

$\gamma_{SAT}=135 \text{ lbs/cu. ft.}$ $\gamma_{SUB.}=73 \text{ lbs/cu. ft.}$
 $\phi=32.5^\circ$ $C=792 \text{ p.s.f.}$

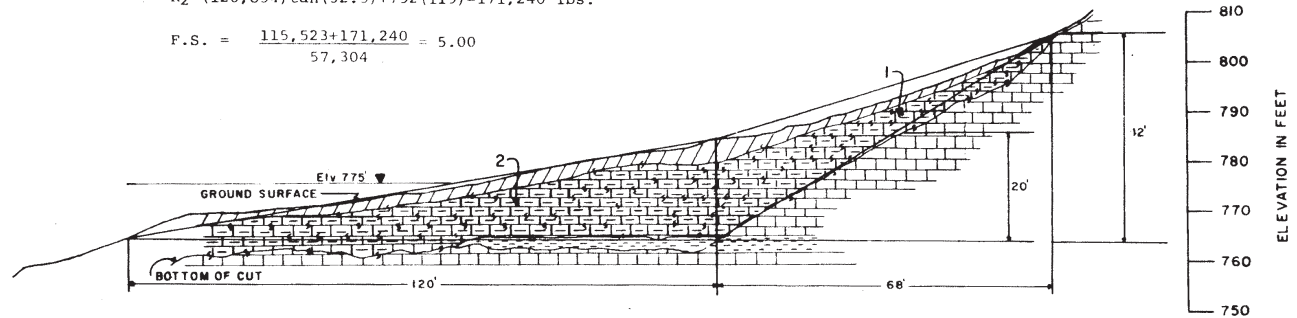
WEDGE #1

$W_1=81,881 \text{ lbs.}$
 $R_1=(81,881) \tan(32.5)+792(80)=115,523 \text{ lbs.}$
 $D_1=81,881(1.12) \tan(32.5)=57,304$

WEDGE #2

$W_2=120,854 \text{ lbs.}$
 $R_2=(120,854) \tan(32.5)+792(119)=171,240 \text{ lbs.}$

$$F.S. = \frac{115,523+171,240}{57,304} = 5.00$$



INDEX
 SEVERELY WEATHERED LIMESTONE AND CLAYSTONE
 CLAYSTONE
 LIMESTONE
 CLAY

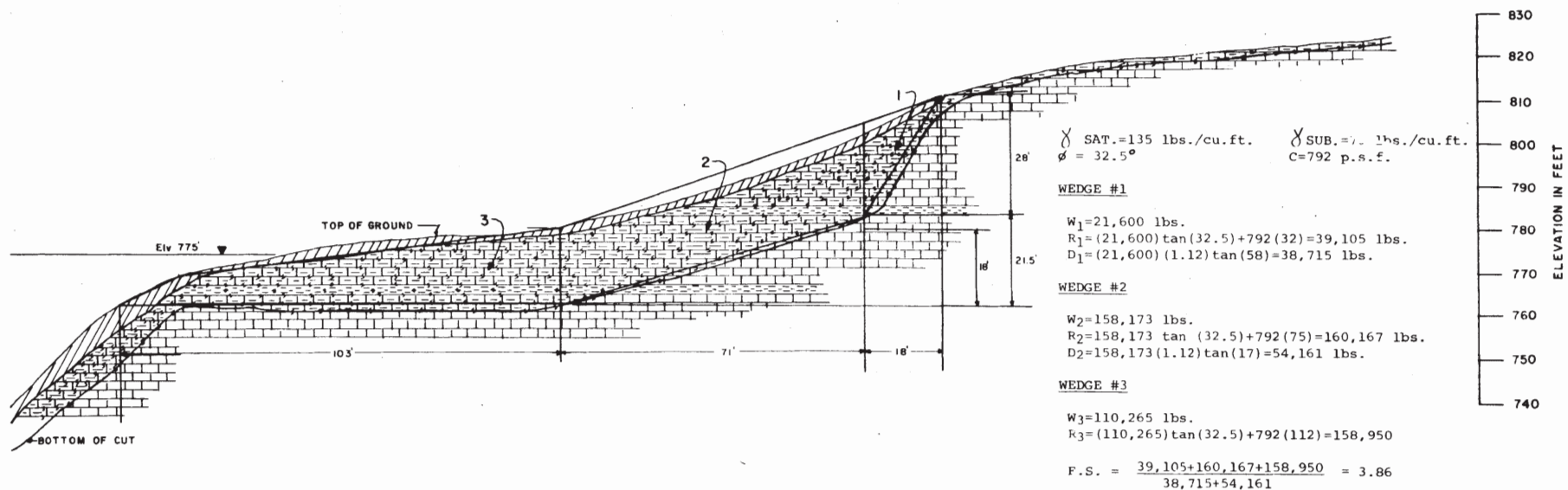
Amendment 4
 January 31, 1978

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

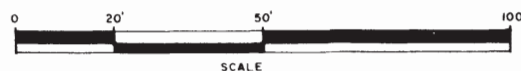
SLOPE PROFILE & STABILITY
 SEC. 1-1

FIGURE 2.5.5-1

Refer to Figure 2.5.5-5 for
 Location of Cross-Section



Refer to Figure 2.5.5-5 for
Location of Cross-Section



INDEX

SEVERELY WEATHERED LIMESTONE
 AND CLAYSTONE
 CLAYSTONE
 LIMESTONE
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COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SLOPE PROFILE & STABILITY
SEC. 2-2

FIGURE 2.5.5-2

SAT.=135 lbs./cu/ft.
 $\phi = 32.5^\circ$ $c=792$ p.s.f.

WEDGE #1

$W_1=25,988$ lbs.
 $R_1=(25,988) \tan(32.5)+792(35)=44,276$ lbs.
 $D_1=(25,988) \tan(39)=21,045$ lbs

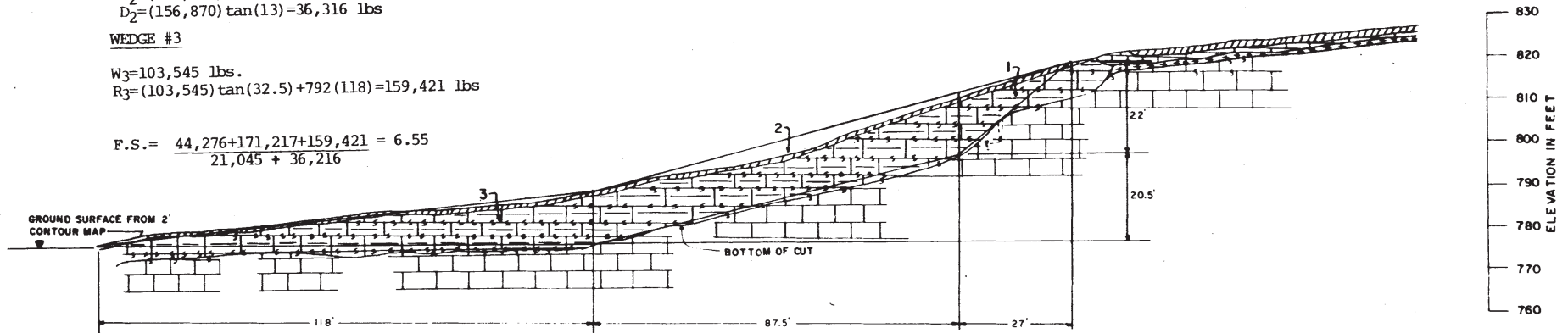
WEDGE #2

$W_2=156,870$ lbs.
 $R_2=(156,870) \tan(32.5)+792(90)=171,217$ lbs
 $D_2=(156,870) \tan(13)=36,316$ lbs

WEDGE #3

$W_3=103,545$ lbs.
 $R_3=(103,545) \tan(32.5)+792(118)=159,421$ lbs

$$F.S.= \frac{44,276+171,217+159,421}{21,045 + 36,216} = 6.55$$



Refer to Figure 2.5.5-5 for
 Location of Cross-Section



INDEX

- SEVERELY WEATHERED LIMESTONE
AND CLAYSTONE
- CLAYSTONE
- LIMESTONE
- CLAY
- SLUMP BLOCK

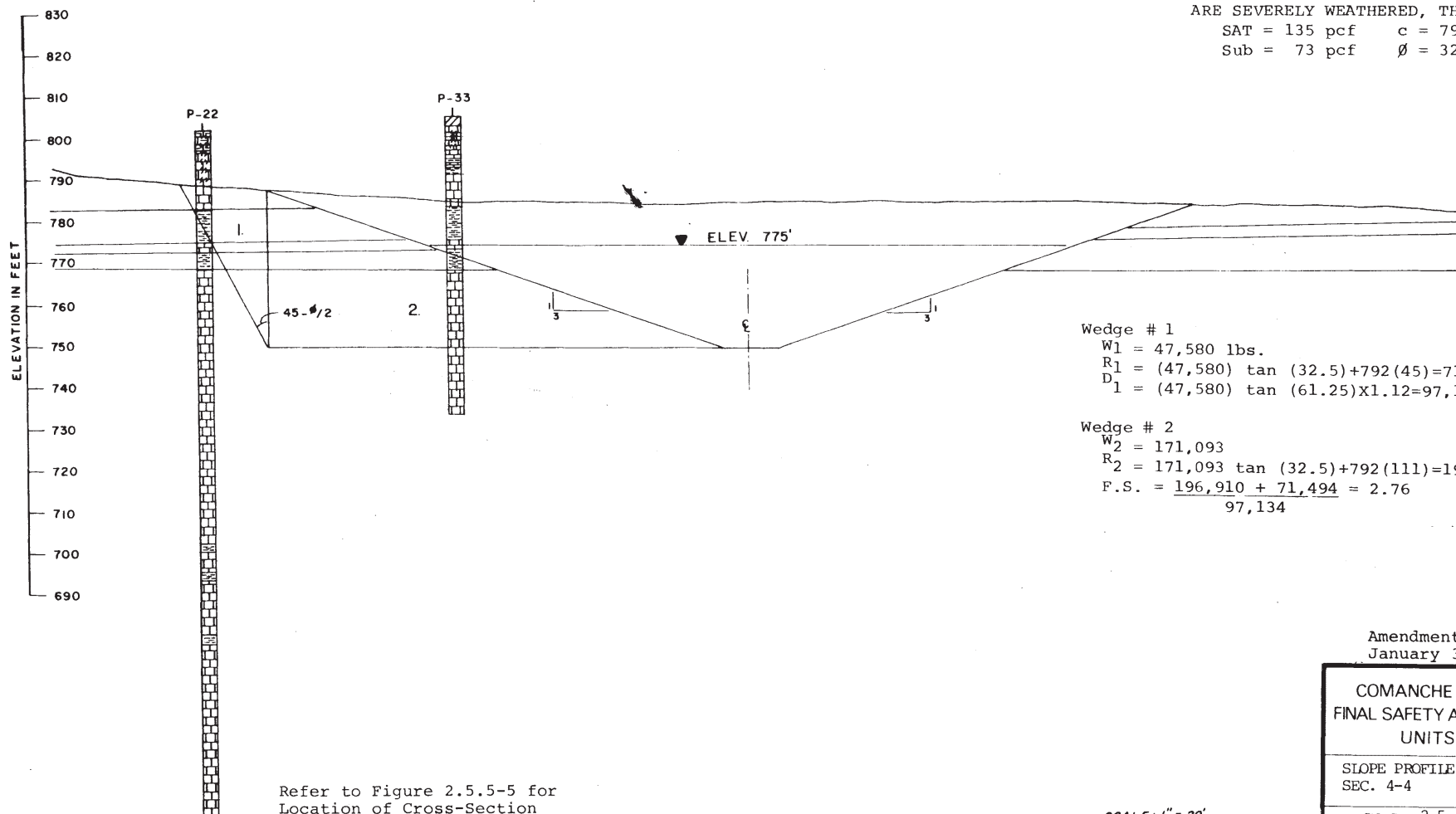
Amendment 4
 January 31, 1978

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

SLOPE PROFILE & STABILITY
 SEC. 3-3

FIGURE 2.5.5-3

ASSUMPTION: ALL LAYERS OF LIMESTONE & CLAYSTONE
ARE SEVERELY WEATHERED, THEREFORE:
SAT = 135 pcf c = 792 psf
Sub = 73 pcf $\phi = 32.5$



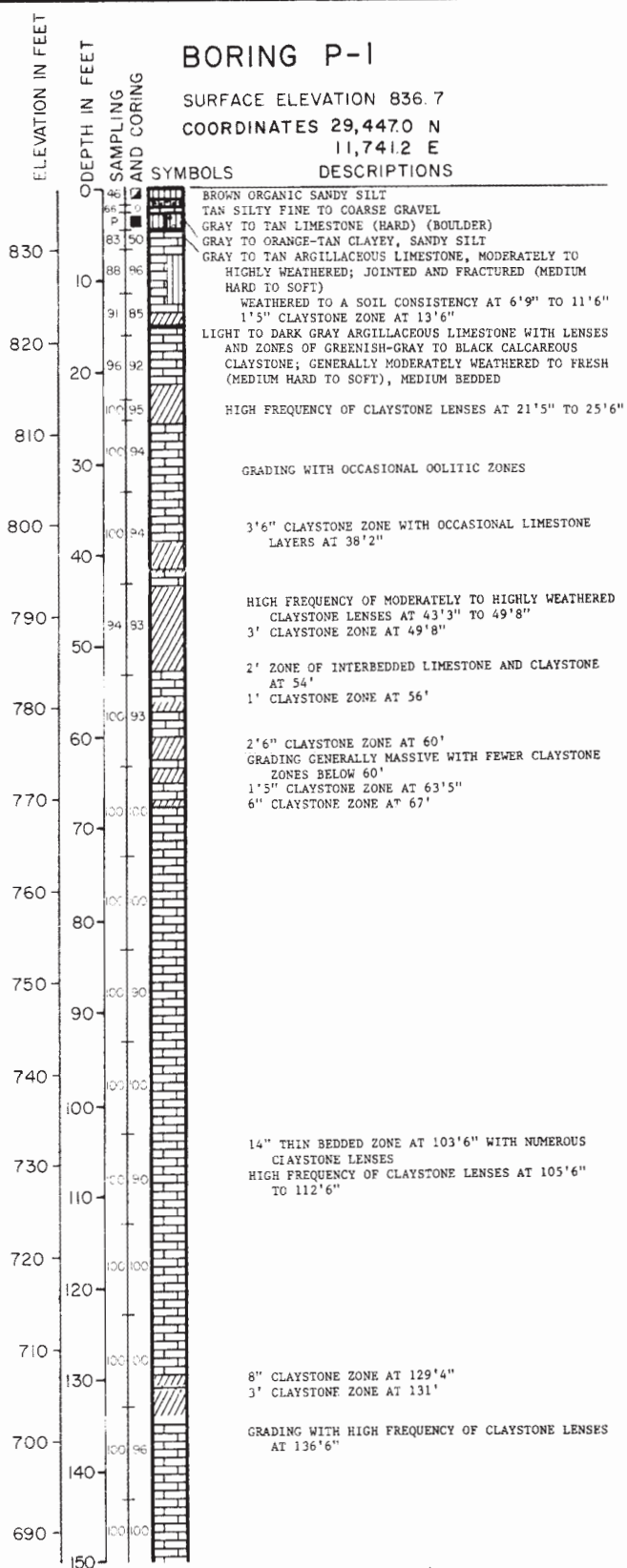
Amendment 4
January 31, 1978

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
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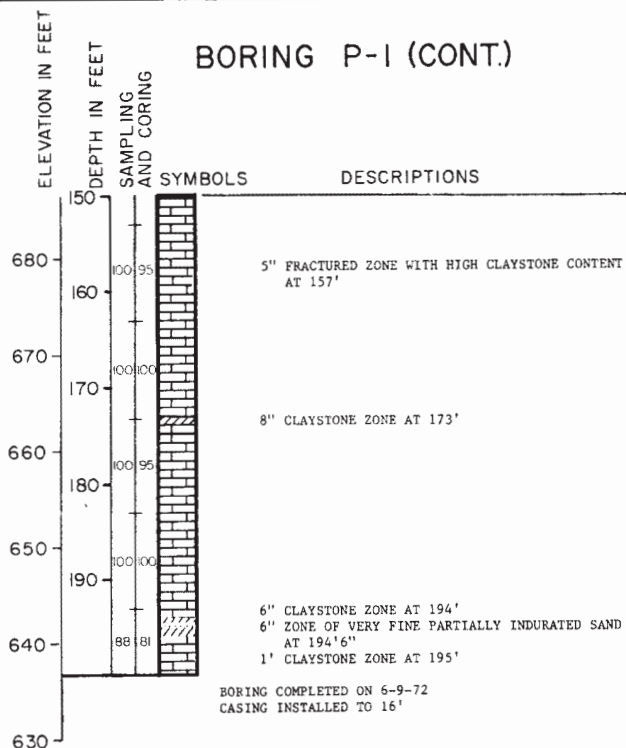
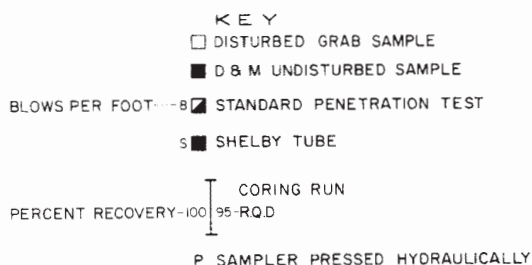
SLOPE PROFILE & STABILITY
SEC. 4-4

FIGURE 2.5.5-4

COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2	
LOCATION OF BORINGS	SQUAW CREEK DAM
FIGURE 2.5.5-6	



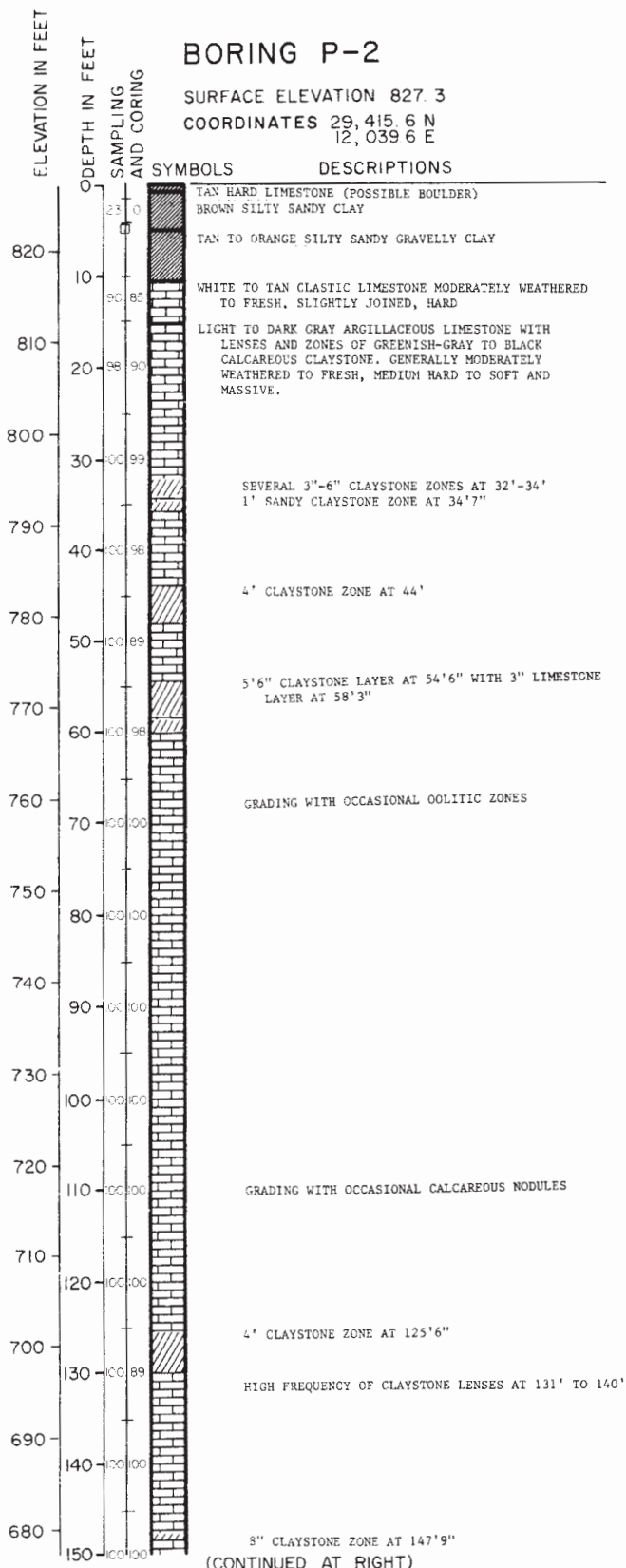
(CONTINUED AT RIGHT)



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-1

FIGURE 2.5.5 - 7



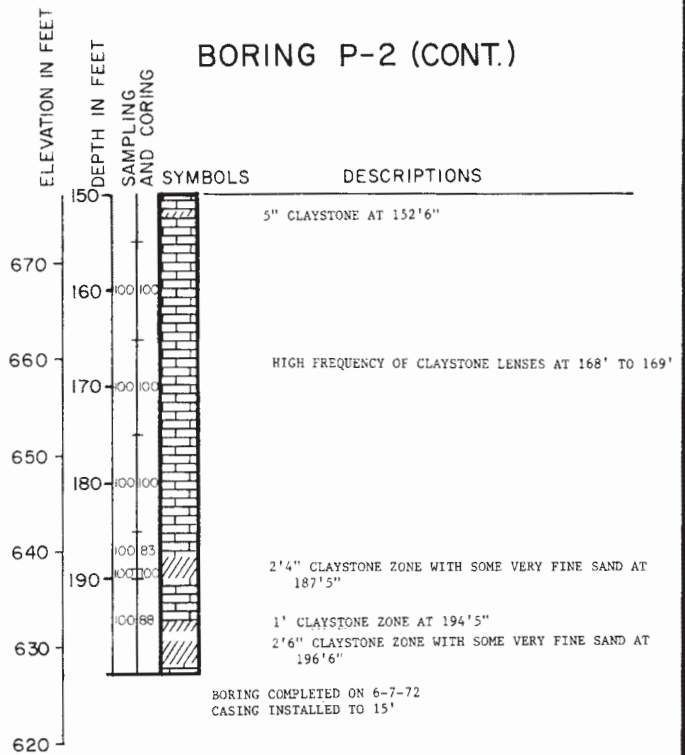
KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
S ■ SHELBY TUBE

PERCENT RECOVERY—100 | CORING RUN
95—R.Q.D.

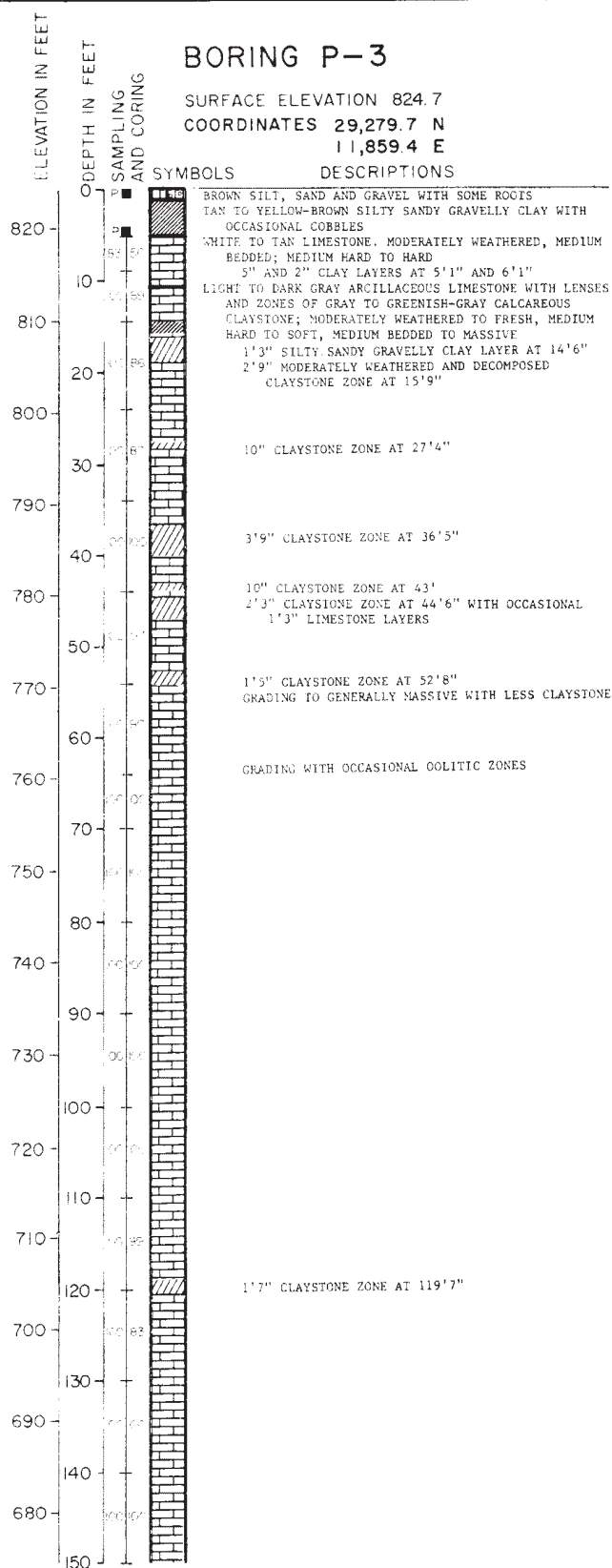
P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-2

FIGURE 2.5.5 - 8



(CONTINUED AT RIGHT)

KEY

□ DISTURBED GRAB SAMPLE

■ D.B.M. UNDISTURBED SAMPLE

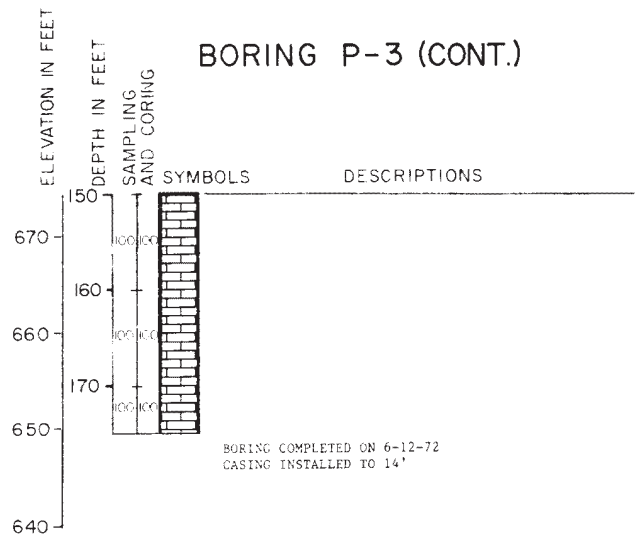
BLOWS PER FOOT: ▨ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

PERCENT RECOVERY: — R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

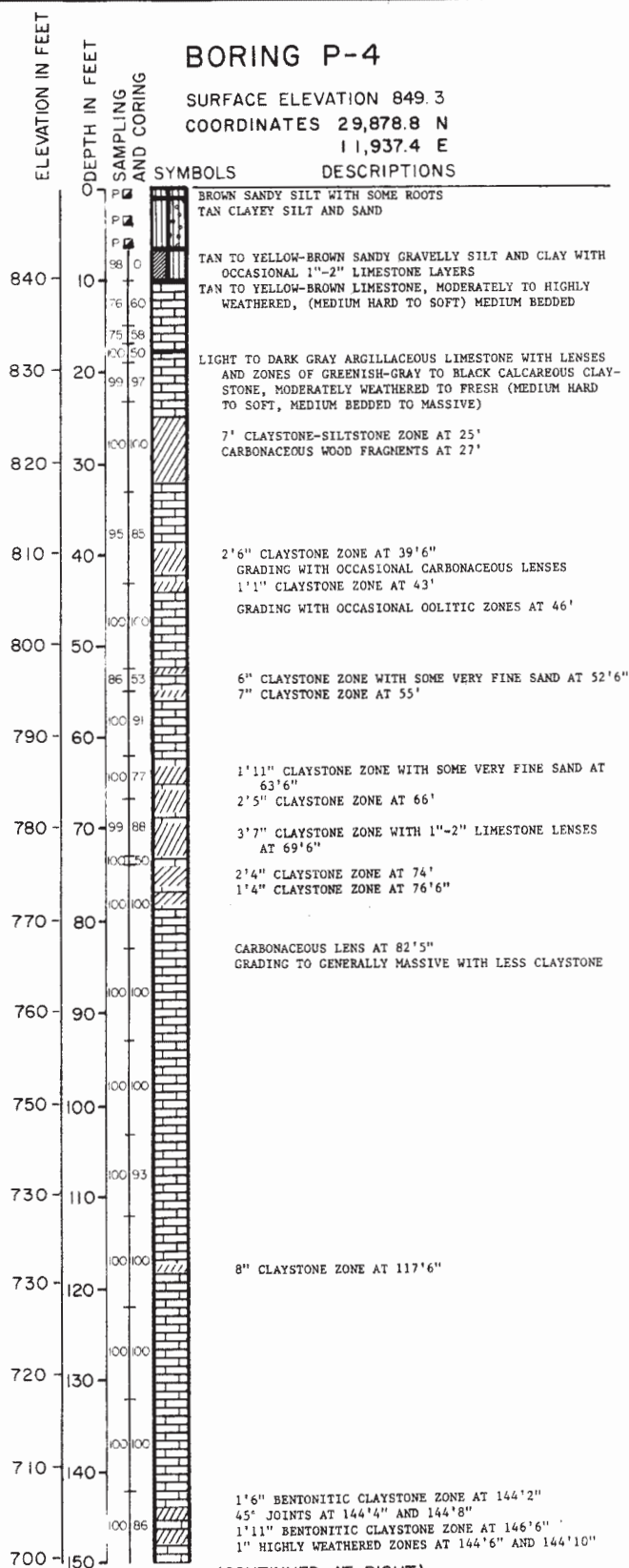


BORING COMPLETED ON 6-12-72
CASING INSTALLED TO 14'

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-3

FIGURE 2.5.5-9



(CONTINUED AT RIGHT)

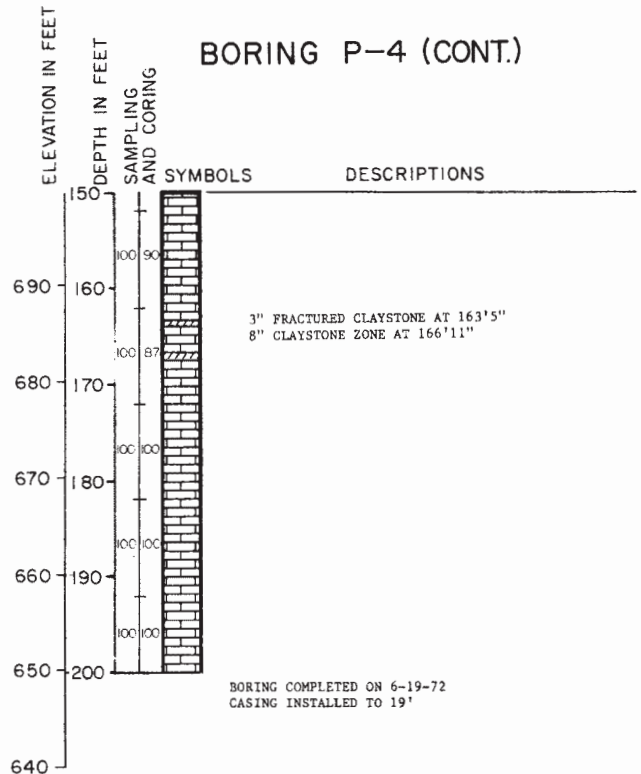
KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—B STANDARD PENETRATION TEST
S SHELBY TUBE

PERCENT RECOVERY—100 CORING RUN
95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

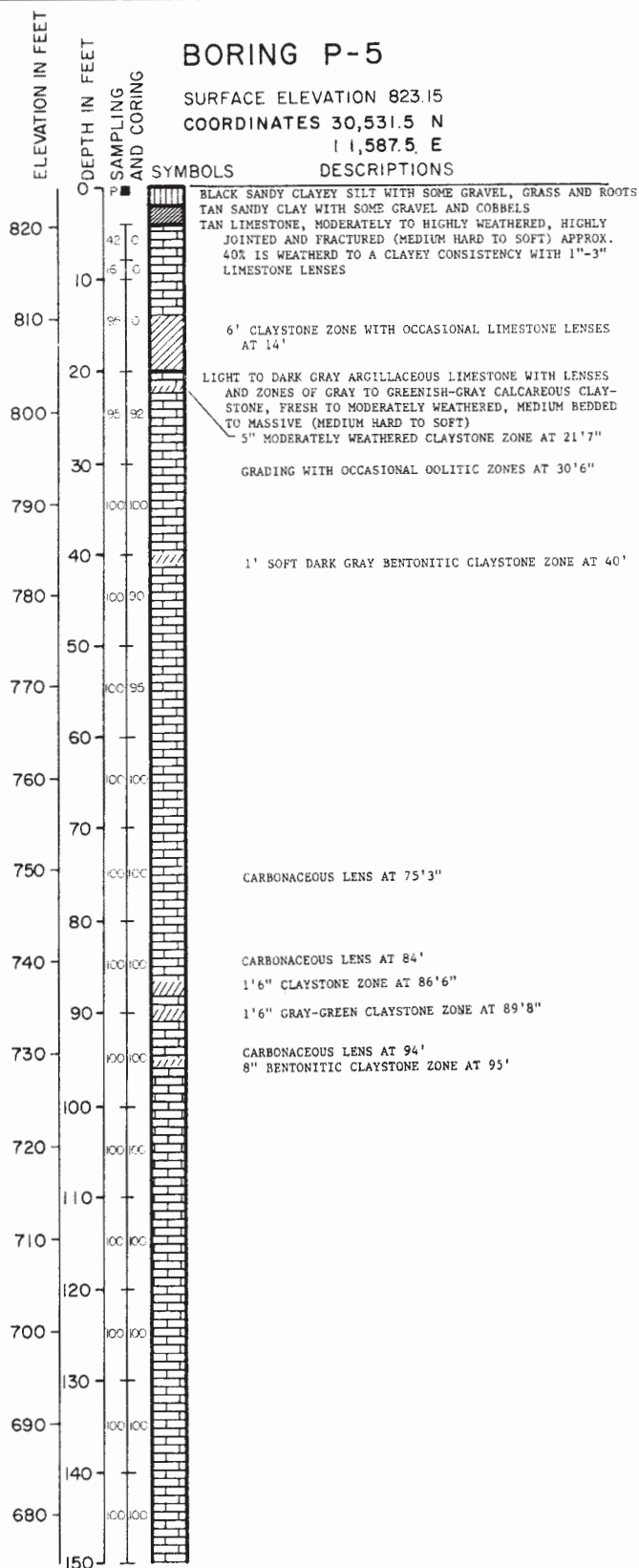


BORING COMPLETED ON 6-19-72
CASING INSTALLED TO 19'

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

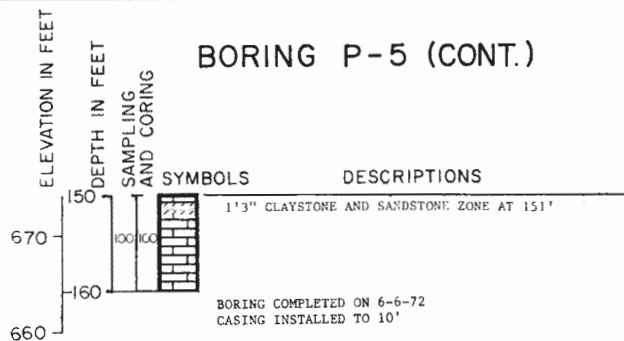
LOG OF BORING P-4

FIGURE 2.5.5 - 10



(CONTINUED AT RIGHT)

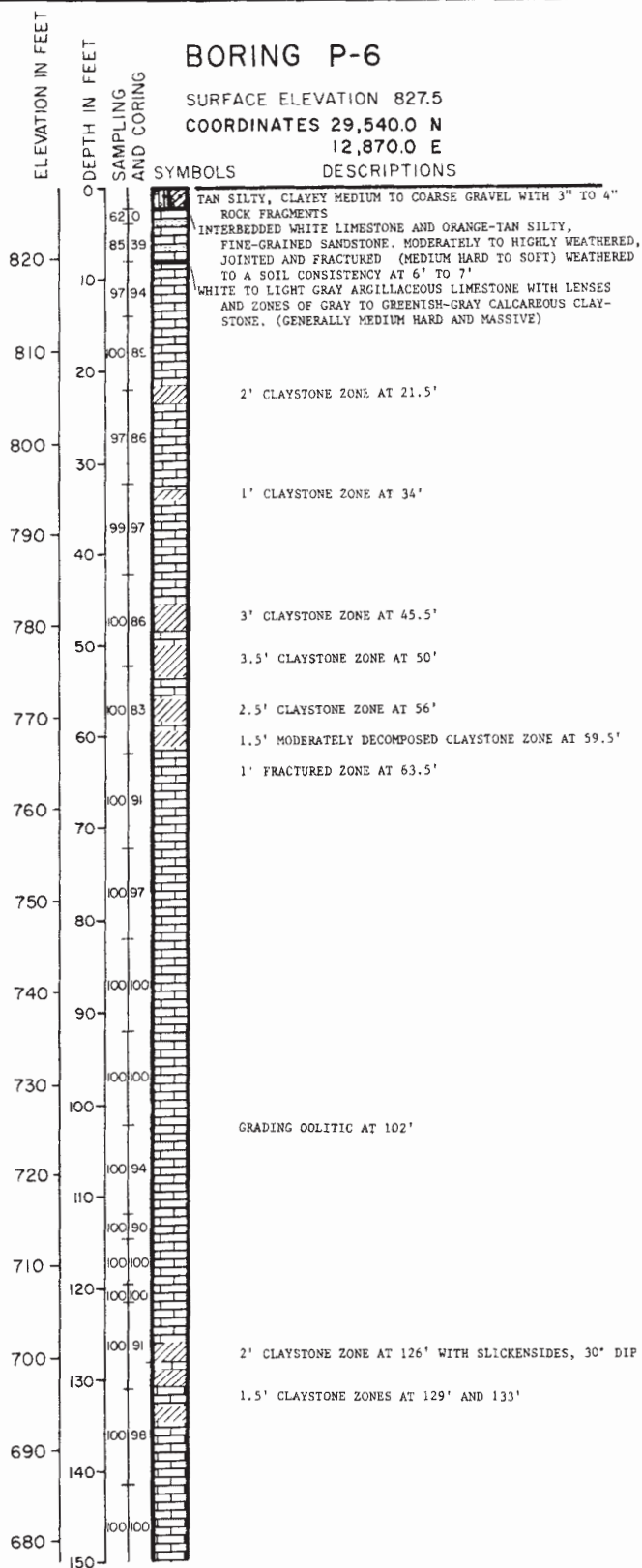
KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT --- S STANDARD PENETRATION TEST
 S SHELBY TUBE
 CORING RUN
 PERCENT RECOVERY --- 95-RQD.
 P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

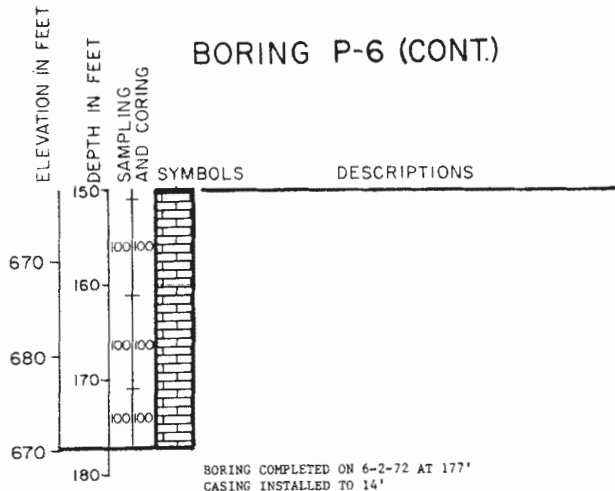
LOG OF BORING P-5

FIGURE 2.5.5 - 11



(CONTINUED AT RIGHT)

KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE
 CORING RUN
 PERCENT RECOVERY — 100 95-RQ.D.
 P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-6

FIGURE 2.5.5 - 12

BORING P-7

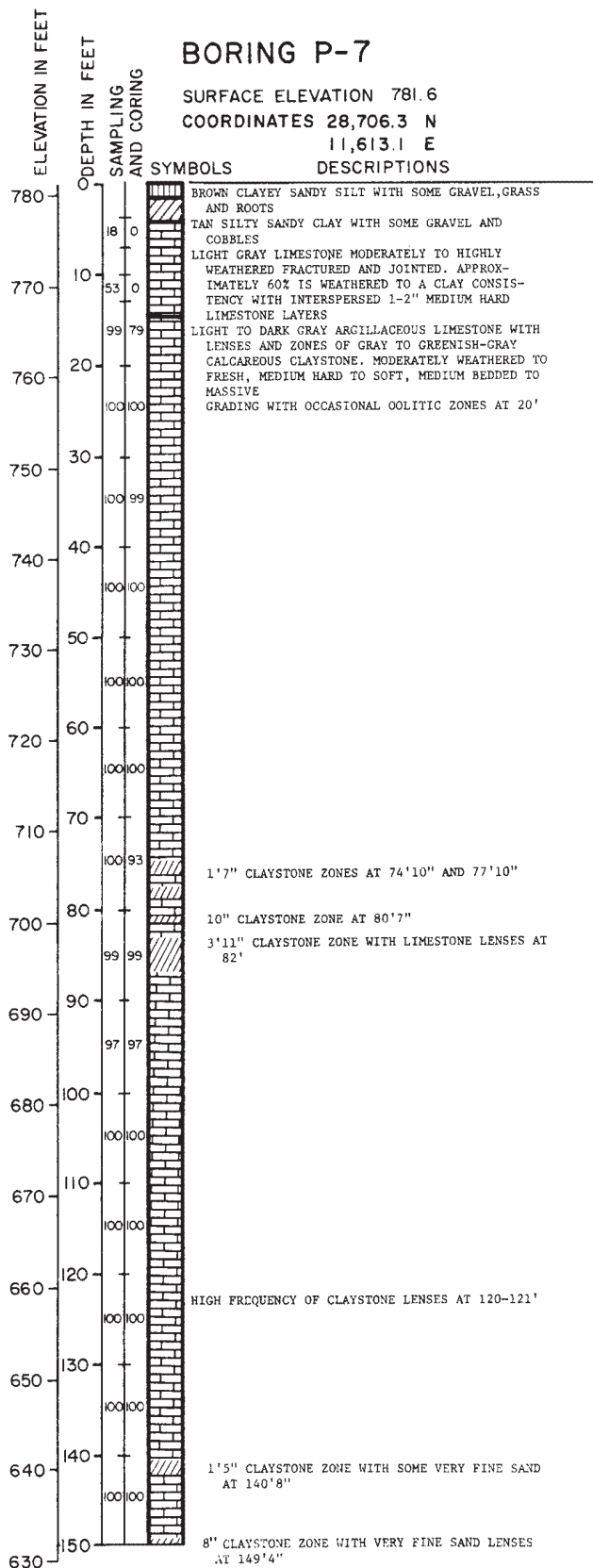
SURFACE ELEVATION 781.6

COORDINATES 28,706.3 N

11,613.1 E

SYMBOLS

DESCRIPTIONS



BORING COMPLETED ON 6-14-72
CASING INSTALLED TO 10'

KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

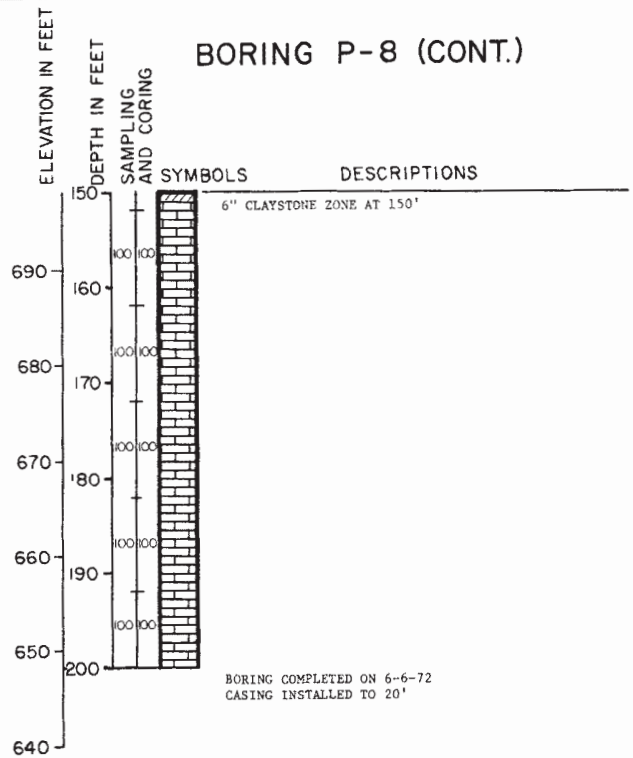
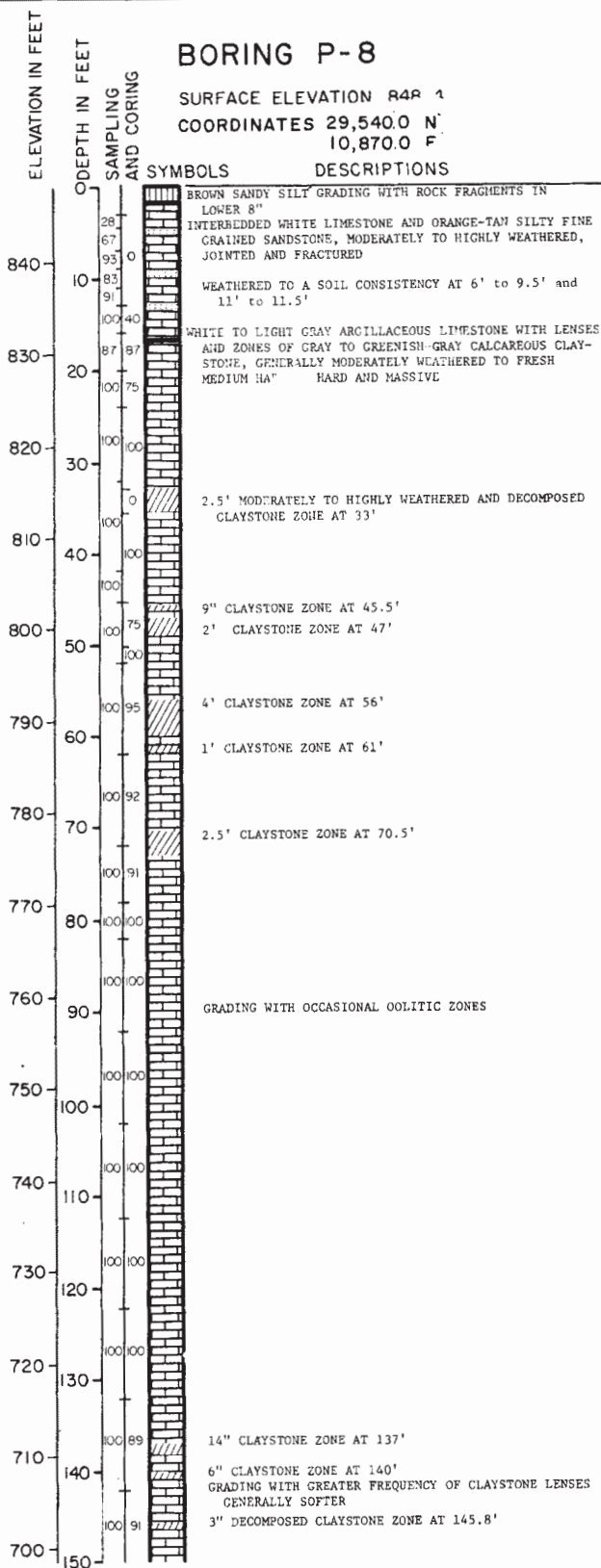
PERCENT RECOVERY—100 ■ CORING RUN
95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-7

FIGURE 2.5.5-13



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

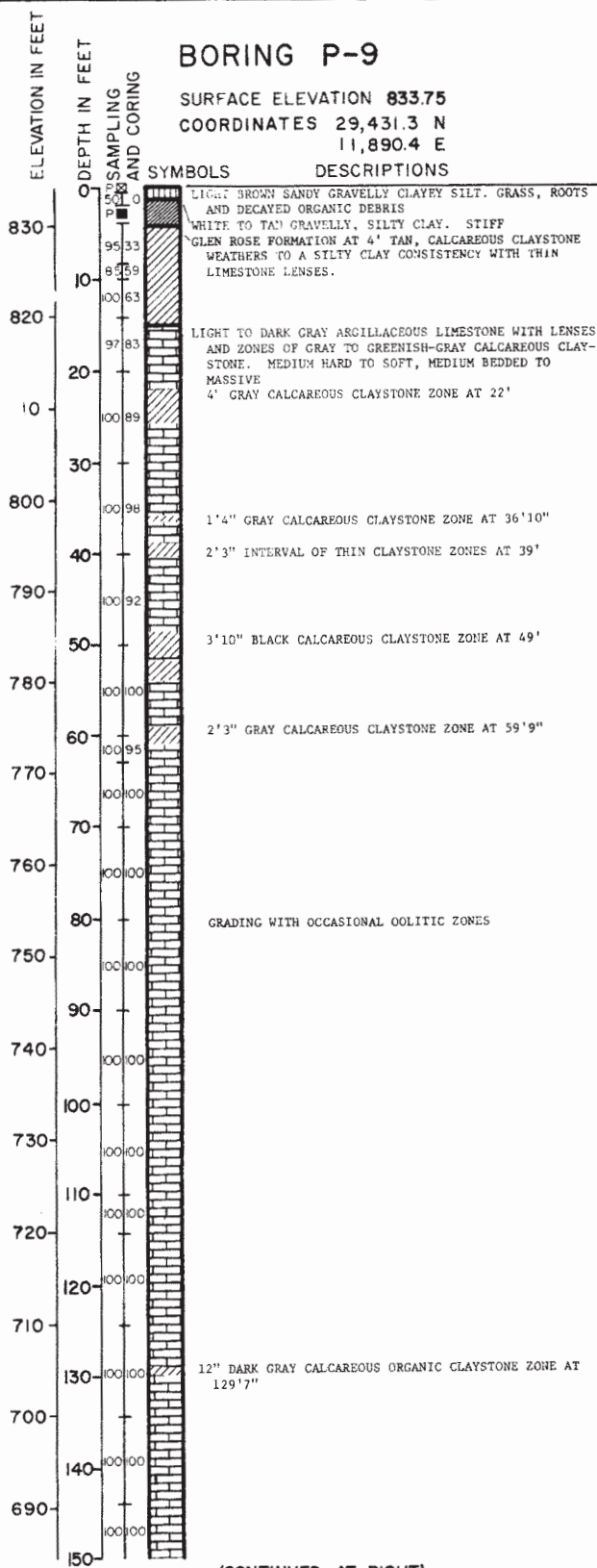
PERCENT RECOVERY — 100 ■ 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING P-8

FIGURE 2.5.5 -14



(CONTINUED AT RIGHT)

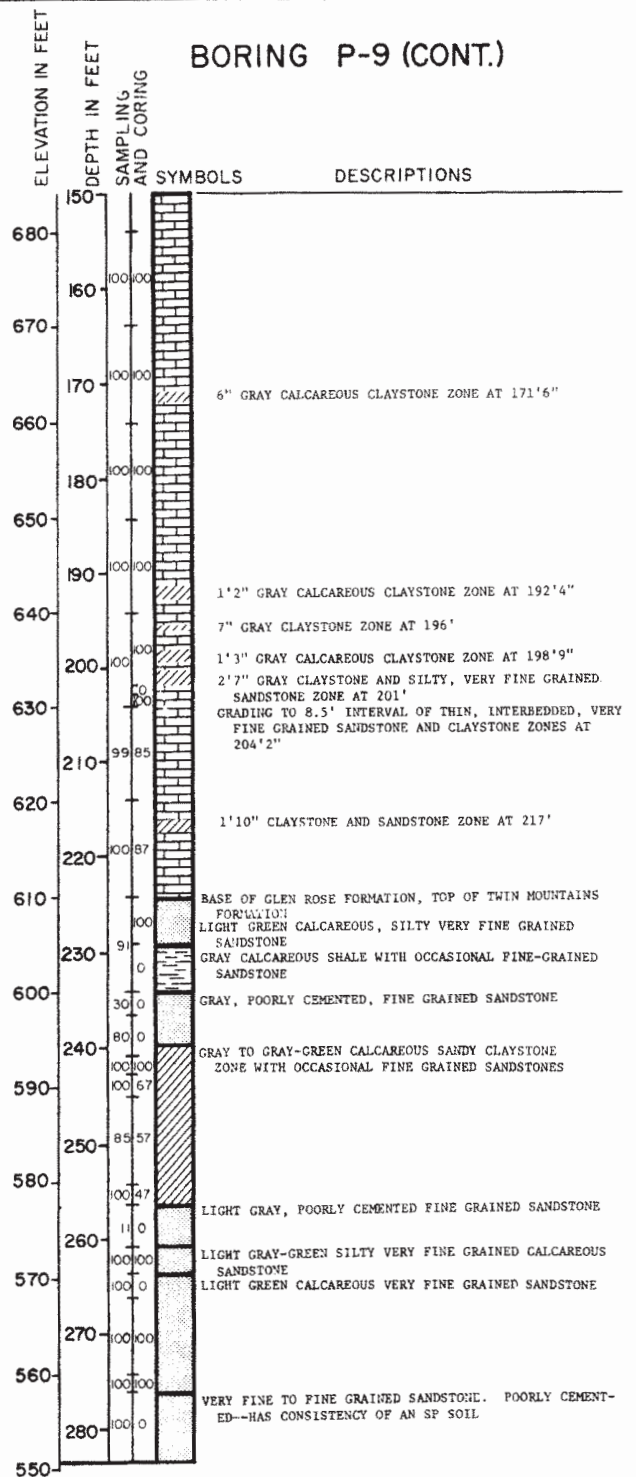
KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
s ■ SHELBY TUBE

PERCENT RECOVERY—100 ■ CORING RUN
95-RQD

P SAMPLER PRESSED HYDRAULICALLY

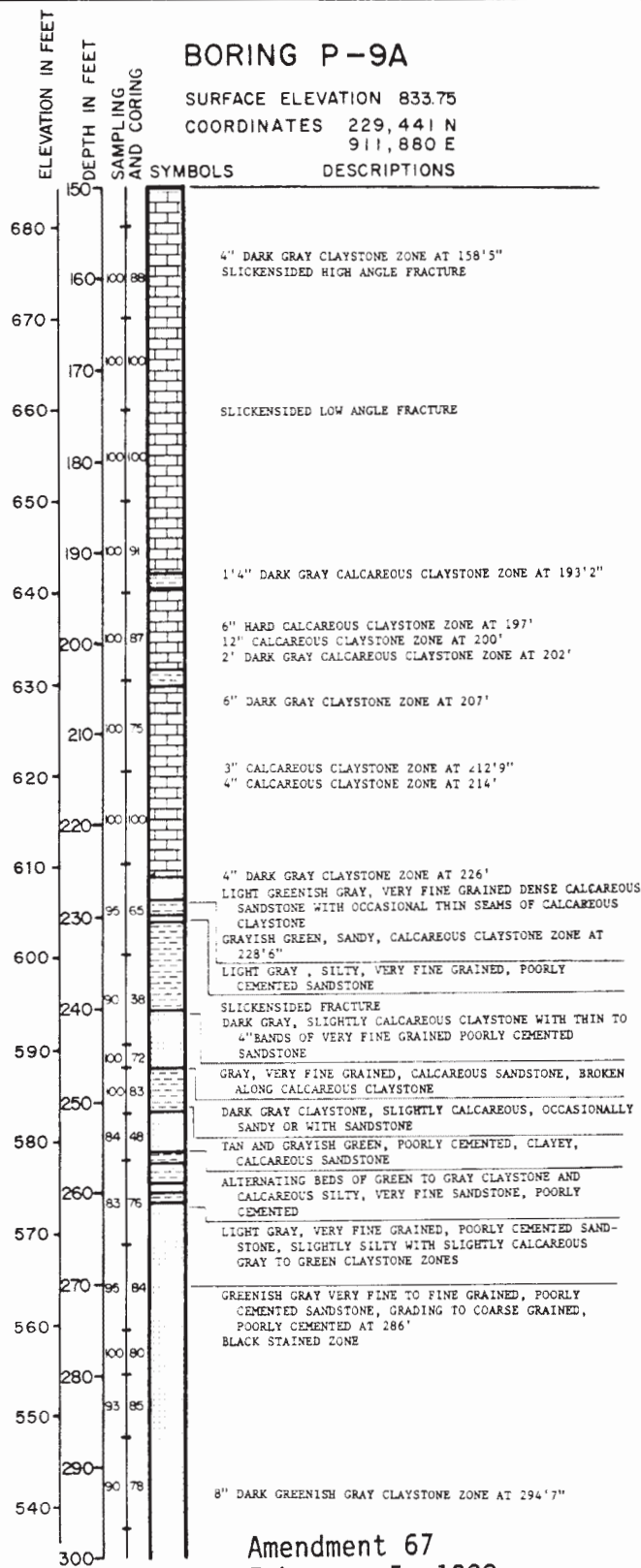
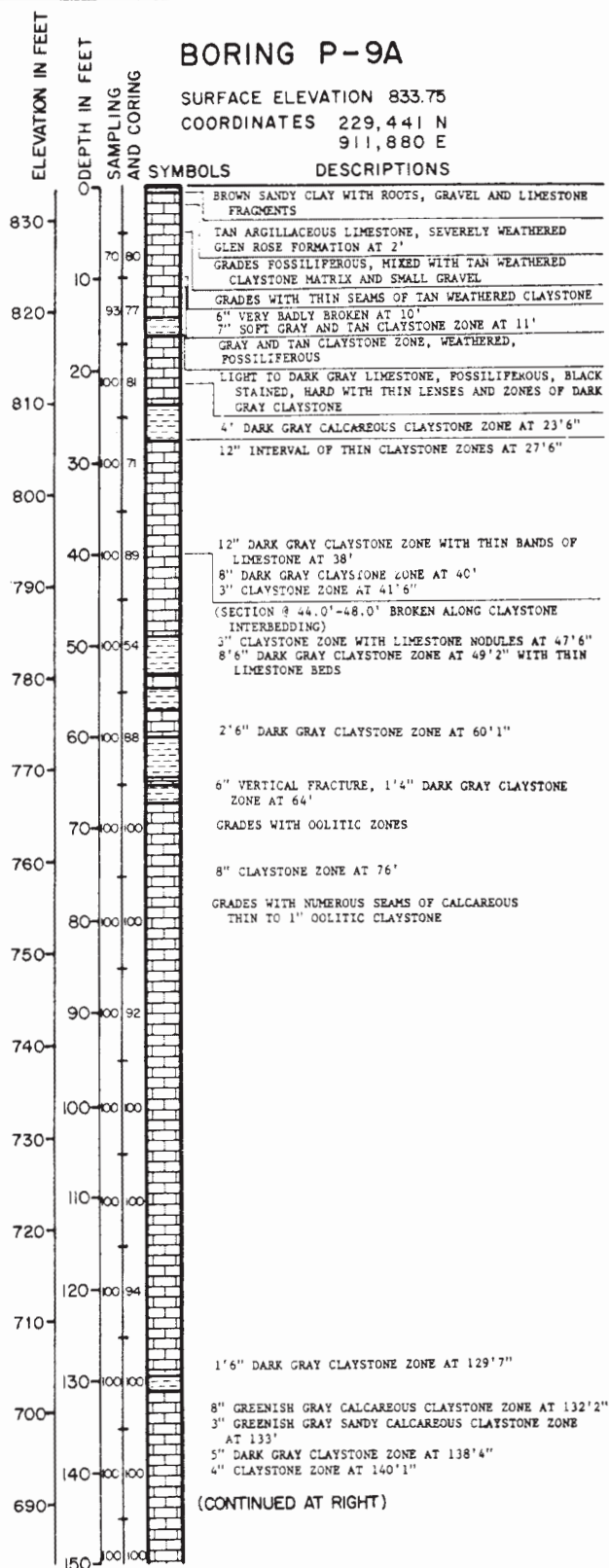


BORING COMPLETED ON 7-3-72
CASING INSTALLED TO 20'

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING P-9

FIGURE 2.5.5 -15



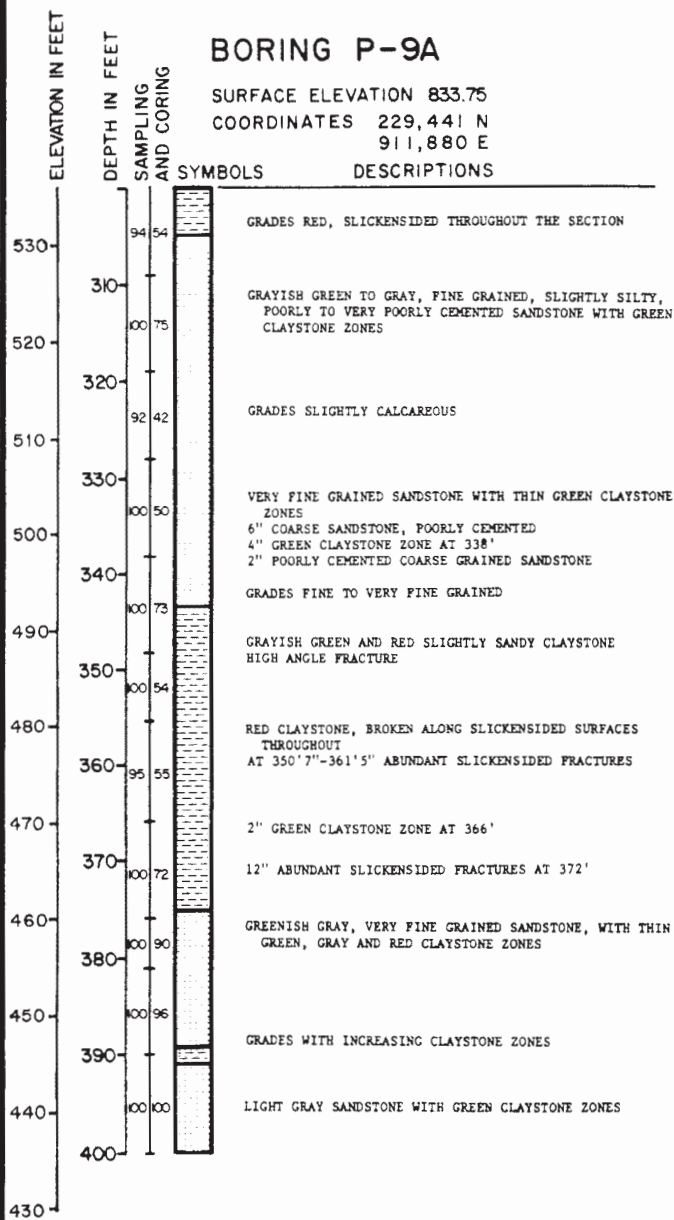
Amendment 67
February 5, 1988

KEY
□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE
BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
S ■ SHELBY TUBE
CORING RUN
PERCENT RECOVERY—100 95-RQD
P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-9A

FIGURE 2.5.5 - 16 (SH. 1 OF 2)



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
 ■ SHELBY TUBE

PERCENT RECOVERY — 100 | CORING RUN
 95-RQD.

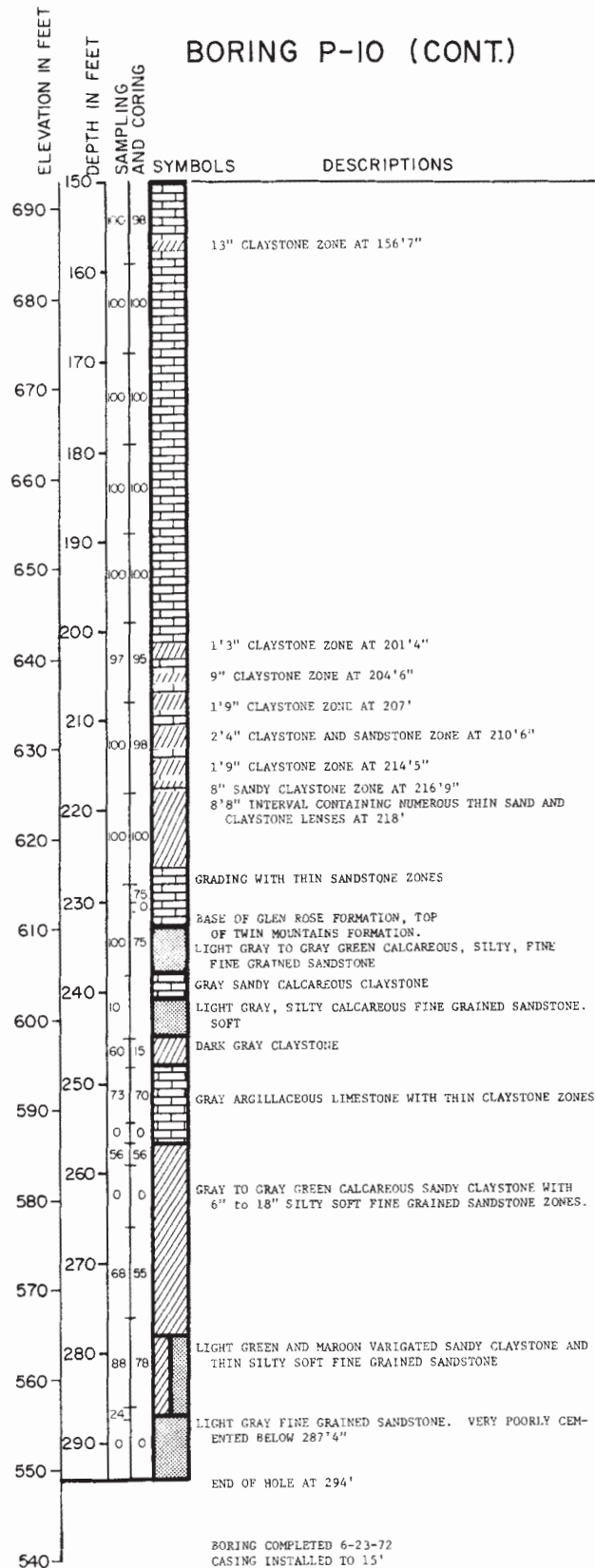
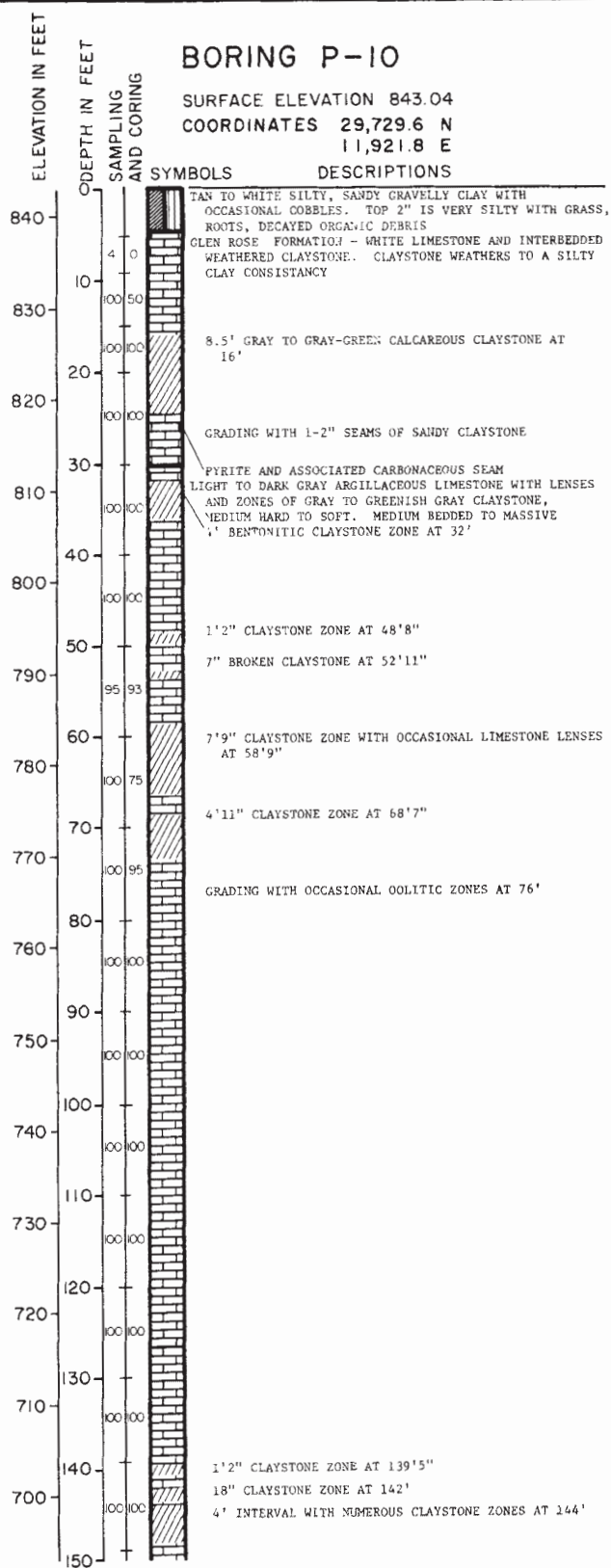
P SAMPLER PRESSED HYDRAULICALLY

Amendment 67
 February 5, 1988

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-9A

FIGURE 2.5.5 - 16 (SH. 2 OF 2)



KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
S ■ SHELBY TUBE

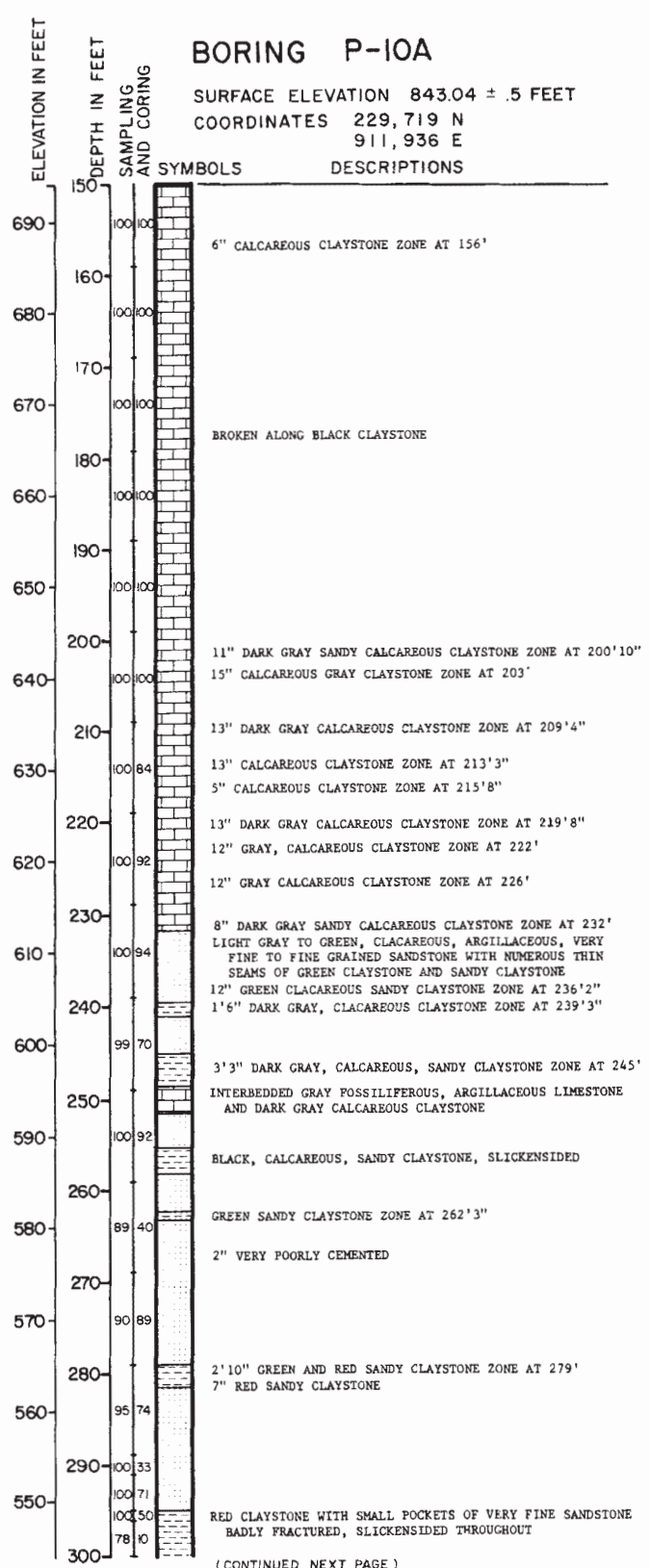
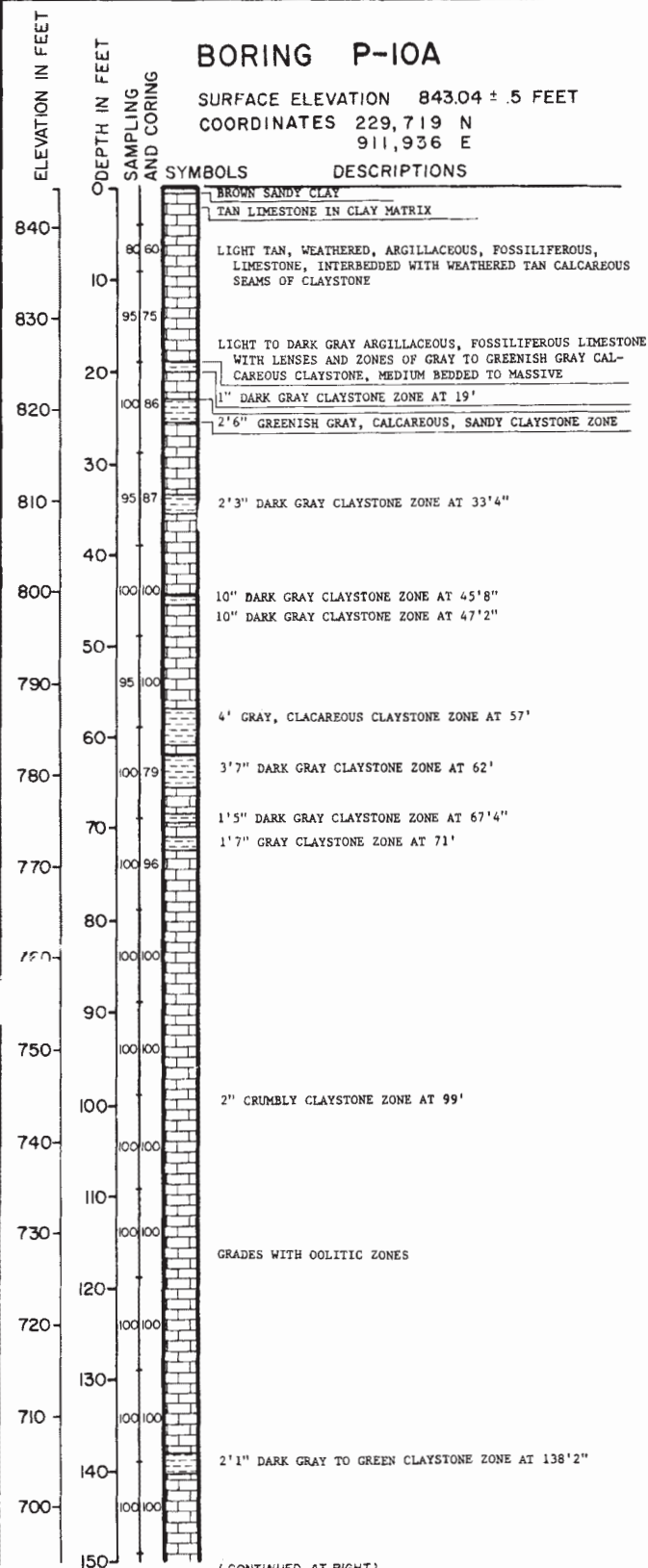
— CORING RUN
PERCENT RECOVERY—100 95-RQ.D.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING P-10

FIGURE 2.5.5-17

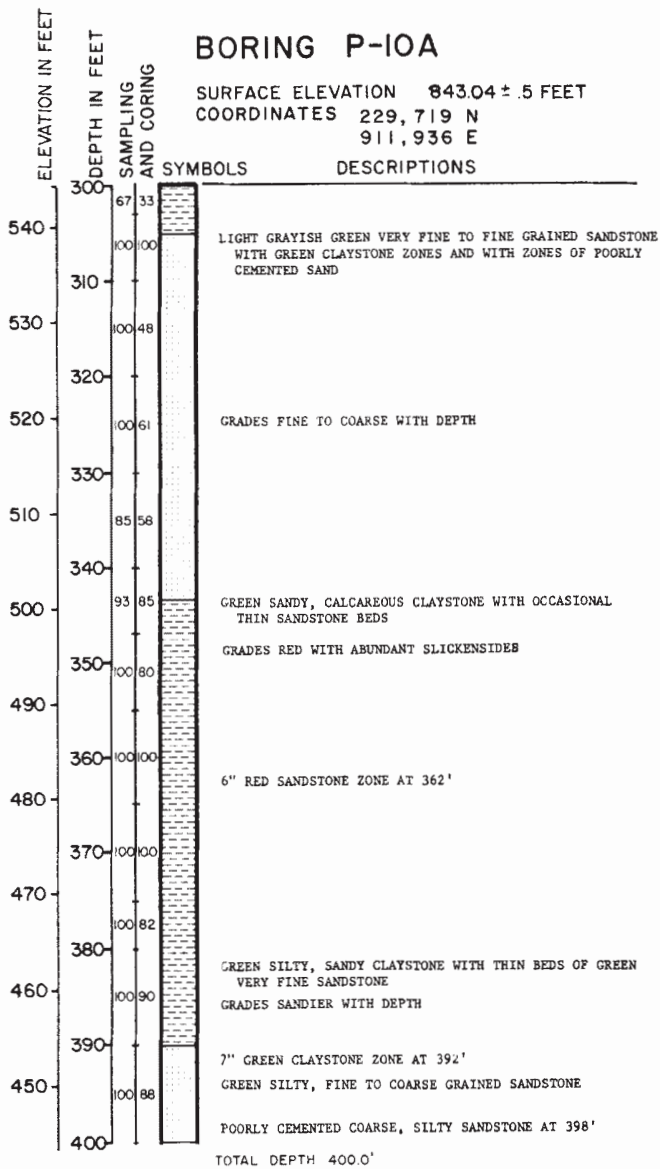


KEY
 □ DISTURBED GRAB SAMPLE
 ■ D.B.M. UNDISTURBED SAMPLE
 BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
 ■ SHELBY TUBE
 CORING RUN
 PERCENT RECOVERY—100 95-R.Q.D.
 P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORING P-10A

FIGURE 2.5.5-18 (SH.1 OF 2)



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

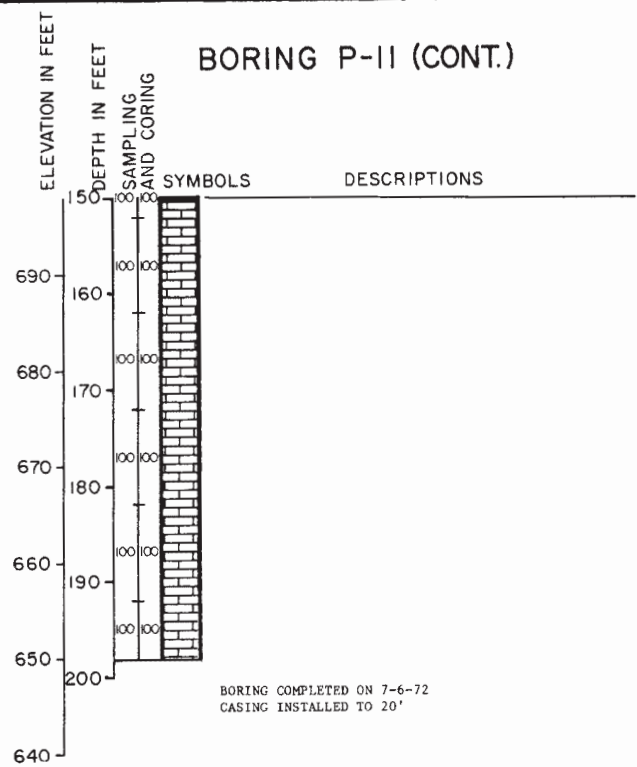
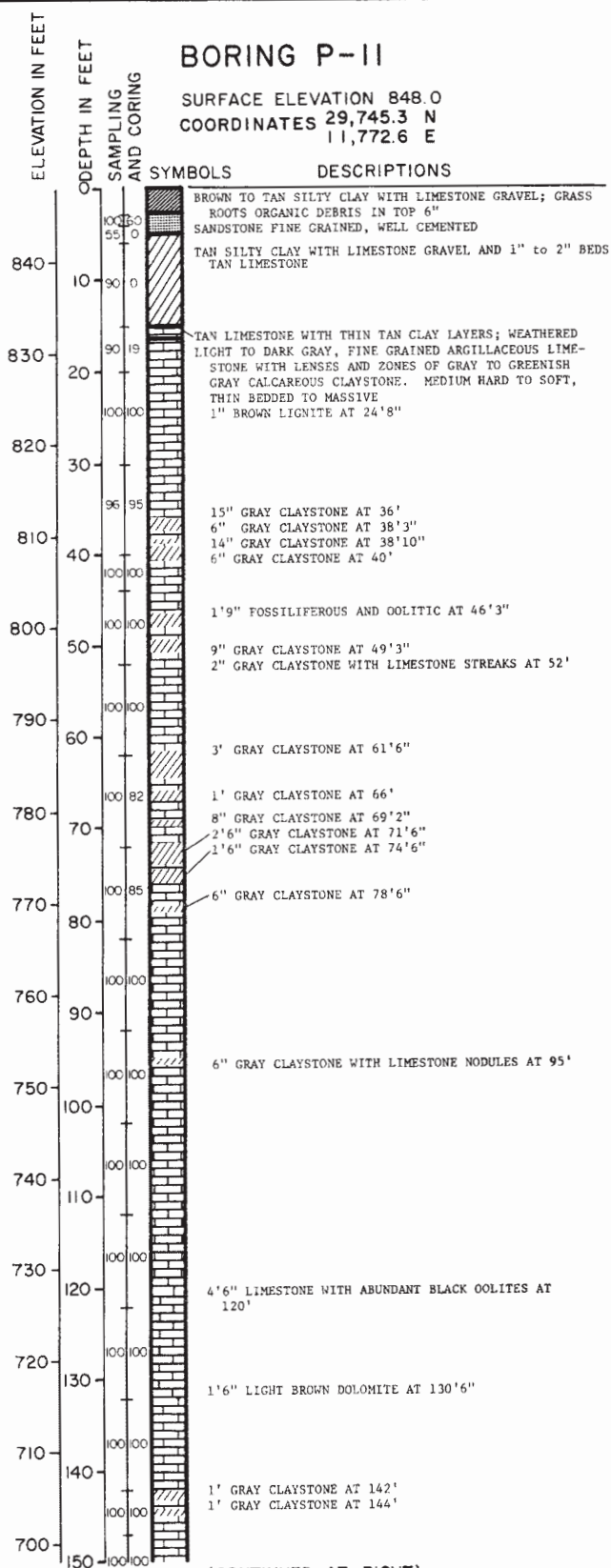
BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE

PERCENT RECOVERY — 100 | CORING RUN
 95-RQD

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-10A



KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
S ■ SHELBY TUBE

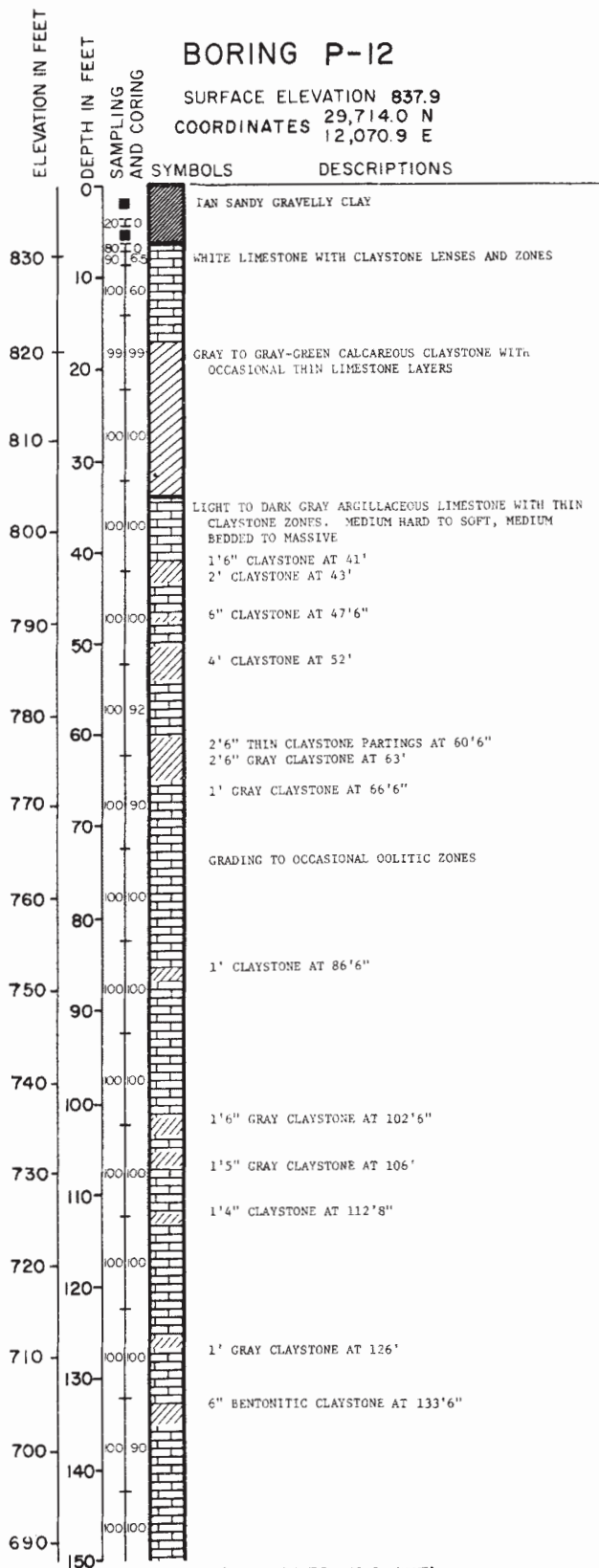
PERCENT RECOVERY—100 ■ CORING RUN
95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-11

FIGURE 2.5.5-19



(CONTINUED AT RIGHT)

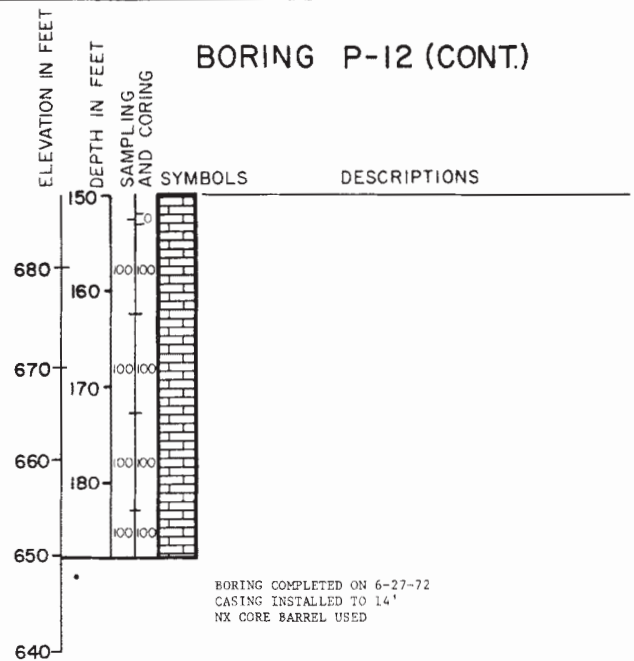
KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
 ■ SHELBY TUBE

PERCENT RECOVERY — 100 | CORING RUN
 95-R.Q.D.

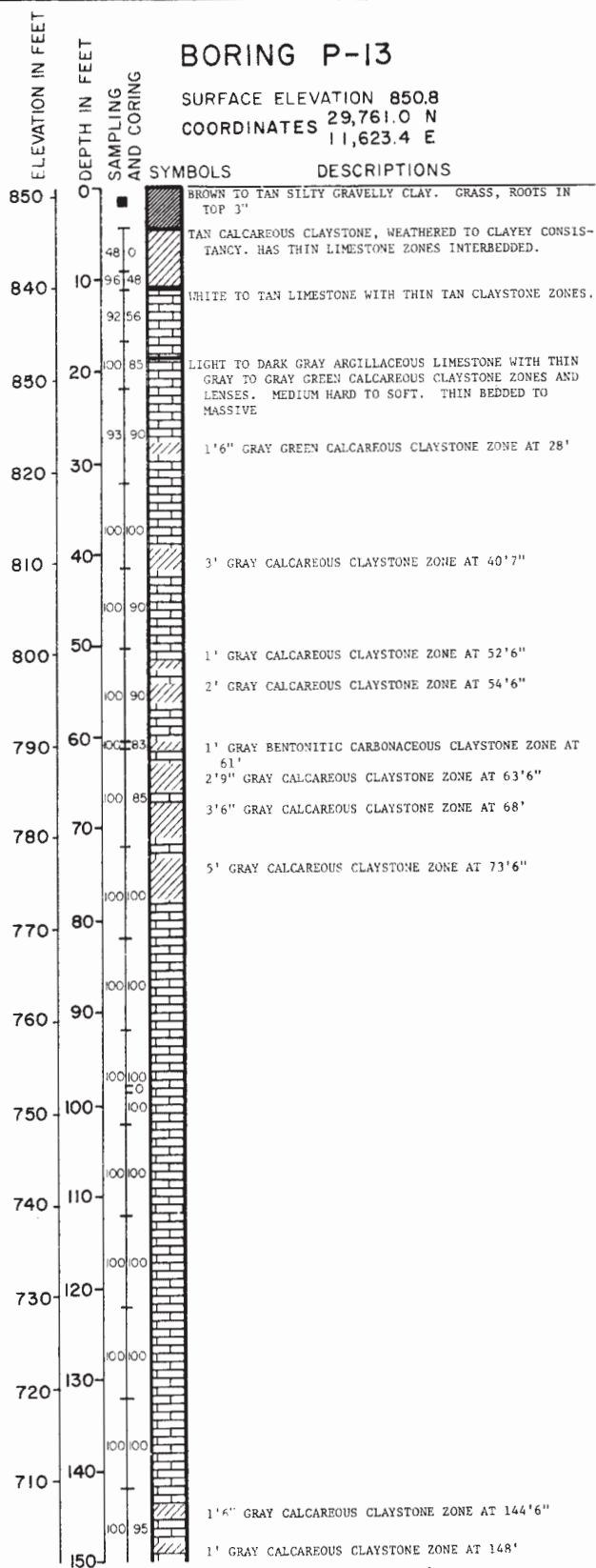
P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
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 UNITS 1 and 2

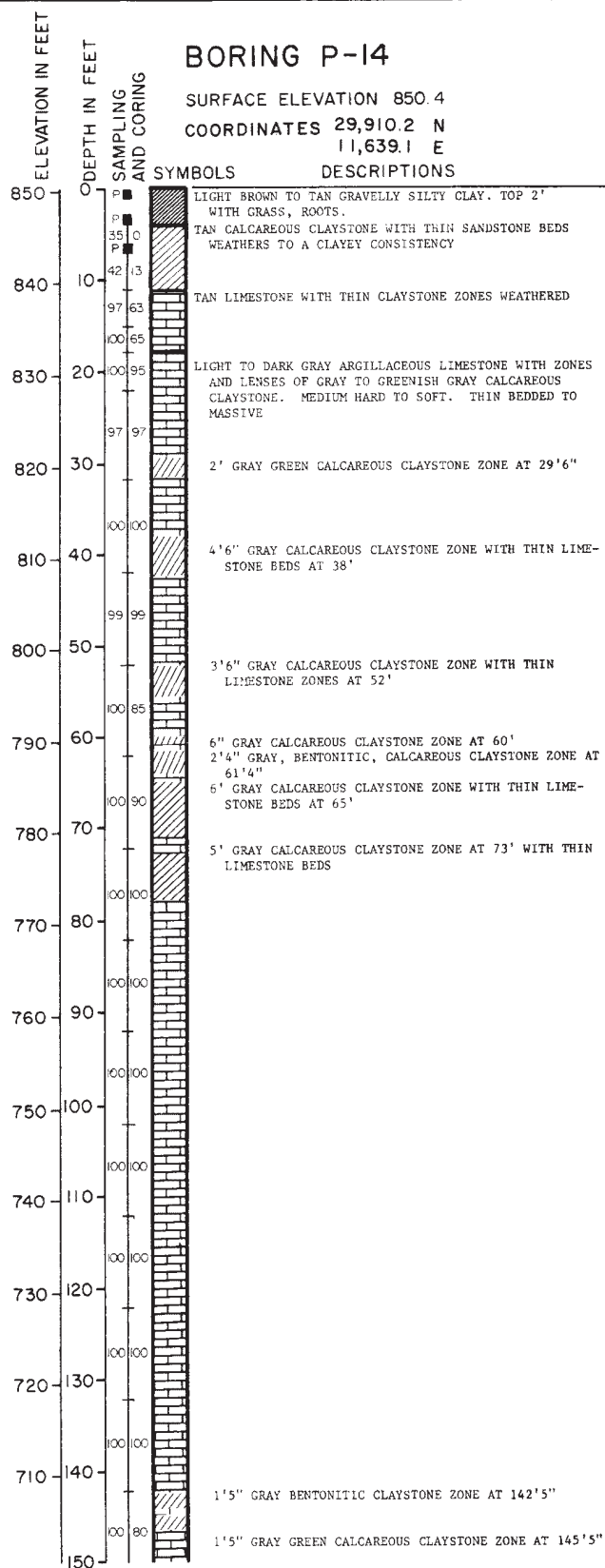
LOG OF BORING P-12

FIGURE 2.5.5 - 20



BORING COMPLETED ON 7-11-72
CASING INSTALLED TO 22'

FIGURE 2.5.5-21



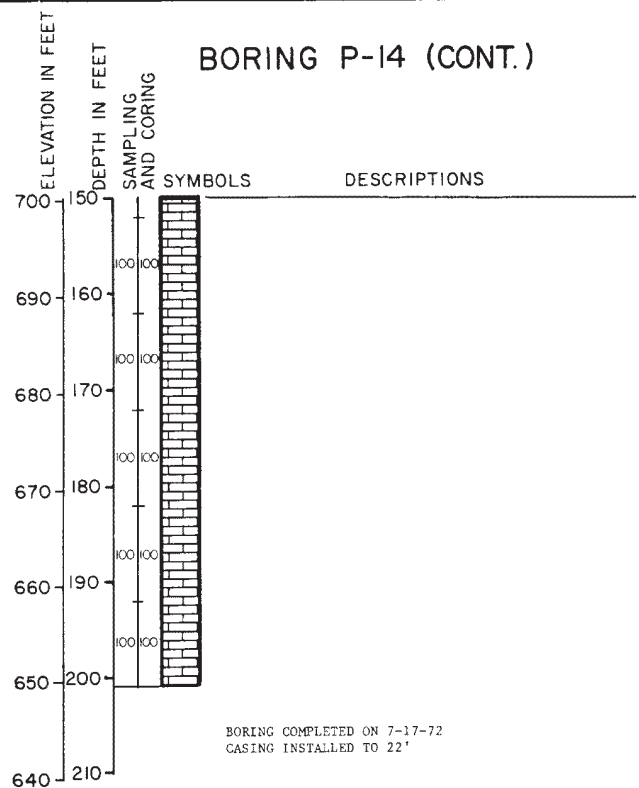
KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
■ SHELBY TUBE

PERCENT RECOVERY—100 ■ CORING RUN
95-R.Q.D.

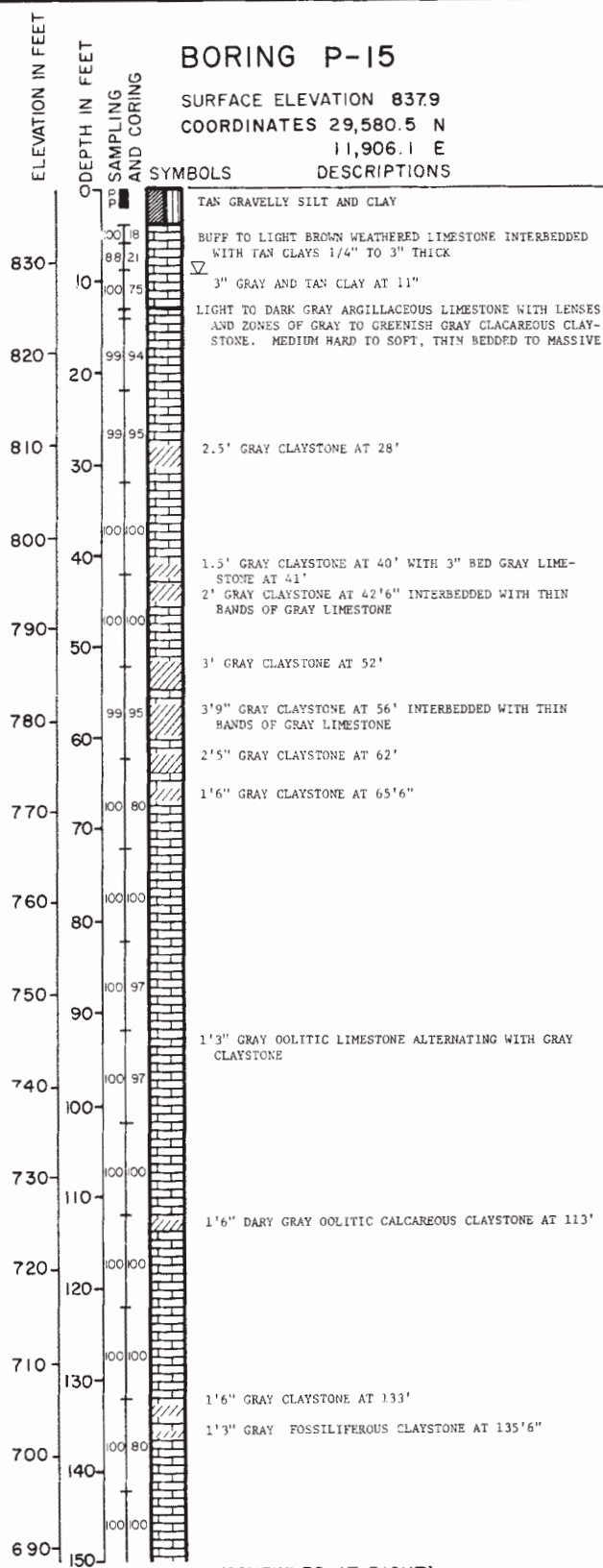
P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

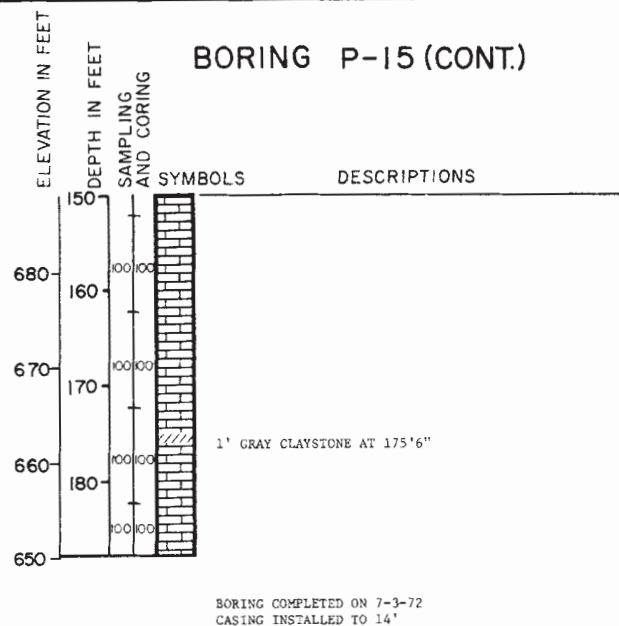
LOG OF BORING P-14

FIGURE 2.5.5 -22



(CONTINUED AT RIGHT)

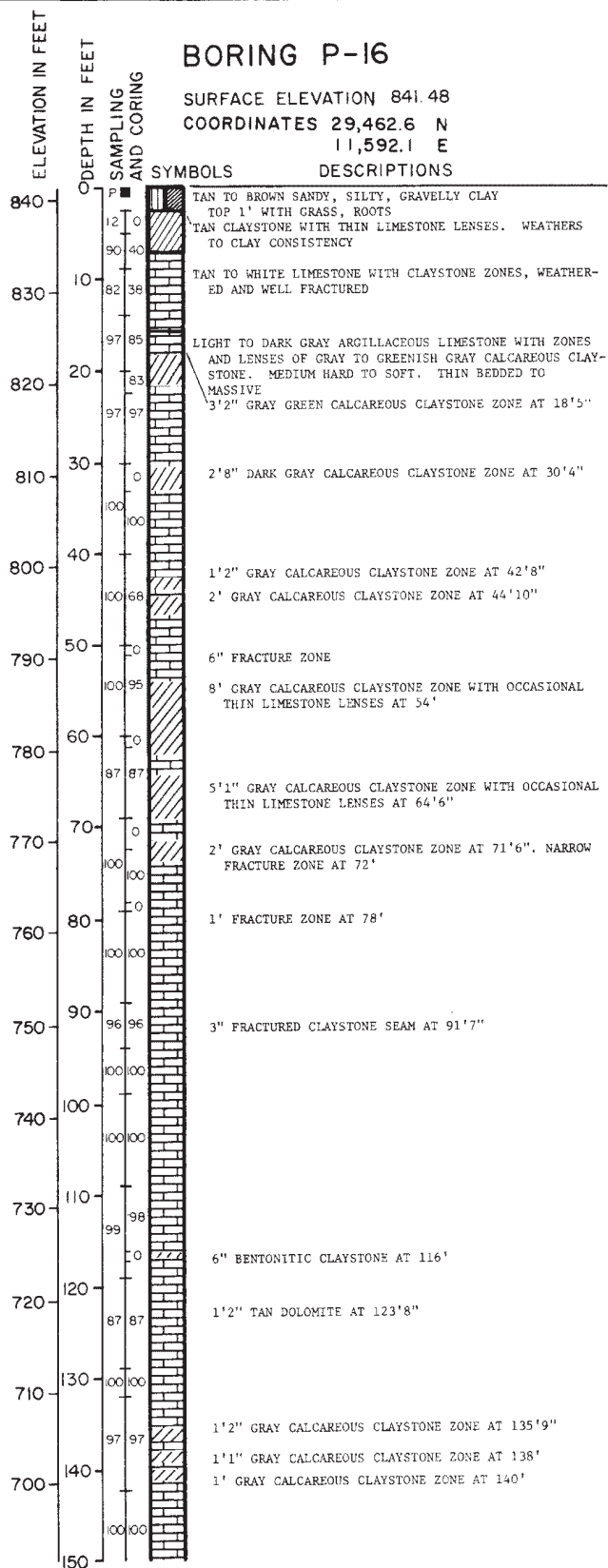
KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 — 8 STANDARD PENETRATION TEST
 S SHELBY TUBE
 CORING RUN
 PERCENT RECOVERY—100 95-RQD.
 P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-15

FIGURE 2.5.5 - 23



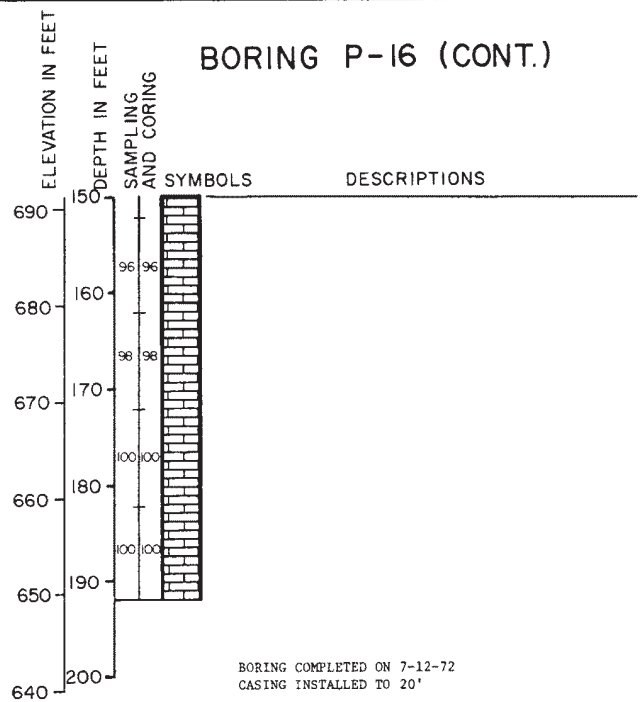
KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
s ■ SHELBY TUBE

PERCENT RECOVERY—100 ■ CORING RUN
95-R.Q.D.

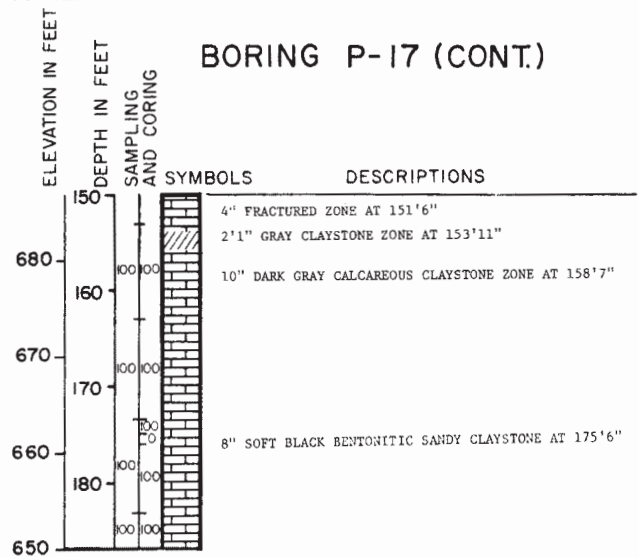
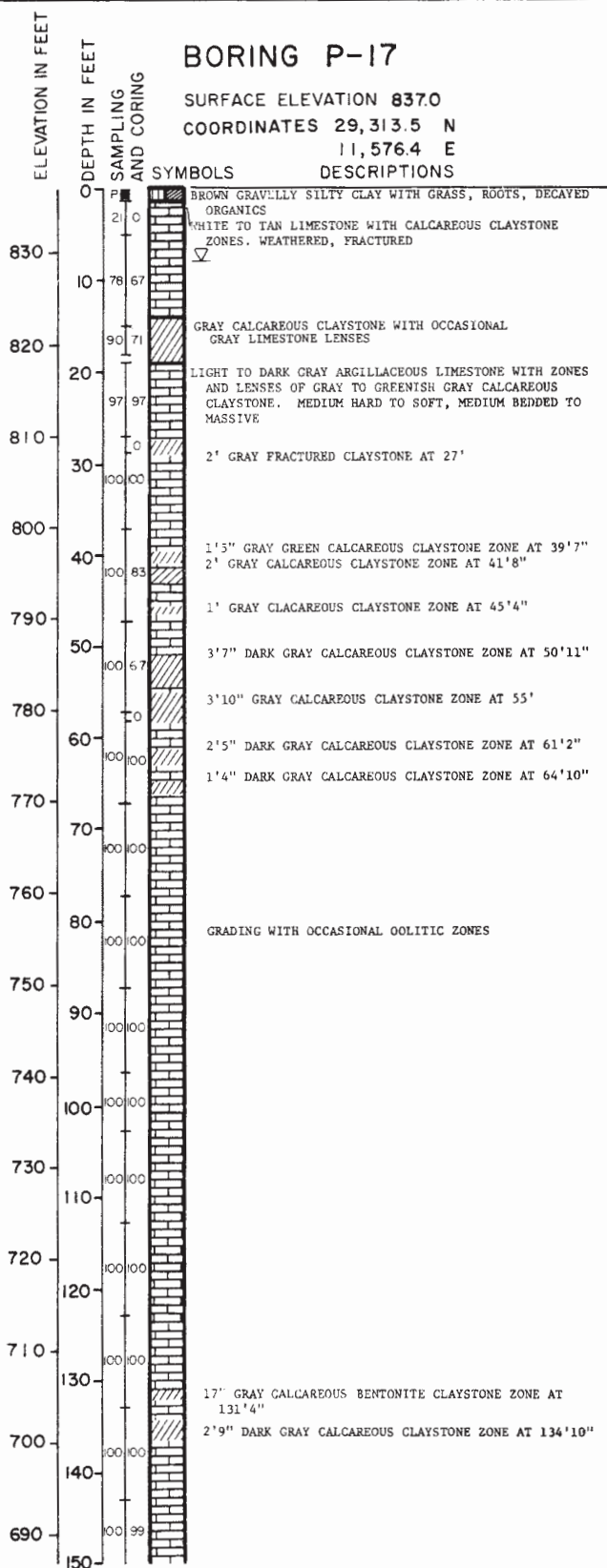
P SAMPLER PRESSED HYDRAULICALLY



**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING P-16

FIGURE 2.5.5 - 24



BORING COMPLETED ON 7-3-72
 CASING INSTALLED TO 19.5'

KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
 ■ SHELBY TUBE

PERCENT RECOVERY — 100 — CORING RUN
 95 — R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-17

FIGURE 2.5.5 - 25

BORING P-18

SURFACE ELEVATION +779.9'

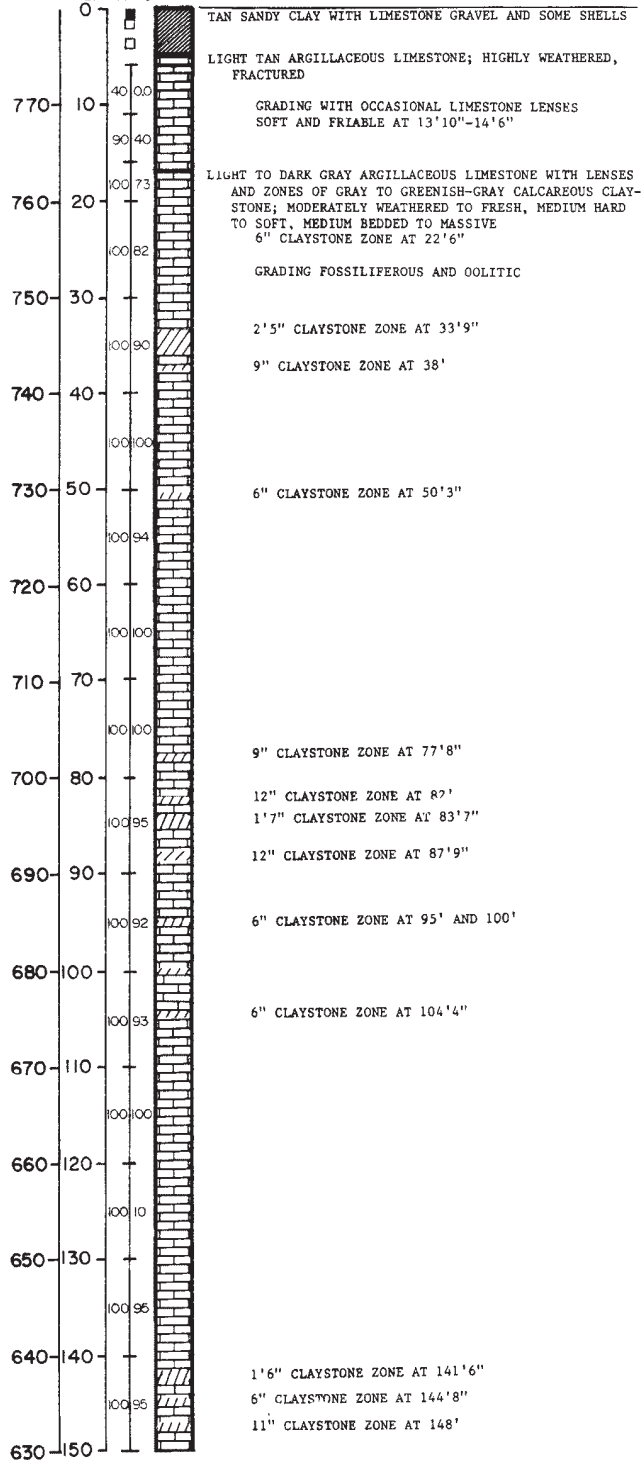
COORDINATES 229,047 N

911,985 E

ELEVATION IN FEET
DEPTH IN FEET
SAMPLING
AND CORING

SYMBOLS

DESCRIPTIONS



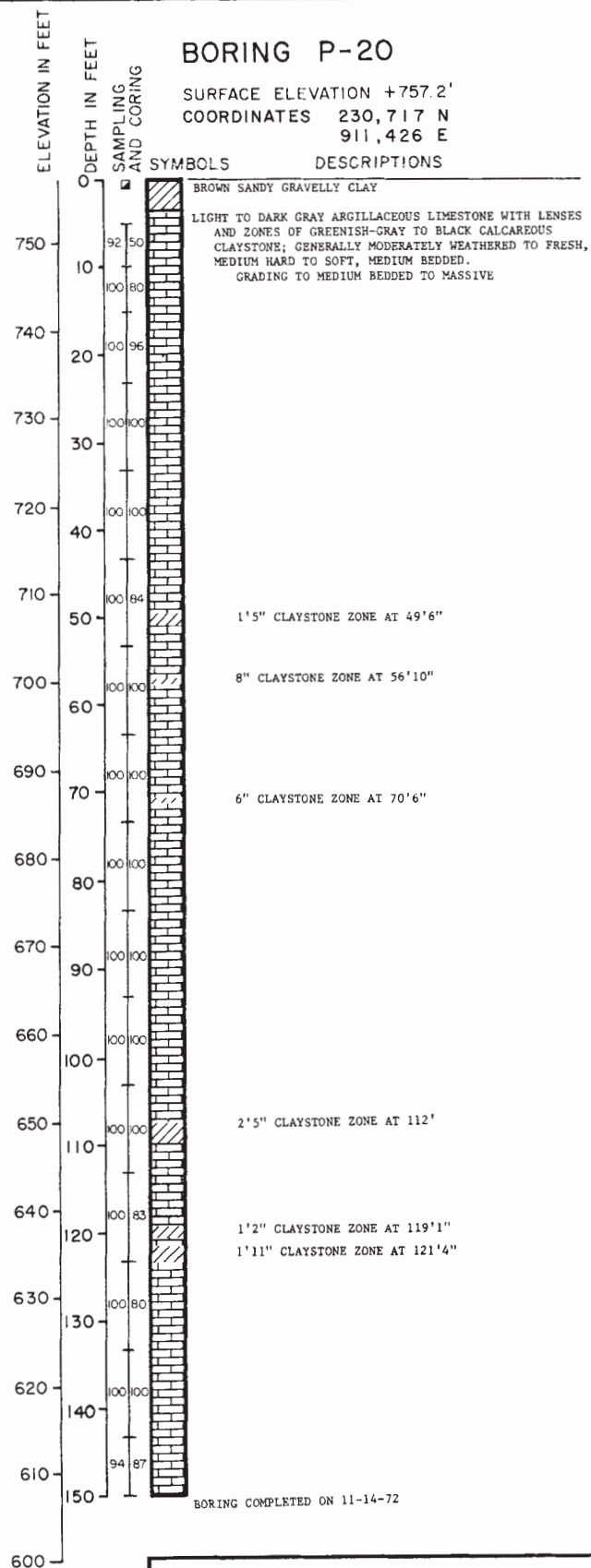
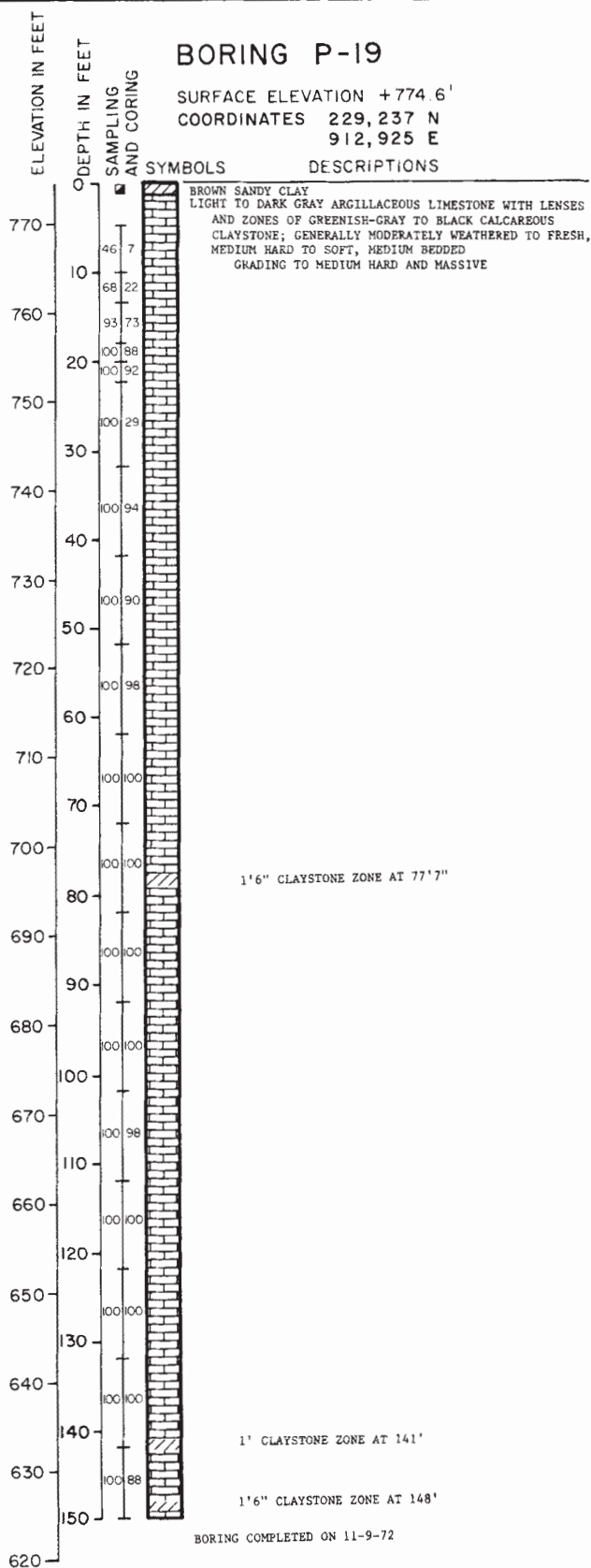
BORING COMPLETED ON 10-24-72

KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE
 PERCENT RECOVERY—100 ■ CORING RUN
 95-R.Q.D.
 P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-18

FIGURE 2.5.5-26



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

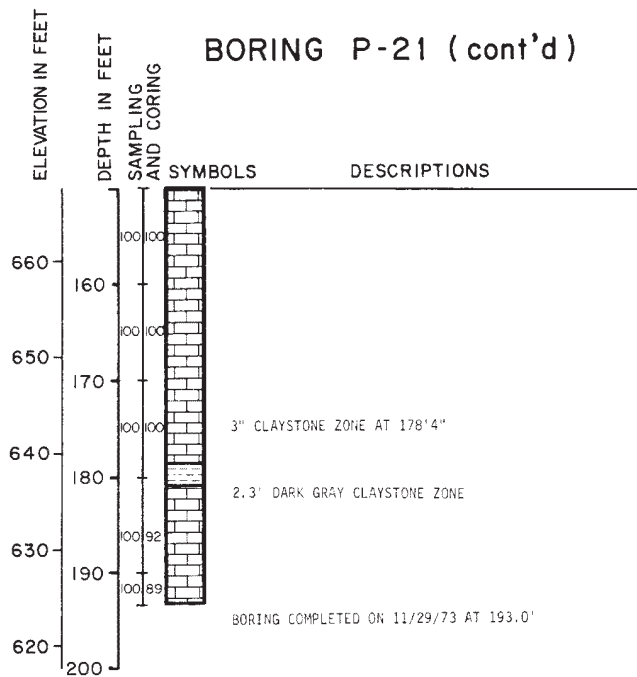
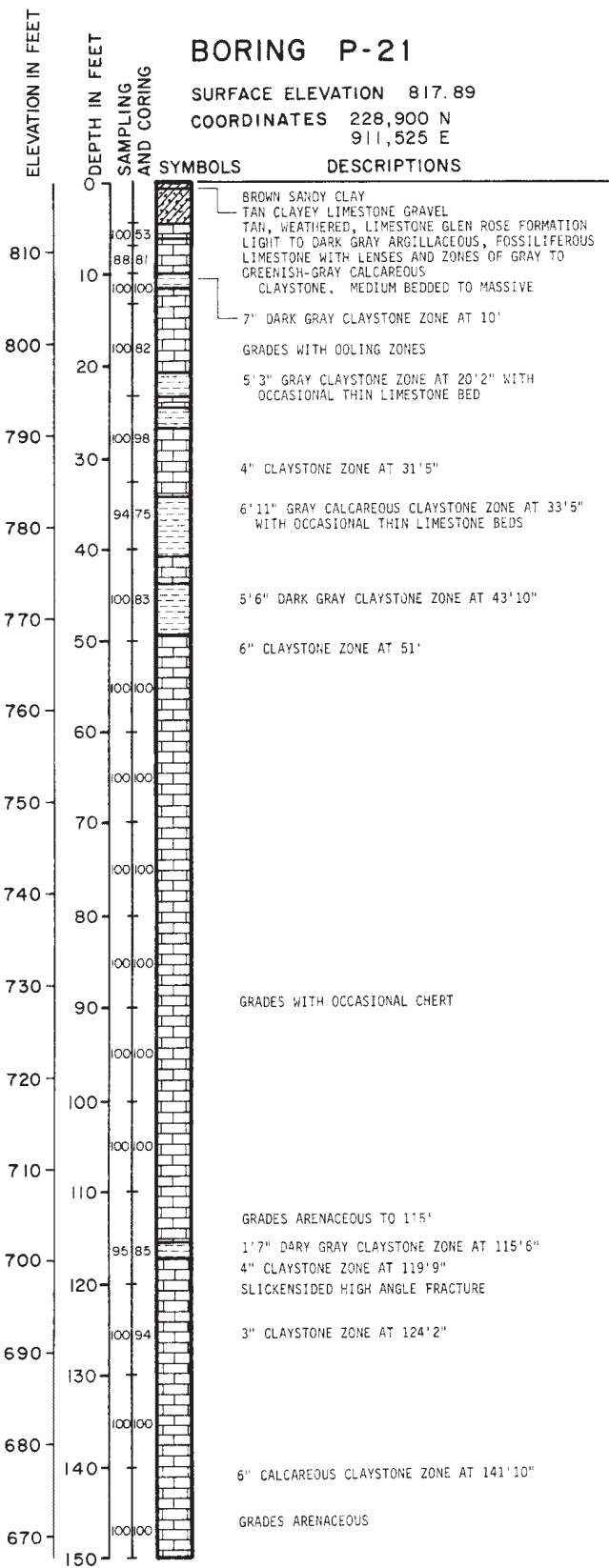
PERCENT RECOVERY — 100 ■ CORING RUN
 95-R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORINGS P-19 AND P-20

FIGURE 2.5.5-27



KEY

□ DISTURBED GRAB SAMPLE
 ■ D B M UNDISTURBED SAMPLE

BLOWS PER FOOT -- 8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE

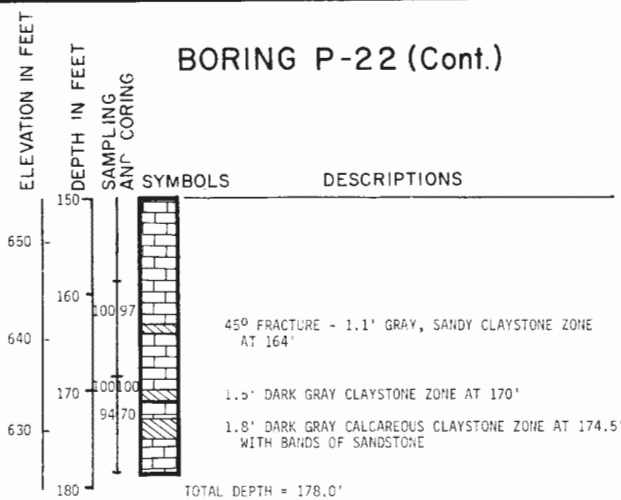
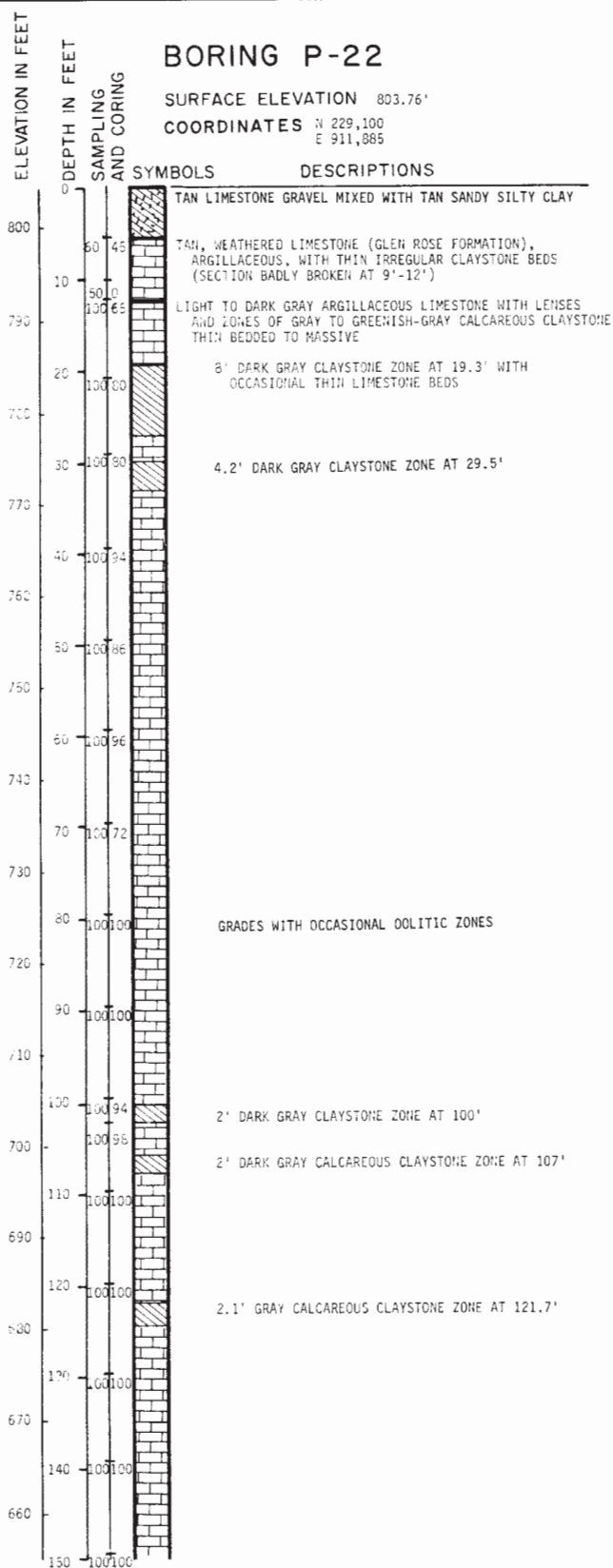
PERCENT RECOVERY -- 100 95 RQD

— CORING RUN
 — P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORING P-21

FIGURE 2.5.5 -28



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — S — STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

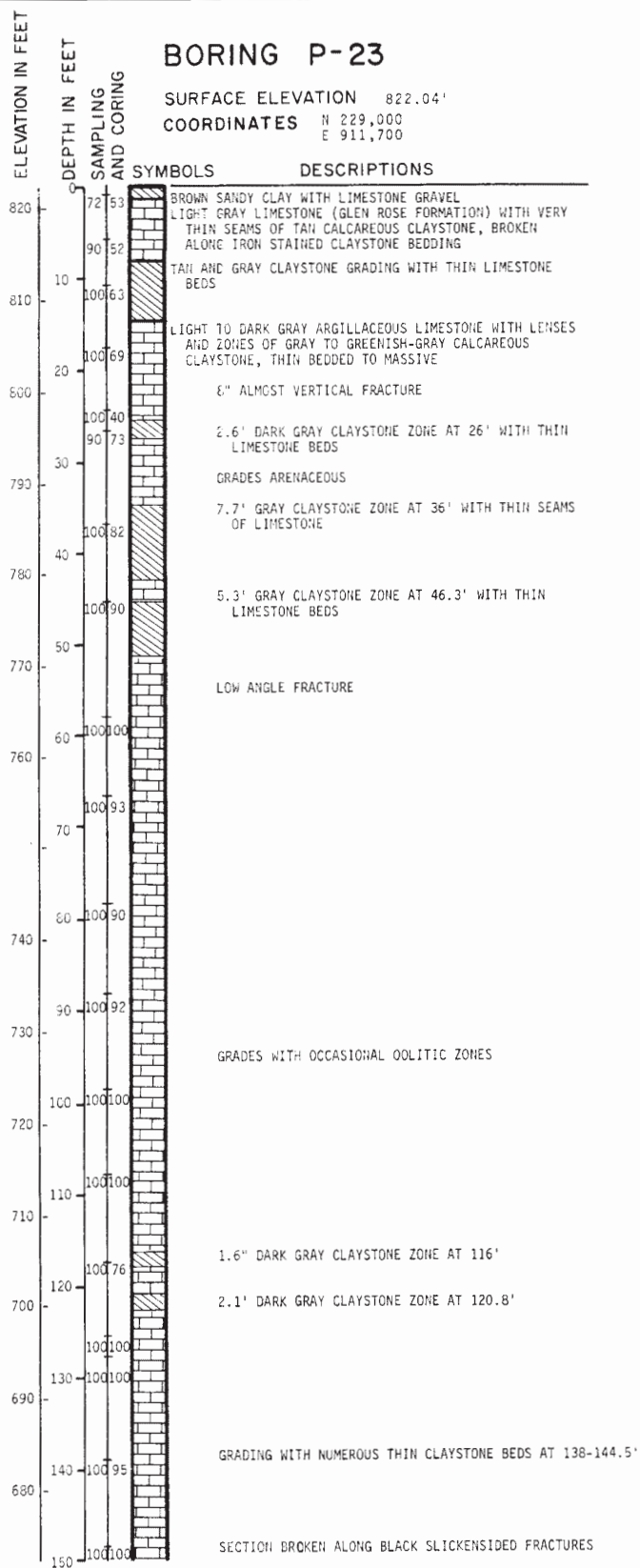
PERCENT RECOVERY — 100 — 95 — RQD

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
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UNITS 1 and 2

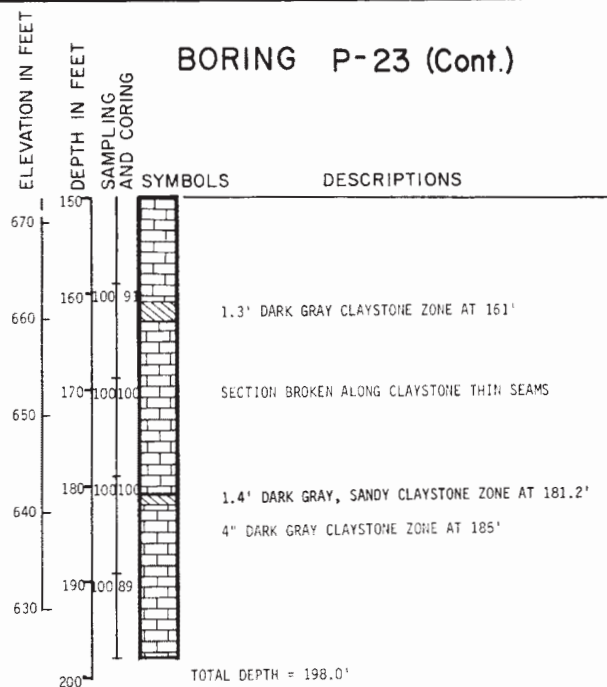
LOG OF BORING P-22

FIGURE 2.5.5 -29



KEY

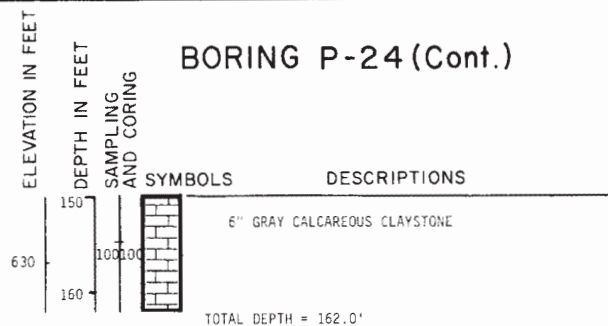
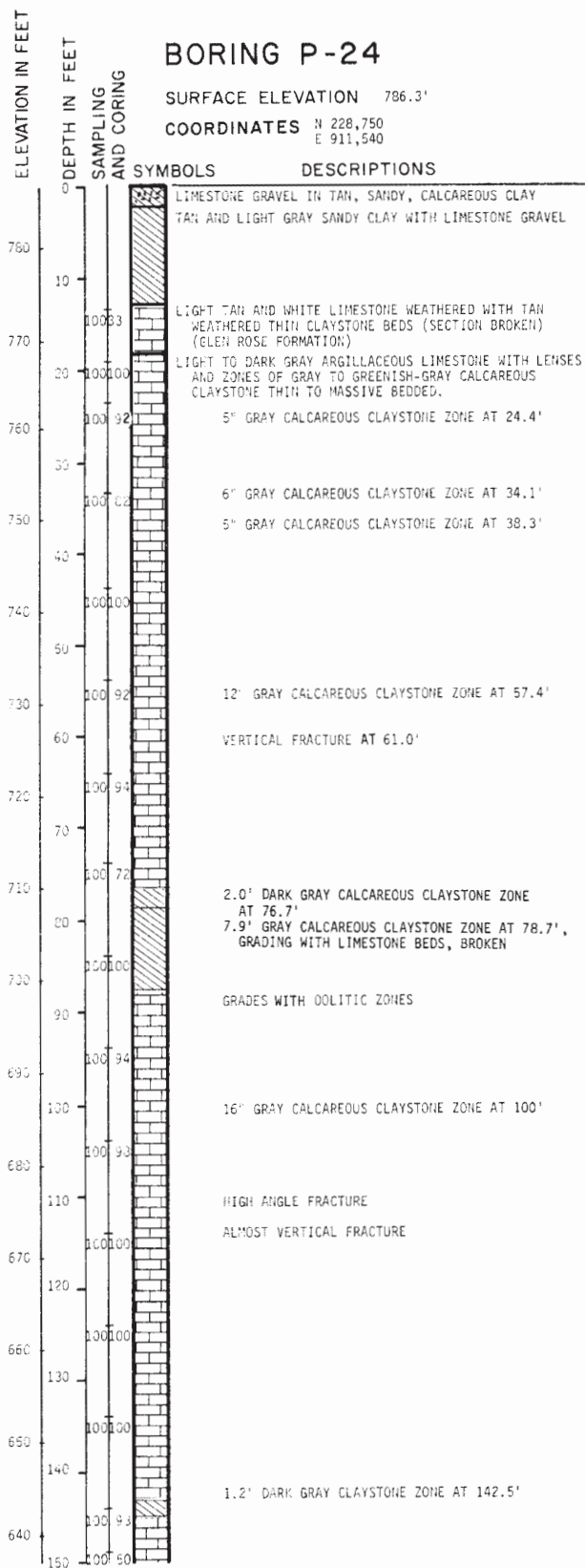
- D & M UNDISTURBED SAMPLE
- BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST
- SHELBY TUBE
- ┤ CORING RUN
- PERCENT RECOVERY — 100 95 — R.Q.D.
- P SAMPLER PRESSED HYDRAULICALLY



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LOG OF BORING P-23

FIGURE 2.5.5 - 30



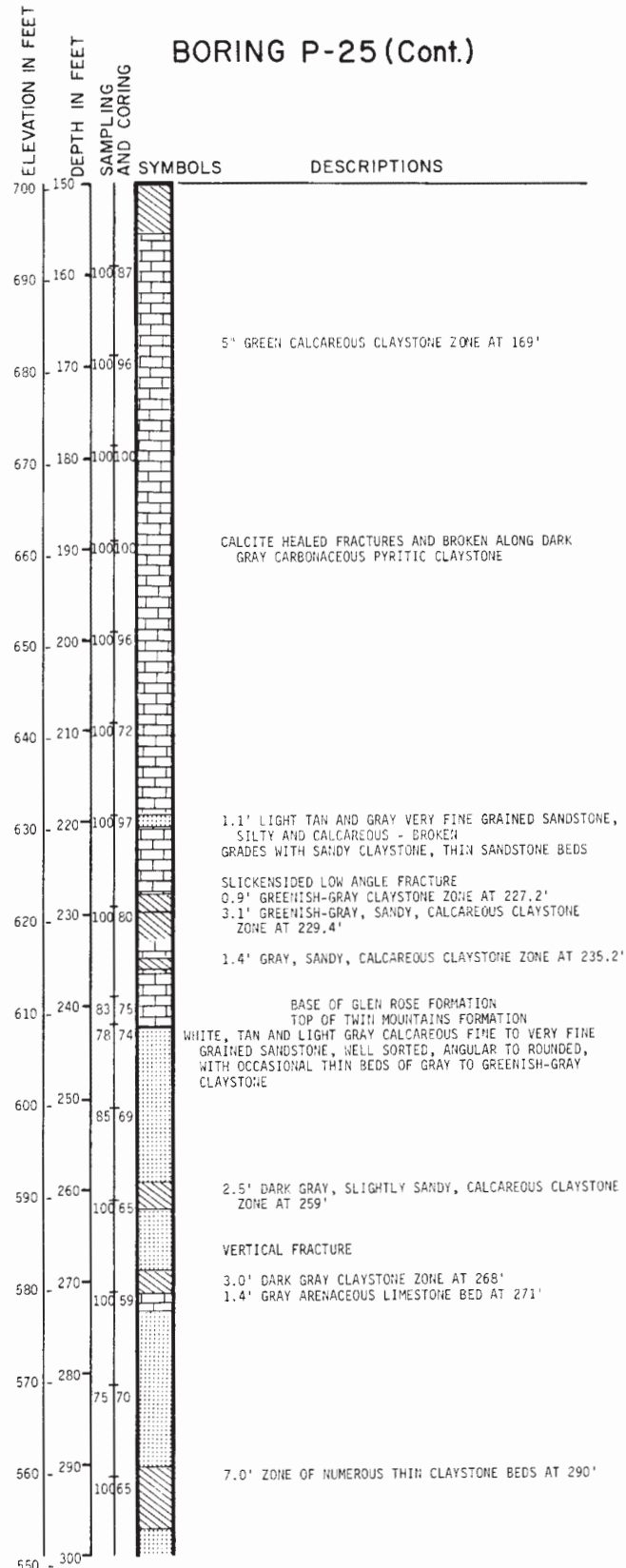
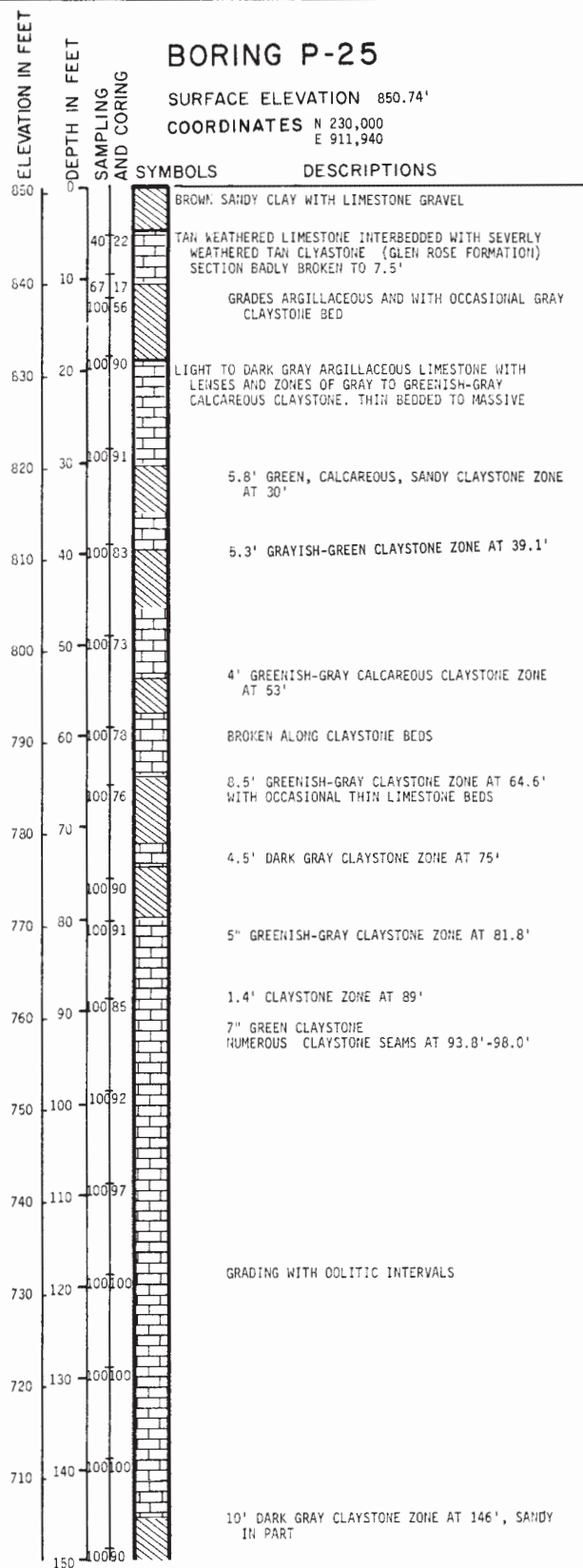
KEY

- D & M UNDISTURBED SAMPLE
- BLOWS PER FOOT --- 8 ■ STANDARD PENETRATION TEST
- S ■ SHELBY TUBE
- PERCENT RECOVERY --- 100 95-RQD.
- P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
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LOG OF BORING P-24

FIGURE 2.5.5-31



BORING COMPLETED ON 12/26/73 AT 301.0'

KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

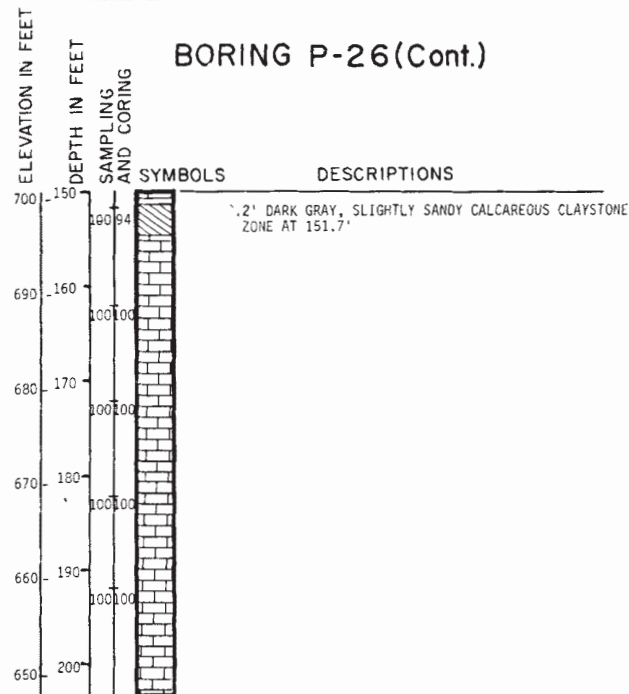
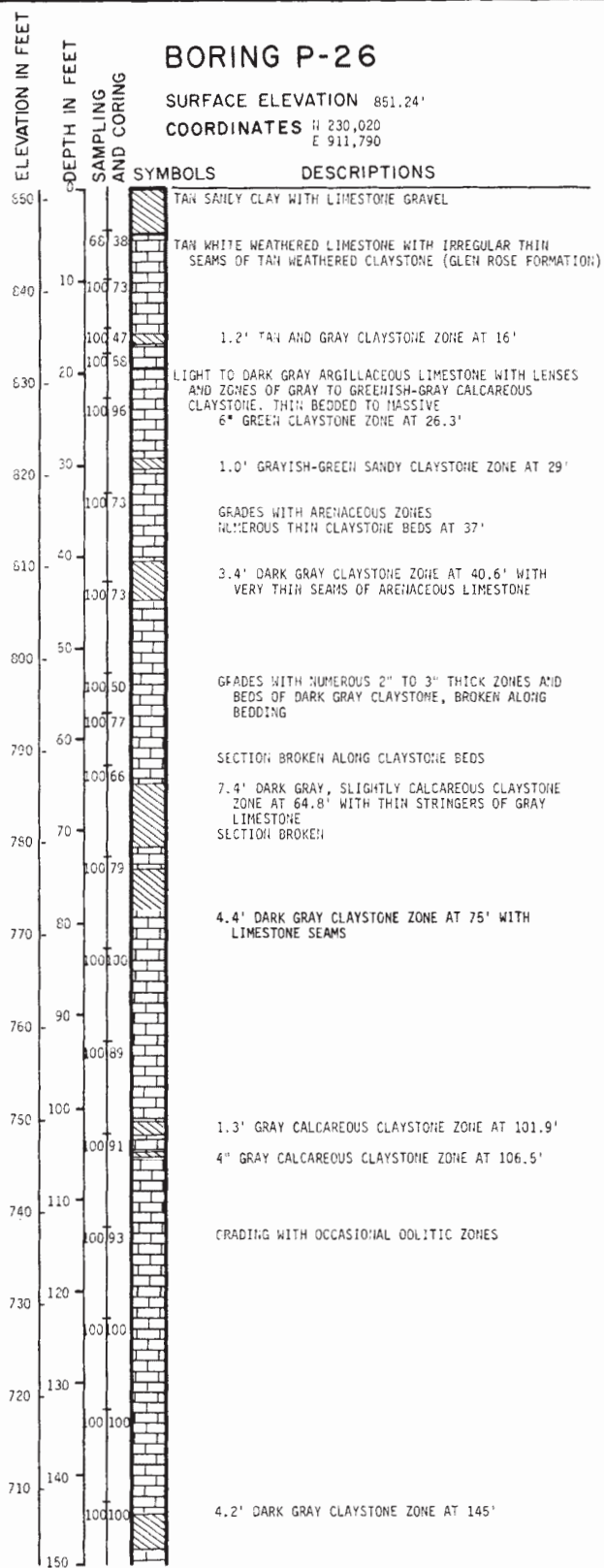
PERCENT RECOVERY—100 95-RQ.D.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORING P-25

FIGURE 2.5.5-32



BORING COMPLETED ON 12/15/73 AT 203.0'

KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

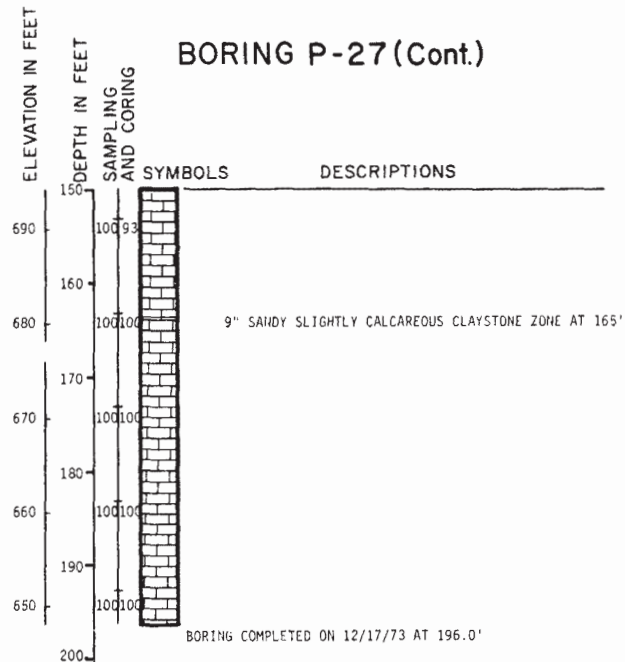
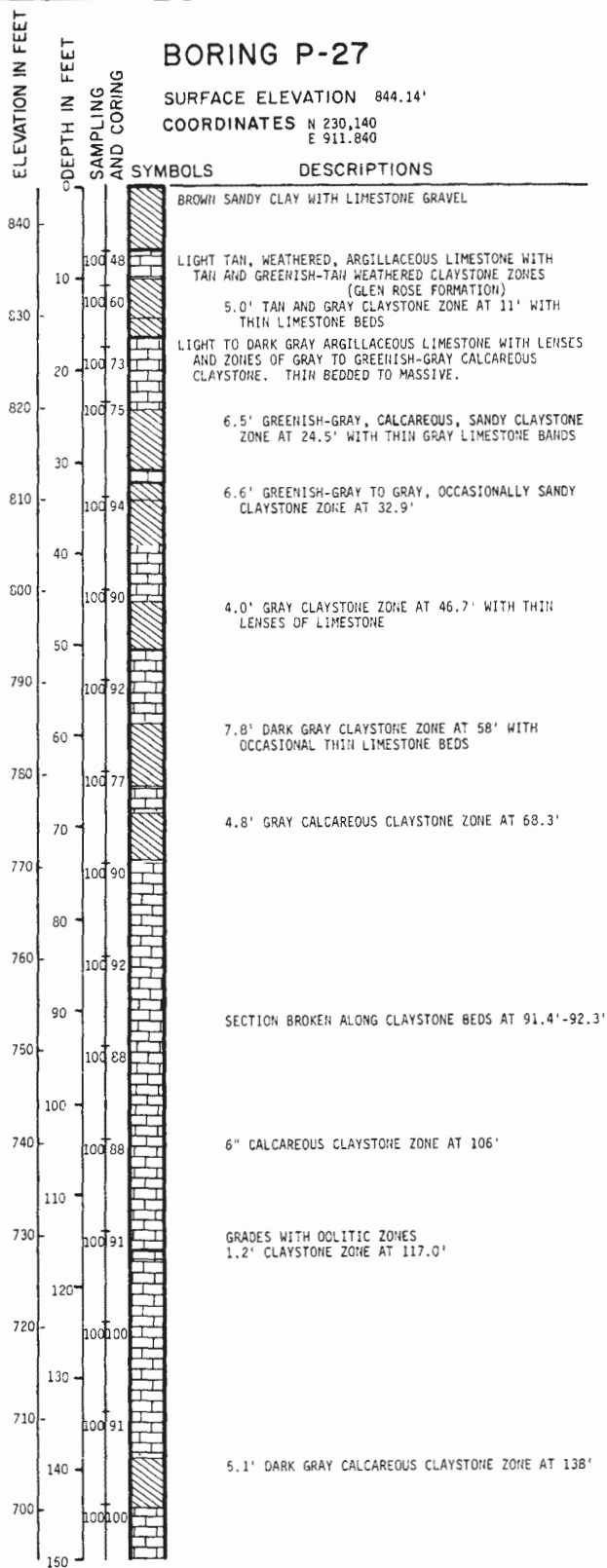
PERCENT RECOVERY—100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

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 UNITS 1 and 2

LOG OF BORING P-26

FIGURE 2.5.5-33



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

PERCENT RECOVERY—100 95-RQD

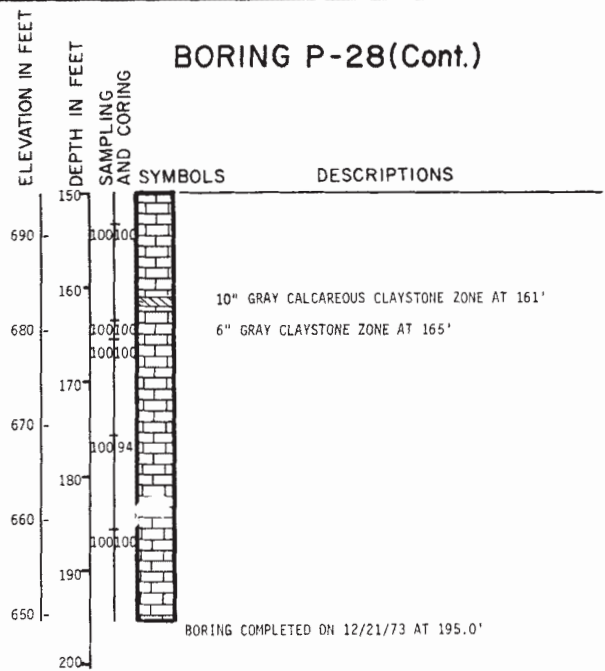
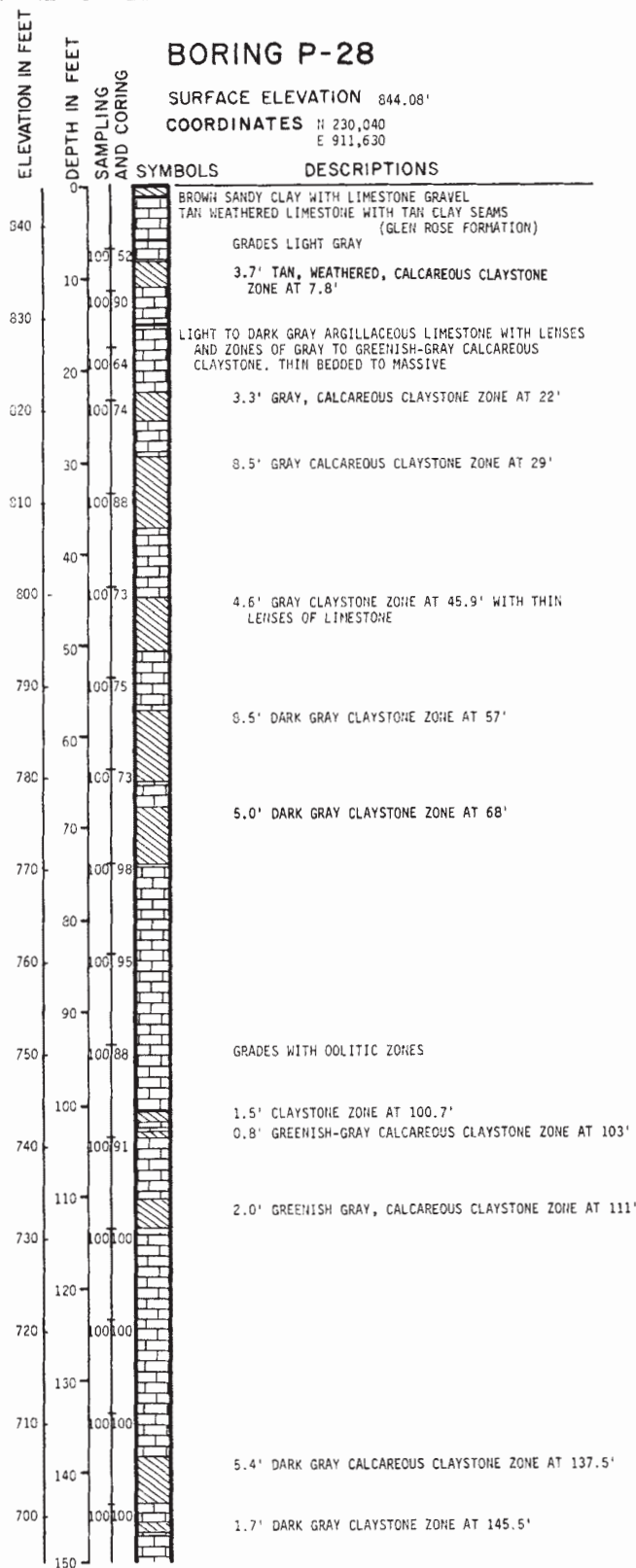
— CORING RUN

P SAMPLER PRESSED HYDRAULICALLY

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 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2

LOG OF BORING P-27

FIGURE 2.5.5-34



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

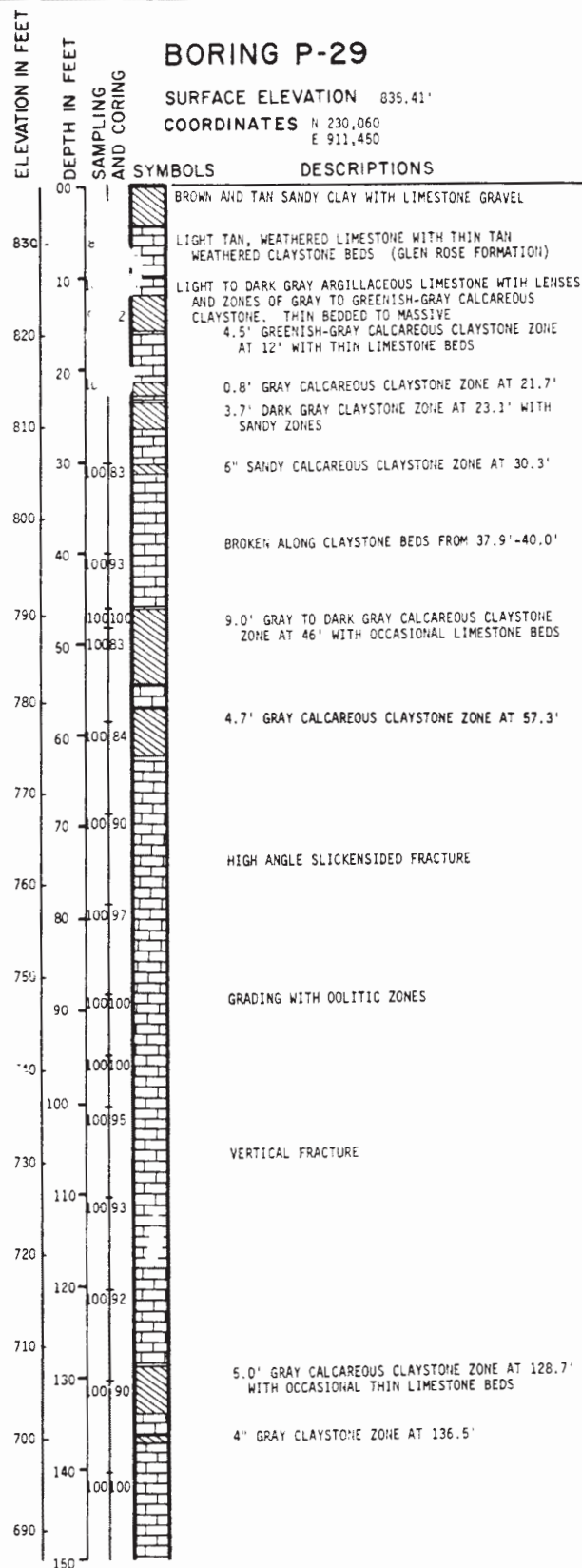
┌ CORING RUN
└ PERCENT RECOVERY—100 95-RQ.D

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-28

FIGURE 2.5.5 - 35



KEY

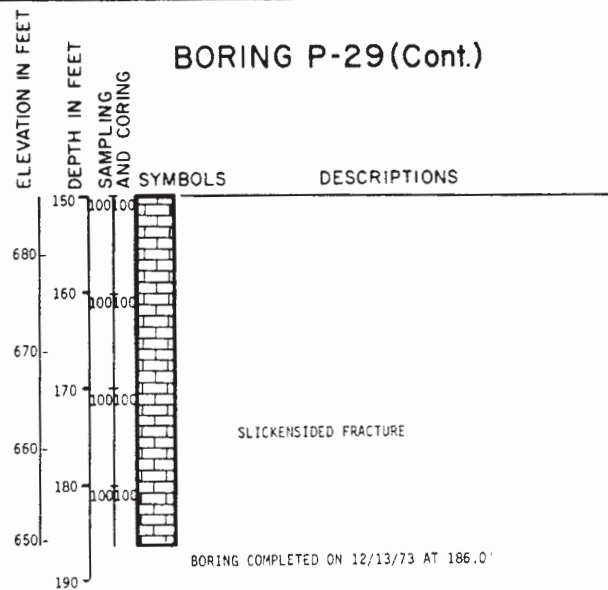
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

PERCENT RECOVERY—100 CORING RUN
95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

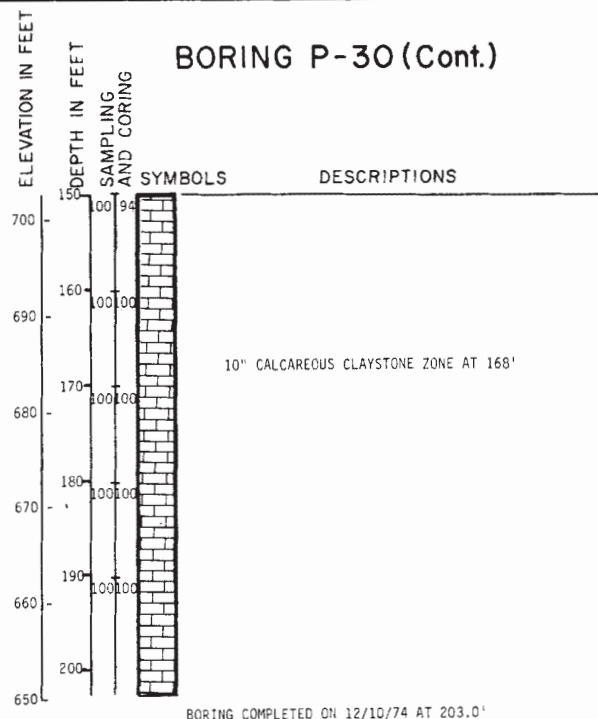
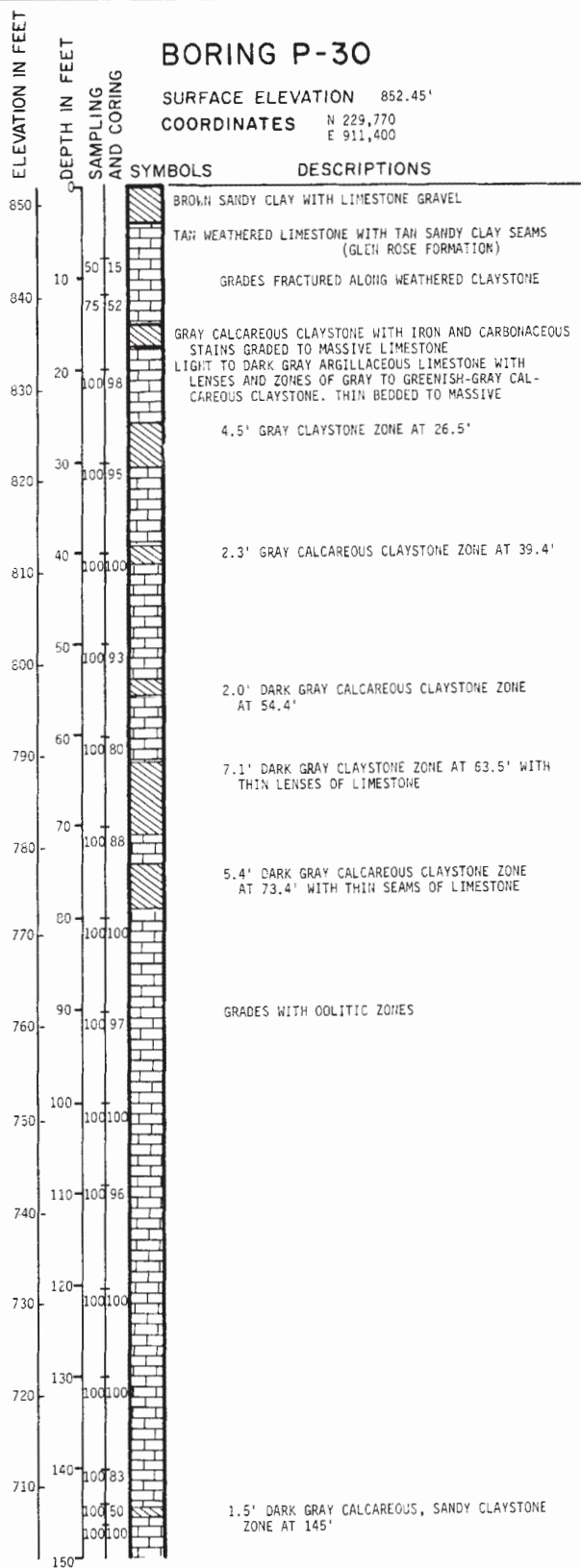


Amendment 67
February 5, 1988

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LOG OF BORING P-29

FIGURE 2.5.5 - 36



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

PERCENT RECOVERY—100 95-RQD

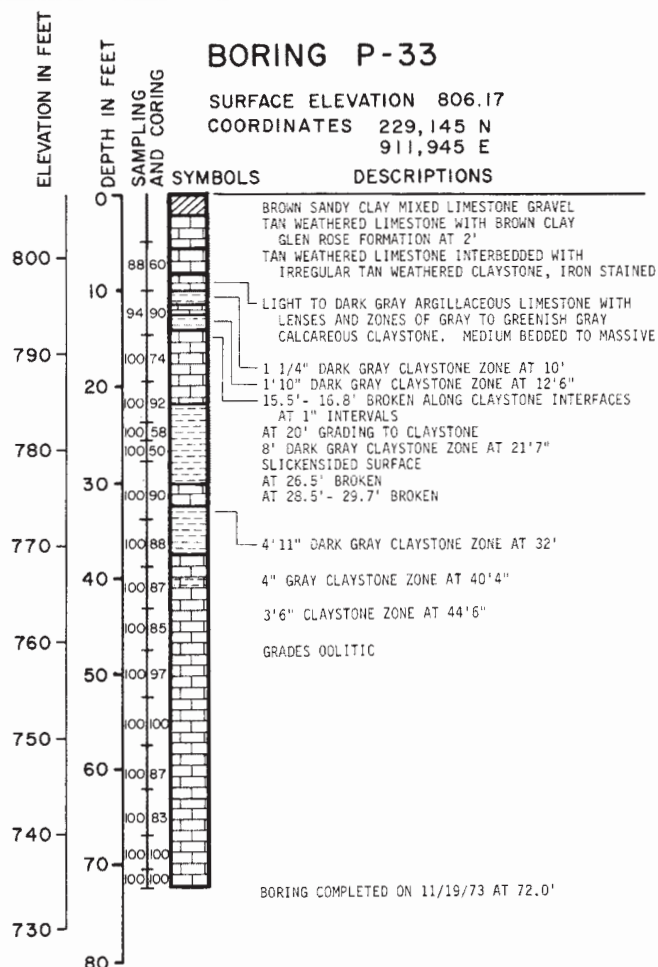
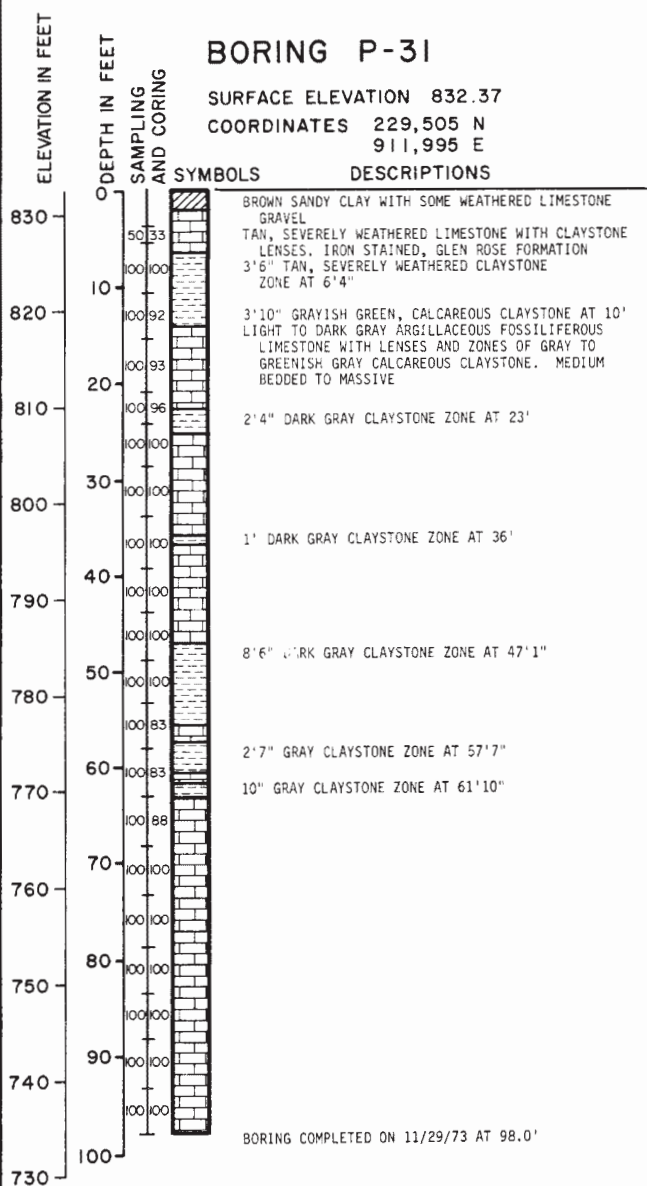
— CORING RUN

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING P-30

FIGURE 2.5.5 -37



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT --- 8 ■ STANDARD PENETRATION TEST
 ■ SHELBY TUBE

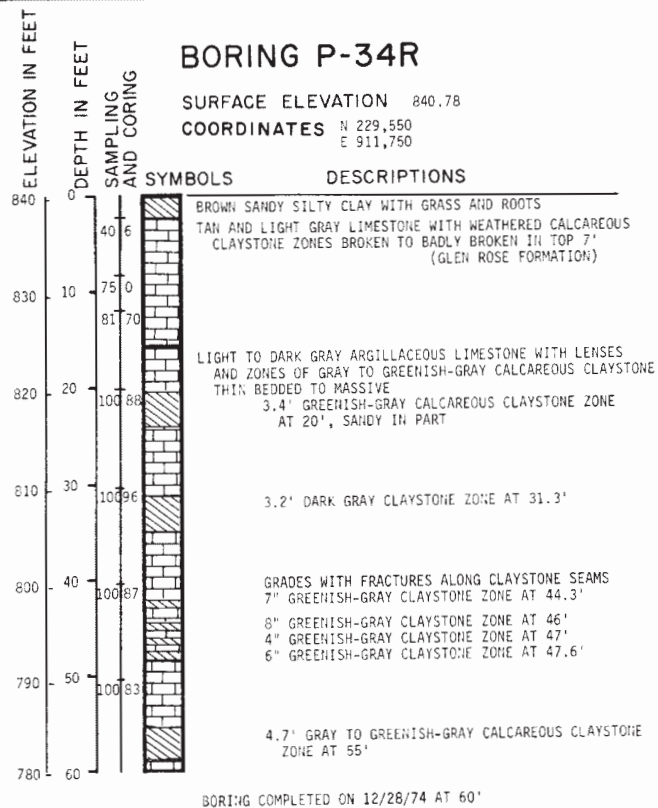
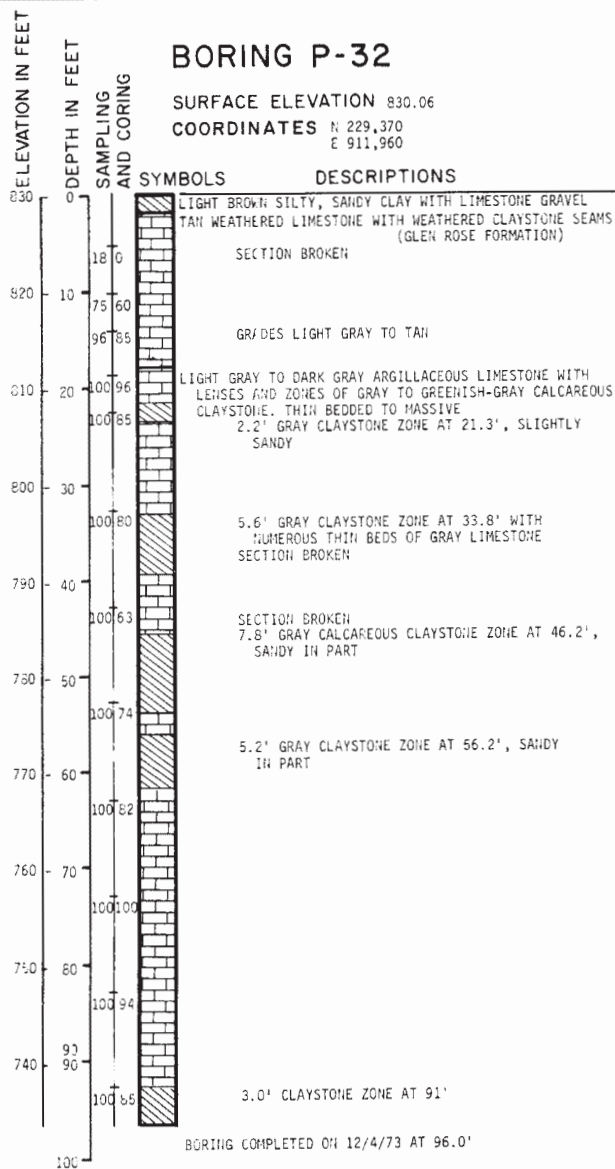
PERCENT RECOVERY --- 100 ■ CORING RUN
 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORINGS P-31 AND P-33

FIGURE 2.5.5-38



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

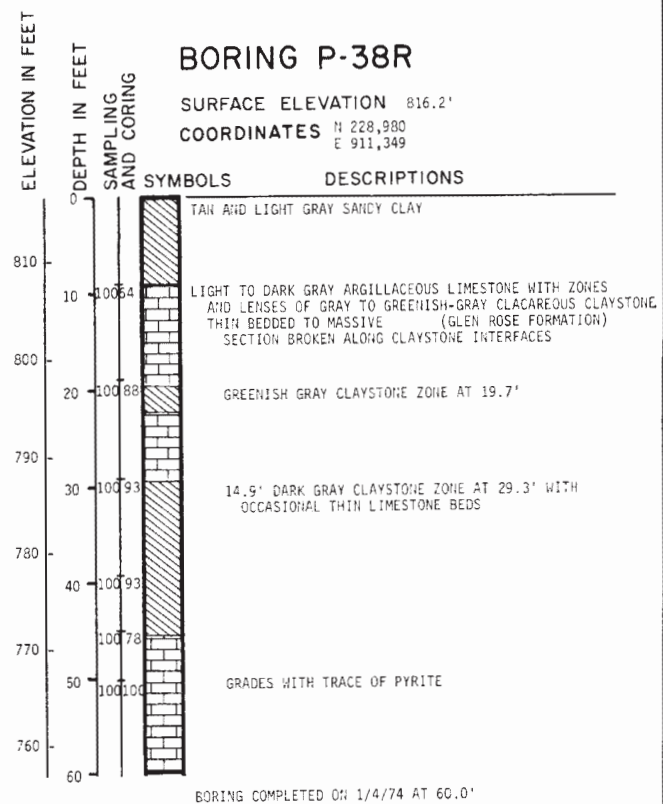
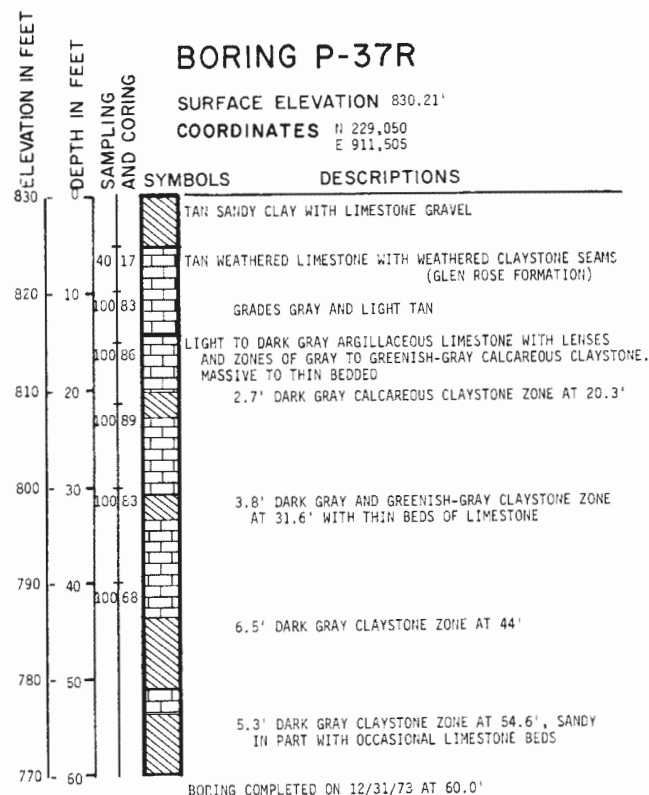
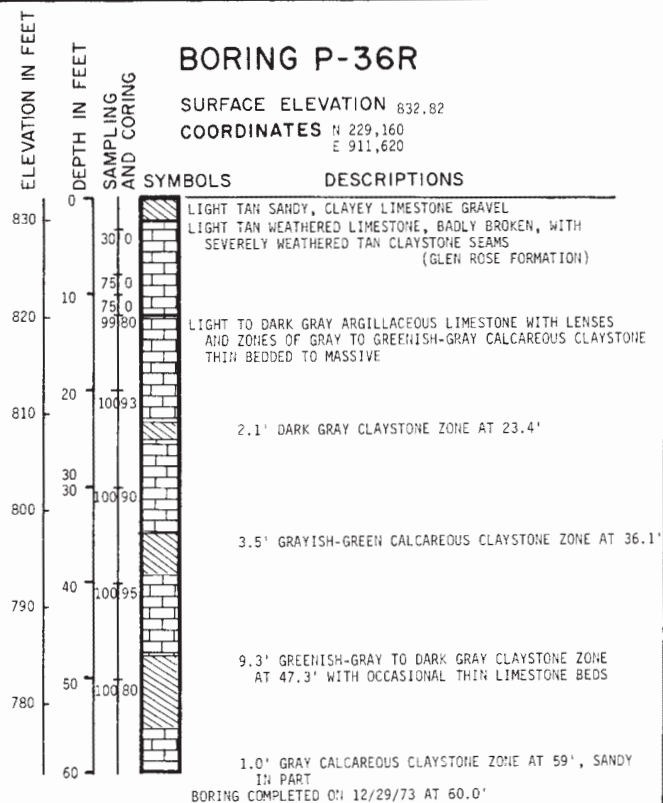
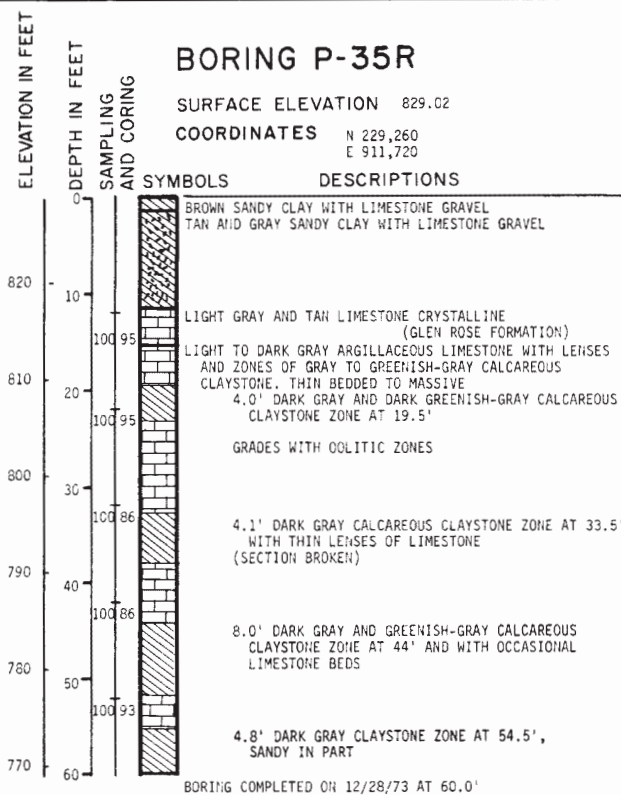
PERCENT RECOVERY—100 95 RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORINGS P-32 AND P-34R

FIGURE 2.5.5 -39



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

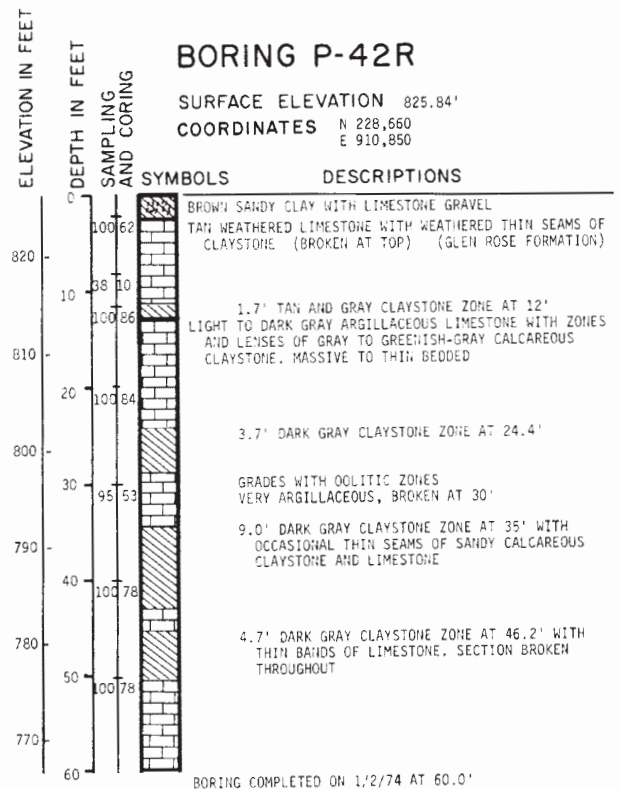
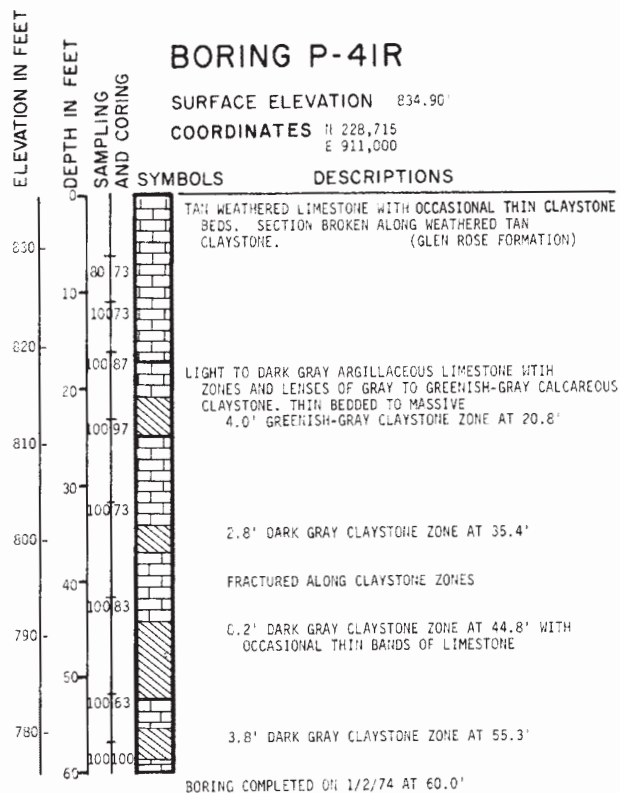
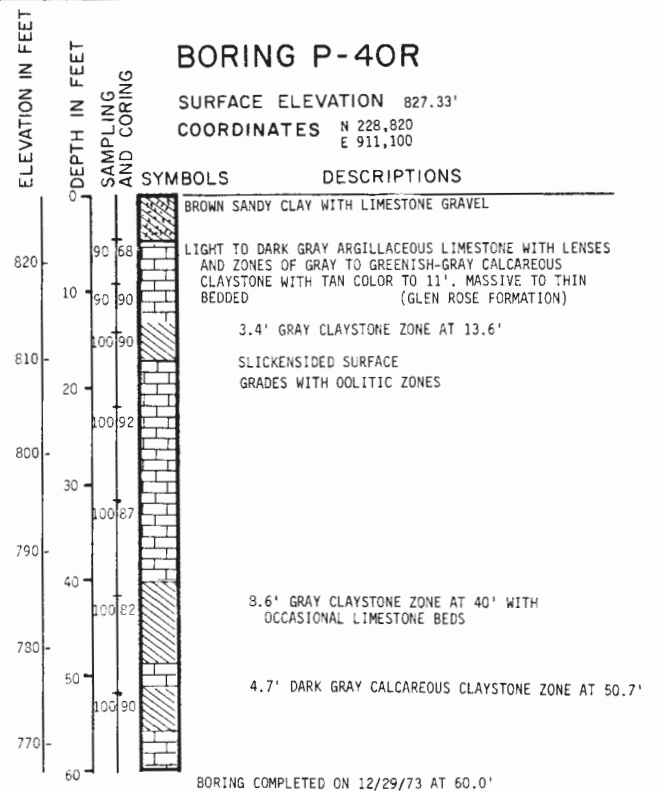
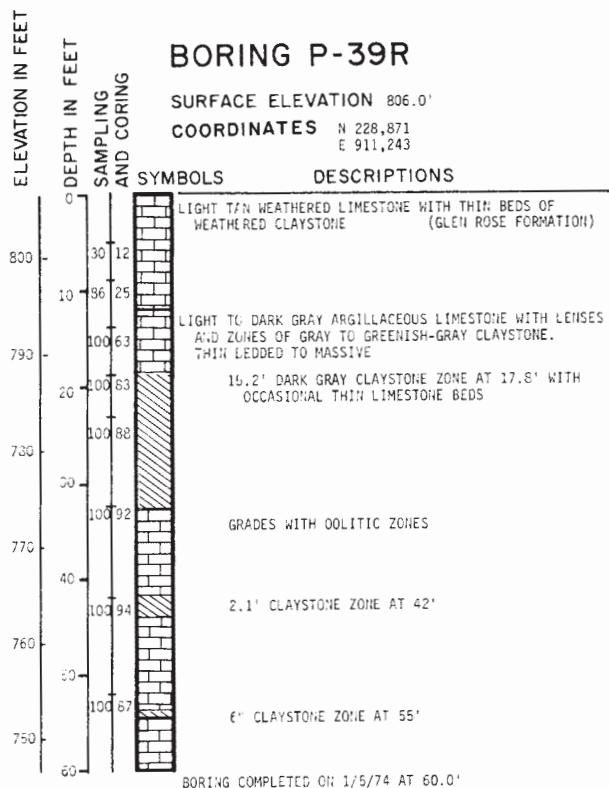
PERCENT RECOVERY—100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

**LOG OF BORINGS P-35R, P-36R,
 P-37R AND P-38R**

FIGURE 2.5.5-40



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

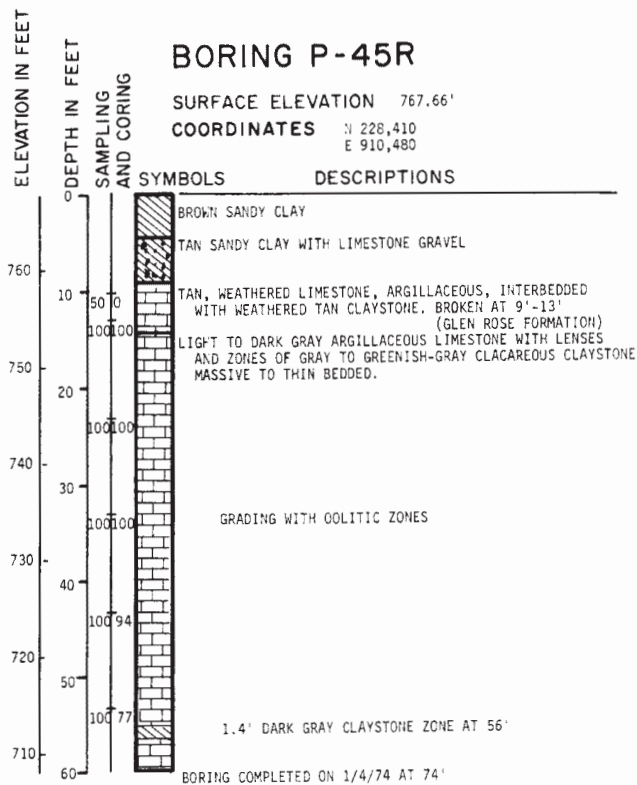
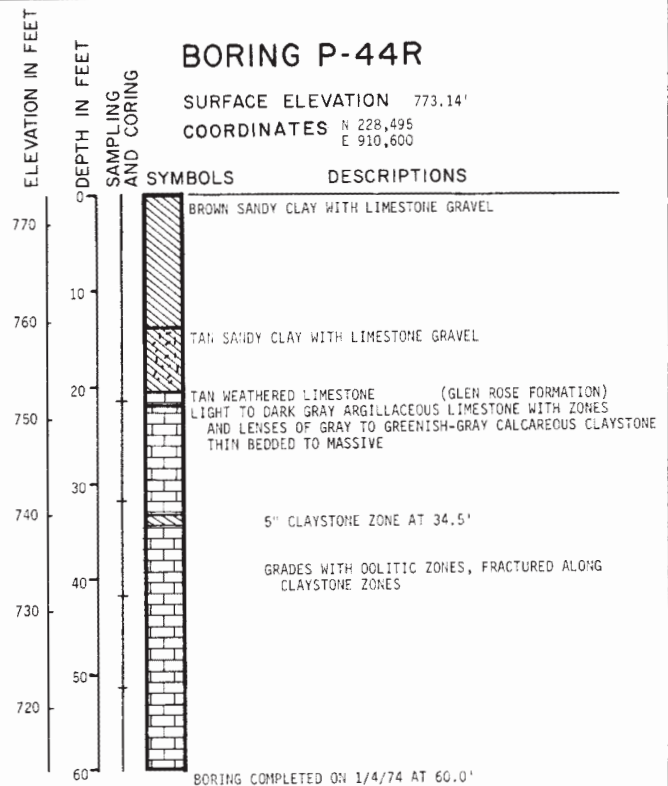
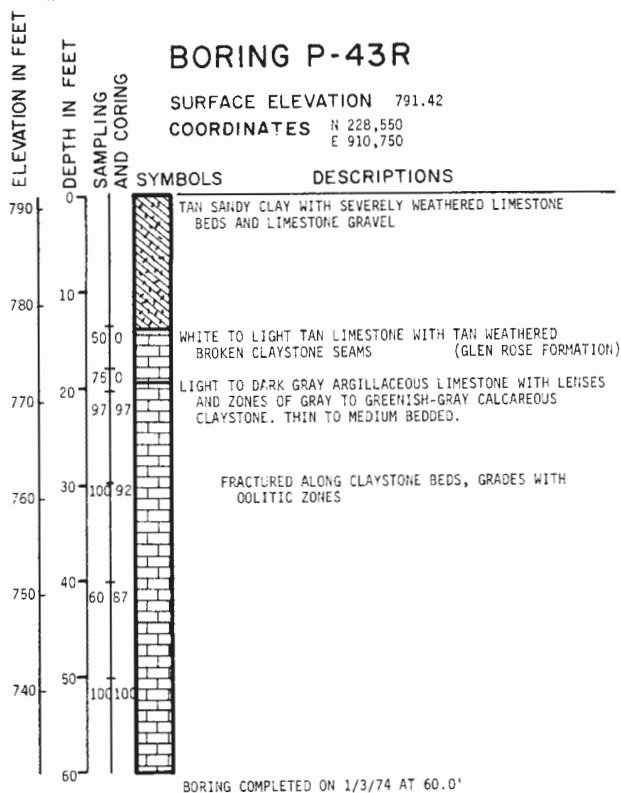
PERCENT RECOVERY—100 95 RQD

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

**LOG OF BORINGS P-39R, P-40R,
P-41R AND P-42R**

FIGURE 2.5.5-41



KEY

■ O & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

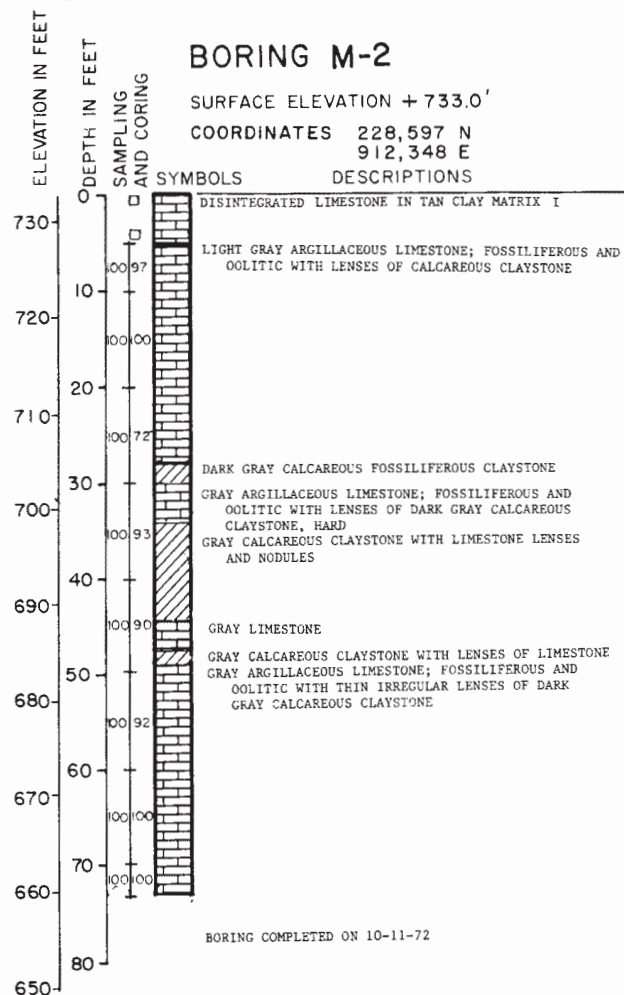
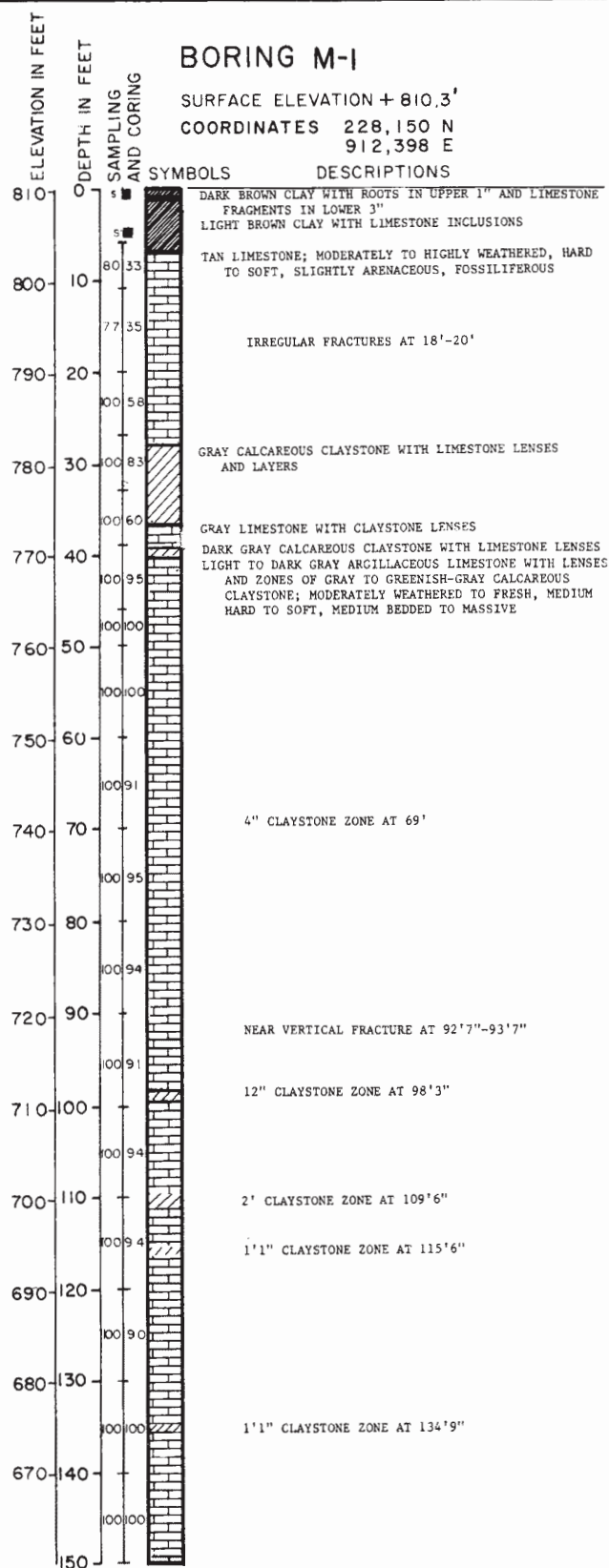
PERCENT RECOVERY — 100 — 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

**LOG OF BORINGS P-43R, P-44R
 AND P-45R**

FIGURE 2.5.5 - 42

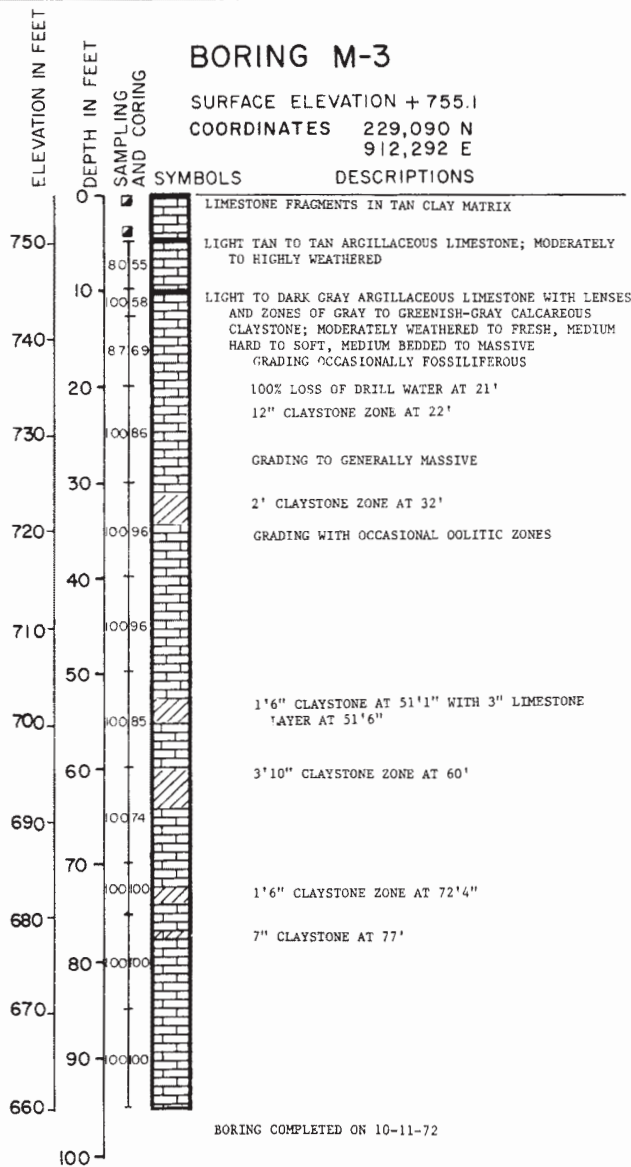


KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT--8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE
 PERCENT RECOVERY--100 95-RQD.
 P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORINGS M-1 AND M-2

FIGURE 2.5.5-43



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT --- 8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE

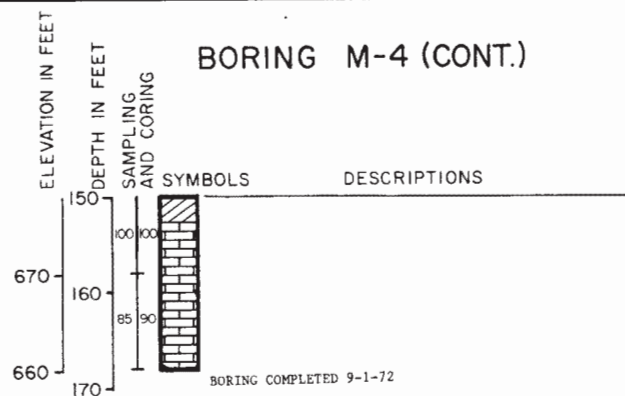
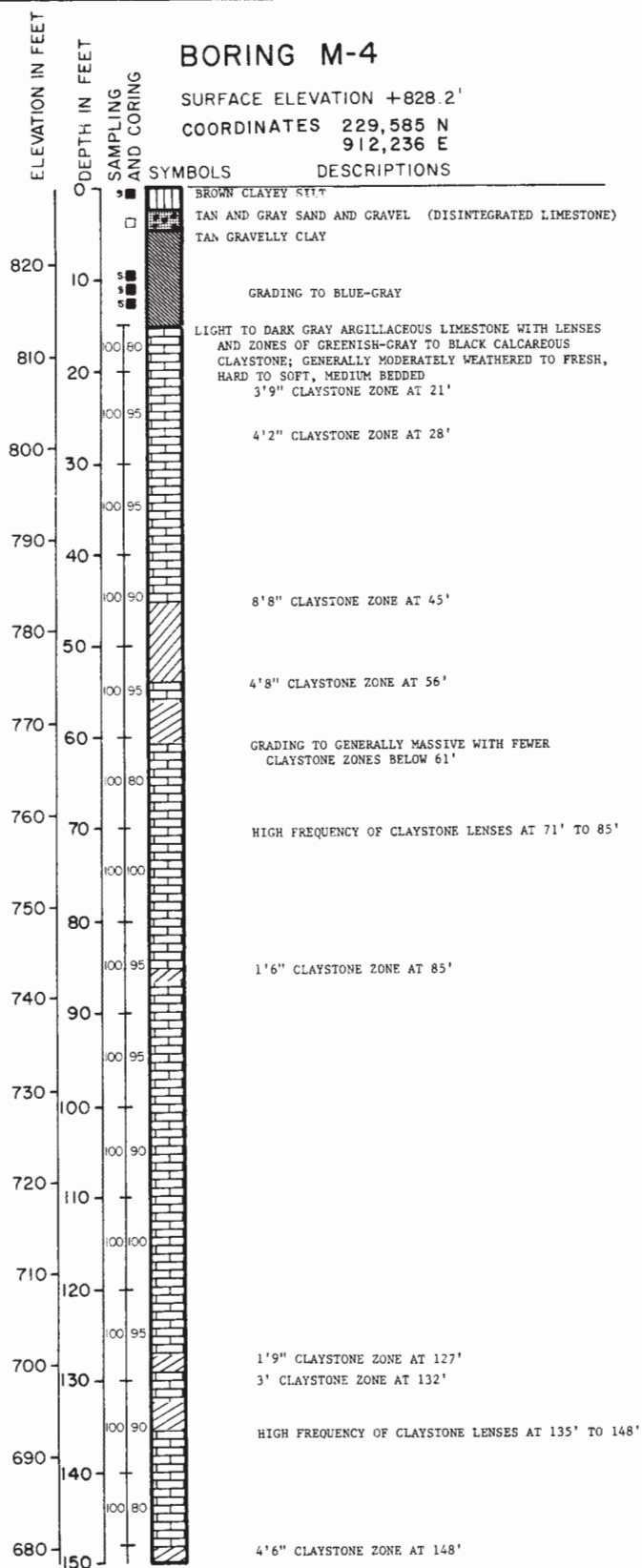
┌ CORING RUN
 └ PERCENT RECOVERY --- 100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

LOG OF BORING M-3

FIGURE 2.5.5-44



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT --- 8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

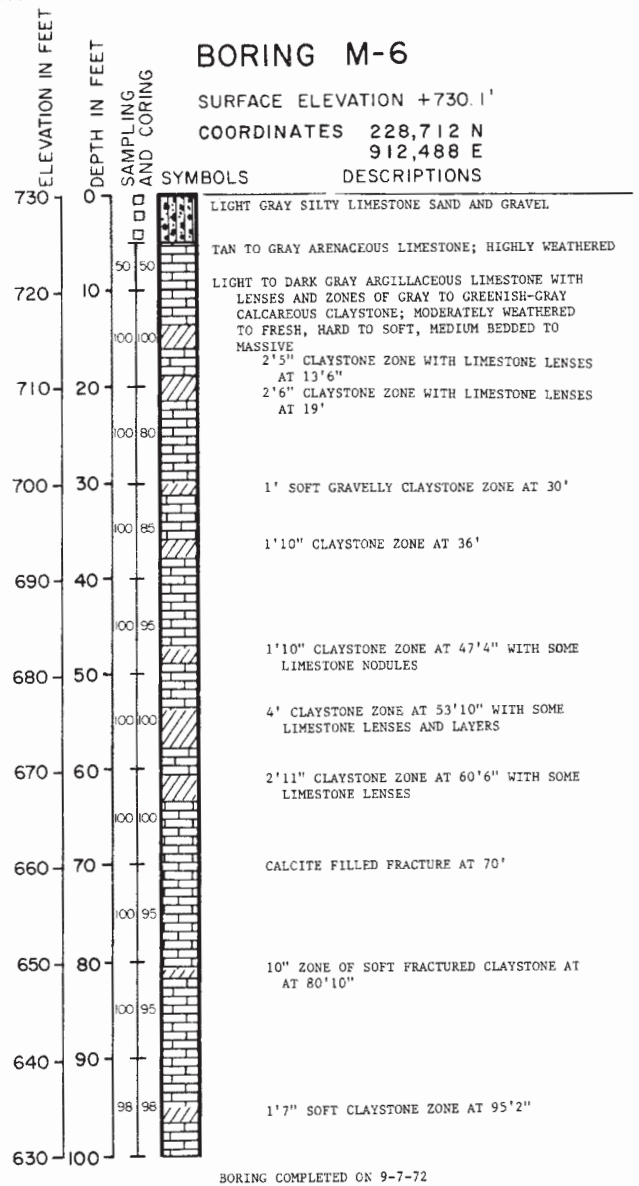
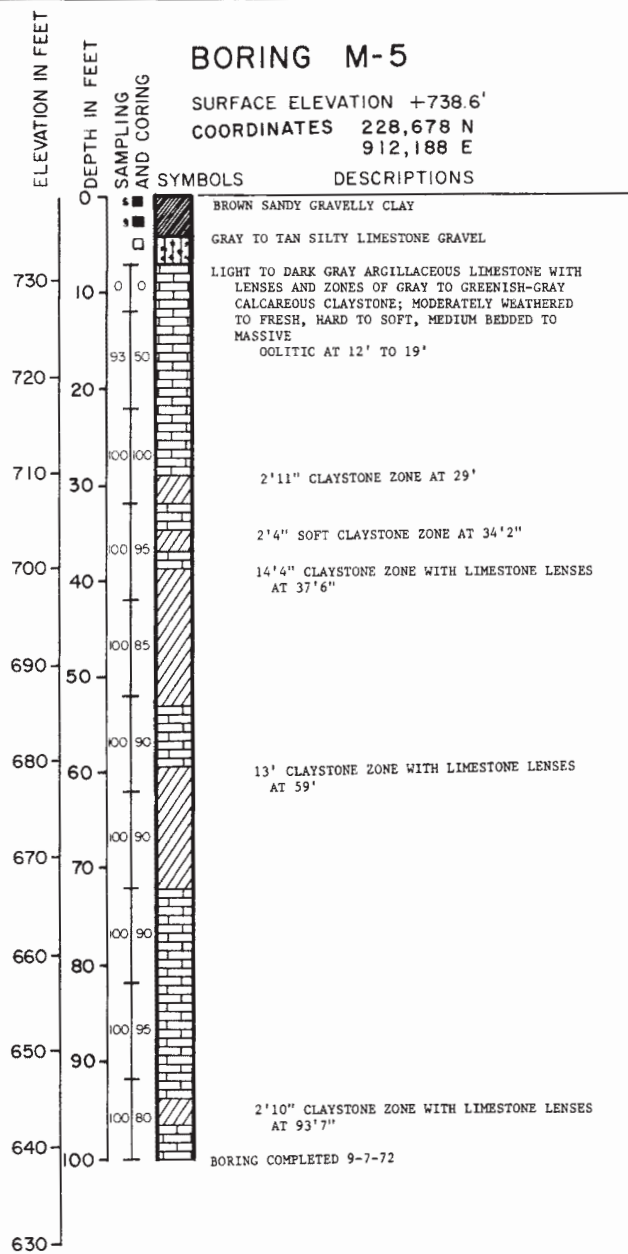
PERCENT RECOVERY --- 100 ■ CORING RUN

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING M-4

FIGURE 2.5.5-45



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

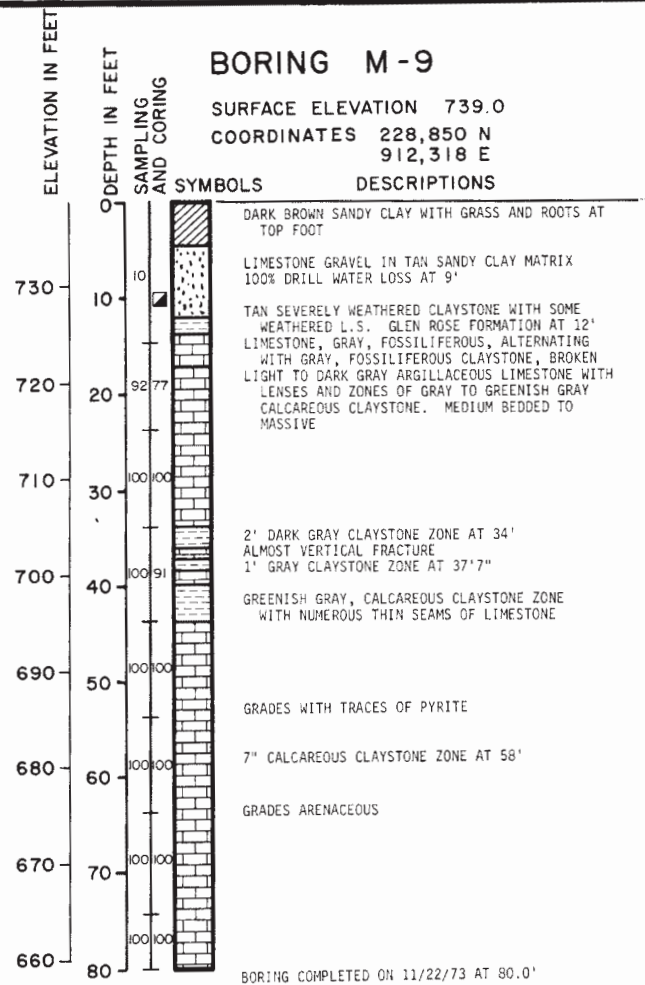
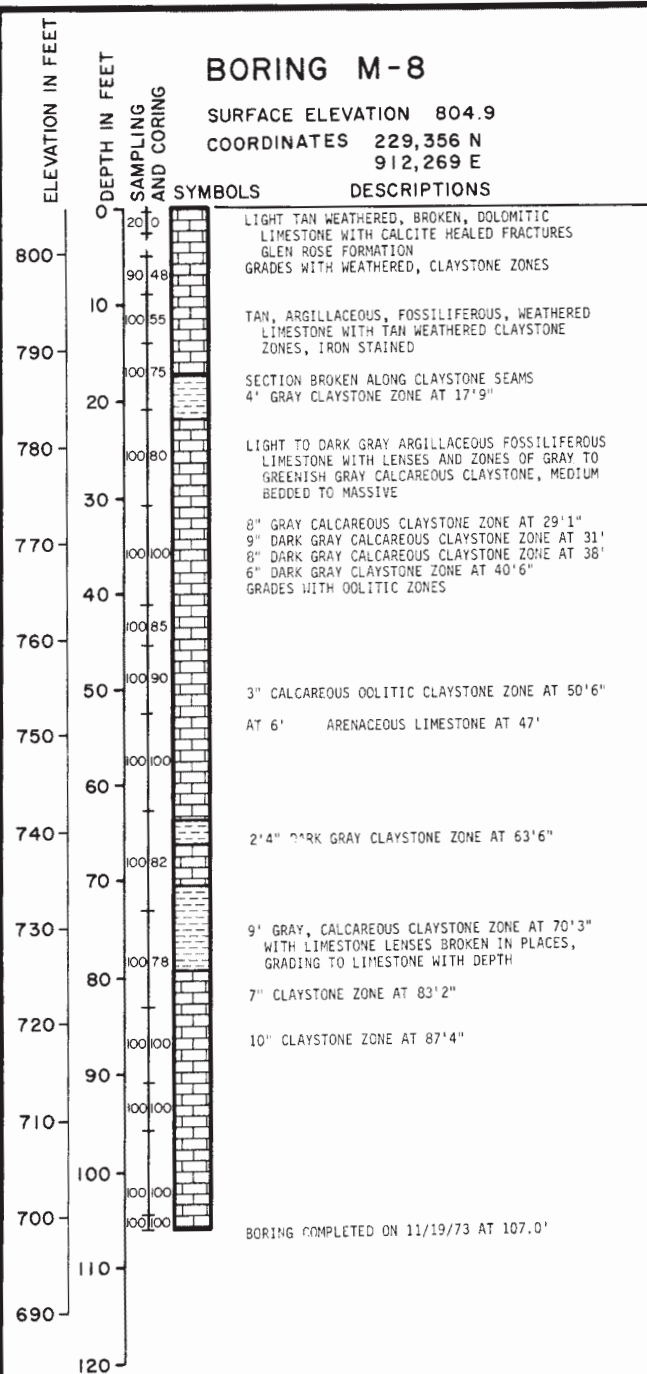
PERCENT RECOVERY—100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
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LOG OF BORINGS M-5 AND M-6

FIGURE 2.5.5-46



KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT: — 8 ■ STANDARD PENETRATION TEST
■ SHELBY TUBE

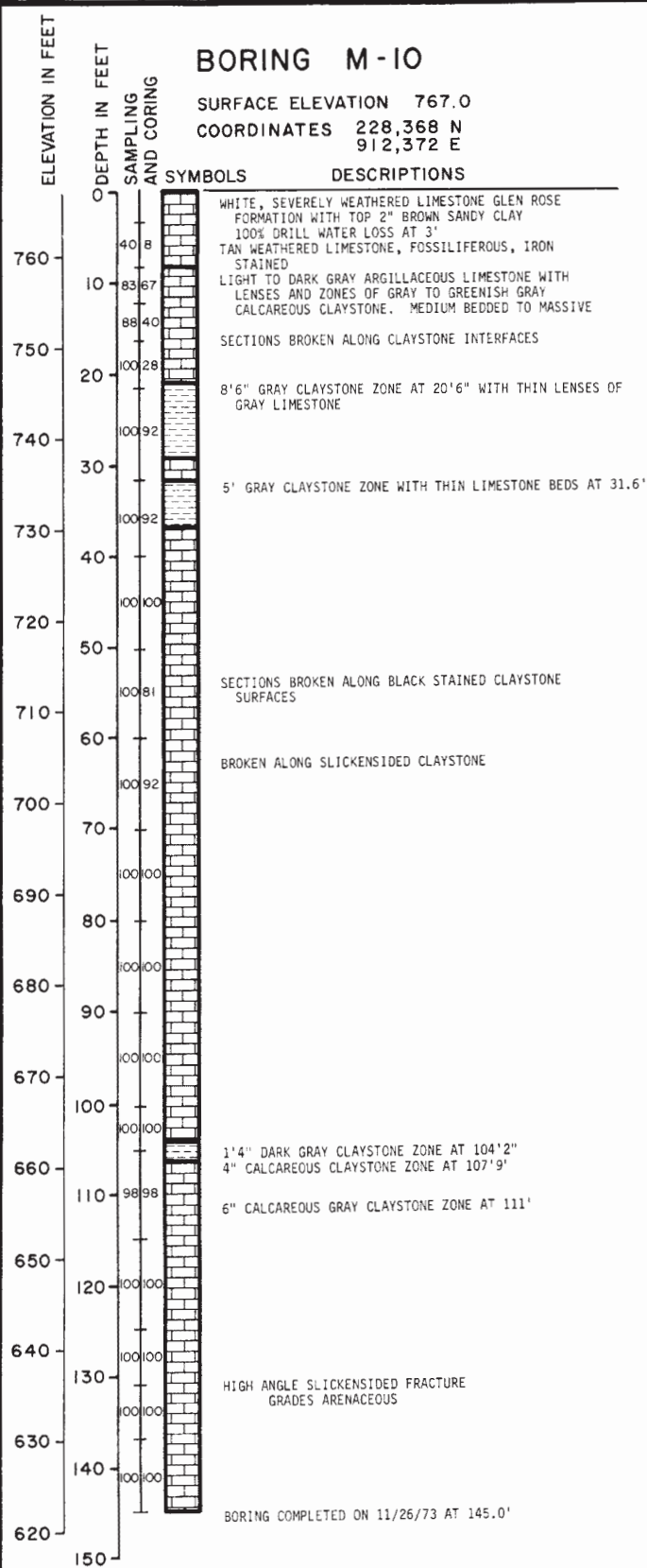
— CORING RUN
PERCENT RECOVERY: 100 — 95-RQD

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

**LOG OF BORINGS M-8
AND M-9**

FIGURE 2.5.5-47



KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT -- 8 □ STANDARD PENETRATION TEST
S ■ SHELBY TUBE

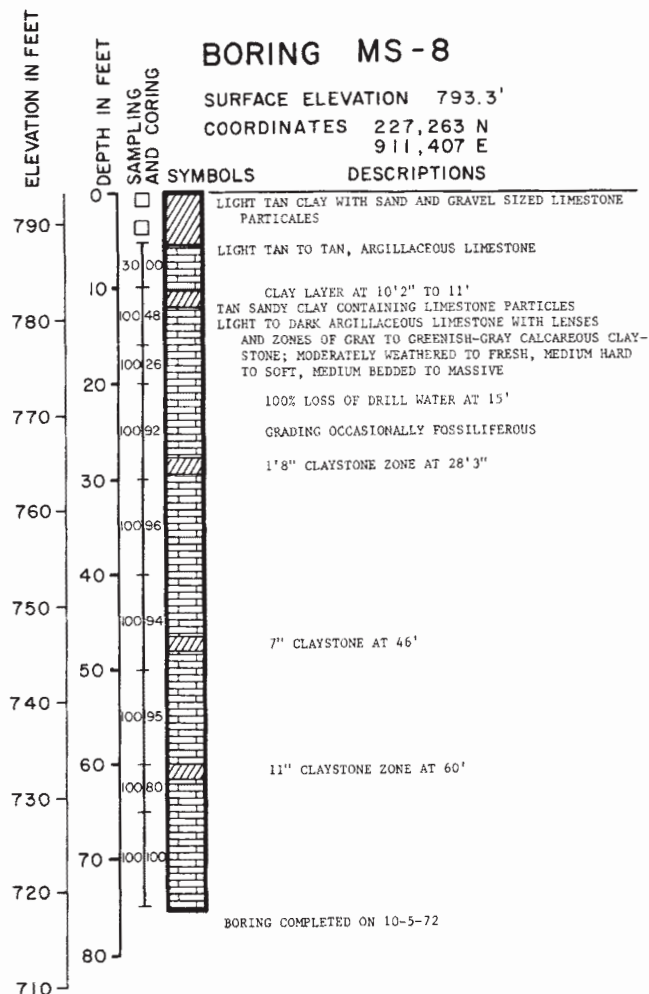
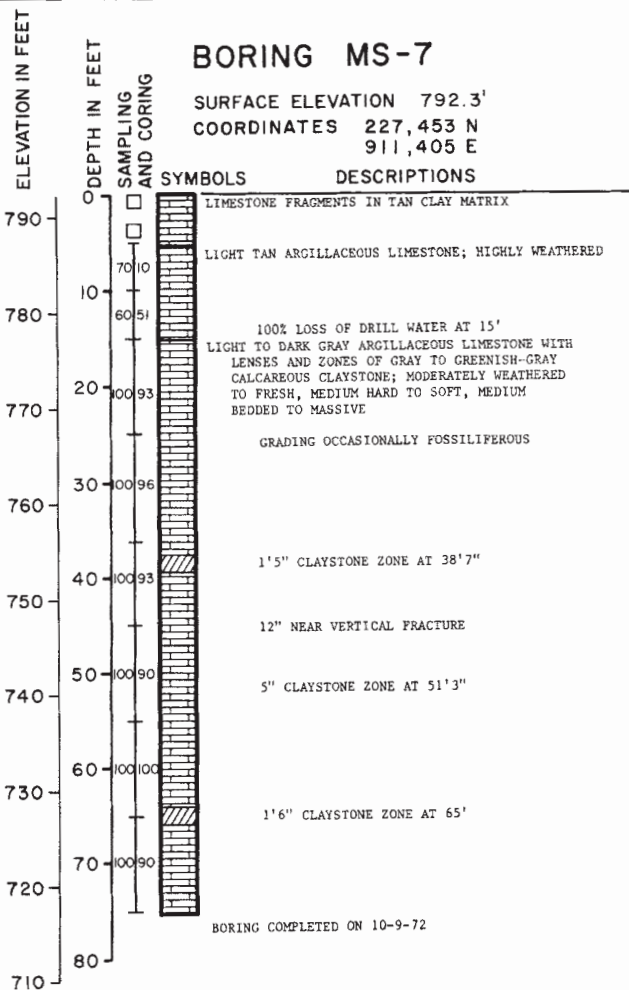
┌ CORING RUN
└ PERCENT RECOVERY-100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING M-10

FIGURE 2.5.5-48



KEY

□ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE

PERCENT RECOVERY—100 | CORING RUN
 95-R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

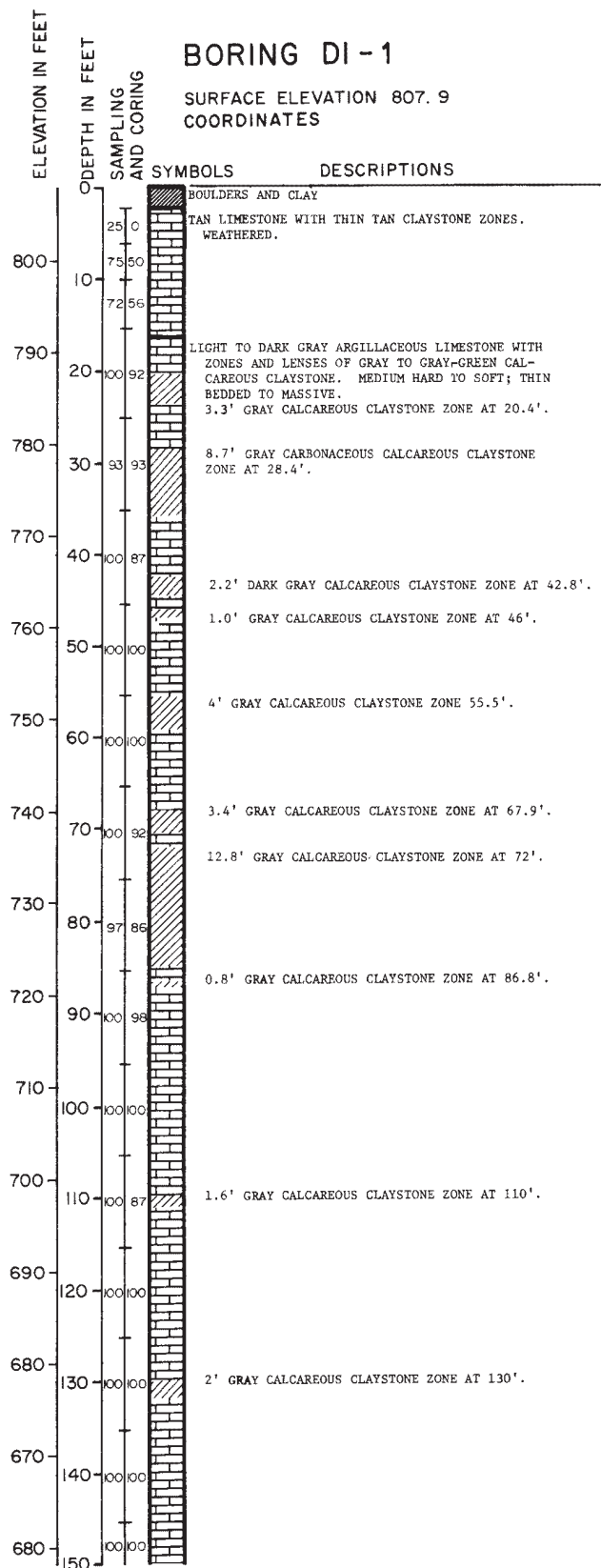
**COMANCHE PEAK S.E.S.
 FINAL SAFETY ANALYSIS REPORT
 UNITS 1 and 2**

**LOG OF BORINGS MS-7
 AND MS-8**

FIGURE 2.5.5-49

FIGURE 2.5.5-50
(NOT USED)

JANUARY 31, 1979



K E Y

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

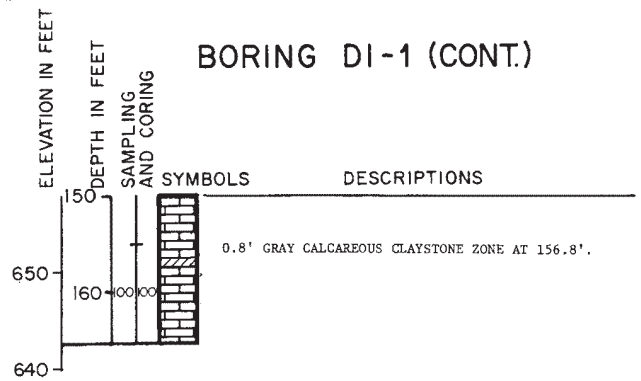
BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

s ■ SHELBY TUBE

CORING RUN

PERCENT RECOVERY—100 95 R.Q.D.

P SAMPLER PRESSED HYDRAULIC

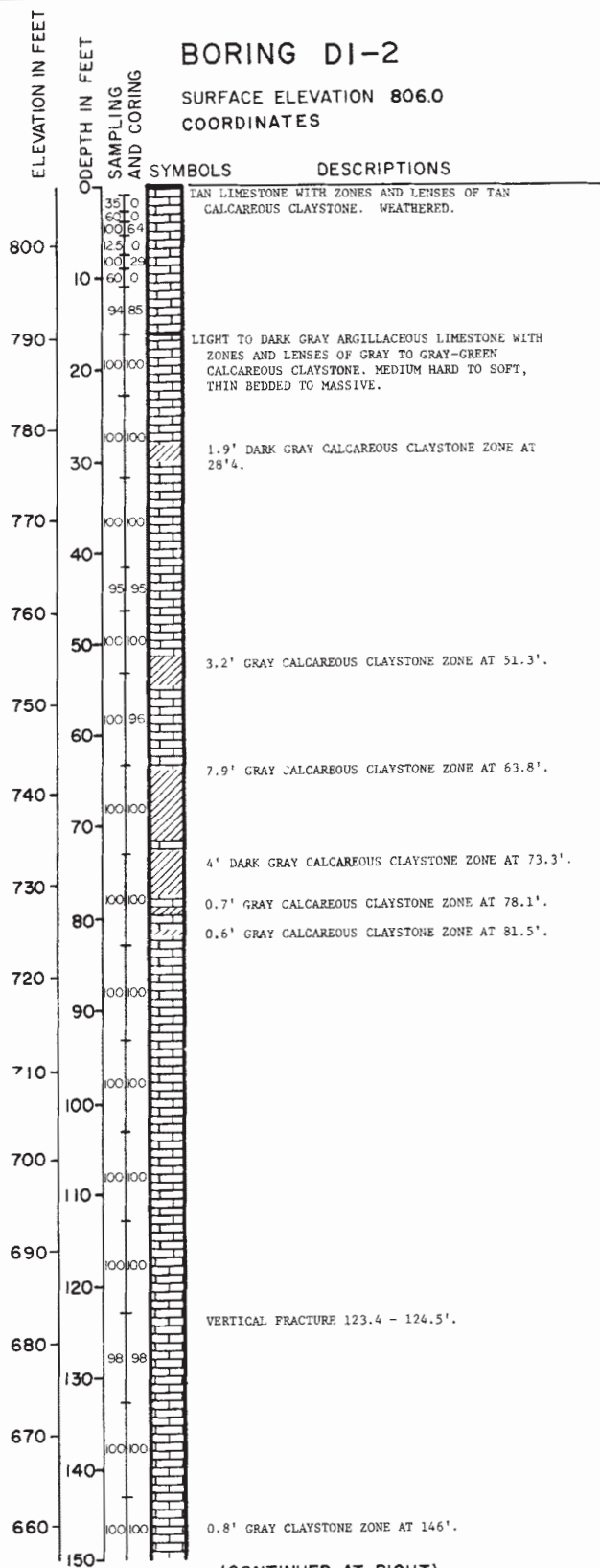


CASING INSTALLED TO 9'

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

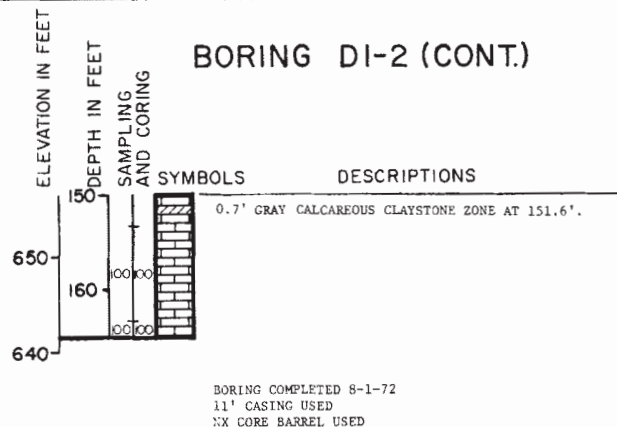
LOG OF BORING DI-1

FIGURE 2.5.5-51



(CONTINUED AT RIGHT)

KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT—B ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE
 CORING RUN
 PERCENT RECOVERY—100 95-RQD.
 P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
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 UNITS 1 and 2

LOG OF BORING DI-2

FIGURE 2.5.5 -52

SURFACE ELEVATION 812.0
COORDINATES



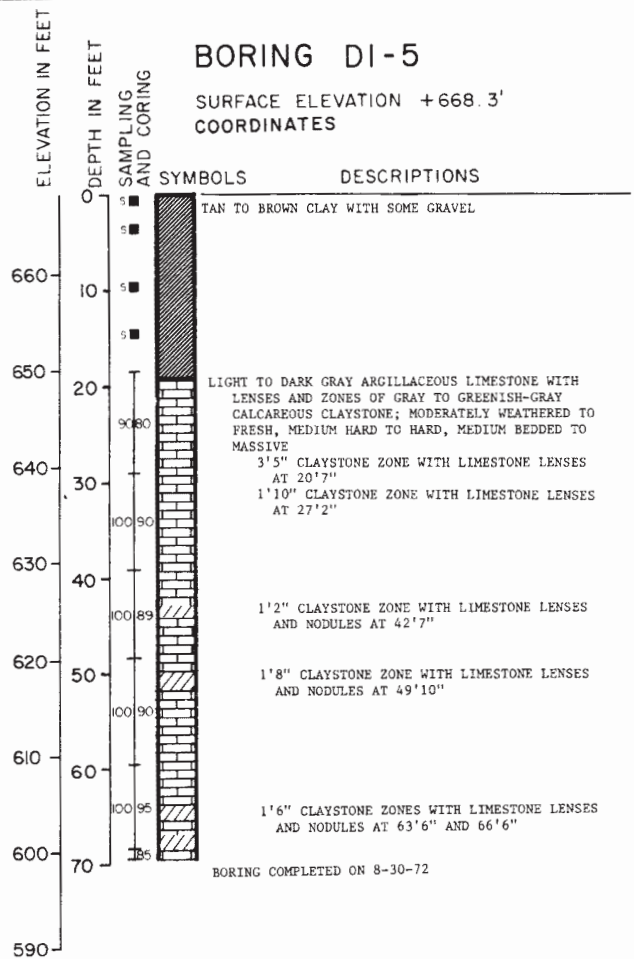
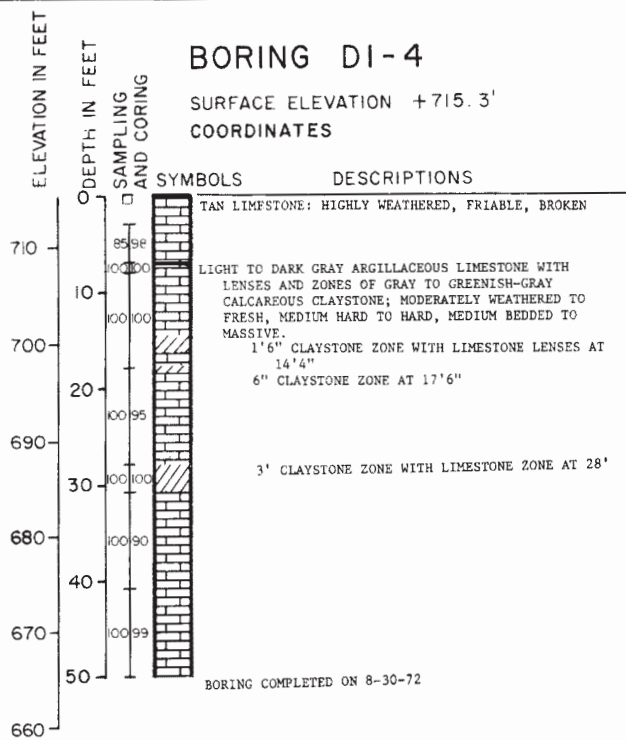
☐ DISTURBED GRAB SAMPLE
☒ D & M UNDISTURBED SAMPLE

S ■ SHELBY TUBE

P SAMPLER PRESSED HYDRAULICALLY

HOLE COMPLETED ON 7-28-72
CASING SET AT 9'

FIGURE 2.5.5-53



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT — 8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

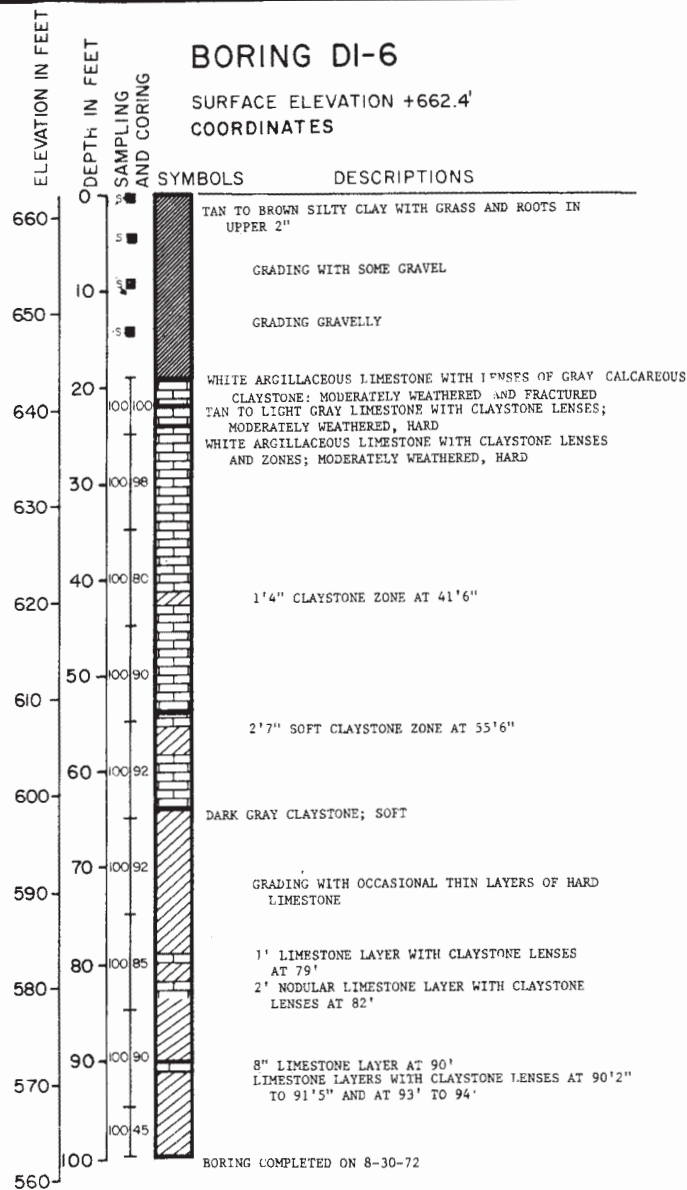
PERCENT RECOVERY — 100 ■ 95 RQD

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

**LOG OF BORINGS DI-4
AND DI-5**

FIGURE 2.5.5-54



KEY

□ DISTURBED GRAB SAMPLE
■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 □ STANDARD PENETRATION TEST
S ■ SHELBY TUBE

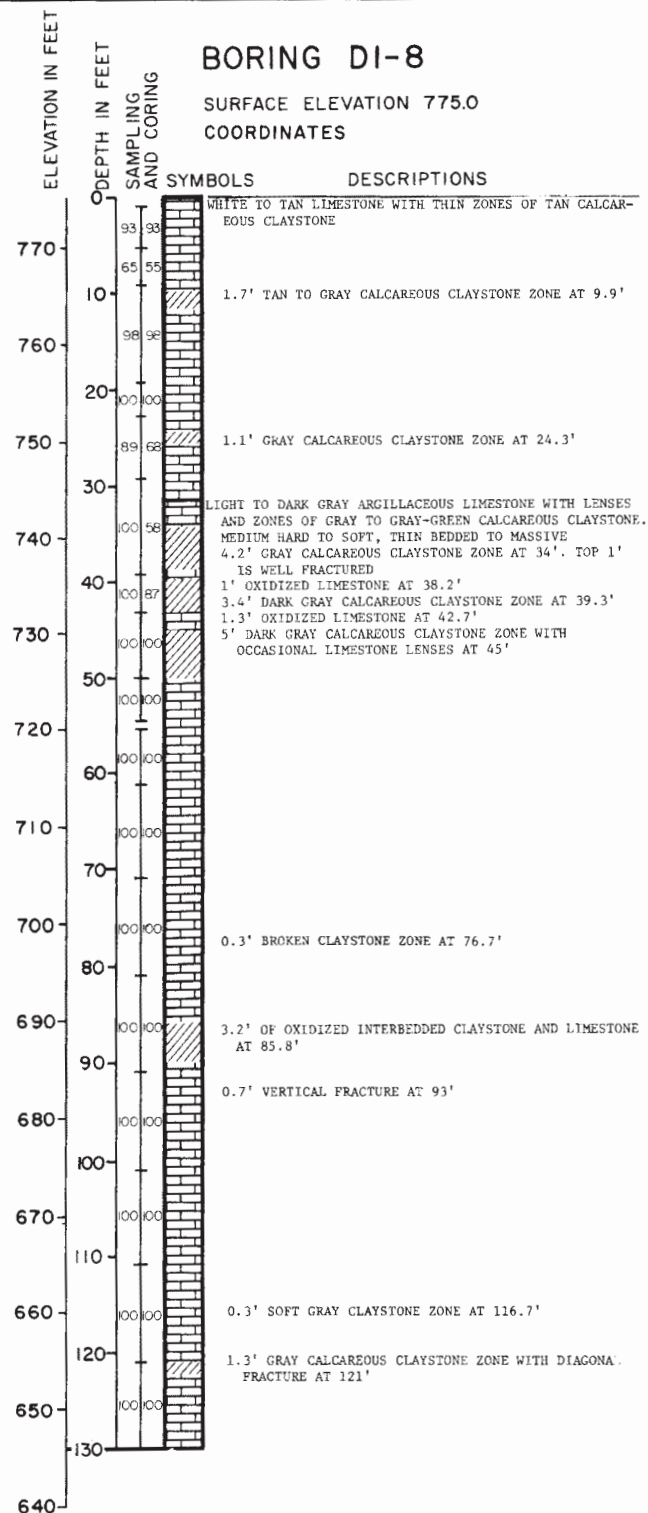
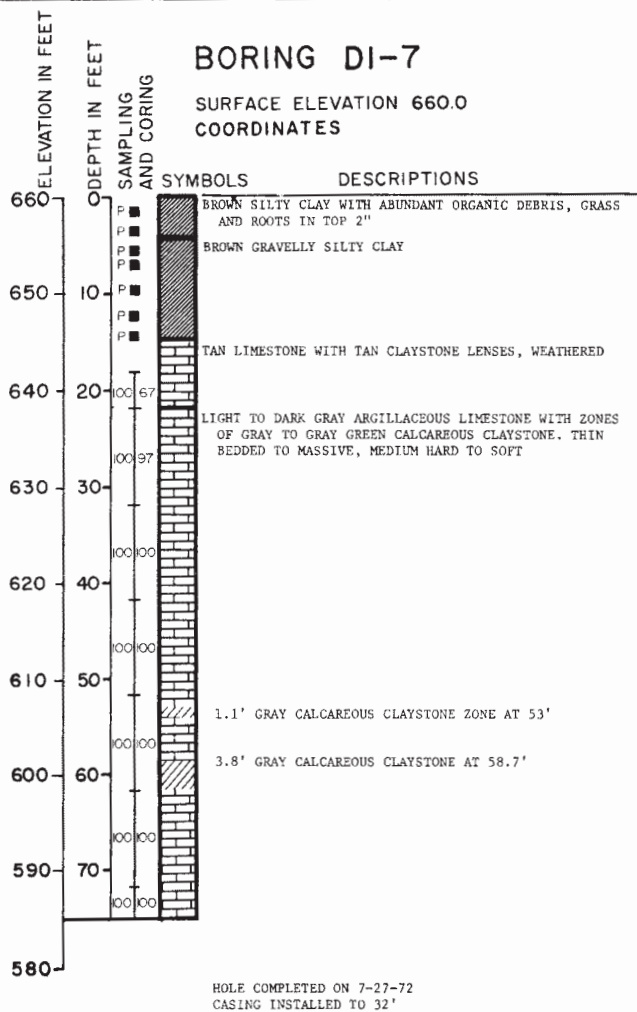
PERCENT RECOVERY—100 □ CORING RUN
95-RQD

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING DI-6

FIGURE 2.5.5-55



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

— CORING RUN

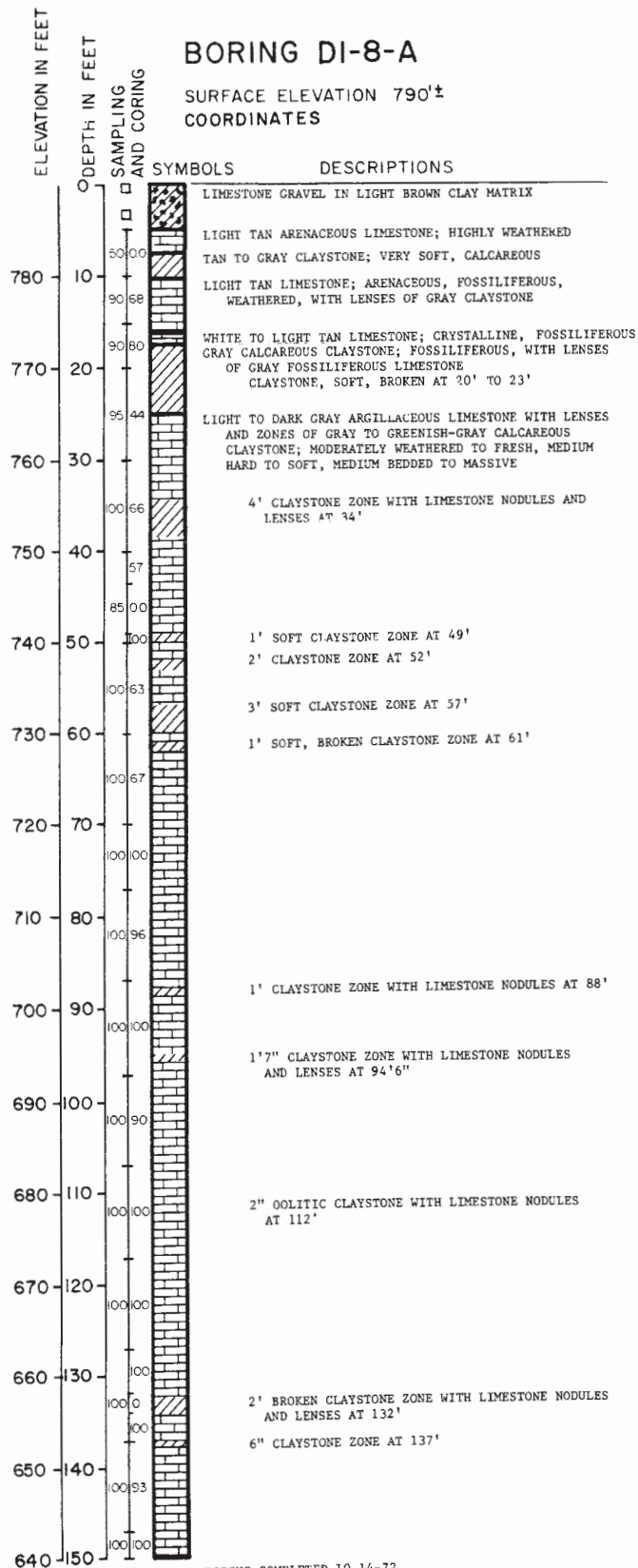
PERCENT RECOVERY—100 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

**LOG OF BORINGS DI-7
AND DI-8**

FIGURE 2.5.5-56

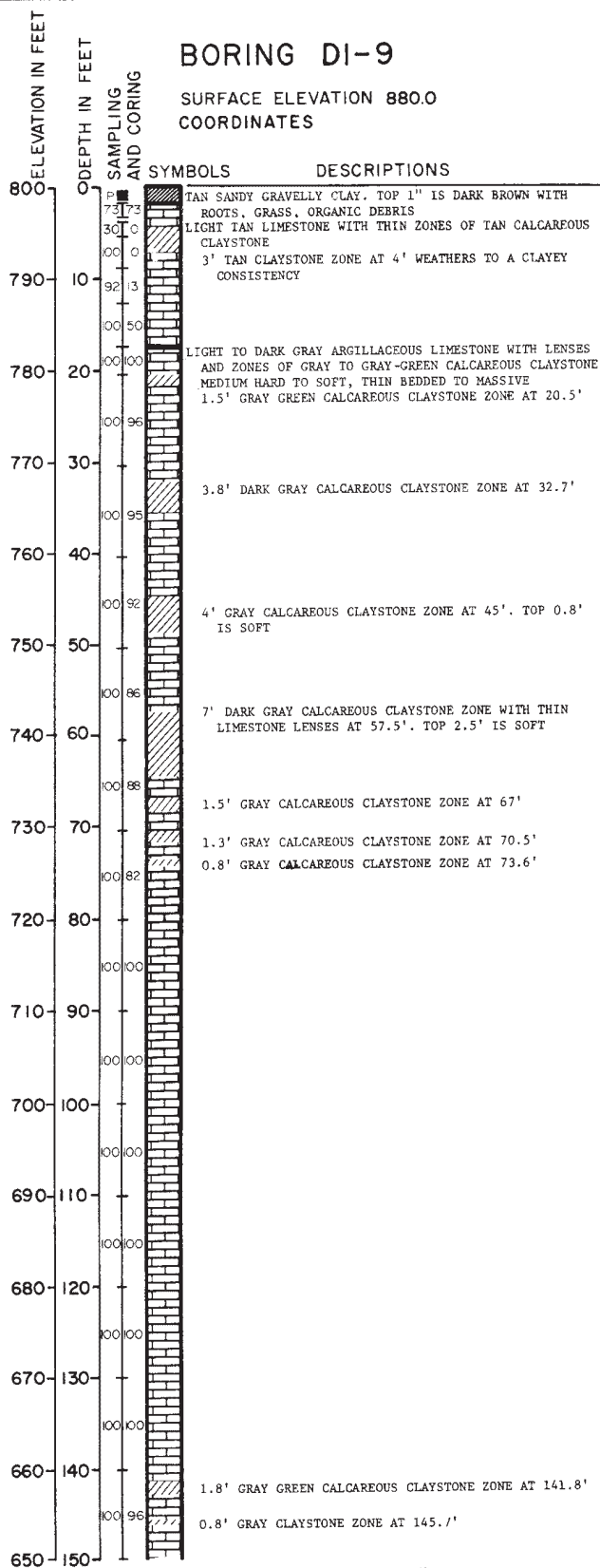


KEY
 [Symbol] DISTURBED GRAB SAMPLE
 [Symbol] D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT—[Symbol] STANDARD PENETRATION TEST
 [Symbol] SHELBY TUBE
 [Symbol] CORING RUN
 PERCENT RECOVERY—[Symbol] 95-RQD
 P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

LOG OF BORING DI-8A

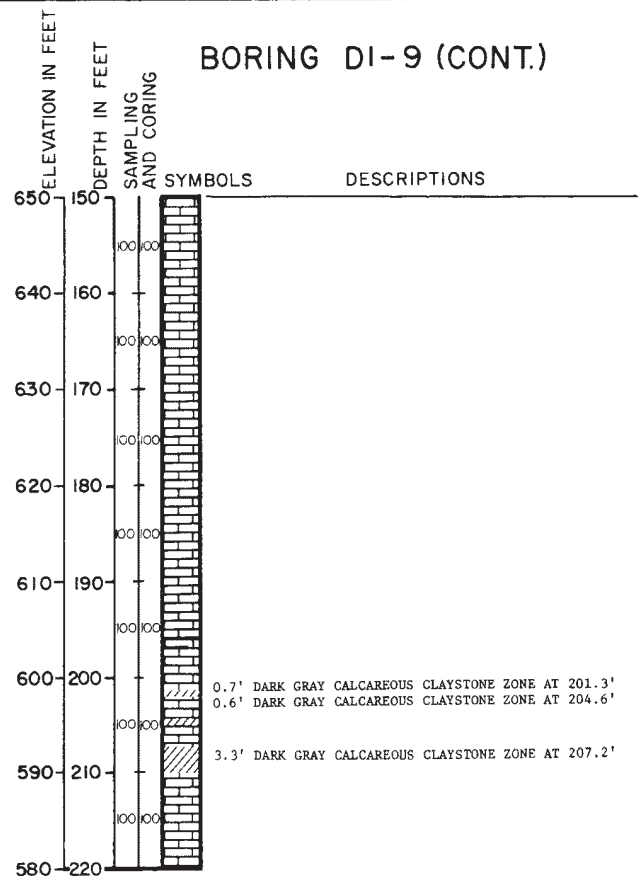
FIGURE 2.5.5-57



(CONTINUED AT RIGHT)

KEY

- DISTURBED GRAB SAMPLE
- D & M UNDISTURBED SAMPLE
- BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
- s ■ SHELBY TUBE
- CORING RUN
- PERCENT RECOVERY—100 95-RQD.
- P SAMPLER PRESSED HYDRAULICALLY

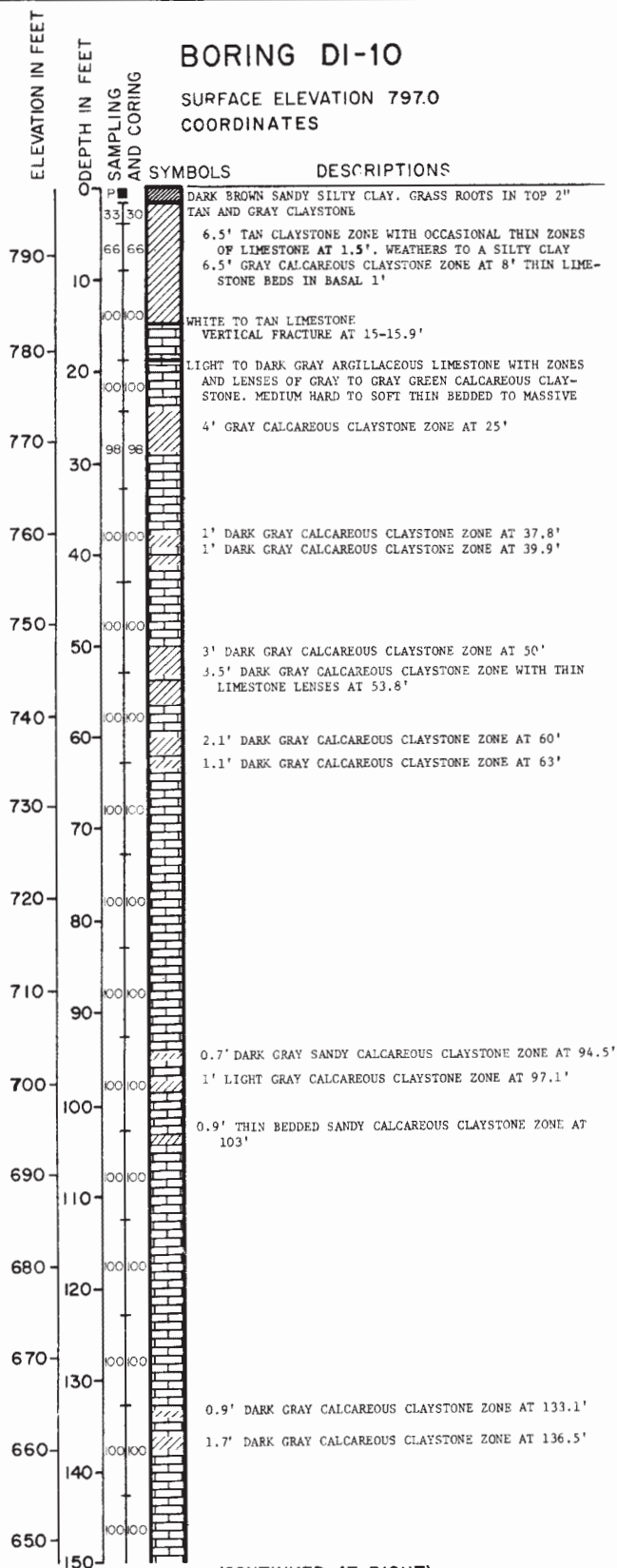


HOLE COMPLETED ON 7-24-72
NO CASING INSTALLED

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

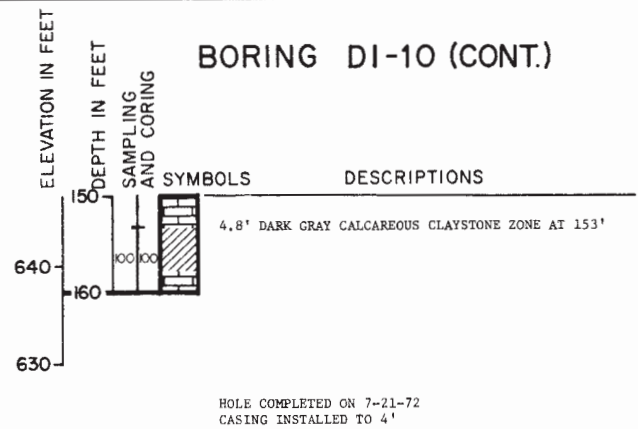
LOG OF BORING DI-9

FIGURE 2.5.5-58



(CONTINUED AT RIGHT)

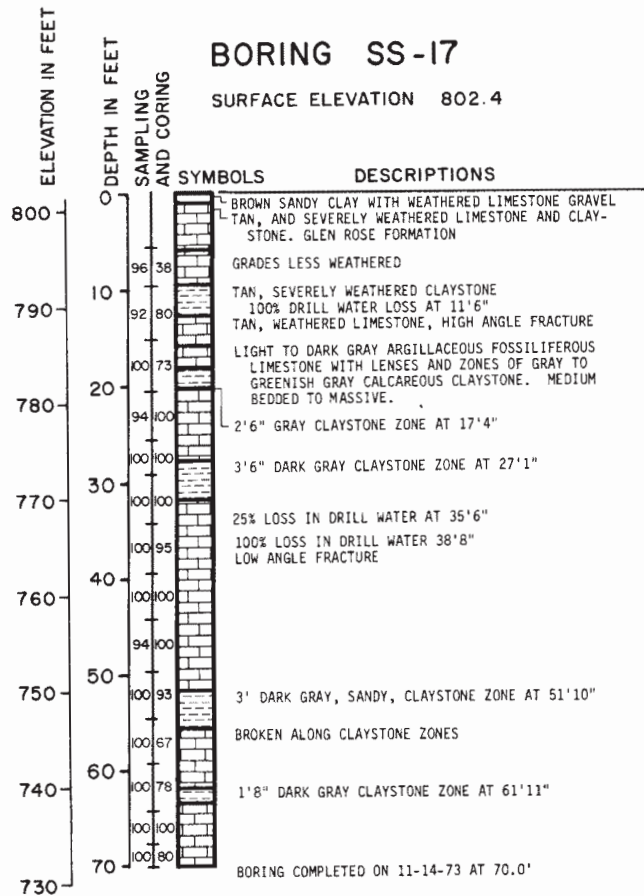
KEY
 □ DISTURBED GRAB SAMPLE
 ■ D & M UNDISTURBED SAMPLE
 BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST
 S ■ SHELBY TUBE
 PERCENT RECOVERY—100 ■ CORING RUN
 95-R.Q.D.
 P SAMPLER PRESSED HYDRAULICALLY



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING DI-10

FIGURE 2.5.5-59



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

S ■ SHELBY TUBE

PERCENT RECOVERY—100 ■ CORING RUN

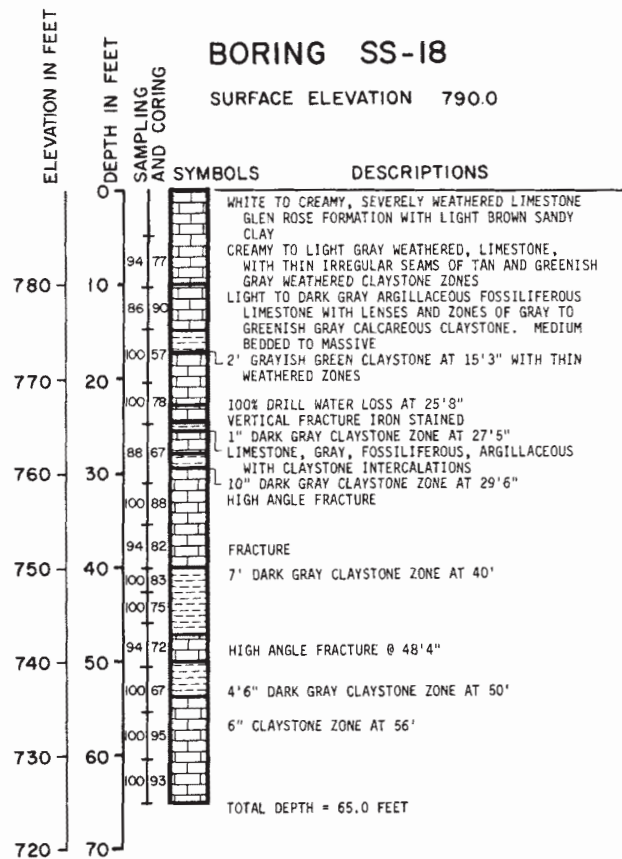
95-R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Log of Boring SS-17

FIGURE 2.5.5-59a



KEY

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

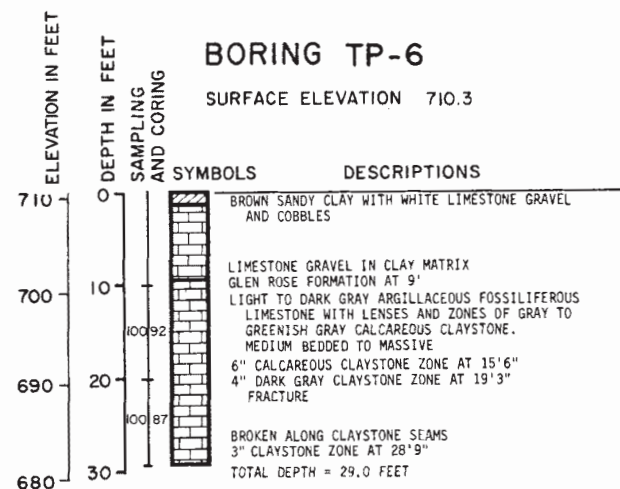
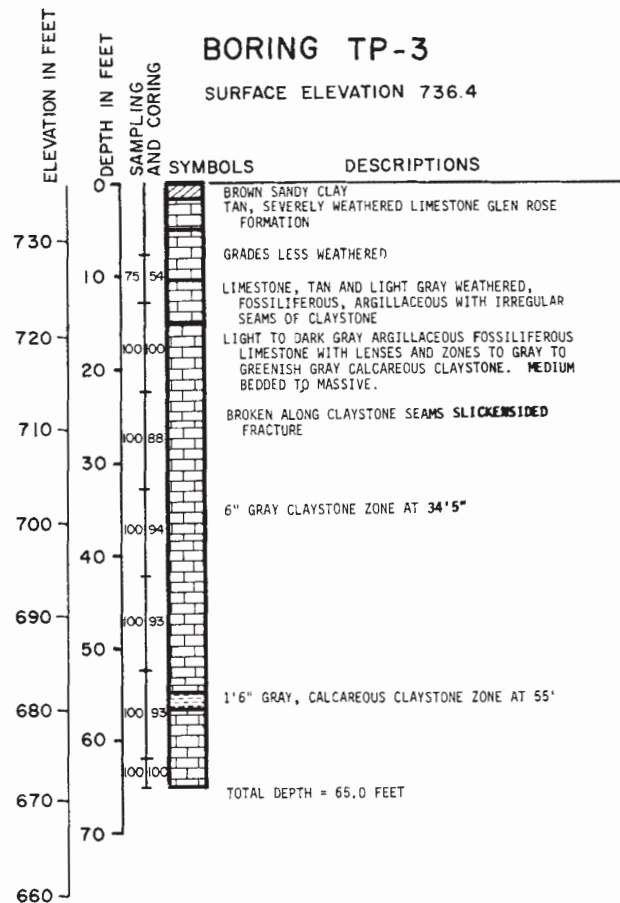
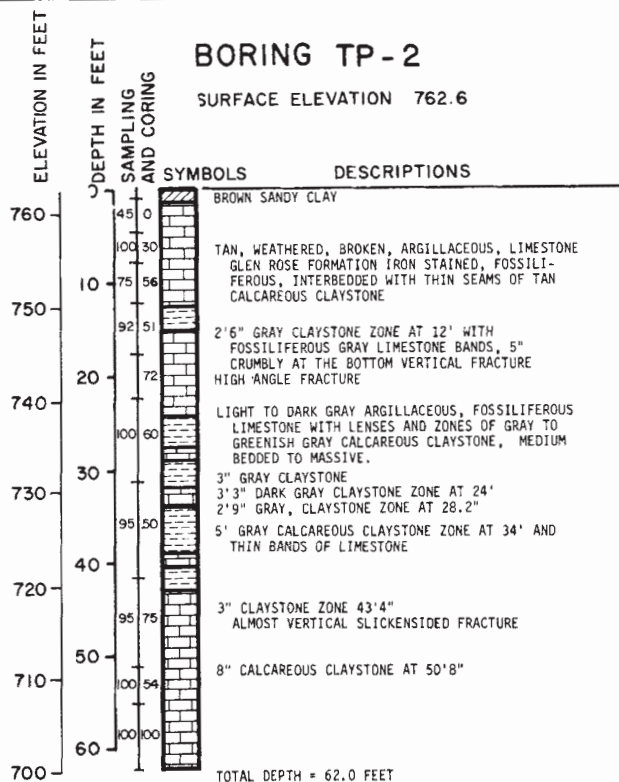
PERCENT RECOVERY—100 CORING RUN
95-R.Q.D.

P SAMPLER PRESSED HYDRAULICALLY

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Log of Borings SS-18

FIGURE 2.5.5-59b



KEY

□ DISTURBED GRAB SAMPLE

■ D & M UNDISTURBED SAMPLE

BLOWS PER FOOT—8 ■ STANDARD PENETRATION TEST

■ SHELBY TUBE

— CORING RUN

PERCENT RECOVERY—100 — 95-RQD.

P SAMPLER PRESSED HYDRAULICALLY

**COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2**

Log of Borings

TP-2, TP-3, and TP-6

FIGURE 2.5.5-59c

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										BORING NO. DII-1	
DATE BORING: 3-20-73		BORING NO. DII-1		DATE LOGGED: 3-20-73		LOG NO. DII-1		LOG SHEET: 1 OF 3			
MASON-JOHNSON & ASSOCIATES, INC. DALLAS, TEXAS										LOG SHEET: 1 OF 3	
PROJECT NO. 50010		DATE: 3-20-73		LOG NO. DII-1		LOG SHEET: 1 OF 3		LOG SHEET: 1 OF 3			
DEPTH, FT	ELEVATION, FT	MATERIAL DESCRIPTION	CORE DATA		PRESSURE TEST						
			SPALLS	REMARKS	UNIT WEIGHT, PCF	MOISTURE, %	STRENGTH, PSI	STRENGTH, KSI	STRENGTH, MPa		
5	95.0	From sandy clay with broken unweathered limestone.									
		Limestone, light tan, broken to fragments, severely weathered.									
10	90.0	Limestone, light tan, argillaceous, fossiliferous, iron stained, badly broken, severely weathered.									
		Interbedded with tan to light greenish gray severely weathered claystone.									
15	85.0	Drill water line.									
		Limestone, light gray, fine grained, fossiliferous, hard with pyrite.									
20	80.0	Limestone, gray, argillaceous, fossiliferous, nodular with thin irregular seams of dark gray calcareous claystone.									
		Limestone, light gray, fine grained, fossiliferous, hard with pyrite.									
25	75.0	Limestone, gray, argillaceous, fossiliferous, nodular with thin irregular seams of dark gray calcareous claystone.									
		Limestone, dark gray, slightly calcareous interbedded with lenses and thin seams of fossiliferous gray limestone.									
30	70.0	Limestone, gray, fine grained, argillaceous with irregular thin to 1" seams of gray calcareous claystone.									
		Limestone nodular in places.									
35	65.0	Limestone, dark gray with limestone.									
		4" claystone with nodular L.S.									
40	60.0	Limestone, gray, fine grained, argillaceous, with claystone seams at 60-61.5' claystone friable.									
		Fracture filled with pyrite.									
45	55.0	Claystone, argillaceous, with 1" seams of dark gray claystone at 64-65.0' section is badly broken.									
		2" soft claystone.									
50	50.0	12" L.S. gray fossiliferous, hard.									
		2" L.S. gray.									
55	45.0	Claystone, dark gray, with thin seams and lenses of limestone, medium hard and broken.									
		Limestone, gray, low grained, argillaceous, fossiliferous with thin irregular seams of calcareous claystone.									
60	40.0	Claystone, dark gray, slightly calcareous crumbly, medium hard with thin seams and small nodules of limestone.									
		1" gray limestone.									
65	35.0	Crumbly at 83.5'.									
		4" crumbly claystone with 1/2" nodules of L.S.									
70	30.0	45" fracture.									
		Limestone, gray, argillaceous, fossiliferous interbedded with thin irregular seams of gray claystone.									
75	25.0	Section broken at 64.5-70.0'.									
		3" gray claystone.									
80	20.0	3" gray claystone.									
		10" soft dark gray calcareous claystone.									
85	15.0	1" soft claystone.									
		4" claystone with L.S.									
90	10.0	4" argillaceous fracture.									
		3" claystone.									
95	5.0	3" claystone.									
		3" claystone.									
100	0.0	3" claystone.									
		3" claystone.									
105	-5.0	3" claystone.									
		3" claystone.									
110	-10.0	3" claystone.									
		3" claystone.									
115	-15.0	3" claystone.									
		3" claystone.									
120	-20.0	3" claystone.									
		3" claystone.									
125	-25.0	3" claystone.									
		3" claystone.									
130	-30.0	3" claystone.									
		3" claystone.									
135	-35.0	3" claystone.									
		3" claystone.									
140	-40.0	3" claystone.									
		3" claystone.									
145	-45.0	3" claystone.									
		3" claystone.									
150	-50.0	3" claystone.									
		3" claystone.									
155	-55.0	3" claystone.									
		3" claystone.									
160	-60.0	3" claystone.									
		3" claystone.									
165	-65.0	3" claystone.									
		3" claystone.									
170	-70.0	3" claystone.									
		3" claystone.									
175	-75.0	3" claystone.									
		3" claystone.									
180	-80.0	3" claystone.									
		3" claystone.									
185	-85.0	3" claystone.									
		3" claystone.									
190	-90.0	3" claystone.									
		3" claystone.									
195	-95.0	3" claystone.									
		3" claystone.									
200	-100.0	3" claystone.									
		3" claystone.									
205	-105.0	3" claystone.									
		3" claystone.									
210	-110.0	3" claystone.									
		3" claystone.									
215	-115.0	3" claystone.									
		3" claystone.									
220	-120.0	3" claystone.									
		3" claystone.									
225	-125.0	3" claystone.									
		3" claystone.									
230	-130.0	3" claystone.									
		3" claystone.									
235	-135.0	3" claystone.									
		3" claystone.									
240	-140.0	3" claystone.									
		3" claystone.									
245	-145.0	3" claystone.									
		3" claystone.									
250	-150.0	3" claystone.									
		3" claystone.									
255	-155.0	3" claystone.									
		3" claystone.									
260	-160.0	3" claystone.									
		3" claystone.									
265	-165.0	3" claystone.									
		3" claystone.									
270	-170.0	3" claystone.									
		3" claystone.									
275	-175.0	3" claystone.									
		3" claystone.									
280	-180.0	3" claystone.									
		3" claystone.									
285	-185.0	3" claystone.									
		3" claystone.									
290	-190.0	3" claystone.									
		3" claystone.									
295	-195.0	3" claystone.									
		3" claystone.									
300	-200.0	3" claystone.									
		3" claystone.									
305	-205.0	3" claystone.									
		3" claystone.									
310	-210.0	3" claystone.									
		3" claystone.									
315	-215.0	3" claystone.									
		3" claystone.									
320	-220.0	3" claystone.									
		3" claystone.									
325	-225.0	3" claystone.									
		3" claystone.									
330	-230.0	3" claystone.									
		3" claystone.									
335	-235.0	3" claystone.									
		3" claystone.									
340	-240.0	3" claystone.									
		3" claystone.									
345	-245.0	3" claystone.									
		3" claystone.									
350	-250.0	3" claystone.									
		3" claystone.									
355	-255.0	3" claystone.									
		3" claystone.									
360	-260.0	3" claystone.									
		3" claystone.									
365	-265.0	3" claystone.									
		3" claystone.									
370	-270.0	3" claystone.									
		3" claystone.									
375	-275.0	3" claystone.									
		3" claystone.									
380	-280.0	3" claystone.									
		3" claystone.									
385	-285.0	3" claystone.									
		3" claystone.									
390	-290.0	3" claystone.									
		3" claystone.									
395	-295.0	3" claystone.									
		3" claystone.									
400	-300.0	3" claystone.									
		3" claystone.									
405	-305.0	3" claystone.									
		3" claystone.									
410	-310.0	3" claystone.									
		3" claystone.									
415	-315.0	3" claystone.									
		3" claystone.									
420	-320.0	3" claystone.									
		3" claystone.									
425	-325.0	3" claystone.									
		3" claystone.									
430	-330.0	3" claystone.									
		3" claystone.									
435	-335.0	3" claystone.									
		3" claystone.									
440	-340.0	3" claystone.									
		3" claystone.									
445	-345.0	3" claystone.									
		3" claystone.									
450	-350.0	3" claystone.									
		3" claystone.									
455	-355.0	3" claystone.									
		3" claystone.									
460	-360.0	3" claystone.									
		3" claystone.									
465	-365.0	3" claystone.									
		3" claystone.									
470	-370.0	3" claystone.									
		3" claystone.									
475	-375.0	3" claystone.									
		3" claystone.									
480	-380.0	3" claystone.									
		3" claystone.									
485	-385.0	3" claystone.									
		3" claystone.									
490	-390.0	3" claystone.									
		3" claystone.									
495	-395.0	3" claystone.									
		3" claystone.									
500	-400.0	3" claystone.									
		3" claystone.									
505	-405.0	3" claystone.									
		3" claystone.									
510	-410.0	3" claystone.									
		3" claystone.									
515	-415.0	3" claystone.									
		3" claystone.									
520	-420.0	3" claystone.									
		3" claystone.									
525	-425.0	3" claystone.									
		3" claystone.									
530	-430.0	3" claystone.									
		3" claystone.									
535	-435.0	3" claystone.									
		3" claystone.									
540	-440.0	3" claystone.									
		3" claystone.									
545	-445.0	3" claystone.									
		3" claystone.									
550	-450.0										

TEXAS UTILITIES SERVICE, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING									
DATE BORING: 3-4-73		BORING NO: DII-1		DATE LOGGED: 3-7-73		LOG NO: DII-1			
MASON-JOHNSON & ASSOCIATES, INC. DALLAS, TEXAS									
DEPTH, FT	ELEVATION, FT	MATERIAL DESCRIPTION	CORE DATA		PRESSURE TEST				
			SPALLS	REMARKS	UNIT WEIGHT, PCF	MOISTURE, %	STRENGTH, PSI	STRENGTH, KSI	STRENGTH, MPa
165	-65.0	1" gray claystone			10.000	0.0100	40		
170	-70.0	1" gray claystone							
175	-75.0	4" gray claystone							
180	-80.0								
185	-85.0	12" abundant of mollus			10.000	0.0100	95		
190	-90.0								
195	-95.0	Limestone, gray, argillaceous, fossiliferous, interbedded with thin irregular seams of gray claystone							
200	-100.0				10.000	0.0100	100		
205	-105.0								
210	-110.0	1" claystone with L.S.							
215	-115.0	4" claystone with L.S.			10.000	0.0100	50		
220	-120.0								
225	-125.0	Claystone, soft, crumbly, medium hard							
230	-130.0								
235	-135.0	1" soft crumbly claystone							
240	-140.0								
245	-145.0	4" abundant mollus							
250	-150.0	Limestone, gray, argillaceous, fossiliferous interbedded with thin irregular seams of gray claystone			10.0	0.0100	80		
255	-155.0								
260	-160.0	Total Depth of Boring = 160.0 Feet							

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										LOG NO. DII-1 DATE LOGGED 3-20-73	
MASON-JOHNSON & ASSOCIATES, INC. DALLAS, TEXAS										DATE BORING 3-20-73	
DEPTH, FT	ELEVATION, FT	MATERIAL DESCRIPTION	CORE DATA				PRESSURE TEST				
			SPALLS	MOISTURE, %	UNIT WEIGHT, PCF	STRENGTH, PSI	STRENGTH, KSI	STRENGTH, MPa			
265	-165.0	From sandstone to 1.5									
265	-165.0	The sandy clay									
270	-170.0	From sandstone to 1.5									
270	-170.0	Limestone, light tan, bluish-gray, severely weathered badly broken, crystalline at the top 1", black stained		4.5	1.9	45	0.5				
275	-175.0	Claystone, greenish gray, soft, mixed with severely weathered limestone		0.4	3.3	93	56				
280	-180.0	1" Gray claystone									
280	-180.0	3" Claystone, gray									
285	-185.0	Limestone, gray, fossiliferous, mollus, argillaceous, hard interbedded with thin to 1" seams of calcareous claystone							88		
290	-190.0	2" Claystone, gray									
295	-195.0	2" Claystone, gray									
300	-200.0	3" soft claystone, dark gray									
300	-200.0	2" soft claystone, dark gray									
305	-205.0	45" fracture		0.0	10.0	100	77				
310	-210.0	1" claystone, gray									
315	-215.0	3" claystone, gray									
320	-220.0	3" limestone hard									
320	-220.0	Claystone, gray mixed with broken limestone									
325	-225.0	Limestone, gray, medium fine grained, fossiliferous with abundance of mollus, argillaceous, hard with gray calcareous interbedded claystone									
325	-225.0			10.0	0.0	100	87				
330	-230.0	8" limestone hard									
330	-230.0	Claystone, gray mixed with broken limestone									
335	-235.0	Limestone, gray, medium fine grained, fossiliferous with abundance of mollus, argillaceous, hard with gray calcareous interbedded claystone									
335	-235.0			10.0	0.0	100	97				

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING									
DATE BORING: 3-20-73		BORING NO: DII-1		DATE LOGGED: 3-20-73		LOG NO: DII-1			
LOG SHEET: 1 OF 3		LOG SHEET: 1 OF 3		LOG SHEET: 1 OF 3		LOG SHEET: 1 OF 3			
MASON-JOHNSON & ASSOCIATES, INC. DALLAS, TEXAS						DATE: 3-20-73		LOG SHEET: 1 OF 3	
DEPTH, FT	ELEVATION, FT	MATERIAL	DESCRIPTION	CORE DATA		PRESSURE TEST			
				SPALLS	REMARKS	UNIT WEIGHT, PCF	MOISTURE, %	STRENGTH, PSI	STRENGTH, KSI
355	-255.0	2" gray claystone							
360	-260.0	Limestone, gray, medium fine grained, fossiliferous with abundance of mollus, argillaceous, hard with gray calcareous interbedded claystone							
365	-265.0								
370	-270.0								
375	-275.0								
380	-280.0								
385	-285.0								
390	-290.0								
395	-295.0								
400	-300.0								
405	-305.0								
410	-310.0								
415	-315.0								
420	-320.0								
425	-325.0								
430	-330.0								
435	-335.0								
440	-340.0								
445	-345.0								
450	-350.0								
455	-355.0								
460	-360.0								
465	-365.0								
470	-370.0								
475	-375.0								
480	-380.0								
485	-385.0								
490	-390.0								
495	-395.0								
500	-400.0								
505	-405.0								
510	-410.0								
515	-415.0								
520	-420.0								
525	-425.0								
530	-430.0								
535	-435.0								
540	-440.0								
545	-445.0								
550	-450.0								
555	-455.0								
560	-460.0								
565	-465.0								
570	-470.0								
575	-475.0								
580	-480.0								
585	-485.0								
590	-490.0								
595	-495.0								
600	-500.0								
605	-505.0								
610	-510.0								
615	-515.0								
620	-520.0								
625	-525.0								
630	-530.0								
635	-535.0								
640	-540.0								
645	-545.0								
650	-550.0								
655	-555.0								
660	-560.0								
665	-565.0								
670	-570.0								
675	-575.0								
680	-580.0								
685	-585.0								
690	-590.0								
695	-595.0								
700	-600.0								

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2
LOG OF BORINGS
DII-1 & DII-2
FIGURE 2.5.5-61

[illegible]

COMANCHE PEAK S.E.S. TEAM ELECTRIC STATION									
WAGON-GUNSTON & ASSOCIATES, INC. DALLAS, TEXAS									
DATE	TIME	DEPTH	LOG	REMARKS	TEST	TEMP.	WATER	WIND	WAVE
11/10/74	10:00	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
11/10/74	10:05	0.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
11/10/74	10:10	1.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
11/10/74	10:15	1.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
11/10/74	10:20	2.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
11/10/74	10:25	2.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
11/10/74	10:30	3.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
11/10/74	10:35	3.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
11/10/74	10:40	4.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
11/10/74	10:45	4.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
11/10/74	10:50	5.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
11/10/74	10:55	5.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
11/10/74	11:00	6.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
11/10/74	11:05	6.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
11/10/74	11:10	7.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
11/10/74	11:15	7.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
11/10/74	11:20	8.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
11/10/74	11:25	8.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
11/10/74	11:30	9.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
11/10/74	11:35	9.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
11/10/74	11:40	10.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
11/10/74	11:45	10.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
11/10/74	11:50	11.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
11/10/74	11:55	11.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
11/10/74	12:00	12.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
11/10/74	12:05	12.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
11/10/74	12:10	13.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
11/10/74	12:15	13.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
11/10/74	12:20	14.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
11/10/74	12:25	14.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
11/10/74	12:30	15.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
11/10/74	12:35	15.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
11/10/74	12:40	16.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
11/10/74	12:45	16.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
11/10/74	12:50	17.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
11/10/74	12:55	17.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
11/10/74	13:00	18.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
11/10/74	13:05	18.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5
11/10/74	13:10	19.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
11/10/74	13:15	19.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
11/10/74	13:20	20.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
11/10/74	13:25	20.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
11/10/74	13:30	21.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
11/10/74	13:35	21.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
11/10/74	13:40	22.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
11/10/74	13:45	22.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
11/10/74	13:50	23.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
11/10/74	13:55	23.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
11/10/74	14:00	24.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
11/10/74	14:05	24.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
11/10/74	14:10	25.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
11/10/74	14:15	25.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
11/10/74	14:20	26.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
11/10/74	14:25	26.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
11/10/74	14:30	27.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
11/10/74	14:35	27.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
11/10/74	14:40	28.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
11/10/74	14:45	28.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
11/10/74	14:50	29.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
11/10/74	14:55	29.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
11/10/74	15:00	30.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
11/10/74	15:05	30.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
11/10/74	15:10	31.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
11/10/74	15:15	31.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
11/10/74	15:20	32.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0
11/10/74	15:25	32.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5
11/10/74	15:30	33.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
11/10/74	15:35	33.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5
11/10/74	15:40	34.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
11/10/74	15:45	34.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
11/10/74	15:50	35.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
11/10/74	15:55	35.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5
11/10/74	16:00	36.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
11/10/74	16:05	36.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5
11/10/74	16:10	37.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
11/10/74	16:15	37.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
11/10/74	16:20	38.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
11/10/74	16:25	38.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
11/10/74	16:30	39.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
11/10/74	16:35	39.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5
11/10/74	16:40	40.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
11/10/74	16:45	40.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5
11/10/74	16:50	41.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
11/10/74	16:55	41.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5
11/10/74	17:00	42.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
11/10/74	17:05	42.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5
11/10/74	17:10	43.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
11/10/74	17:15	43.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5
11/10/74	17:20	44.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
11/10/74	17:25	44.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
11/10/74	17:30	45.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
11/10/74	17:35	45.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5
11/10/74	17:40	46.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
11/10/74	17:45	46.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
11/10/74	17:50	47.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0
11/10/74	17:55	47.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
11/10/74	18:00	48.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
11/10/74	18:05	48.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5
11/10/74	18:10	49.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0
11/10/74	18:15	49.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5
11/10/74	18:20	50.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
11/10/74	18:25	50.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5
11/10/74	18:30	51.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0
11/10/74	18:35	51.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5
11/10/74	18:40	52.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
11/10/74	18:45	52.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5
11/10/74	18:50	53.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
11/10/74	18:55	53.5	63.5	63.5	63.5	63.5	63.5	63.5	63.5
11/10/74	19:00	54.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
11/10/74	19:05	54.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
11/10/74	19:10	55.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
11/10/74	19:15	55.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
11/10/74	19:20	56.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
11/10/74	19:25	56.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5
11/10/74	19:30	57.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
11/10/74	19:35	57.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5
11/10/74	19:40	58.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
11/10/74	19:45	58.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5
11/10/74	19:50	59.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
11/10/74	19:55	59.5	69.5	69.5	69.5				

[illegible][illegible]

TEXAS UTILITIES SERVICES, INC. CONDUCE AREA OF SERVICE COST OF SERVICE										MASON JONSON & ASSOCIATES, INC. ELECTRICAL DIVISION PROJECT NO. 10070											
UNIT NO.	UNIT NAME	UNIT TYPE	UNIT DESCRIPTION	UNIT STATUS	UNIT LOCATION	UNIT DATE	UNIT TIME	UNIT VALUE	UNIT COST	UNIT TOTAL	UNIT NO.	UNIT NAME	UNIT TYPE	UNIT DESCRIPTION	UNIT STATUS	UNIT LOCATION	UNIT DATE	UNIT TIME	UNIT VALUE	UNIT COST	UNIT TOTAL
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
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60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
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64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
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77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
79	79	79</																			

[illegible]

FIGURE 2.55-67

DATE RECEIVED		DATE OF DELIVERY		QUANTITY		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE		TOTAL PRICE		TAXES		TOTAL		REMARKS		UNIT PRICE	
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[illegible]

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORINGS
SS-5—SS-7

FIGURE 2.5.5-68

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING									
DATE STARTED: 3-29-77		DATE COMPLETED: 4-1-77		BORING NO.: SSA-2		LOCATION: 1		ELEVATION: 101.4	
MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS									
DEPTH, FT	ELEVATION, FEET	MATERIAL	LOG DATA		PRESSURE TEST				
			PERCENT SAND	PERCENT GRAVEL	PERCENT CLAY	PERCENT SILT	PERCENT FINE SAND	PERCENT COARSE SAND	PERCENT TOTAL SAND
0	101.4	Limestone, light tan, somewhat weathered, loose and friable mixed with (lime) gravel, sand and clay	5.0	0.0	10.0	0			
10	90.4	Limestone, tan, somewhat weathered, fossiliferous, argillaceous mixed with weathered tan to greenish tan calcareous claystone, badly broken and iron stained	5.0	0.0	10.0	20			
20	79.4	Limestone, tan, weathered, fossiliferous, argillaceous, iron stained and broken	5.0	0.0	10.0	40			
30	68.4	Claystone, dark gray, medium fine	5.0	0.0	10.0	60			
40	57.4	Limestone, very fine grained, gray, fossiliferous, hard, argillaceous with thin to 1" dark gray claystone interbedded	5.0	0.0	10.0	80			
50	46.4	Claystone, greenish gray, soft	5.0	0.0	10.0	100			
60	35.4	Limestone, gray, fossiliferous, argillaceous, hard with thin to 1" claystone bands	5.0	0.0	10.0	100			
70	24.4	2" very soft greenish gray claystone	5.0	0.0	10.0	100			
80	13.4	4" gray claystone	5.0	0.0	10.0	100			
90	2.4	Claystone, dark gray soft with thin bands of gray dense limestone	5.0	0.0	10.0	100			
100		2" gray claystone	5.0	0.0	10.0	100			
110		2" friable claystone	5.0	0.0	10.0	100			
120		2" friable claystone	5.0	0.0	10.0	100			
130		Limestone gray, hard, fossiliferous, argillaceous, with irregular thin to 1" seams of gray calcareous claystone	5.0	0.0	10.0	60			
140		Section at 10-12.5 badly broken along claystone seams	5.0	0.0	10.0	60			
150		Claystone, dark gray, soft	5.0	0.0	10.0	60			
160		12" dark gray claystone w/ 8" limestone, gray, fossiliferous, interbedded with numerous thin seams of gray calcareous claystone	5.0	0.0	10.0	60			
170		Total Depth of Boring = 65.0 Feet							

SHEET NO. 1 OF 1

BORING NO. SSA-2

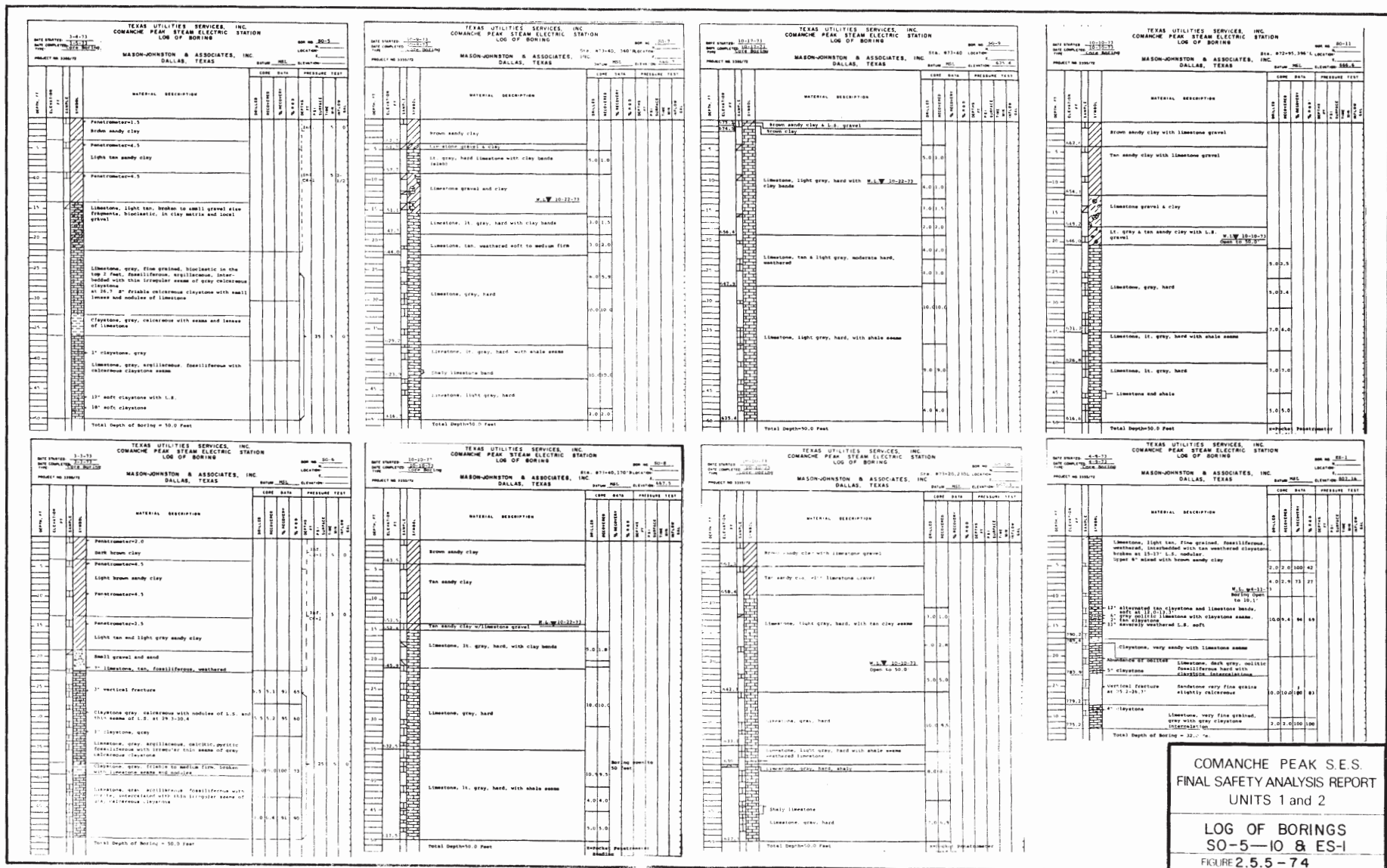
TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										Boring No. 33-2	
DATE STARTED: 3-29-77		DATE COMPLETED: 4-1-77		BORING NO.: SSA-2		LOCATION: 1		ELEVATION: 101.4			
MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS										Boring No. 33-2	
DEPTH FEET	ELEVATION FEET	MATERIAL	LOG DATA		PRESSURE TEST						
			PERCENT SAND	PERCENT GRAVEL	PERCENT CLAY	PERCENT SILT	PERCENT FINE SAND	PERCENT COARSE SAND	PERCENT TOTAL SAND		
0	101.4	Limestone, tan, fossiliferous, calcareous somewhat weathered, badly broken, black and iron stained mixed with (gray) green, sand and clay section from 0 to 5' friable	5.0	0.0	10.0	20					
10	90.4	8" tan claystone with limestone gravel	5.0	0.0	10.0	20					
20	79.4	Claystone, greenish gray, slightly calcareous, soft to medium fine	5.0	0.0	10.0	20					
30	68.4	3" weathered limestone	5.0	0.0	10.0	20					
40	57.4	Limestone, light tan to light gray fossiliferous calcareous, hard	5.0	0.0	10.0	20					
50	46.4	Limestone, gray, fossiliferous, calcareous, hard with irregular thin seams of gray calcareous fossiliferous claystone	5.0	0.0	10.0	20					
60	35.4	Limestone, gray, very fine grained, dense, hard fossiliferous, argillaceous	5.0	0.0	10.0	20					
70	24.4	Claystone, dark gray, friable to medium fine, broken	5.0	0.0	10.0	20					
80	13.4	Limestone, dark gray very fine grained, hard, fossiliferous, argillaceous with irregular thin seams of claystone	5.0	0.0	10.0	20					
90	2.4	Section at 45-48.7 badly broken	5.0	0.0	10.0	20					
100		Claystone, dark gray	5.0	0.0	10.0	20					
110		Limestone, gray, fossiliferous, argillaceous with irregular thin seams of claystone	5.0	0.0	10.0	20					
120		Dark gray claystone with limestone lenses	5.0	0.0	10.0	20					
130		Limestone, gray, fossiliferous, argillaceous with irregular thin to 1" thick claystone seams	5.0	0.0	10.0	20					
140		Mixed with friable claystone	5.0	0.0	10.0	20					
150		Total Depth of Boring = 64.0 Feet									

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										DATE STARTED: 3-29-77		DATE COMPLETED: 4-1-77		BORING NO.: SSA-2		LOCATION: 1		ELEVATION: 101.4	
MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS										DATE: 3-29-77									
DEPTH FEET	ELEVATION FEET	MATERIAL	LOG DATA		PRESSURE TEST														
			PERCENT SAND	PERCENT GRAVEL	PERCENT CLAY	PERCENT SILT	PERCENT FINE SAND	PERCENT COARSE SAND	PERCENT TOTAL SAND										
0	101.4	Limestone, tan, fossiliferous, severely weathered, badly broken, dark argillaceous	5.0	0.0	10.0	20													
10	90.4	Limestone, tan, severely weathered, soft to medium hard mixed with an evenly weathered very soft, tan calcareous claystone	5.0	0.0	10.0	20													
20	79.4	Total Logs at 20-22 Feet																	
30	68.4	1" sandy claystone	5.0	0.0	10.0	20													
40	57.4	Limestone, light gray, partly crystalline, fossiliferous, hard stained, hard	5.0	0.0	10.0	20													
50	46.4	1" friable claystone	5.0	0.0	10.0	20													
60	35.4	Limestone, gray, fossiliferous, argillaceous, soft to hard, interbedded with irregular thin seams of gray calcareous fossiliferous claystone	5.0	0.0	10.0	20													
70	24.4	Limestone graded to lower soft fine, black stained at 20'	5.0	0.0	10.0	20													
80	13.4	Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
90	2.4	4" friable claystone	5.0	0.0	10.0	20													
100		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
110		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
120		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
130		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
140		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
150		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
160		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
170		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
180		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
190		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
200		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
210		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
220		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
230		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
240		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
250		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
260		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
270		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
280		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
290		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
300		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
310		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
320		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
330		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
340		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
350		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
360		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
370		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
380		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
390		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
400		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
410		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
420		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
430		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
440		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
450		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
460		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
470		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
480		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
490		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
500		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
510		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
520		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
530		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
540		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
550		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
560		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
570		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
580		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
590		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
600		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
610		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
620		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
630		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
640		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
650		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
660		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
670		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
680		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
690		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
700		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
710		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
720		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
730		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
740		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
750		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
760		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
770		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
780		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
790		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
800		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
810		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
820		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
830		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
840		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
850		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
860		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
870		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
880		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
890		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
900		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
910		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
920		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
930		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
940		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
950		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
960		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
970		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
980		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
990		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
1000		Claystone, dark gray, medium fine	5.0	0.0	10.0	20													
Total Depth of Boring = 44.0 Feet																			

SHEET NO. 001 OF 01

END OF LOG

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING DATE STARTED: 2-5-73 DATE COMPLETED: 2-22-73 PROJECT NO. 200-4 BORING NO. 200-4 LOCATION: DALLAS, TEXAS MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS									
DEPTH, FT.	LOG	DESCRIPTION	DEPTH, FT.	LOG	DESCRIPTION	DEPTH, FT.	LOG	DESCRIPTION	DEPTH, FT.
0		Surface	0		Surface	0		Surface	0
1		0-1" sand	1		0-1" sand	1		0-1" sand	1
2		0-2" sand	2		0-2" sand	2		0-2" sand	2
3		0-3" sand	3		0-3" sand	3		0-3" sand	3
4		0-4" sand	4		0-4" sand	4		0-4" sand	4
5		0-5" sand	5		0-5" sand	5		0-5" sand	5
6		0-6" sand	6		0-6" sand	6		0-6" sand	6
7		0-7" sand	7		0-7" sand	7		0-7" sand	7
8		0-8" sand	8		0-8" sand	8		0-8" sand	8
9		0-9" sand	9		0-9" sand	9		0-9" sand	9
10		0-10" sand	10		0-10" sand	10		0-10" sand	10
11		0-11" sand	11		0-11" sand	11		0-11" sand	11
12		0-12" sand	12		0-12" sand	12		0-12" sand	12
13		0-13" sand	13		0-13" sand	13		0-13" sand	13
14		0-14" sand	14		0-14" sand	14		0-14" sand	14
15		0-15" sand	15		0-15" sand	15		0-15" sand	15
16		0-16" sand	16		0-16" sand	16		0-16" sand	16
17		0-17" sand	17		0-17" sand	17		0-17" sand	17
18		0-18" sand	18		0-18" sand	18		0-18" sand	18
19		0-19" sand	19		0-19" sand	19		0-19" sand	19
20		0-20" sand	20		0-20" sand	20		0-20" sand	20
21		0-21" sand	21		0-21" sand	21		0-21" sand	21
22		0-22" sand	22		0-22" sand	22		0-22" sand	22
23		0-23" sand	23		0-23" sand	23		0-23" sand	23
24		0-24" sand	24		0-24" sand	24		0-24" sand	24
25		0-25" sand	25		0-25" sand	25		0-25" sand	25
26		0-26" sand	26		0-26" sand	26		0-26" sand	26
27		0-27" sand	27		0-27" sand	27		0-27" sand	27
28		0-28" sand	28		0-28" sand	28		0-28" sand	28
29		0-29" sand	29		0-29" sand	29		0-29" sand	29
30		0-30" sand	30		0-30" sand	30		0-30" sand	30
31		0-31" sand	31		0-31" sand	31		0-31" sand	31
32		0-32" sand	32		0-32" sand	32		0-32" sand	32
33		0-33" sand	33		0-33" sand	33		0-33" sand	33
34		0-34" sand	34		0-34" sand	34		0-34" sand	34
35		0-35" sand	35		0-35" sand	35		0-35" sand	35
36		0-36" sand	36		0-36" sand	36		0-36" sand	36
37		0-37" sand	37		0-37" sand	37		0-37" sand	37
38		0-38" sand	38		0-38" sand	38		0-38" sand	38
39		0-39" sand	39		0-39" sand	39		0-39" sand	39
40		0-40" sand	40		0-40" sand	40		0-40" sand	40
41		0-41" sand	41		0-41" sand	41		0-41" sand	41
42		0-42" sand	42		0-42" sand	42		0-42" sand	42
43		0-43" sand	43		0-43" sand	43		0-43" sand	43
44		0-44" sand	44		0-44" sand	44		0-44" sand	44
45		0-45" sand	45		0-45" sand	45		0-45" sand	45
46		0-46" sand	46		0-46" sand	46		0-46" sand	46
47		0-47" sand	47		0-47" sand	47		0-47" sand	47
48		0-48" sand	48		0-48" sand	48		0-48" sand	48
49		0-49" sand	49		0-49" sand	49		0-49" sand	49
50		0-50" sand	50		0-50" sand	50		0-50" sand	50
51		0-51" sand	51		0-51" sand	51		0-51" sand	51
52		0-52" sand	52		0-52" sand	52		0-52" sand	52
53		0-53" sand	53		0-53" sand	53		0-53" sand	53
54		0-54" sand	54		0-54" sand	54		0-54" sand	54
55		0-55" sand	55		0-55" sand	55		0-55" sand	55
56		0-56" sand	56		0-56" sand	56		0-56" sand	56
57		0-57" sand	57		0-57" sand	57		0-57" sand	57
58		0-58" sand	58		0-58" sand	58		0-58" sand	58
59		0-59" sand	59		0-59" sand	59		0-59" sand	59
60		0-60" sand	60		0-60" sand	60		0-60" sand	60
61		0-61" sand	61		0-61" sand	61		0-61" sand	61
62		0-62" sand	62		0-62" sand	62		0-62" sand	62
63		0-63" sand	63		0-63" sand	63		0-63" sand	63
64		0-64" sand	64		0-64" sand	64		0-64" sand	64
65		0-65" sand	65		0-65" sand	65		0-65" sand	65
66		0-66" sand	66		0-66" sand	66		0-66" sand	66
67		0-67" sand	67		0-67" sand	67		0-67" sand	67
68		0-68" sand	68		0-68" sand	68		0-68" sand	68
69		0-69" sand	69		0-69" sand	69		0-69" sand	69
70		0-70" sand	70		0-70" sand	70		0-70" sand	70
71		0-71" sand	71		0-71" sand	71		0-71" sand	71
72		0-72" sand	72		0-72" sand	72		0-72" sand	72
73		0-73" sand	73		0-73" sand	73		0-73" sand	73
74		0-74" sand	74		0-74" sand	74		0-74" sand	74
75		0-75" sand	75		0-75" sand	75		0-75" sand	75
76		0-76" sand	76		0-76" sand	76		0-76" sand	76
77		0-77" sand	77		0-77" sand	77		0-77" sand	77
78		0-78" sand	78		0-78" sand	78		0-78" sand	78
79		0-79" sand	79		0-79" sand	79		0-79" sand	79
80		0-80" sand	80		0-80" sand	80		0-80" sand	80
81		0-81" sand	81		0-81" sand	81		0-81" sand	81
82		0-82" sand	82		0-82" sand	82		0-82" sand	82
83		0-83" sand	83		0-83" sand	83		0-83" sand	83
84		0-84" sand	84		0-84" sand	84		0-84" sand	84
85		0-85" sand	85		0-85" sand	85		0-85" sand	85
86		0-86" sand	86		0-86" sand	86		0-86" sand	86
87		0-87" sand	87		0-87" sand	87		0-87" sand	87
88		0-88" sand	88		0-88" sand	88		0-88" sand	88
89		0-89" sand	89		0-89" sand	89		0-89" sand	89
90		0-90" sand	90		0-90" sand	90		0-90" sand	90
91		0-91" sand	91		0-91" sand	91		0-91" sand	91
92		0-92" sand	92		0-92" sand	92		0-92" sand	92
93		0-93" sand	93		0-93" sand	93		0-93" sand	93
94		0-94" sand	94		0-94" sand	94		0-94" sand	94
95		0-95" sand	95		0-95" sand	95		0-95" sand	95
96		0-96" sand	96		0-96" sand	96		0-96" sand	96
97		0-97" sand	97		0-97" sand	97		0-97" sand	97
98		0-98" sand	98		0-98" sand	98		0-98" sand	98
99		0-99" sand	99		0-99" sand	99		0-99" sand	99
100		0-100" sand	100		0-100" sand	100		0-100" sand	100
101		0-101" sand	101		0-101" sand	101		0-101" sand	101
102		0-102" sand	102		0-102" sand	102		0-102" sand	102
103		0-103" sand	103		0-103" sand	103		0-103" sand	103
104		0-104" sand	104		0-104" sand	104		0-104" sand	104
105		0-105" sand	105		0-105" sand	105		0-105" sand	105
106		0-106" sand	106		0-106" sand	106		0-106" sand	106
107		0-107" sand	107		0-107" sand	107		0-107" sand	107
108		0-108" sand	108		0-108" sand	108		0-108" sand	108
109		0-109" sand	109		0-109" sand	109		0-109" sand	109
110		0-110" sand	110		0-110" sand	110		0-110" sand	110
111		0-111" sand	111		0-111" sand	111		0-111" sand	111
112		0-112" sand	112		0-112" sand	112		0-112" sand	112
113		0-113" sand	113		0-113" sand	113		0-113" sand	113
114		0-114" sand	114		0-114" sand	114		0-114" sand	114
115		0-115" sand	115		0-115" sand	115		0-115" sand	115
116		0-116" sand	116		0-116" sand	116		0-116" sand	116
117		0-117" sand	117		0-117" sand	117		0-117" sand	117
118		0-118" sand	118		0-118" sand	118		0-118" sand	118
119		0-119" sand	119		0-119" sand	119		0-119" sand	119
120		0-120" sand	120		0-120" sand	120		0-120" sand	120
121		0-121" sand	121		0-121" sand	121		0-121" sand	121
122		0-122" sand	122		0-122" sand	122		0-122" sand	122
123		0-123" sand	123		0-123" sand	123		0-123" sand	123
124		0-124" sand	124		0-124" sand	124		0-124" sand	124
125		0-125" sand	125		0-125" sand	125		0-125" sand	125
126		0-126" sand	126		0-126" sand	126		0-126" sand	126
127		0-127" sand	127		0-127" sand	127		0-127" sand	127
128		0-128" sand	128		0-128" sand	128		0-128" sand	128
129		0-129" sand	129		0-129" sand	129		0-129" sand	129
130		0-130" sand	130		0-130" sand	130		0-130" sand	130
131		0-131" sand	131		0-131" sand	131		0-131" sand	131
132		0-132" sand	132		0-132" sand	132		0-132" sand	132
133		0-133" sand	133		0-133" sand	133		0-133" sand	133
134		0-134" sand	134		0-134" sand	134		0-134" sand	134
135		0-135" sand	135		0-135" sand	135		0-135" sand	135
136		0-136" sand	136		0-136" sand	136		0-136" sand	136
137		0-137" sand	137		0-137" sand	137		0-137" sand	137
138		0-138" sand	138		0-138" sand	138		0-138" sand	138
139		0-139" sand	139		0-139" sand	139		0-139" sand	139
140		0-140" sand	140		0-140" sand	140		0-140" sand	140
141		0-141" sand	141		0-141" sand	141		0-141" sand	141
142		0-142" sand	142		0-142" sand	142		0-142" sand	142
143		0-143" sand	143		0-143" sand	143		0-143" sand	143
144		0-144" sand	144		0-144" sand	144		0-144" sand	144
145		0-145" sand	145		0-145" sand	145		0-145" sand	145
146		0-146" sand	146		0-146" sand	146		0-146" sand	146
147		0-147" sand	147		0-147" sand	147		0-147" sand	147
148		0-148" sand	148		0-148" sand	148		0-148" sand	148
149		0-1							




COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2
LOG OF BORINGS
ES-2 — ES-9
FIGURE 2.5.5-75

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING											
DATE STARTED 4-23-76 DATE COMPLETED 4-24-76 TIME 10:00 AM			BOR NO. 57-1 LOCATION N. 8720 ELEVATION 827.50			MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS					
PROJECT NO. 1700			DATE			ELEVATION 827.50					
DEPTH FT.	ELEVATION FT.	SYMBOL	MATERIAL DESCRIPTION	CORE DATA		PRESSURE TEST					
				DRILLED	RECOVERED	% RECOVERY	NO. WD	DEPTH FT.	TIME MIN.	WELL HEAD PSI	
0	827.50		UNDESIGNED: limestone and limestone fill, yellow to tan	4.0	1.3						
2.5											
5					1.0	0.4					
7.5				4.0	1.0						
10	827.89										
12.5	825.58			CLAY: abundant limestone pebbles in lower 2', dark brown to yellow	3.0	3.0					
15			UNDESIGNED AND CLAY: heavily weathered, soft, tan								
17.5					4.0	1.8					
20	828.89			UNDESIGNED: weathered, hard, tan	1.0	0.6					
22.5			UNDESIGNED: heavily weathered, soft, green and yellow								
25	824.49				10.0	5.7					
27.5	820.79			UNDESIGNED: tan to medium bedded, minor pyrite nodules, bedding planes weathered tan to yellow, very hard, tan							
30	818.19		UNDESIGNED: intensely burrowed, argillaceous, moderately hard to hard, gray								
32.5	816.89			UNDESIGNED: very argillaceous, slightly fossiliferous, moderate, hard, gray							
35	814.48			UNDESIGNED: moderately argillaceous, very fossiliferous, very hard, gray	8.5	8.5					
37.5	813.09		UNDESIGNED: fissile to blocky fracture, calcareous, firm, dark gray, lower 0.8' contains thin calc. silt lens								
40	811.58			UNDESIGNED: very argillaceous, thin silt-sand lens, hard, gray							
42.5	810.09			UNDESIGNED: calcareous, fossiliferous, firm, gray							
45	808.69		UNDESIGNED: argillaceous, thin to thick clay laminae, hard gray								
47.5	806.69			UNDESIGNED: fossiliferous, slightly argillaceous, sparse thin clay laminae, hard, gray							
50				UNDESIGNED: very argillaceous, blocky burrowed, medium hard, gray							
52.5			UNDESIGNED: argillaceous, thin to thick clay laminae, hard, gray	9.0	9.0						
55	806.69			UNDESIGNED: slightly argillaceous, fossil fragments, hard, gray							
57.5	803.79			UNDESIGNED: blocky to fissile, fractured, firm, dark gray							
60	802.29		UNDESIGNED: argillaceous, numerous thin clay laminae, mod. hard, gray								
62.5	800.69			UNDESIGNED: blocky to fissile fracture, thin lens in lower part, firm, dark gray							
65				UNDESIGNED: argillaceous, thin to thick clay laminae, hard, gray	7.9	7.9					
67.5	798.69		UNDESIGNED: calcareous is filled burrows, firm, dark gray								
70	798.22										

SHEET NO. 1 OF 2

BOR NO. 57-1

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										BOR NO. 57-1 LOCATION N. 8720 ELEVATION 827.50	
DATE STARTED 4-23-76 DATE COMPLETED 4-24-76 TIME			MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS			PROJECT NO. 1700				DATE	
DEPTH FT.	ELEVATION FT.	SYMBOL	MATERIAL DESCRIPTION	CORE DATA			PRESSURE TEST				
				DRILLED	RECOVERED	% RECOVERY	% R.O.G.	DEPTH FT.	PSI PRESSURE	TIME MIN.	INFORM MAN.
0	827.50		UNDESIGNED: slightly fossiliferous, numerous medium to thick clay laminae, argillaceous, hard, gray								
2.5	825.00		SANDSTONE: same as thin clay laminae, fossiliferous, very hard								
5	822.50		CLAYSTONE: fissile, firm, gray								
7.5	820.00		LOESS: thin clay laminae, fossiliferous, very hard, gray								
32.9			Total Depth = 32.9 feet								

SHEET NO. 2 OF 2

BOR NO. 57-1

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2Log of Borings
SY-1 - SY-4 (Sheet 1 of 3)

FIGURE 2.5.5-76

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										BOR NO 82-2 # 2935	
DATE STARTED: 8-24-76 DATE COMPLETED: 8-24-76 TYPE: CORE LOG				MASON-JOHNSTON & ASSOCIATES, INC DALLAS, TEXAS				LOCATION: 4.9215 ELEVATION: 847.95			
PROJECT NO 3700				DATE: _____				ELEVATION: 847.95			
DEPTH, FT	ELEVATION, FT	SAMPLE SYMBOL	MATERIAL DESCRIPTION	CORE DATA			PRESSURE TEST				
				DRILLED	RECOVERED	% RECOVERY	% R.O.D	DEPTH, FT	PSI	TIME MIN	INFLOW
			LIMESTONE (NO CLAYSTONE): heavily weathered, yellow to tan								
2.5											
5											
840.32											
7.5	840.32		LIMESTONE: weathered, hard, tan								
			CLAYSTONE: weathered, soft, tan								
10	837.85		LIMESTONE: numerous thin clay laminae, weathered, firm, tan			5.0	4.0				
835.69											
835.15			CLAYSTONE: calcareous, weathered, soft, tan								
			LIMESTONE: argillaceous, weathered, moderately hard, tan								
833.99											
15			CLAYSTONE: very calcareous, moderately hard, dark gray, less calcareous weathered clay some 0.3' thick at 15.5', weathered tan above 15.7'								
831.58			LIMESTONE: argillaceous, fossiliferous, hard, gray (1/2" weathered zone at 17.0')			10.0	0.0				
830.15			CLAYSTONE: very calcareous, medium hard, gray								
			LIMESTONE: argillaceous, w/thick clay partings in upper 1.0', hard to very hard, gray								
827.98			CLAYSTONE: w/sparse median thick limestone lens, soft, greenish-gray								
824.62			LIMESTONE: thin to medium bedded, sparse pyrite nodules, very hard, tan								
821.05											
27.5			LIMESTONE: intensely burrowed, argillaceous, moderately hard to hard, gray			10.0	0.0				
817.58			LIMESTONE: very argillaceous, slightly fossiliferous, mod. hard, gray								
816.24			LIMESTONE: mod. argillaceous, very fossiliferous, very hard, gray								
814.19			CLAYSTONE: fissile to blocky fracture, calcareous, firm, dark gray, lower 1.0' contains thin calc. silt lens								
813.19			LIMESTONE: very argillaceous, thin salt-and lens, hard, gray								
812.49			CLAYSTONE: calcareous, fossiliferous, firm, gray								
812.09											
811.09			LIMESTONE: fossiliferous, thin clay laminae, hard, gray								
809.96			LIMESTONE: fossiliferous, argillaceous, moderately hard to hard, gray			10.0	0.0				
808.59			LIMESTONE: fossil fragments, slightly burrowed, slightly argillaceous, hard, gray								
			CLAYSTONE: very argillaceous, highly burrowed, moderately hard, gray								
			LIMESTONE: argillaceous, thin to thick clay laminae, hard gray								
805.79			LIMESTONE: slightly argillaceous, fossil fragments, hard, gray								
803.43											
45			CLAYSTONE: blocky to fissile fracture, firm, dark gray								
802.34											
801.79			LIMESTONE: argillaceous, numerous thin clay laminae, mod. hard, gray			10.0	0.0				
47.5			CLAYSTONE: blocky to fissile fracture, thin limestone lens in lower part, firm, dark gray								
739.89			LIMESTONE: argillaceous, thin to thick clay laminae, hard, gray								
50											
SHEET NO. 1 OF 2				BOR NO. 82-2							

SHEET NO 1 OF 2

BOR NO 82-2

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										BOR NO. <u>82-2</u> LOCATION <u>4-2315</u>		DATE <u>8-24-76</u> TIME <u>4:21 P</u>		PROJECT NO. <u>3700</u>		MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS		DATUM _____ ELEVATION <u>817.22</u>	
DEPTH, FT	ELEVATION, FT	SAMPLE	SYMBOL	MATERIAL DESCRIPTION	CORE DATA				PRESSURE TEST										
					DRILLED	RECOVERED	% RECOVERY	% R.O.D	DEPTH	PSI	SURFACE	MIN	MAX	AVG					
52.5	794.99			CLAYSTONE: calcareous, limestone filled burrows, firm, dark gray															
55	794.99			LIMESTONE: slightly fossiliferous, numerous med. to thick clay laminae, argillaceous, hard, gray	1.0	0.9													
				Total Depth = 53.0 feet															

SHEET NO 2 OF 2

BOR NO 82-2

COMANCHE PEAK S.E.S.
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UNITS 1 and 2Log of Borings
ST-1 - ST-4 (Sheet 2 of 3)

FIGURE 2.5.5-76

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING										BOR NO. SY-3 N. 2670 E. 9215 ELEVATION 247.29	
DATE STARTED 3-20-76 DATE COMPLETED 3-26-76 TYPE			PROJECT NO. 3700			MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS			DATE _____ ELEVATION _____		
DEPTH, FT.	ELEVATION, FT.	SAMPLE SYMBOL	MATERIAL DESCRIPTION	CORE DATA		PRESSURE TEST					
				DRILLED	RECOVERED	% RECOVERY	NO. OF DEPTHS	PSI	TIME	IN/CM	
2.5			LIMESTONE AND CLAYSTONE: heavily weathered, yellow to tan								
5											
7.5	819.77		LIMESTONE: weathered, hard, tan								
8.5	819.12		CLAYSTONE: sparse limestone lens, weathered, soft, tan								
10	817.22		LIMESTONE: numerous thin clay laminae, moderately hard, gray, (weathered tan to 11.2')			5.0	5.0				
12.5	815.09		CLAYSTONE: very calcareous, moderately hard, dark gray								
13.5	814.59		LIMESTONE: argillaceous, slightly fossiliferous, hard, gray								
15	813.49		CLAYSTONE: very calcareous, moderately hard, dark gray								
17.5	811.49		LIMESTONE: very argillaceous, slightly fossiliferous, hard, gray			9.5	8.7				
20	809.99		CLAYSTONE: w/sparse medium thick limestone lens, soft, greenish-gray								
22.5	808.49		LIMESTONE: thin to medium bedded, sparse pyrite nodules, very hard, tan								
25						9.0	9.0				
27.5	819.99		LIMESTONE: intensely burrowed, argillaceous, moderately hard to hard, gray								
30	816.89		LIMESTONE: very argillaceous, slightly fossiliferous, moderately hard, gray								
31.5	815.69		LIMESTONE: moderately argillaceous, very fossiliferous, very hard, gray								
32.5	814.59		CLAYSTONE: fissile to blocky fracture, calcareous, firm, dark gray, lower 1.0' contains thin calcareous silt lens			7.5	7.5				
35	812.89		LIMESTONE: very argillaceous, thin silt-sand lens, hard, gray								
36	811.39		CLAYSTONE: calcareous, fossiliferous, firm, gray								
37.5	809.79		LIMESTONE: fossiliferous, w/thick clay laminae, hard gray								
40			LIMESTONE: burrowed, argillaceous, hard, gray								
			Total Depth = 38.0 feet.								

SHEET NO 1 OF 1

BOR. NO. SY-3

SHEET NO. 1 OF 1

BOR. NO. SY-3

TEXAS UTILITIES SERVICES, INC. COMANCHE PEAK STEAM ELECTRIC STATION LOG OF BORING									
DATE STARTED 3-20-76 DATE COMPLETED 3-26-76 TYPE			BOR NO. SY-4 LOCATION N 2670 E 9217 ELEVATION 247.59			MASON-JOHNSTON & ASSOCIATES, INC. DALLAS, TEXAS			
PROJECT NO 3700			DATE			ELEVATION			
DEPTH, FT.	ELEVATION, FT.	SAMPLE SYMBOL	MATERIAL DESCRIPTION	DRILLED	RECOVERED	% RECOVERY	NO. OF DEPTHS	PSI	TIME
2.5			CLAYSTONE AND CLAYSTONE: heavily weathered, yellow to tan						
5									
7.5	819.99		LIMESTONE: weathered, hard, tan						
8.5	819.12		CLAYSTONE: weathered, argillaceous						
10	817.22		LIMESTONE: numerous thin clay laminae, moderately hard, gray, weathered tan to 11.5'		8.1	8.1			
12.5	815.89		CLAYSTONE: very calcareous, moderately hard, dark gray						
13.5	815.49		LIMESTONE: argillaceous, slightly fossiliferous, hard, gray						
15	813.59		CLAYSTONE: very calcareous, moderately hard, dark gray						
17.5	811.59		LIMESTONE: very argillaceous, slightly fossiliferous, hard, gray						
20	809.29		CLAYSTONE: w/sparse medium thick limestone lens, soft, green		8.5	8.5			
22.5	807.29		LIMESTONE: thin to medium bedded, sparse pyrite nodules, very hard, tan						
25	805.59		LIMESTONE: intensely burrowed, argillaceous, moderately hard to hard, gray		7.1	7.1			
27.5	818.59		LIMESTONE: very argillaceous, slightly fossiliferous, mod. hard, gray						
30	817.29		LIMESTONE: moderately argillaceous, very fossiliferous, very hard, gray						
32.5	814.59		CLAYSTONE: fissile to blocky fracture, calcareous, firm, dark gray, lower 1.0' contains thin calc. silt lens						
35	812.49		LIMESTONE: very argillaceous, thin silt-sand lens, hard gray						
36	811.89		CLAYSTONE: calcareous fossiliferous, firm, gray		8.0	8.0			
37.5	810.89		LIMESTONE: burrowed, argillaceous, hard, gray						
40	808.49		LIMESTONE: thin clay laminae, very hard, gray						
			LIMESTONE: burrowed, argillaceous, moderately hard, gray						
			LIMESTONE: argillaceous, slightly burrowed, thin clay laminae, hard, gray						
			Total Depth = 39.0 feet						

SHEET NO 1 OF 1

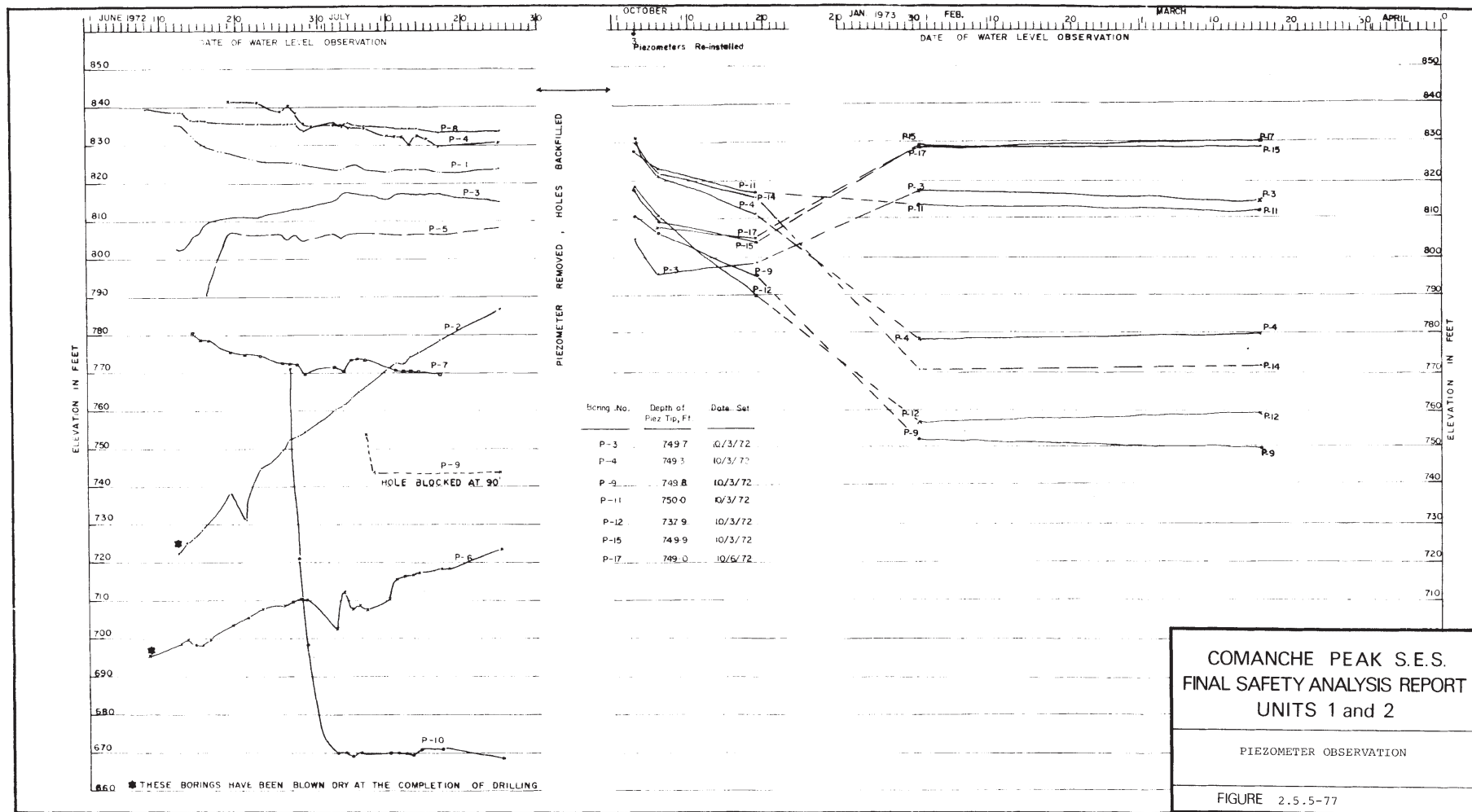
BOR NO SY-4

SHEET NO. 1 OF 1

BOR. NO. SY-4

COMANCHE PEAK S.E.S.
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UNITS 1 and 2Log of Borings
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FIGURE 2.5.5-76



COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS				J.O. NO. 16345.03		BORING NO. 9	
SITE _____		COORDINATES N 9969.00 E 10610.00		GROUND ELEV. (1) 809.4'		SHEET 1 OF 2	
INCLINATION VERTICAL		BEARING N/A		INSPECTOR LESTER M. TYRALA			
DATE : START / FINISH 12/22/87 / 12/23/87		CONTRACTOR / DRILLER MJA/O. CROMEANS					
STATIC GROUNDWATER DEPTH / DATE DRY HOLE (FT) / 1/10/88		DRILL RIG TYPE DAMCO 1250					
DEPTH TO BEDROCK 5.5 (FT)		TOTAL DEPTH DRILLED 40.7 (FT)					
METHODS :							
DRILLING SOIL		ROLLER CONE (6 IN. DIAMETER)					
SAMPLING SOIL		NONE					
DRILLING ROCK		IMPREGNATED DIAMOND BIT (NX) DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL					
SPECIAL TESTING OR INSTRUMENTATION		PRESSURE TESTS AND INSTALLATION OF PIEZOMETER.					
COMMENTS AT CORNER OF UNIT NO. 2, SAFEGUARD BUILDING, AND UNIT NO. 2 CONTAINMENT BUILDING.							

ELEVATION (FEET) (1E2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.4	0						PLACED GRAVEL FILL	
	5						5.5'	
799.4	10		RUN 1 100/86				LIMESTONE (LS), LIGHT-MEDIUM GRAY, FRESH, BEDDED, RANGES FROM CLEAN TO INTIMATELY MIXED WITH DISTORTED SEAMS OF CLAY	NO. 1 PSIG = 11.9 TIME (M) FLOW (G) 3.0 0.03
	15		RUN 2 100/72				- 13.8' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WELL BEDDED - 14.7' CLAYSTONE, AS ABOVE	
	20		RUN 3 100/59				LIMESTONE, AS ABOVE, BUT FIRST 1.2' IS INTERBEDDED LIMESTONE AND CLAYSTONE CLOSELY LAYERED. THE INTERVAL BECOMES ALMOST ALL LIMESTONE TOWARD THE BOTTOM OF THIS INTERVAL	
789.4	25		RUN 4 100/54					NO. 2 PSIG = 20.2 TIME (M) FLOW (G) 5.0 0.17
	25		5 100/100				- 24.7'	
	30		RUN 6 100/31				CLAYSTONE, DARK GRAY, FRESH, SOFT, VERY WELL BEDDED (~ SHALE)	
779.4							- 0.7' LIMESTONE, MEDIUM GRAY, HARD, FOSSILIFEROUS	

- | | |
|--|--|
| LEGEND / NOTES
1. DATUM IS SEA LEVEL OF 1929.
2. ∇ GROUND WATER LEVEL
3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.
4. % ROCK CORE RECOVERY / ROCK QUALITY DESIGNATION.
5. STD. PENETRATION RESISTANCE BLOWS/FT.
6. UNIFIED SOIL CLASSIFICATION SYSTEM. | 7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI

<div style="text-align: center;"> AMENDMENT 78
 JANUARY 15, 1990 </div> |
|--|--|

COMANCHE PEAK S.E.S.

FINAL SAFETY ANALYSIS REPORT

UNITS 1 and 2

LOG OF BORING NO. 9

FIGURE 2.5.5-78 (Sh. 1)

COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. <u>9</u> SHEET <u>2</u> OF <u>2</u>	
SITE _____ J.O. NO. <u>16345.03</u>								
ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	
							PRESSURE TEST (7)	
779.4	30		RUN 7	98/92			CLAYSTONE, GREENISH GRAY, FRESH, SOFT, BEDDED - 32.2' - VERY FOSSILIFEROUS, LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED WITH SOME MIXING OF CLAY - 34.8' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, VERY WELL BEDDED	
	35		RUN 8	96/62			- 37.9' LIMESTONE, AS ABOVE BUT VERY FOSSILIFEROUS - 38.5' CLAYSTONE, WELL BEDDED - 40.2' LIMESTONE, AS ABOVE	
769.4	40						TD = 40.7'	

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UNITS 1 and 2

LOG OF BORING NO. 9

FIGURE 2.5.5-78 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION
GLEN ROSE, TEXAS

SITE _____ J.O. NO. 16345.03 BORING NO. 10

COORDINATES N 9694.50 E 10748.41 GROUND ELEV. (I) 809.4' SHEET 1 OF 2

INCLINATION VERTICAL BEARING N/A INSPECTOR LESTER M. TYRALA

DATE : START / FINISH 12/7/87 / 12/9/87 CONTRACTOR / DRILLER MJA/BEN CROMEANS

STATIC GROUNDWATER DEPTH / DATE DRY HOLE (FT) / 1/29/88 DRILL RIG TYPE DAMCO 1220

DEPTH TO BEDROCK 2.6 (FT) TOTAL DEPTH DRILLED 40.8 (FT)

METHODS :

DRILLING SOIL FISHTAIL BIT

SAMPLING SOIL NONE

DRILLING ROCK IMPREGNATED DIAMOND BIT (HX), AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL

SPECIAL TESTING OR INSTRUMENTATION FOUR INTERVALS PRESSURE TESTED, PIEZOMETER INSTALLED

COMMENTS EAST OF FUEL BLDG. (FB)

ELEVATION (FEET) (6.2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.4	0						PLACED GRAVEL FILL	
	5		RUN 1	100/38			- 3.2' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WITH HORIZONTAL PARTINGS	
			RUN 2	98/72			- FOSSILS LIMESTONE, LIGHT GRAY, FRESH, HARD, WITH THIN SEAMS OF CLAYSTONE	NO. 1 PSIG = 5.5
799.4	10		RUN 3	100/37			LIMESTONE, VERY LIGHT TO MEDIUM GRAY, FRESH, HARD, MODERATELY MASSIVE WITH THIN CLAYEY SEAMS	TIME (M) FLOW (G) 5.0 0.94
	15		RUN 4	90/41			- CORE LOSS - 0.3' (CLAY BAND ?)	NO. 2 PSIG = 11.7
			RUN 5	100/62			- CORE LOSS - 0.2' (CLAY BAND ?)	TIME (M) FLOW (G) 3.0 0.09
789.4	20		6	100/0			LIMESTONE, AS ABOVE BUT WITH LESS CLAY SEAMS	
			7	100/0				NO. 3 PSIG = 20.8
	25		RUN 8	100/19			- CLAYSTONE, 3/8" SEAM	TIME (M) FLOW (G) 3.0 0.00
779.4	30						- 25.7' CLAYSTONE, DARK GREENISH GRAY, FRESH, HARD, MASSIVE	
							- 27.2' LIMESTONE, AS ABOVE	
							- CLAYSTONE SEAM	

- LEGEND / NOTES
- DATUM IS SEA LEVEL OF 1929.
 - GROUND WATER LEVEL
 - BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.
 - % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.
 - STD. PENETRATION RESISTANCE BLOWS/FT.
 - UNIFIED SOIL CLASSIFICATION SYSTEM.
 - PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI
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UNITS 1 and 2**

LOG OF BORING NO. 10

FIGURE 2.5.5-79 (Sh. 1)

SITE <u>COMANCHE PEAK STEAM ELECTRIC STATION</u> <u>GLEN ROSE, TEXAS</u>		J.O. NO. <u>16345.03</u>	BORING NO. <u>11</u>
COORDINATES <u>N 9830.00</u>	<u>E 10,000.00</u>	GROUND ELEV. (I) <u>808.6'</u>	SHEET <u>1</u> OF <u>2</u>
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE: START/FINISH <u>12/11/87</u> / <u>12/14/87</u>		CONTRACTOR / DRILLER <u>MJA/D. CROMEANS</u>	
STATIC GROUNDWATER DEPTH / DATE <u>N/A (FT)</u> /		DRILL RIG TYPE <u>DAMCO</u>	
DEPTH TO BEDROCK <u>2.0</u> (FT)		TOTAL DEPTH DRILLED <u>80.8</u> (FT)	
METHODS:			
DRILLING SOIL <u>ROLLER CONE</u>			
SAMPLING SOIL <u>NONE</u>			
DRILLING ROCK <u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE TYPE NONROTATING INNER CORE BARREL</u>			
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLATION OF PIEZOMETER</u>			
COMMENTS <u>UNDER CRANE ADJACENT TO TURBINE BUILDING (78)</u>			

ELEVATION (FEET) (1) (2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
808.6	0						PLACED GRAVEL FILL	
			RUN 1	100/100			2.0'	
	5		RUN 2	100/94			LIMESTONE, MEDIUM GRAY, FRESH, MODERATELY HARD, BEDDED, FOSSILIFEROUS, WITH MANY THIN DISTORTED LAYERS OF CLAY SEAMS. INTIMATELY MIXED.	NO. 1 PSIG = 7.9 TIME (M) FLOW (G) 3.0 0.34
798.6	10		RUN 3	100/94			- 7.2' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT. WELL STRATIFIED (~ SHALE) - 7.9' LIMESTONE, AS ABOVE	
	15		RUN 4	100/54			- 9.4' LIMESTONE AND CLAYSTONE, INTIMATELY MIXED TOGETHER - 10.8' LIMESTONE, AS ABOVE, BUT FAIRLY PURE, WELL INDURATED, FOSSILIFEROUS, MEDIUM GRAY	NO. 2 PSIG = 11.0 TIME (M) FLOW (G) 3.0 0.60
788.6	20		RUN 5	84/23			- 14.7' CLAYSTONE BAND, 0.2' - LIMESTONE, AS ABOVE - FOSSILIFEROUS LAYER	
	25		RUN 6	83/18			- 19.1' CLAYSTONE, WELL STRATIFIED - 21.2' LIMESTONE, COMPETENT - VERY FOSSILIFEROUS CORE LOSS = 0.9' (CLAYSTONE)	NO. 3 PSIG = 23.3 TIME (M) FLOW (G) 3.0 0.04
778.6	30						- 24.1' CORE LOSS = 0.6' (CLAYSTONE) CORE LOSS = 0.6' (CLAYSTONE) CLAYSTONE, WELL STRATIFIED - 28.4' LIMESTONE, NUMEROUS CLAY SEAMS MIXED THROUGH THE LIMESTONE	

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI	<div style="border: 2px solid black; padding: 10px; margin: 10px;"> <p style="text-align: center; margin: 0;">COMANCHE PEAK S.E.S.</p> <p style="text-align: center; margin: 0;">FINAL SAFETY ANALYSIS REPORT</p> <p style="text-align: center; margin: 0;">UNITS 1 and 2</p> <hr/> <p style="text-align: center; margin: 0;">LOG OF BORING NO. 11</p> <hr/> <p style="text-align: center; margin: 0;">FIGURE 2.5.5-80 (Sh. 1)</p> </div>
	2. GROUND WATER LEVEL		
	3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.		
	4. % ROCK CORE RECOVERY / ROCK QUALITY DESIGNATION.		
	5. STD. PENETRATION RESISTANCE BLOWS/FT.		
	6. UNIFIED SOIL CLASSIFICATION SYSTEM.		
	AMENDMENT 78 JANUARY 15, 1990		

COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. 11 SHEET 2 OF 2		
SITE _____							J.O. NO. 16345.03		
ELEVATION (FEET) (1)&(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION		PRESSURE TEST (7)
778.6	30						-30.9' CLAYSTONE, AS ABOVE		
							-31.4' LIMESTONE, MODERATELY FOSSILIFEROUS		
	25		RUN 7	100/42			-33.9' CLAYSTONE, AS ABOVE	NO. 4 PSIGE = 33.1	
							-35.1 LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED, RANGES FROM MODERATELY PURE TO INTIMATELY MIXED WITH CLAY SEAMS AND DISTURBED CLAYSTONE LAYERS	TIME(M) FLOW(G) 3.0 0.04	
768.6	40								
	45		RUN 8	100/100				NO. 5 PSIGE = 42.1	
								TIME(M) FLOW(G) 3.0 0.02	
758.6	50								
	55		RUN 9	100/100			LIMESTONE, AS ABOVE	NO. 6 PSIGE = 54.8	
							LIMESTONE, LIGHT TO MEDIUM GRAY, FRESH, HARD, BEDDED. VERY WELL INDURATED. RANGES FROM FAIRLY PURE AND FOSSILIFEROUS TO WELL MIXED WITH CLAY SEAMS. THE ROCK IS VERY COMPETENT AND ONLY HAS BREAKS WHERE MINOR CLAY SEAMS ARE PRESENT	TIME(M) FLOW(G) 3.0 0.03	
748.6	60								
	65		RUN 10	100/100			LIMESTONE, AS ABOVE	NO. 7 TIME(M) FLOW(G) PSIGE = 34.8 3.0 0.00 PSIGE = 48.9 3.0 0.14 PSIGE = 63.8 3.0 0.39 PSIGE = 48.9 3.0 0.06 PSIGE = 34.8 3.0 0.00	
738.6	70								
	75		RUN 11	100/97			LIMESTONE, AS ABOVE	NO. 8 TIME(M) FLOW(G) PSIGE = 42.2 3.0 0.00 PSIGE = 59.4 3.0 0.13 PSIGE = 79.4 3.0 0.42 PSIGE = 59.4 3.0 0.24 PSIGE = 42.2 3.0 0.00	
728.6	80								
							TD = 80.8'		

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LOG OF BORING NO. 11

FIGURE 2.5.5-80 (Sh. 2)

SITE <u>COMANCHE PEAK STEAM ELECTRIC STATION</u> <u>GLEN ROSE, TEXAS</u>		J.O. NO. <u>16345.03</u>	BORING NO. <u>12</u>
COORDINATES <u>N 9394.40</u>	<u>E 10179.40</u>	GROUND ELEV. (I) <u>809.5'</u>	SHEET <u>1</u> OF <u>2</u>
INCLINATION <u>VERTICAL</u>		BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>
DATE : START / FINISH <u>12/9/87</u> / <u>12/11/87</u>		CONTRACTOR / DRILLER <u>MJA/G. TAYLOR</u>	
STATIC GROUNDWATER DEPTH / DATE <u>20.8 (FT)</u> / <u>1/29/88</u>		DRILL RIG TYPE <u>MOBIL</u>	
DEPTH TO BEDROCK <u>1.0</u> (FT)		TOTAL DEPTH DRILLED <u>40.4</u> (FT)	
METHODS :			
DRILLING SOIL		<u>ROLLER CONE (6 IN. DIAMETER)</u>	
SAMPLING SOIL		<u>NONE</u>	
DRILLING ROCK		<u>IMPREGNATED DIAMOND BIT (NX), DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL</u>	
SPECIAL TESTING OR INSTRUMENTATION		<u>PRESSURE TESTS AND INSTALLED PIEZOMETER</u>	
COMMENTS <u>ADJACENT TO ELECTRICAL YARD/SECURITY GATE.</u>			

ELEVATION (FEET) (6.2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST
809.5	0		RUN 1	100/100			1.0' PLACED GRAVEL FILL	NO. 1 PSIG = 4.9
	5		RUN 2	100/68			LIMESTONE (LS) LIGHT TO MEDIUM GRAY, COMPETENT, RANGES FROM CLEAN TO IRREGULARLY MIXED WITH CLAYEY SEAMS THAT ARE CONTORTED	TIME (M) FLOW (G) 3.0 0.00
	10		RUN 3	96/91				
799.5	10		RUN 4	96/43			CLAYSTONE, INTERBED .3', DARK GRAY, WELL STRATIFIED	NO. 2 PSIG = 9.5
	15		RUN 5	100/82			CLAYSTONE, THIN INTERBED CLAYSTONE, THIN INTERBED CLAYSTONE, THIN INTERBED FOSSIL SHELL FRAGMENTS VERY FOSSILIFEROUS VERY FOSSILIFEROUS	TIME (M) FLOW (G) 3.0 0.00
789.5	20						21.1' CLAYSTONE, GREENISH GRAY, FRESH, SOFT, WELL BEDDED	
	25		RUN 6	98/32			23.2' LIMESTONE, VERY FOSSILIFEROUS CLAYSTONE, THIN INTERBEDS 25.3' CLAYSTONE, WELL BEDDED (~ SHALE)	NO. 3 PSIG = 21.7
779.5	30						LIMESTONE WITH IRREGULAR CONTORTED LAYERS OF CLAY SEAMS	TIME (M) FLOW (G) 3.0 0.00

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI	<div style="border: 2px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="margin: 0;">COMANCHE PEAK S.E.S.</p> <p style="margin: 0;">FINAL SAFETY ANALYSIS REPORT</p> <p style="margin: 0;">UNITS 1 and 2</p> <hr/> <p style="margin: 0;">LOG OF BORING NO. 12</p> <hr/> <p style="margin: 0;">FIGURE 2.5.5-81 (Sh. 1)</p> </div>
	2. ∇ GROUND WATER LEVEL		
	3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.		
4. % ROCK CORE RECOVERY / ROCK QUALITY DESIGNATION.	<p>AMENDMENT 78</p> <p>JANUARY 15, 1990</p>		
5. STD. PENETRATION RESISTANCE BLOWS/FT.			
6. UNIFIED SOIL CLASSIFICATION SYSTEM.			

BORING NO. 12

SHEET 2 OF 2

COMANCHE PEAK STEAM ELECTRIC STATION
GLEN ROSE, TEXAS

SITE

J.O. NO. 16345.03

ELEVATION (FEET) (6.2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (4)
779.5	30						-31.0' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT	NO. 4
							-33.1' LIMESTONE, AS ABOVE	PSIG = 18.8
							-34.1' CLAYSTONE, AS ABOVE	TIME (M) FLOW (G)
							-35.2' LIMESTONE, AS ABOVE	3.0 0.90
							-37.0' CLAYSTONE, AS ABOVE	PSIG = 34.3
							-37.7' LIMESTONE, AS ABOVE	TIME (M) FLOW (G)
								3.0 0.02
769.5	40						TO = 40.4'	

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LOG OF BORING NO. 12

FIGURE 2.5.5-81 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		BORING NO. <u>13</u>
SITE _____ J.O. NO. <u>16345.03</u>		SHEET <u>1</u> OF <u>2</u>
COORDINATES <u>N 9027.05</u> <u>E 10705.25</u>	GROUND ELEV. (I) <u>810.0'</u>	
INCLINATION <u>VERTICAL</u> BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE : START / FINISH <u>12/07/87</u> / <u>12/09/87</u>		CONTRACTOR / DRILLER <u>MJA/G. TAYLOR</u>
STATIC GROUNDWATER DEPTH / DATE <u>26.8 (FT)</u> / <u>1/28/88</u>		DRILL RIG TYPE <u>MOBIL B-8</u>
DEPTH TO BEDROCK <u>32.0 (FT)</u>		TOTAL DEPTH DRILLED <u>45.0 (FT)</u>
METHODS :		
DRILLING SOIL <u>FISHTAIL/TRI-CONE (6 IN. DIAMETER)</u>		
SAMPLING SOIL <u>N/A (NONE)</u>		
DRILLING ROCK <u>NX - IMPREGNATED DIAMOND BIT, AND DOUBLE TUBE TYPE NONROTATING INNER CORE BARREL</u>		
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLED PIEZOMETER</u>		
COMMENTS <u>AT SERVICE WATER INTAKE STRUCTURE (SWIS) - DRILLED INTO ROCK.</u>		

ELEVATION (FEET) (62)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
810.0	0						CATEGORY I BACKFILL (LIMESTONE WITH MINOR CLAY)	
	5							
	10							
800.0								
	15							
	20							
790.0								
	25							
	30							
780.0								

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY / ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI AMENDMENT 78 JANUARY 15, 1990	<div style="border: 2px solid black; padding: 5px; margin-bottom: 5px;"> COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2 </div> <div style="border: 1px solid black; padding: 5px;"> LOG OF BORING NO. 13 FIGURE 2.5.5-82 (Sh. 1) </div>

COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. <u>16345.03</u>	BORING NO. <u>14</u>
SITE _____		GROUND ELEV. (I) <u>809.2'</u>	SHEET <u>1</u> OF <u>2</u>
COORDINATES <u>N 9395.00</u>	<u>E 10627.47</u>		
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE : START / FINISH <u>12/9/87</u> / <u>12/11/87</u>		CONTRACTOR / DRILLER <u>MJA/B. CROMEANS</u>	
STATIC GROUNDWATER DEPTH / DATE <u>8.7 (FT)</u> / <u>1/28/88</u>		DRILL RIG TYPE <u>DAMCO</u>	
DEPTH TO BEDROCK <u>2.5</u> (FT)		TOTAL DEPTH DRILLED <u>40.1</u> (FT)	
METHODS :			
DRILLING SOIL <u>ROLLER CONE (6 IN. DIAMETER)</u>			
SAMPLING SOIL <u>NONE</u>			
DRILLING ROCK <u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL</u>			
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLED PIEZOMETER</u>			
COMMENTS <u>ADJACENT TO UNIT 1 (SE SIDE)</u>			

ELEVATION (FEET)(1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.2	0						PLACED GRAVEL FILL	
	5		RUN 1 100/88				2.5' - 3.1' - CLAYSTONE, GREENISH GRAY, FRESH, SOFT, VERY IMPURE WITH MINOR INCLUSIONS OF FOSSIL FRAGMENTS	NO. 1 PSIG = 4.7 TIME(M) FLOW(G) 3.0 0.00
	10		RUN 2 100/86				LIMESTONE, VERY LIGHT GRAY, FRESH, HARD, IMPURE, WITH THIN CLAY BANDS, IRREGULARLY SPACED AND CONTORTED	
799.2	10						-9.6' 10.1' CLAYSTONE INTERBEDS	
	15		RUN 3 100/0				INTERBEDDED LIMESTONE AND CLAYSTONE, VERY SOFT WITH MANY NATURAL PARTINGS IN THE CLAY SEAMS. THIS INTERVAL CONTAINS MANY CONTORTED AND DISTURBED INTERBEDS	NO. 2 PSIG = 11.4 TIME(M) FLOW(G) 3.0 0.12
789.2	20						INTERBEDDED LIMESTONE AND CLAYSTONE	
	25		RUN 4 99/21				MANY SHELL FRAGMENTS IN CLEAN LIMESTONE CLAYSTONE, DARK GRAY, FRESH, SOFT, WELL STRATIFIED, LACKING LIMESTONE LENSES - 24.9'	NO. 3 PSIG = 19.9 TIME(M) FLOW(G) 3.0 0.04
779.2	30						MANY SHELL FRAGMENTS IN CLEAN LIMESTONE INTERBED CLAYSTONE, AS ABOVE, WELL STRATIFIED (~ SHALE)	

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI	<div style="border: 2px solid black; padding: 10px; margin: 10px;"> <p style="text-align: center; margin: 0;">COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2</p> <hr/> <p style="text-align: center; margin: 0;">LOG OF BORING NO. 14</p> <hr/> <p style="text-align: center; margin: 0;">FIGURE 2.5.5-83 (Sh. 1)</p> </div>
	2. <input checked="" type="checkbox"/> GROUND WATER LEVEL		
	3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.		
	4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.		
	5. STD. PENETRATION RESISTANCE BLOWS/FT.		
	6. UNIFIED SOIL CLASSIFICATION SYSTEM.		
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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS										BORING NO. <u>14</u>	
SITE _____										J.O. NO. <u>16345.03</u>	
ELEVATION (FEET) (1E2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION				
779.2	30						-30.3' LIMESTONE, IMPURE, AS ABOVE WITH DISTORTED CLAY SEAMS -33.6' CLAYSTONE, AS ABOVE -34.8' LIMESTONE, AS ABOVE -36.1' CLAYSTONE, AS ABOVE - WELL STRATIFIED -38.7' LIMESTONE, WITH MINOR SHELL FRAGMENTS				
	35		RUN 5	100/43			NO. 4 PSIG = 19.6 TIME (M) FLOW (G) 3.0 0.00 PSIG = 35.6 TIME (M) FLOW (G) 3.0 0.00				
769.1	40						TD = 40.1				

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FIGURE 2.5.5-83 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. <u>16345.02</u>	BORING NO. <u>15</u>
SITE _____		GROUND ELEV. (1) <u>809.0</u>	SHEET <u>1</u> OF <u>2</u>
COORDINATES <u>N 9651.16</u>	<u>E 10872.92</u>		
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE : START / FINISH <u>12/23/87</u> / <u>12/28/87</u>		CONTRACTOR / DRILLER <u>MJA/B. CROMEANS</u>	
STATIC GROUNDWATER DEPTH / DATE <u>DRY HOLE</u> (FT) / <u>1/29/88</u>		DRILL RIG TYPE <u>DAMCO</u>	
DEPTH TO BEDROCK <u>5.5</u> (FT)		TOTAL DEPTH DRILLED <u>40.7</u> (FT)	
METHODS :			
DRILLING SOIL <u>ROLLER CONE (6 IN. DIAMETER)</u>			
SAMPLING SOIL <u>NONE</u>			
DRILLING ROCK <u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE TYPE NONROTATING INNER CORE BARREL</u>			
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TEST AND INSTALLATION OF PIEZOMETER</u>			
COMMENTS <u>EAST OF 9H-10, AND NEAR EAST SERVICE ROAD</u>			

ELEVATION (FEET) (E2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.0	0						PLACED GRAVEL FILL	
	5						5.5'	
799.0	10	RUN 1	100/91				LIMESTONE (LS), LIGHT MEDIUM GRAY, FRESH, HARD, BEDDED WITH FOSSILIFEROUS LAYERS AND MINOR CLAYSTONE BANDS	NO. 1 PSIGE = 8.2 TIME(M) FLOW(G) 3.0 0.00
	15						- 14.1' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WELL BEDDED - 14.9' LIMESTONE, AS ABOVE	
	20	RUN 2	100/73				- 17.2' CLAYSTONE, AS ABOVE WITH MINOR INTERBEDS OF LIMESTONE - 18.4'	
789.0	25	RUN 3	100/0				LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED	NO. 2 PSIGE = 13.5 TIME(M) FLOW(G) 3.0 0.00
	30	RUN 4	100/88				- 25.2' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WELL BEDDED (~ SHALE)	PSIGE = 17.5 TIME(M) FLOW(G) 3.0 0.00
779.0							- 29.5' LIMESTONE, AS ABOVE	3.0 0.00

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. <input checked="" type="checkbox"/> GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY / ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	7. PSIGE IS EFFECTIVE PRESSURE (HEAD) IN PSI.
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LOG OF BORING NO. 15		
FIGURE 2.5.5-84 (Sh. 1)		
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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		BORING NO. <u>15</u> SHEET <u>2</u> OF <u>2</u>
SITE _____	J.O. NO. <u>16345.03</u>	

ELEVATION (FEET) (1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (4)
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777.0	30		RUN				- 30.6' CLAYSTONE, AS ABOVE	NO. 3
			5	98/67			- 33.6' LIMESTONE, AS ABOVE WITH SOME WOOD FRAGMENTS (LIGNITE) - 36.1' CLAYSTONE, AS ABOVE - 38.0' LIMESTONE, LIGHT GRAY, MODERATELY HARD - 39.2' CLAYSTONE, AS ABOVE	PSIG = 23.9 TIME H: FLOW (G) 3.0 0.04 PSIG = 29.9 5.0 0.34 PSIG = 23.9 3.0 .09
769.0	40		RUN	97/100			- 40.2' CLAYSTONE, AS ABOVE - 40.2' LIMESTONE, AS ABOVE TO = 40.7'	

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FIGURE 2.5.5-84 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. 16345.03	BORING NO. 16
SITE _____		SHEET 1 OF 2	
COORDINATES	N 10160.00 E 10350.00	GROUND ELEV. (1)	809.1'
INCLINATION	VERTICAL BEARING _____	INSPECTOR	LESTER M. TYRALA
DATE : START / FINISH	12/15/87 / 12/16/87	CONTRACTOR / DRILLER	MJA/B. CROMEANS
STATIC GROUNDWATER DEPTH / DATE	15.3 (FT) / 1/29/88	DRILL RIG TYPE	DAMCO 1250
DEPTH TO BEDROCK	3.0 (FT)	TOTAL DEPTH DRILLED	40.0 (FT)
METHODS :			
DRILLING SOIL	ROLLER CONE (6 IN. DIAMETER)		
SAMPLING SOIL	NONE		
DRILLING ROCK	IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL		
SPECIAL TESTING OR INSTRUMENTATION	PRESSURE TESTS AND INSTALLATION PIEZOMETER		
COMMENTS BETWEEN TEMPERATURE WATER FLUSH STORAGE TANK AND E-W ROAD NORTH OF PLANT			

ELEVATION (FEET) (E2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.1	0						PLACED GRAVEL FILL	
							- 3.3' CLAYSTONE, DARK GRAY, DISTURBED STRATIFICATION FRESH, SOFT	
	5		RUN 1 98/82				- CORE LOSS FROM 5.0-5.1' LIMESTONE, LIGHT TO MEDIUM GRAY, FRESH, HARD, COMPETENT, BEDDED, NARROW FOSSILIFEROUS BEDS. INTERBEDS CONTAIN DIFFERENT AMOUNTS OF CLAY INTIMATELY MIXED WITH THE LIMESTONE	NO. 1 PSIGE = 10.7 TIME(M) FLOW(G) 3.0 0.05
799.1	10						- CLAYSTONE INTERBED, 0.6') LIMESTONE)	
	15		RUN 2 100/76				- CLAYSTONE INTERBED, 1.0') AN INTERVAL OF LIMESTONE AND CLAYSTONE LIMESTONE) INTERBEDS - CLAYSTONE INTERBED, 0.1') LIMESTONE, AS ABOVE)	
789.6	20						- CLAYSTONE SEAM, 0.2' LIMESTONE AND CLAYSTONE, INTIMATELY MIXED	NO. 2 PSIGE = 23.4 TIME(M) FLOW(G) 3.0 0.00
	25		RUN 3 95/86				- 23.7' CLAYSTONE, VERY DARK, GREENISH GRAY, FRESH, SOFT, WELL STRATIFIED (~ SHALE) - CORE LOSS FROM 25.1'-25.3'	
779.1	30						- CORE LOSS FROM 29.0' TO 29.2'	

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM. 7. PSIGE IS EFFECTIVE PRESSURE (HEAD) IS PSI	<div style="border: 2px solid black; padding: 10px; margin-bottom: 10px;"> COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> LOG OF BORING NO. 16 </div> <div style="border: 1px solid black; padding: 5px;"> FIGURE 2.5.5-85 (Sh. 1) </div>
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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS						BORING NO. <u>16</u> SHEET <u>2</u> OF <u>2</u>	
SITE _____						J.O. NO. <u>16345.03</u>	
ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION
779.1	30		RUN 4	100/31			<div style="display: flex; justify-content: space-between;"> <div> - 30.2' LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED - 31.9' CLAYSTONE WITH MINOR (<0.1') LIMESTONE LAYER LIMESTONE FOSSILIFEROUS WITH THIN (<0.01') CLAY SEAM - 34.3' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WELL STRATIFIED AND CLEAN - 36.5' LIMESTONE, AS ABOVE, BUT MORE FOSSILIFEROUS - 37.8' CLAYSTONE, WELL STRATIFIED - 39.4' LIMESTONE, AS ABOVE, BUT LESS COMPETENT TD = 40.0' </div> <div style="text-align: right;"> NO. 3 TIME(M) FLOW(G) PSIGE = 19.7 3.0 0.00 PSIGE = 32.7 5.0 0.32 </div> </div>
769.1	40		RUN 5	100/42			

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LOG OF BORING NO. 16

FIGURE 2.5.5-85 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. 16345.03	BORING NO. 17
SITE _____	COORDINATES N 9783.00 E 9872.00	GROUND ELEV. (I) 809.2'	SHEET 1 OF 2
INCLINATION VERTICAL BEARING N/A		INSPECTOR LESTER M. TYRALA	
DATE : START / FINISH 12/11/87 / 12/16/87		CONTRACTOR / DRILLER MJA/S. TAYLOR	
STATIC GROUNDWATER DEPTH / DATE 6.0 (FT) / 1/28/88		DRILL RIG TYPE MOBIL	
DEPTH TO BEDROCK 6.0 (FT)		TOTAL DEPTH DRILLED 79.3 (FT)	
METHODS :			
DRILLING SOIL		ROLLER CONE (6 IN. DIAMETER)	
SAMPLING SOIL		NONE	
DRILLING ROCK		IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL	
SPECIAL TESTING OR INSTRUMENTATION		PRESSURE TESTS AND INSTALLATION OF PIEZOMETER	
COMMENTS LOCATIONS AT SLOPE - WEST SECURITY FENCE, 200' WEST OF BH 17, NEAR CWIS TUNNEL			

ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.2	0						PLACED GRAVEL FILL	
	5						6.0'	
			RUN 1	100/61			LIMESTONE, MEDIUM GRAY, FRESH, HARD, BEDDED WITH MANY IRREGULAR CLAY SEAMS	
799.2	10		RUN 2	50/26			CORE LOSS - CLAYSTONE, 1.0'	
							CORE LOSS, 0.7'	
	15		RUN 3	94/82			VERY THIN CLAYSTONE LIMESTONE AND CLAYSTONE, INTERMIXED LAYERS AND INTERBEDS BOTH STRATIFIED AND CONTORTED	NO. 1 PSIG = 12.2 TIME (M) FLOW (G) 3.0 0.00
789.2	20						18.6' CLAYSTONE, GREENISH GRAY, FRESH, SOFT, THINLY BEDDED	
			RUN 4	100/96			21.4' LIMESTONE, WELL INDURATED AND VERY FOSSILIFEROUS	NO. 2 PSIG = 22.8 TIME (M) FLOW (G) 5.0 2.11
	25						CLAYSTONE, VERY THIN INTERBEDS	
							CLAYSTONE, VERY THIN INTERBEDS	
			5	100/51			LIMESTONE, MIXED WITH DISTURBED CLAY SEAM	
779.2	30						29.2' CLAYSTONE, DARK GRAY, FRESH, SOFT, BEDDED	

LEGEND / NOTES

- DATUM IS SEA LEVEL OF 1929.
- GROUND WATER LEVEL
- BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.
- % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.
- STD. PENETRATION RESISTANCE BLOWS/FT.
- UNIFIED SOIL CLASSIFICATION SYSTEM.

7. PSIG IS EFFECTIVE PRESSURE (HEAD IN PSI)

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LOG OF BORING NO. 17

FIGURE 2.5.5-86 (Sh. 1)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. <u>17</u>		
SITE _____							J.O. NO. <u>16345.03</u>		
ELEVATION (FEET) (062)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)	
779.2	30		RUN 6	100/54			- 32.4' - 33.0' - 34.9'	LIMESTONE, MEDIUM GRAY, FRESH, VERY HARD, MASSIVE CLAYSTONE, AS ABOVE LIMESTONE, THIN ALTERNATING BEDS OF MODERATELY PURE LIMESTONE AND LIMESTONE MIXED WITH CLAY SEAMS	NO. 3 PSIG = 32.1 TIME(M) FLOW(G) 3.0 0.08
	35		7	100/100					
769.2	40		RUN 8	100/100				NO. 4 PSIG = 41.4 TIME(M) FLOW(G) 5.0 0.73	
	45						LIMESTONE, MEDIUM GRAY, FRESH, MEDIUM HARD, BEDDED. MOSTLY UNFOSSILIFEROUS. CONTAINS INTERBEDS OF WELL MIXED CLAY SEAMS WITH LIMESTONE		
759.2	50		RUN 9	100/100				NO. 5 TIME(M) FLOW(G) PSIG = 32.8 3.0 0.00 PSIG = 50.8 3.0 0.00	
	55								
749.2	60		RUN 10	100/94			- 59.4'	NO. 6 TIME(M) FLOW(G) PSIG = 36.3 3.0 0.00 PSIG = 50.3 3.0 0.00 PSIG = 55.3 3.0 0.00	
	65						- 66.1'	CLAYSTONE SEAM, DARK GREENISH GRAY, FRESH, SOFT, BEDDED (~ SHALE) LIMESTONE, AS ABOVE CLAYSTONE SEAM, VERY THIN, AS ABOVE	
	70		RUN 11	100/81				NO. 7 TIME(M) FLOW(G) PSIG = 42.7 3.0 0.03 PSIG = 59.7 3.0 0.24	
739.2	75		RUN 12	100/91				LIMESTONE, AS ABOVE, BUT SLIGHTLY MORE COMPETENT, DUE TO SLIGHTLY LESS CLAY SEAMS PSIG = 59.7 3.0 0.87	
							- 77.0'		
							CLAYSTONE AND LIMESTONE - THIN ALTERNATE LAYERING FOR 0.7' LIMESTONE		
729.2	80						TO = 79.3'		

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LOG OF BORING NO. 17

FIGURE 2.5.5-86 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION
GLEN ROSE, TEXAS

SITE _____ J.O. NO. 16345.03 BORING NO. 18
 COORDINATES N 9248.67 E 10.280.30 GROUND ELEV. (I) 808.7' SHEET 1 OF 2
 INCLINATION VERTICAL BEARING _____ INSPECTOR LESTER M. TYRALA
 DATE : START / FINISH 12/29/87 / 12/30/87 CONTRACTOR / DRILLER HJA/B. CROMEANS
 STATIC GROUNDWATER DEPTH / DATE 10.7 (FT) / 1/10/88 DRILL RIG TYPE DAMCO
 DEPTH TO BEDROCK 6.0 (FT) TOTAL DEPTH DRILLED 41.0 (FT)
 METHODS :
 DRILLING SOIL ROLLER CONE (6 IN. DIAMETER)
 SAMPLING SOIL NONE
 DRILLING ROCK IMPREGNATED DIAMOND BIT AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL
 SPECIAL TESTING OR INSTRUMENTATION PRESSURE TESTS AND INSTALLATION OF PIEZOMETER
 COMMENTS AT ADMINISTRATION BUILDING/GUARD HOUSE

ELEVATION (FEET)(IE2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
808.7	0						PLACED GRAVEL FILL	
	5						6.0'	
798.7	10		RUN 1 96/0				LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED WITH MANY CLAY SEAMS	NO. 1 PSIGE = 11.5 TIME(M) FLOW(G) 5.0 2.05
	15		RUN 2 97/42				- 10.9' CLAYSTONE, DARK GREENISH GRAY, WELL BEDDED, FRESH, SOFT - 12.1' LIMESTONE AND CLAYSTONE, MIXED LAYERS - 13.4'	
788.7	20		RUN 3 96/23				LIMESTONE, MEDIUM GRAY, FRESH, HARD, BEDDED WITH SOME MIXING OF CLAY SEAMS, MANY HORIZONTAL PARTING	NO. 2 PSIGE = 21.6 TIME(M) FLOW(G) 3.0 0.00
	25		RUN 4 100/91				- 20.9' CLAYSTONE, DARK GREENISH GRAY, FRESH, SOFT, WELL BEDDED	
778.7	30		RUN 5 100/92				- 25.1' LIMESTONE AND CLAYSTONE, ALTERNATING INTERBEDS - 27.8' CLAYSTONE, AS ABOVE - 29.9' LIMESTONE, AS ABOVE	

- LEGEND / NOTES
1. DATUM IS SEA LEVEL OF 1929.
 2. ☒ GROUND WATER LEVEL
 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.
 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.
 5. STD. PENETRATION RESISTANCE BLOWS/FT.
 6. UNIFIED SOIL CLASSIFICATION SYSTEM.
 7. PSIGE IS EFFECTIVE PRESSURE (HEAD) IN PSI
- AMENDMENT 78
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LOG OF BORING NO. 18

FIGURE 2.5.5-87 (Sh. 1)

COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. 18 SHEET 2 OF 2	
SITE _____		J.O. NO. 16345.03						
ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
778.7	30						- 31.5' CLAYSTONE, AS ABOVE, BUT WITH LIMESTONE LENSES AT TOP OF INTERVAL - 34.2' LIMESTONE, AS ABOVE - 35.4' CLAYSTONE, AS ABOVE, WELL BEDDED - 37.2' LIMESTONE, AS ABOVE TO = 41.0'	NO. 3 PSIG = 36.1 TIME (M) FLOW (G) 5.0 0.23
	35		RUN 6	100/42				
	40							
768.7								

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LOG OF BORING NO. 18

FIGURE 2.5.5-87 (Sh. 2)

COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. <u>15345.03</u>	BORING NO. <u>19</u>
SITE _____		GROUND ELEV. (I) <u>847.8</u>	SHEET <u>1</u> OF <u>2</u>
COORDINATES <u>N 9538.20</u> <u>E9488.10</u>			
INCLINATION <u>VERTICAL</u> BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>		
DATE : START / FINISH <u>12/18/87</u> / <u>12/22/87</u>	CONTRACTOR / DRILLER <u>MJA/G. TAYLOR</u>		
STATIC GROUNDWATER DEPTH / DATE <u>64.5 (FT)</u> / <u>1/29/88</u>	DRILL RIG TYPE <u>MOBIL 80</u>		
DEPTH TO BEDROCK <u>5.0</u> (FT)	TOTAL DEPTH DRILLED <u>80.0</u> (FT)		
METHODS :			
DRILLING SOIL	<u>ROLLER CONE (6 IN. DIAMETER)</u>		
SAMPLING SOIL	<u>NONE</u>		
DRILLING ROCK	<u>IMPREGNATED DIAMOND BIT (NX) AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL</u>		
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLATION OF PIEZOMETER</u>			
COMMENTS <u>AT SWITCHYARD RELAY HOUSE (~ HALF BETWEEN 17 AND 20)</u>			

ELEVATION (FEET)(1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
847.8	0							
	5		RUN 1 100/21				5.0' LIMESTONE, MEDIUM GRAY, VERY WEATHERED, HARD, THIN BEDDED WITH MANY CLAY BANDS	
	10						- 7.8' CLAYSTONE, DARK TAN, WEATHERED, MEDIUM SOFT MASSIVE	
837.8	15		RUN 2 100/91				LIMESTONE (LS), LIGHT MEDIUM GRAY, FRESH, MODERATELY HARD, VERY THIN TO THIN BEDDED. MANY THIN, <0.1', INTERBEDS OF CLAY SEAMS AND CLAYSTONE	NO. 1 PSIGE = 19.6 TIME(M) FLOW(G) 3.0 0.00
	20						- 19.4' CLAYSTONE, MEDIUM DARK GRAY, SOFT, FRESH, VERY WELL STRATIFIED (~ SHALE)	
827.8	25		RUN 3 100/44				-22.6' FOSSILIFEROUS BAND SHOWING SMALL VOIDS LIMESTONE, MEDIUM DARK GRAY, MEDIUM HARD, FRESH, THIN BEDDED. CONTAINS DIFFERENT AMOUNTS OF INTIMATELY MIXED THIN CLAY SEAMS	NO. 2 PSIGE = 13.0 TIME(M) FLOW(G) 3.0 0.00
817.8	30							

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. <input checked="" type="checkbox"/> GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2"O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	7. PSIGE IS EFFECTIVE PRESSURE (HEAD) IN PSI.
COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2		
LOG OF BORING NO. 19		
FIGURE 2.5.5-88 (Sh. 1)		

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. 19 SHEET 2 OF 2	
SITE _____ J.O. NO. 16345.03								
ELEVATION (FEET) (162)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (*)
817.8	30						- 31.6' CLAYSTONE, AS ABOVE	NO. 3 PSIG = 32.7 TIME(M) FLOW(G) 3.0 0.00
	35		RUN 4	100/96			- 34.1' LIMESTONE, LIGHT-DARK GRAY, FRESH, MODERATELY HARD, THIN BEDDED. MANY INTERVALS OF INTIMATELY MIXED LIMESTONE AND CLAYSTONE	
807.8	40						LIMESTONE, MEDIUM GRAY, FRESH, MODERATELY HARD, BEDDED WITH MULTIPLE ZONES OF CONTORTED CLAY SEAMS	NO. 4 PSIG = 41.5 TIME(M) FLOW(G) 3.0 0.00
	45		RUN 5	100/87			CLAYSTONE BAND	
							MINOR LIGNITE	
797.8	50						- 50.4' CLAYSTONE INTERBED	NO. 5 PSIG = 53.2 TIME(M) FLOW(G) 3.0 0.00
	55		RUN 6	86/91			LIMESTONE, AS ABOVE	
							- 55.4' CLAYSTONE, DARK GRAYISH-GREEN, FRESH, VERY SOFT, WELL STRATIFIED	
							- 57.7') CORE LOSS, 1.4'	
							- 59.1')	
787.8	60						- 59.9' LIMESTONE, AS ABOVE	NO. 6 TIME(M) FLOW(G) PSIG = 36.8 3.0 0.00 PSIG = 50.8 3.0 0.00 PSIG = 65.8 3.0 0.3
	65		RUN 7	99/67			CLAYSTONE, AS ABOVE	
							- 64.2' LIMESTONE, AS ABOVE	
							- 66.7' CLAYSTONE, AS ABOVE	
777.8	70		RUN 8	100/47			- 68.9' LIMESTONE, LIGHT GRAY, FRESH, HARD, DENSE	NO. 7 TIME(M) FLOW(G) PSIG = 32.7 3.0 0.00 PSIG = 59.7 3.0 0.3 PSIG = 79.7 3.0 0.12
							- 69.9' CLAYSTONE, AS ABOVE	
	75		RUN 9	100/86			LIMESTONE, MEDIUM GRAY, FRESH, MEDIUM HARD, BEDDED WITH SOME MIXING OF CLAY SEAMS	
							- 74.8' CLAYSTONE LAYER	
							LIMESTONE, AS ABOVE	
767.8	80						TD = 80.0'	

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LOG OF BORING NO. 19

FIGURE 2.5.5-88 (Sh. 2)

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SITE <u>COMANCHE PEAK STEAM ELECTRIC STATION</u> <u>GLEN ROSE, TEXAS</u>		J.O. NO. <u>16345.03</u>	BORING NO. <u>20</u>
COORDINATES <u>N 9818.60</u>	<u>E8912.70</u>	GROUND ELEV. (1) <u>846.5'</u>	SHEET <u>1</u> OF <u>2</u>
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE : START / FINISH <u>12/17/87</u> / <u>12/19/87</u>		CONTRACTOR / DRILLER <u>MJA/B. CROMEANS</u>	
STATIC GROUNDWATER DEPTH / DATE <u>69.2 (FT)</u> / <u>1/10/88</u>		DRILL RIG TYPE <u>DAMCO</u>	
DEPTH TO BEDROCK <u>5.0 (FT)</u>		TOTAL DEPTH DRILLED <u>80.0 (FT)</u>	
METHODS :			
DRILLING SOIL <u>ROLLER CONE</u>			
SAMPLING SOIL <u>NONE</u>			
DRILLING ROCK <u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL</u>			
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLATION OF PIEZOMETER</u>			
COMMENTS <u>BH ON E SIDE OF RESERVOIR</u>			

ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
846.5	0							
	5		RUN 1	100/37			5.0' LIMESTONE, LIGHT GRAY, SLIGHTLY WEATHERED, WELL INDURATED AND FOSSILIFEROUS - CORE LOSS, 0.3', 7.5'-7.8' CLAYSTONE, TAN, WEATHERED, VERY SOFT, MASSIVE LIMESTONE AND CLAYSTONE, INTIMATELY MIXED LIMESTONE, LIGHT GRAY, MODERATELY COMPETENT CLAYSTONE, VERY DARK GRAY, FRESH, SOFT, WELL STRATIFIED LIMESTONE, LIGHT-MEDIUM GRAY, FRESH, HARD, BEDDED, CONTAINS MUCH CLAYSTONE INTIMATELY MIXED TOGETHER	NO. 1 PSIG = 11.2 TIME(M) FLOW(G) 5.0 0.19
836.5	10		RUN 2	100/86			- 15.4' CLAYSTONE, DARK GREEN GRAYISH, FRESH, POORLY INDURATED AND POORLY - 16.6' BEDDED - CORE LOSS, 17.8'-18.0' CLAYSTONE, AS ABOVE LIMESTONE, MEDIUM GRAY, FRESH, HARD, THINLY BEDDED. CONTAINS INTERVALS OF THIN CLAYSTONE BANDS - 23.1'-VERY FOSSILIFEROUS INTERVALS (~ 1.0') AND VUGGY LIMESTONE, AS ABOVE - 28.0' CLAYSTONE, DARK GRAY, FRESH, SOFT, WELL STRATIFIED (~ SHALE)	NO. 2 PSIG = 21.5 TIME(M) FLOW(G) 3.0 0.00
826.5	20		RUN 3	100/86				
816.5	30							

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI	<div style="border: 2px solid black; padding: 10px; margin: 10px;"> <p style="text-align: center; font-weight: bold;">COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2</p> <hr/> <p style="text-align: center;">LOG OF BORING NO. 20</p> <hr/> <p style="text-align: center;">FIGURE 2.5.5-89 (Sh. 1)</p> </div>
	2. <input checked="" type="checkbox"/> GROUND WATER LEVEL		
	3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.		
	4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.		
	5. STD. PENETRATION RESISTANCE BLOWS/FT.		
	6. UNIFIED SOIL CLASSIFICATION SYSTEM.		
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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. <u>20</u>	
SITE _____ J.O. NO. <u>16345.03</u>							SHEET <u>2</u> OF <u>2</u>	
ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
816.5	30						- 30.9'	NO. 3 PSIGE = 32.8 TIME(M) FLOW(G) 3.0 0.03
	35		RUN 4	100/91			LIMESTONE, MEDIUM GRAY, FRESH, MEDIUM HARD, BEDDED. CONTAINS ZONES OF INTIMATELY MIXED AND DISTURBED CLAYSTONE	
806.5	40		RUN 5	96/52			- 41.2' CLAYSTONE	NO. 4 PSIGE = 42.2 TIME(M) FLOW(G) 5.0 .98
	45		RUN 6	99/14			LIMESTONE, MEDIUM GRAY, FRESH, MEDIUM HARD, BEDDED, WITH CLAY SEAMS	
796.5	50						- 51.9'	NO. 5 PSIGE = 54.5 TIME(M) FLOW(G) 3.0 0.06
	55		RUN 7	100/42			CLAYSTONE, DARK GRAYISH-GREEN, FRESH, SOFT, WELL STRATIFIED	
	60						- 55.2'	
	65						LIMESTONE AND CLAYSTONE. WELL STRATIFIED, ALTERNATING INTERBEDS	
786.5	60						- 60.0'	NO. 6 TIME(M) FLOW(G) PSIGE = 36.8 3.0 0.00 PSIGE = 50.8 3.0 0.00 PSIGE = 65.8 3.0 0.00
	65		RUN 8	95/23			- 61.8'	
	70						LIMESTONE, LIGHT GRAY, FRESH, HARD, MASSIVE	
776.5	70						- 61.8'	
	75						CLAYSTONE, DARK GRAYISH-GREEN, WELL STRATIFIED	
	80						- 65.0' LIMESTONE, AS ABOVE - 66.1' CLAYSTONE, AS ABOVE - 67.8' LIMESTONE, AS ABOVE, - 68.8' CORE LOSS, - 69.4' CLAYSTONE, AS ABOVE	
	80		RUN 9	100/100			LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED. MINOR DISTURBED INTERVALS WITH CLAY	NO. 7 TIME(M) FLOW(G) PSIGE = 43.0 3.0 0.00 PSIGE = 60.0 3.0 0.00 PSIGE = 80.0 3.0 0.01
766.5	80						TD = 80.0'	

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LOG OF BORING NO. 20

FIGURE 2.5.5-89 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		J.O. NO. 16345.03	BORING NO. 21
SITE	COORDINATES N 8775.34 E 10465.24	GROUND ELEV. (I) 806.8'	SHEET 1 OF 2
INCLINATION	BEARING	INSPECTOR	LESTER M. TYRALA
DATE : START / FINISH	12/28/87 / 12/29/87	CONTRACTOR / DRILLER	MJA/G. TAYLOR
STATIC GROUNDWATER DEPTH / DATE	18.8 (FT) / 1/28/88	DRILL RIG TYPE	MOBIL
DEPTH TO BEDROCK	4.5 (FT)	TOTAL DEPTH DRILLED	39.5 (FT)
METHODS :			
DRILLING SOIL	ROLLER CONE (6 IN. DIAMETER)		
SAMPLING SOIL	NONE		
DRILLING ROCK	IMPREGNATED DIAMOND BIT (NX), DOUBLE TUBE-TYPE NONROTATING INNER CORE BARREL		
SPECIAL TESTING OR INSTRUMENTATION	PRESSURE TESTS AND INSTALLATION OF PIEZOMETER		
COMMENTS	BEHIND ADMINISTRATION BUILDING - LAKESIDE (SOUTH)		

ELEVATION (FEET)(1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
806.8	0						PLACED GRAVEL FILL	
	5		RUN 1	100/47				
796.8	10						- 9.5' CORE LOSS, 0.3'	
	15		RUN 2	97/79			LIMESTONE AND CLAYSTONE, LIGHT GRAY, AND GREENISH GRAY, FRESH DISCREET LAYERS TO DISTORTED AND DISTURBED ZONES	NO. 1 PSIG = 11.5 TIME (M) FLOW (G) 3.0 0.00
786.8	20						- 20.5' CLAYSTONE, DARK GRAY, FRESH, SOFT WELL BEDDED	
	25		RUN 3	97/11			- 24.6' LIMESTONE LIGHT GRAY, HARD, FOSSILIFEROUS	
							- 25.9' CLAYSTONE, AS ABOVE, BUT WITH THIN INTERBEDS OF LIMESTONE	
776.8	30						- 28.2' LIMESTONE, AS ABOVE, FOSSILIFEROUS	NO. 2 PSIG = 20.8 TIME (M) FLOW (G) 5.0 0.24

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. <input checked="" type="checkbox"/> GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI <div style="border: 2px solid black; padding: 10px; text-align: center;"> COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2 </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> LOG OF BORING NO. 21 FIGURE 2.5.5-90 (Sh. 1) </div>
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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS							BORING NO. 21 SHEET 2 OF 2	
SITE _____							J.O. NO. 15345.03	
ELEVATION (FEET) (1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	
							PRESSURE TEST (7)	
776.8	30		RUN 4	95/47			NO. 3 PSIG = 35.2 TIME (M) FLOW (G) 3.0 0.00	
	35						- 31.1' CLAYSTONE, FRESH, SOFT, VERY WELL BEDDED (~ SHALE) - 33.3' LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED - 34.3' CLAYSTONE, AS ABOVE - 35.5' LIMESTONE, AS ABOVE - CLAYSTONE BAND, AS ABOVE LIMESTONE, AS ABOVE TD = 39.5'	
767.8	40							

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

LOG OF BORING NO. 21

FIGURE 2.5.5-90 (Sh. 2)

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COMANCHE PEAK STEAM ELECTRIC STATION GLEN ROSE, TEXAS		BORING NO. <u>22</u>
SITE _____	J.O. NO. <u>16345.03</u>	SHEET <u>1</u> OF <u>2</u>
COORDINATES <u>N 9631.00</u> <u>E 11353.40</u>	GROUND ELEV. (I) <u>822.8'</u>	
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>
DATE : START / FINISH <u>12/16/87</u> / <u>12/18/87</u>	CONTRACTOR / DRILLER <u>MJA/G. TAYLOR</u>	
STATIC GROUNDWATER DEPTH / DATE <u>50.4 (FT)</u> / <u>1/29/88</u>	DRILL RIG TYPE <u>MOBIL B 90</u>	
DEPTH TO BEDROCK <u>1.3</u> (FT)	TOTAL DEPTH DRILLED <u>60</u> (FT)	
METHODS :		
DRILLING SOIL	<u>ROLLER CONE (6 IN. DIAMETER)</u>	
SAMPLING SOIL	<u>NONE</u>	
DRILLING ROCK	<u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE TYPE NONROTATING INNER CORE BARREL</u>	
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLATION OF PIEZOMETER</u>		
COMMENTS <u>MOST EASTERLY HOLE (NEAR BLUE WATER TOWER)</u>		

ELEVATION (FEET)(1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N	VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST(7)
822.8	0							PLACED GRAVEL FILL	
			RUN 1	48/76				- 1.3' LIMESTONE, LIGHT BUFF, WEATHERED, MODERATELY HARD, MASSIVE	
			2	0/0				- 2.4' CORE LOSS OF 1.0', AND CORE CUT OUT OF 0.7'	
	5		RUN 3	98/48				- 4.1' LIMESTONE, AS ABOVE CORE LOSS, 0.1'	
								- 7.8' LIMESTONE, LIGHT BUFF TO LIGHT GRAY, AS ABOVE, CONTAINS THIN INTERBEDS OF CLAYSTONE	RUN 1 PSIGE = 8.2
812.8	10		RUN 4	96/83				CLAYSTONE, DARK GRAY, FRESH, SOFT, MODERATELY TO WELL STRATIFIED. CONTAINS THIN INTERBEDS OF LIMESTONE	TIME(M) FLOW(G) 3.0 0.00
	15		RUN 5	100/88				- 13.8' LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED - 16.6' CLAYSTONE, WELL STRATIFIED	RUN 2 PSIGE = 15.5
802.8	20							LIMESTONE AND CLAYSTONE, MOSTLY LIMESTONE AND INTIMATE MIXING OF CLAY SEAMS, THE CONTACTS ARE POORLY DEFINED	TIME(M) FLOW(G) 3.0 0.00
			RUN 6	84/73				- 21.6' CORE LOSS, 0.4'	
	25		7	100/71				- 22.9' CLAYSTONE, AS ABOVE	
								- 25.2'	RUN 3 TIME(M) FLOW(G) PSIGE = 17.6 3.0 0.00 PSIGE = 25.6 3.0 0.00
792.8	30		RUN 8	100/ 97				LIMESTONE, MEDIUM GRAY, FRESH, COMPETENT. MOST OF THIS INTERVAL IS LIMESTONE WITH INTIMATELY MIXED THIN SEAMS OF CLAY	

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929.	7. PSIGE IS EFFECTIVE PRESSURE (HEAD) IN PSI	<div style="border: 2px solid black; padding: 10px; margin: 10px auto; width: 80%;"> COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2 </div> <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 80%;"> LOG OF BORING NO. 22 </div> <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: 80%;"> FIGURE 2.5.5-91 (Sh. 1) </div>
	2. <input checked="" type="checkbox"/> GROUND WATER LEVEL		
	3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.		
4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.			
5. STD. PENETRATION RESISTANCE BLOWS/FT.			
6. UNIFIED SOIL CLASSIFICATION SYSTEM.			

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SITE <u>COMANCHE PEAK STEAM ELECTRIC STATION</u> <u>GLEN ROSE, TEXAS</u>		J.O. NO. <u>16345.03</u>	BORING NO. <u>23</u>
COORDINATES <u>N 10358.31</u>	<u>E 10,334.34</u>	GROUND ELEV. (I) <u>797.2'</u>	SHEET <u>1</u> OF <u>1</u>
INCLINATION <u>VERTICAL</u>		BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>
DATE : START / FINISH <u>12/22/87</u> / <u>12/28/87</u>		CONTRACTOR / DRILLER <u>MJA/G. TAYLOR</u>	
STATIC GROUNDWATER DEPTH / DATE <u>19.5 (FT)</u> / <u>1/28/88</u>		DRILL RIG TYPE <u>MOBIL</u>	
DEPTH TO BEDROCK <u>4.0</u> (FT)		TOTAL DEPTH DRILLED <u>30.0</u> (FT)	
METHODS :			
DRILLING SOIL <u>ROLLER CONE (6 IN. DIAMETER)</u>			
SAMPLING SOIL <u>NONE</u>			
DRILLING ROCK <u>IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE TYPE NONROTATING INNER CORE BARREL</u>			
SPECIAL TESTING OR INSTRUMENTATION <u>PRESSURE TESTS AND INSTALLATION OF PIEZOMETER</u>			
COMMENTS <u>AT CIRCULATING WATER INTAKE STRUCTURE (SHOULDER OF ACCESS ROAD)</u>			

ELEVATION (FEET)(1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
797.2'	0						PLACED GRAVEL FILL	
	5		RUN 1	58/0			5.8' LIMESTONE, LIGHT GRAY, WEATHERED, MEDIUM HARD, BEDDED - 6.5' CLAYSTONE, LIGHT BROWN, WEATHERED, VERY SOFT, BEDDED - 6.5' CORE LOSS - 8.5' LIMESTONE, LIGHT GRAY, SLIGHTLY WEATHERED, HARD, BEDDED	
787.2'	10		RUN 3	68/9			- 10.9' CLAYSTONE, FRESH, DARK GREYISH GREEN, SOFT, WELL BEDDED - 13.2' LIMESTONE, AS ABOVE - 13.7' CORE LOSS - 16.0' CLAYSTONE, AS ABOVE	NO. 1 PSIG = 10.7 TIME (M) FLOW (G) 5.0 10.2 (A VERY WEATHERED CLAY BAND AT 18.8)
	15		RUN 4	98/71			- 18.8' VERY WEATHERED CLAY BAND, 0.3' LIMESTONE, LIGHT GRAY, FRESH, HARD, BEDDED, A 0.4', VERY FOSSILIFEROUS LAYER. THE CLAY SEAMS ARE WEATHERED - 22.1' PIECE OF WOOD/LIGNITE CLAYSTONE, AS ABOVE	NO. 2 TIME (M) FLOW (G) PSIG = 14.6 3.0 0.00 PSIG = 18.6 3.0 0.00
777.2'	20						- 24.7' LIMESTONE, LIGHT GRAY, FRESH, HARD - 24.9' CLAYSTONE, AS ABOVE - 26.4' LIMESTONE, MEDIUM GRAY, FRESH, HARD WITH SOME CLAY SEAM AT BOTTOM	
	25		RUN 5	95/91				
767.2'	30						TD = 30.0'	

LEGEND / NOTES	1. DATUM IS SEA LEVEL OF 1929. 2. <input checked="" type="checkbox"/> GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	7. PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI <div style="border: 2px solid black; padding: 10px; text-align: center;"> COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2 LOG OF BORING NO. 23 FIGURE 2.5.5-92 </div>
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SITE <u>COMANCHE PEAK STEAM ELECTRIC STATION</u> <u>GLEN ROSE, TEXAS</u>		J.O. NO. <u>16345.03</u>	BORING NO. <u>24</u>
COORDINATES <u>N 9024.05</u> <u>E 10,705.25</u>	GROUND ELEV. (I) <u>810.0 FT</u>	SHEET <u>1</u> OF <u>1</u>	
INCLINATION <u>VERTICAL</u>	BEARING <u>N/A</u>	INSPECTOR <u>LESTER M. TYRALA</u>	
DATE : START / FINISH <u>12/30/87</u> / <u>12/31/87</u>	CONTRACTOR / DRILLER <u>MJA/S. TAYLOR</u>		
STATIC GROUNDWATER DEPTH / DATE <u>27.2 (FT)</u> / <u>1/29/88</u>	DRILL RIG TYPE <u>MOBIL</u>		
DEPTH TO BEDROCK <u>N/A</u> (FT)	TOTAL DEPTH DRILLED <u>31.5</u> (FT)		
METHODS :			
DRILLING SOIL	<u>ROLLER CONE (6 IN. DIAMETER)</u>		
SAMPLING SOIL	<u>NONE</u>		
DRILLING ROCK	<u>NONE</u>		
SPECIAL TESTING OR INSTRUMENTATION	<u>INSTALLATION OF PIEZOMETER</u>		
COMMENTS <u>ADJACENT TO BH-13 AT THE SWIS</u>			

ELEVATION (FEET) (1&2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/ROD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION
810.0	0						CONCRETE PAD
	5						
800.0	10						
	15						CAT. I BACKFILL (LIMESTONE WITH MINOR CLAY)
790.0	20						
	25						
780.0	30						
							TD = 31.5'

LEGEND / NOTES	2. <input checked="" type="checkbox"/> GROUND WATER LEVEL 3. BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY. 4. % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION. 5. STD. PENETRATION RESISTANCE BLOWS/FT. 6. UNIFIED SOIL CLASSIFICATION SYSTEM.	1. DATUM IS SEA LEVEL OF 1929.
	COMANCHE PEAK S.E.S. FINAL SAFETY ANALYSIS REPORT UNITS 1 and 2	
	LOG OF BORING NO. 24 FIGURE 2.5.5-93	

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SITE COMANCHE PEAK STEAM ELECTRIC STATION - GLEN ROSE, TEXAS J.O. NO. 16345.03 BORING NO. 25
 COORDINATES N 9792.26 E 10,667.17 GROUND ELEV. (1) 809.3' SHEET 1 OF 1
 INCLINATION VERTICAL BEARING N/A INSPECTOR LESTER M. TYRALA
 DATE : START / FINISH 12/30/87 / 12/31/87 CONTRACTOR / DRILLER MJA/B. CROMEANS
 STATIC GROUNDWATER DEPTH / DATE 7.2 (FT) / 1/28/88 DRILL RIG TYPE DAMCO 1250
 DEPTH TO BEDROCK 4.5 (FT) TOTAL DEPTH DRILLED 31.4 (FT)
 METHODS :
 DRILLING SOIL ROLLER CONE (6 IN. DIAMETER)
 SAMPLING SOIL NONE
 DRILLING ROCK IMPREGNATED DIAMOND BIT (NX), AND DOUBLE TUBE - TYPE NONROTATING INNER CORE BARREL
 SPECIAL TESTING OR INSTRUMENTATION PRESSURE TEST AND INSTALLATION OF PIEZOMETER
 COMMENTS NEAR BH-13 (FUEL BUILDING)

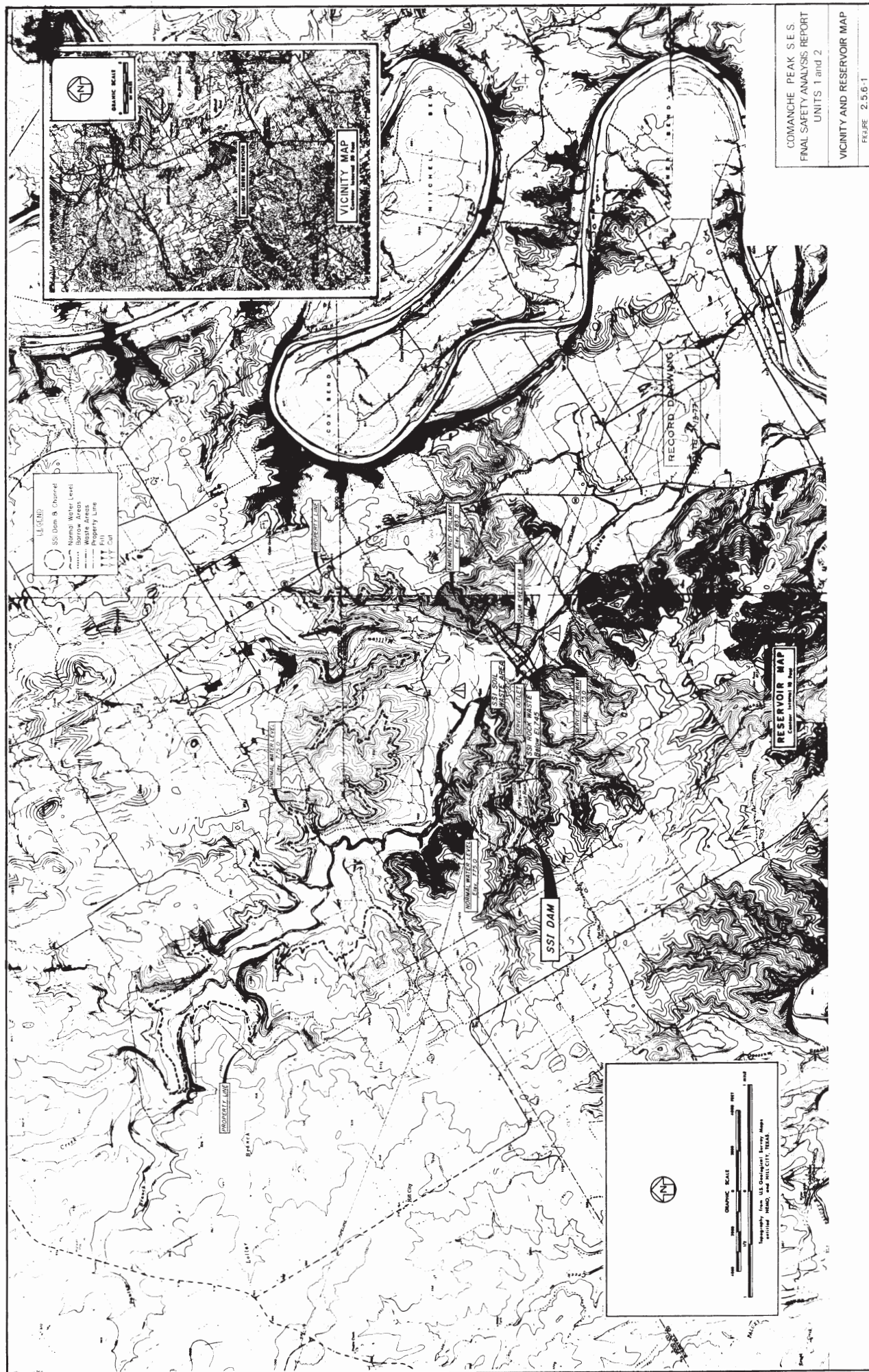
ELEVATION (FEET)(1)(2)	DEPTH (FEET)	SAMPLE TYPE (7)	SAMPLE OR RUN NUMBER	BLOWS (3) OR REC/RQD (4)	SPT N VALUE (5)	GROUP SYMBOL (6) OR GRAPHIC LOG	SAMPLE DESCRIPTION	PRESSURE TEST (7)
809.3	0						PLACED GRAVEL FILL	
	5		1	100/67			4.5'	
			RUN 2	100/51			- 0.2' CLAY SEAM	
799.3	10						LIMESTONE, MEDIUM GRAY, FRESH, HARD, BEDDED WITH SOME FOSSILS	NO. 1 PSIG = 11.5 TIME(M) FLOW(G) 5.0 0.23
	15		RUN 3	100/94			- 14.0' CLAYSTONE, DARK GREEN-GRAYISH, FRESH, SOFT, WELL BEDDED - 14.9' LIMESTONE, AS ABOVE, BUT WITH DISTORTED CLAY SEAMS - 15.9' CLAYSTONE, AS ABOVE, BUT WITH LIMESTONE BAND	
789.3	20						- 18.5' CLAYSTONE, AS ABOVE, BUT WITH LIMESTONE BAND	NO. 2 PSIG = 23.9 TIME(M) FLOW(G) 5.0 .05
	25		RUN 4	100/92			LIMESTONE, MEDIUM GRAY, FRESH, HARD, BEDDED WITH MANY ZONES OF DISTORTED AND DEFORMED CLAY SEAMS	
							- 26.7' CLAYSTONE, DARK GRAY, FRESH SOFT VERY WELL BEDDED (~ SHALE)	
							- 28.3' LIMESTONE, AS ABOVE	
779.3	30		RUN 5	75/67			- 29.6' CORE LOSS	
							- 30.1' CLAYSTONE, AS ABOVE	
							TD = 31.4'	

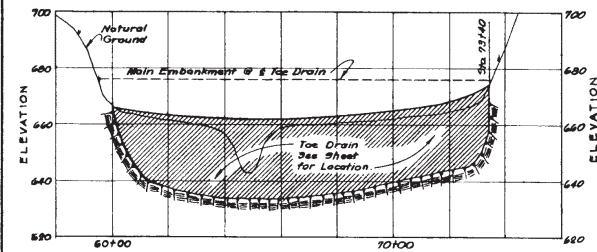
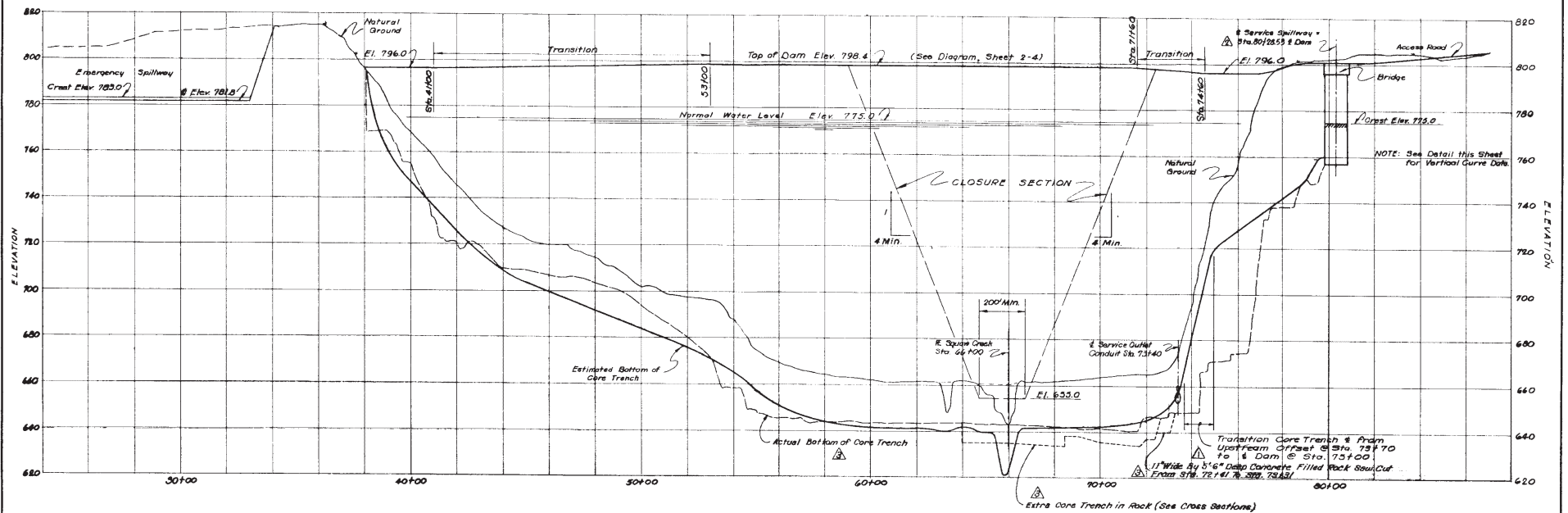
- LEGEND / NOTES
- GROUND WATER LEVEL
 - BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLE SPOON 6" OR DISTANCE SHOWN USING 140lb. HAMMER FALLING 30". * INDICATES USE OF 300lb. HAMMER. () INCHES OF SAMPLE RECOVERY.
 - % ROCK CORE RECOVERY/ ROCK QUALITY DESIGNATION.
 - STD. PENETRATION RESISTANCE BLOWS/FT.
 - UNIFIED SOIL CLASSIFICATION SYSTEM.
 - PSIG IS EFFECTIVE PRESSURE (HEAD) IN PSI
 - DATUM IS SEA LEVEL OF 1929.
- AMENDMENT 78
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COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

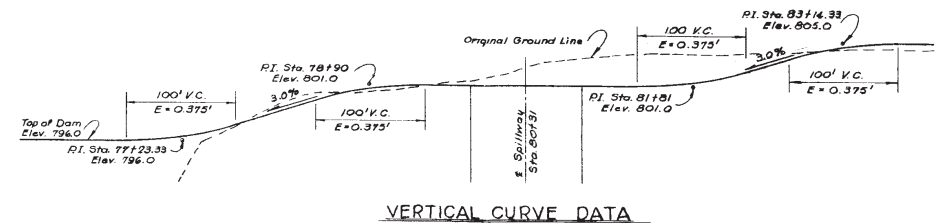
LOG OF BORING NO. 25

FIGURE 2.5.5-94





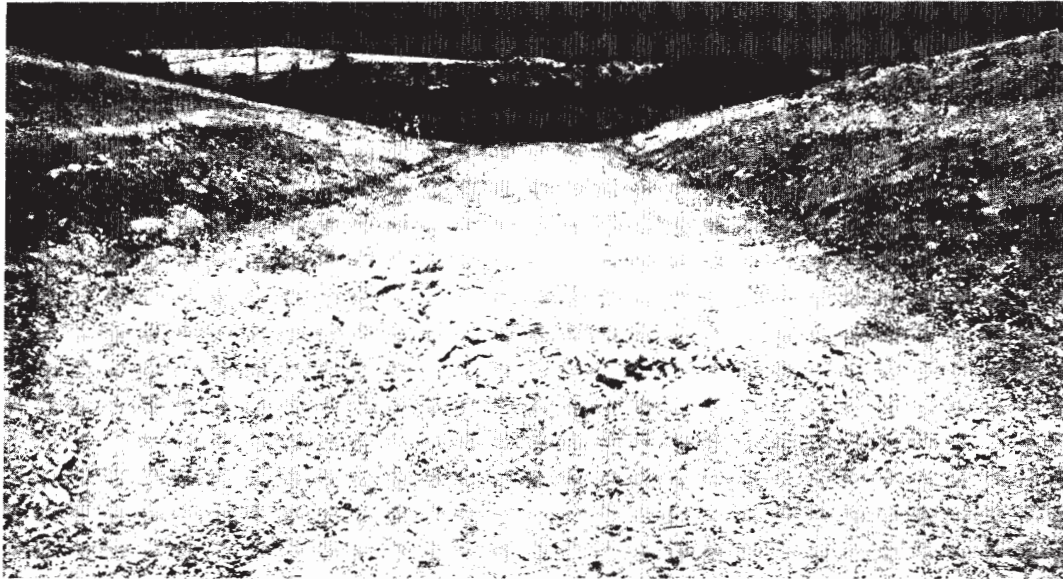
△ Drainage Filter Limits:
 1. Core Trench - Sta. 51+00 to 74+00
 2. Horizontal and Toe - 60+00 to 73+55



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

PROFILE S.S.I. DAM
COMPLETED EXCAVATION

FIGURE 2.5.6 - 3



1. SSI/SCR Equalization Canal Grading. View to Northwest (5/16/75).

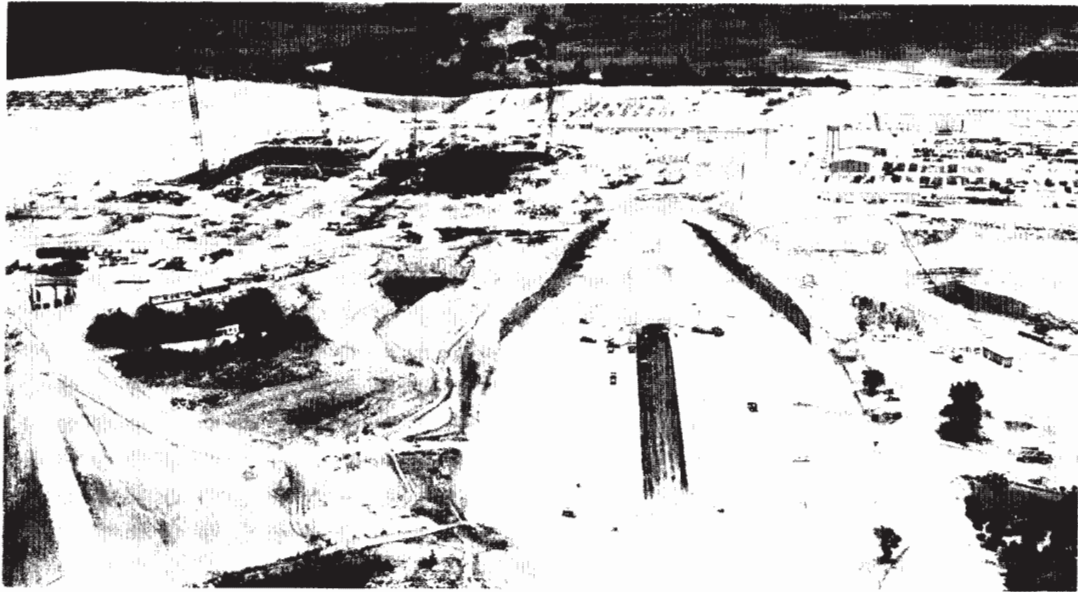


2. SSI Dam Placing Fill Concrete in So. Abutment Bedrock. View to South (3/26/76).

COMANCHE PEAK S.E.S.
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SSI Dam
Construction Photographs

FIGURE 2.5.6-4A



1. SSI Dam Aerial View. Material Placement Started in Center Section. View to North (5/19/76).

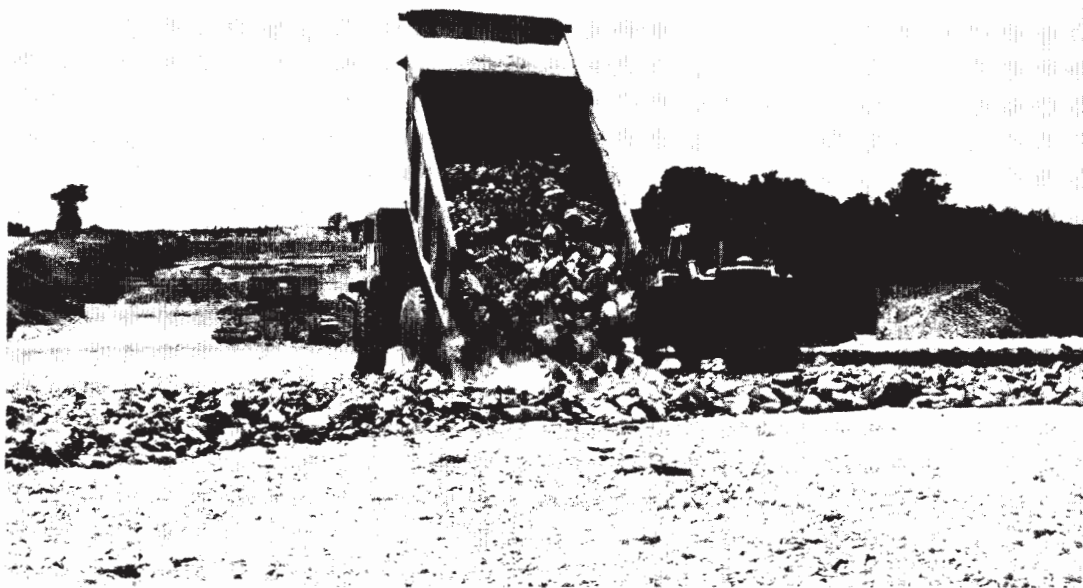


2. SSI Dam Preparing Core Trench for Filter Material Placement in South Abutment. View to South (8/9/76).

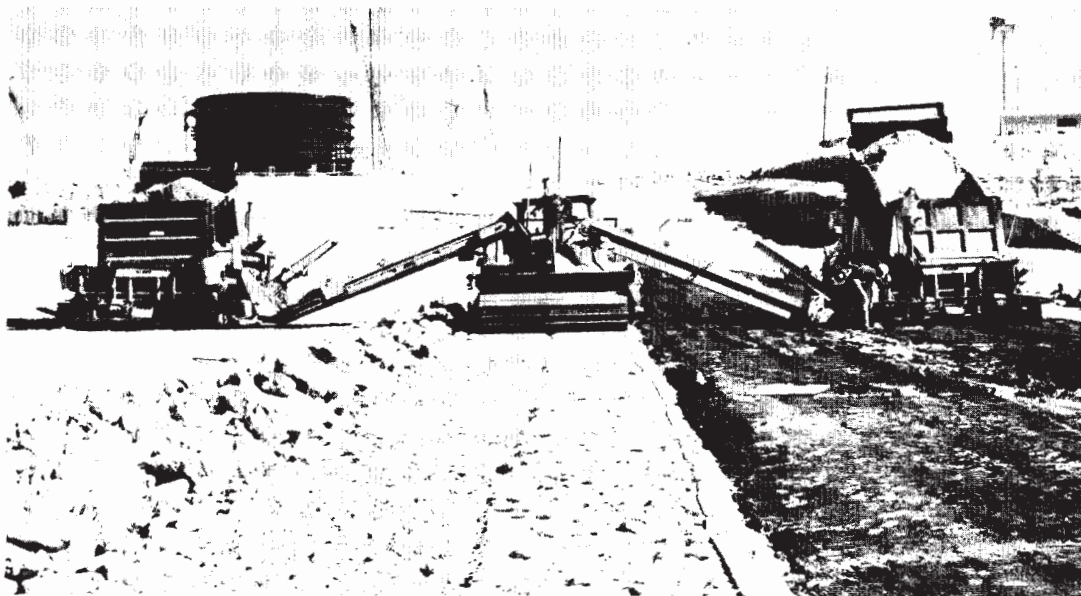
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SSI Dam
Construction Photographs

FIGURE 2.5.6-4B



1. SSI Dam Placing Crushed Rock. View to North
(8/12/76).

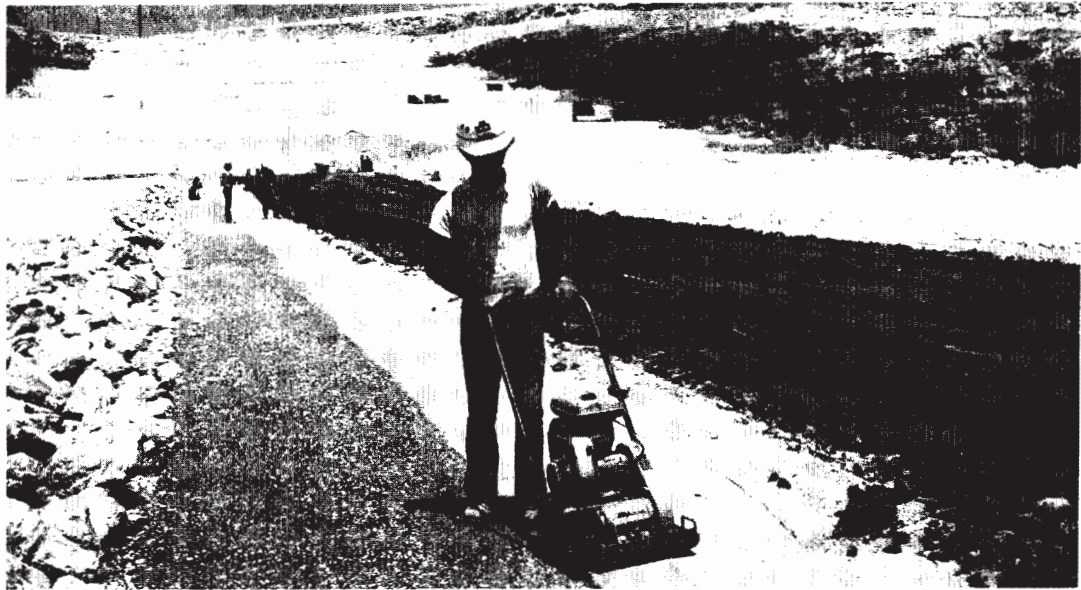


2. SSI Dam Placing Filter Material. View to North
(8/12/76).

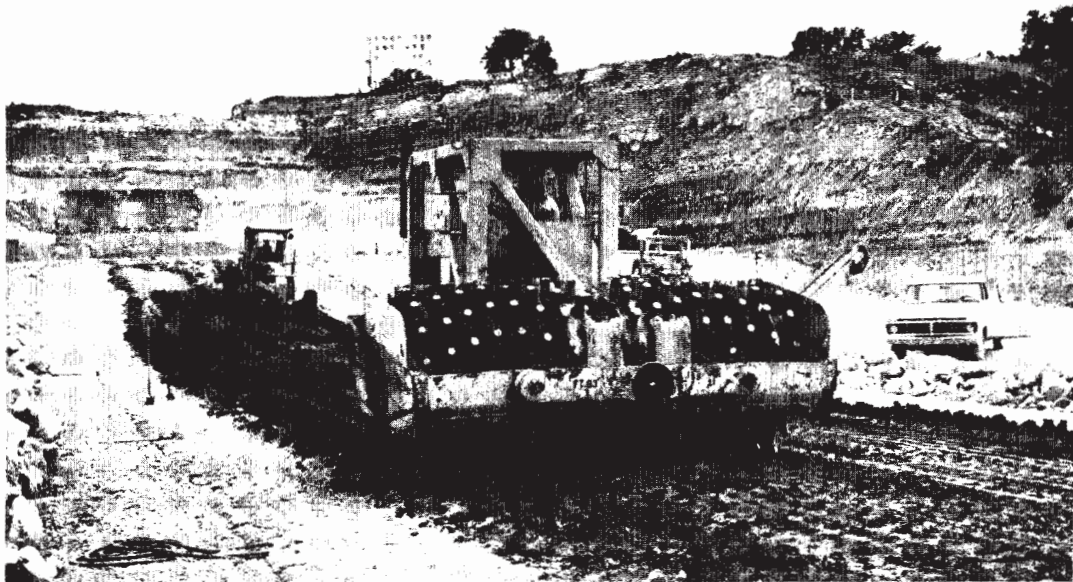
COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SSI Dam
Construction Photographs

FIGURE 2.5.6-4C



1. SSI Dam Compacting Filter Material. View to North
(8/12/76).

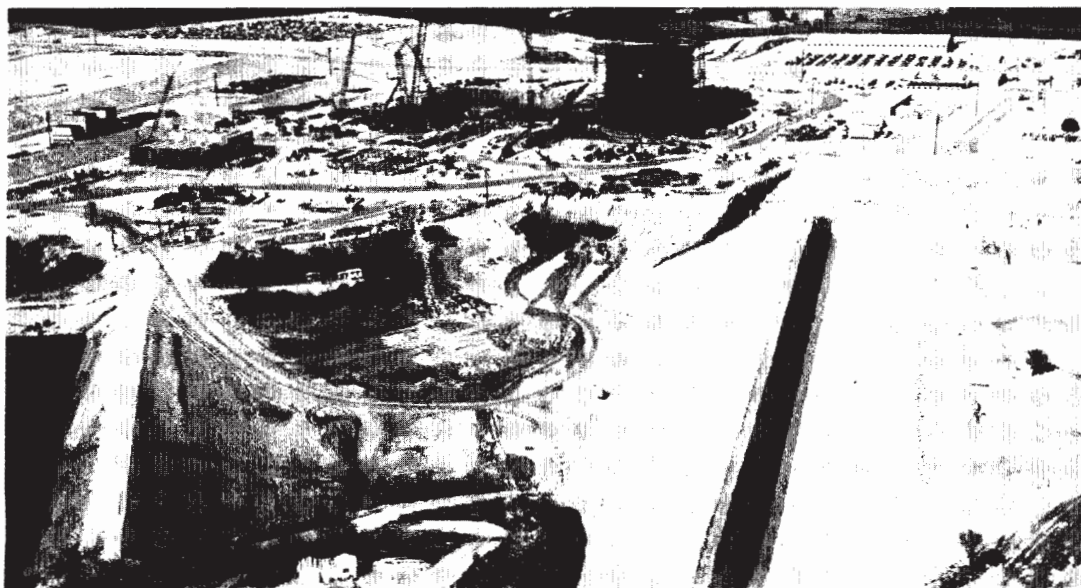


2. SSI Dam Compacting Core Material. View to South
(8/18/76).

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FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SSI Dam
Construction Photographs

FIGURE 2.5.6-4D



1. SSI Dam and Cofferdam Aerial View. View to North (11/22/76).

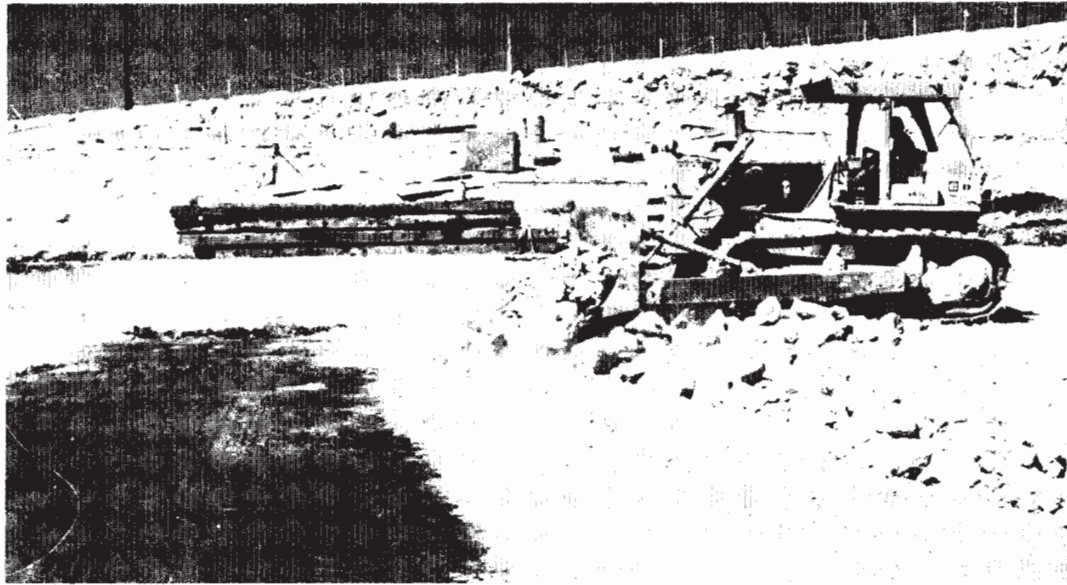


2. SSI Dam Core and Filter Material Placement Completed. View to North (4/2/77).

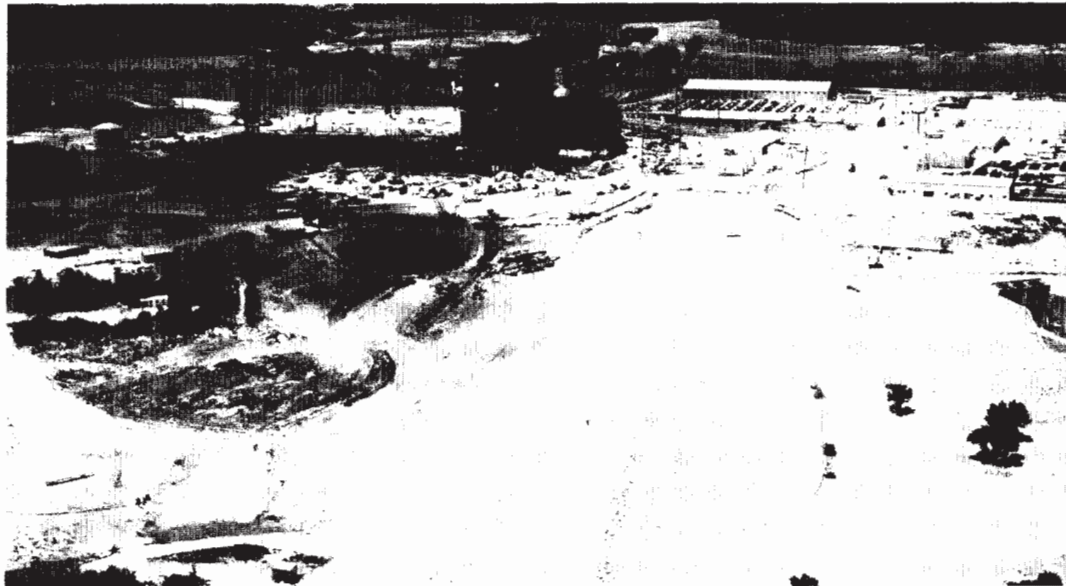
COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SSI Dam
Construction Photographs

FIGURE 2.5.6-4E



1. SSI Dam start of 10-ft. Rock Shell Placement above Core & Filter Material. View to North (4/2/77).

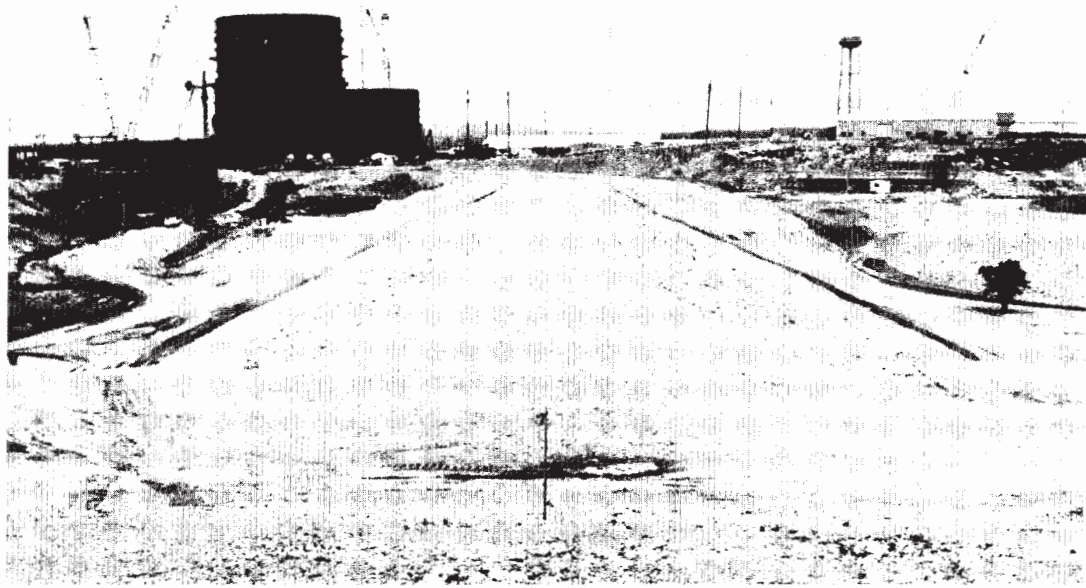


2. SSI Dam Aerial View Rock Shell Placement Nearing Completion to Elev. 796. View to North (4/22/77).

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SSI Dam
Construction Photographs

FIGURE 2.5.6-4F

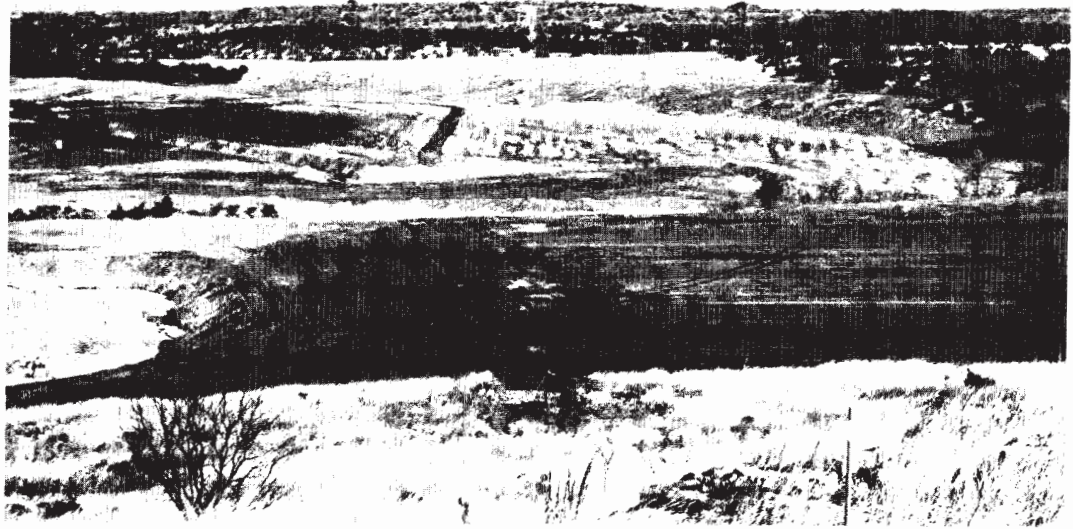


1. SSI Dam Completed, Abutments Sloped Out. View to North (5/13/77).

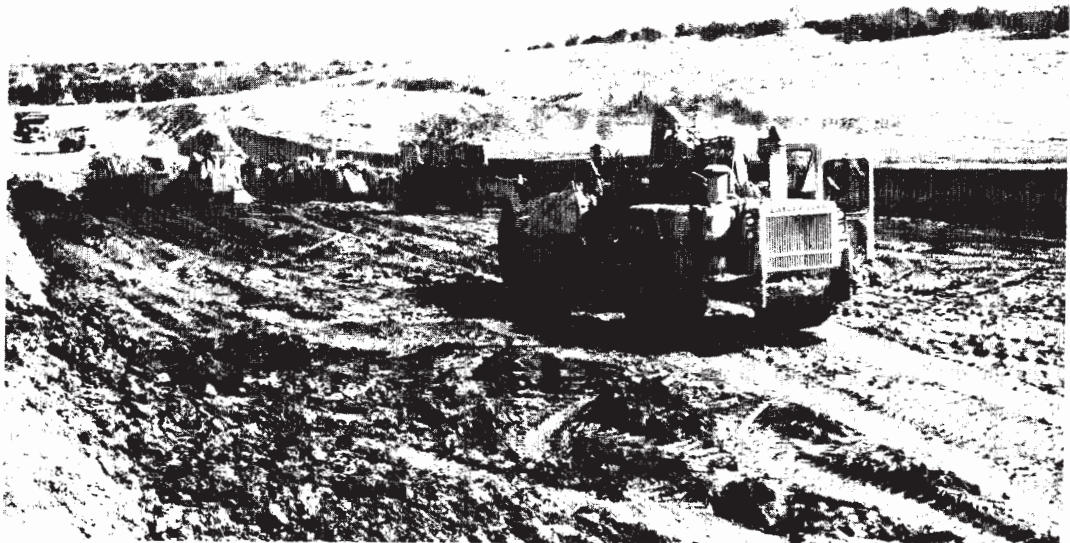
COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SSI Dam
Construction Photographs

FIGURE 2.5.6-4G



1. SCD \downarrow after Stripping. View to Northeast
(12/13/74).



2. SCD Core Trench Material Placement. View to Northeast
(2/17/75).

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Squaw Creek Dam
Construction Photographs

FIGURE 2.5.6-5A



1. SCD Core Trench, Preparing Bedrock. View to Northeast (2/20/75).

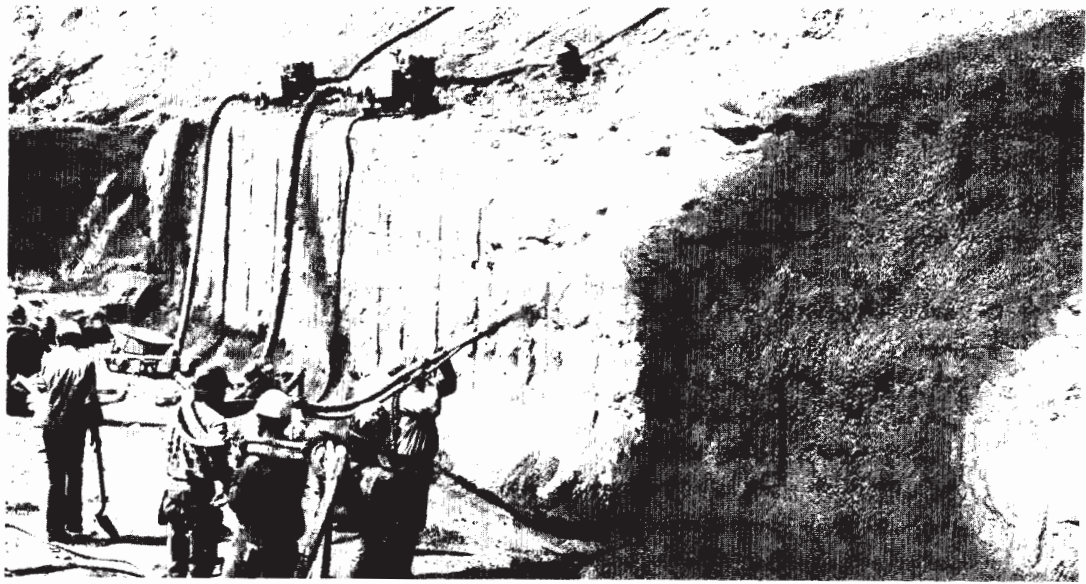


2. SCD Core Trench, Testing In-Place Filter Material. View to Northeast (2/24/75).

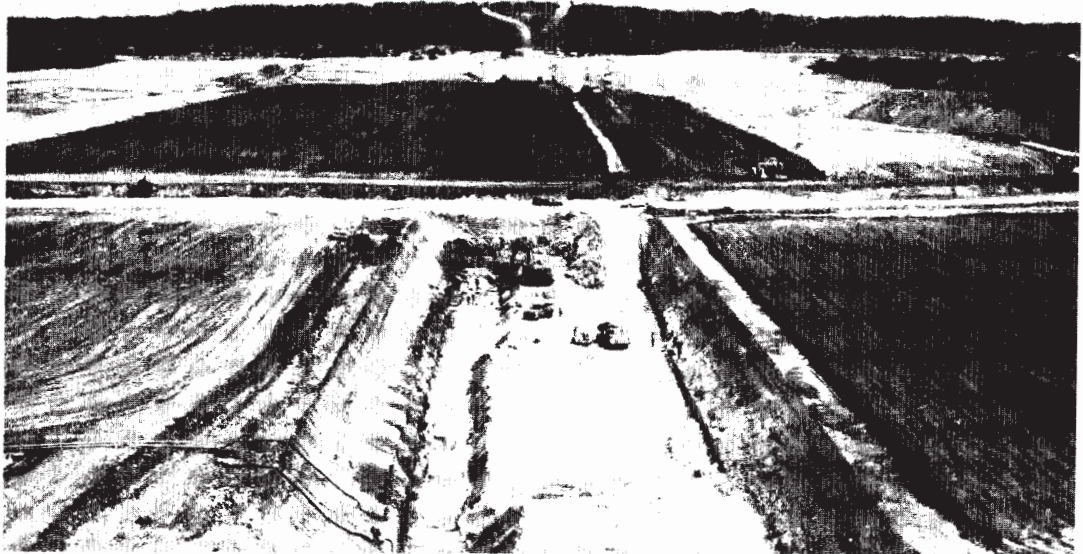
COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Squaw Creek Dam
Construction Photographs

FIGURE 2.5.6-5B



1. SCD Shotcreting S.W. Core Trench. View to Southeast (3/19/75).



2. SCD S.W. Core Trench Excavated. N.E. Core Trench Backfilled. View to Northeast (3/21/75).

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Squaw Creek Dam
Construction Photographs

FIGURE 2.5.6-5C



1. SCD Service Spillway Discharge Channel Excavation.
View to East (5/14/75).



2. SCD Closure Core Trench Excavation. View to South-
east (10/14/75).

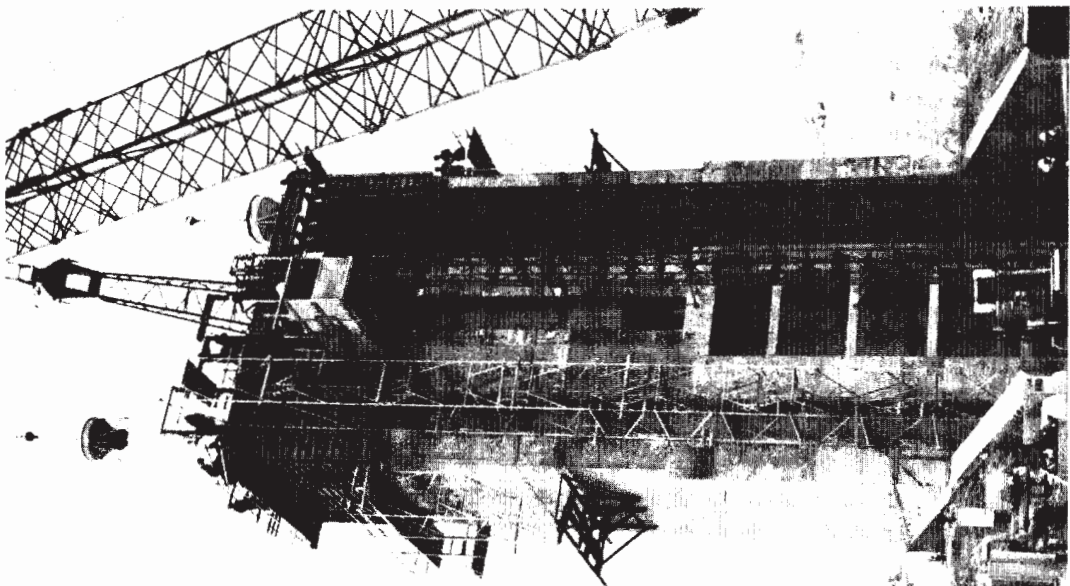
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FIGURE 2.5.6-5D



1. SCD Riprap Placement on Upstream Slope. View to East (11/18/75).

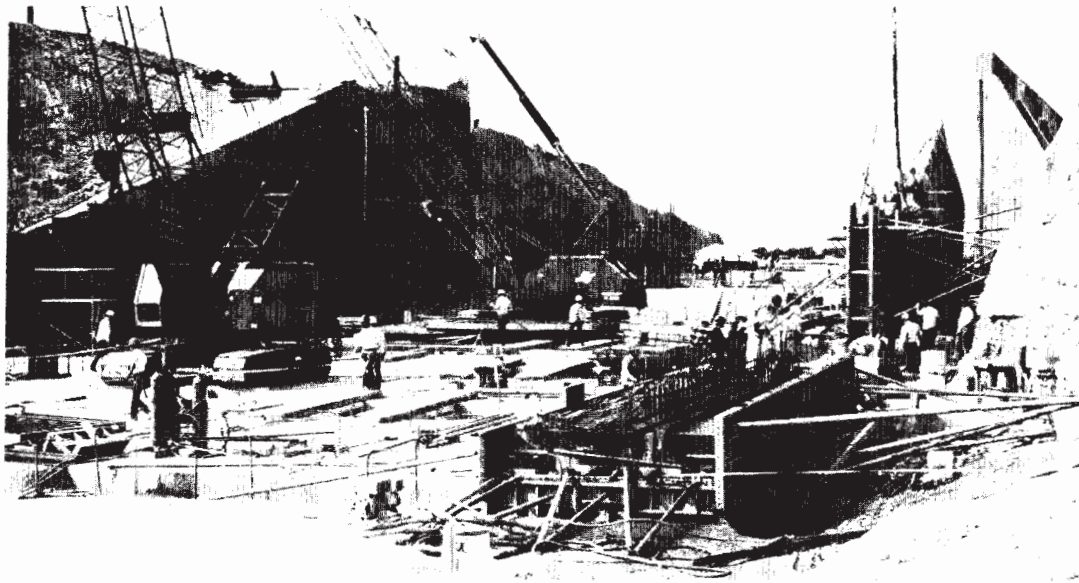


2. SCD Service Outlet Tower Concrete Placement to Elev. 764. View to South (12/23/75).

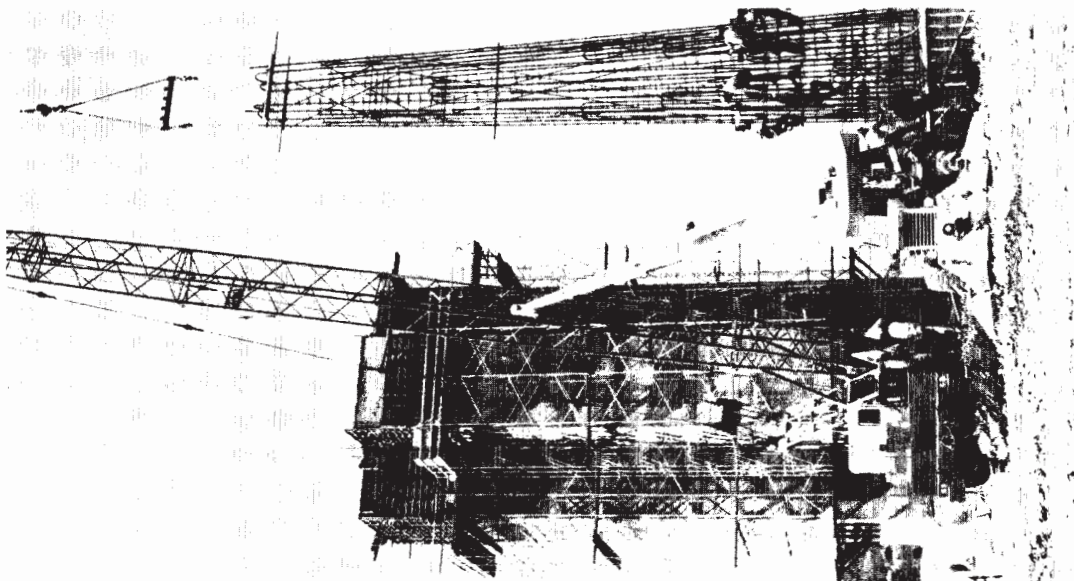
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FIGURE 2.5.6-5E



1. SCD Service Spillway Construction. View to West (2/10/76).



2. SCD Service Outlet Tower Bridge Pier Construction. View to Northwest (3/17/77).

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FIGURE 2.5.6-5F