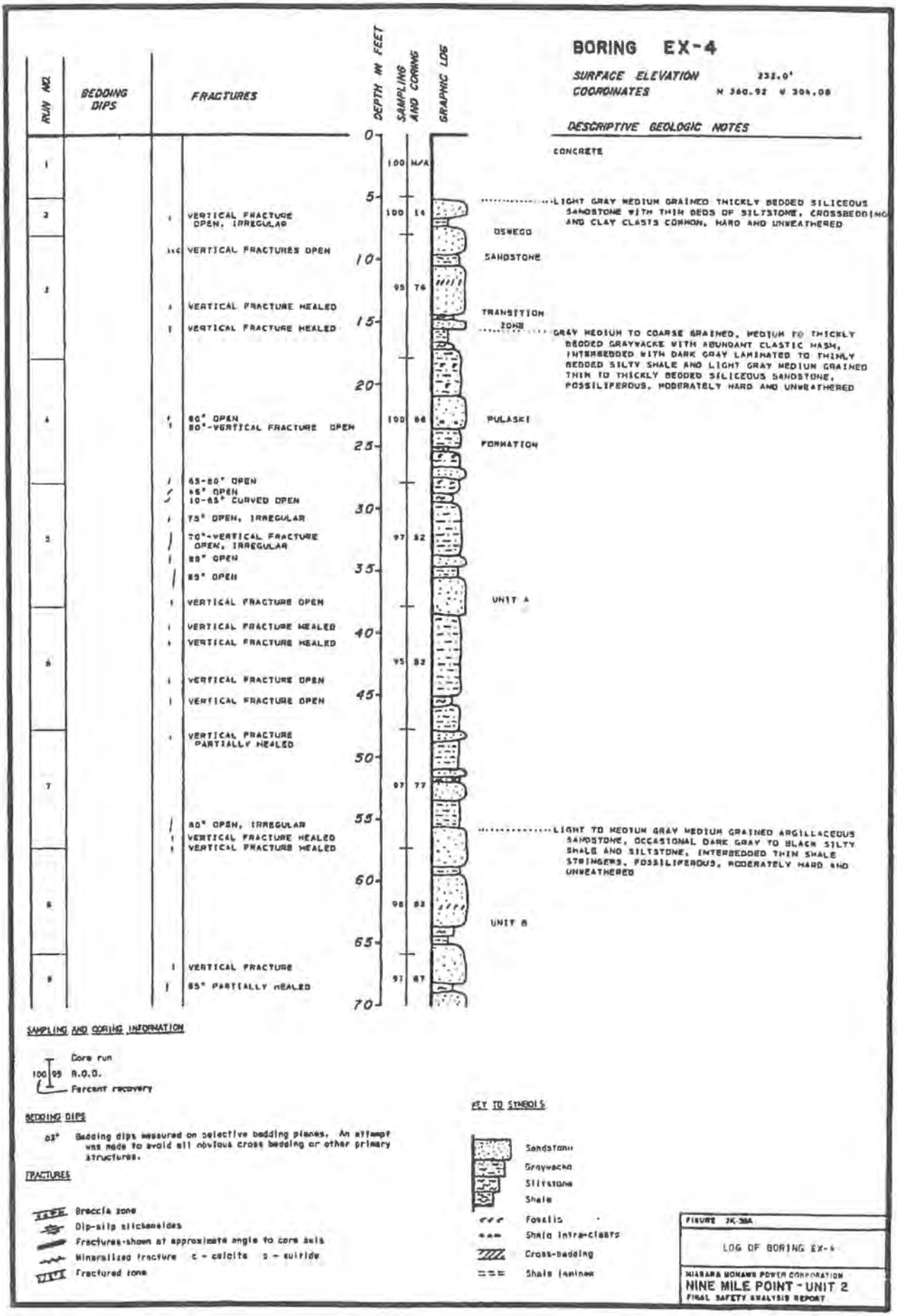
KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

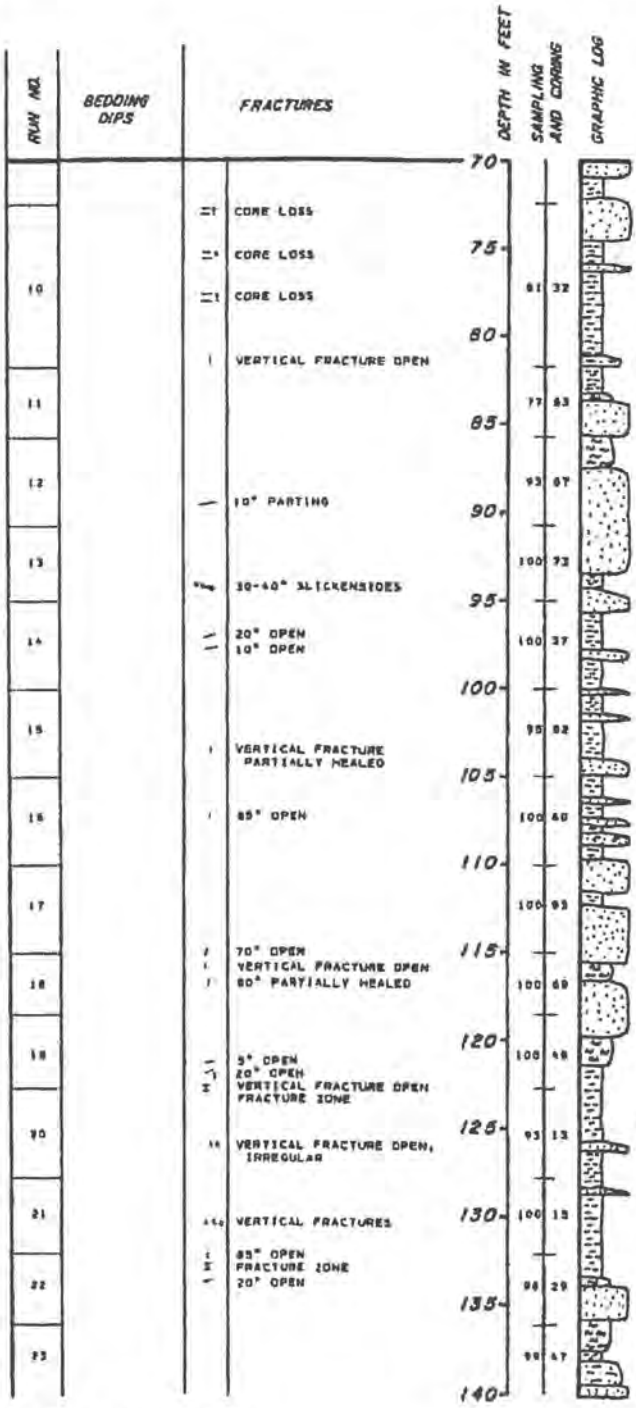
FIGURE 13K 95C

LOG OF BORING EX-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT


BORING EX-4
SURFACE ELEVATION 232.0'
COORDINATES N 360.92 W 304.08
RUN NO.
BEDDING DIPS
FRACTURES
DEPTH IN FEET
SAMPLING AND CORING
GRAPHIC LOG
DESCRIPTIVE GEOLOGIC NOTES
CONCRETE
VERTICAL FRACTURE OPEN, IRREGULAR
VERTICAL FRACTURES OPEN
VERTICAL FRACTURE HEALED
VERTICAL FRACTURE HEALED
80° OPEN
80°-VERTICAL FRACTURE OPEN
65-80° OPEN
45° OPEN
10-65° CURVED OPEN
75° OPEN, IRREGULAR
70°-VERTICAL FRACTURE OPEN, IRREGULAR
85° OPEN
85° OPEN
VERTICAL FRACTURE OPEN
VERTICAL FRACTURE HEALED
VERTICAL FRACTURE HEALED
VERTICAL FRACTURE OPEN
VERTICAL FRACTURE OPEN
VERTICAL FRACTURE PARTIALLY HEALED
80° OPEN, IRREGULAR
VERTICAL FRACTURE HEALED
VERTICAL FRACTURE HEALED
VERTICAL FRACTURE
85° PARTIALLY HEALED
LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, CROSSBEDDING AND CLAY CLASTS COMMON, HARD AND UNWEATHERED
OSWEGO SANDSTONE
TRANSITION ZONE
GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
PULASKI FORMATION
UNIT A
LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
UNIT B
SAMPLING AND CORING INFORMATION
Core run
100 95 R.Q.D.
Percent recovery
BEDDING DIPS
83° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.
FRACTURES
Breccia zone
Dip-slip slickensides
Fractures shown at approximate angle to core axis
Mineralized fracture c - calcite s - sulfide
Fractured zone
KEY TO SYMBOLS
Sandstone
Graywacke
Siltstone
Shale
Fossils
Shale intra-clasts
Cross-bedding
Shale laminae
FIGURE 2K-38A
LOG OF BORING EX-4
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-4



DESCRIPTIVE GEOLOGIC NOTES

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT C

DOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SMETSTONE GULF FORMATION

UNIT A

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

63° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

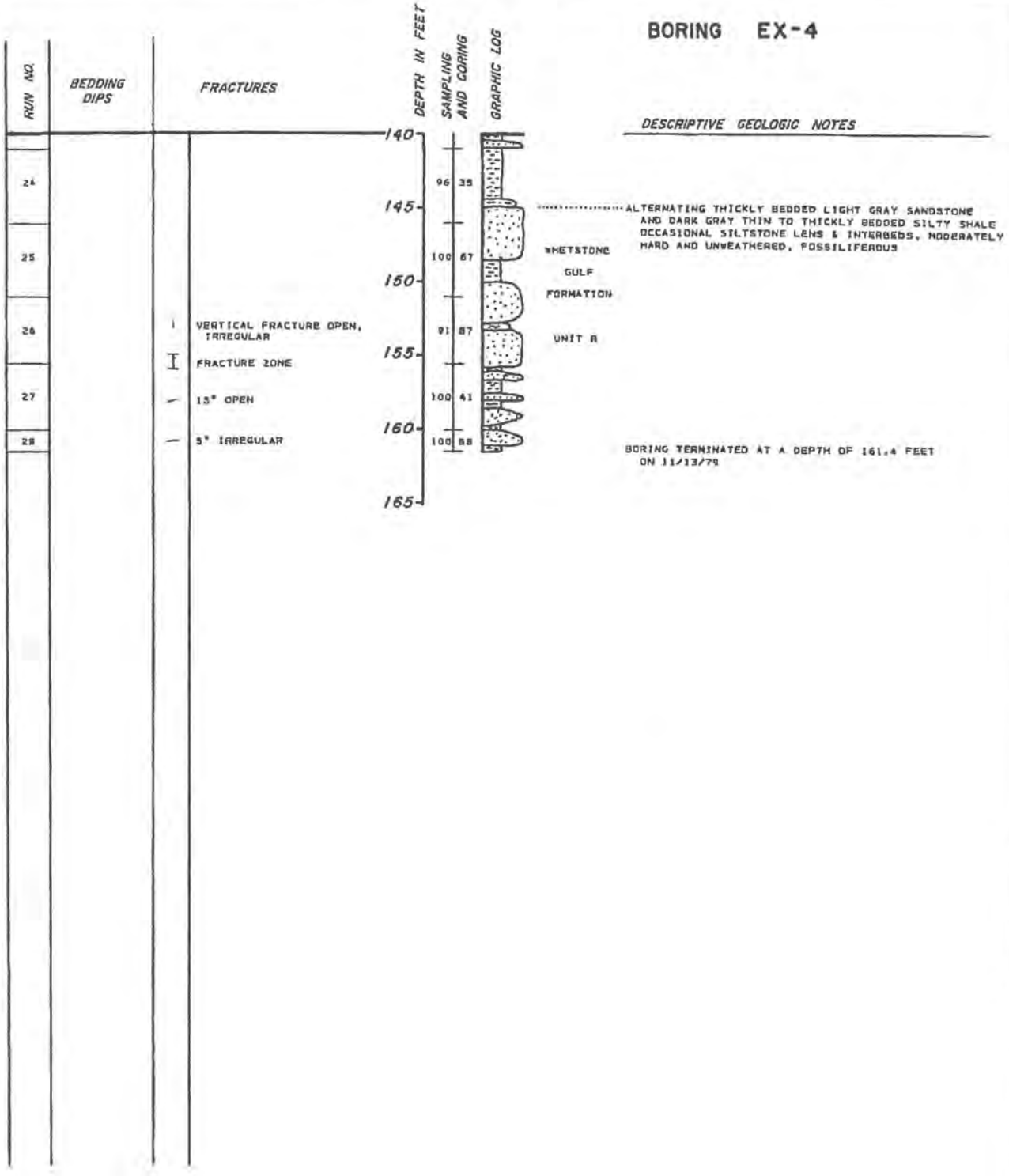
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2E-36B

LOG OF BORING EX-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-4



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

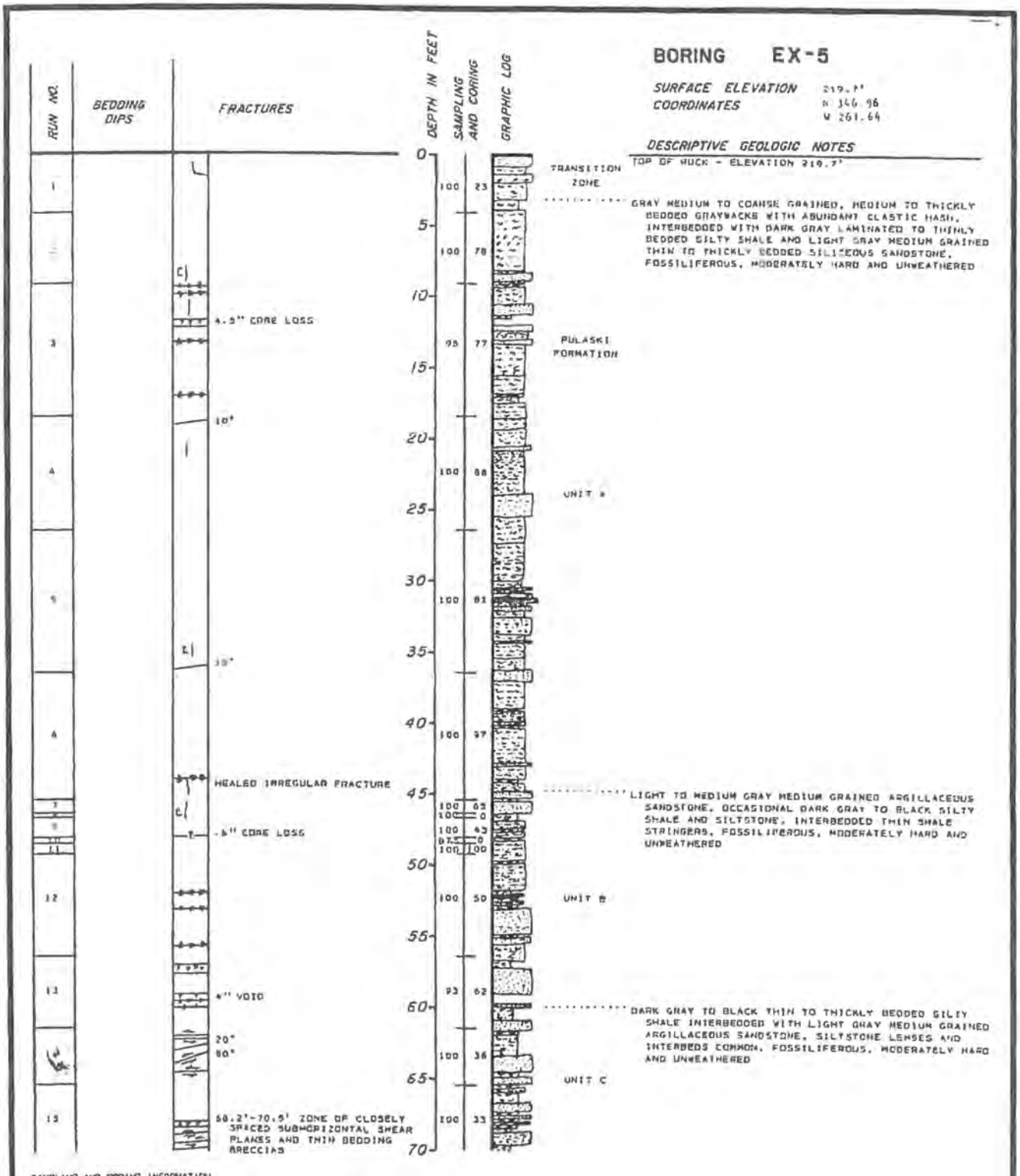
KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-58C

LOG OF BORING EX-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



SAMPLING AND CORING INFORMATION

100 | 95 Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c = calcite z = sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2.5-37A

LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-5

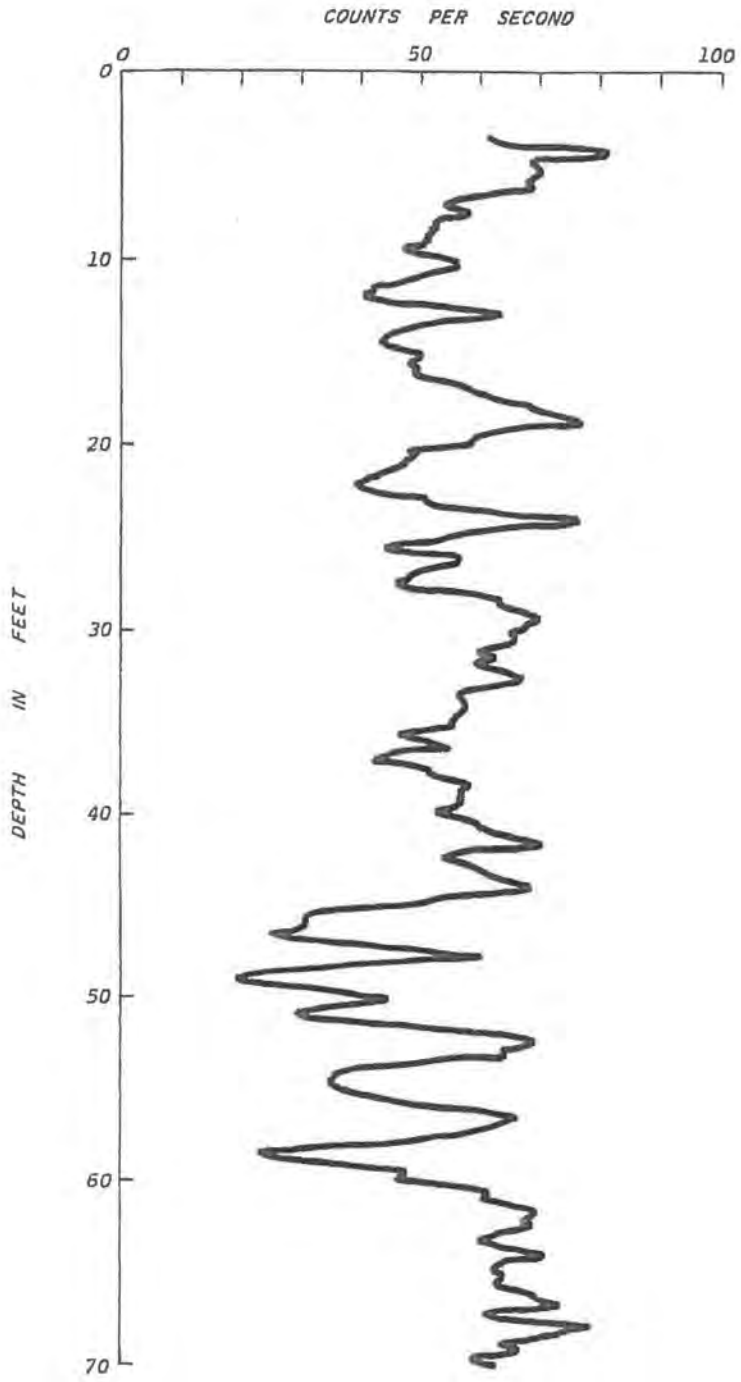
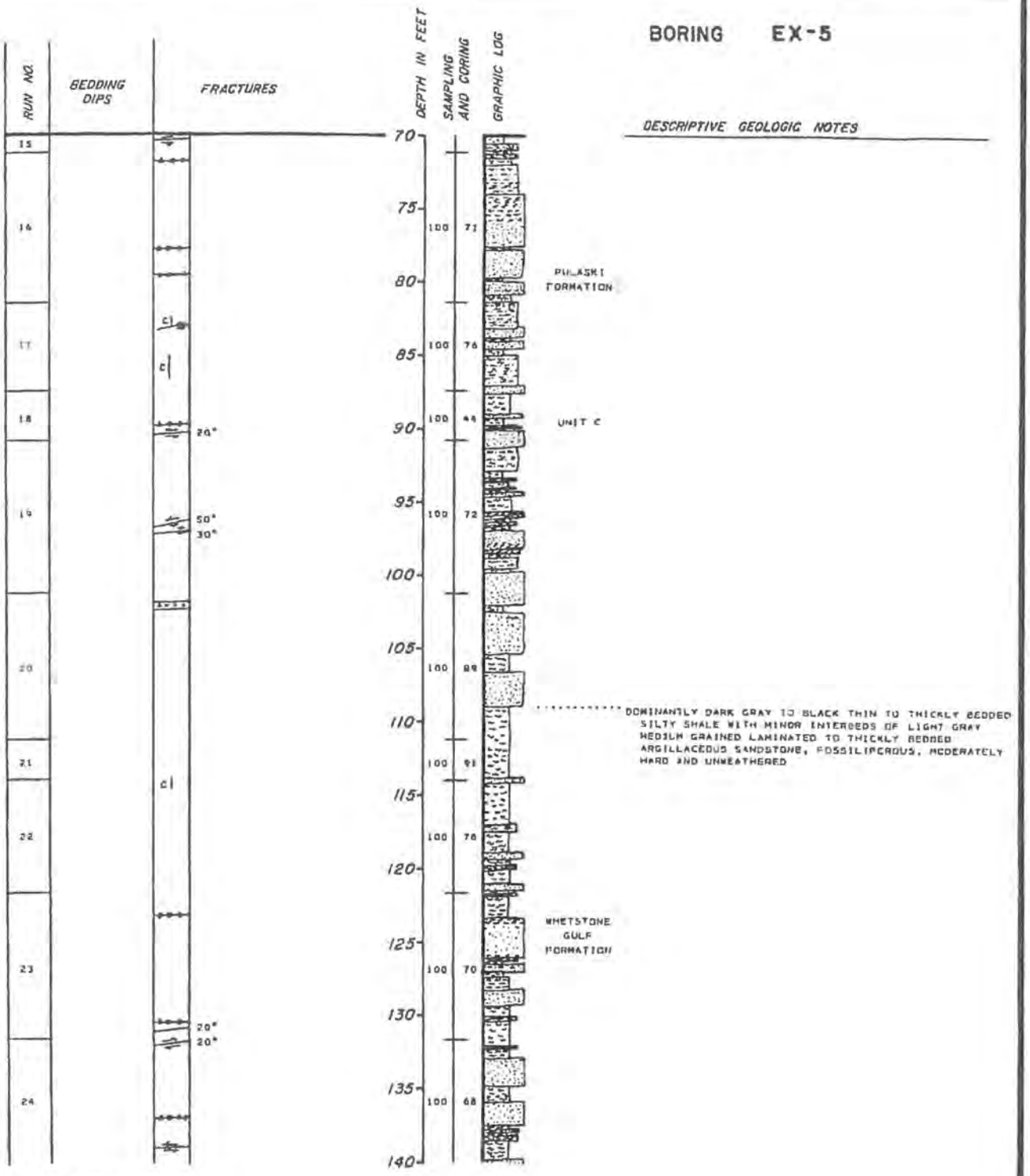


FIGURE 2K-37B

GAMMA RAY LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-5



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite p = sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-17C

LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-5

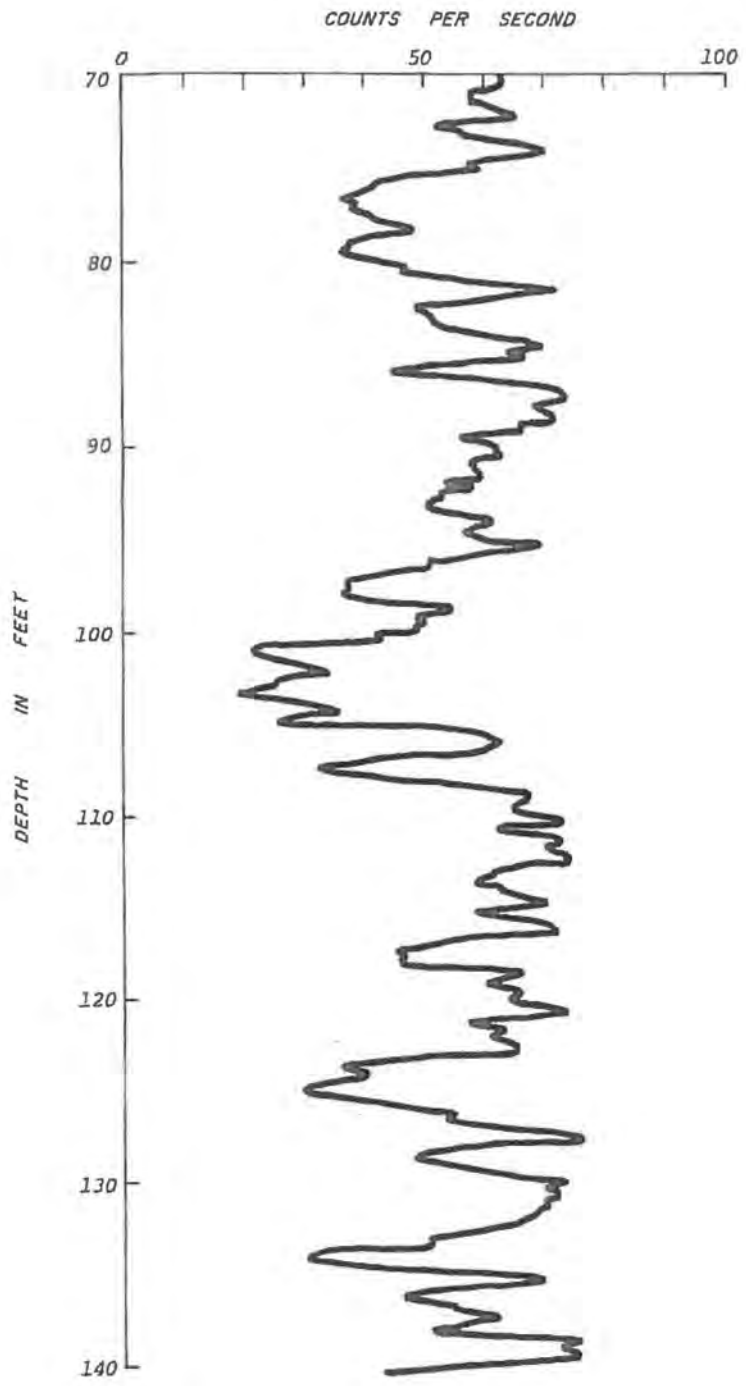
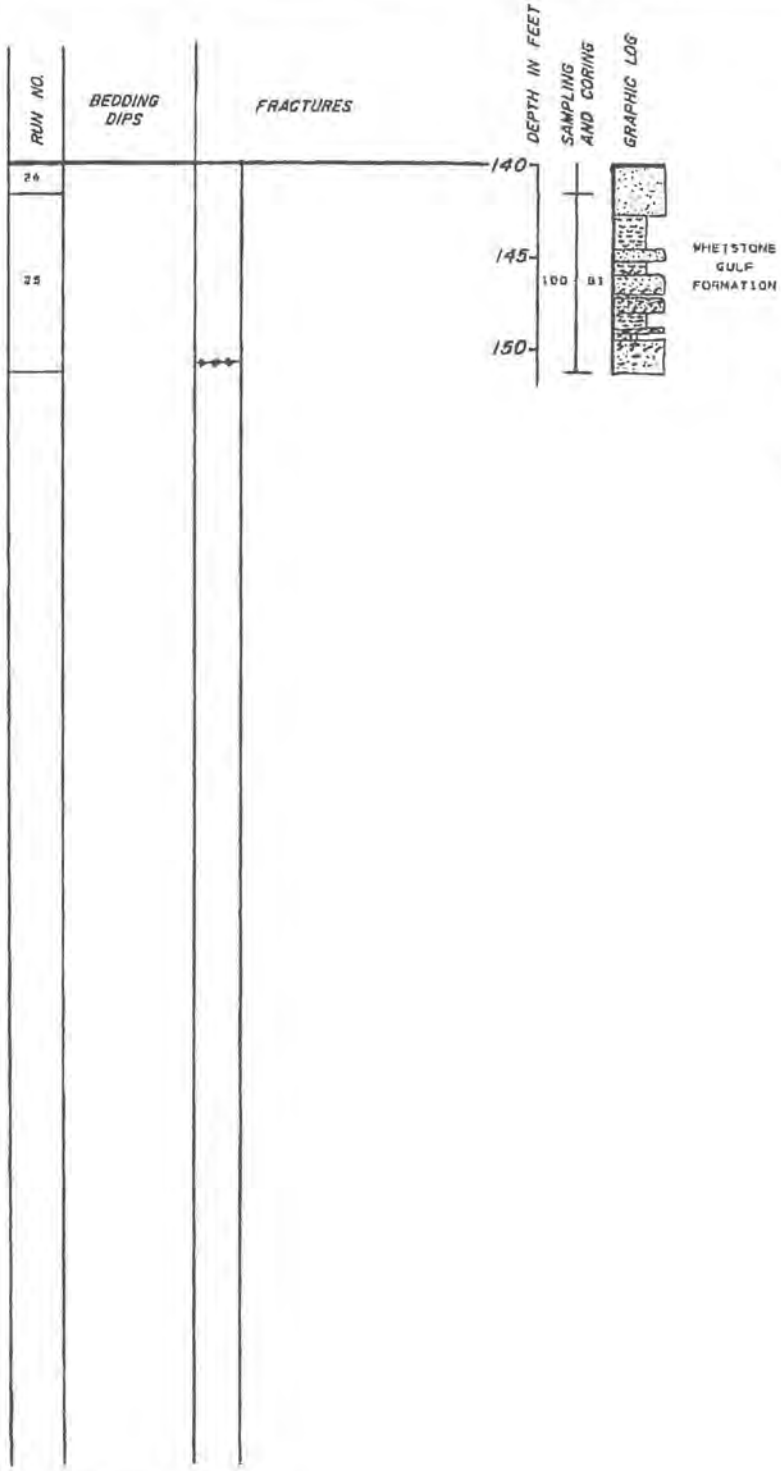


FIGURE 2K-37D

GAMMA RAY LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-5



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 151.55 FEET ON 9/24/81 AND GEOPHYSICALLY LOGGED ON 9/30/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-37E

LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-5

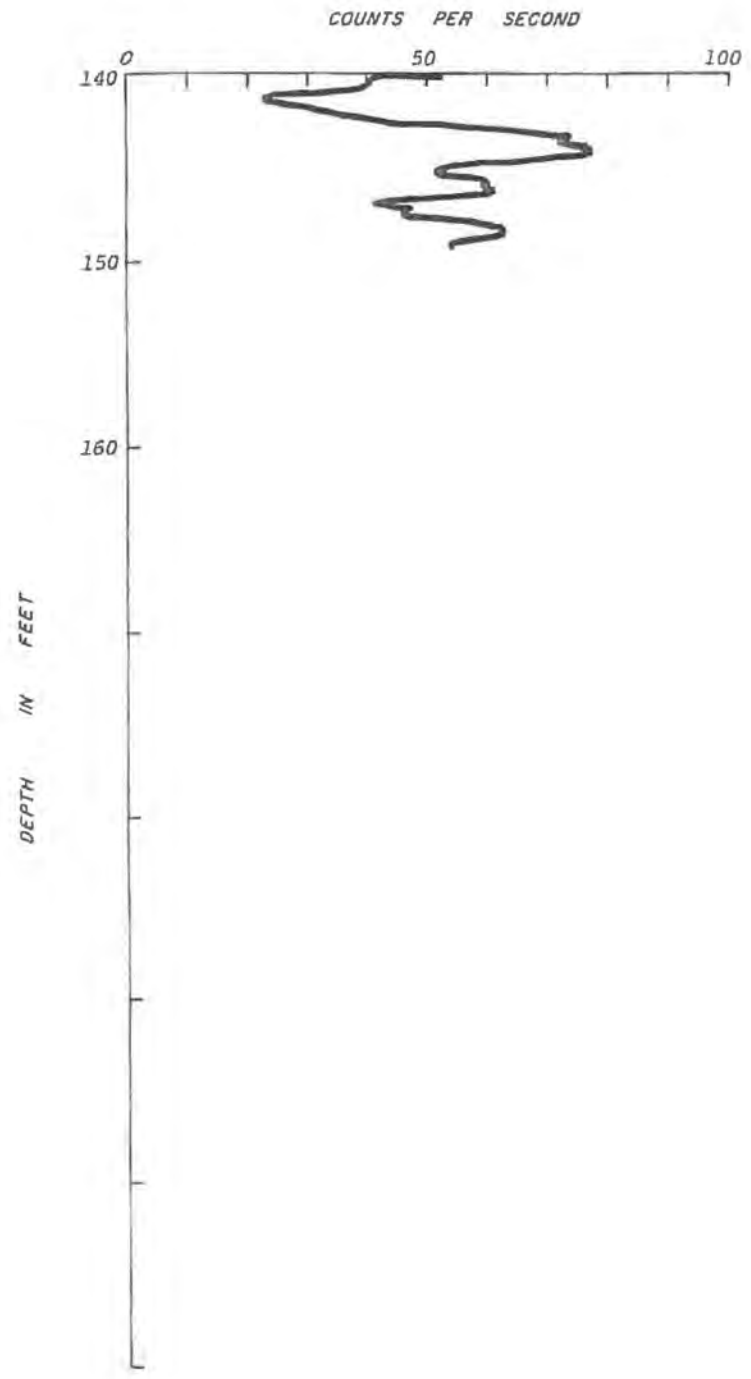


FIGURE 2K-37F

GAMMA RAY LOG OF BORING EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

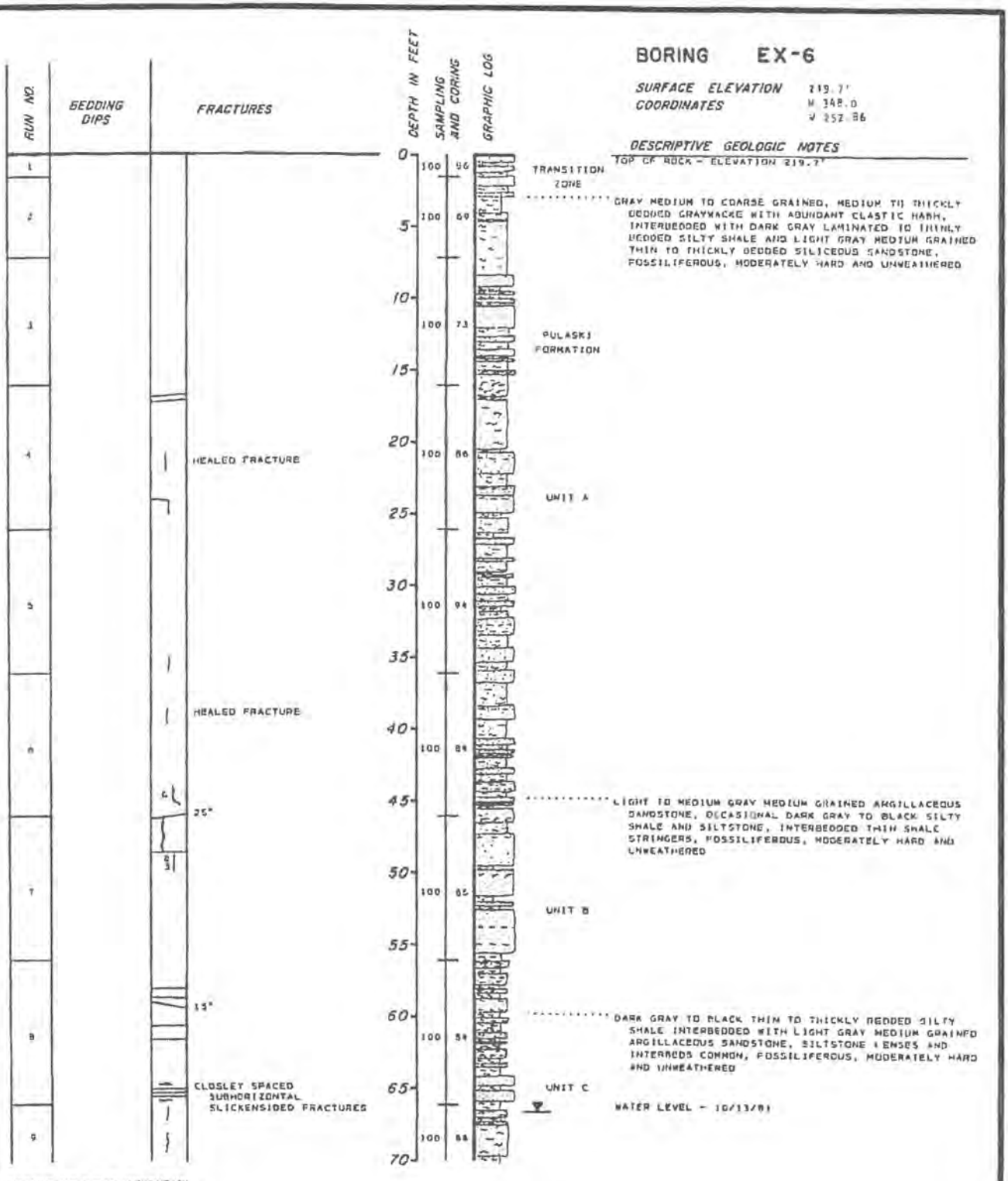


FIGURE 2.5-35A

LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-6

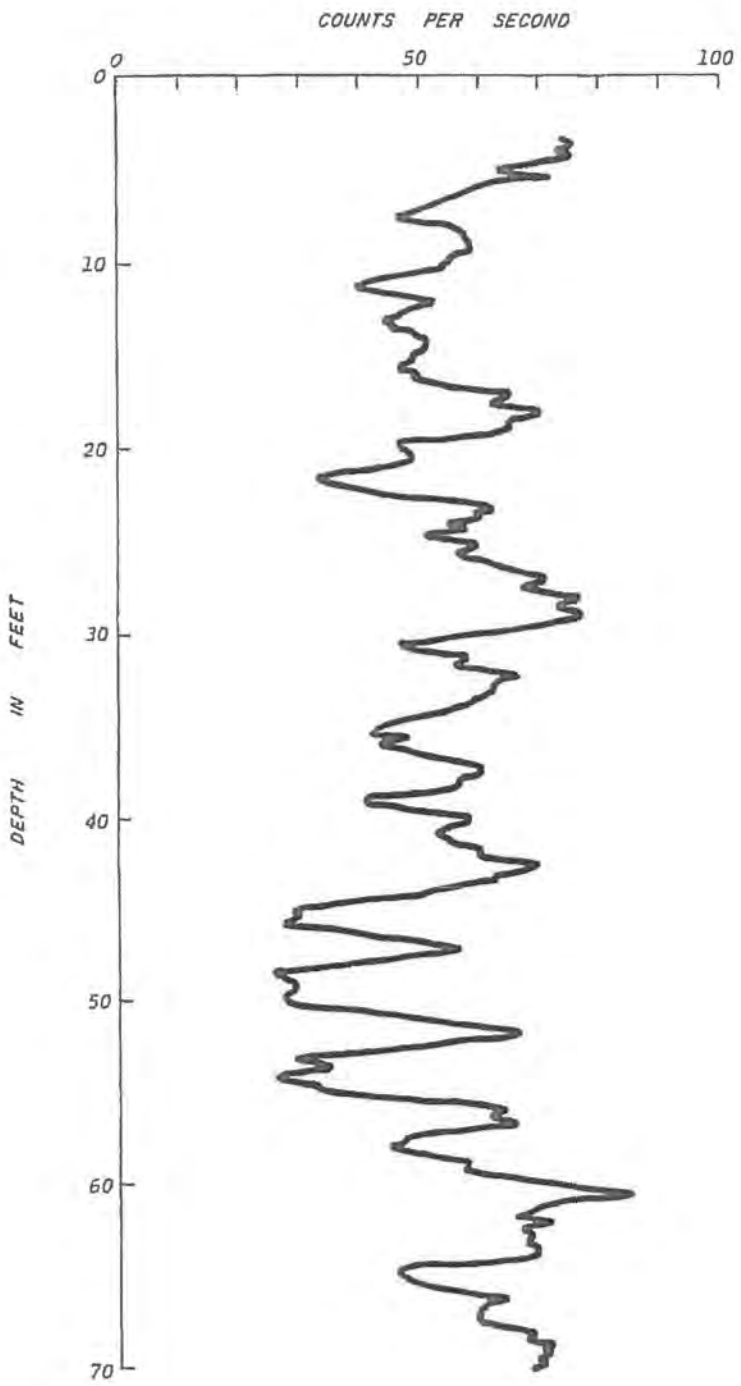


FIGURE 2K-38B

GAMMA RAY LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

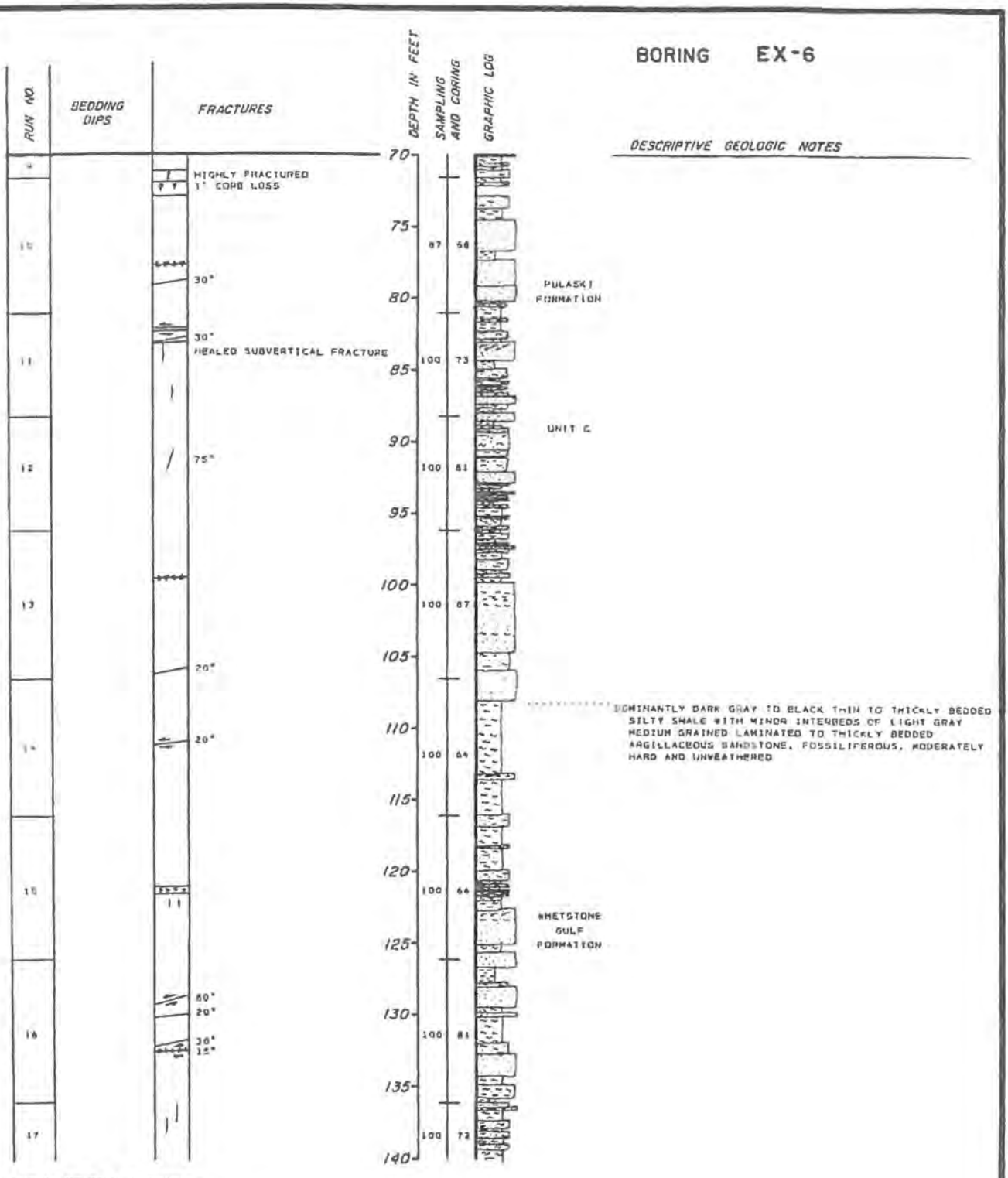


FIGURE 2A-3E

LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-6

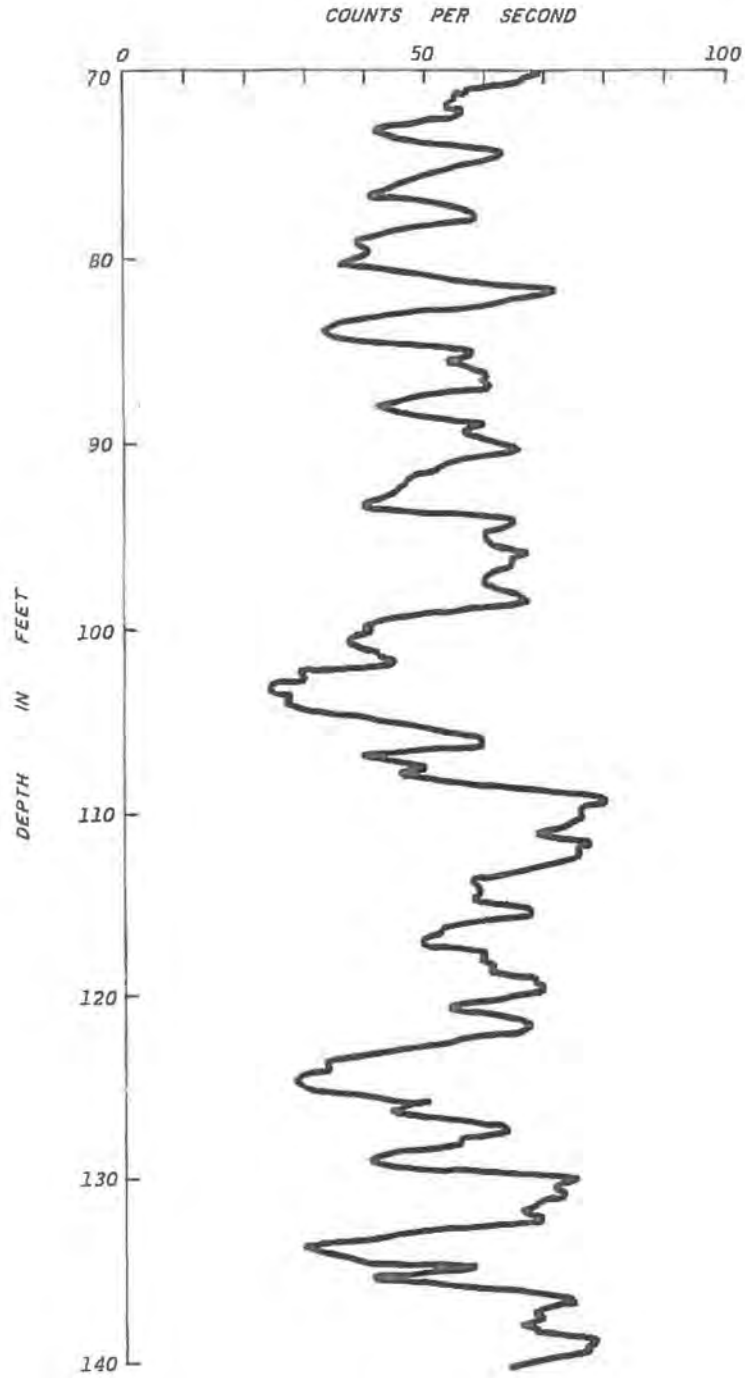
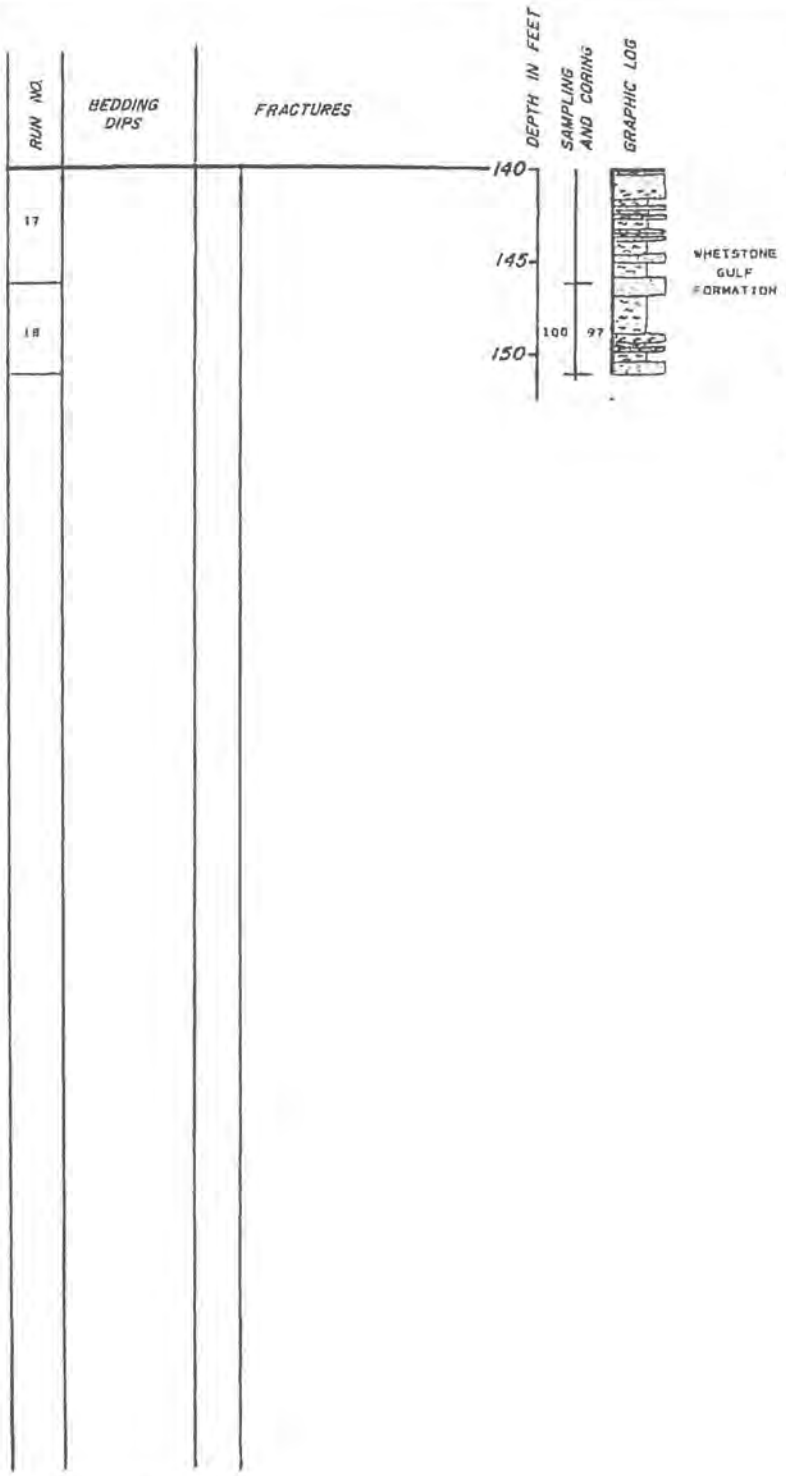


FIGURE 2K-38D

GAMMA RAY LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-6



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 151.2 FEET ON 10/1/81 AND GEOPHYSICALLY LOGGED ON 10/12/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

$\alpha 3^{b}$ Bedding dips measured on selective bedding planes. An attempt was made to record all [illegible] structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite q - sulfide
- Fractured zone

KEY TO SYMBOLS

- Conglomerate
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-352

LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-6

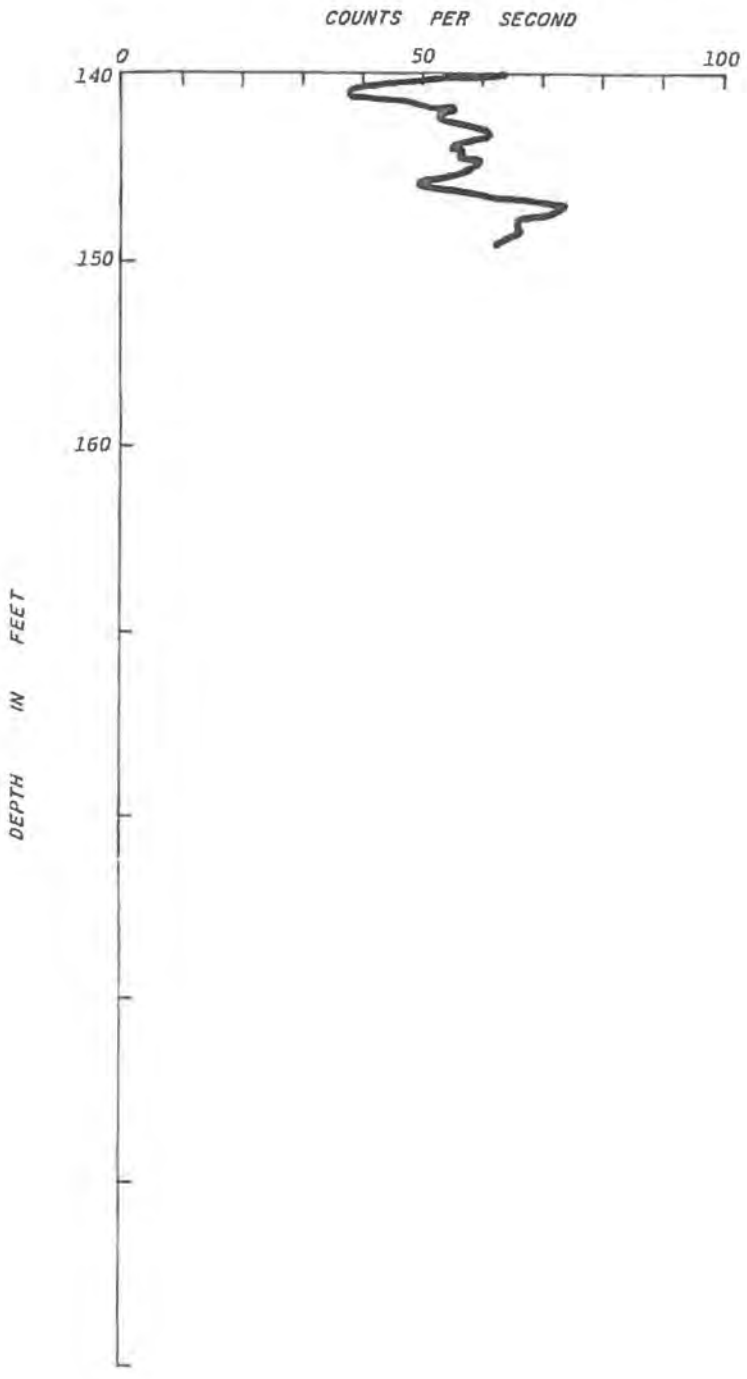
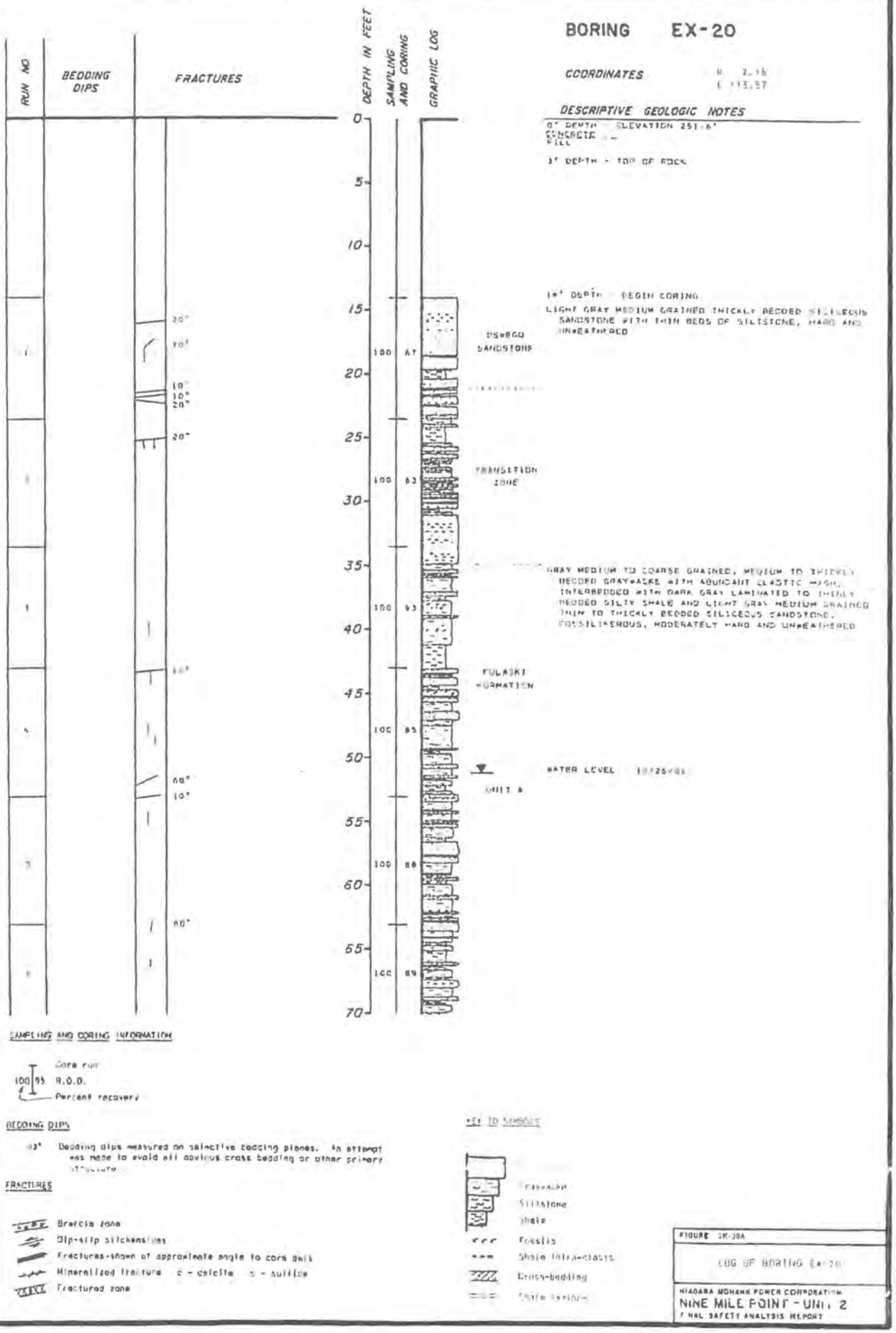


FIGURE 2K-38F

GAMMA RAY LOG OF BORING EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



SAMPLING AND CORING INFORMATION

100 95 Core run
R.Q.D.
Percent recovery

BEDDING DIPS

43° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structure.

FRACTURES

Breccia zone
Slip-slip slickensides
Fractures-shown at approximate angle to core axis
Mineralized fracture c - calcite q - quartz
Fractured zone

KEY TO SYMBOLS

Sandstone
Siltstone
Shale
Fossils
Shale intra-clasts
Cross-bedding
Shale laminae

FIGURE SK-20A

LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

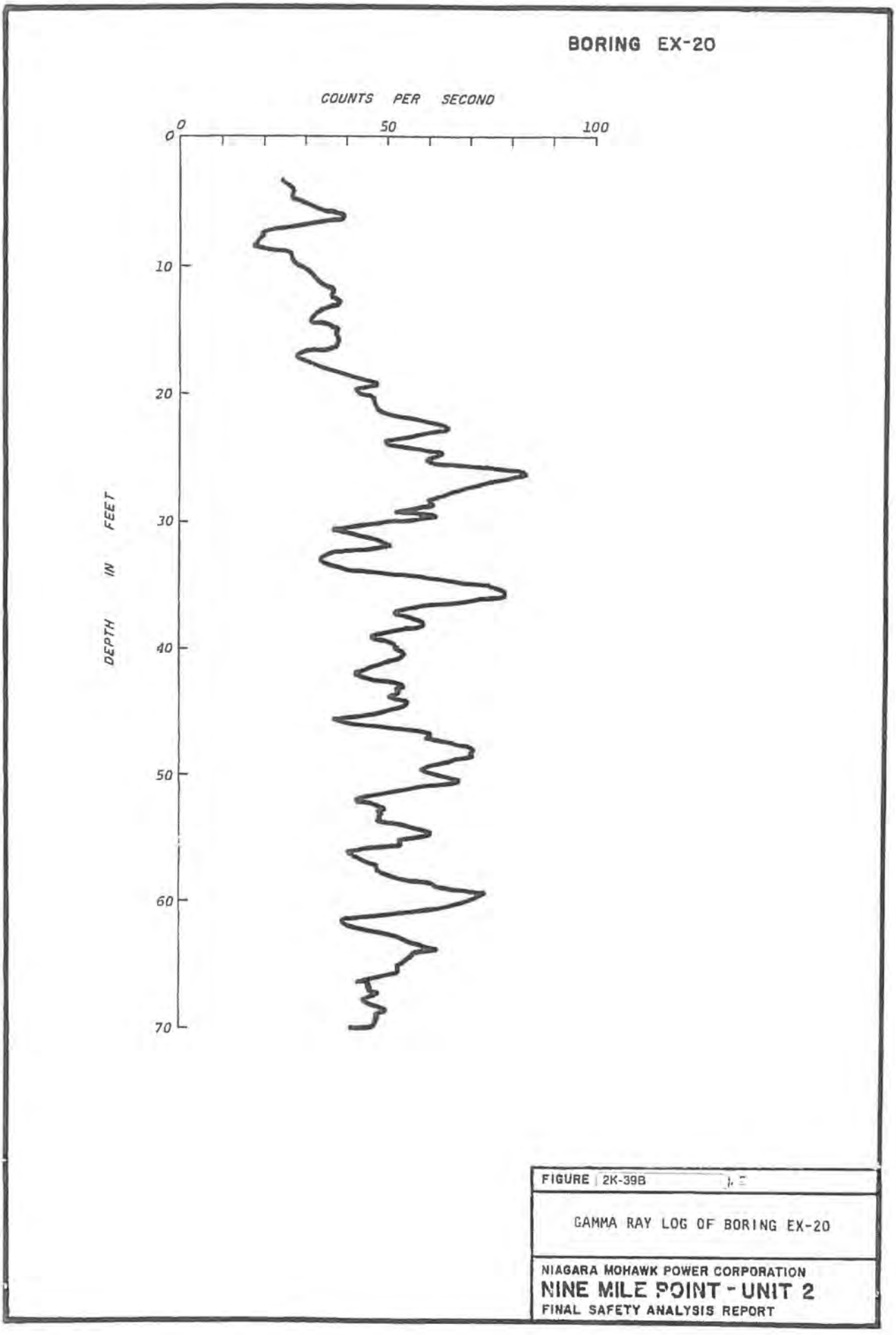
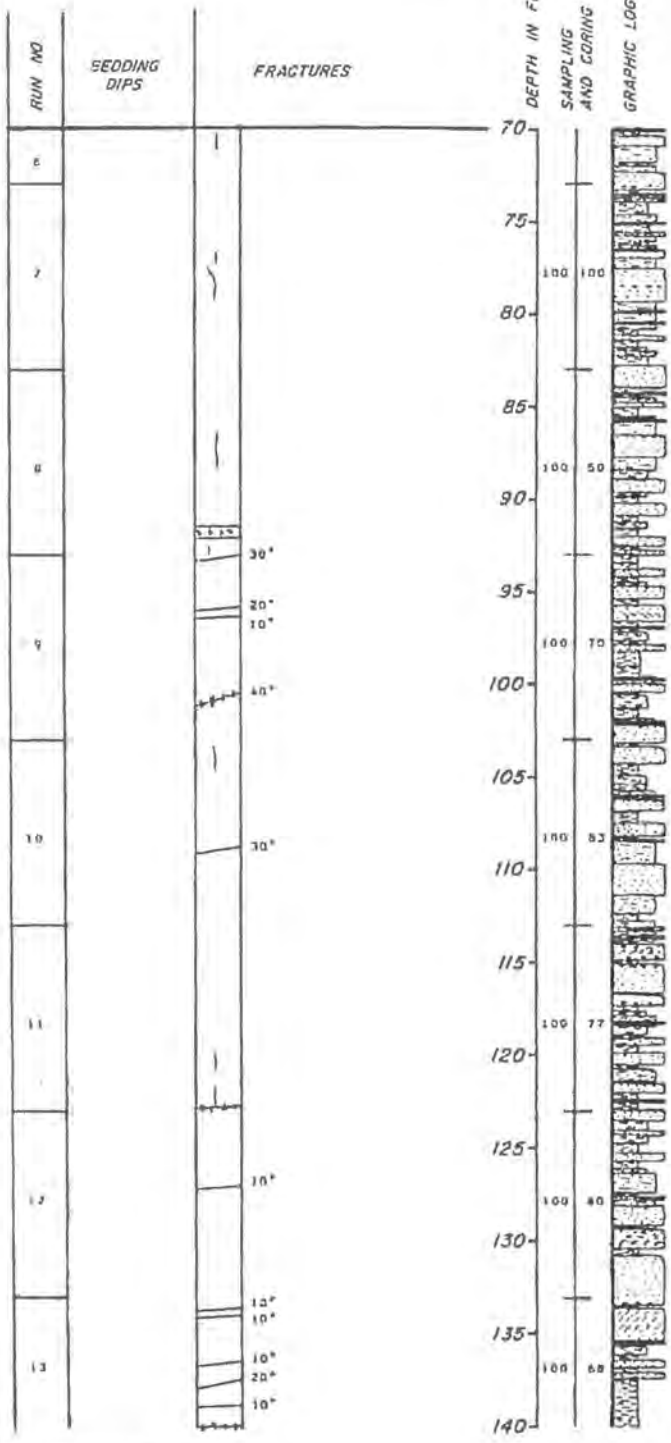


FIGURE 2K-39B

GAMMA RAY LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-20



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION

UNIT B

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

WHETSTONE GULF FORMATION UNIT A

PREDOMINANTLY DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE WITH MINOR INTERBEDS OF LIGHT GRAY MEDIUM GRAINED LAMINATED TO THICKLY BEDDED ARGILLACEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 Core run
R.Q.D.
Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt [illegible] structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE [illegible]

LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-20

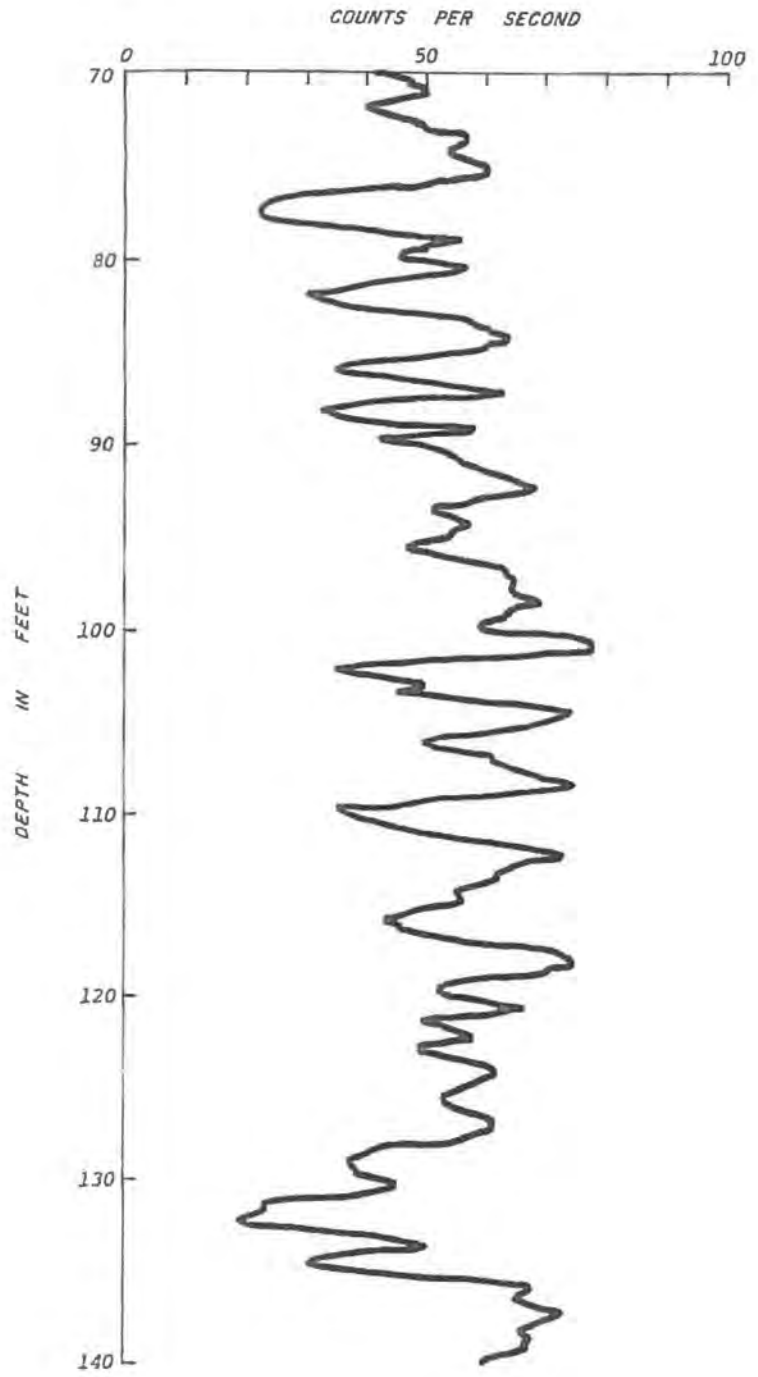
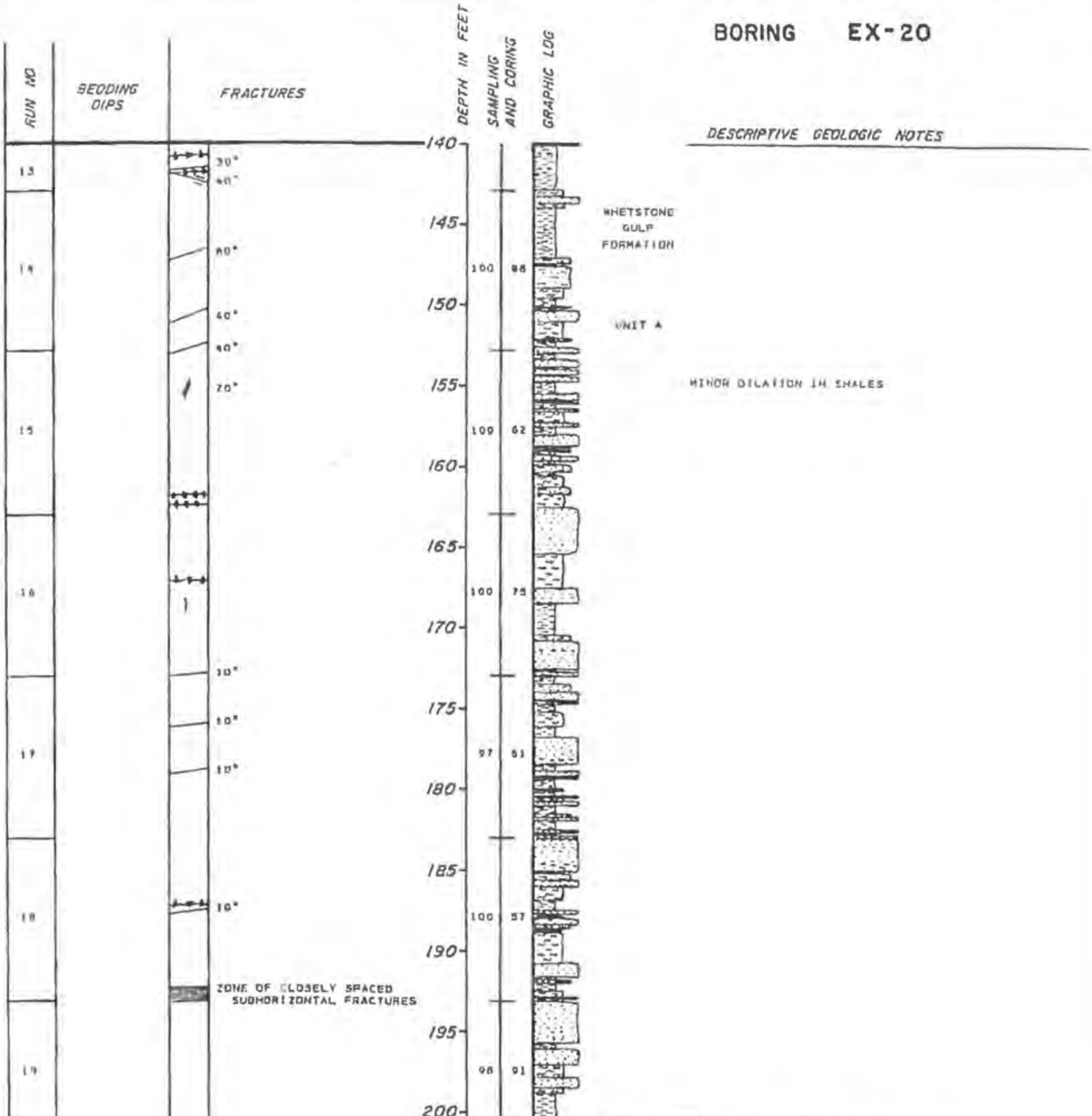


FIGURE 12K-39D

GAMMA RAY LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-20



BORING TERMINATED AT A DEPTH OF 200.7 FEET ON 9/15/81 AND GEOPHYSICALLY LOGGED ON 9/21/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUBHORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

- Core run
- 100 | 95 R.Q.D.
- Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt [illegible] structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-39E

LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING EX-20

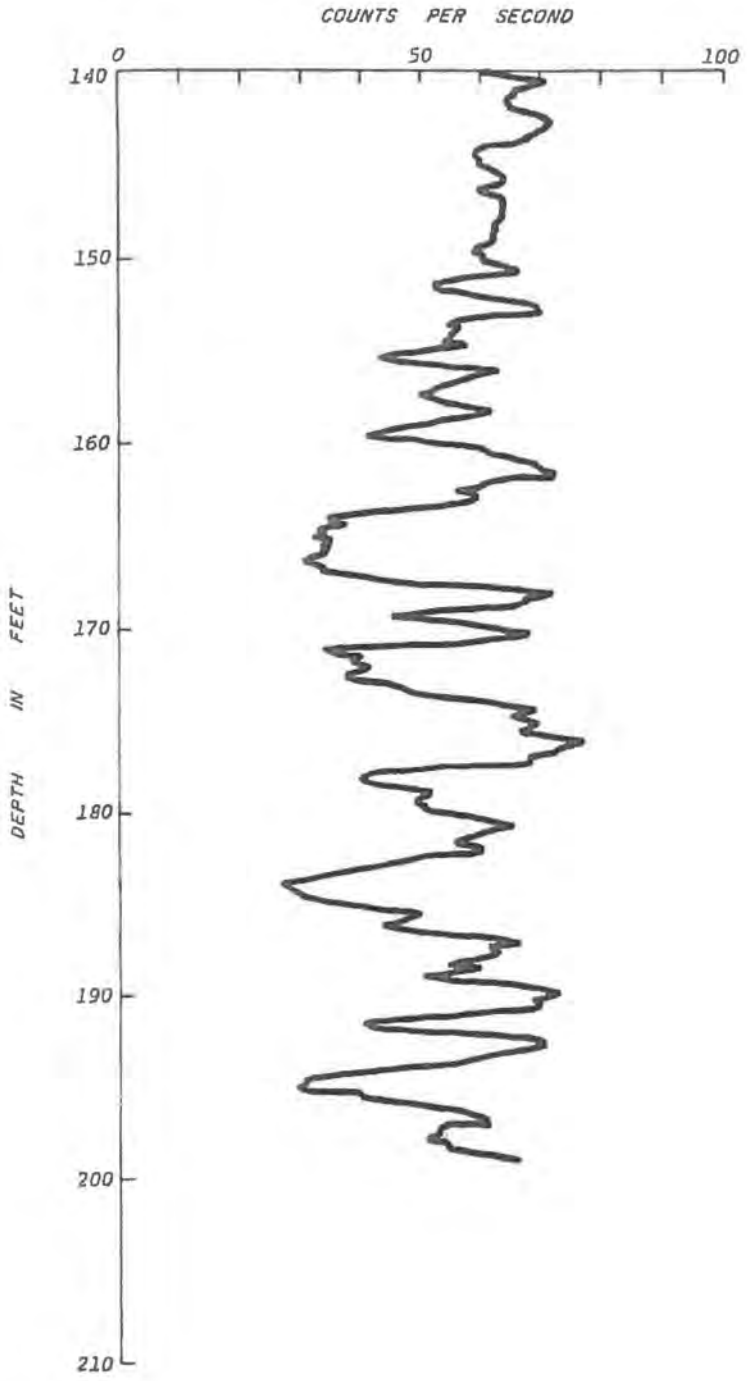
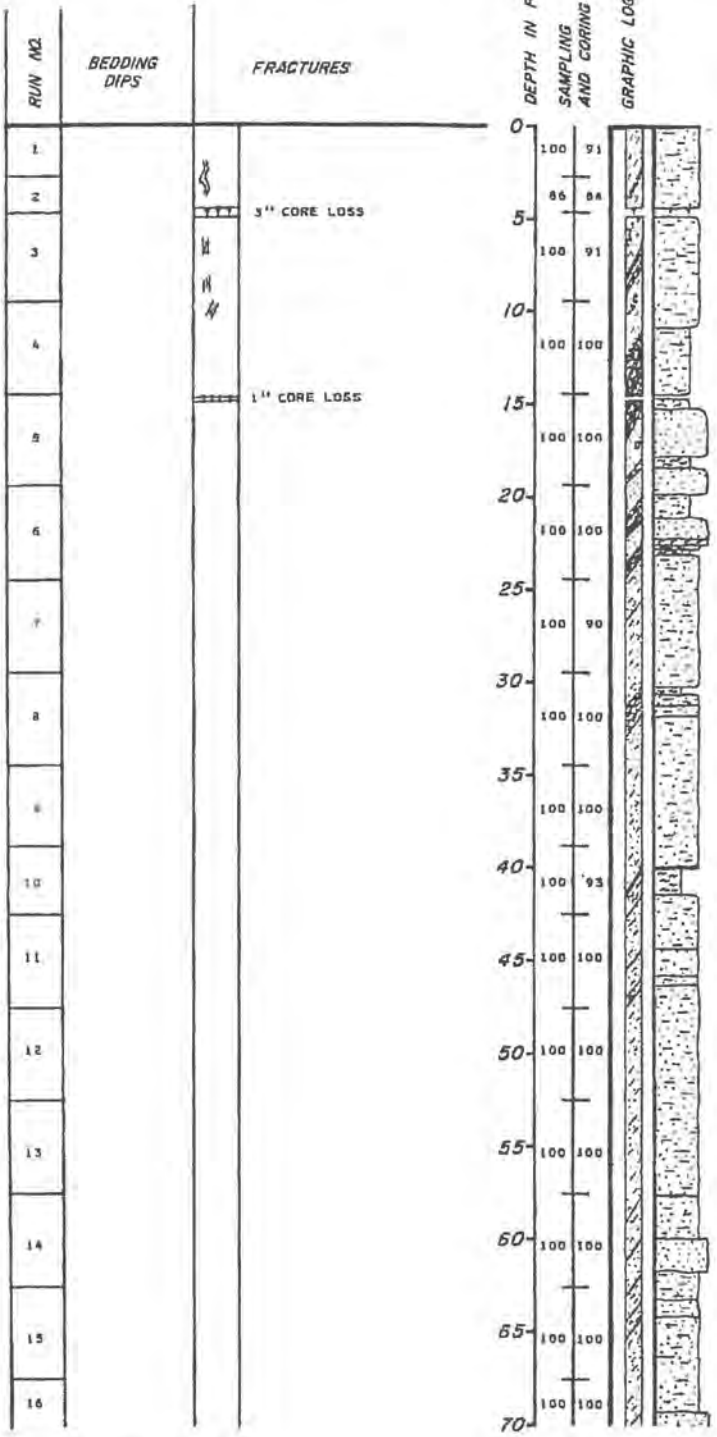


FIGURE 2K-39F

GAMMA RAY LOG OF BORING EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



BORING HEX-1

SURFACE ELEVATION -213.75'
COORDINATES N 54.2
E 88.4

DESCRIPTIVE GEOLOGIC NOTES

NOTE: BORING ORIENTED N70°E-15°
BEDDING CONSISTANTLY ORIENTED APPROXIMATELY 15° TO AXIS OF CORE.

PULASKI FORMATION UNIT A

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

23° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

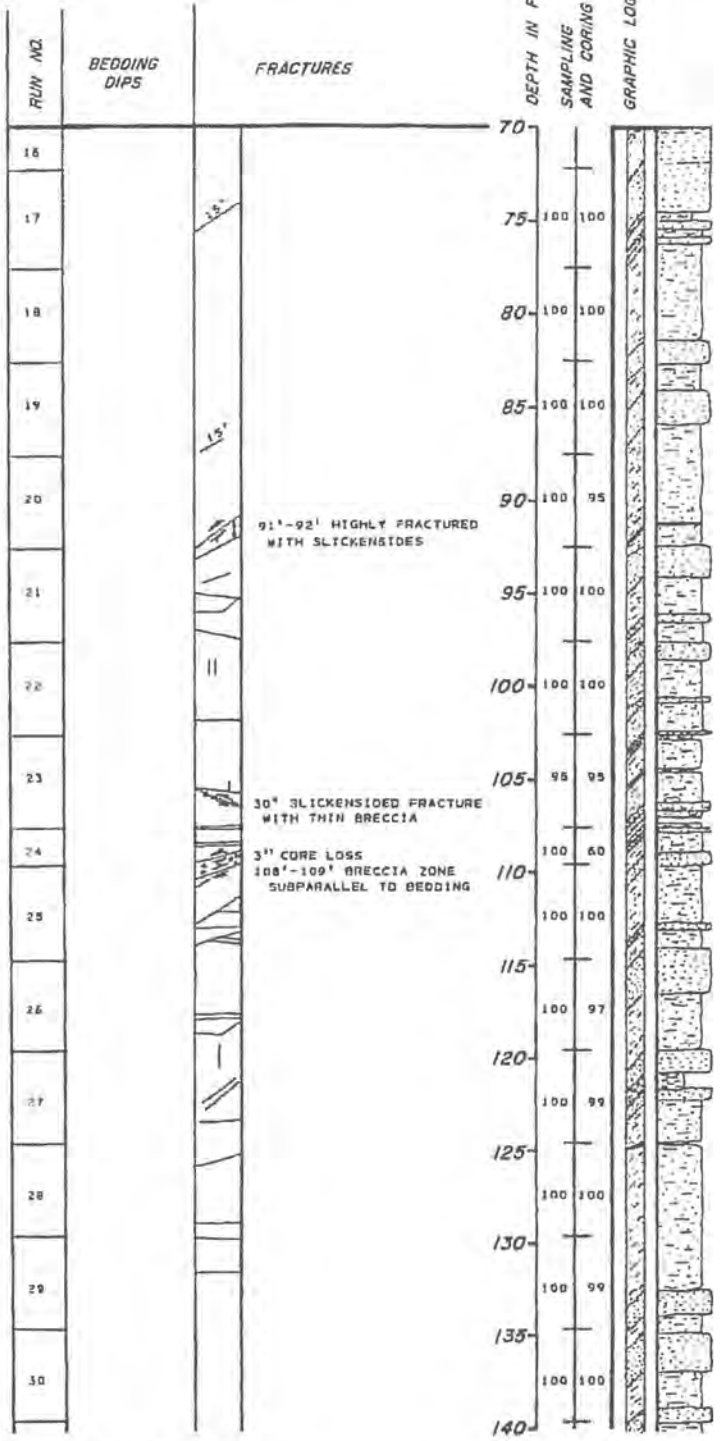
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-60A

LOG OF BORING HEX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING HEX-1



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION UNIT A

ILLITE LAYER

SAMPLING AND CORING INFORMATION

100 95 Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-clip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-400

LOG OF BORING HEX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

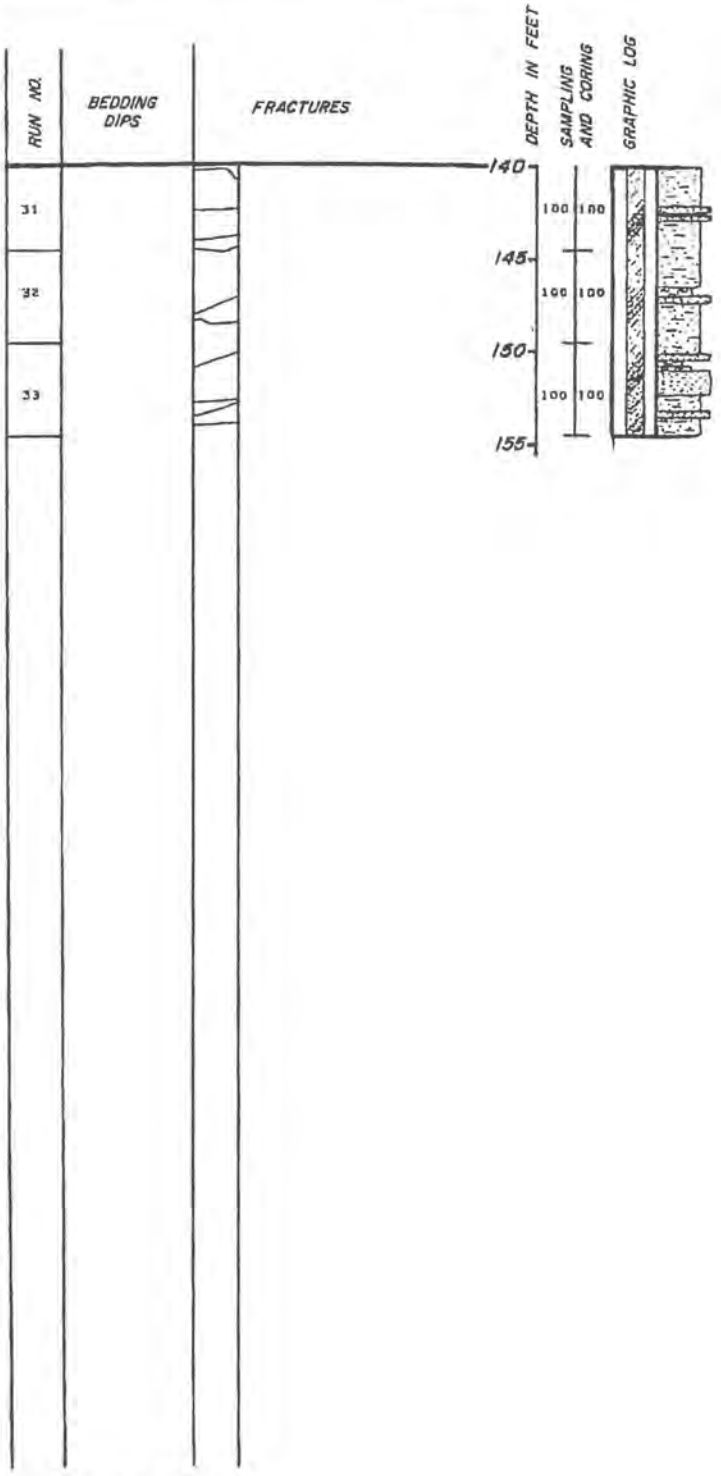
BORING HEX-1

SURFACE ELEVATION
COORDINATES

DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION UNIT A

BORING TERMINATED AT A DEPTH OF 154.4 FEET ON 10/5/81



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Fossil
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

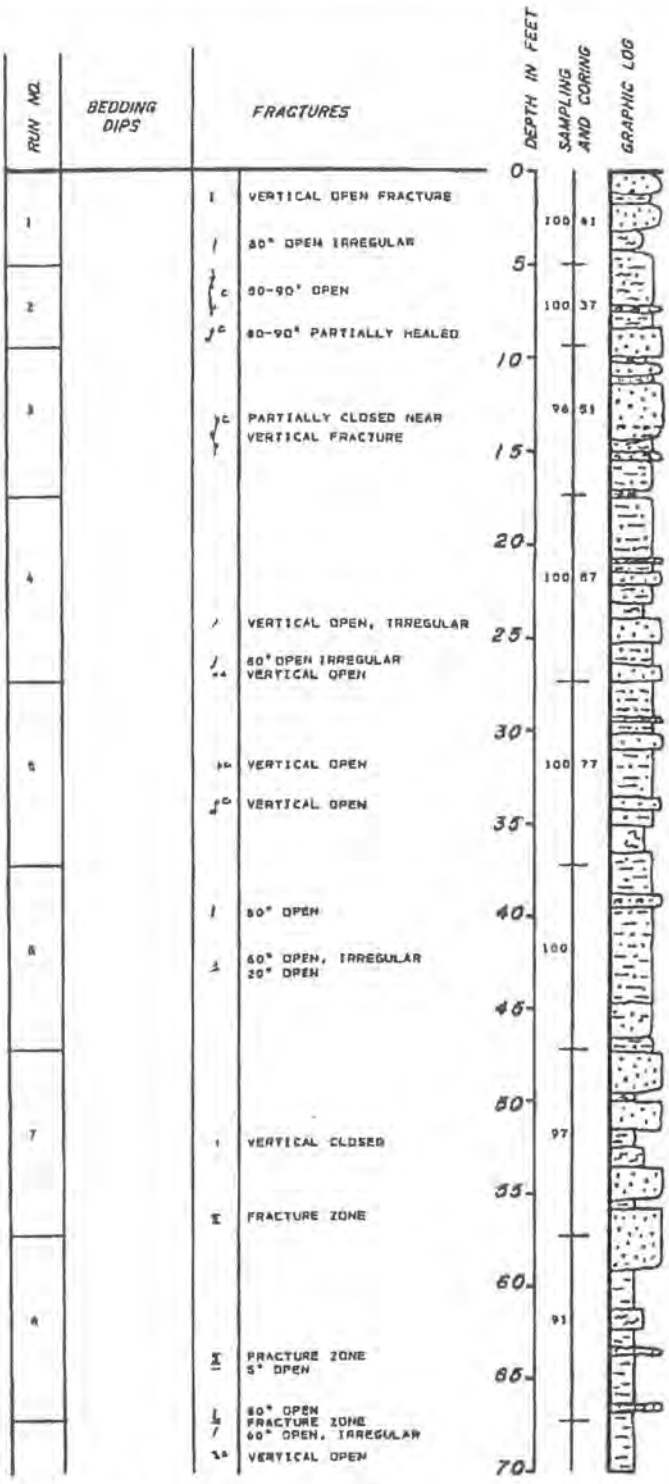
FIGURE 12K-400

LOG OF BORING HEX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-1

SURFACE ELEVATION 319.9
COORDINATES N 332.50 W 265.30



OSWEGO SANDSTONE

TRANSITION ZONE

PULASKI FORMATION

UNIT A

UNIT B

UNIT C

DESCRIPTIVE GEOLOGIC NOTES

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE. FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite p - sulfide
- Fractured zone

KEY TO SYMBOLS

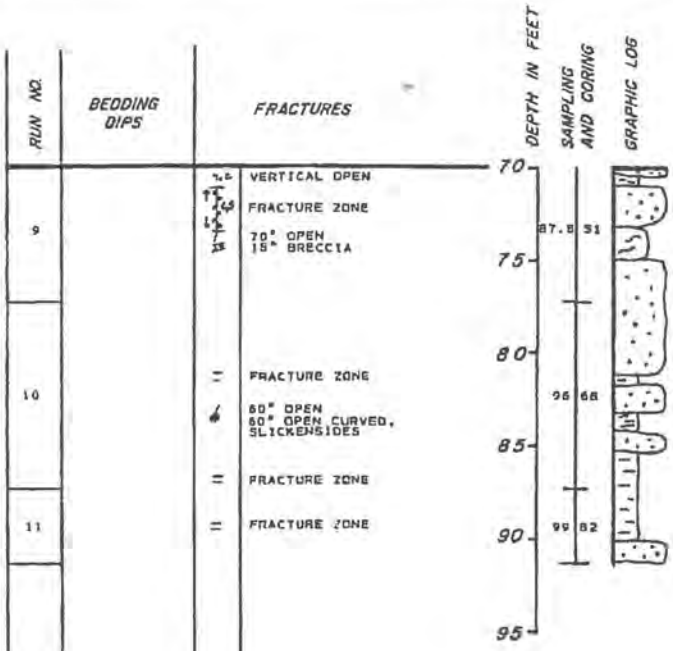
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2.2K-41A

LOG OF BORING P1-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-1



DESCRIPTIVE GEOLOGIC NOTES

BORING TERMINATED AT A DEPTH OF 91.2 FEET
ON 10/4/79
WATER LEVEL AT A DEPTH OF 24.4 FEET
ON 10/21/79

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

n°° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

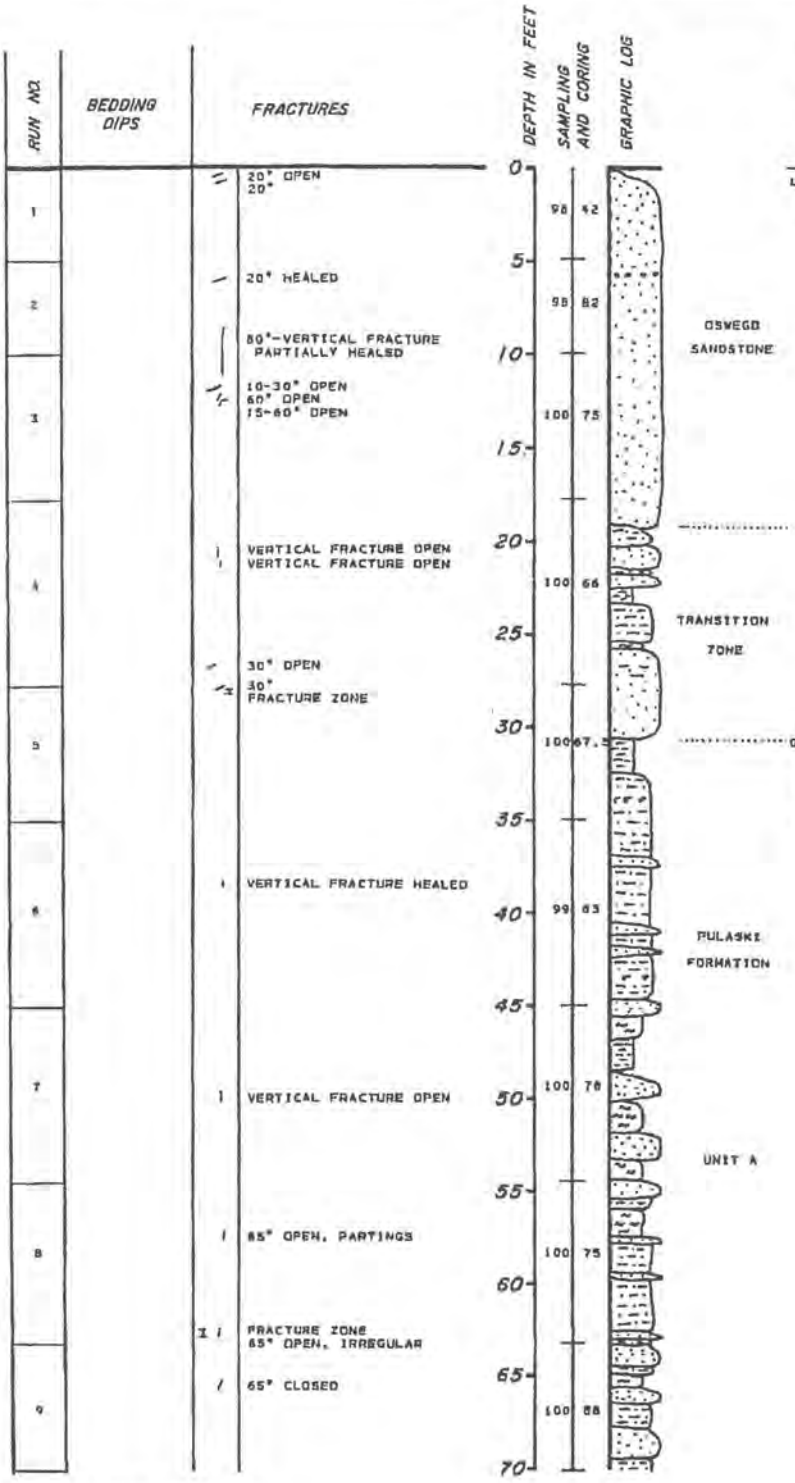
FIGURE 2K-418

LOG OF BORING P1-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-2

SURFACE ELEVATION 246.8'
COORDINATES N 335.25 W 372.53



DESCRIPTIVE GEOLOGIC NOTES

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding, or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

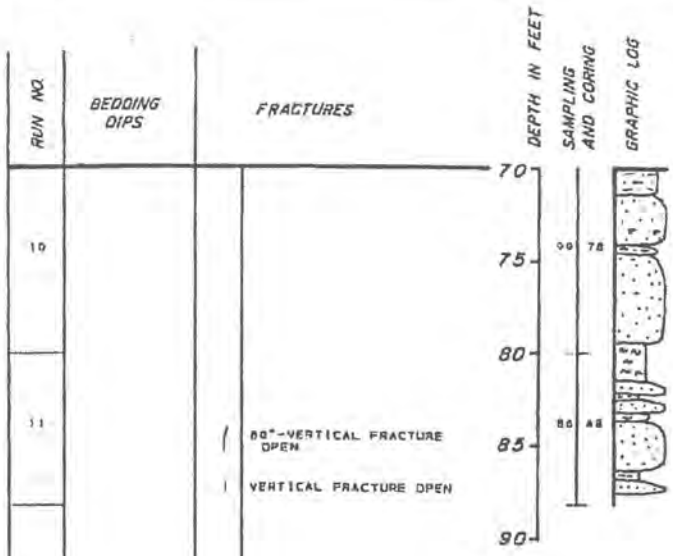
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2R-42A

LOG OF BORING PI-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-2



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION
UNIT B

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

BORING TERMINATED AT A DEPTH OF 88.16 FEET
ON 10/8/79
HOLE LEFT OPEN
WATER LEVEL AT A DEPTH OF 38.8 FEET
ON 10/21/79

SAMPLING AND CORING INFORMATION

Core run
100 95 R.Q.D.
Percent recovery

BEDDING DIPS

Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intraclasts
- Cross-bedding
- Shale laminae

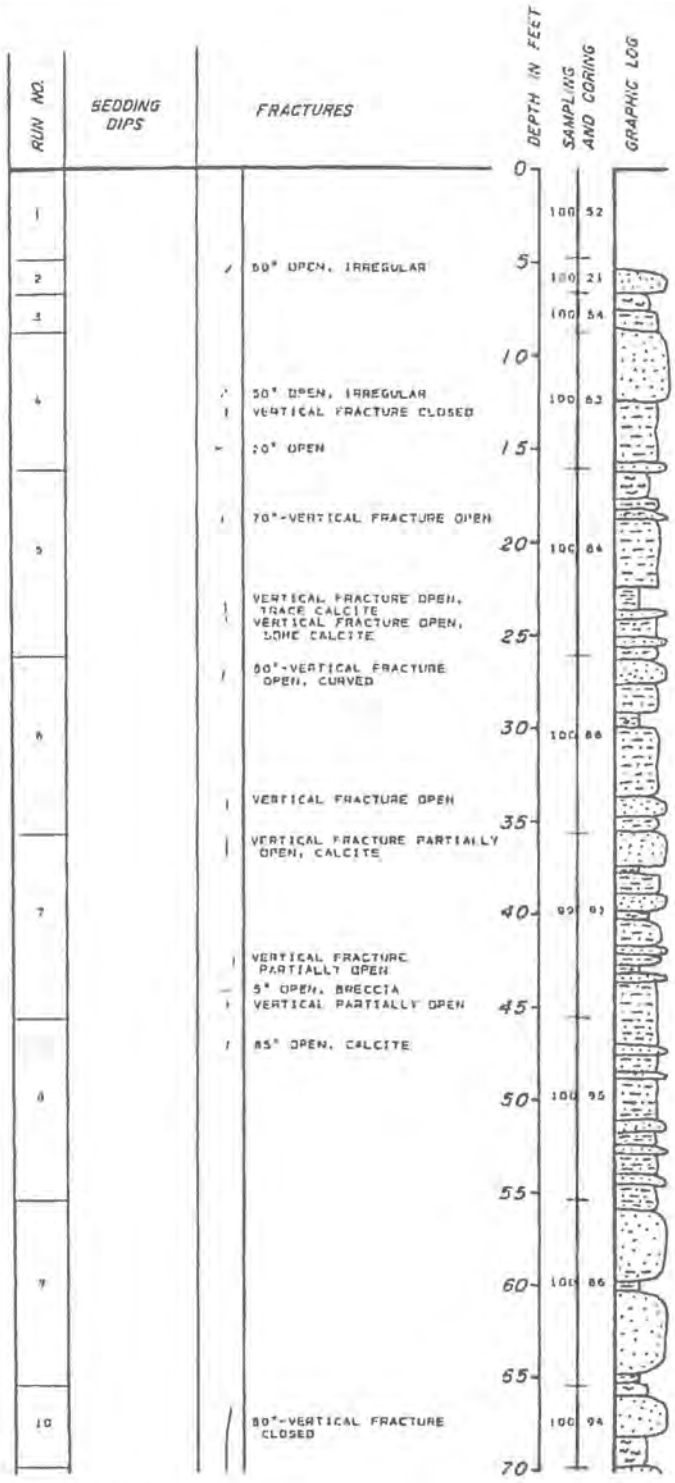
FIGURE 2K-42B

LOG OF BORING PI-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-3

SURFACE ELEVATION 232.0'
COORDINATES N 332.33 W 304.92



DESCRIPTIVE GEOLOGIC NOTES

CONCRETE

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

OSWEGO SANDSTONE

TRANSITION ZONE

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

PULASKI FORMATION

UNIT A

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT B

SAMPLING AND CORING INFORMATION

Core run
100 | 95 R.Q.D.
Percent recovery

BEDDING DIPS

α° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

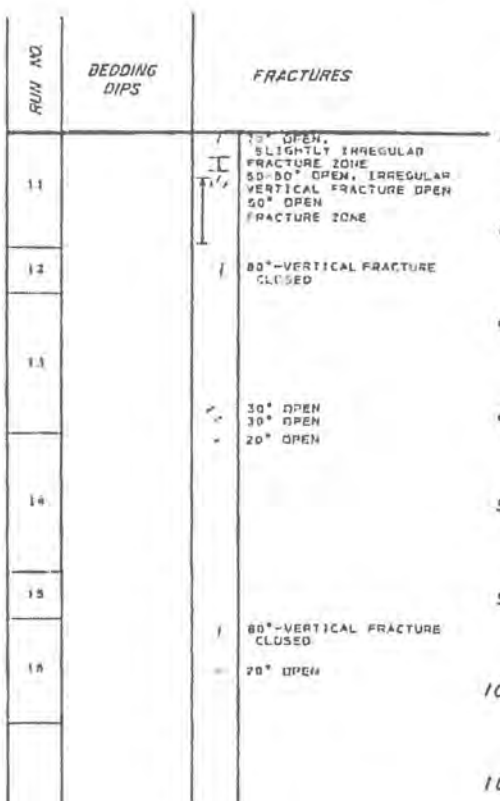
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2.5-43A

LOG OF BORING P1-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-3



PULASKI FORMATION

UNIT C

DESCRIPTIVE GEOLOGIC NOTES

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

BORING TERMINATED AT A DEPTH OF 101.8 FEET ON 10/30/79

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

Bedding was measured on reflective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

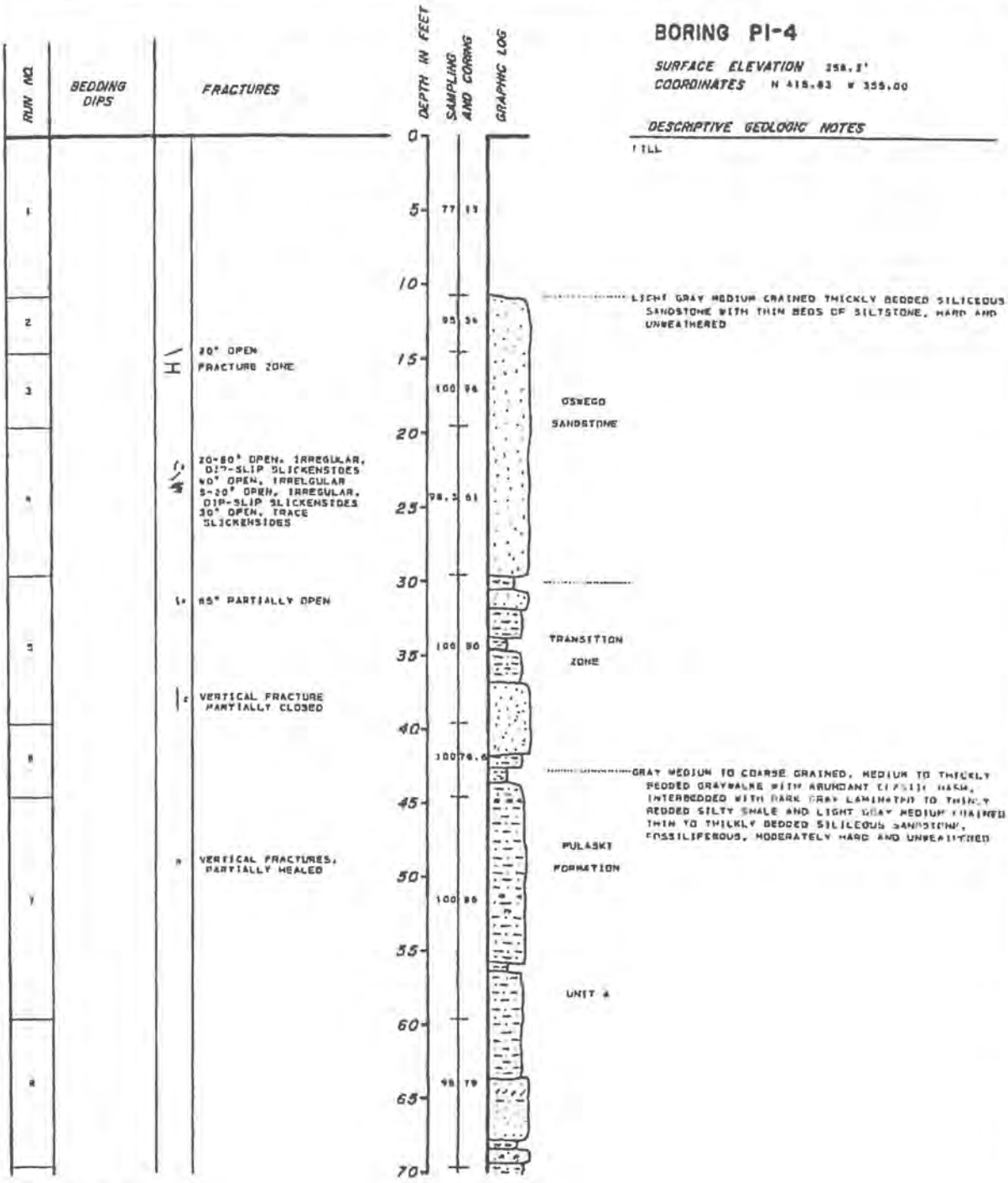
FIGURE I 2K-438

LOG OF BORING P1-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-4

SURFACE ELEVATION 258.3'
COORDINATES N 415.83 W 355.00



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone

KEY TO SYMBOLS

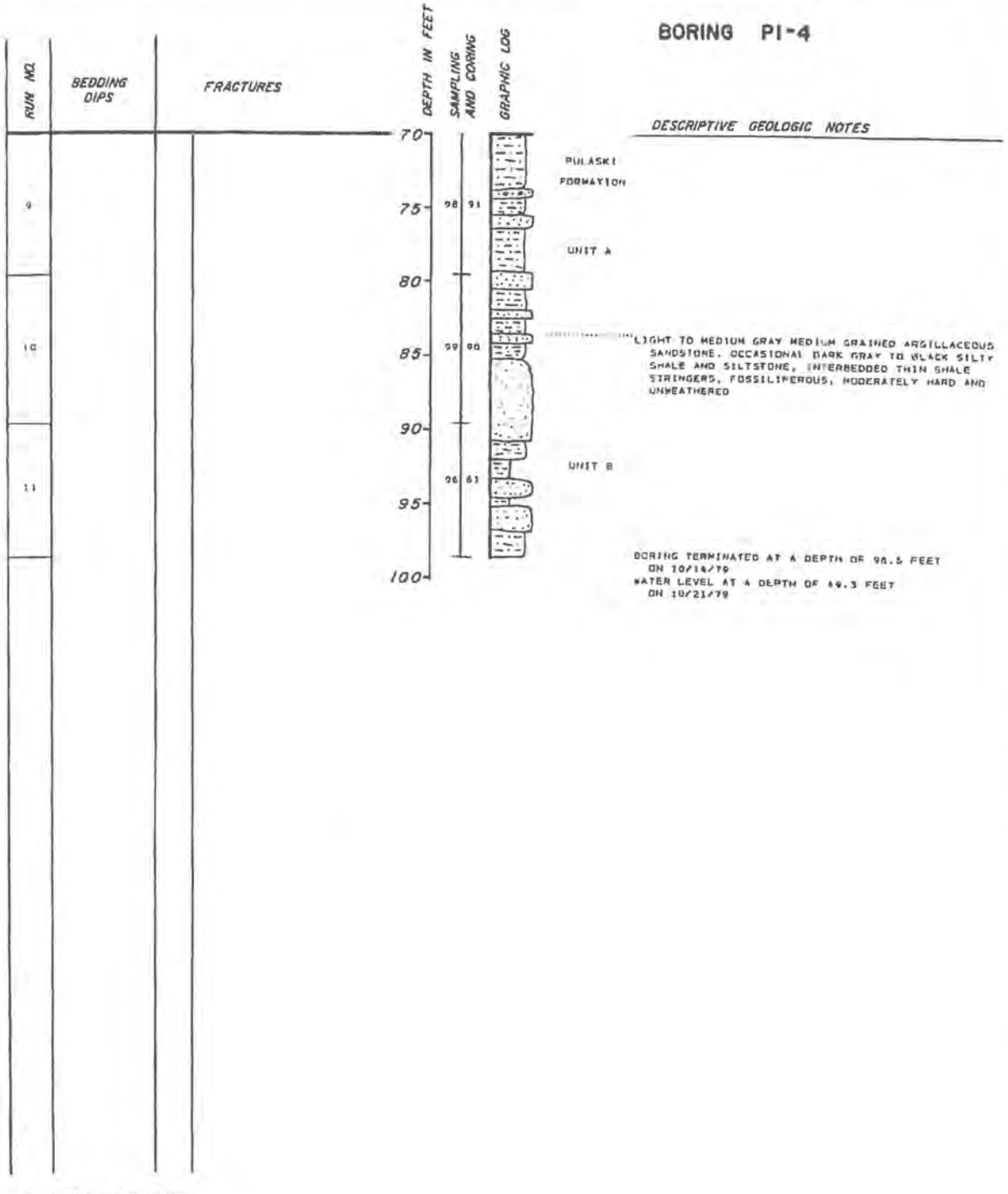
- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-66A

LOG OF BORING PI-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-4



SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - silica
- Fractured zone

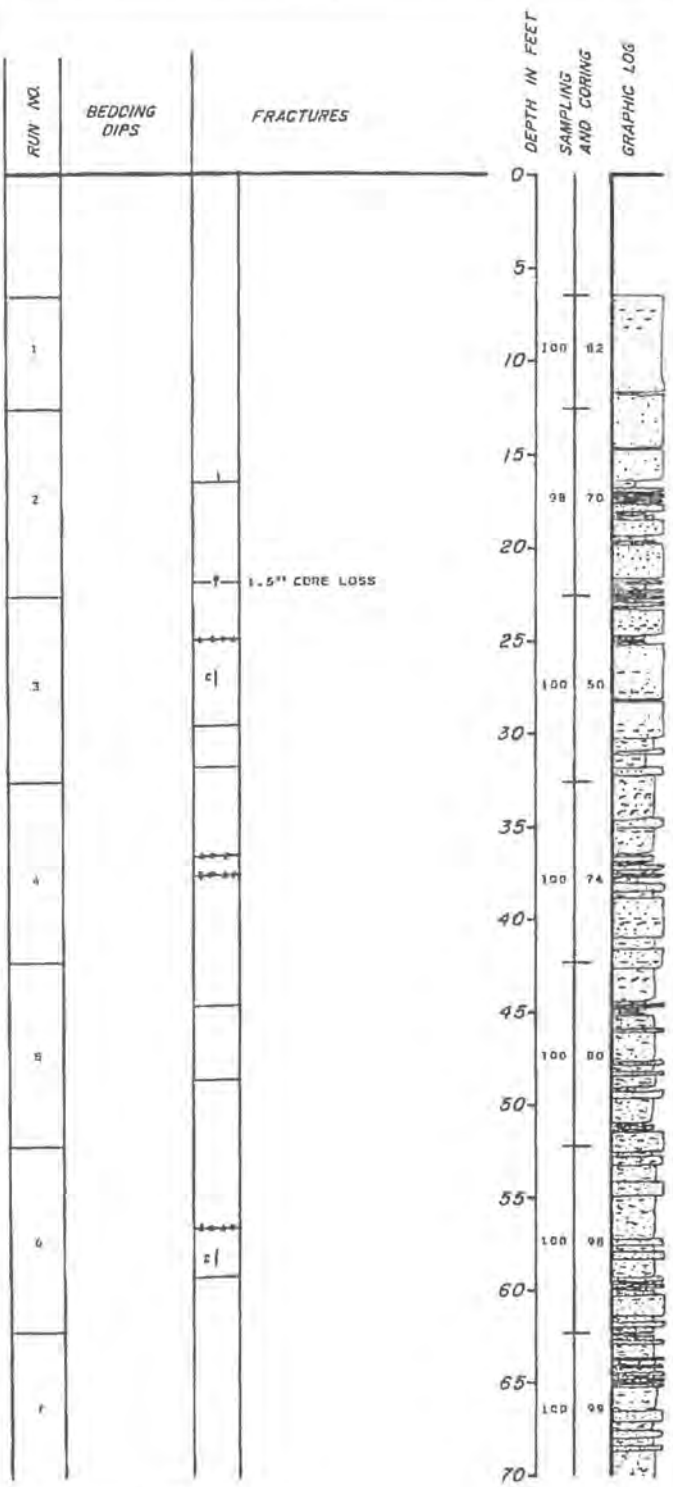
KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale terra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2A-44B

LOG OF BORING P1-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT



BORING P1-5

COORDINATES N 355.0
W 225.0

DESCRIPTIVE GEOLOGIC NOTES

0' DEPTH - ELEVATION 248.12'

2.7' DEPTH - TOP OF ROCK

6.4' DEPTH - BEGIN CORING

LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED

OSWEGO SANDSTONE

TRANSITION ZONE

GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC HASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

39.7' LOSS OF DRILLING CIRCULATION

PULASKI FORMATION

UNIT A

WATER LEVEL - 9/29/81

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2K-45A

LOG OF BORING P1-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-5

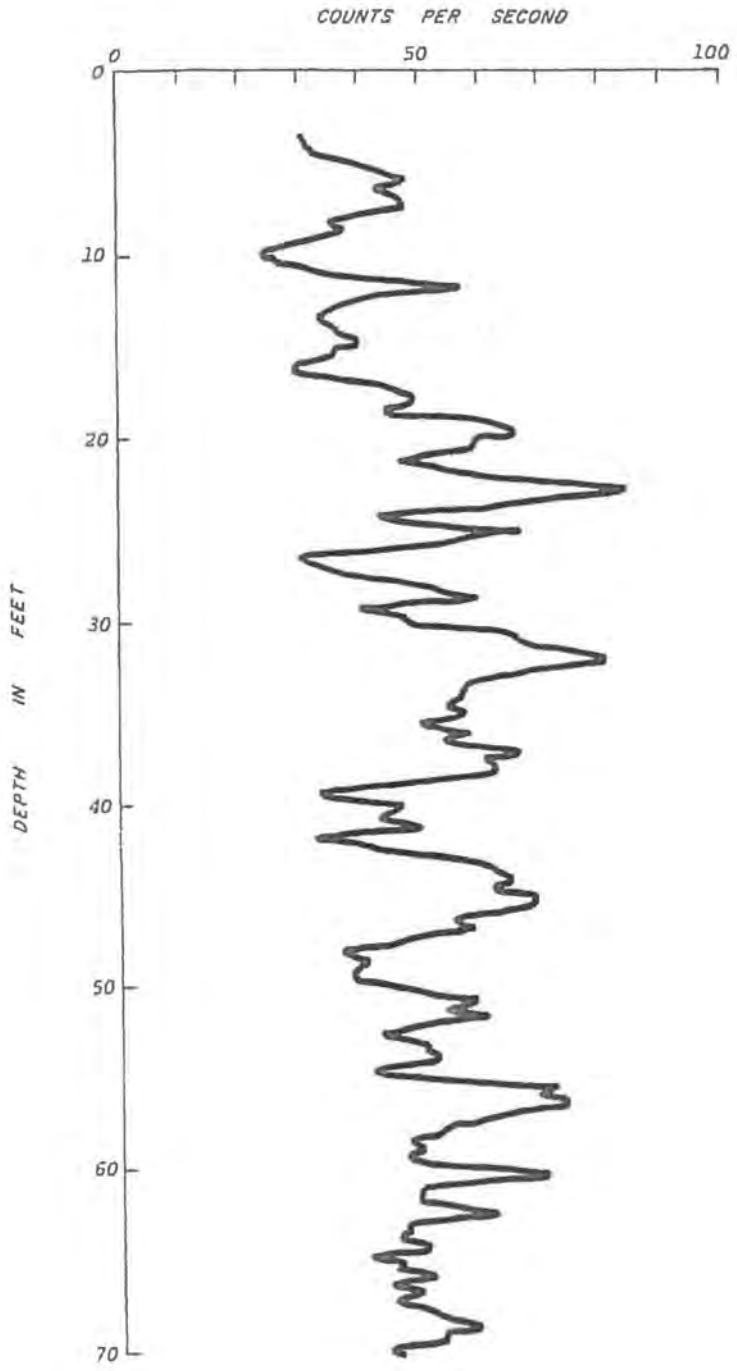
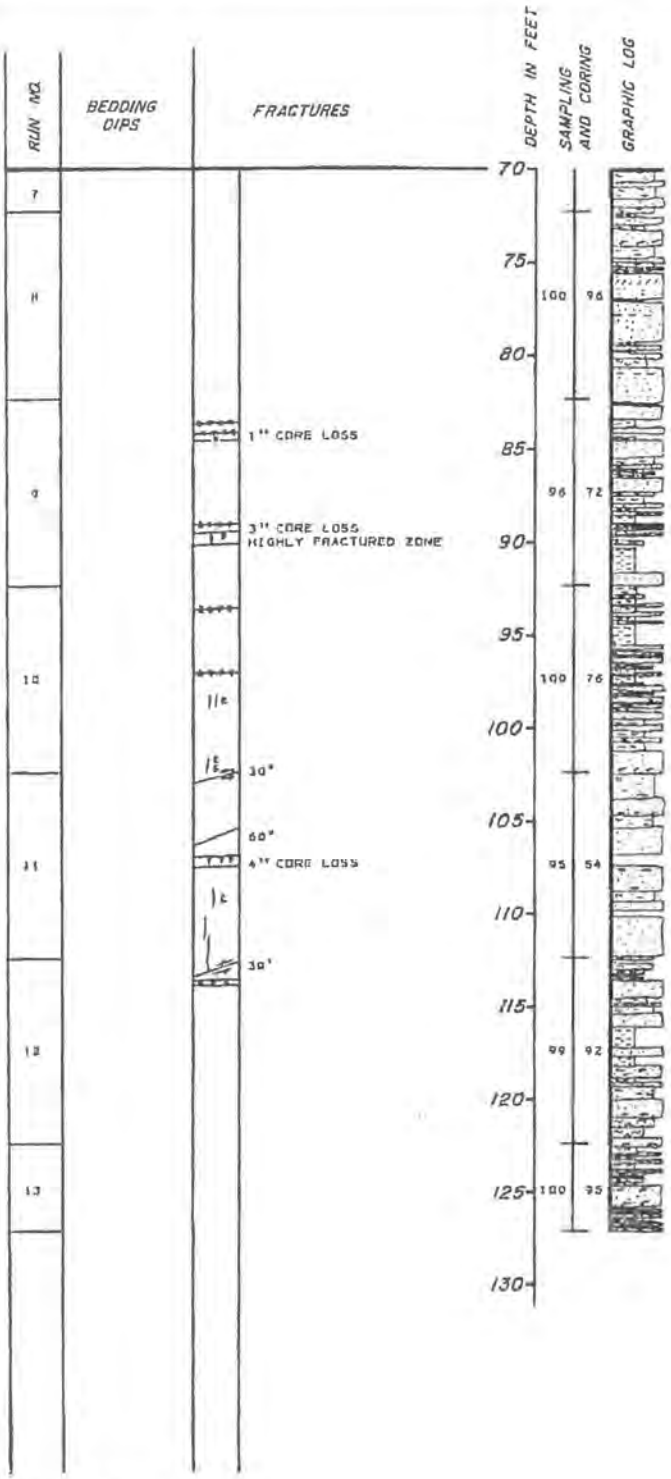


FIGURE 2K-45B

GAMMA RAY LOG OF BORING PI-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-5



DESCRIPTIVE GEOLOGIC NOTES

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

BORING TERMINATED AT A DEPTH OF 127.0 FEET ON 9/25/81 AND GEOPHYSICALLY LOGGED ON 9/25/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE RQD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 95 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c – calcite s – sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE SR-4SC

LOG OF BORING PI-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-5

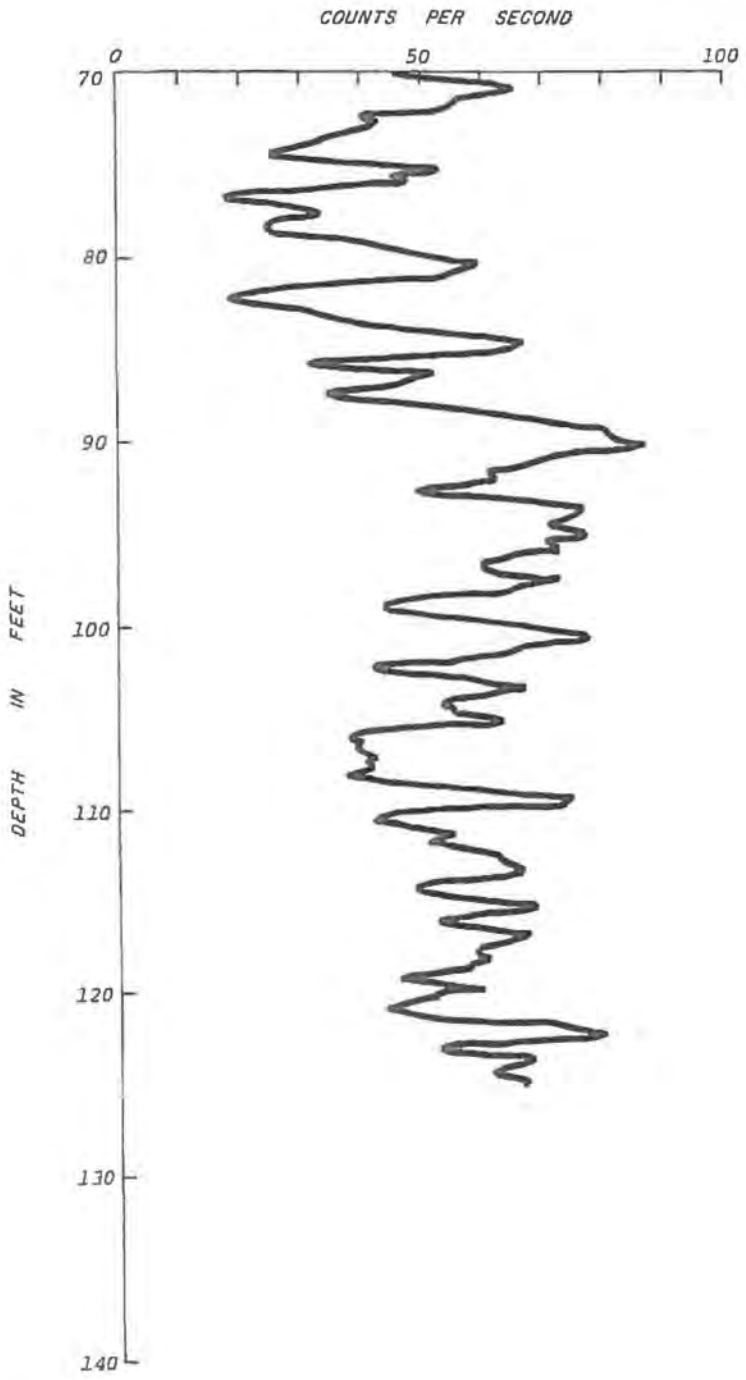
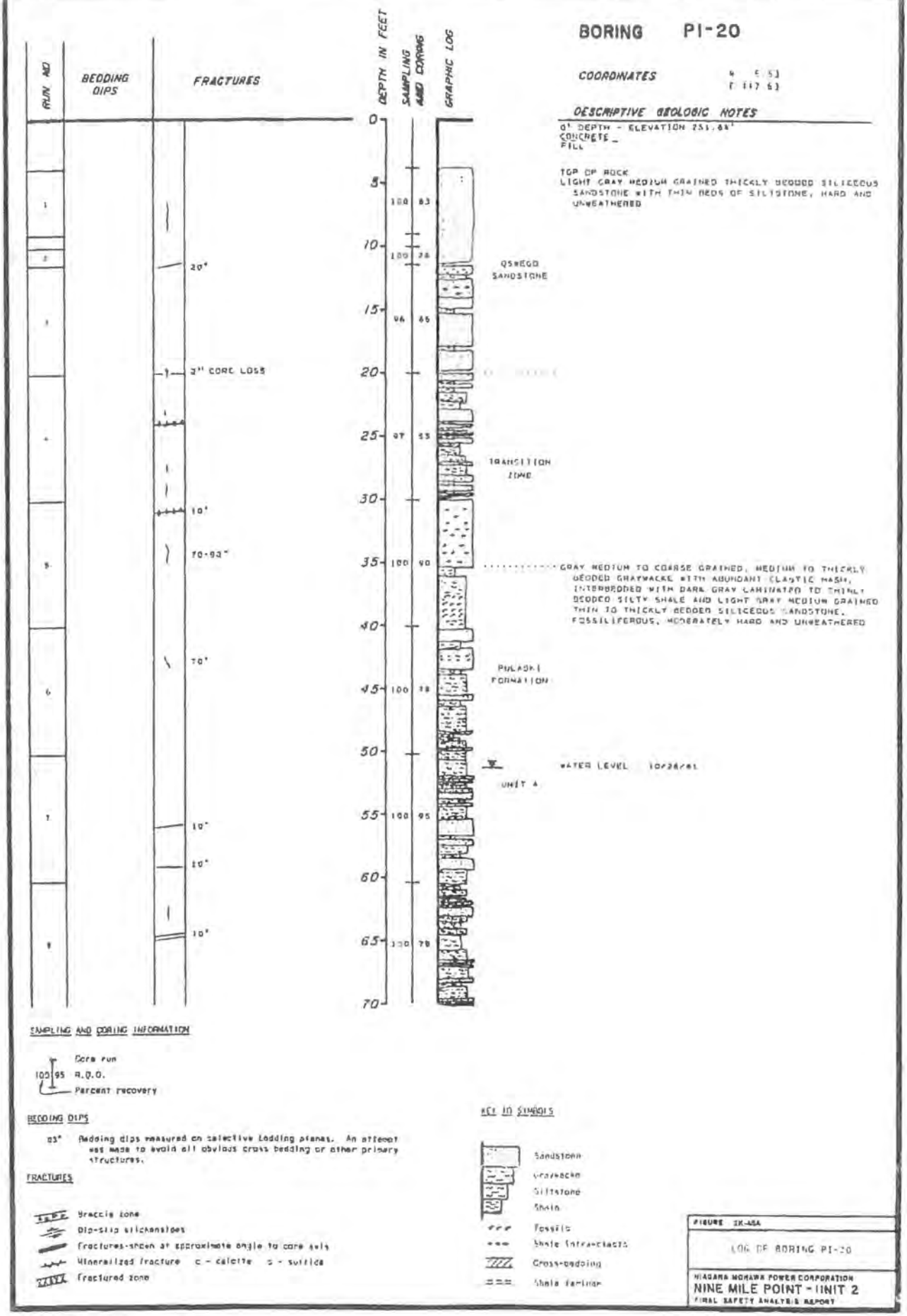


FIGURE 2K-45D

GAMMA RAY LOG OF BORING PI-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT


BORING PI-20
COORDINATES
DESCRIPTIVE GEOLOGIC NOTES
0' DEPTH - ELEVATION 751.68'
CONCRETE
FILL
TOP OF ROCK
LIGHT GRAY MEDIUM GRAINED THICKLY BEDDED SILICEOUS SANDSTONE WITH THIN BEDS OF SILTSTONE, HARD AND UNWEATHERED
QUEENSTON SANDSTONE
TRANSITION ZONE
GRAY MEDIUM TO COARSE GRAINED, MEDIUM TO THICKLY BEDDED GRAYWACKE WITH ABUNDANT CLASTIC MASH, INTERBEDDED WITH DARK GRAY LAMINATED TO THINLY BEDDED SILTY SHALE AND LIGHT GRAY MEDIUM GRAINED THIN TO THICKLY BEDDED SILICEOUS SANDSTONE, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED
PULASKI FORMATION
WATER LEVEL
UNIT A
RUN NO
BEDDING DIPS
FRACTURES
DEPTH IN FEET
SAMPLING AND CORING
GRAPHIC LOG
20°
3" CORE LOSS
10°
70-90°
70°
10°
20°
10°
SAMPLING AND CORING INFORMATION
Core run
R.Q.D.
Percent recovery
BEDDING DIPS
Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.
FRACTURES
Breccia zone
Slip-slip slickensides
Fractures-shown at approximate angle to core axis
Mineralized fracture c - calcite s - sulfide
Fractured zone
KEY TO SYMBOLS
Sandstone
Graywacke
Siltstone
Shale
Fossils
Shale intraclasts
Cross-bedding
Shale laminae
FIGURE IX-45A
LOG OF BORING PI-20
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-20

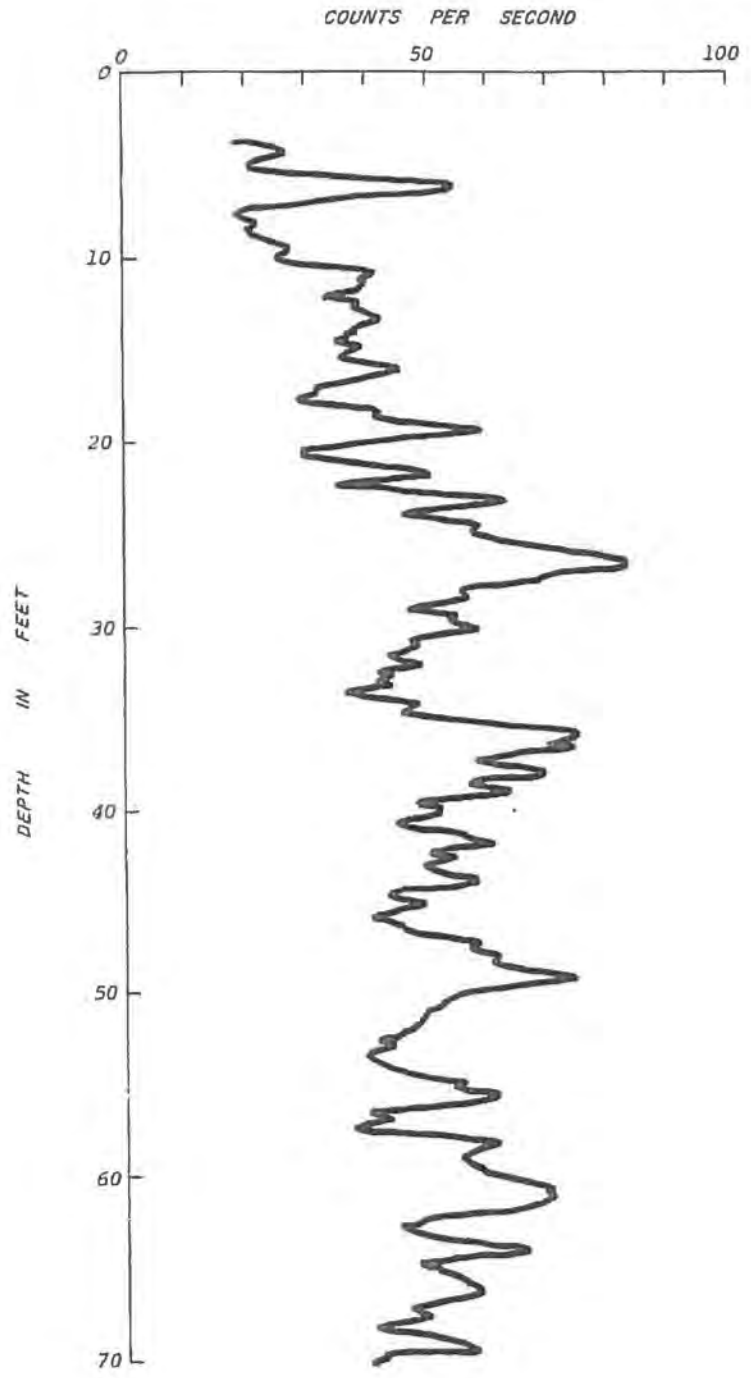
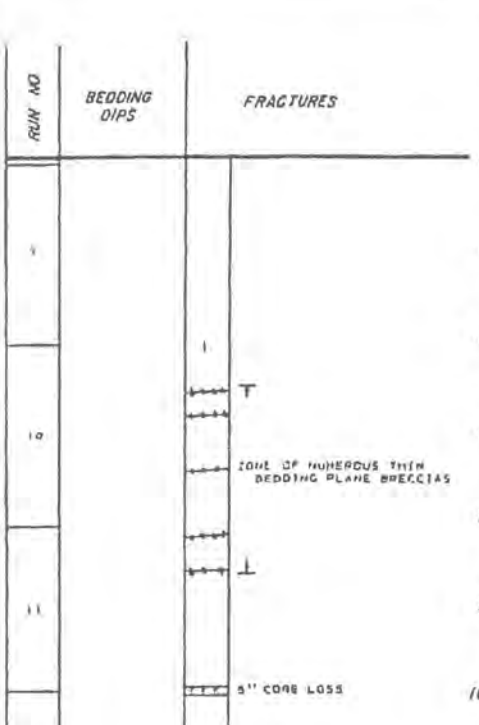


FIGURE 12K-46B

GAMMA RAY LOG OF BORING PI-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-20



UNIT A

PULASKI FORMATION

UNIT B

UNIT C

DESCRIPTIVE GEOLOGIC NOTES

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

BORING TERMINATED AT A DEPTH OF 99.4 FEET ON 9/19/81 AND GEOPHYSICALLY LOGGED ON 9/24/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN OMITTED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE ROD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

100 | 93 — Core run; R.Q.D.; Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE 2R-48C

LOG OF BORING PI-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING P1-20

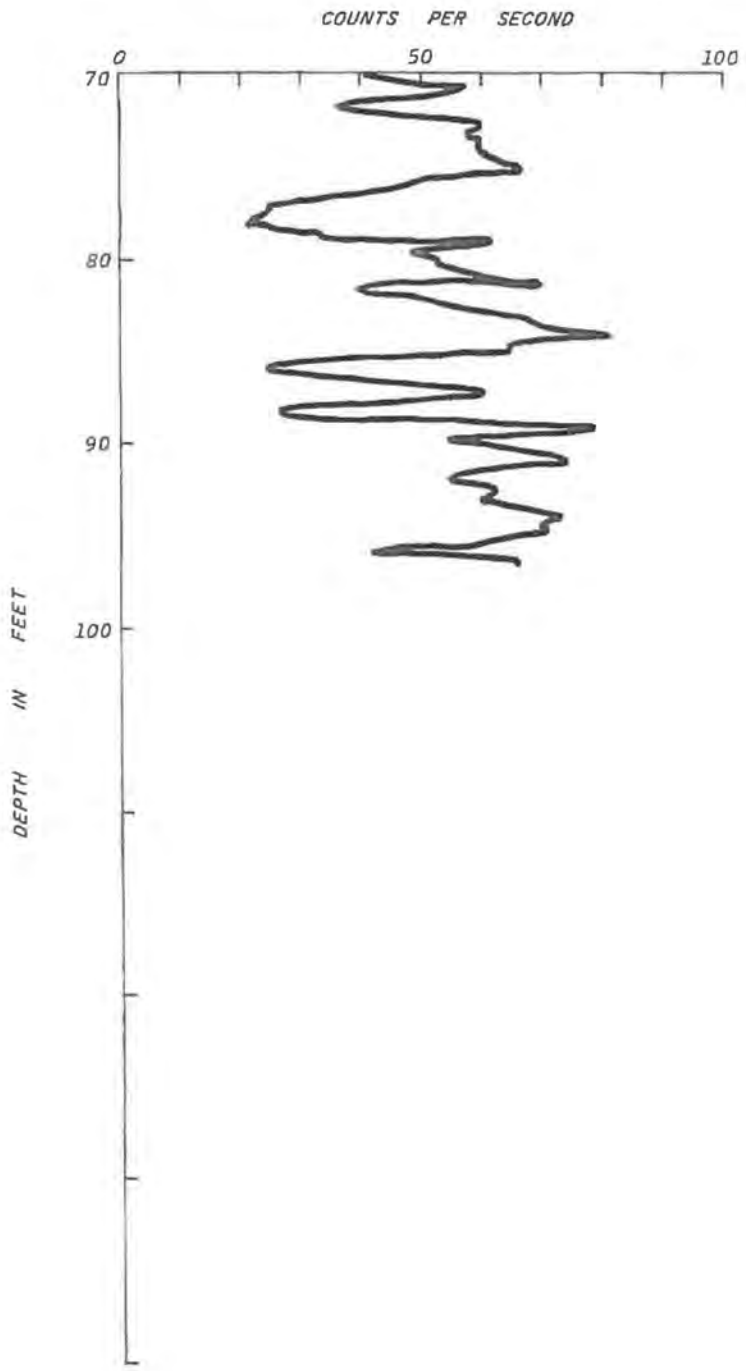


FIGURE 2K-46D

GAMMA RAY LOG OF BORING P1-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

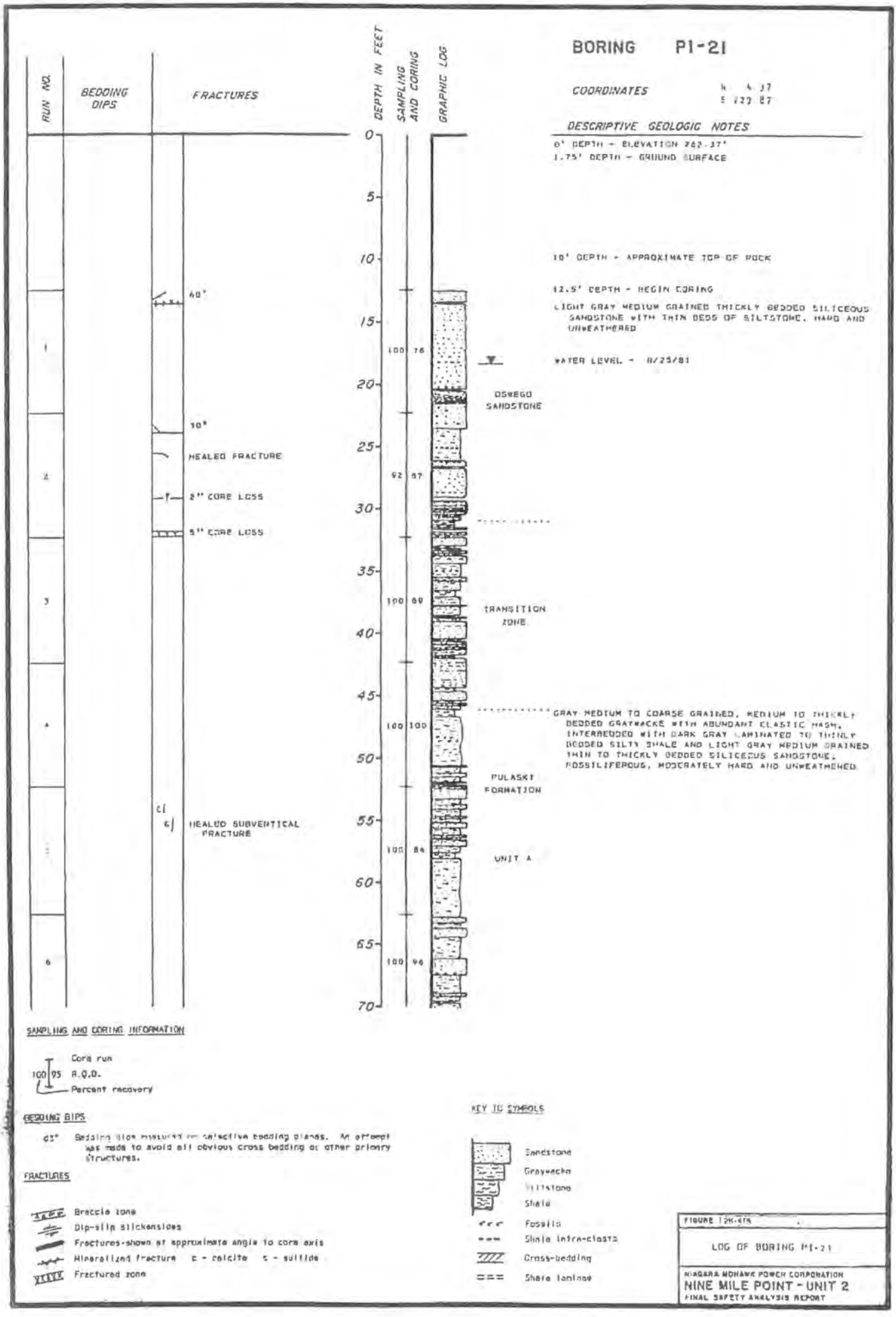


FIGURE 12K-4F8

LOG OF BORING P1-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-21

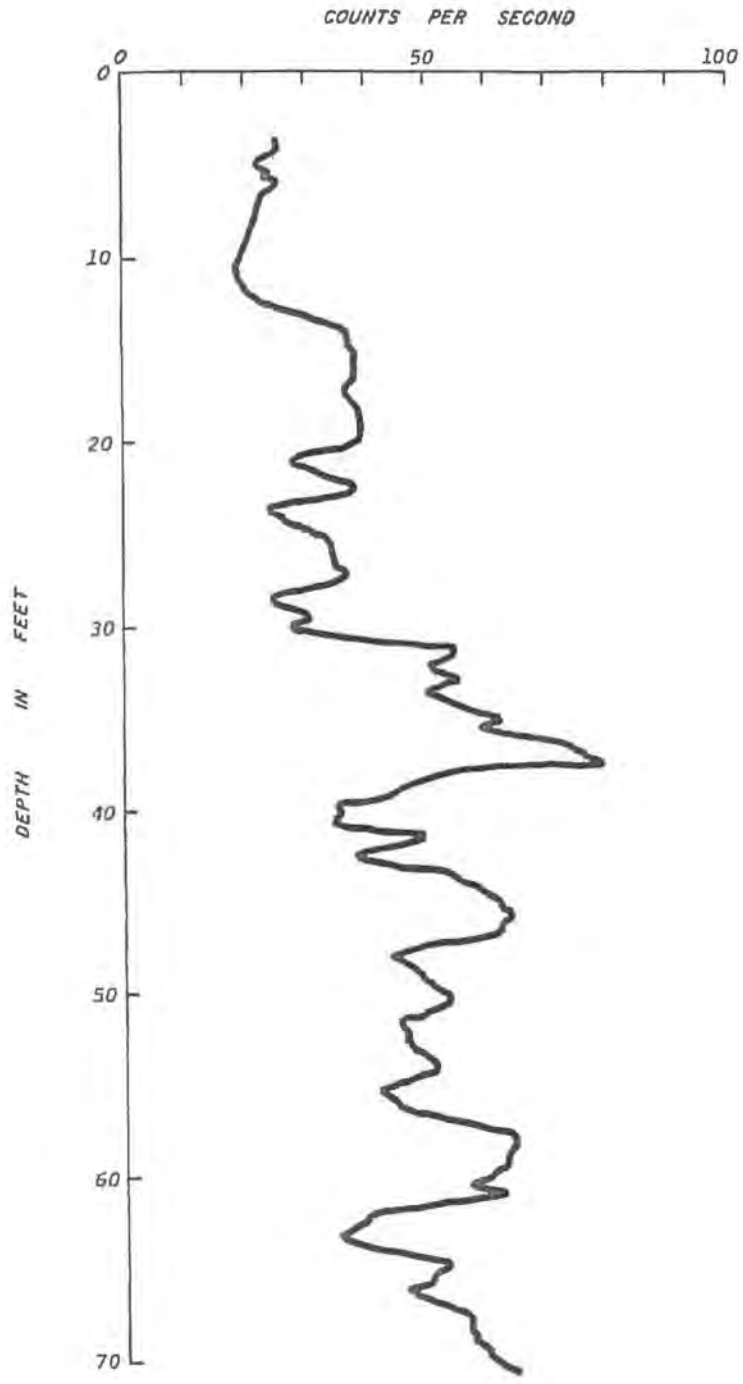
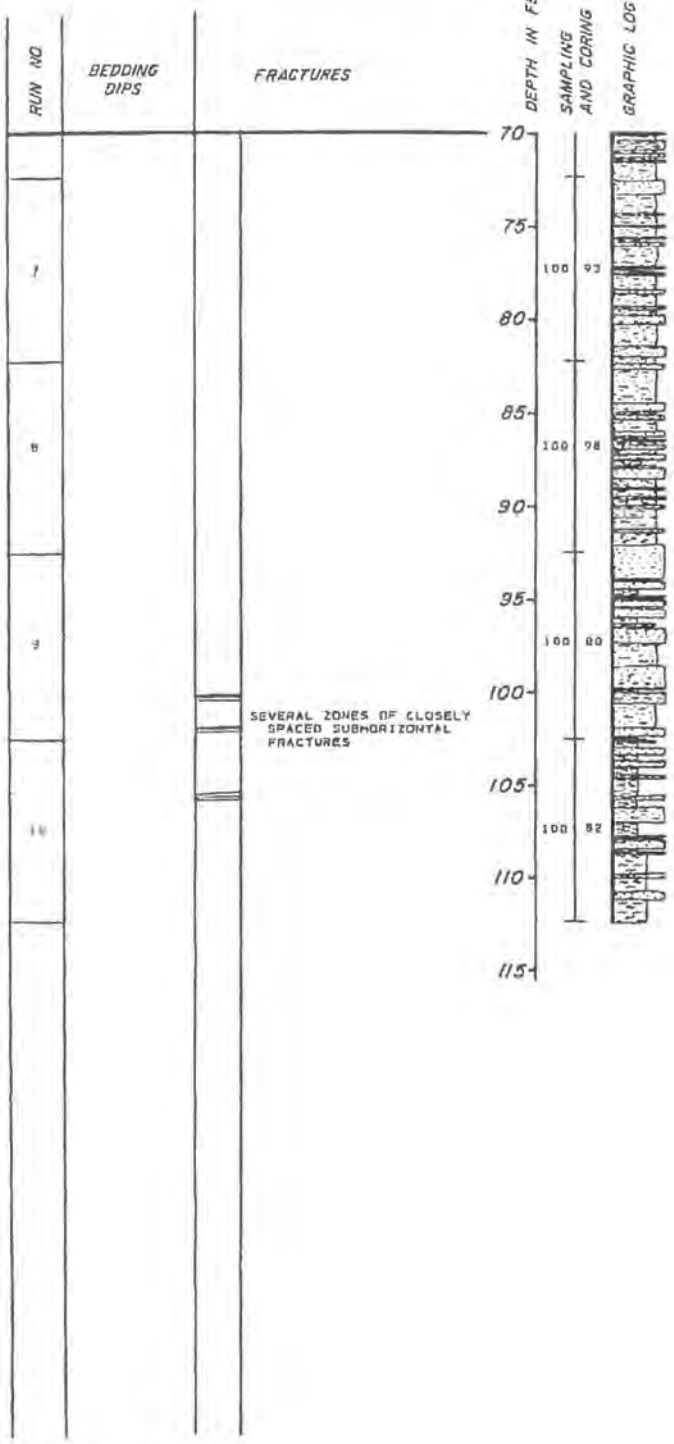


FIGURE 2K-47B

GAMMA RAY LOG OF BORING PI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-21



DESCRIPTIVE GEOLOGIC NOTES

PULASKI FORMATION

UNIT A

UNIT B

LIGHT TO MEDIUM GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, OCCASIONAL DARK GRAY TO BLACK SILTY SHALE AND SILTSTONE, INTERBEDDED THIN SHALE STRINGERS, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

UNIT C

DARK GRAY TO BLACK THIN TO THICKLY BEDDED SILTY SHALE INTERBEDDED WITH LIGHT GRAY MEDIUM GRAINED ARGILLACEOUS SANDSTONE, SILTSTONE LENSES AND INTERBEDS COMMON, FOSSILIFEROUS, MODERATELY HARD AND UNWEATHERED

BORING TERMINATED AT A DEPTH OF 112.4' FEET ON 6/24/81 AND GEOPHYSICALLY LOGGED ON 6/25/81

NOTE: NUMEROUS FRACTURES PARALLEL TO BEDDING SURFACES WERE OBSERVED IN THE CORE FROM THIS BORING. THEY HAVE BEEN EDITED OUT IN THE PRODUCTION OF THIS LOG UNLESS THEY COULD BE IDENTIFIED AS NATURALLY OCCURRING FRACTURES. HOWEVER, THE FREQUENCY OF OCCURRENCE OF THESE SUB-HORIZONTAL FRACTURES IS REFLECTED IN THE ROD VALUES SHOWN.

SAMPLING AND CORING INFORMATION

Core run

100 | 95 R.Q.D.

Percent recovery

BEDDING DIPS

03° Bedding dips measured on selective bedding planes. An attempt was made to avoid all obvious cross bedding or other primary structures.

FRACTURES

- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone

KEY TO SYMBOLS

- Sandstone
- Graywacke
- Siltstone
- Shale
- Fossils
- Shale intra-clasts
- Cross-bedding
- Shale laminae

FIGURE I 2K-47C

LOG OF BORING PI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

BORING PI-21

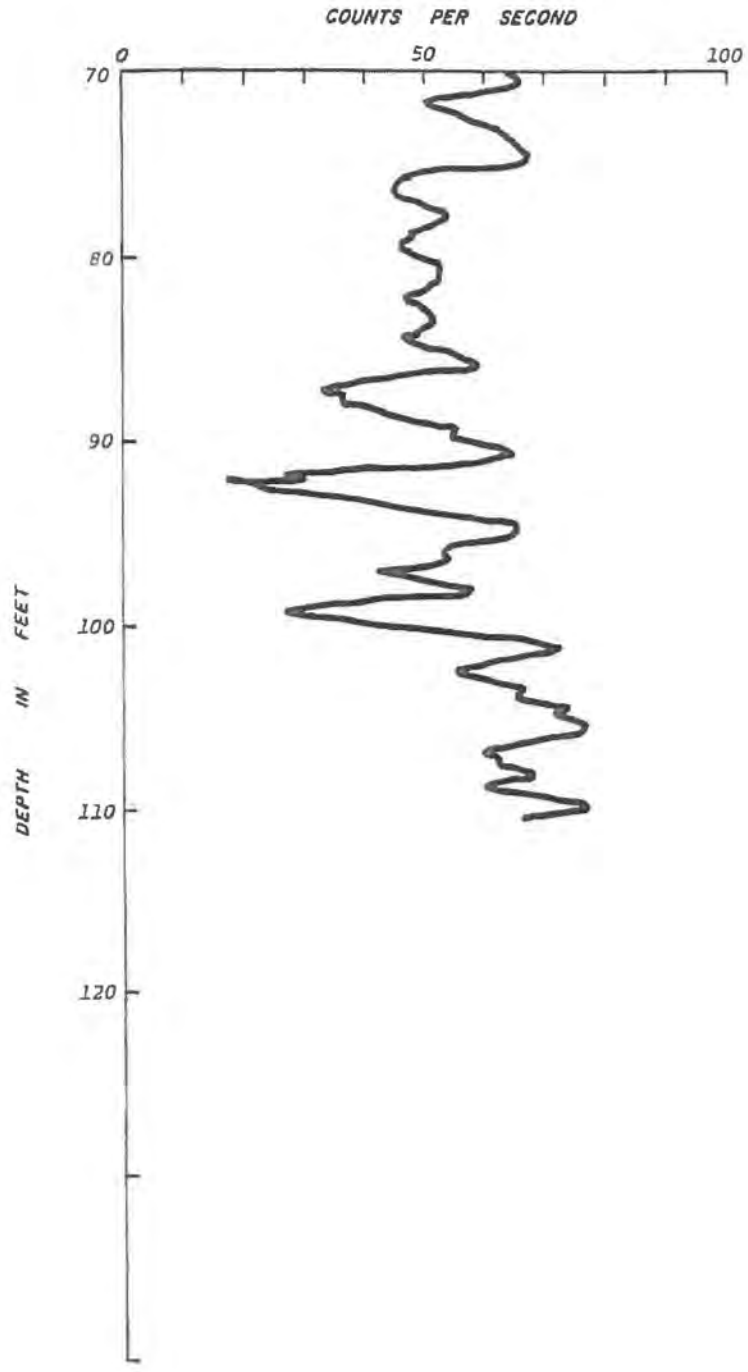


FIGURE 2K-47D

GAMMA RAY LOG OF BORING PI-21

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

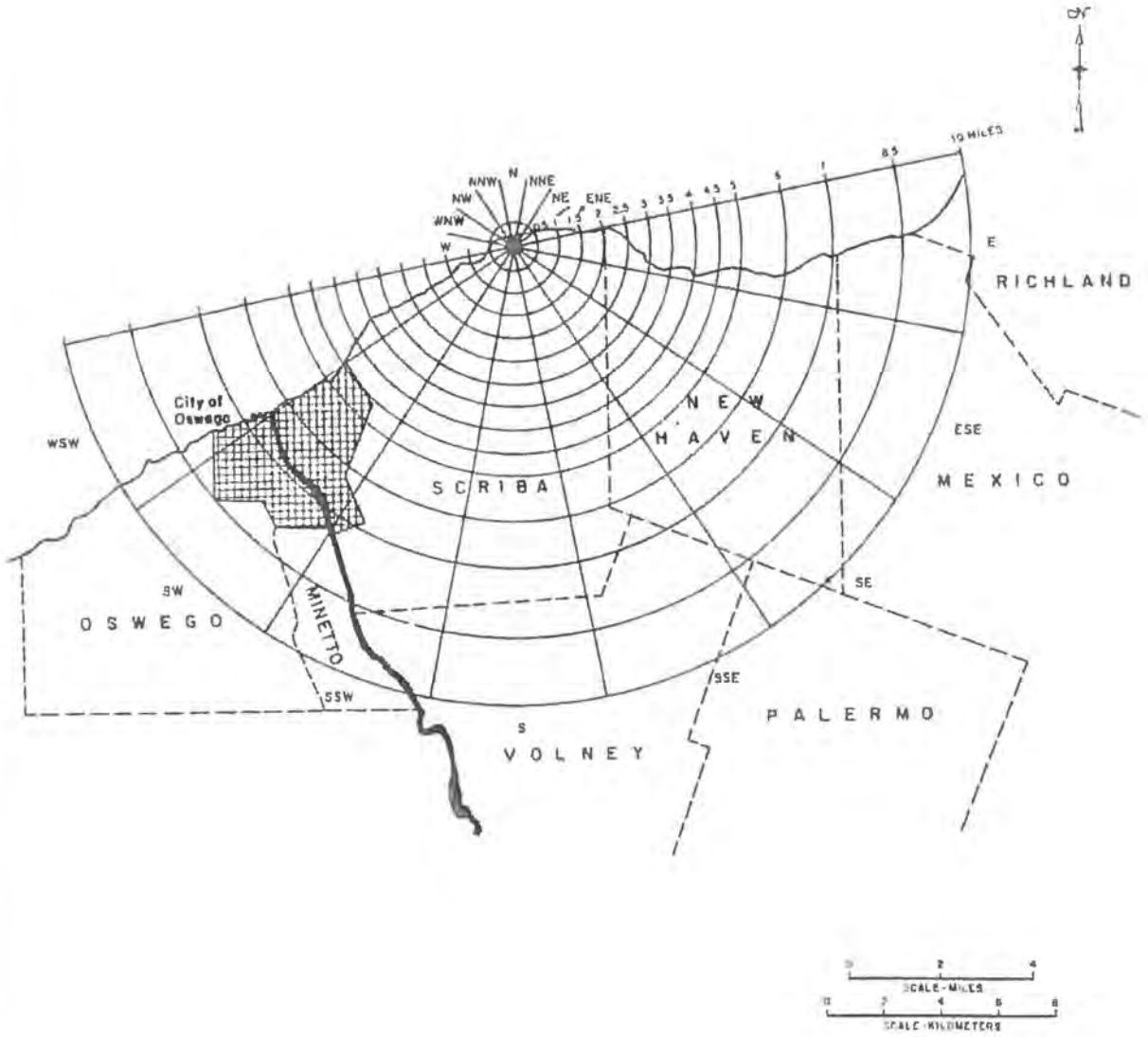


FIGURE 2L-1

0-10 MILE POPULATION ROSE

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
FINAL SAFETY ANALYSIS REPORT

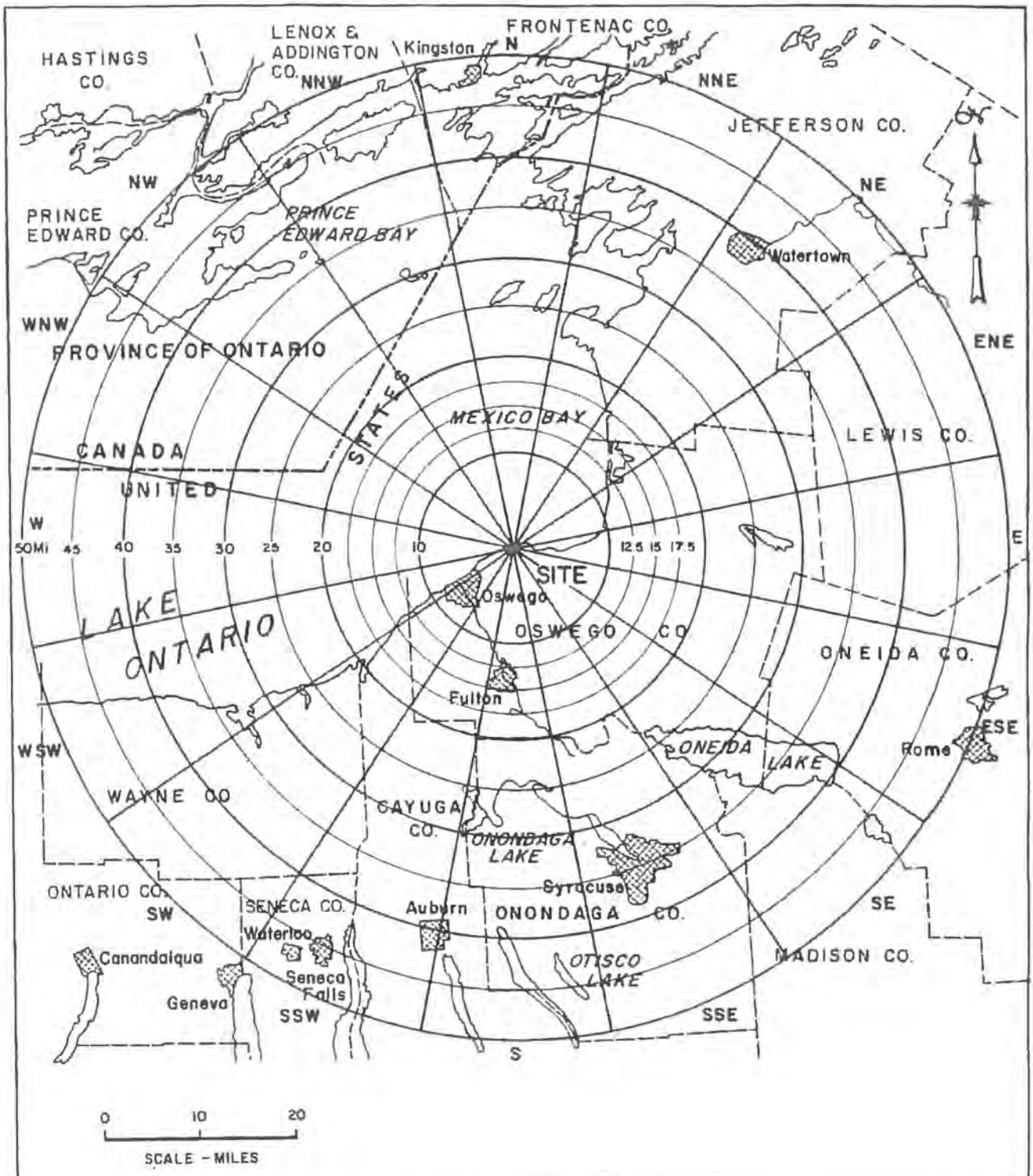
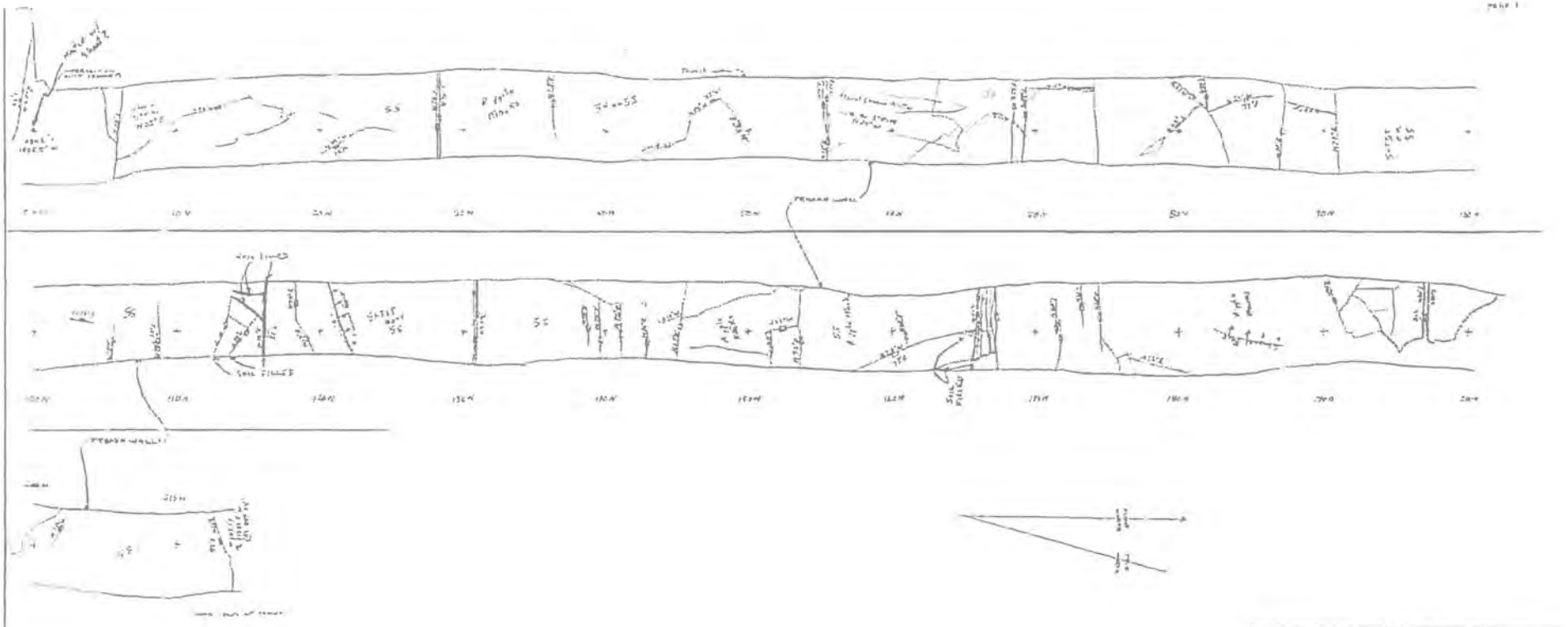


FIGURE 2L-2

50 MILE POPULATION ROSE

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
FINAL SAFETY ANALYSIS REPORT

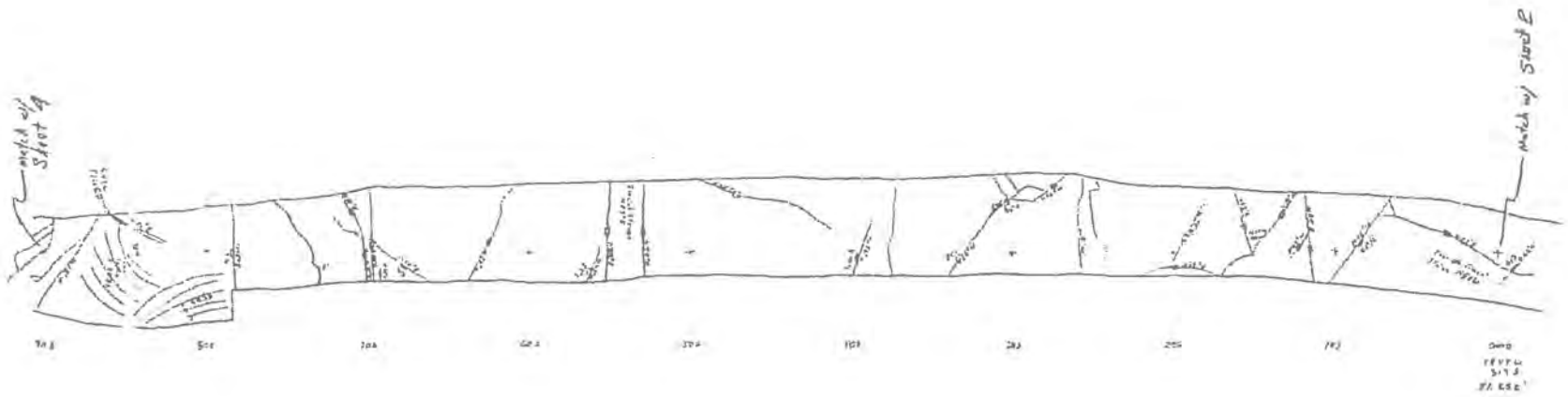


Scale 1"=5'

7	6	5	4	3	2	1	Sheet 1
							7405

Stone & Webster Engineering Corporation

SK-

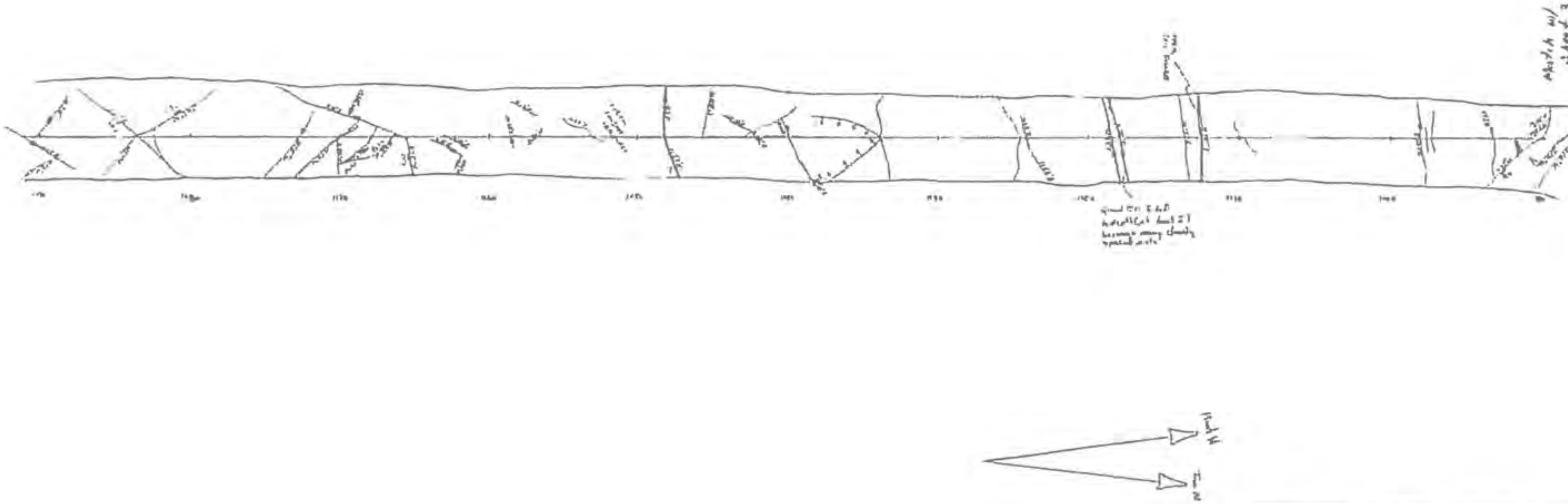


Niagara Mohawk Pr Co Ano-M.Is Unit #2
Eagle Nest Trench Co
PICKING - AS-BUILT, Scale 1"=5'

7	6	5	4	3	2	1	Chk'd TLB

STONE & WEBSTER ENGINEERING CORPORATION

SK-



Niagara Mohawk Pwr. Co. Nine Mile Point
Exploration Trench 2

STONE & WEBSTER ENGINEERING CORPORATION

SK-

Checked	1	2	3	4	5	6	7
12-13							

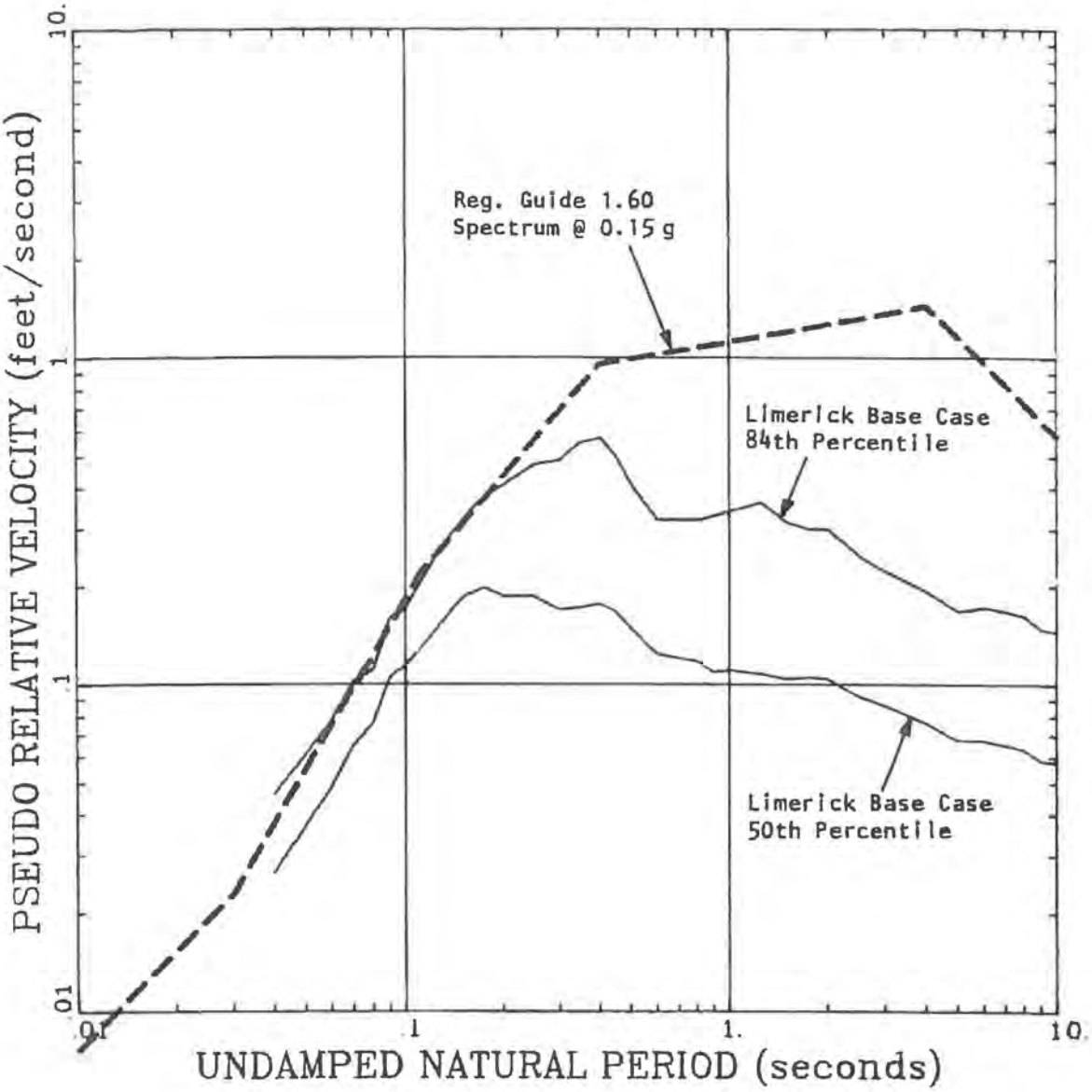
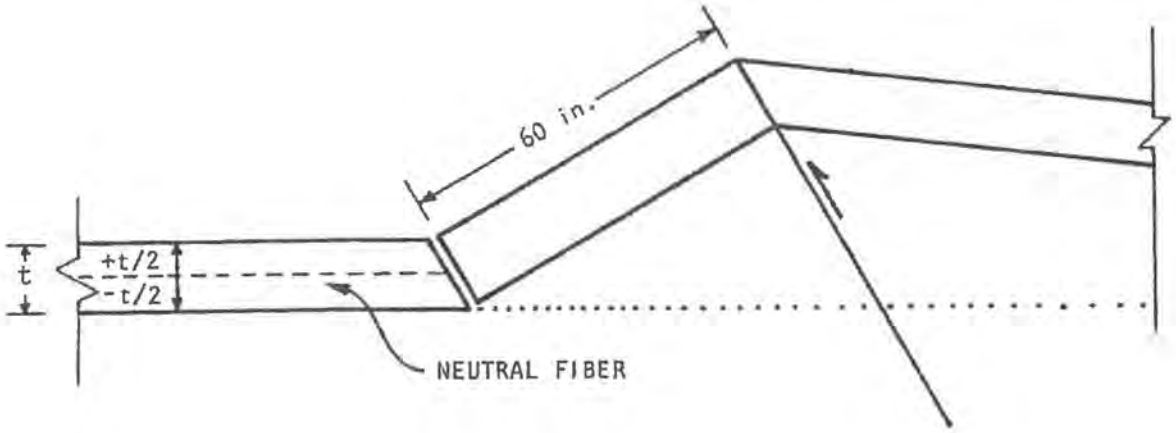


FIGURE 230.3-1

SITE SPECIFIC SPECTRA (LIMERICK BASE CASE) COMPARED TO NINE MILE POINT — UNIT 2 HORIZONTAL SSE RESPONSE SPECTRA (DAMPING = 5.0)

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT



f = FIBER STRESS
E = YOUNG'S MODULUS
t = (AVERAGE) BED THICKNESS
R_c = RADIUS OF CURVATURE

$$\sigma_f = \pm \frac{(t/2) \times E}{R_c}$$

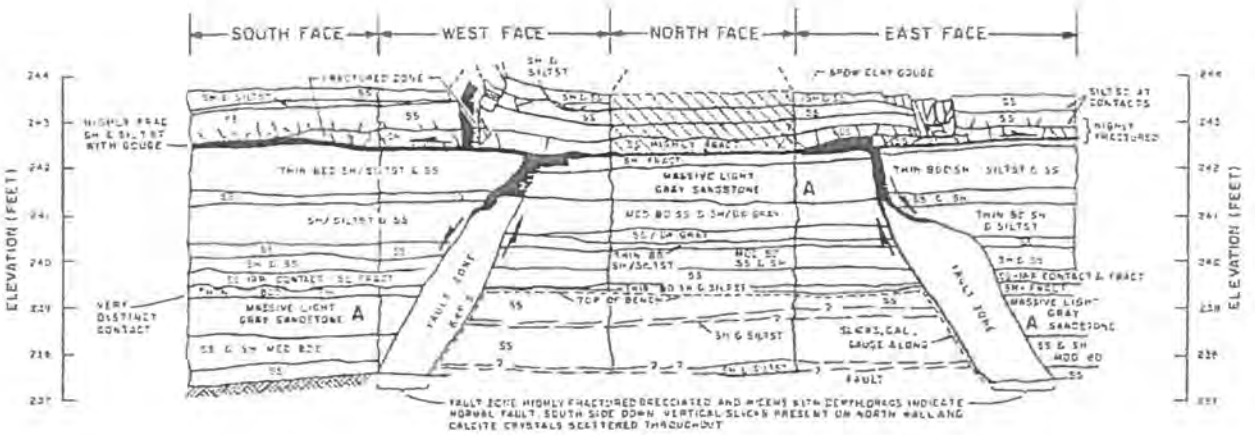
$E = 3{,}500{,}000\ lb./in^2$
$t = 12$ in.
$R_c = 144$ in.

$\therefore\ \sigma_f \approx 150{,}000\ lb./in^2$ (10 kb)

FIGURE 231.10-1

FIBER STRESS
RELATED TO THE FORMATION OF THE LOWER FRACTURE OF THE COOLING TOWER BUCKLE

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT



LEGEND

- FAULT TRACE ON EXPOSED ROCK FACE, ARROW INDICATES DIRECTION OF MOVEMENT
- FAULT GOUGE
- A — DISTINCTIVE LIGHT GREY MASSIVE SANDSTONE BED TRACED ACROSS FAULT
- BLOCK OF ROCK REMOVED FROM NORTH FACE TO PERMIT DETAILED MAPPING OF SHEAR SURFACE
- OUTLINES BENCH EXCAVATED IN FLOOR OF PIT
- SS SANDSTONE
- SH SHALE
- SILTST SILTSTONE

NOTES
1. DATUM IS MSL
2. SEE FIG 2.1-3 FOR LOCATION OF ROCK PIT IN TRENCH B

0 2 4 6
SCALE - FEET

FIGURE 231.11-1

ROCK PIT — TRENCH B

JAMES A FITZPATRICK NUCLEAR POWER PLANT
POWER AUTHORITY OF THE STATE OF NEW YORK

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

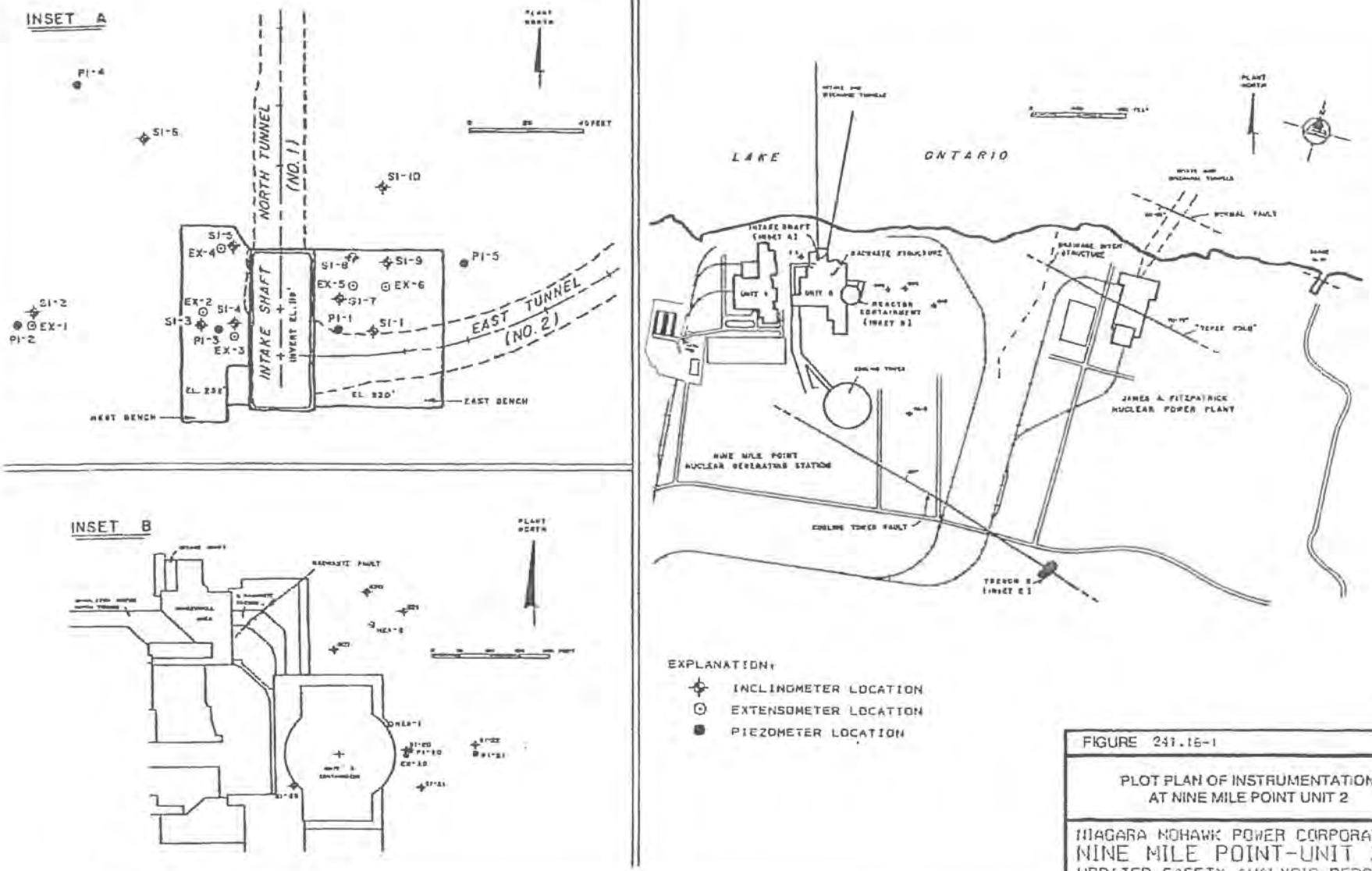


FIGURE 241.16-1

PLOT PLAN OF INSTRUMENTATION AT NINE MILE POINT UNIT 2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

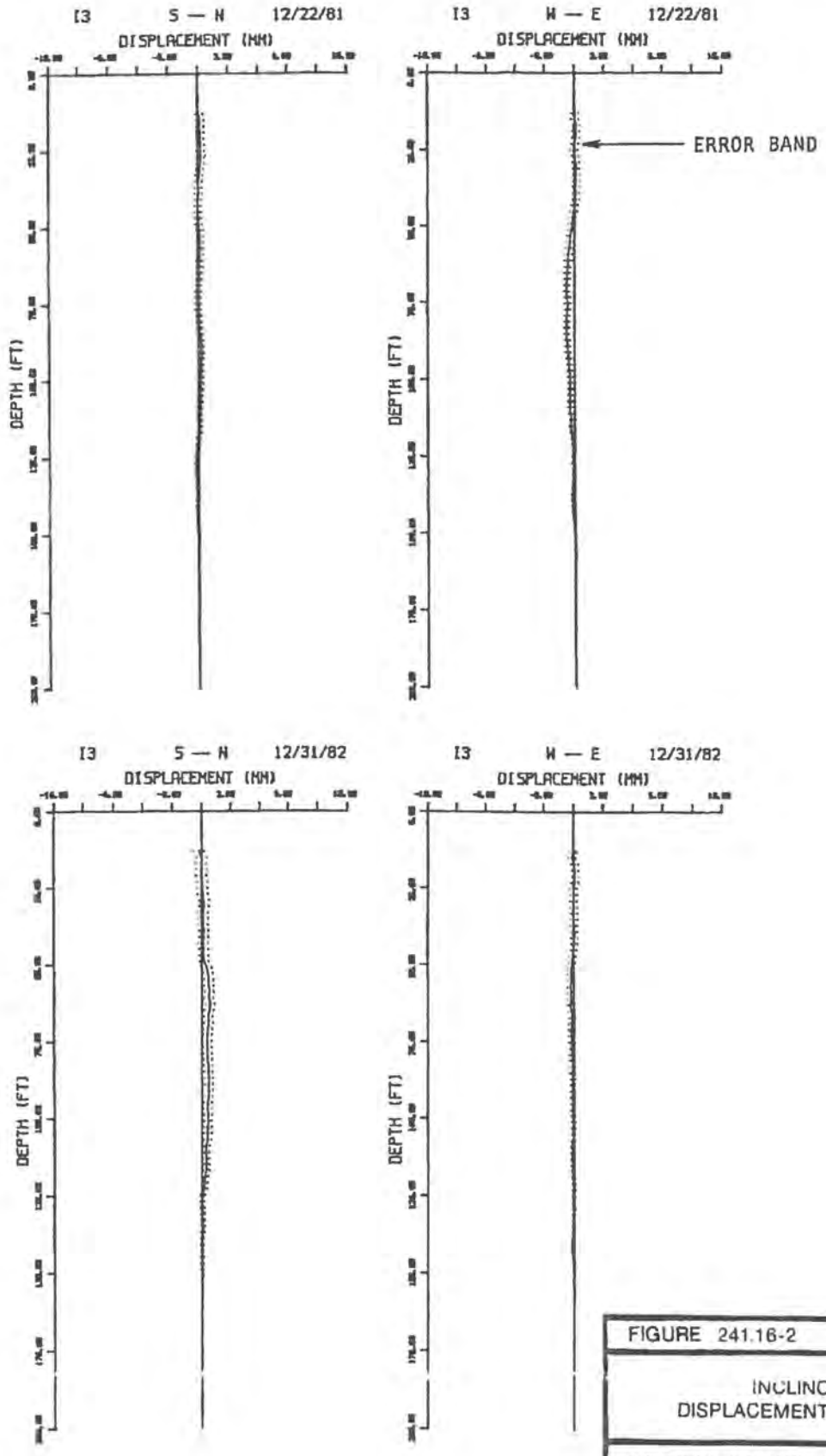


FIGURE 241.16-2

INCLINOMETER I-3
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

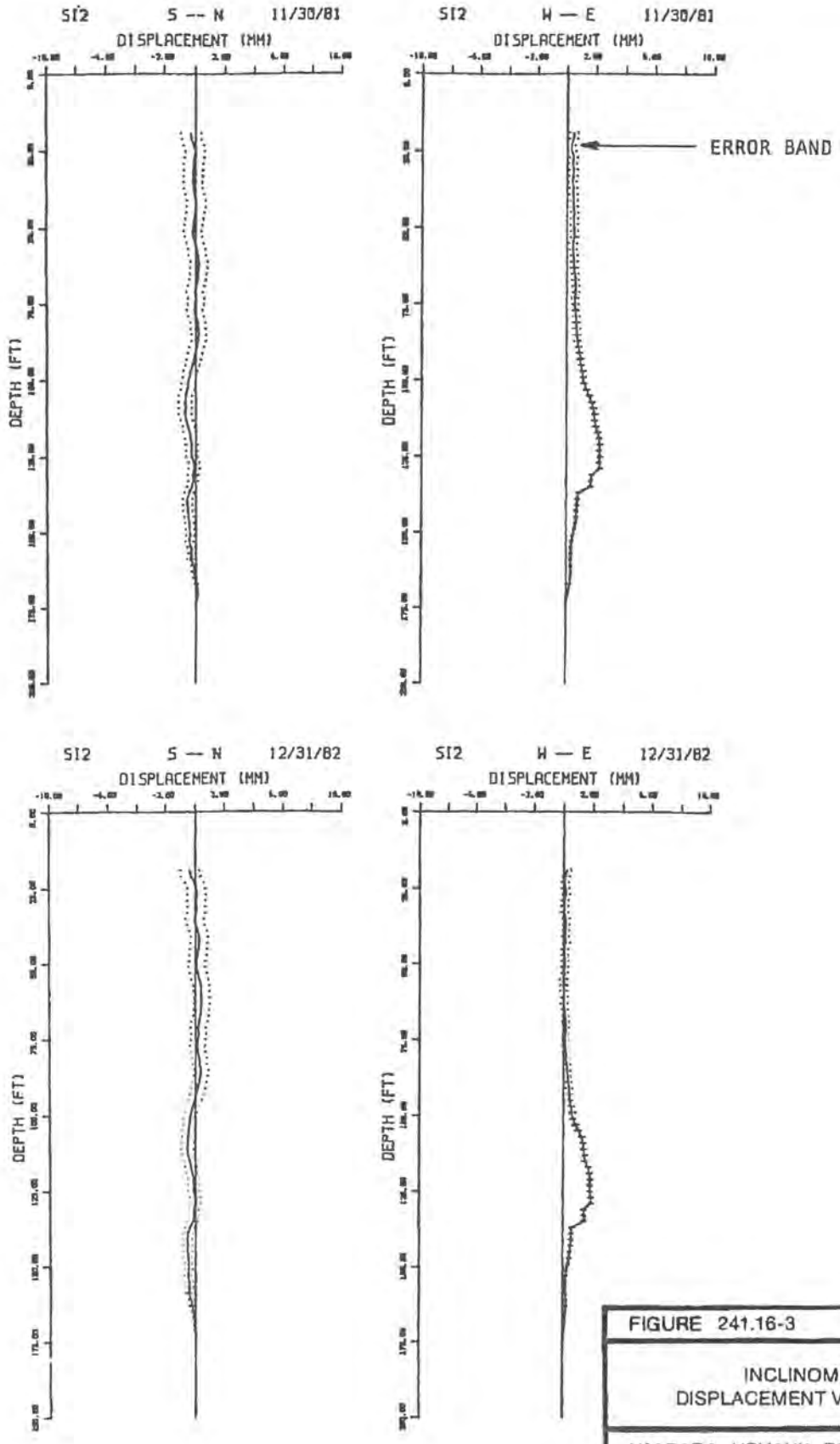


FIGURE 241.16-3

INCLINOMETER SI-2
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

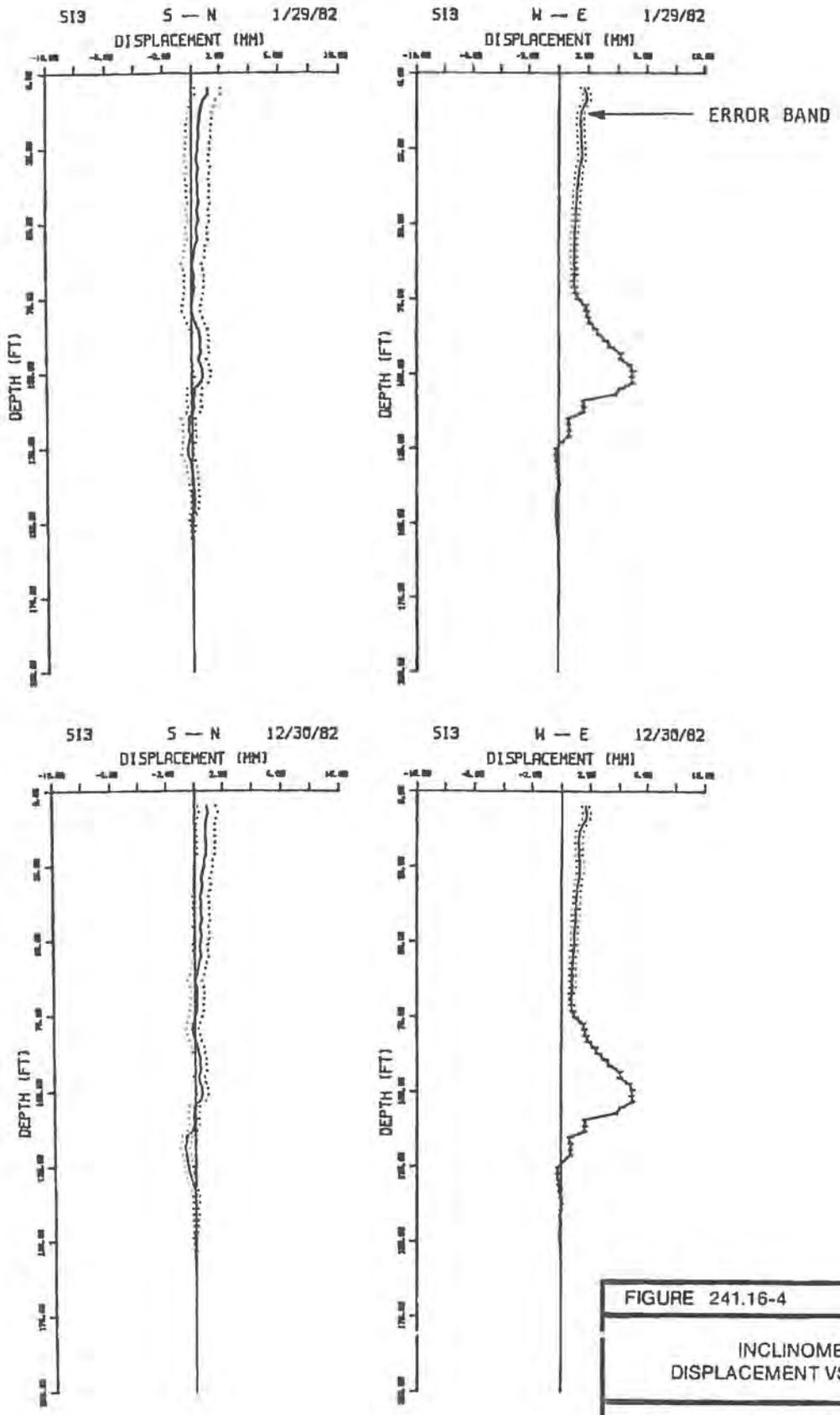


FIGURE 241.16-4

INCLINOMETER SI-3
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

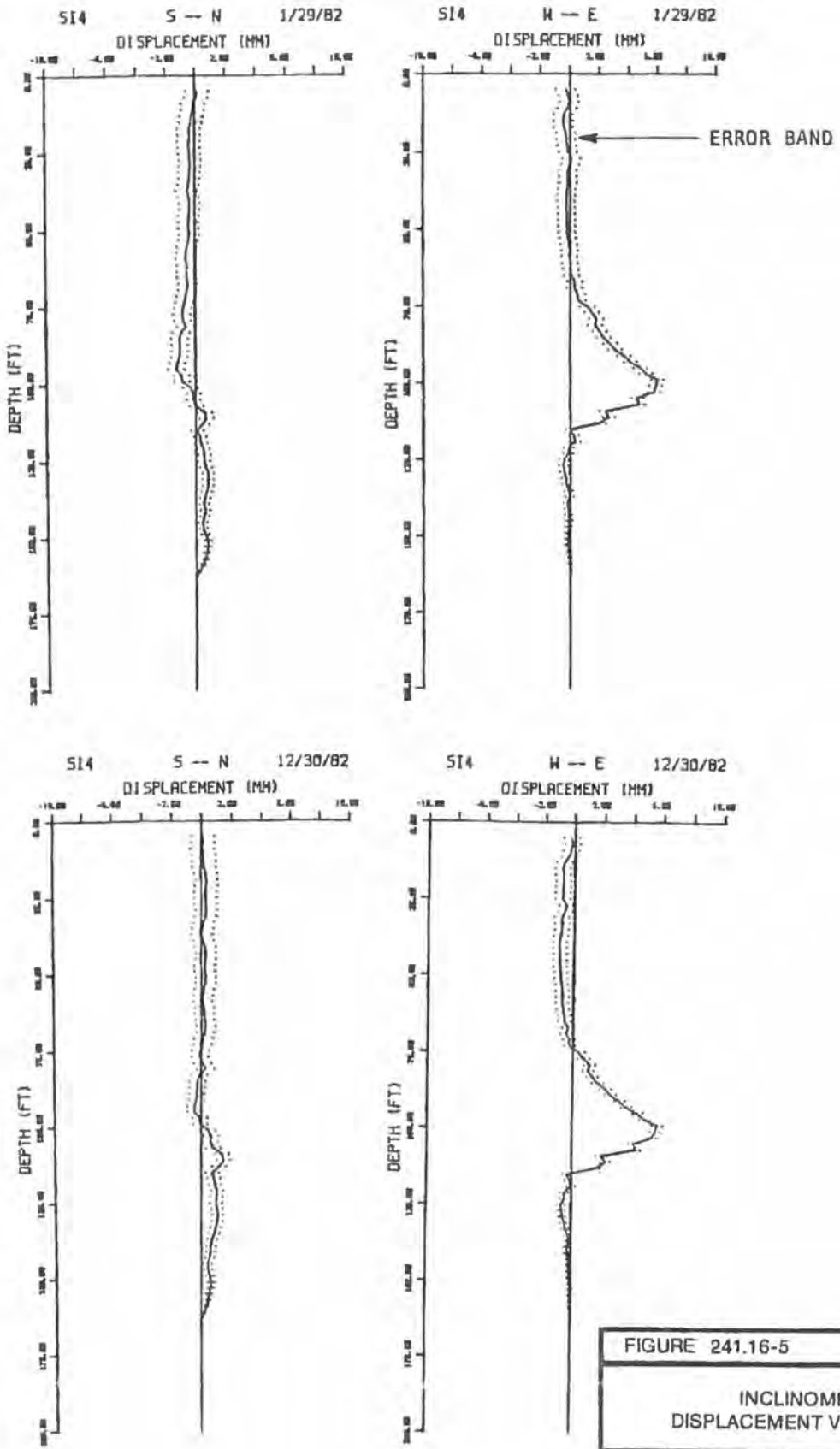


FIGURE 241.16-5

INCLINOMETER SI-4
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

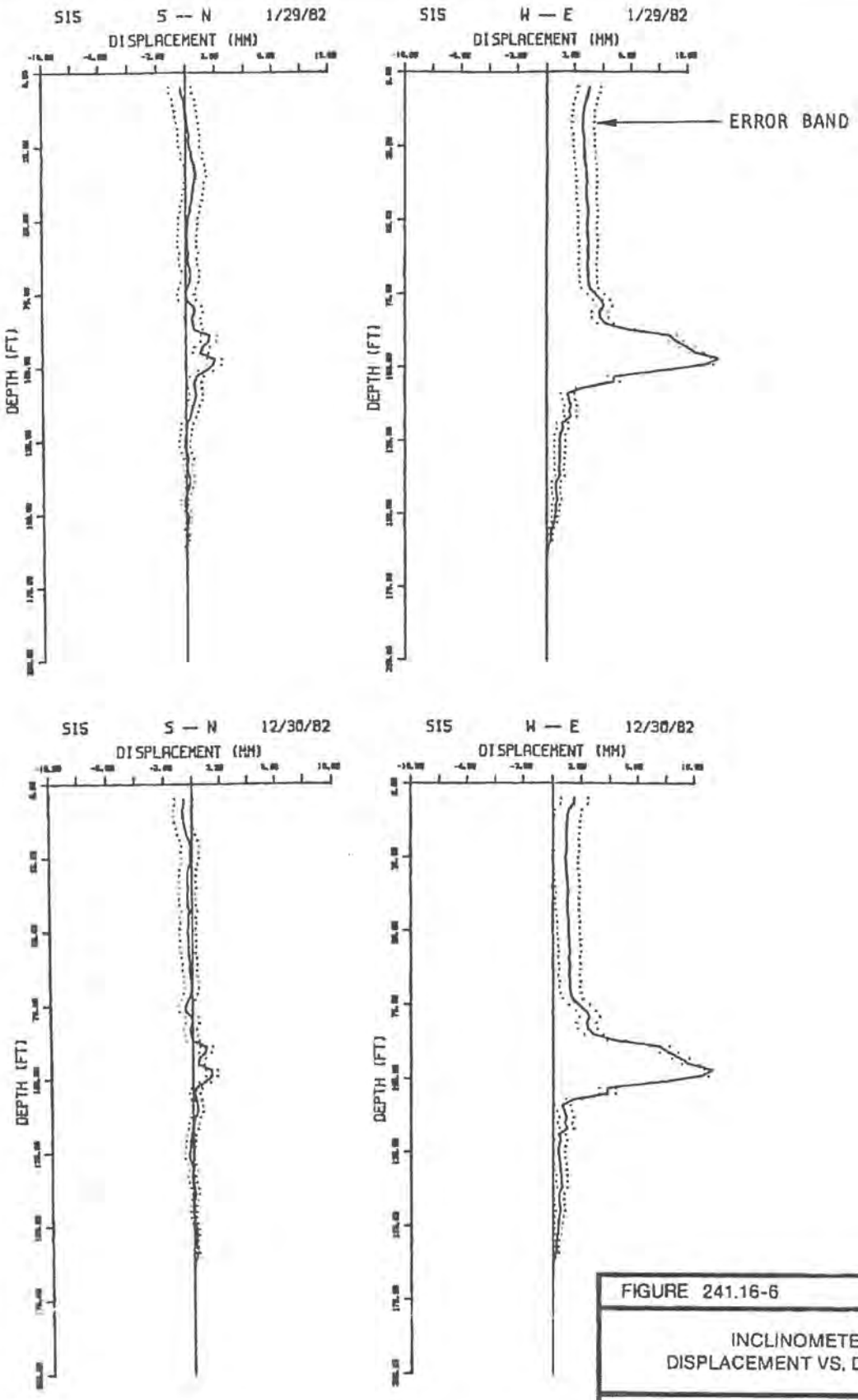


FIGURE 241.16-6

INCLINOMETER SI-5
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

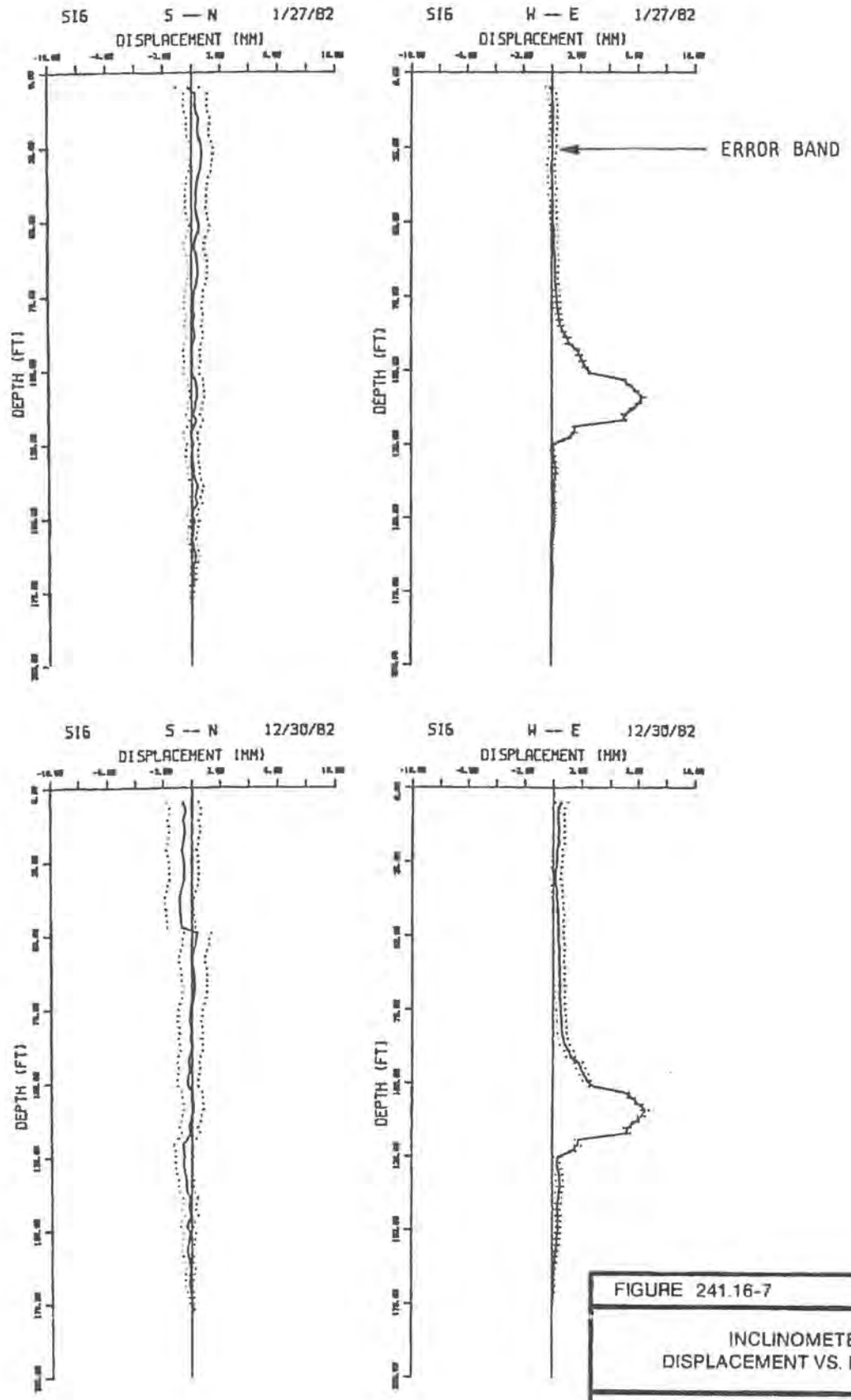


FIGURE 241.16-7

INCLINOMETER SI-6
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

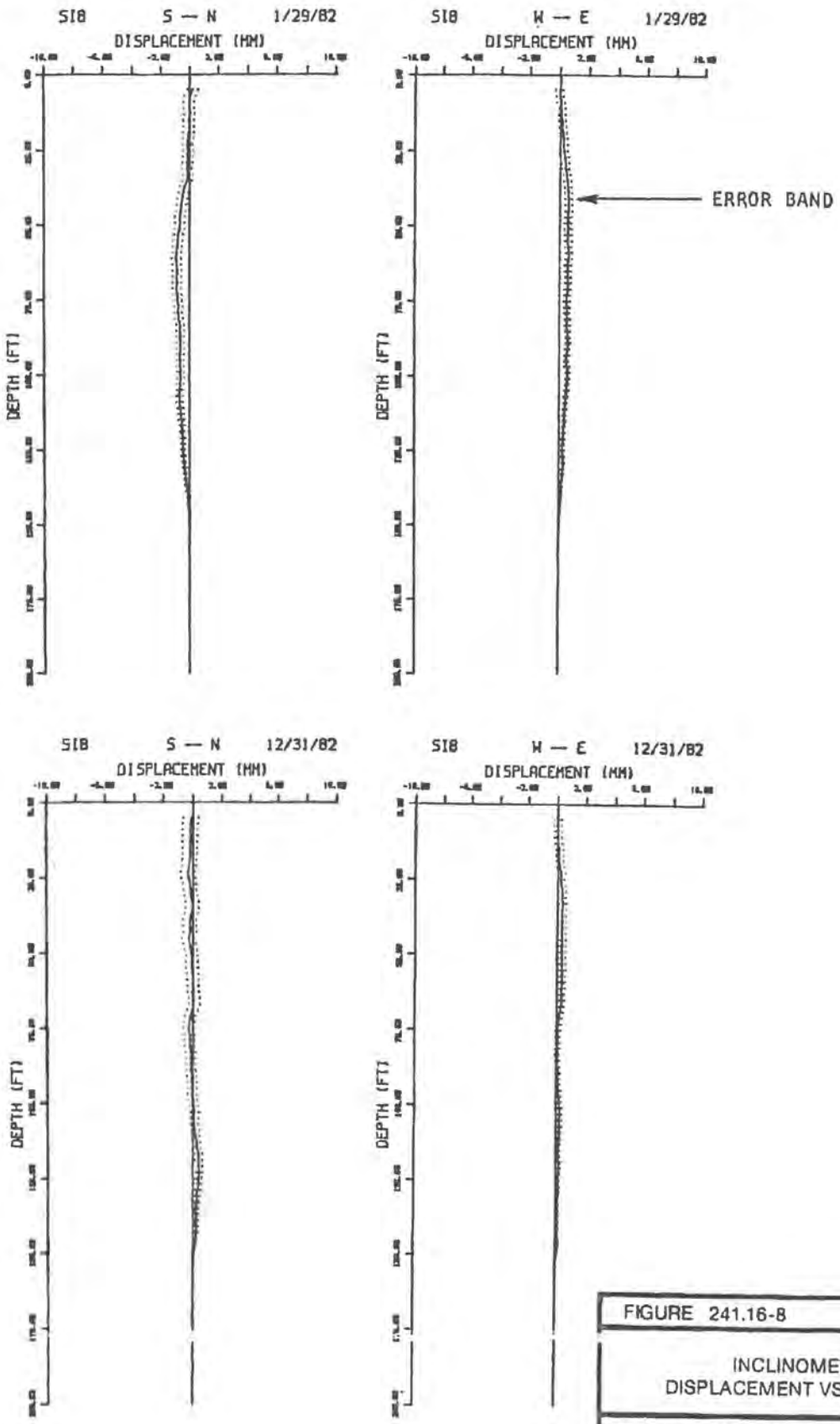


FIGURE 241.16-8

INCLINOMETER SI-8
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

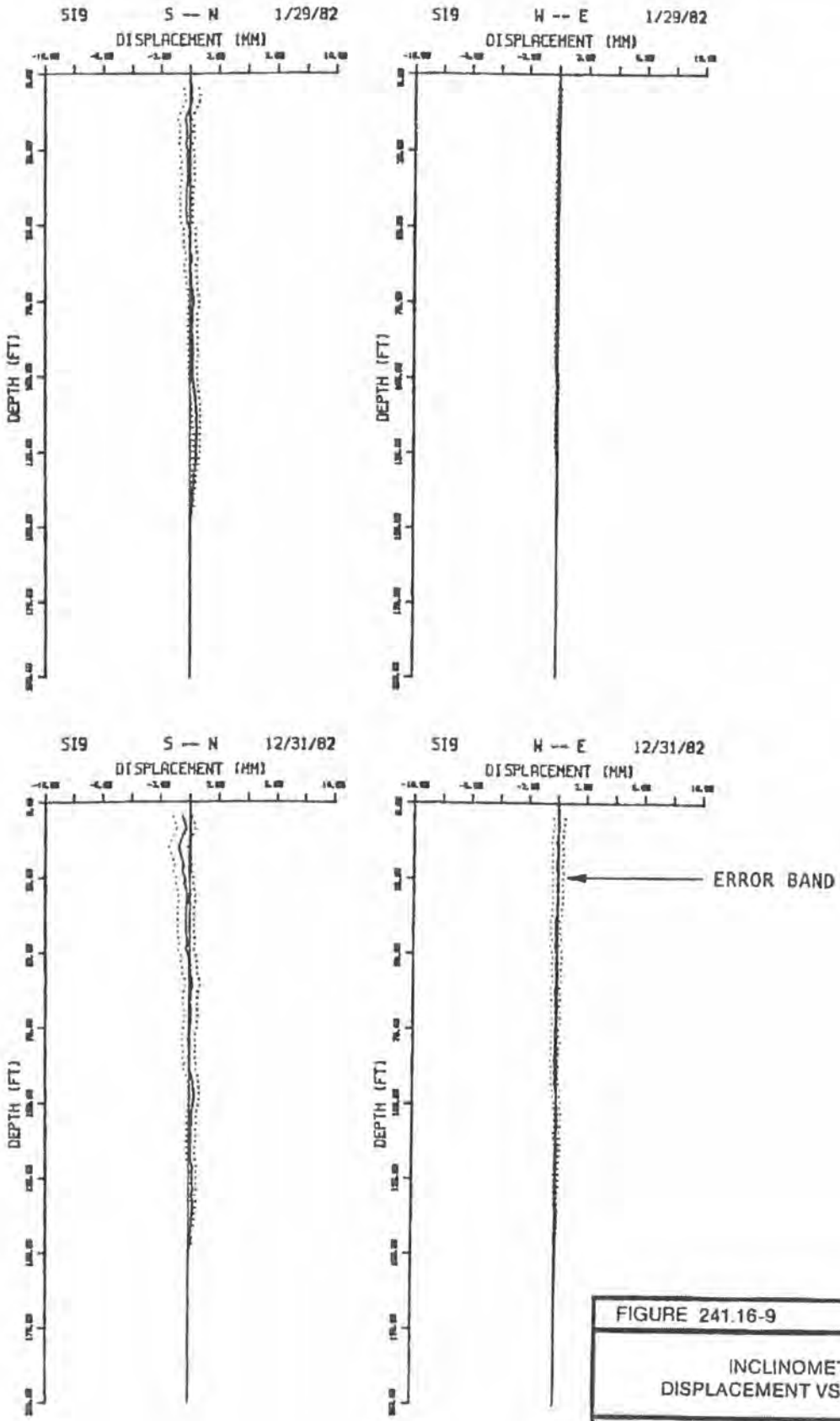


FIGURE 241.16-9

INCLINOMETER SI-9
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

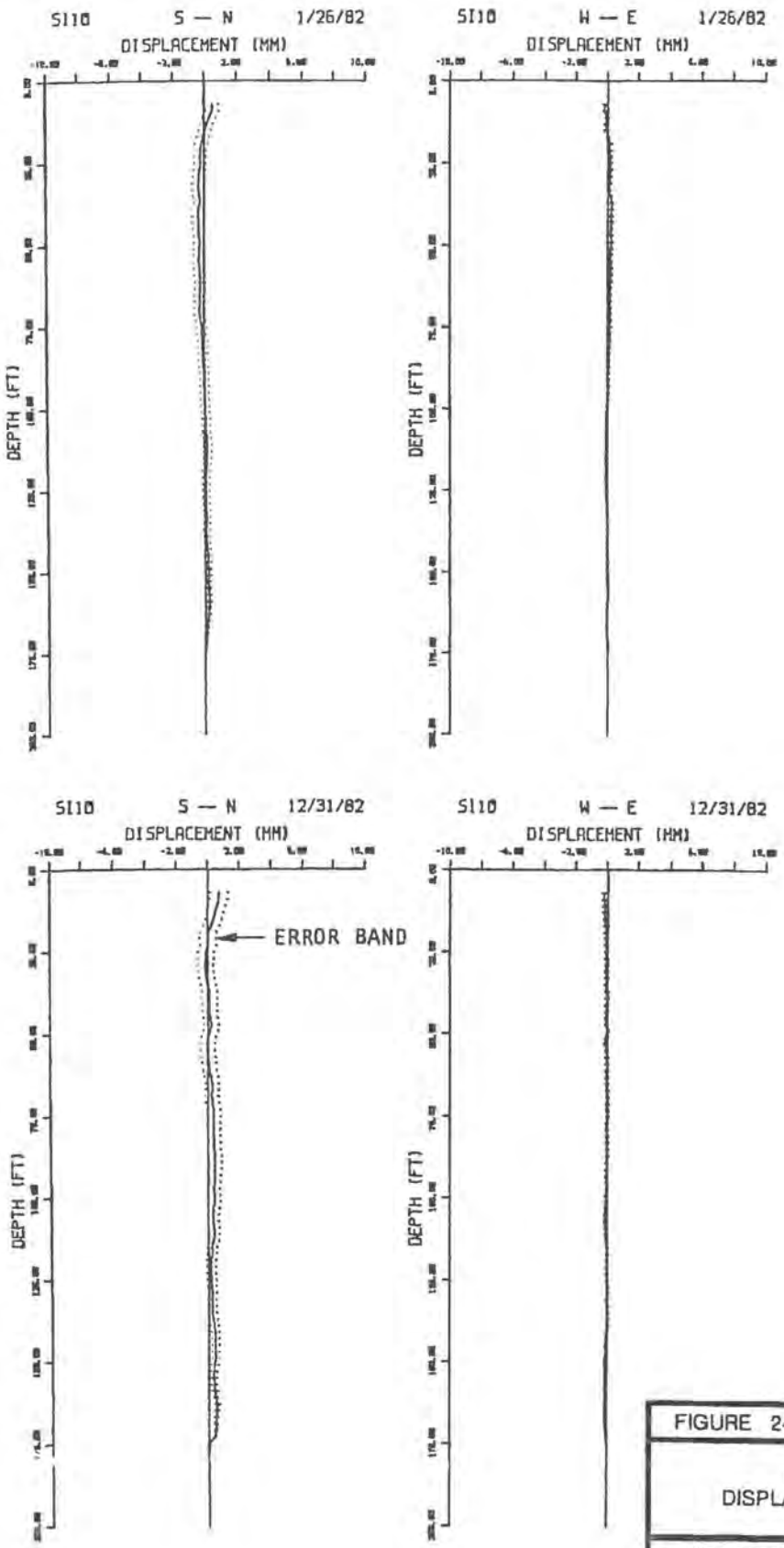


FIGURE 241.16-10

INCLINOMETER SI-10
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

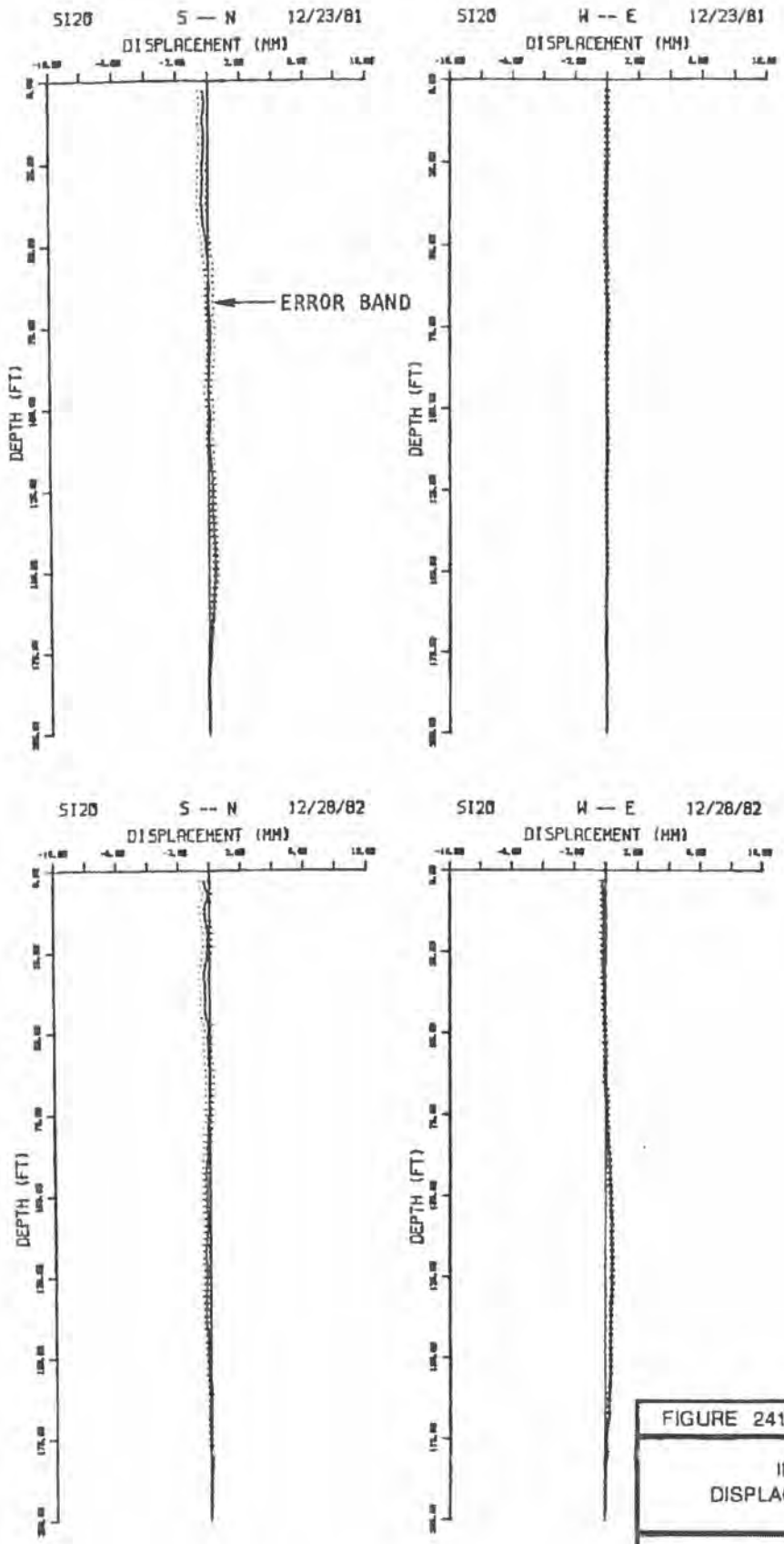


FIGURE 241 16-11

INCLINOMETER SI-20
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2.
UPDATED SAFETY ANALYSIS REPORT

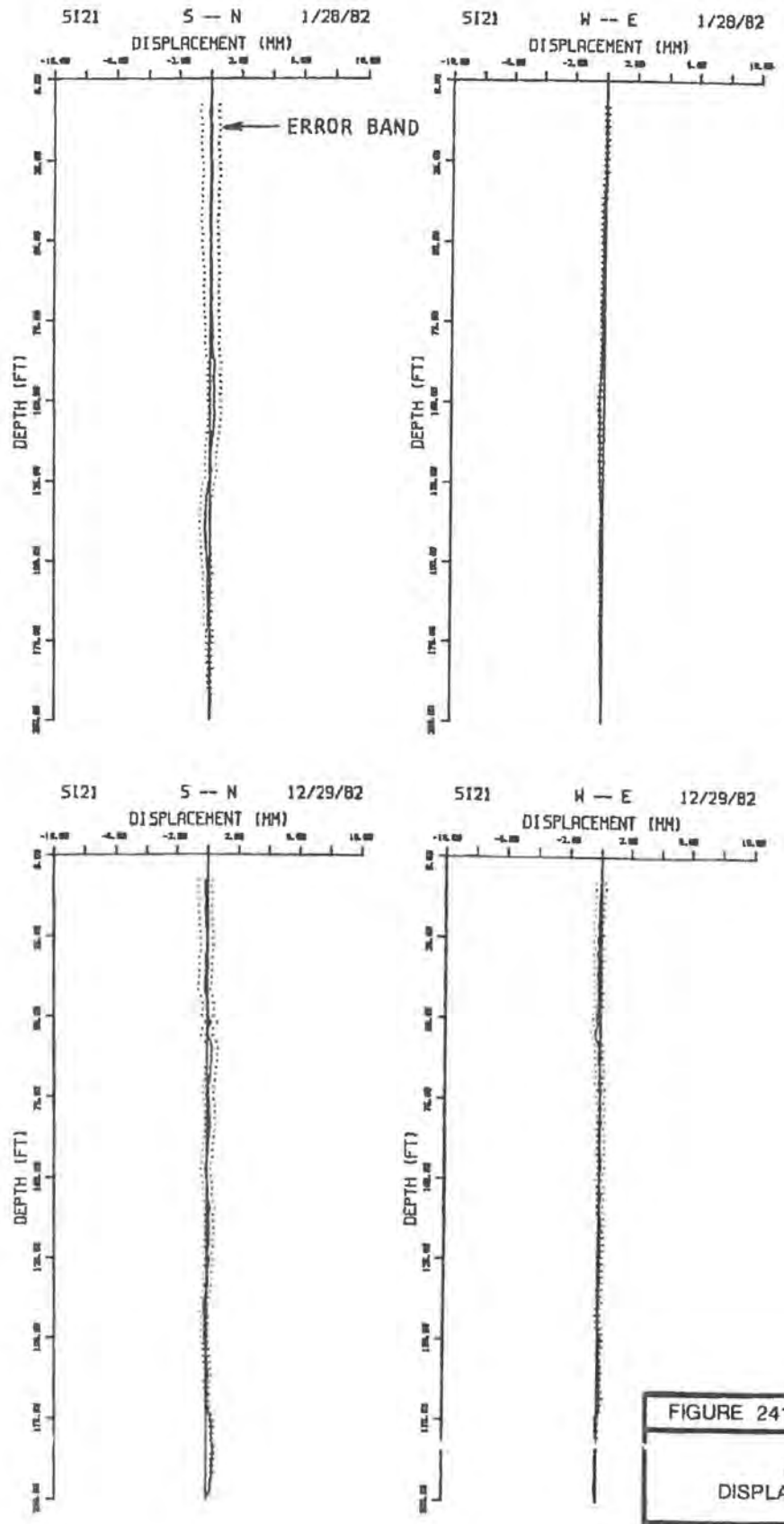


FIGURE 241.16-12

INCLINOMETER SI-21
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

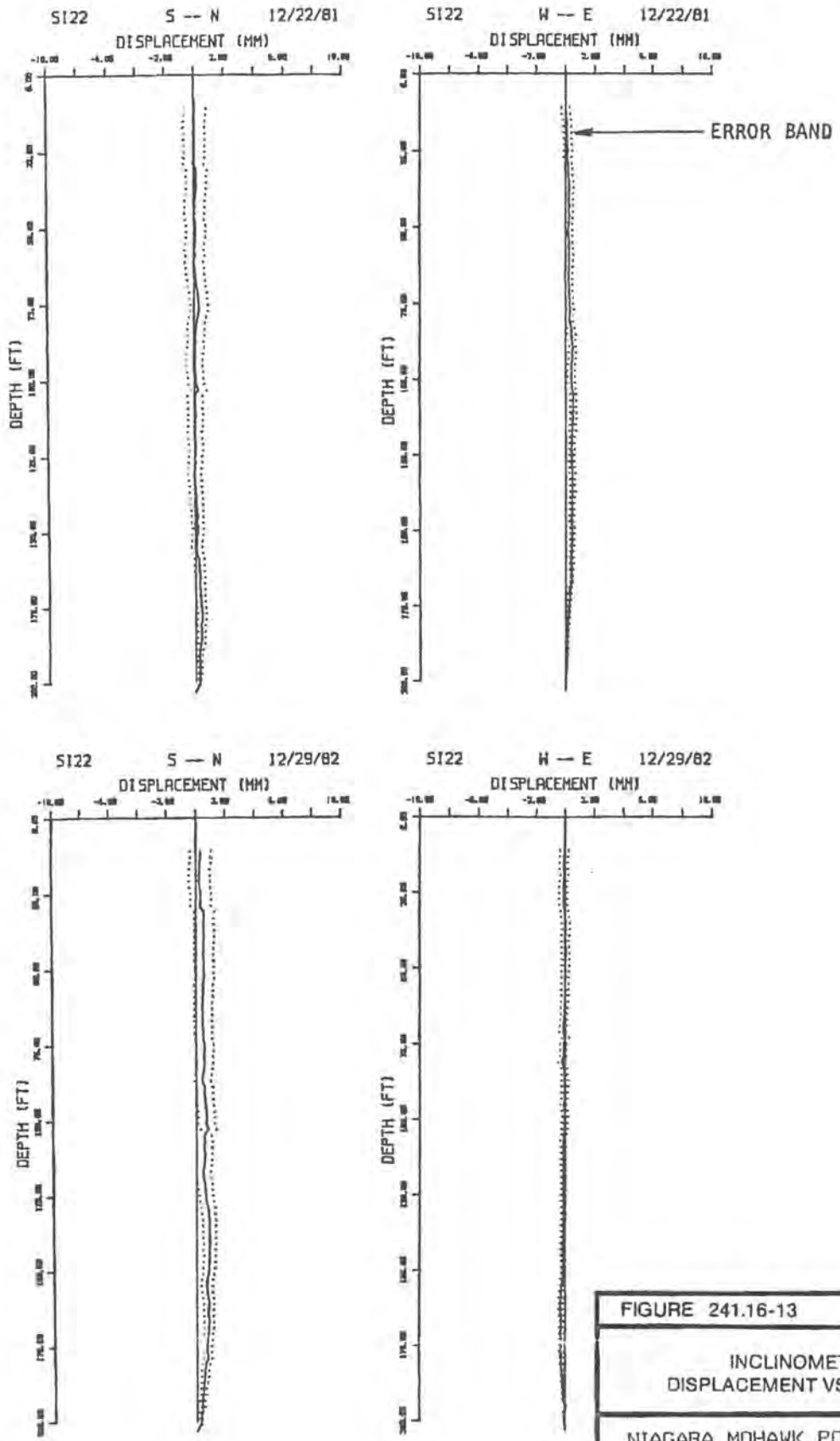


FIGURE 241.16-13

INCLINOMETER SI-22
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

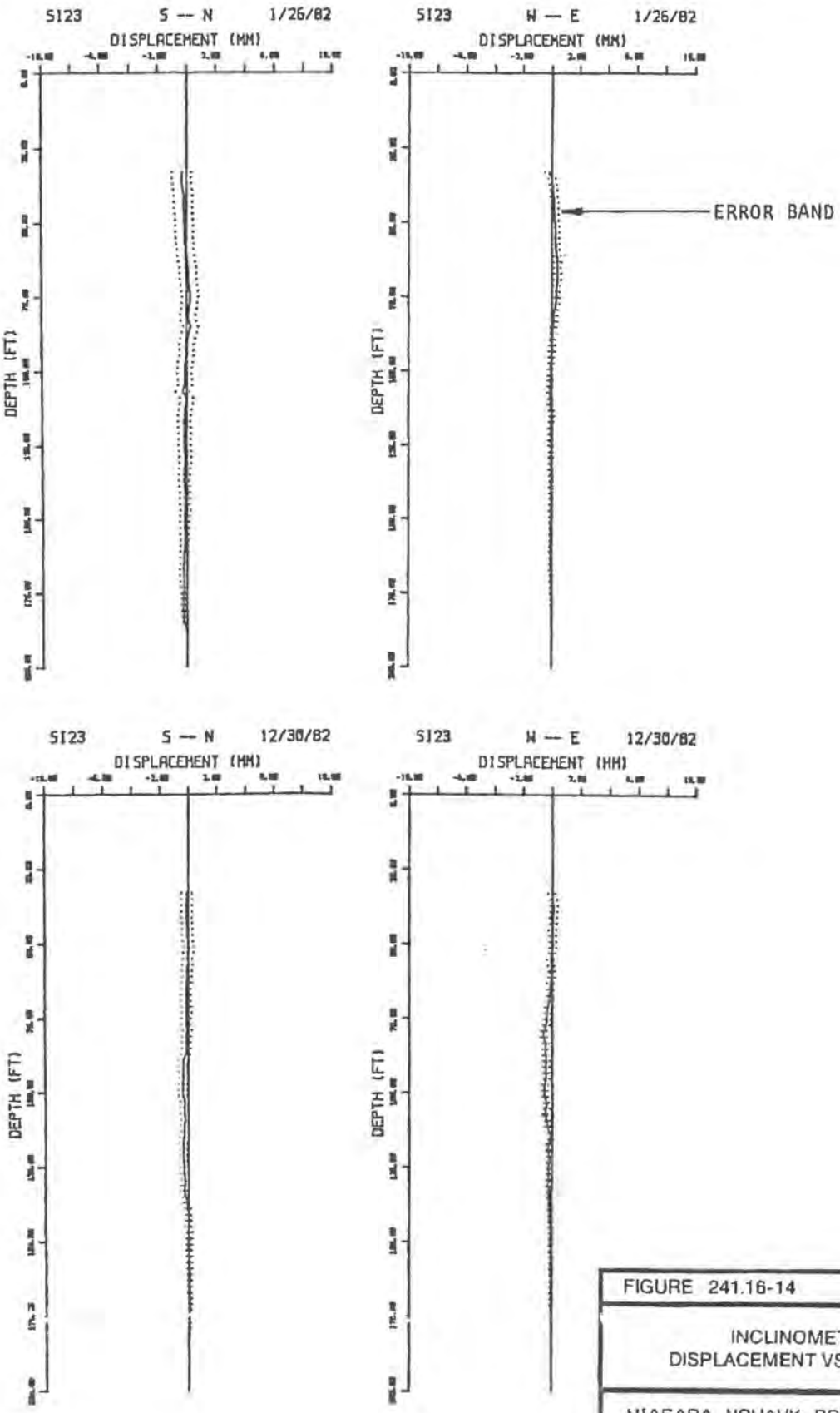


FIGURE 241.16-14

INCLINOMETER SI-23
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

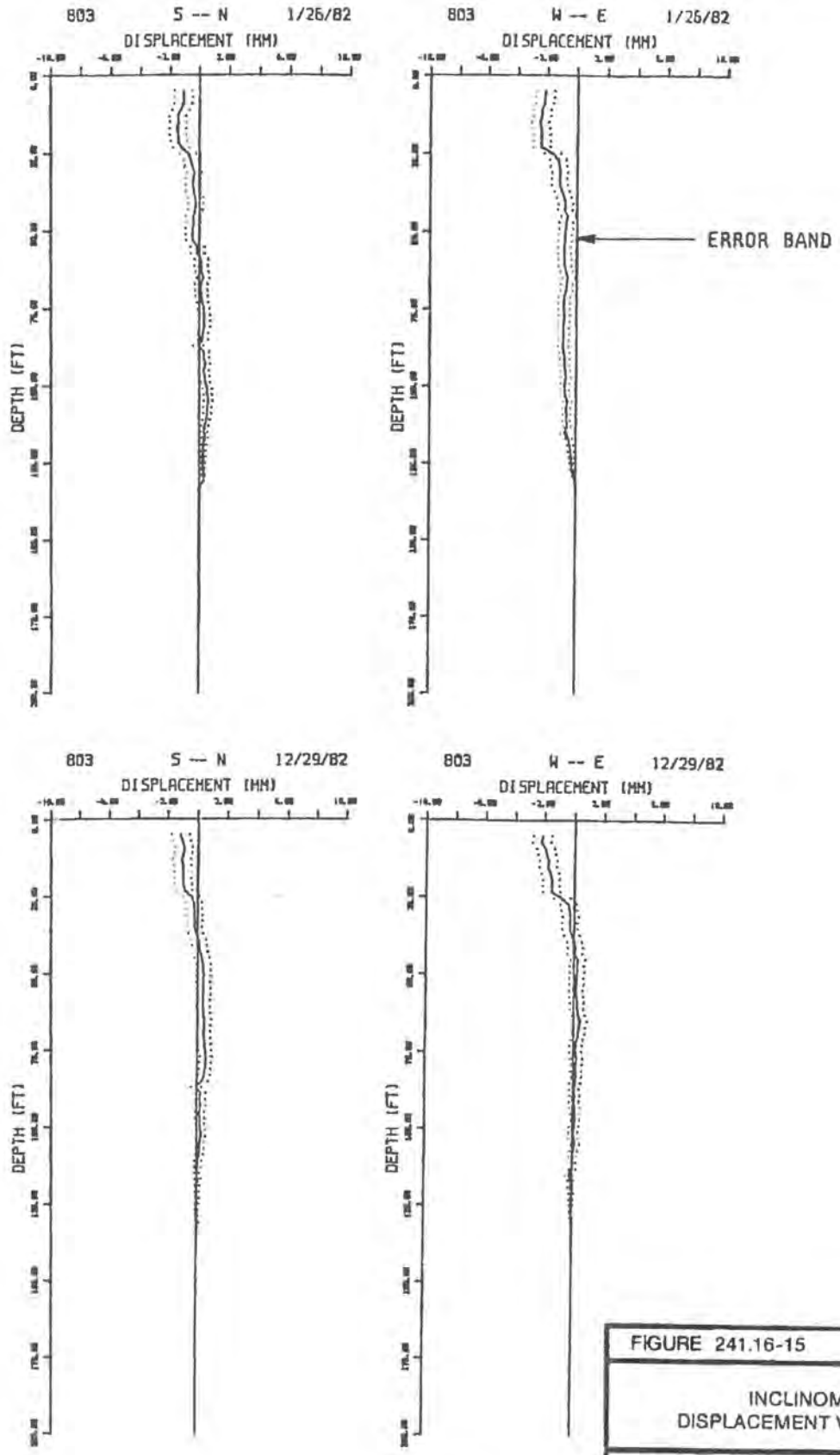


FIGURE 241.16-15

INCLINOMETER 803
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

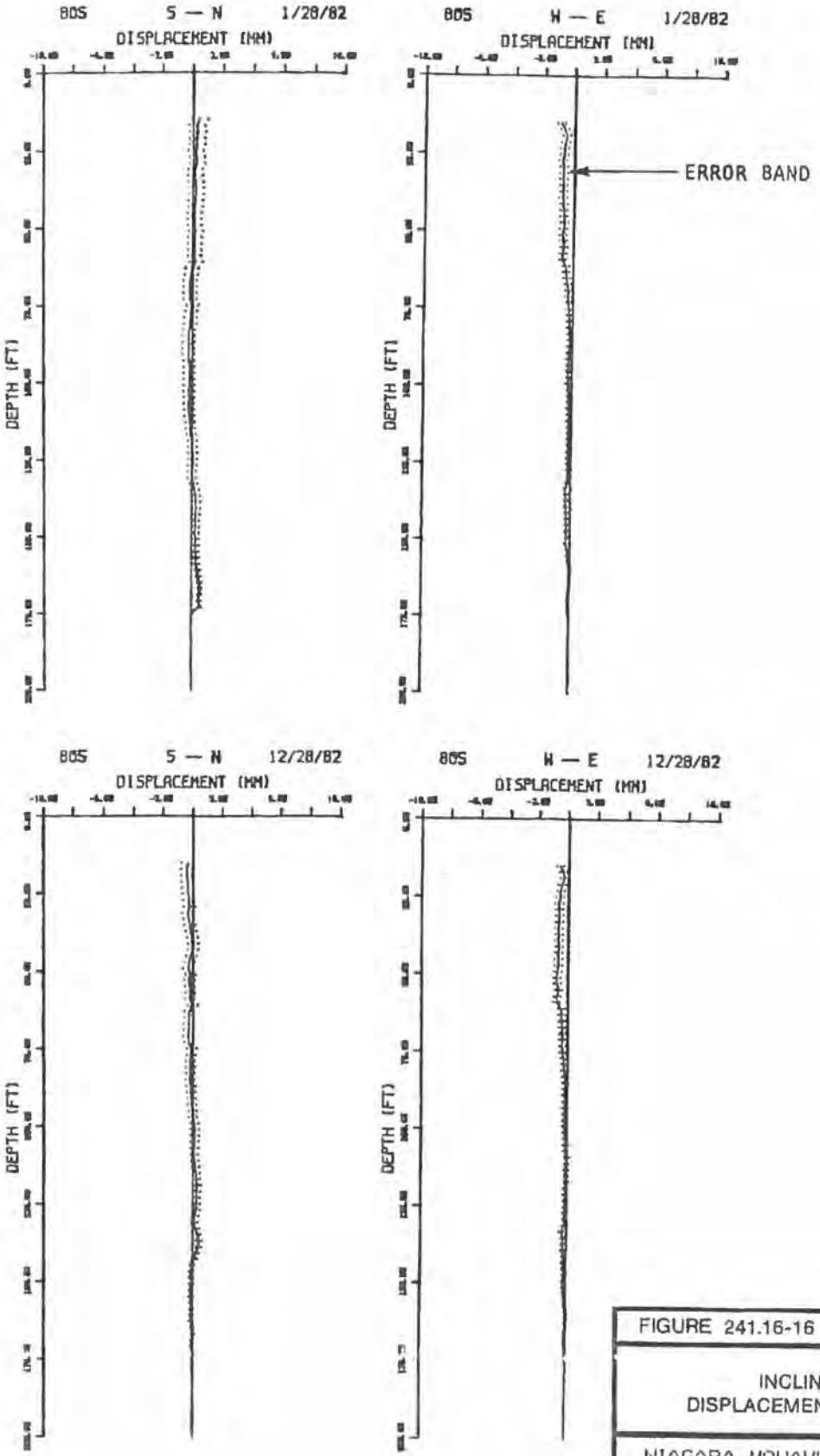


FIGURE 241.16-16

INCLINOMETER 805
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

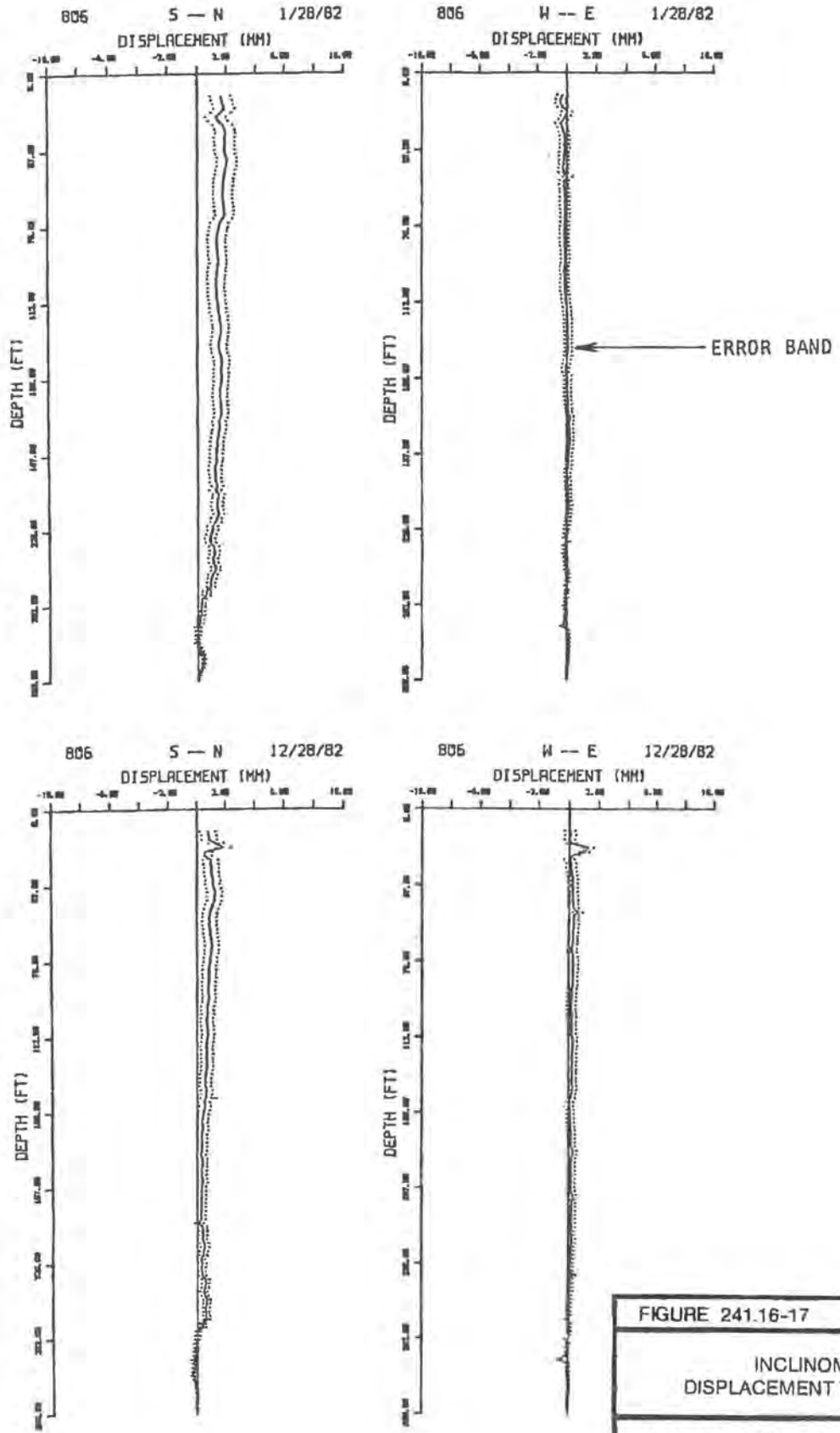


FIGURE 241.16-17

INCLINOMETER 806
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

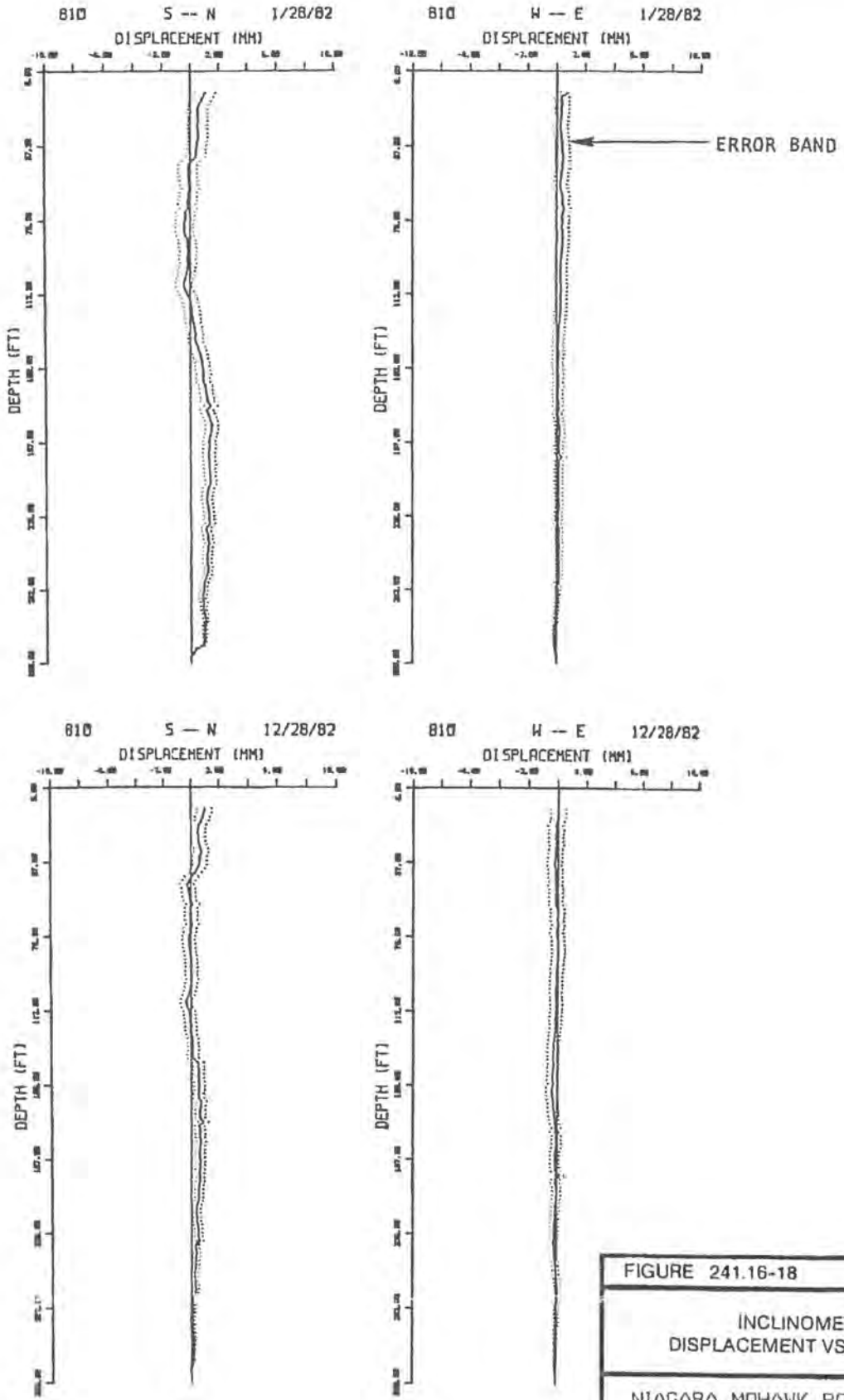


FIGURE 241.16-18

INCLINOMETER 810
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

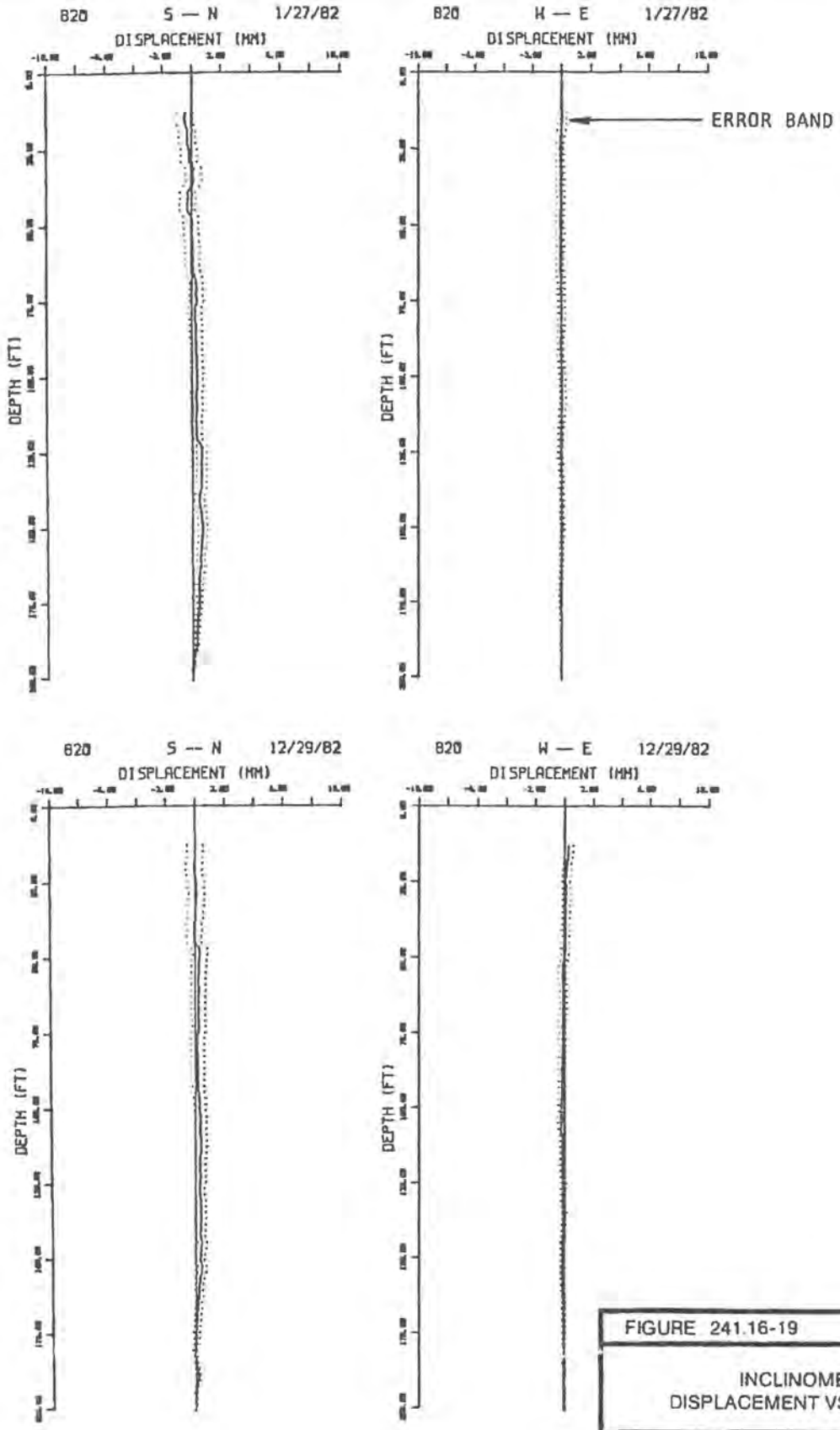


FIGURE 241.16-19

INCLINOMETER 820
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

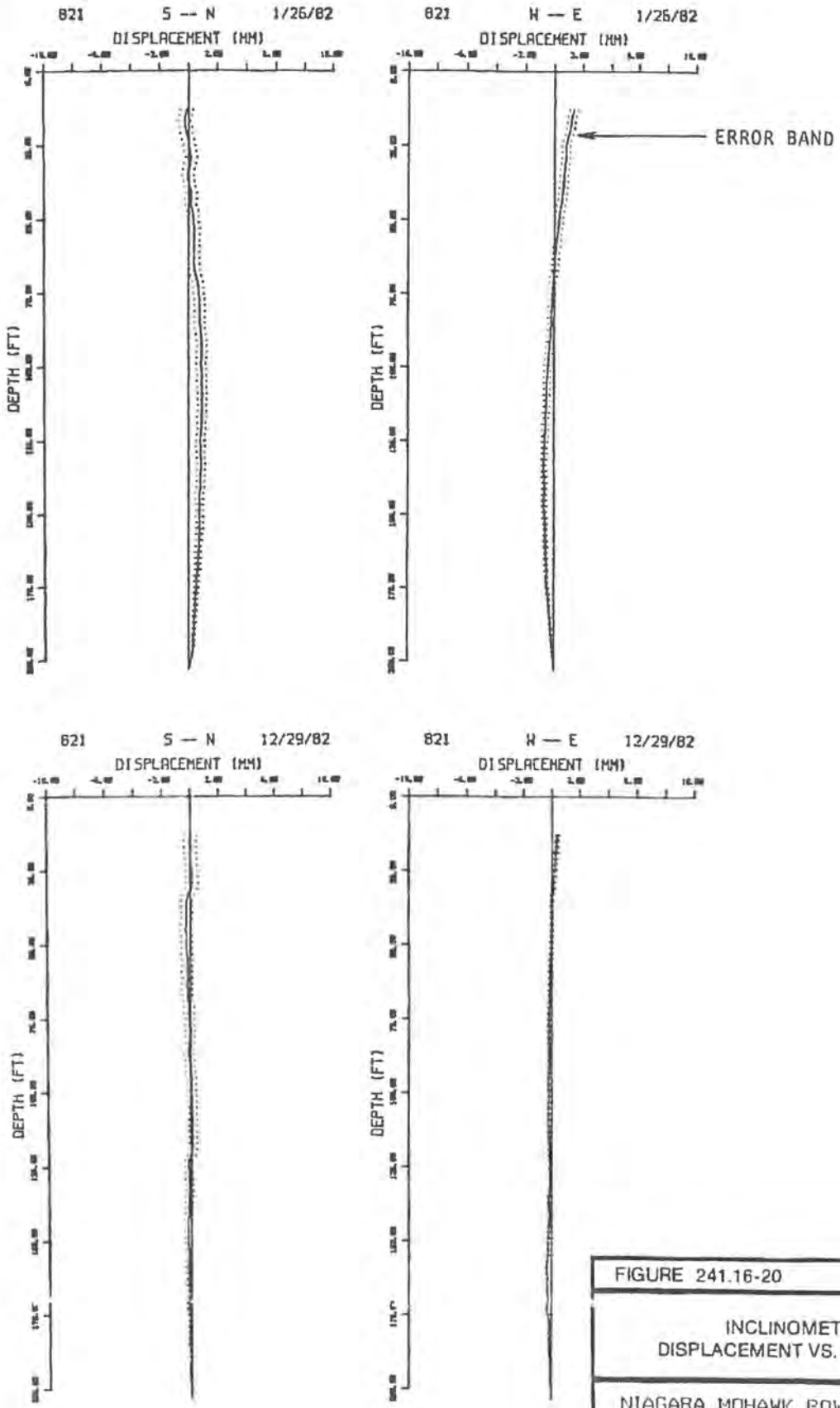


FIGURE 241.16-20

INCLINOMETER 821
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

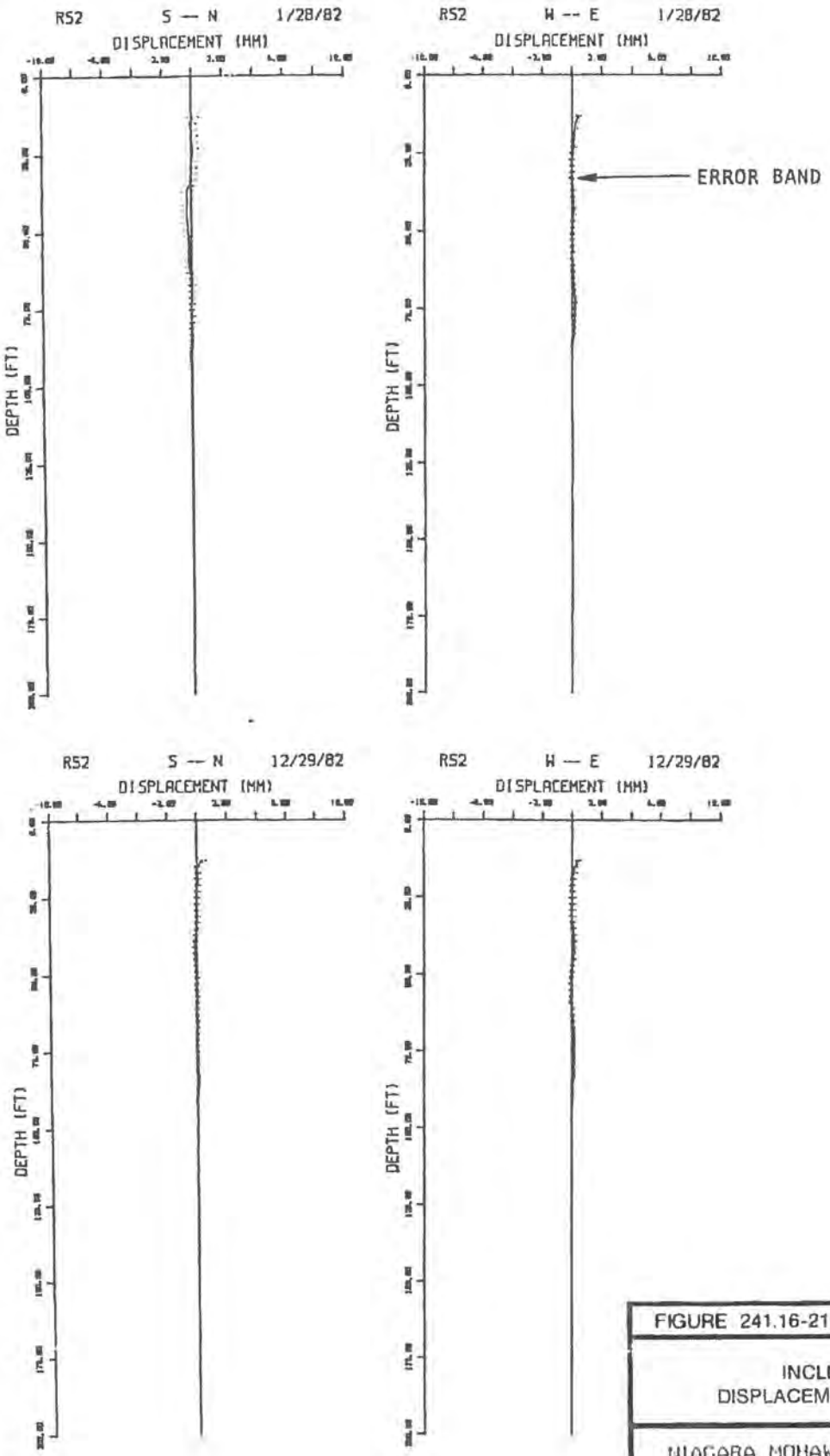
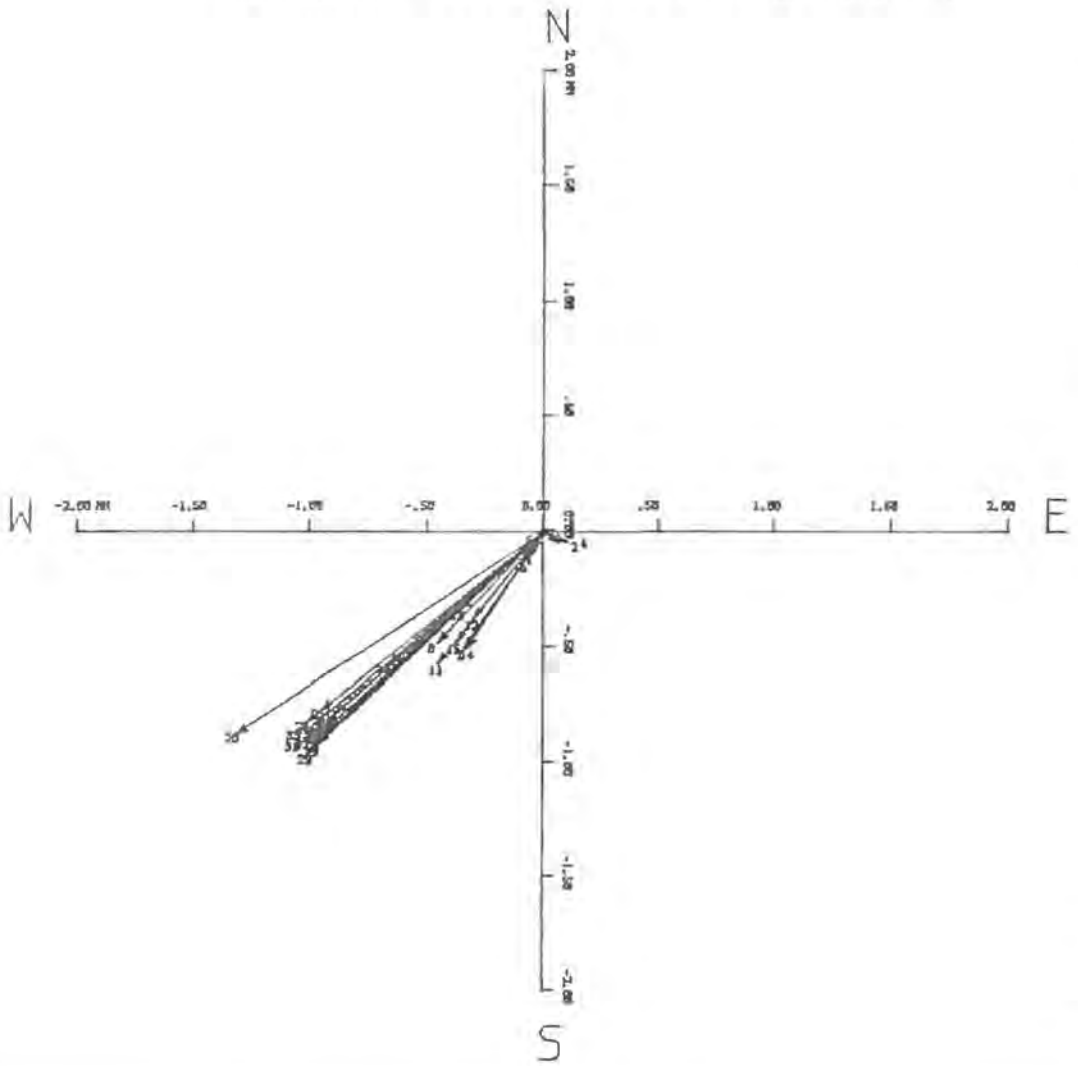


FIGURE 241.16-21

INCLINOMETER RS-2
DISPLACEMENT VS. DEPTH PLOTS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

VECTORS SHOWING RELATIVE DISPLACEMENT IN
INCLINOMETER 803 DEPTH INTERVAL FROM 23 TO 27 FT.



1	5/23/80
2	5/29/80
3	6/ 6/80
4	6/19/80
5	7/14/80
6	7/30/80
7	9/ 3/80
8	10/15/80
9	11/24/80
10	11/26/80
11	1/19/81
12	2/17/81
13	3/31/81
14	5/13/81
15	6/16/81
16	8/ 5/81
17	9/15/81
18	11/23/81
19	11/30/81
20	12/ 7/81
21	12/18/81
22	1/26/82
23	3/ 4/82
24	3/23/82
25	4/29/82
26	5/21/82
27	6/25/82
28	7/28/82
29	8/26/82
30	9/21/82
31	10/28/82
32	11/30/82
33	12/23/82

FIGURE 241.16-22

VECTOR PLOT
INCLINOMETER 803

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

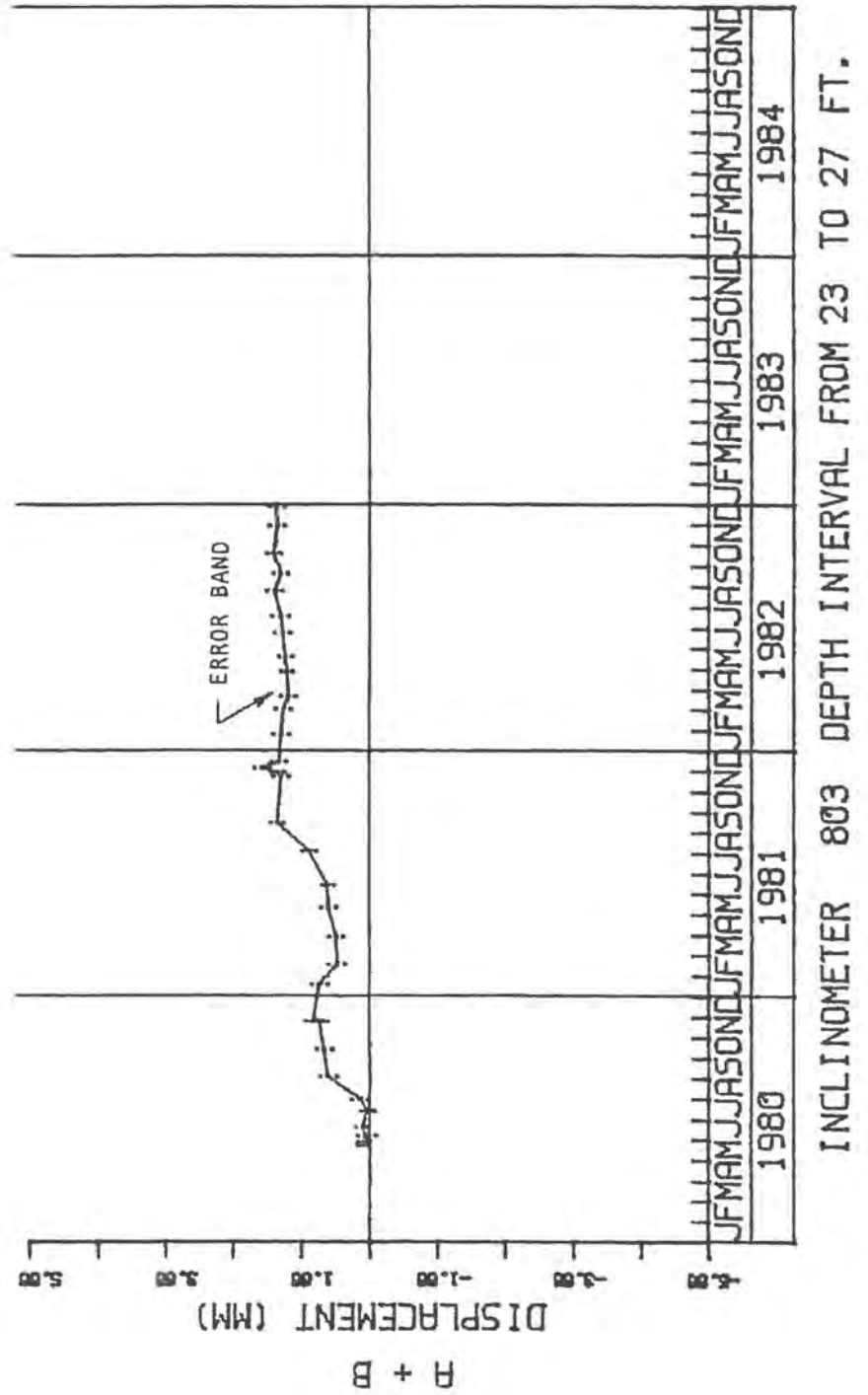


FIGURE 241.16-23

TIME VS. DISPLACEMENT PLOT
INCLINOMETER 803

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

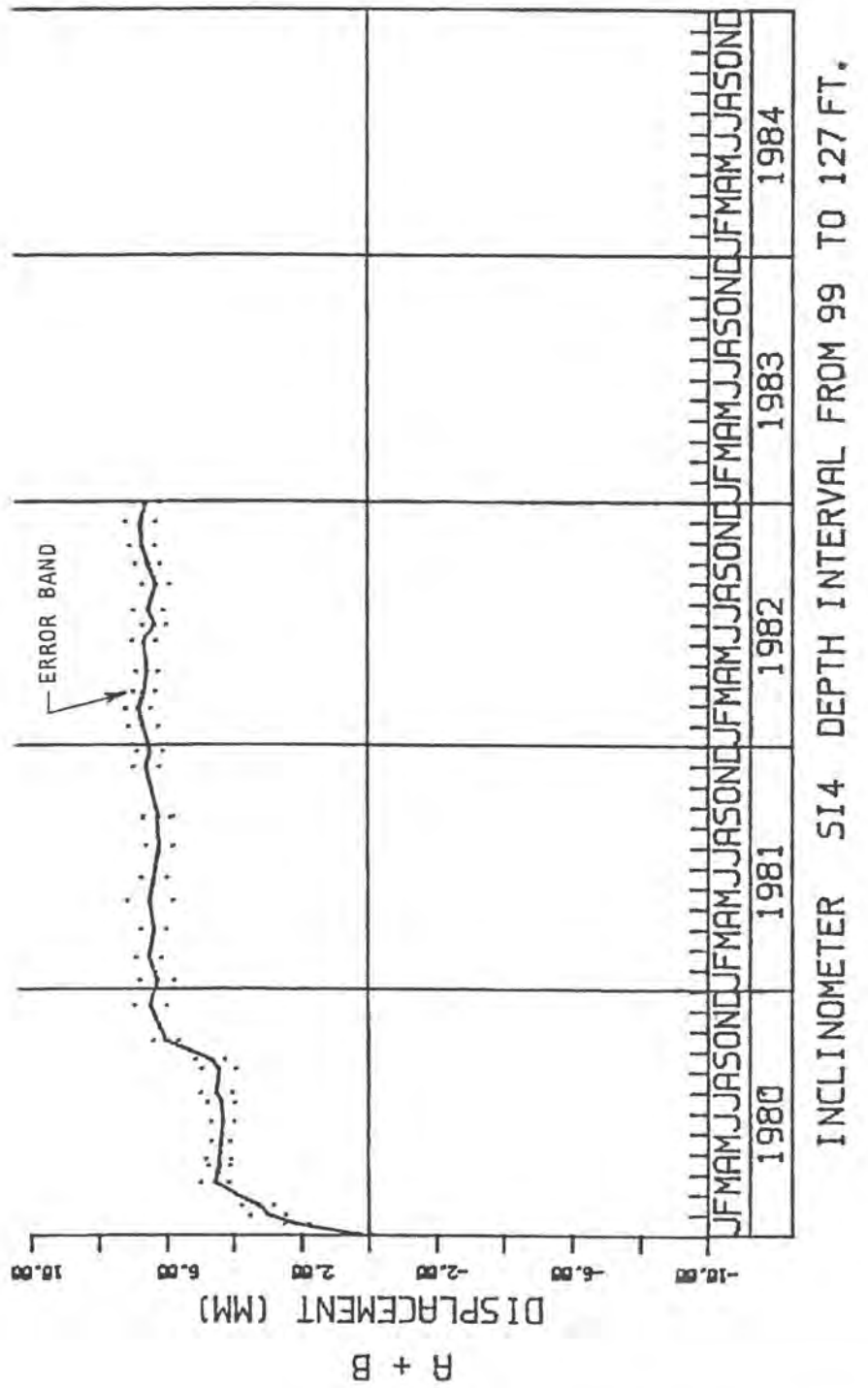


FIGURE 241.16-24

TIME VS. DISPLACEMENT PLOT
INCLINOMETER SI-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

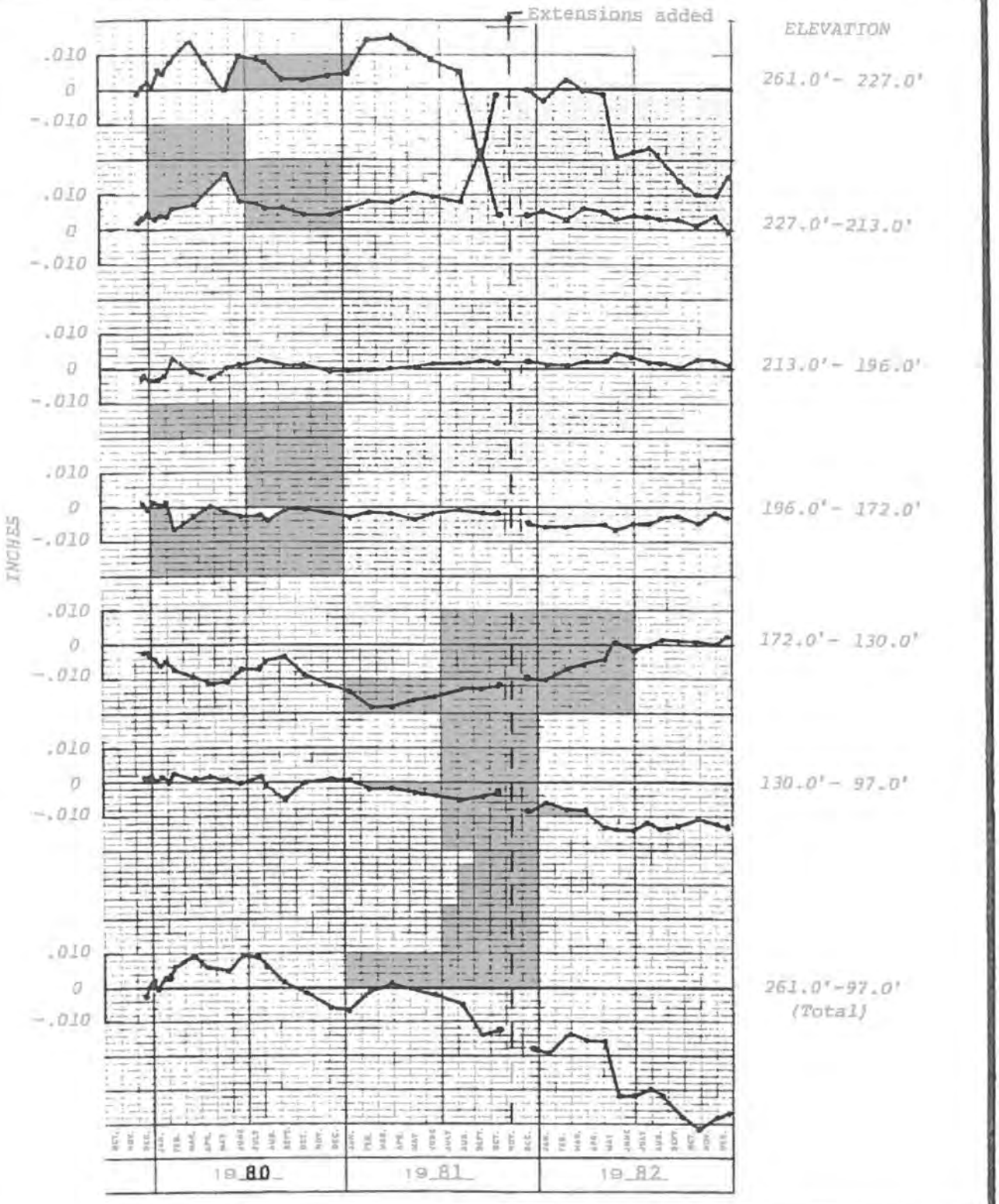


FIGURE 241.16-25

EXTENSOMETER EX-1

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

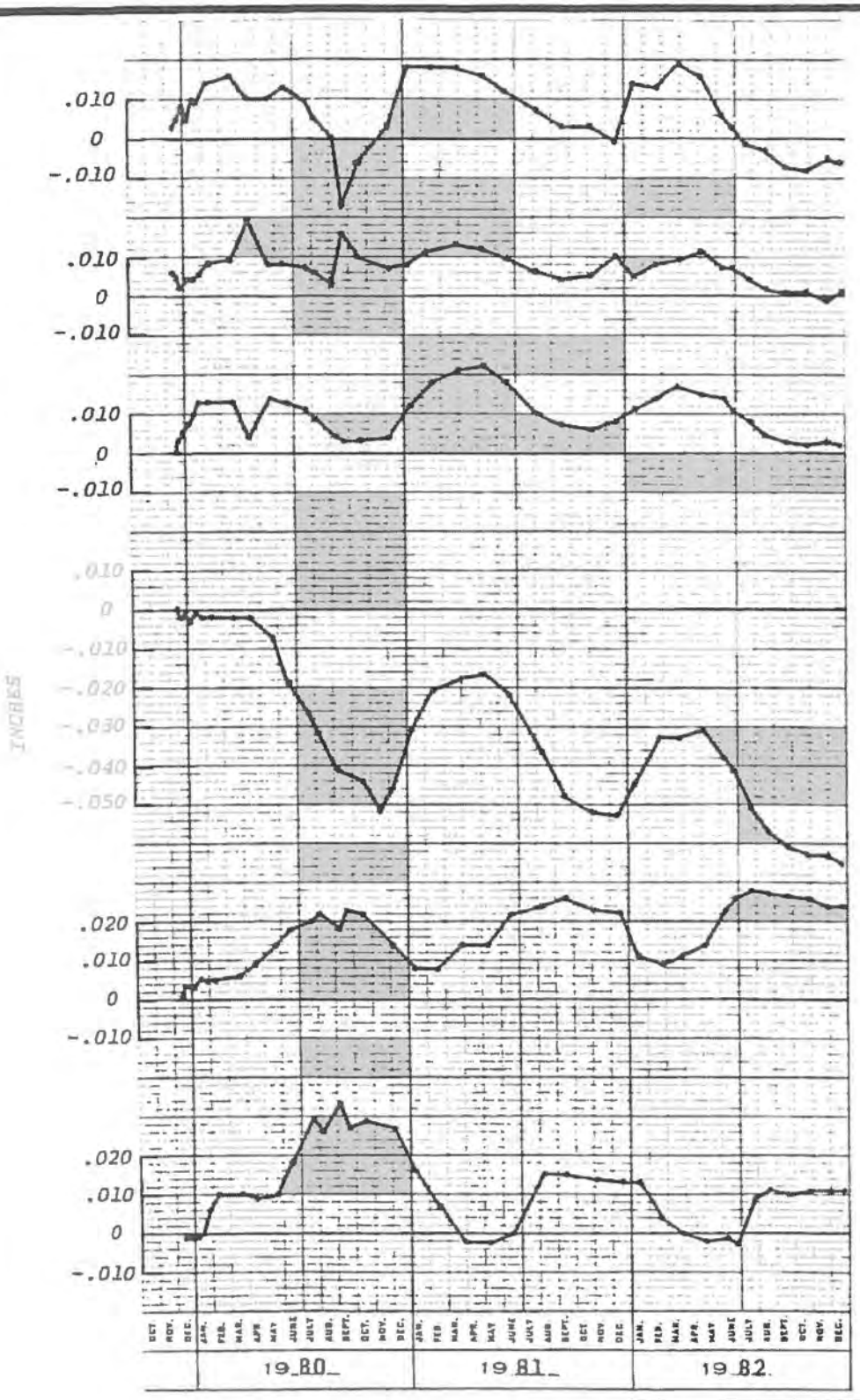


FIGURE 241.16-26A

EXTENSOMETER EX-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

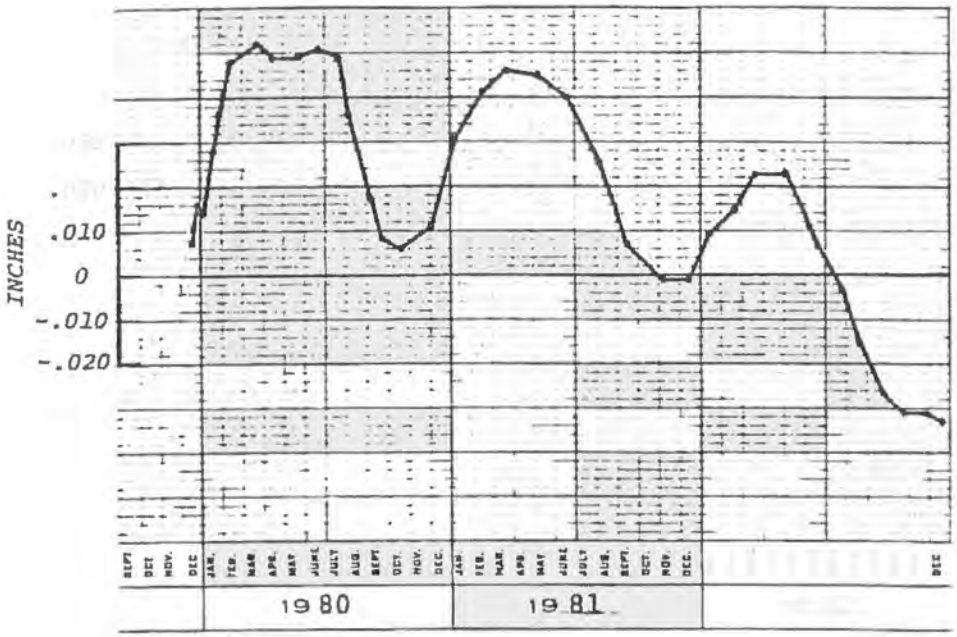
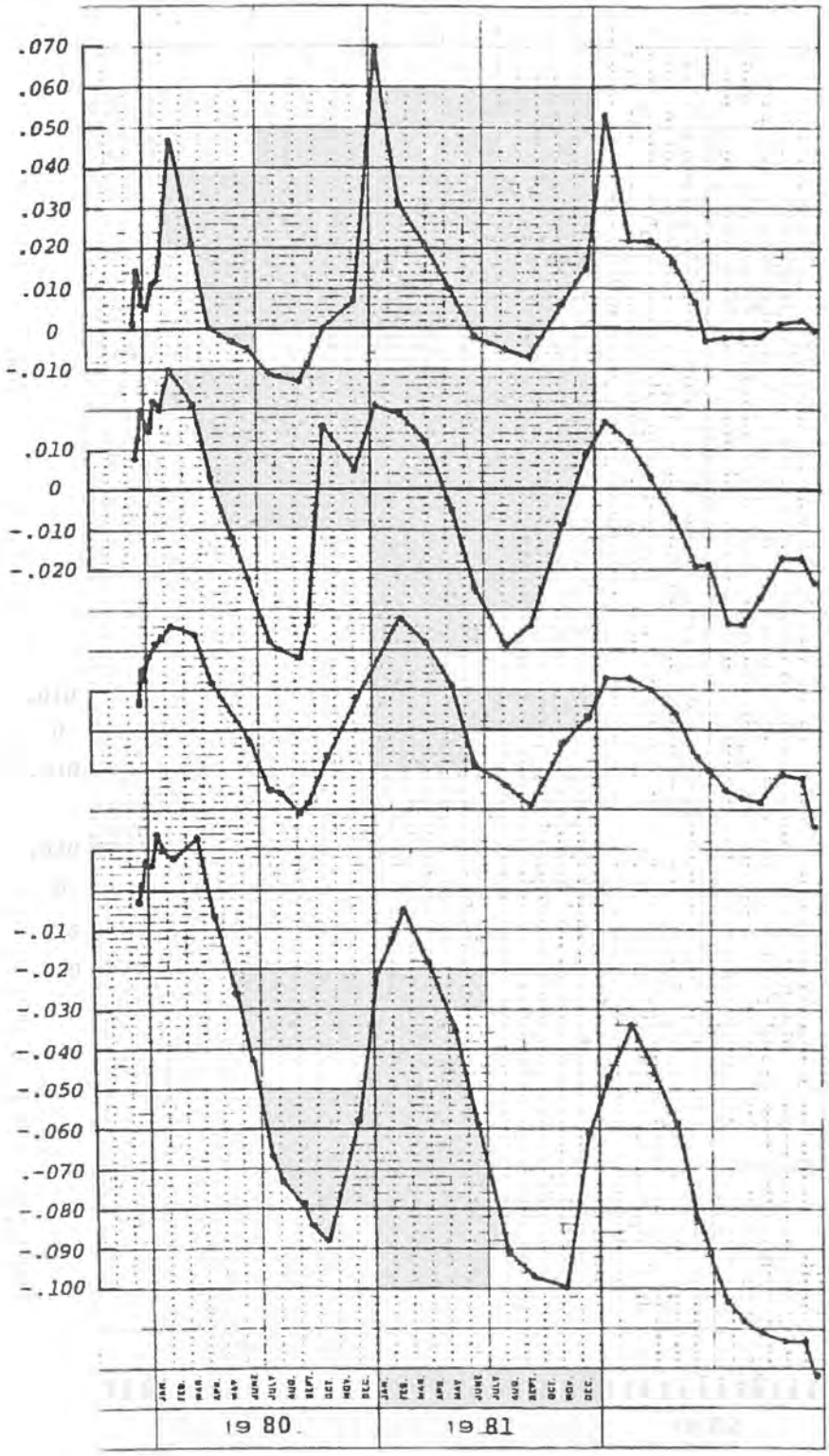


FIGURE 241.16-26B

EXTENSOMETER EX-2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT



NIAGARA I
NINE MI
UPDATED

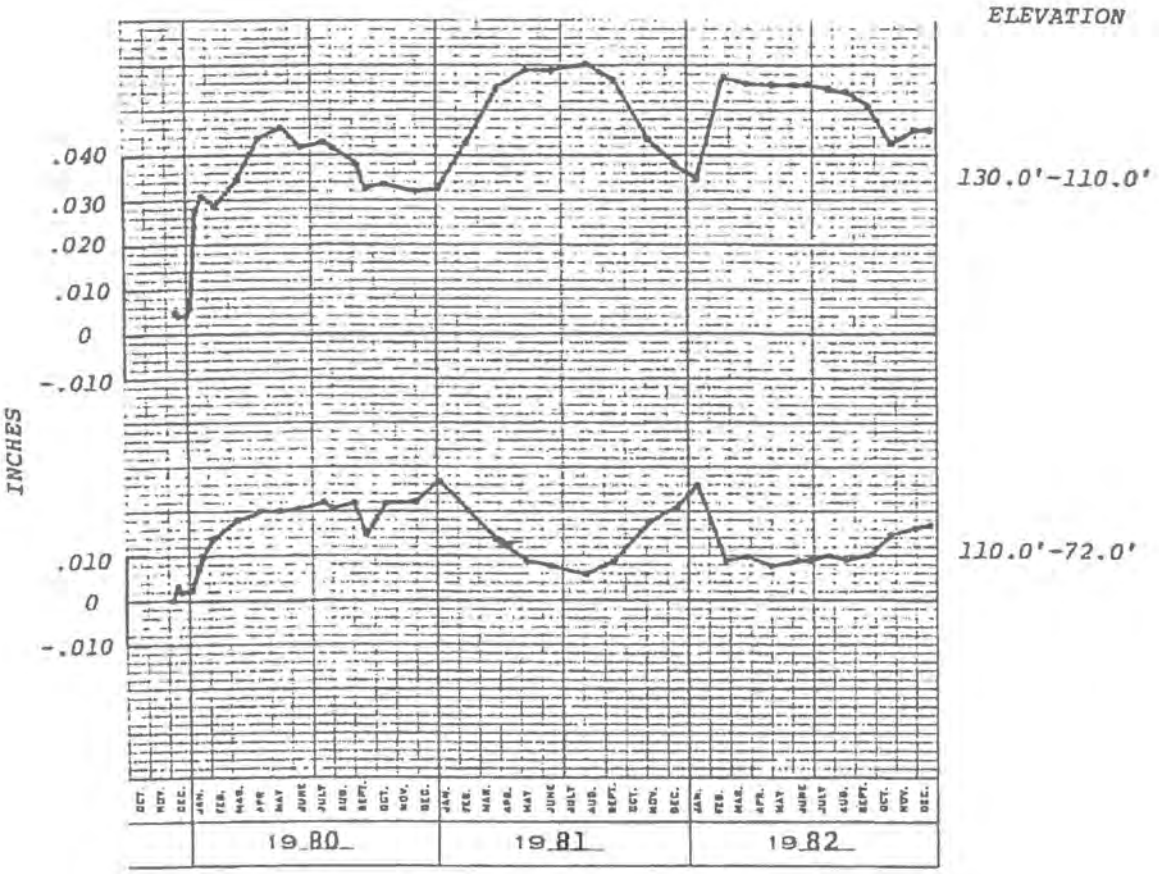


FIGURE 241.16-27B

EXTENSOMETER EX-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

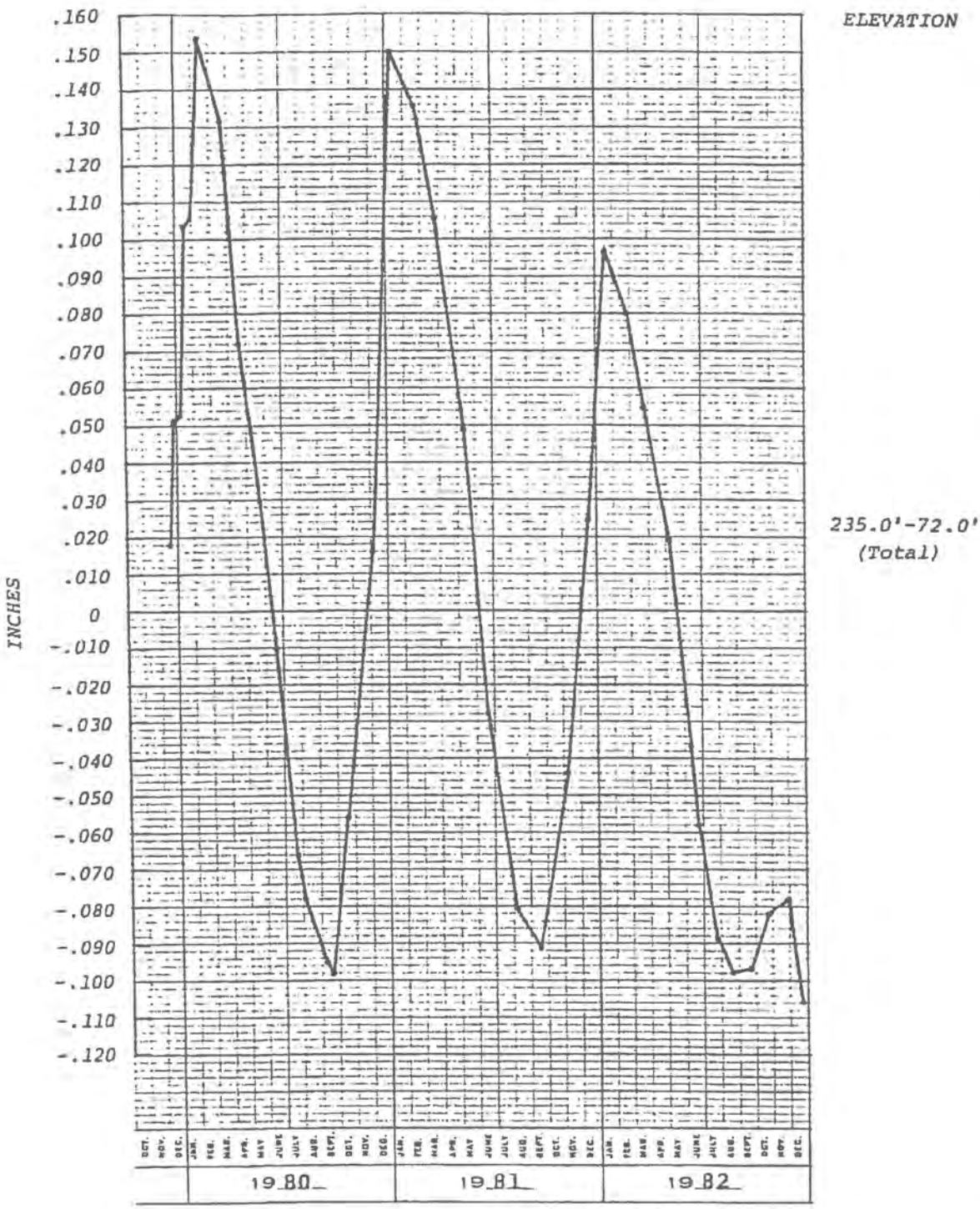


FIGURE 241.16-27C

EXTENSOMETER EX-3

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

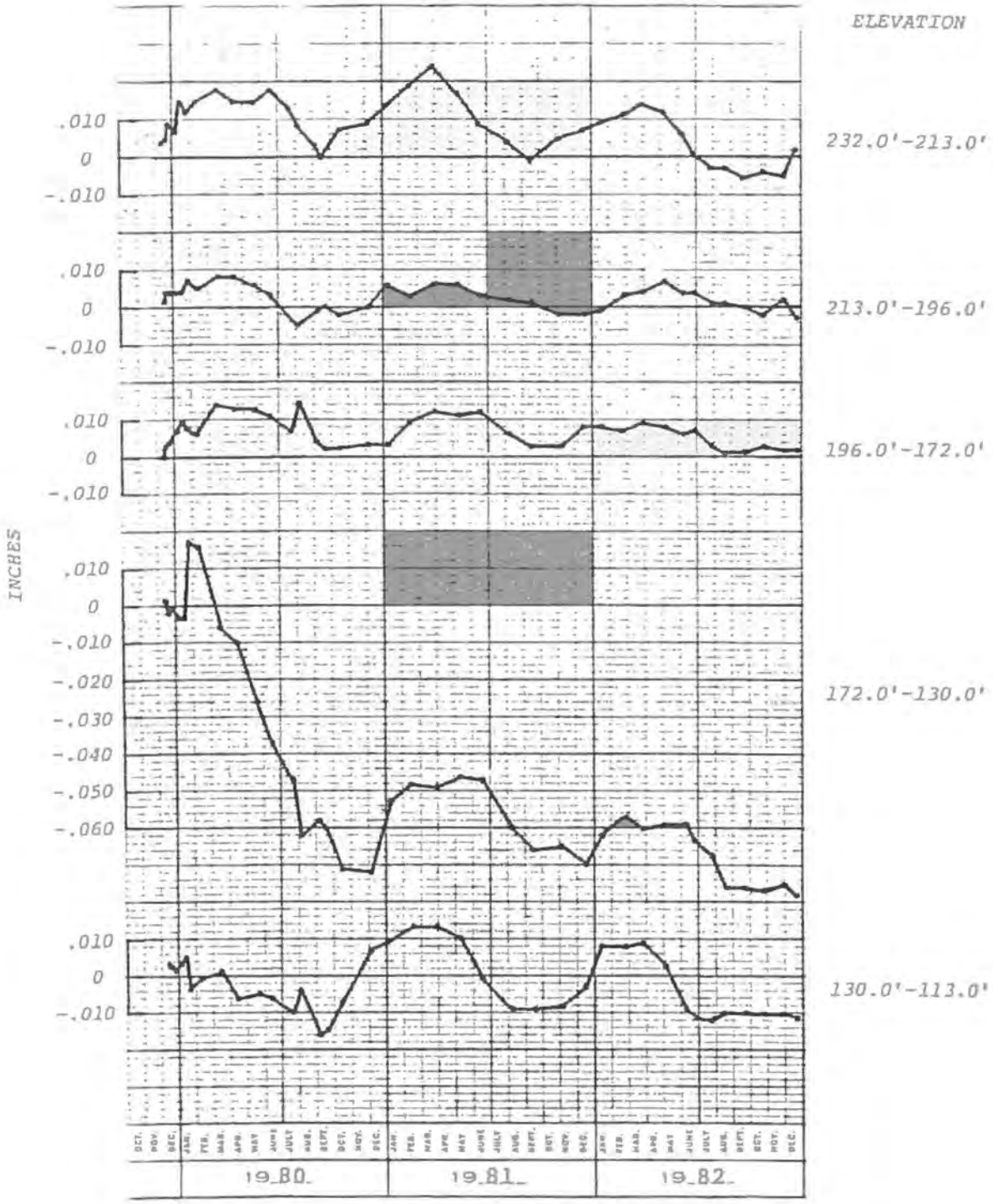


FIGURE 241.16-28A

EXTENSOMETER EX-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

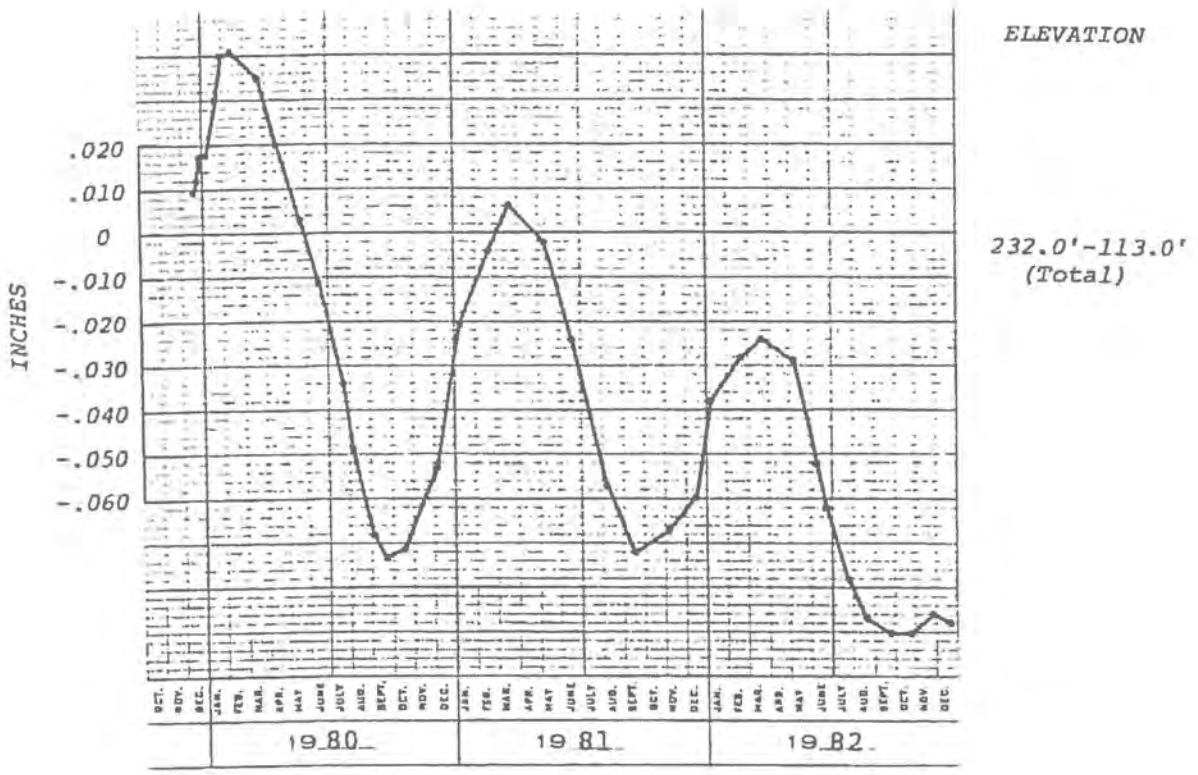


FIGURE 241.16-28B

EXTENSOMETER EX-4

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

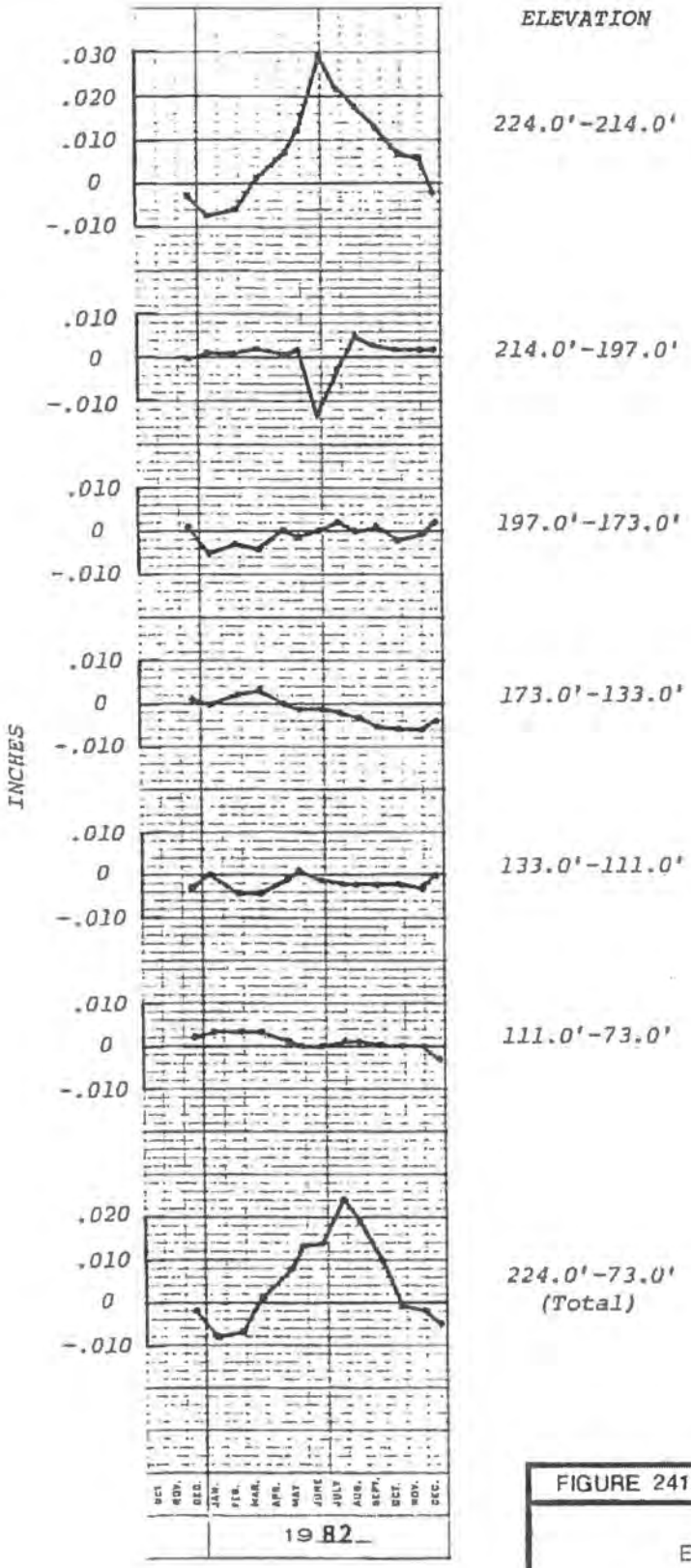


FIGURE 241.16-29

EXTENSOMETER EX-5

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

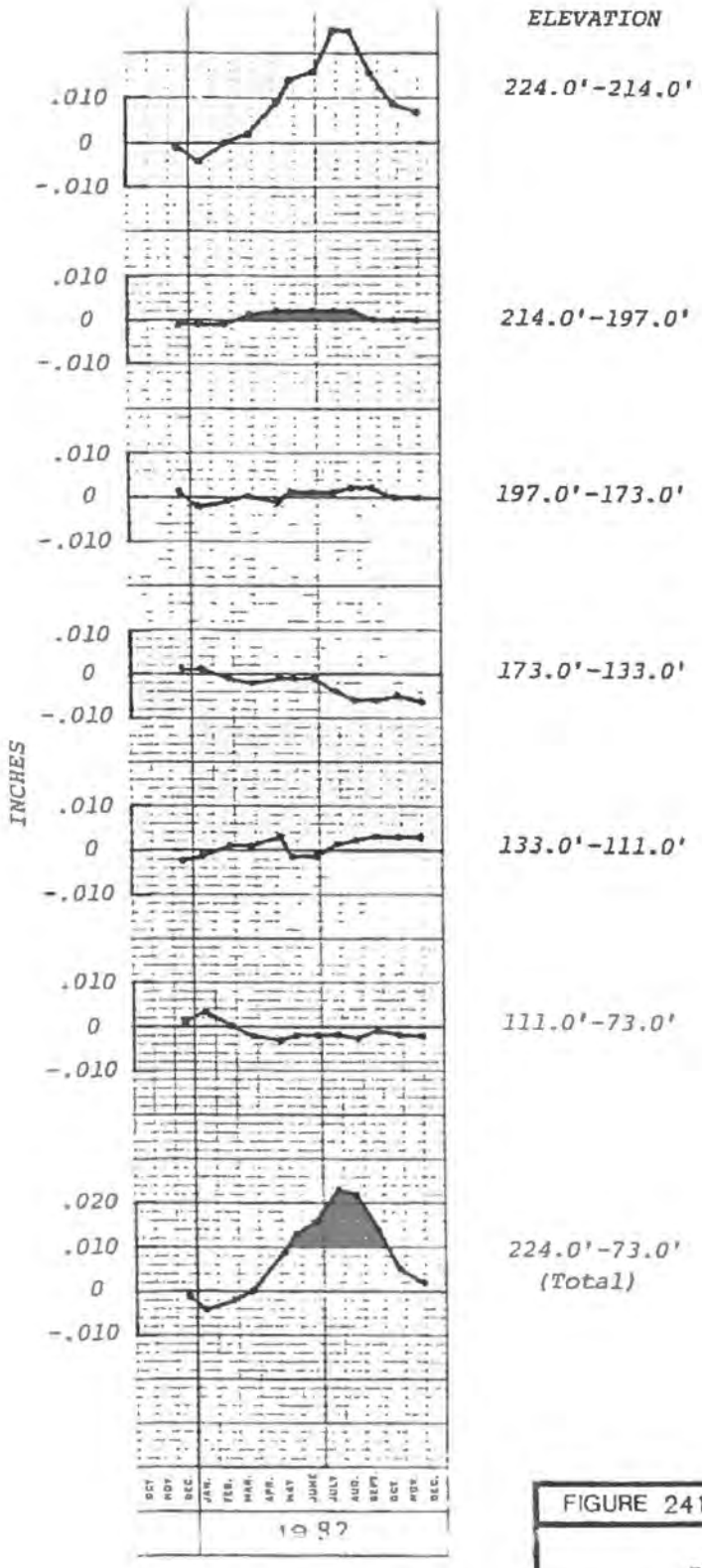


FIGURE 241.16-30

EXTENSOMETER EX-6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

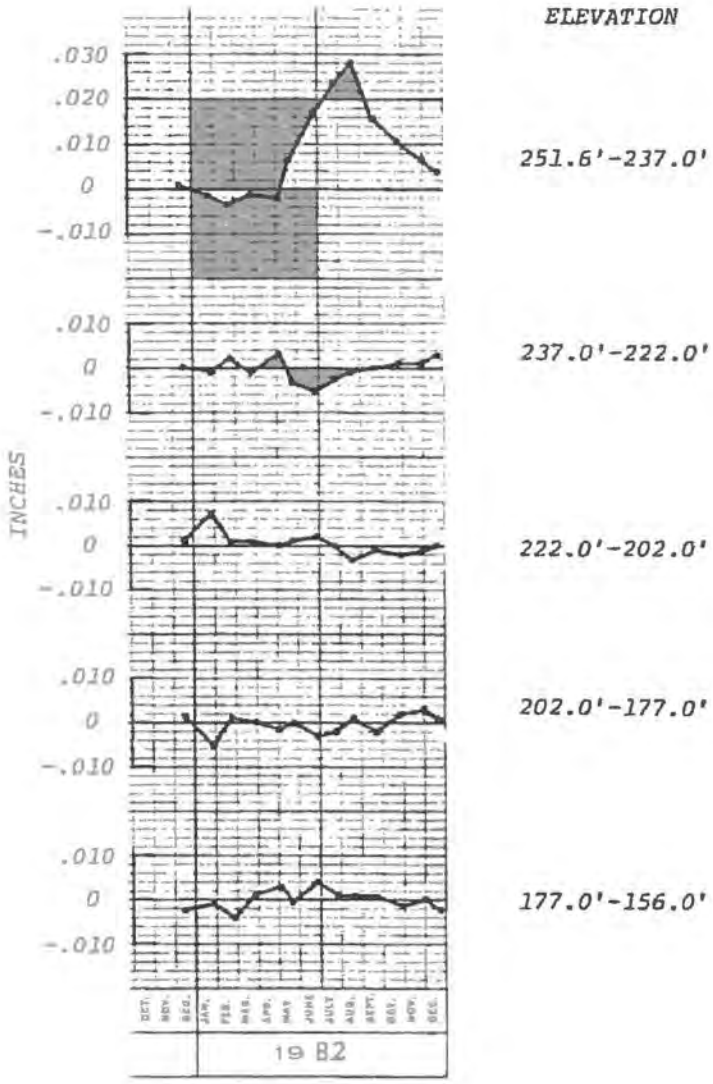


FIGURE 241.16-31A

EXTENSOMETER EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

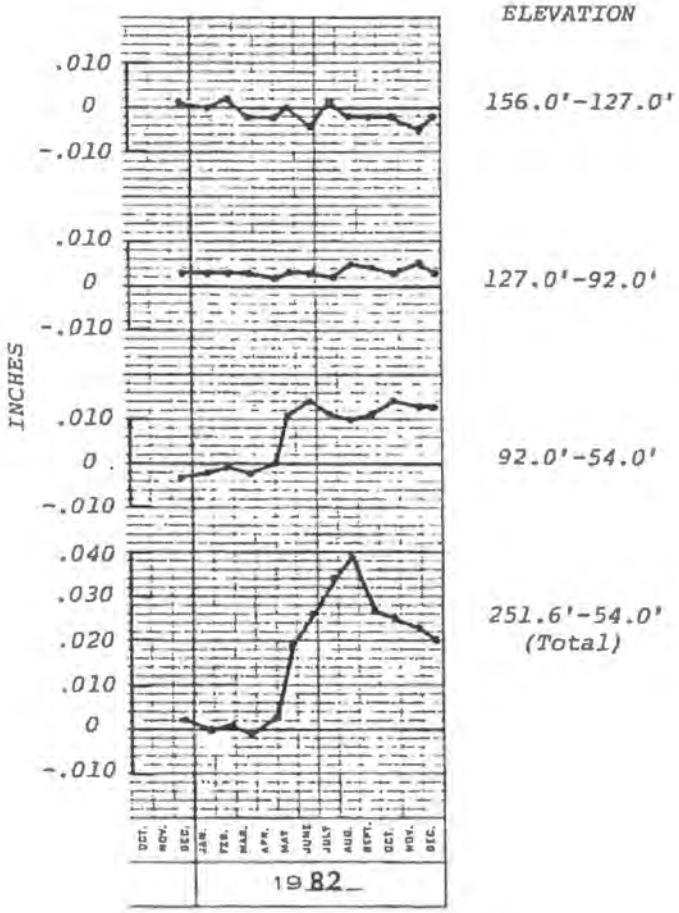


FIGURE 241.16-31B

EXTENSOMETER EX-20

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

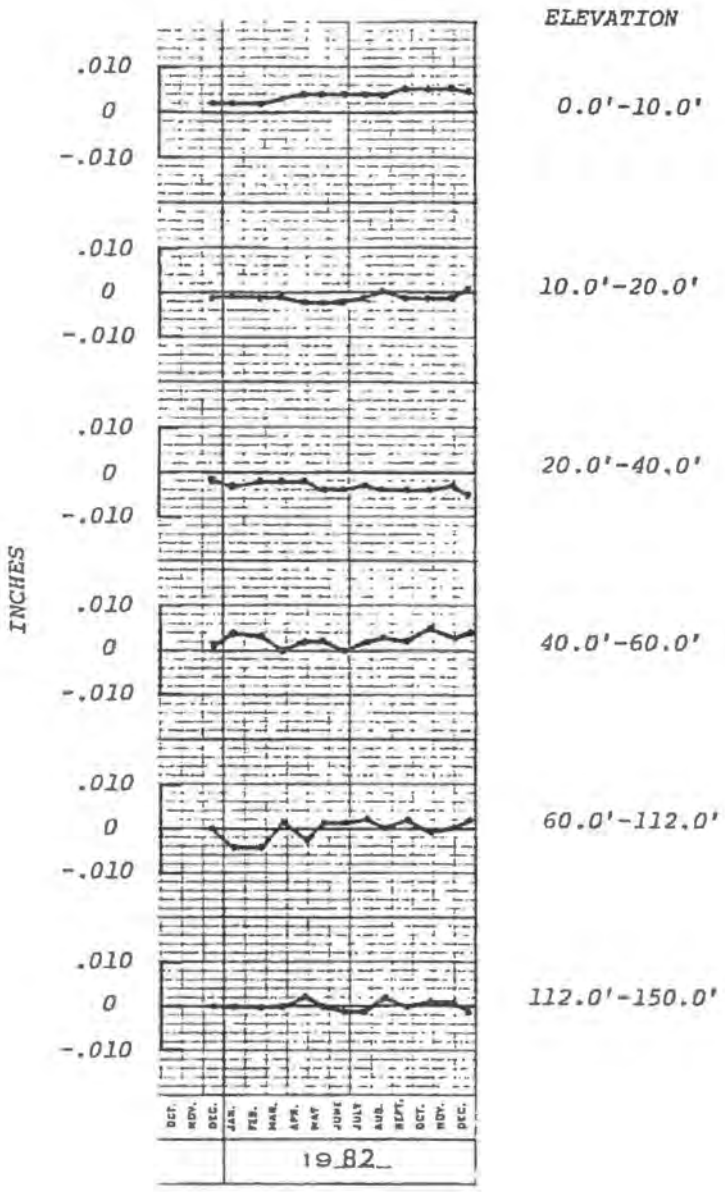


FIGURE 241.16-32A

EXTENSOMETER HEX-1 SONIC PROBE

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

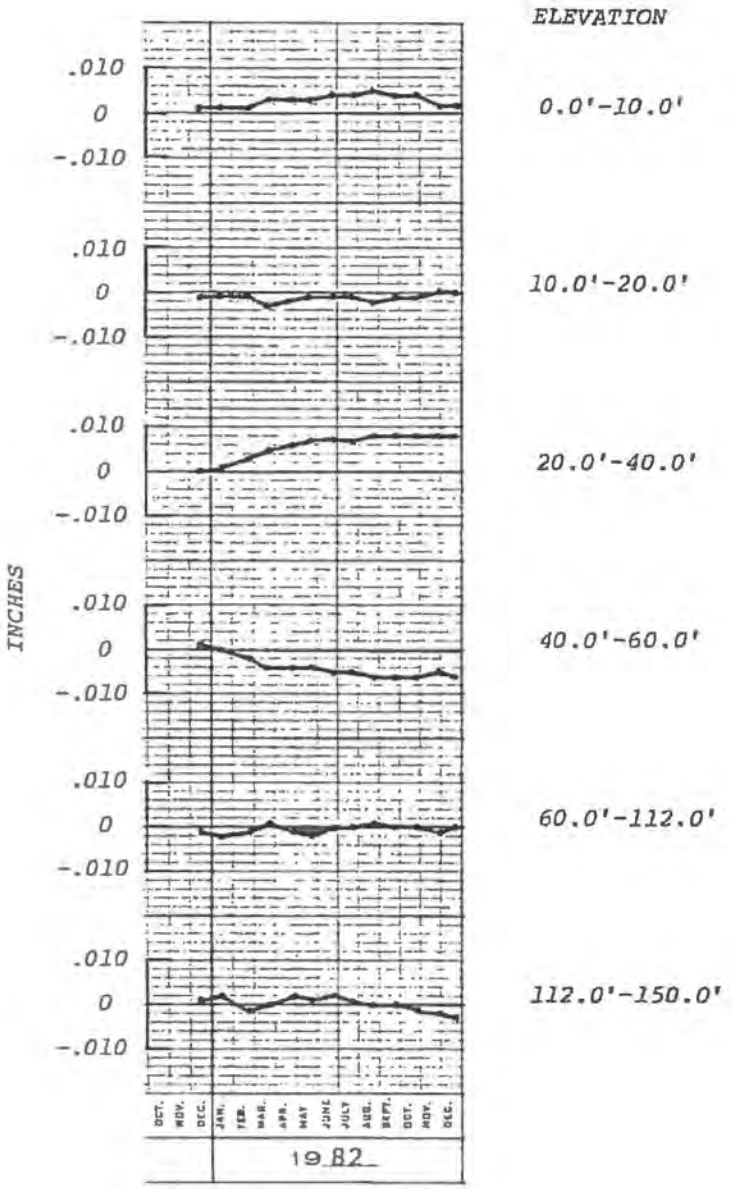


FIGURE 241.16-328

EXTENSOMETER HEX-1
LINEAR POTENTIOMETERS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

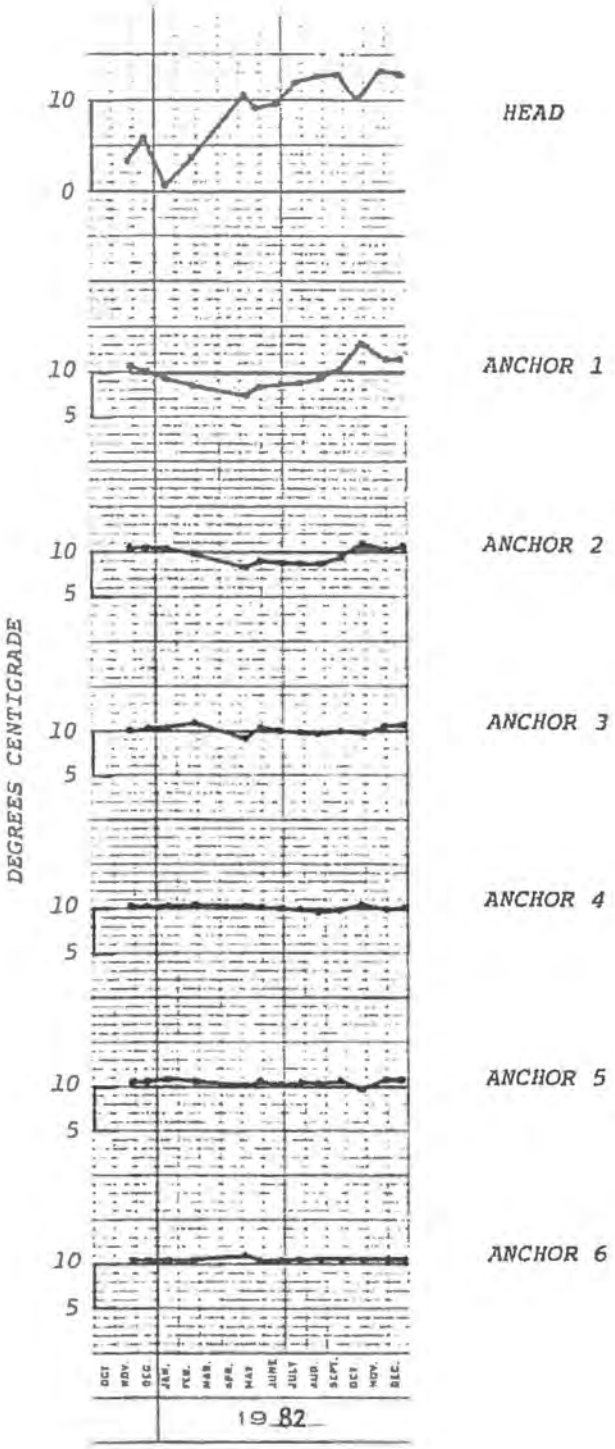


FIGURE 241.16-32C

EXTENSOMETER HEX-1 THERMISTERS

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

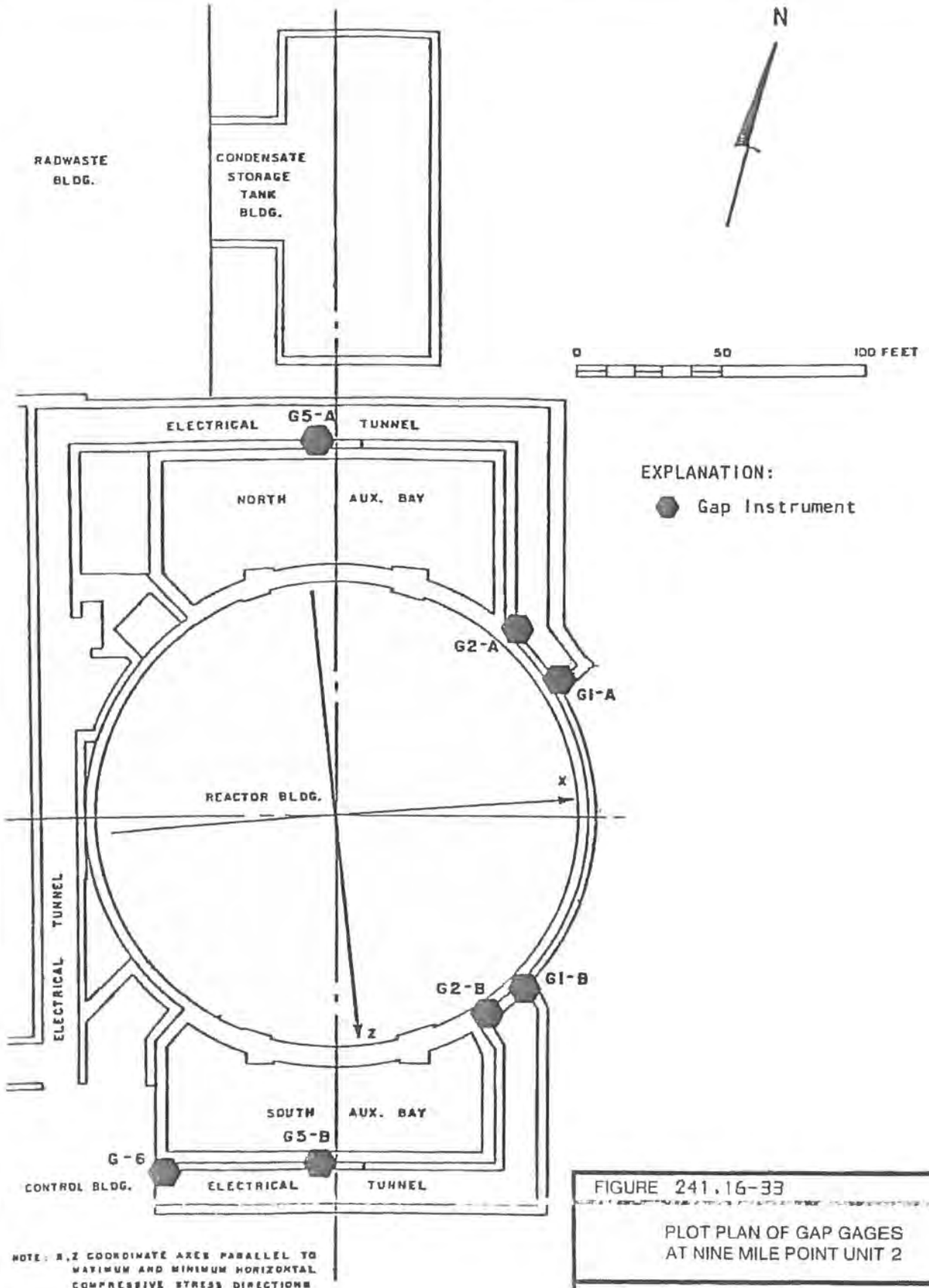


FIGURE 241.16-33

PLOT PLAN OF GAP GAGES
AT NINE MILE POINT UNIT 2

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

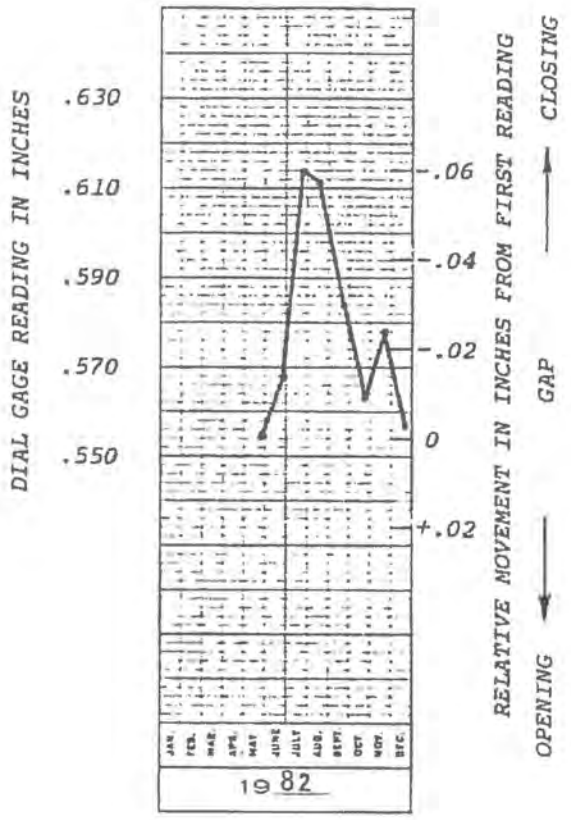


FIGURE 241.16-34

GAP GAGE G1A

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

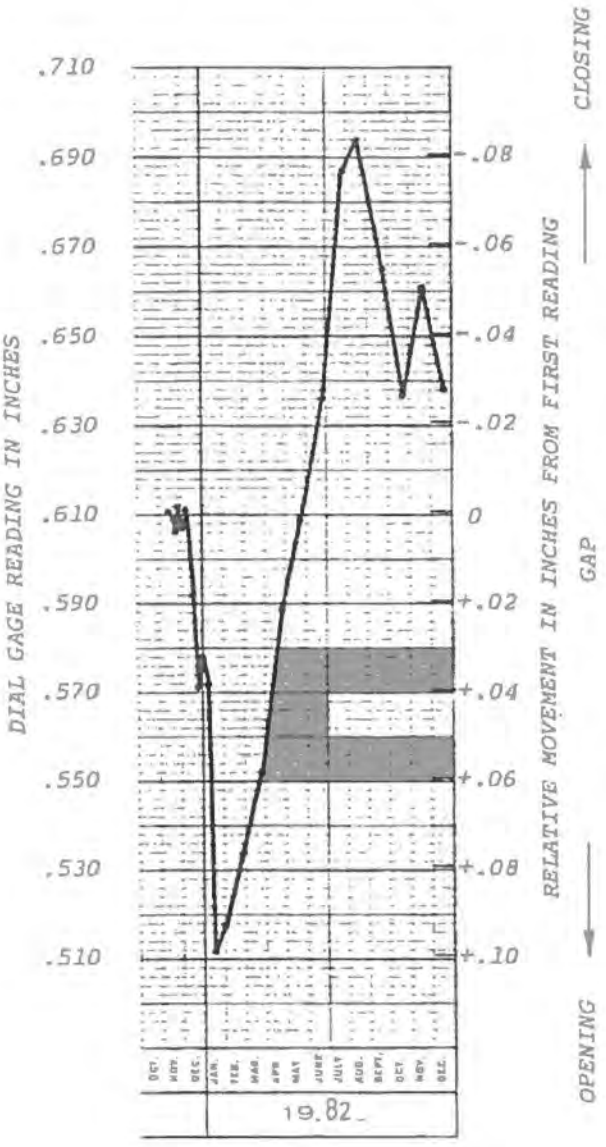


FIGURE 241.16-35

GAP GAGE G1B

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

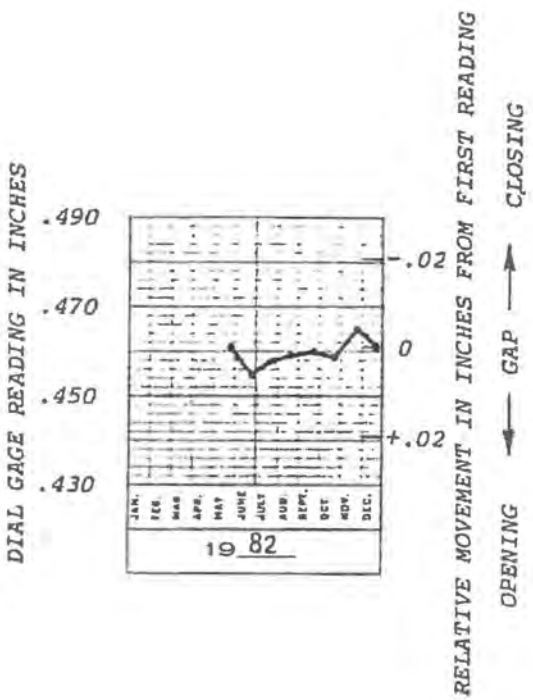


FIGURE 241.16-36

GAP GAGE G2A

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

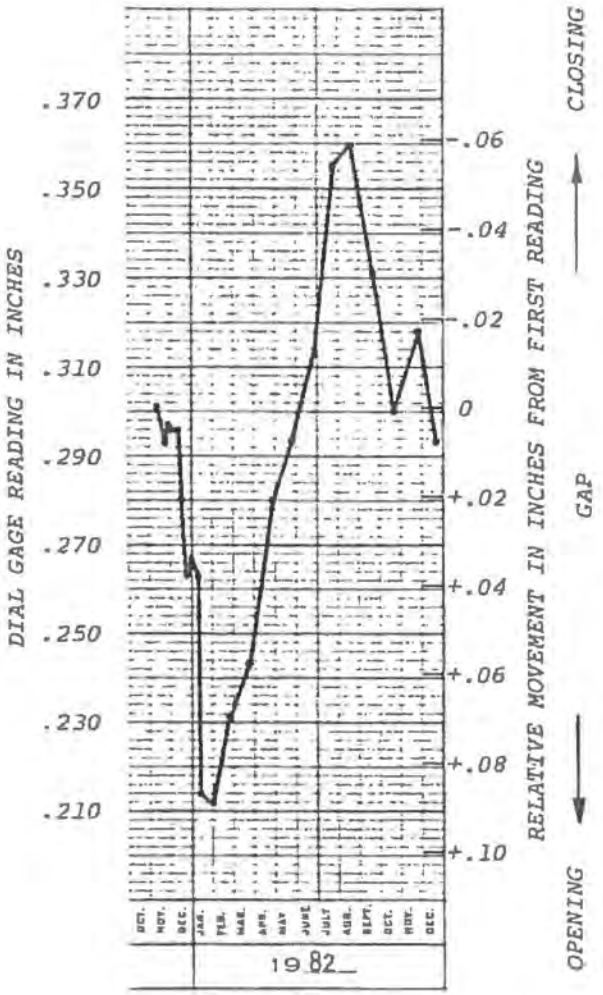


FIGURE 241.16-37

GAP GAGE G2B

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

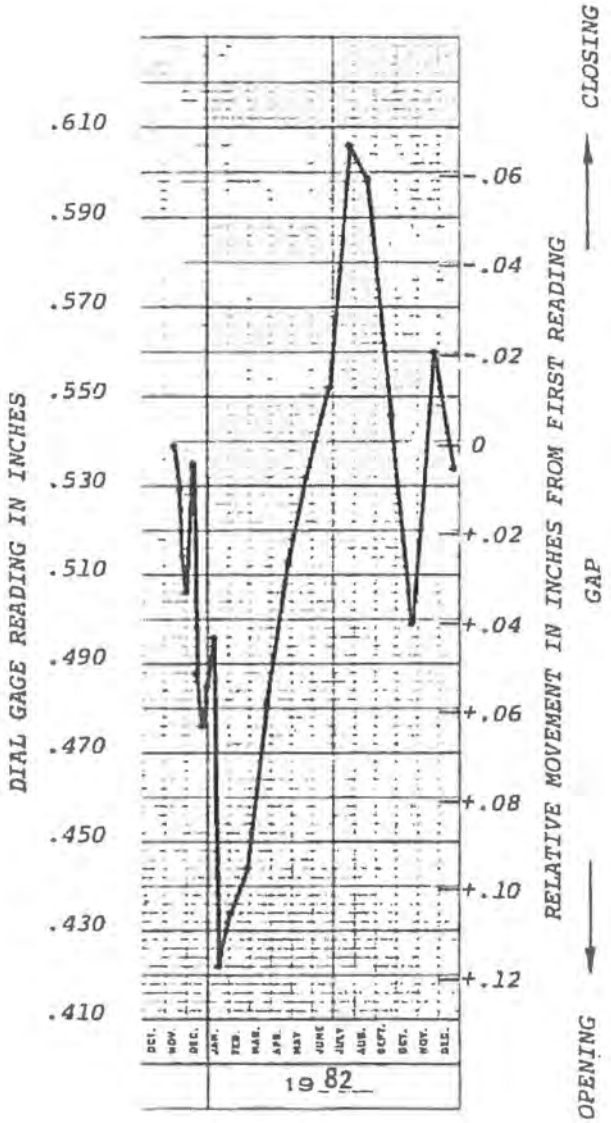


FIGURE 241.16-38

GAP GAGE G5A

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

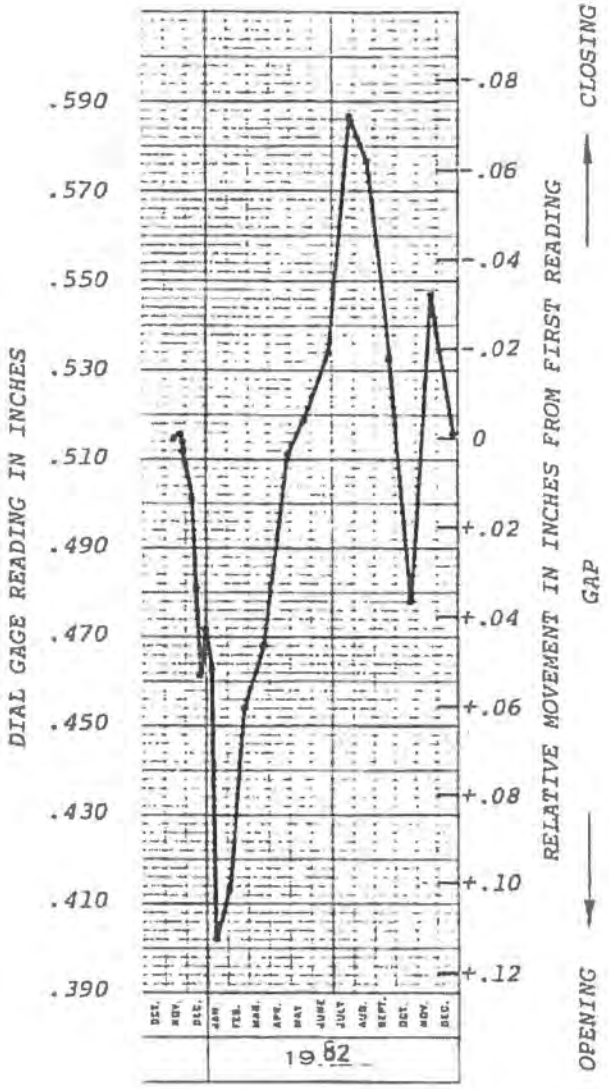


FIGURE 241.16-39

GAP GAGE G5B

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

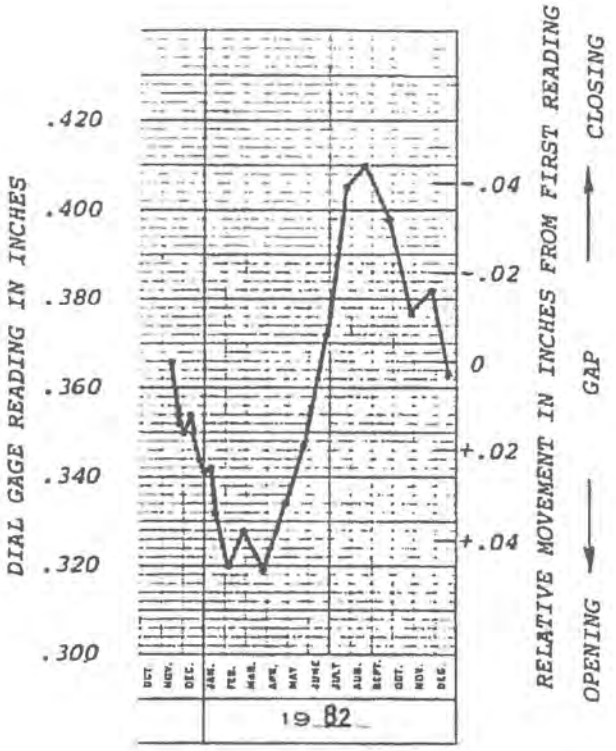


FIGURE 241.16-40

GAP GAGE G6

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

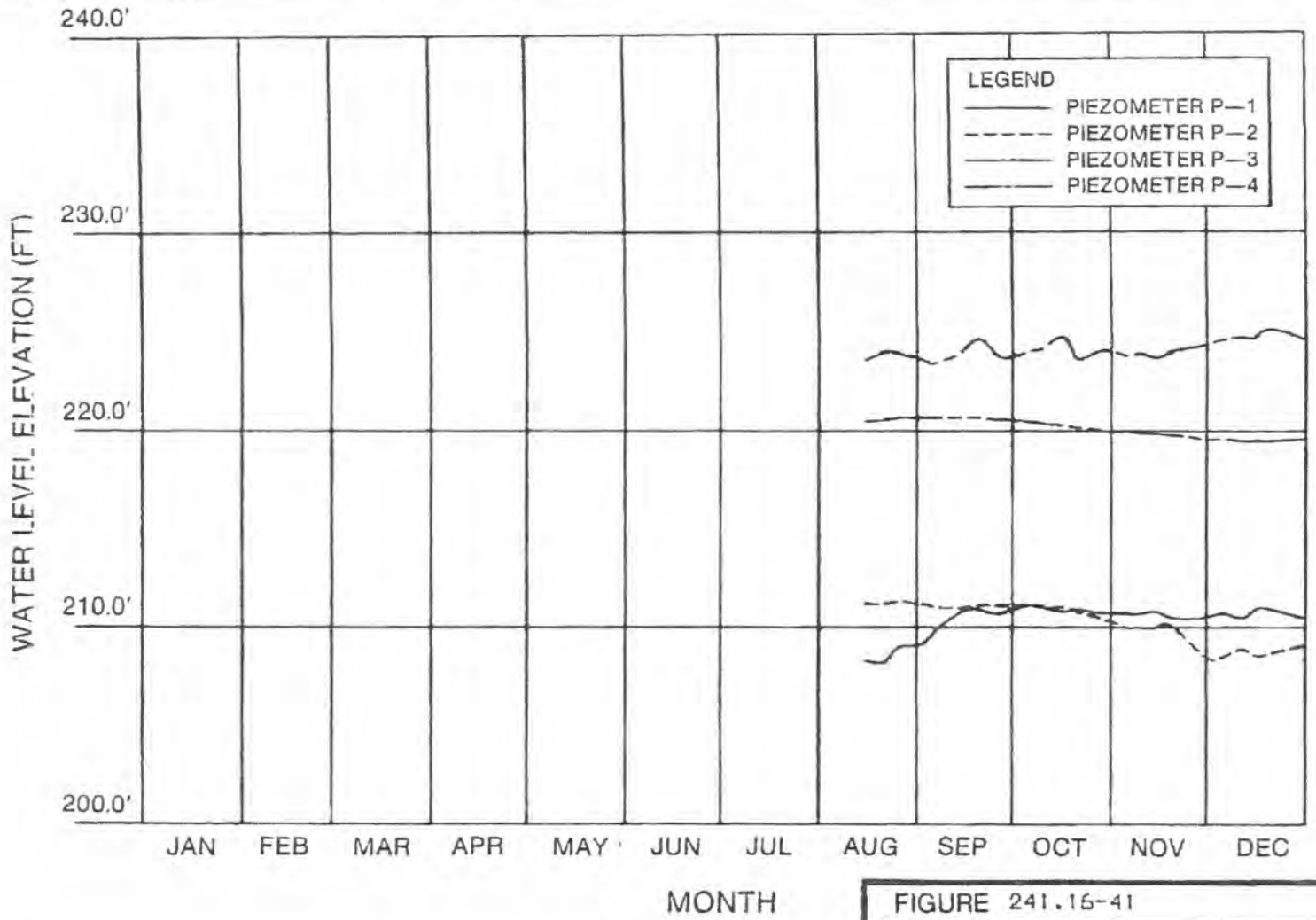


FIGURE 241.15-41

PIEZOMETER READINGS
DURING 1978

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

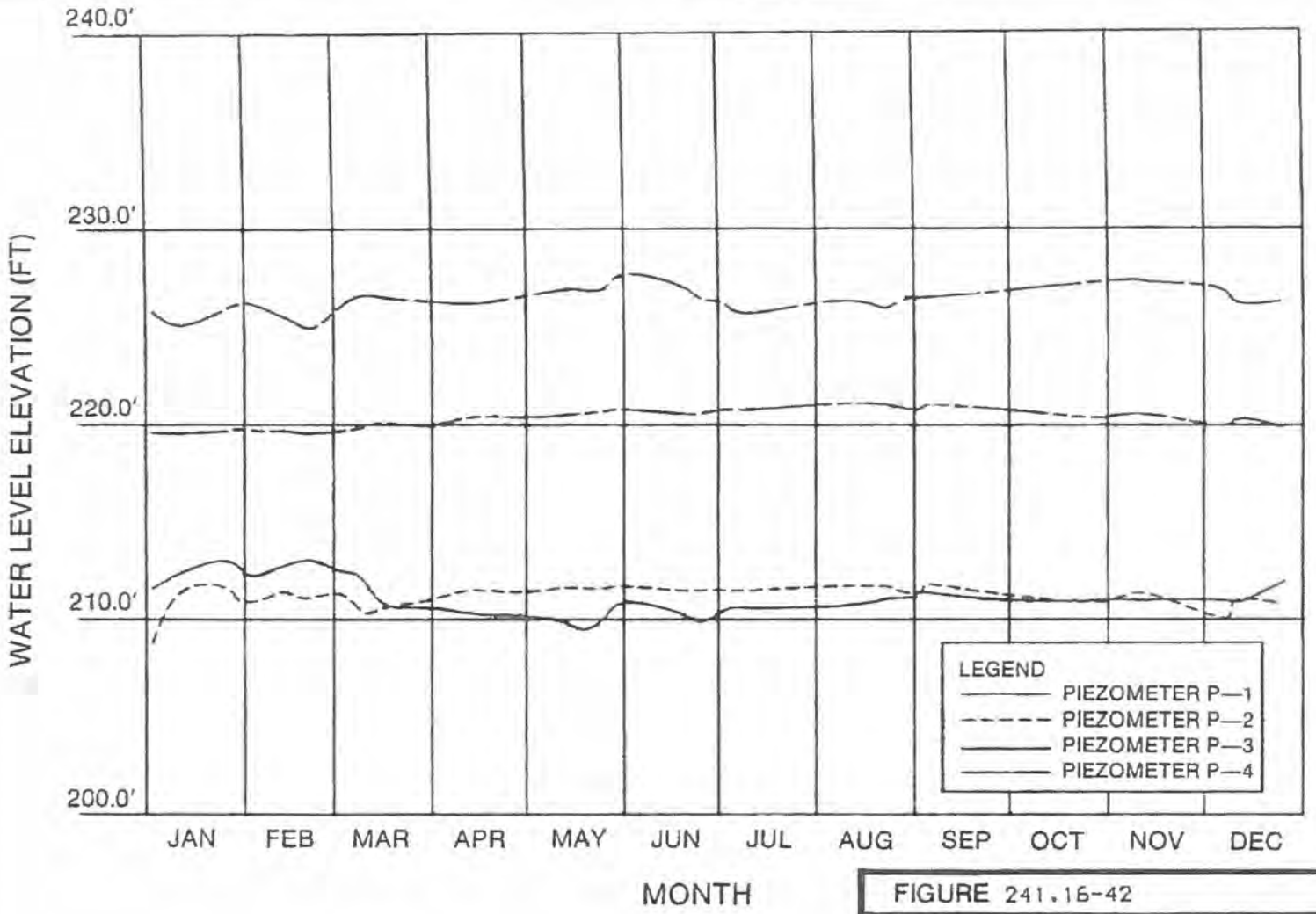


FIGURE 241.16-42

PIEZOMETER READINGS
DURING 1979

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

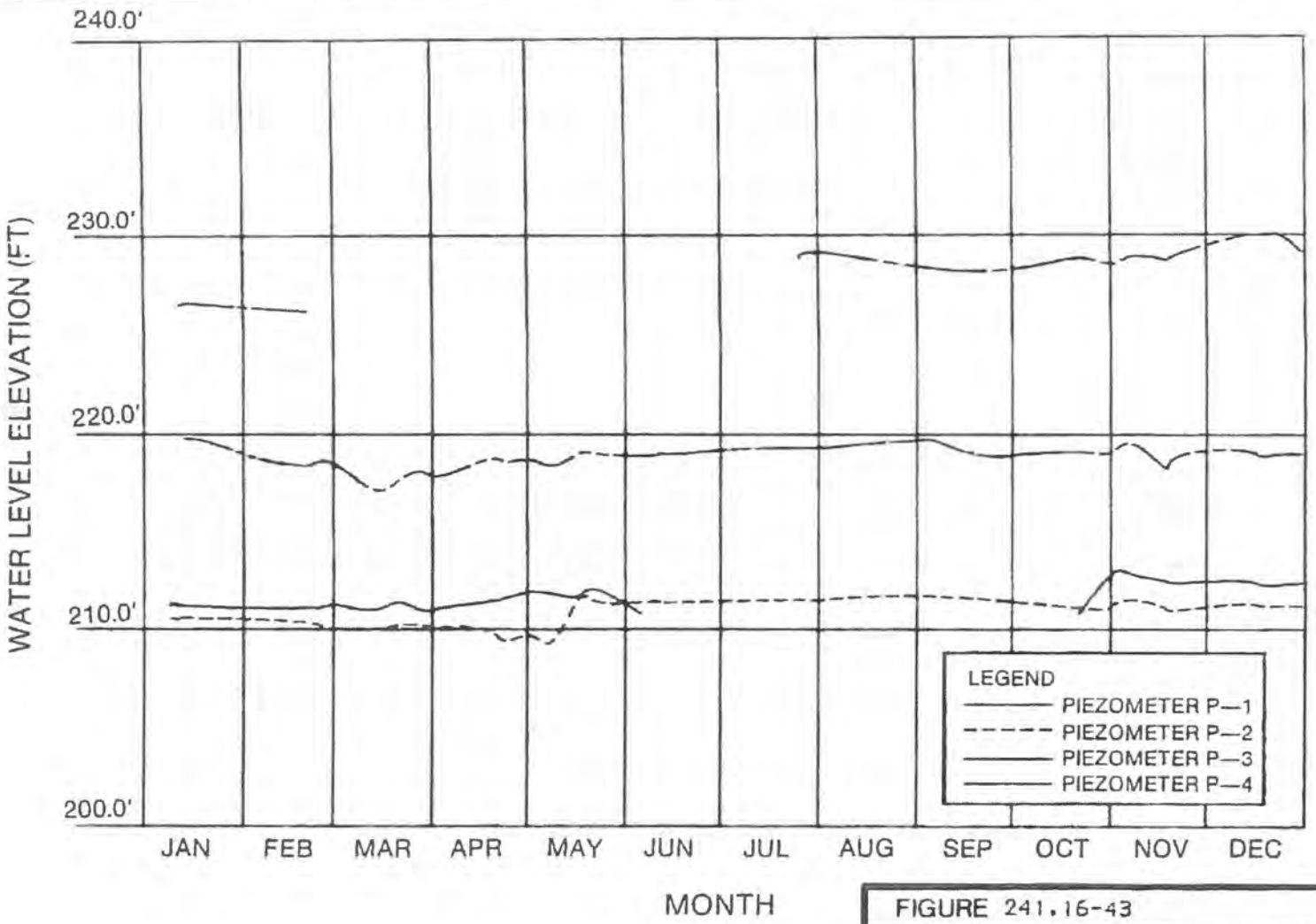


FIGURE 241.16-43

PIEZOMETER READINGS
DURING 1980

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

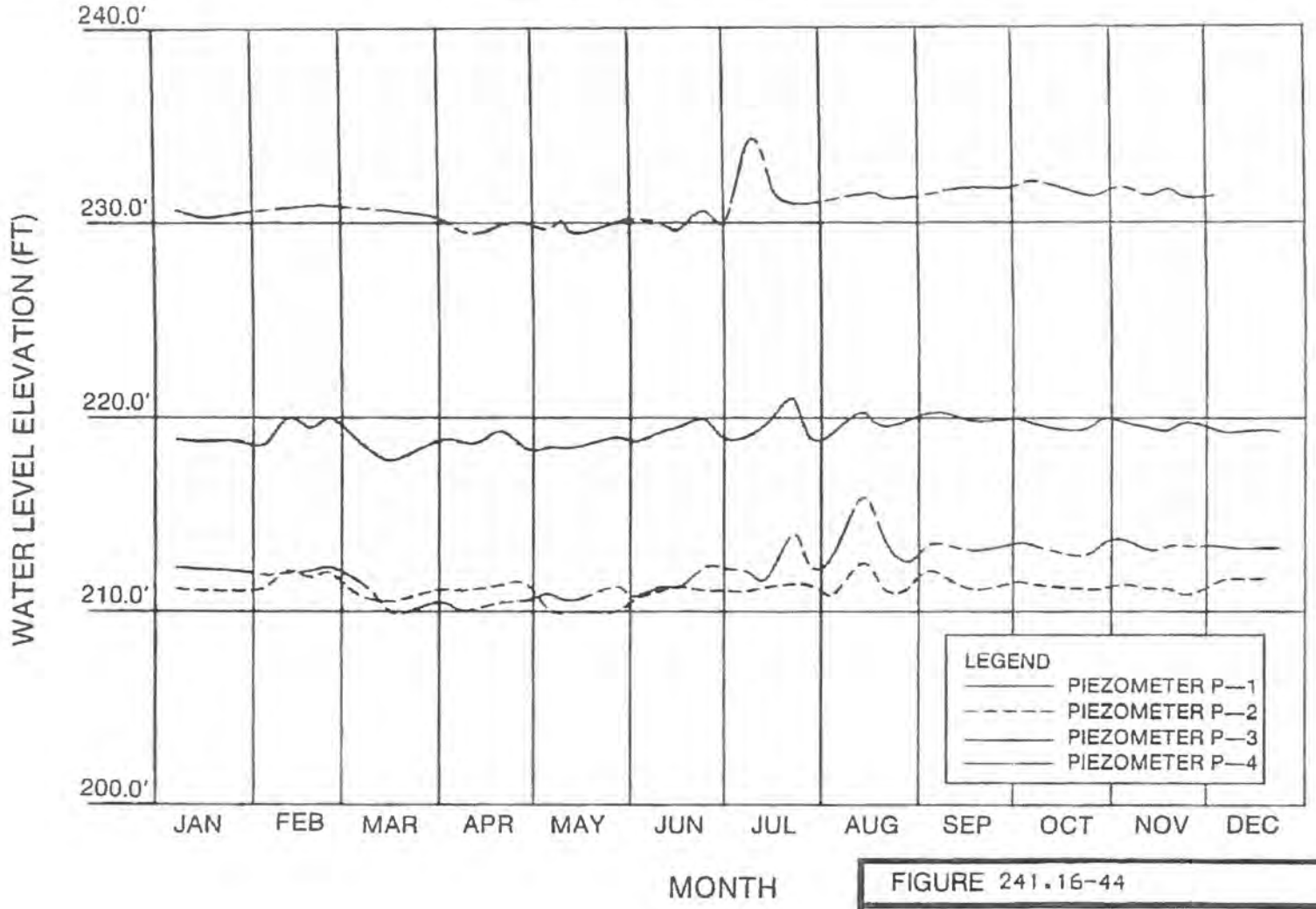


FIGURE 241.16-44

PIEZOMETER READINGS
DURING 1981

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

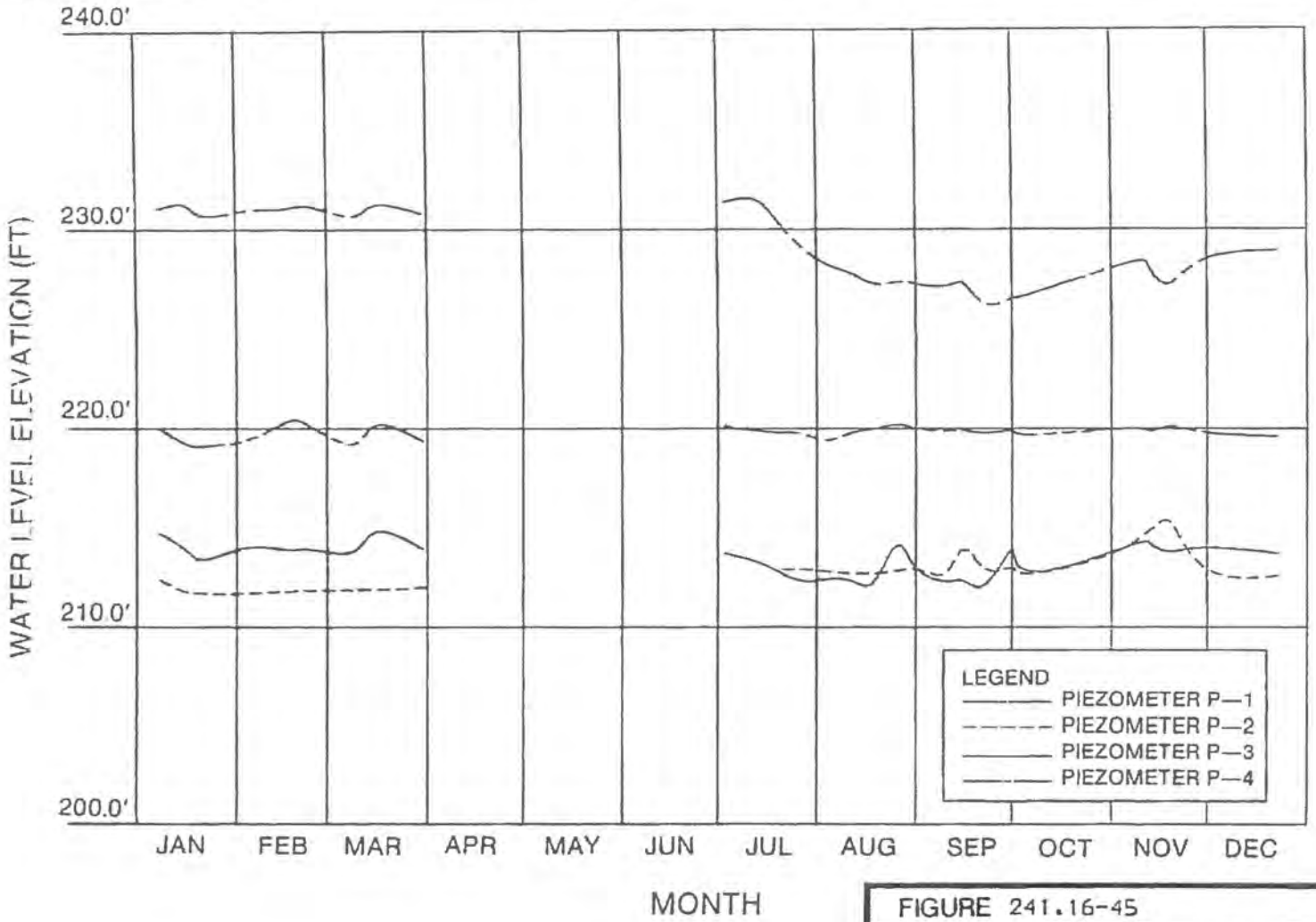


FIGURE 241.16-45

PIEZOMETER READINGS
DURING 1982

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

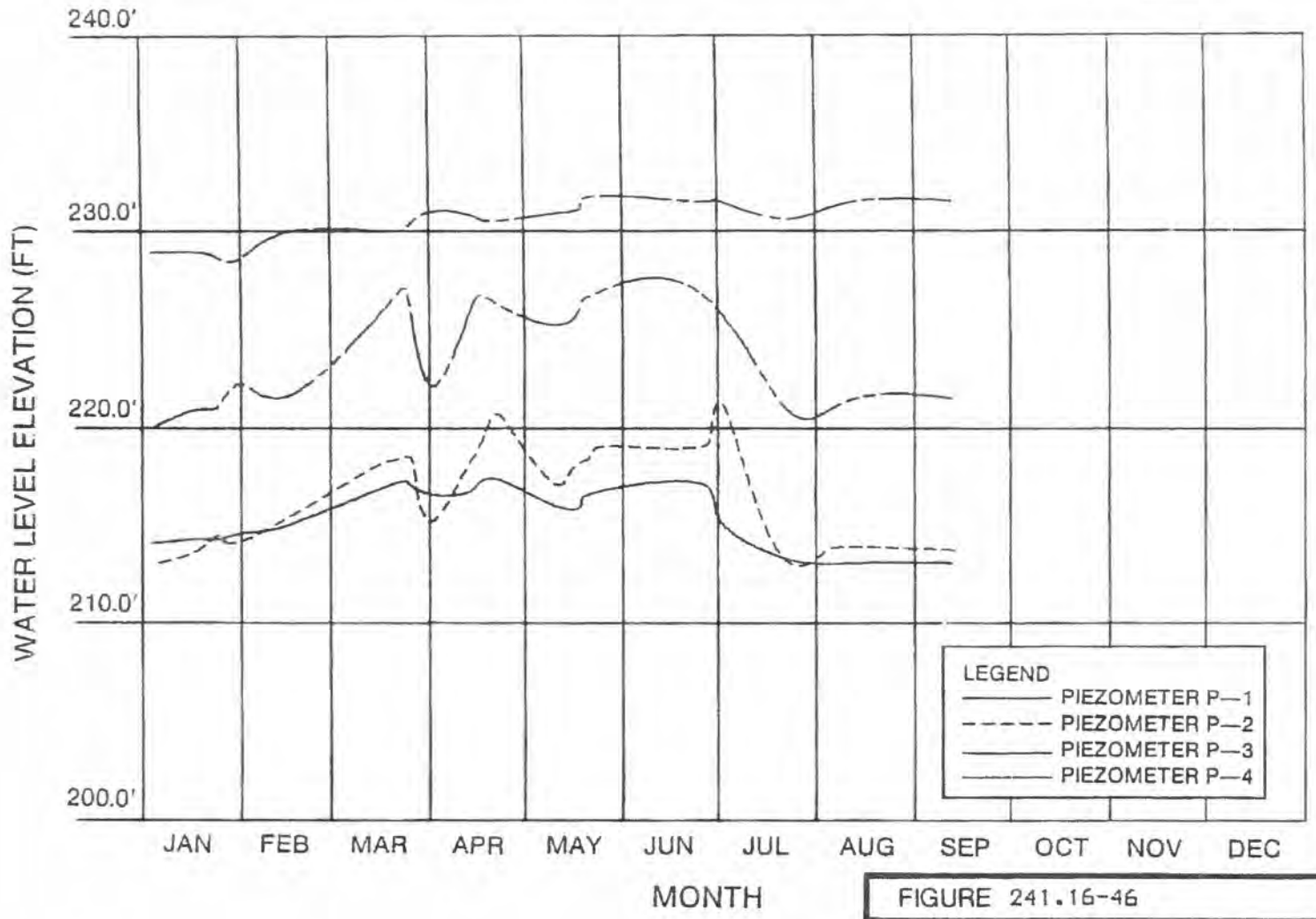


FIGURE 241.16-46

PIEZOMETER READINGS
DURING 1983

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT-UNIT 2
UPDATED SAFETY ANALYSIS REPORT

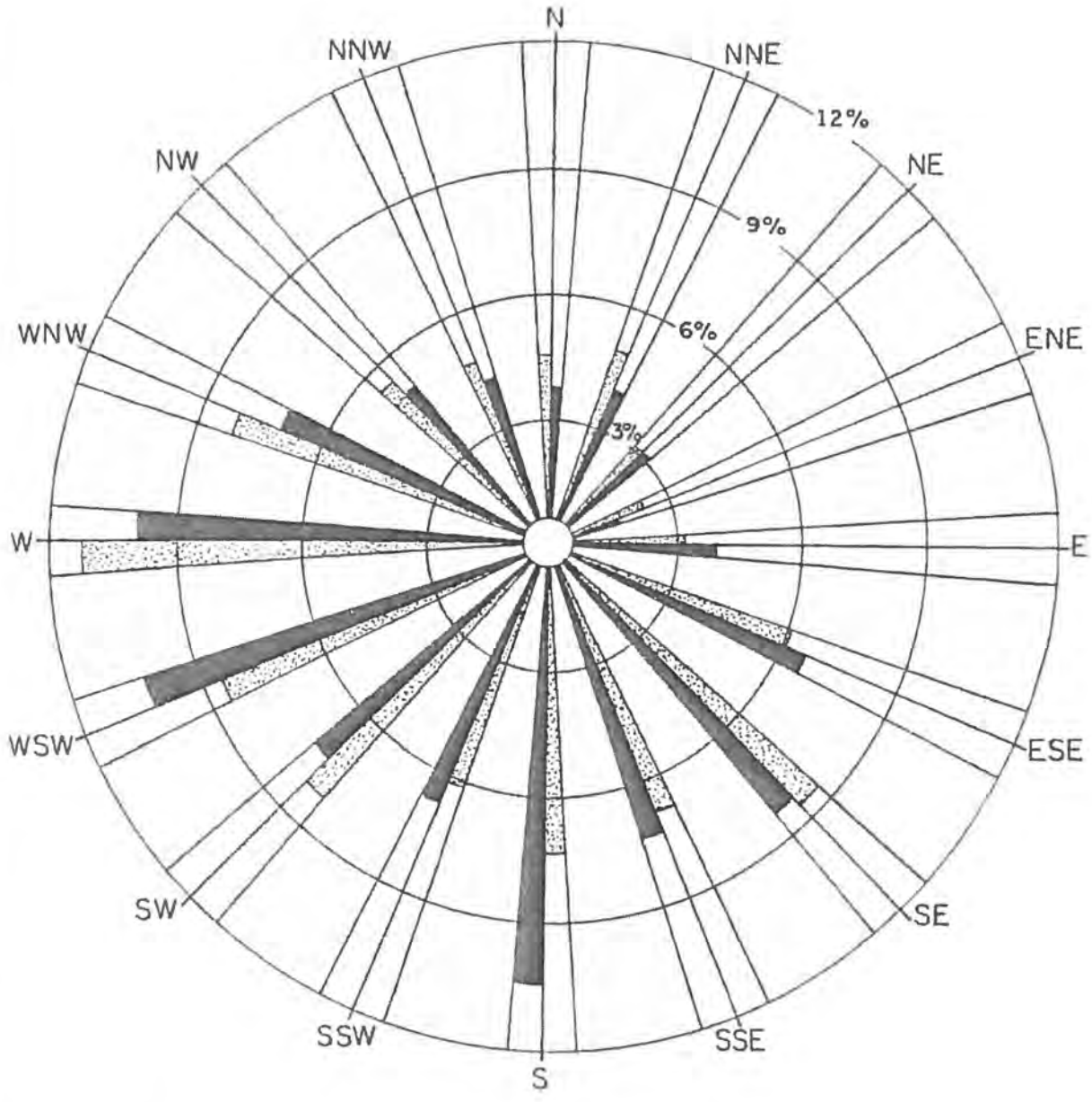


FIGURE 451.14-1

150-FT AND 340-FT WIND DIRECTION FREQUENCIES AT THE STERLING TOWER MAY 13, 1973 THROUGH MAY 12, 1974

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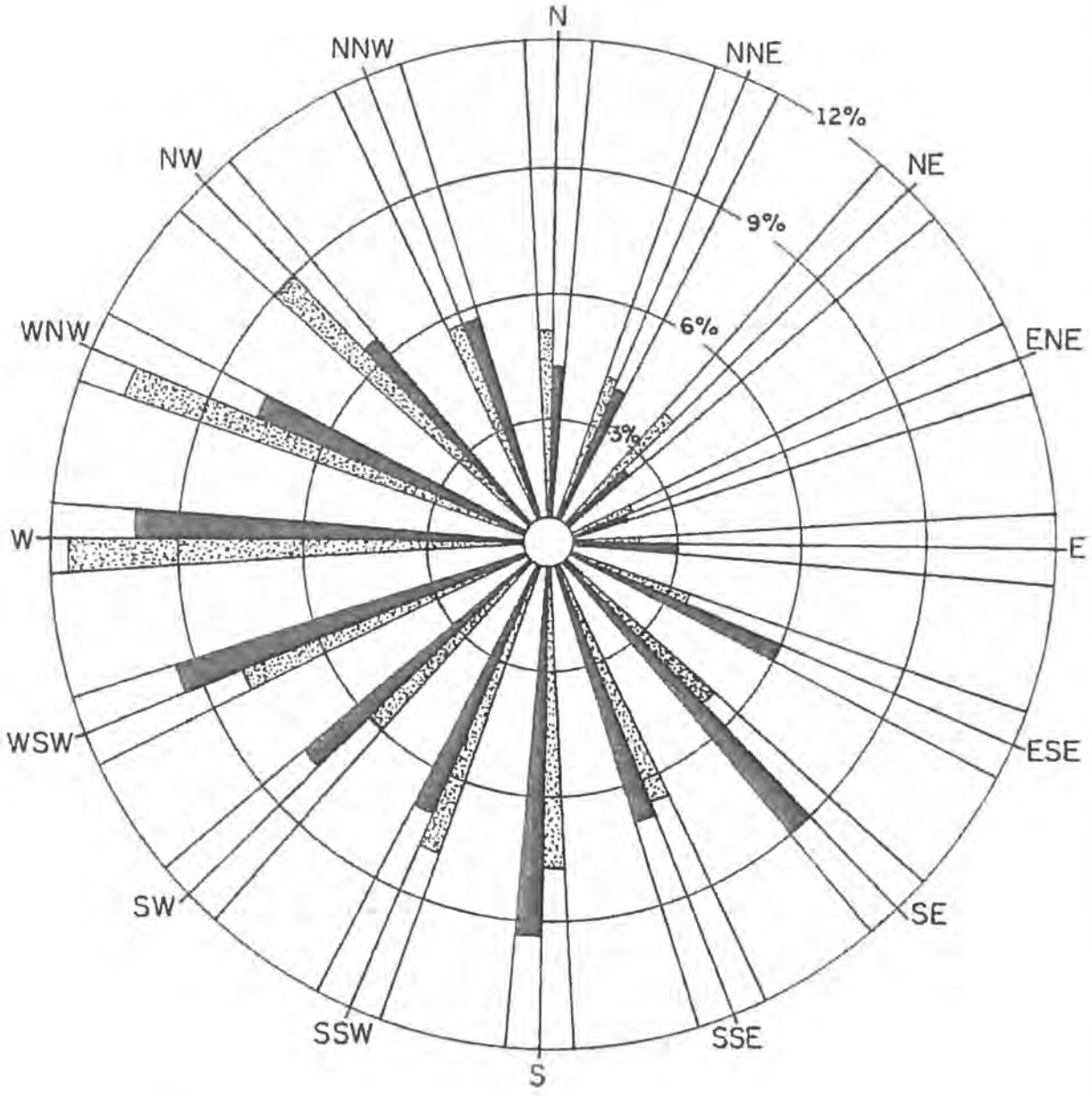

FIGURE 451.14-2

150-FT AND 340-FT WIND DIRECTION FREQUENCIES AT THE STERLING TOWER MAY 13, 1974 THROUGH MAY 12, 1975

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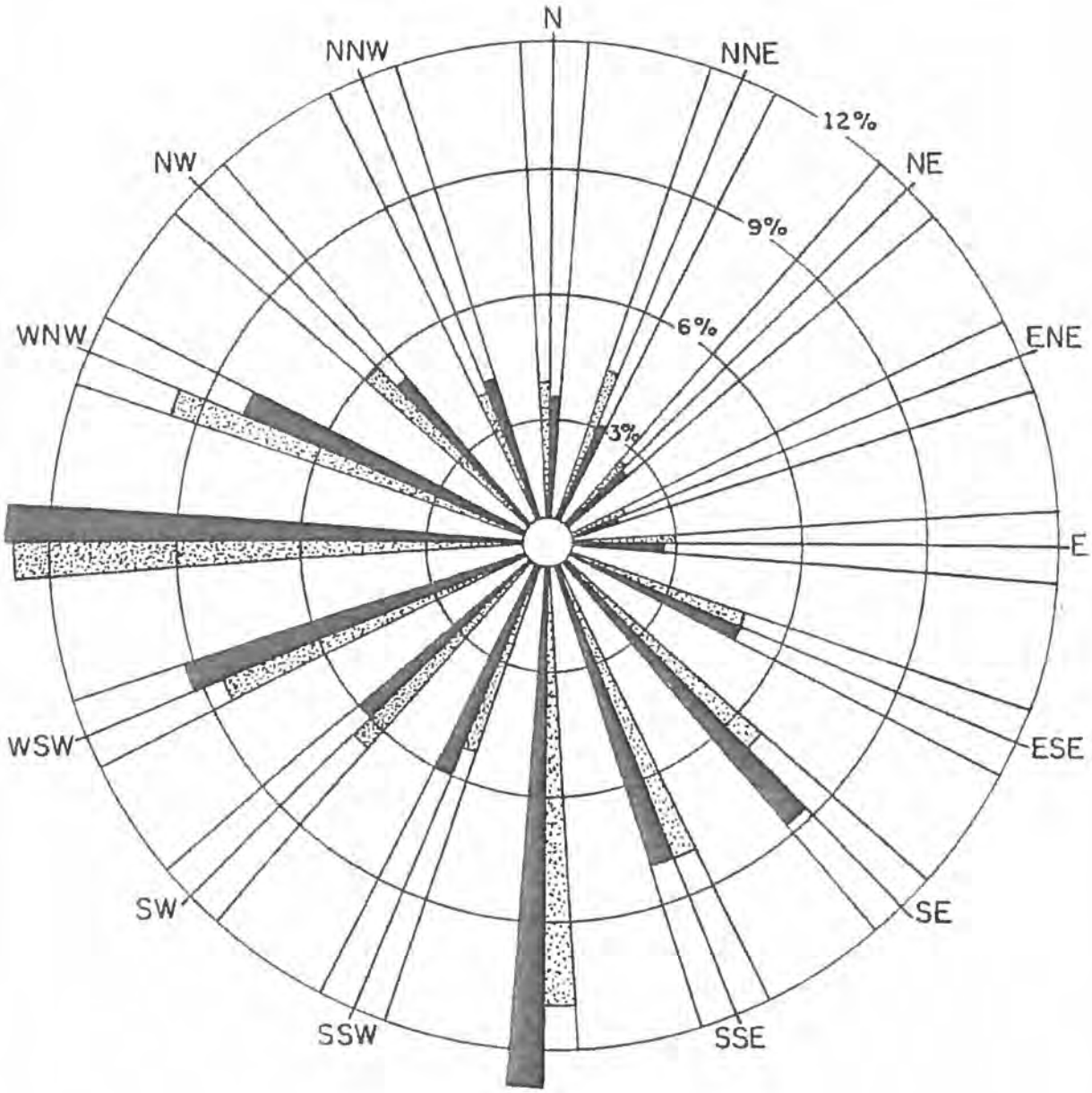

FIGURE 451.14-3

150-FT AND 340-FT WIND DIRECTION FREQUENCIES AT THE STERLING TOWER MAY 13, 1975 THROUGH MAY 12, 1976

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