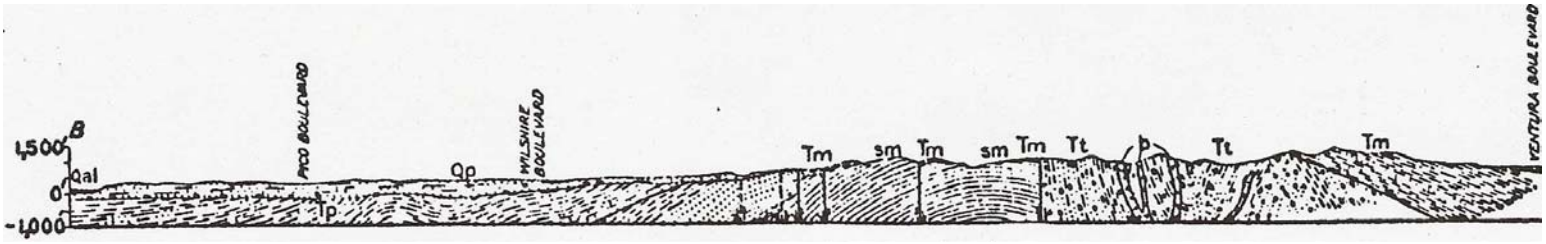


Donald B. Kowalewsky
ENVIRONMENTAL &.
ENGINEERING GEOLOGY

September 20, 2007
revised October 4, 2007
Job # 07630A1.001

Mark Wetton
6418 Trancas Canyon Road
Malibu, CA 90265

SUBJECT: Geologic memorandum concerning observations, testing, and analyses of multiple vacant lots at 929 and 939 Fernwood Pacific Drive, Topanga, California

Evaluation of the subject lots involved excavation of two flight auger borings to a depth of 44 feet. Both of those borings were downhole logged (Appendix A) by the undersigned engineering geologist. Samples of the sheared, clayey rock were obtained while downhole logging the second boring. Samples of the hard sandstone were obtained from cores excavated during drilling. Rock samples were delivered to soils testing laboratories for both quality and chemical testing. (Appendix B includes copies of test results).

The site topographic map (Figure 1) was utilized to draw a representative geologic cross-section of the slope profile (Figure 2) and underlying geologic conditions based on the logging of the two borings and regional geologic mapping. Based on shear testing of the rock (in order to determine rock strengths), analyses of the slope stability were performed (Appendix C). Those analyses demonstrate that the slope has a substandard safety factor. The amount of resisting force that would be required to bring the safety factor up to the minimum acceptable by the County of Los Angeles for issuance of building permits may not be achievable utilizing soldier piles due to the depth of the potential failure surfaces and the very high forces that would need to be resisted.

Prior to performing stability analyses, both of the exploratory borings and the seepage pit installed by a previous owner were tested for percolation rate. All three borings demonstrated a perc rate that would be acceptable for installation of an onsite wastewater disposal system. It should be noted that, the neighbor to the east (across the street and downslope) indicated that

27101 Old Chimney Road
Malibu, California 90265
☎ (310) 457-2456
Fax:(310) 457-4721

following the percolation test of the first boring, water began seeping from fractures in the bedrock exposed on that property. I did not verify the neighbor's observations nor determine that the neighbor was in error although I was told that the water may have been v=from a leaking pipe on that property.

The percolation rate in the second boring was so high that it could not be filled with a fire hose flowing at full capacity. This suggests that large fractures exist in the ground that will relatively rapidly transmit water. Because of the clay layers interbedded with the sandstone, saturation of those clay layers by sewage effluent may further reduce overall site stability.

CONCLUSIONS

In my opinion, the County of Los Angeles would not issue building permits considering the existing site conditions.

1. The site does not have the required safety factor.
2. The required safety factor may not be achievable through conventional means (soldier piles).
3. Onsite wastewater disposal may adversely affect offsite properties.

Because of the unfavorable site conditions, a full geotechnical report was not completed. This memorandum should serve as the sole data base generated by this office for the subject lots.

? Signature Not Verified

Donald B. Kowalewsky

Digitally signed by Donald B. Kowalewsky
DN: cn=Donald B. Kowalewsky, o=Engineering Geologist, c=US
Date: 2007.10.04 15:27:55 -07'00'

Donald B. Kowalewsky
Certified Engineering geologist 1025

APPENDIX A

BORING LOGS

DONALD B. KOWALEWSKY
ENVIRONMENTAL & ENGINEERING GEOLOGY
Job Description: 929 Fernwood Pacific Dr.
Client: Wetton **Job #** 07630A1.001 **Logged By:** DBK
Elevation: 100 **Drill Rig:** DJ Scheffler

Boring # 1
Sheet 1 of 2
Date: 7/16/07

LITHOLOGIC DESCRIPTION

DEPTH	LOG		ATTITUDES
0		0-3" sandy soil	
		3"- 44' Topanga Fm	
		3" - Hard sandstone pebbles & cobbles	
5			
10			
15			
20		20'7" High Side	
		21'4" Low Side - mudstone top is 1" thick soft clay	N30E 19SE
		no slicks or striations visible along contact	
		very hard below top 2"	
		23'9" bedding	N45E 20SE
25		@25' gradational from fine sandstone to courser sandstone	
		@26' Near vertical fracture tight	N75E 88NW
		29' siltstone grades to ss at 30'	
30		31' fractured fairly tight but breaking out along fracture	NS near vertical
35		@35' siltstone soft layer on top 7" thick pod in ss pinches out	N5E
		@35' 7" sandstone	
		TD 44'	
		No seepage or groundwater	
		No caving	
40		Hole left open and covered for perc test	

DONALD B. KOWALEWSKY
ENVIRONMENTAL & ENGINEERING GEOLOGY
Job Description: 939 Fernwood Pacific Dr
Client: Wetton **Job #** 07630A1.001 **Logged By:** DBK
Elevation: 110 **Drill Rig:** DJ Scheffler

Boring # 2

Sheet 1 of 2

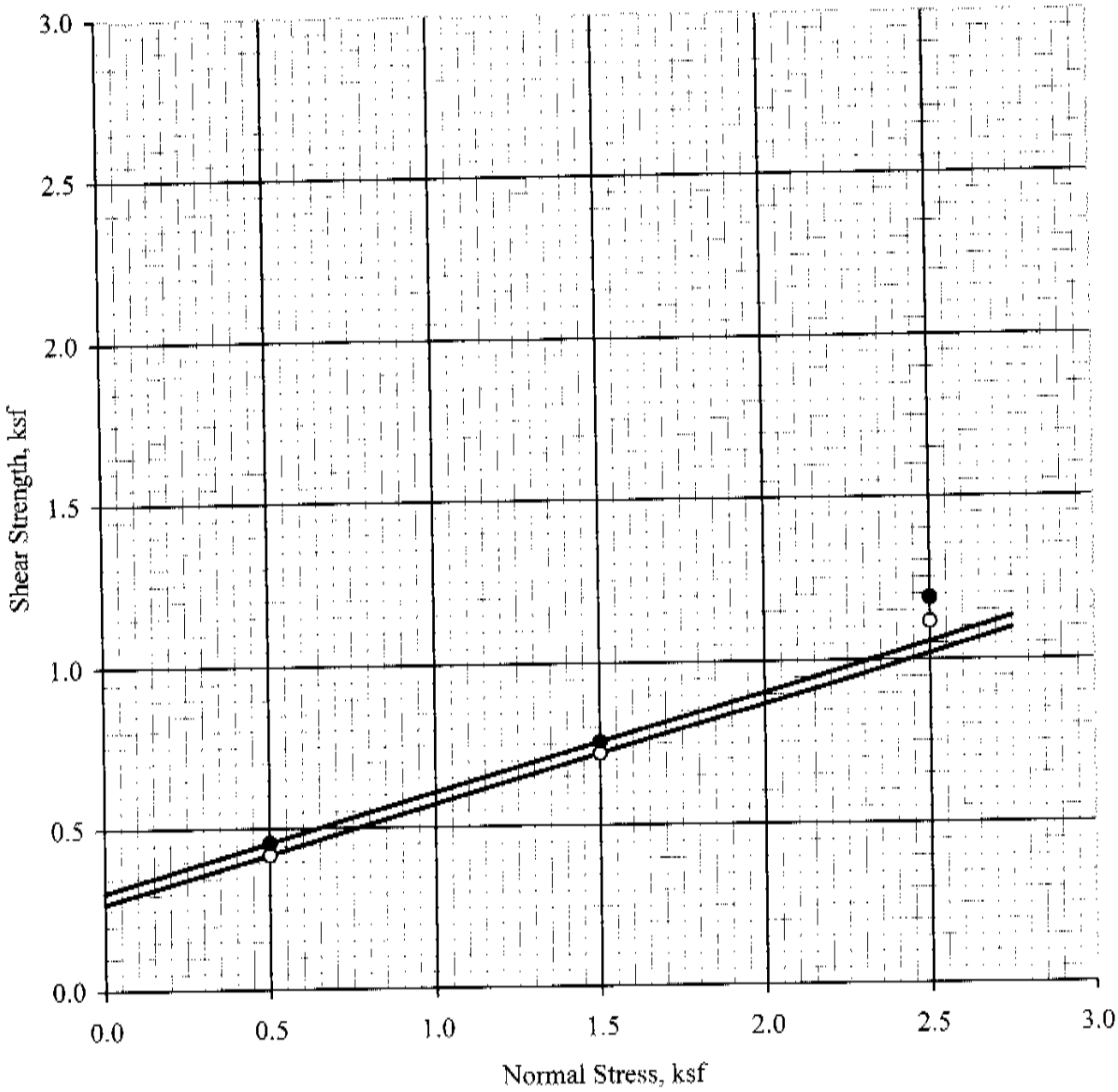
Date: 7/23/07

LITHOLOGIC DESCRIPTION

DEPTH	LOG		ATTITUDES
0		No soil	
		@2½ fracture zone parallel to bedding roots rodent burrow	
		Hard sandstone	
		@2½' Joint leaves hole at 6½' not quite vertical	N62E 90°
5			
10			
15			
		18½' siltstone; clay along upper 1-2"	N10W 18NE
		dark gray silty sandstone micaceous	
20		grades into sandstone @20½'	
		@23' grades into coarse ss	
25			
		@27' fractured laminated fine sandstone	N28E 28SE
		28'10" back into hard sandstone	
30			
		34½'	
35			
		TD 44'	
40			

APPENDIX B

LABORATORY TEST RESULTS



● Peak - At Saturation Moisture Content C = 300 psf ϕ = 16.5 °

○ Residual - At Saturation Moisture Content C = 270 psf ϕ = 16.5 °

Field Dry Density = pcf
Field Moisture Content = %
Saturation Moisture Content = %

Boring : Onsite
Depth : -- --
Description : Clayey seam
(Sample 1)

C. Y. GEOTECH, INC.

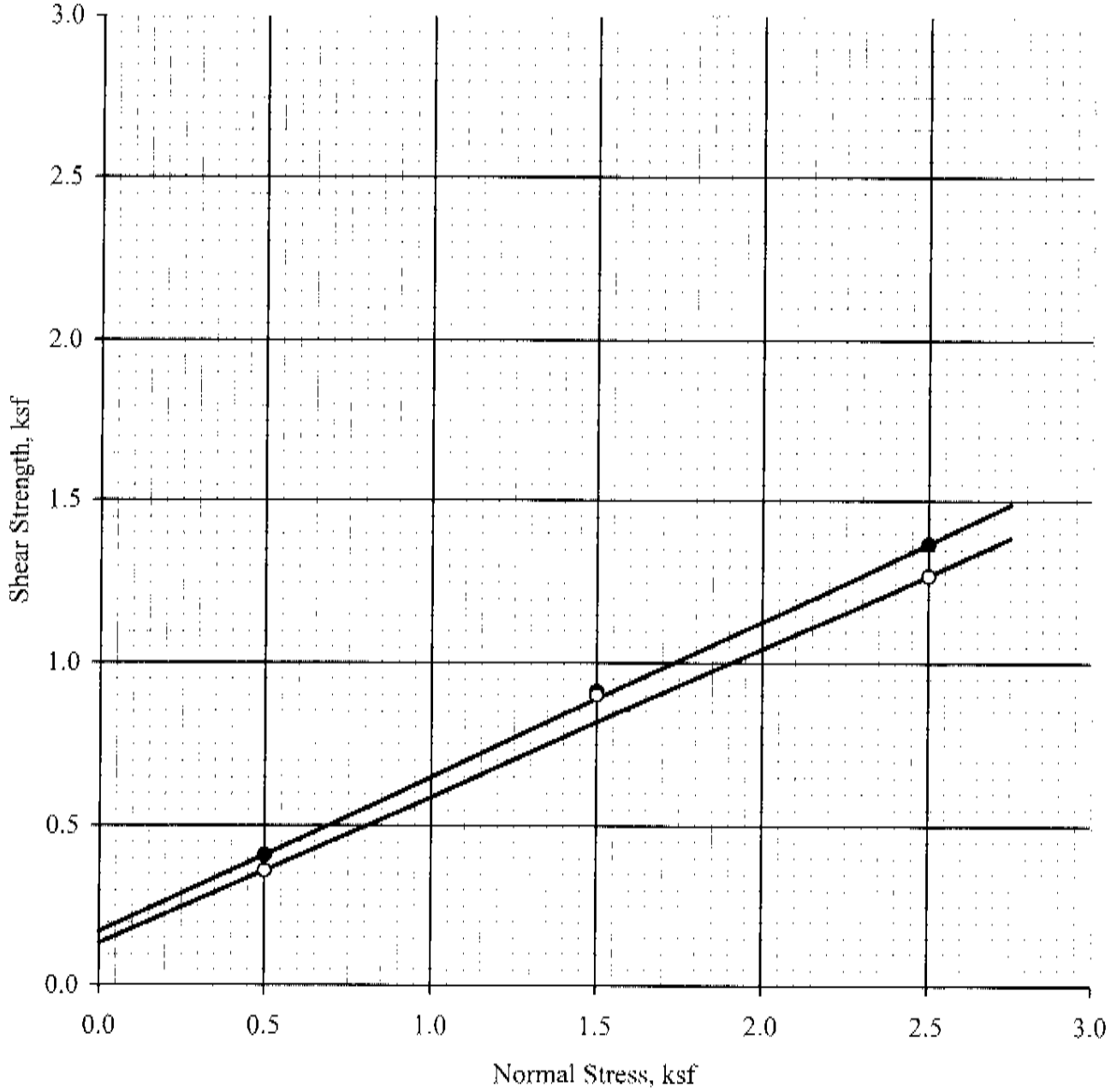
Geotechnical Engineering
and Engineering Geology

DBK/Wetten

Date : 08-2007 | P.N. No.: CYG-07-4984

Shear Diagram

Plate DS - 1



● Peak - At Saturation Moisture Content C = 160 psf ϕ = 25.5 °

○ Residual - At Saturation Moisture Content C = 130 psf ϕ = 24.5 °

Field Dry Density = pcf
Field Moisture Content = %
Saturation Moisture Content = %

Boring : Onsite
Depth : -- --
Description : Clayey seam
(Sample 2)

C. Y. GEOTECH, INC.

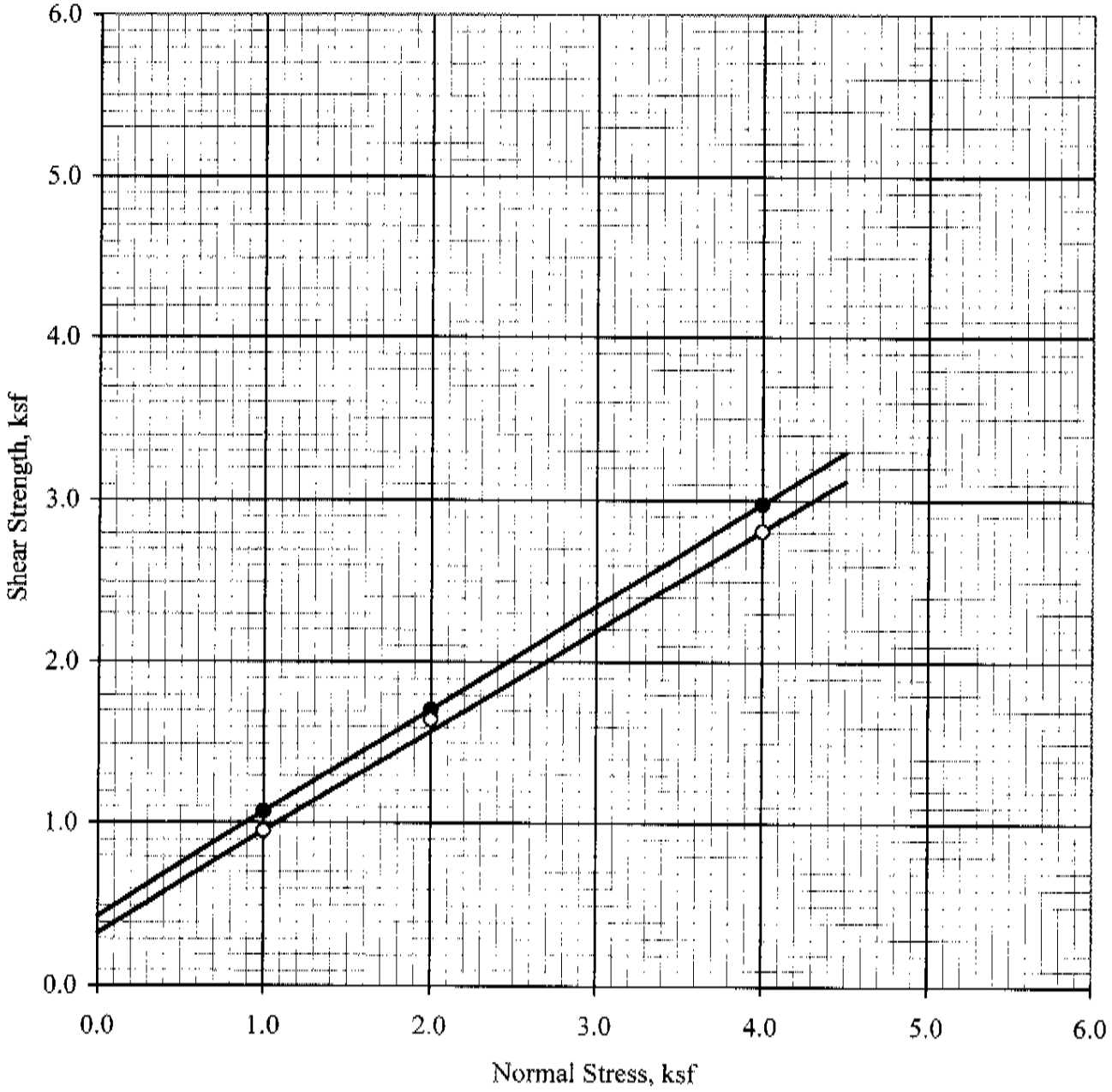
Geotechnical Engineering
and Engineering Geology

DBK/Wetten

Date : 08-2007 | P.N. No.: CYG-07-4984

Shear Diagram

Plate DS - 2



● Peak - At Saturation Moisture Content C = 430 psf ϕ = 32 °

○ Ultimate - At Saturation Moisture Content C = 320 psf ϕ = 31.5 °

Field Dry Density = pcf
Field Moisture Content = %
Saturation Moisture Content = %

Sample: Bulk
Depth : -- --
Description :

C. Y. GEOTECH, INC.

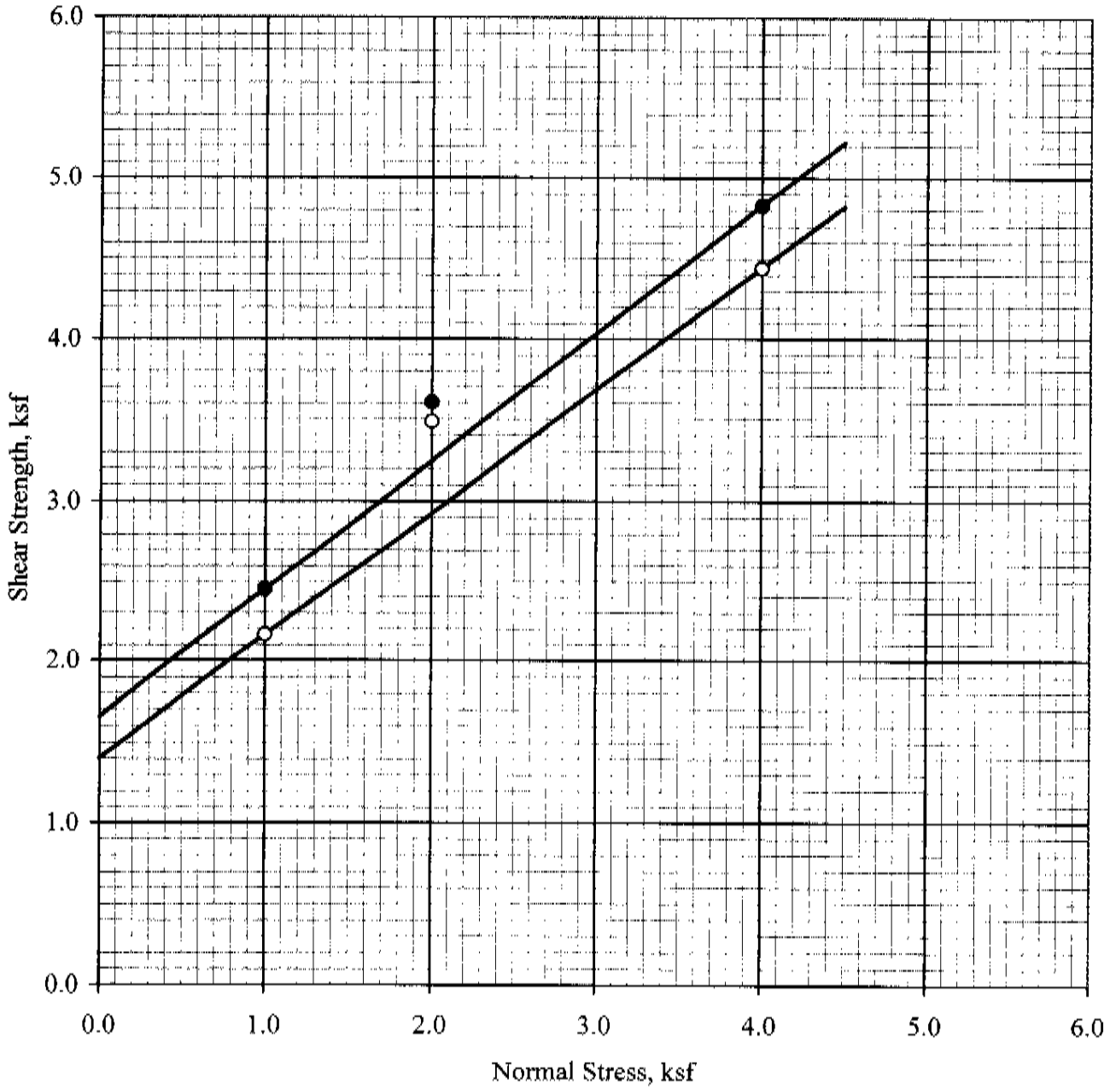
Geotechnical Engineering
and Engineering Geology

DBK/Wetten

Date : 07-2007 | P.N. No.: CYG-07-4984

Shear Diagram

Plate DS - 1



● Peak - At Saturation Moisture Content C = 1650 psf ϕ = 38 °

○ Ultimate - At Saturation Moisture Content C = 1400 psf ϕ = 37 °

Field Dry Density = 154 pcf
Field Moisture Content = 1 %
Saturation Moisture Content = 3 %

Sample: Bulk
Depth : -- --
Description : Light gray sandstone

C. Y. GEOTECH, INC.

Geotechnical Engineering
and Engineering Geology

DBK/Wetten

Date : 07-2007 | P.N. No.: CYG-07-4984

Shear Diagram

Plate DS - 2

GEOSYSTEMS, INC.

ENVIRONMENTAL
ENGINEERING-GEOLOGY
GEOTECHNICAL ENGINEERING

August 8, 2007
GS07-C0802

C. Y. Geotech, Inc.,
21430 Strathern Street, Unit O
Canoga Park, CA 91304

Attn: Jane

SUBJECT: Laboratory Testing Results: Soil Corrosivity Test for Fernwood Pacific, Topanga, California.

At your request, this letter provides the results of a Soil Corrosivity Test performed for the soil sample submitted to our laboratory for the subject site located at Fernwood Pacific, Topanga, California.

Chemical tests for pH, chloride content, sulfate content and minimum resistivity were performed per the California Test Method (CTM) on a sample submitted to this office. Minimum resistivity testing was conducted on a saturated sample. The laboratory test results based on CTM are presented below:

Sample Location	pH CTM 532	Chloride Content CTM 422 (ppm)	Sulfate Content CTM 417 (ppm)	Minimum Resistivity CTM 532 (ohm-cm)
On-Site Soil	8.6	80.0	1.5	89112

1545 VICTORY BLVD. 2ND FLOOR, GLENDALE CALIFORNIA 91201-9240 PH. 818 - 500 - 9533 FAX 818 - 500 - 0134

Services performed by this facility for the on-site soil were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other warranties are expressed or implied. The opportunity to provide professional services is greatly appreciated.

Please feel free to call if you have any questions.

GEOSYSTEMS, INC.

Sean Chi-Hsin Lin, Ph.D., Senior Engineer
RCE 67109, Exp. 9-30-08

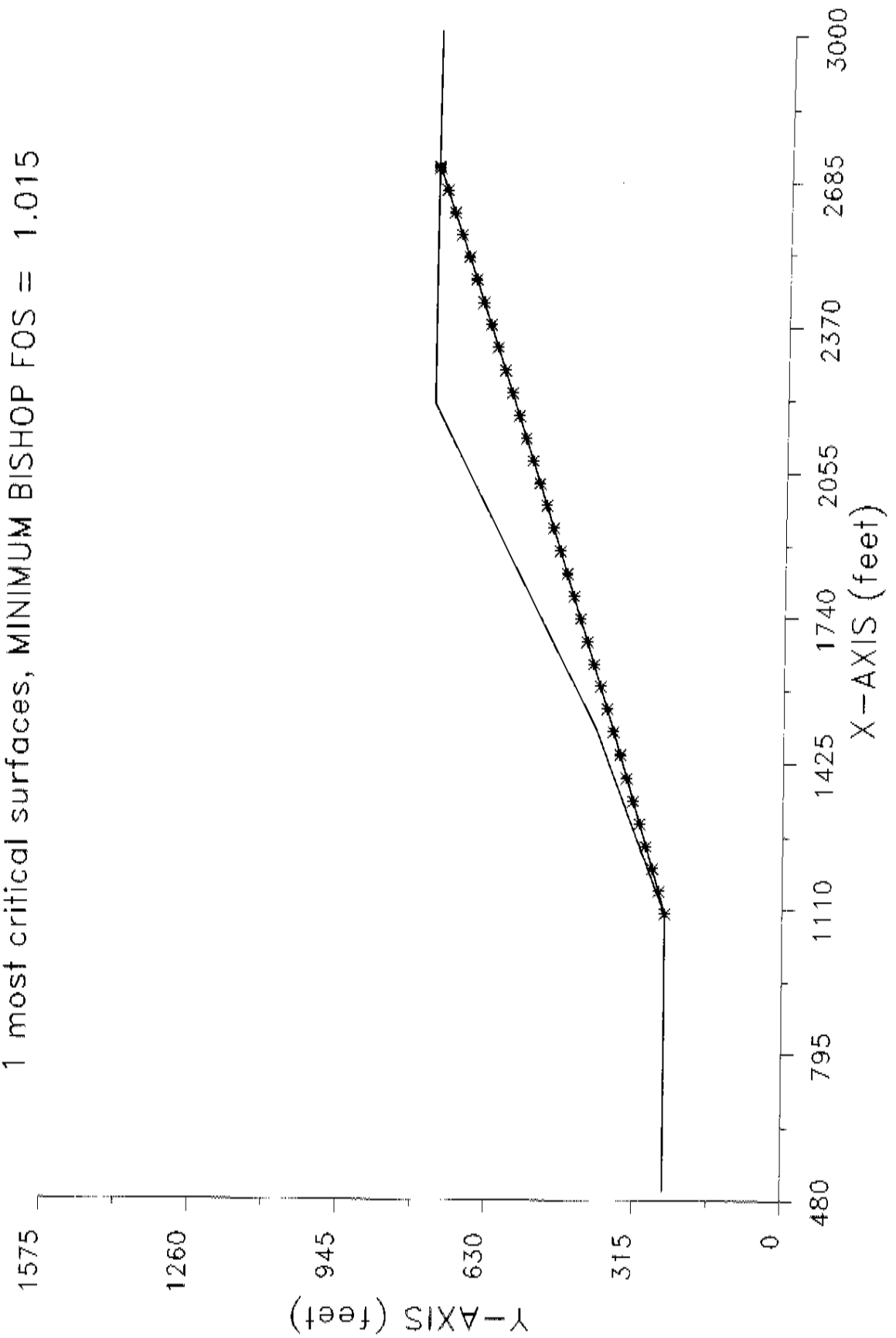
CC: (5) to Client

SCL/SST/nr

\\Geosrv\company\GS07\GS07-C0802\As-Built Reports\fernwood_c.cyg.wpd

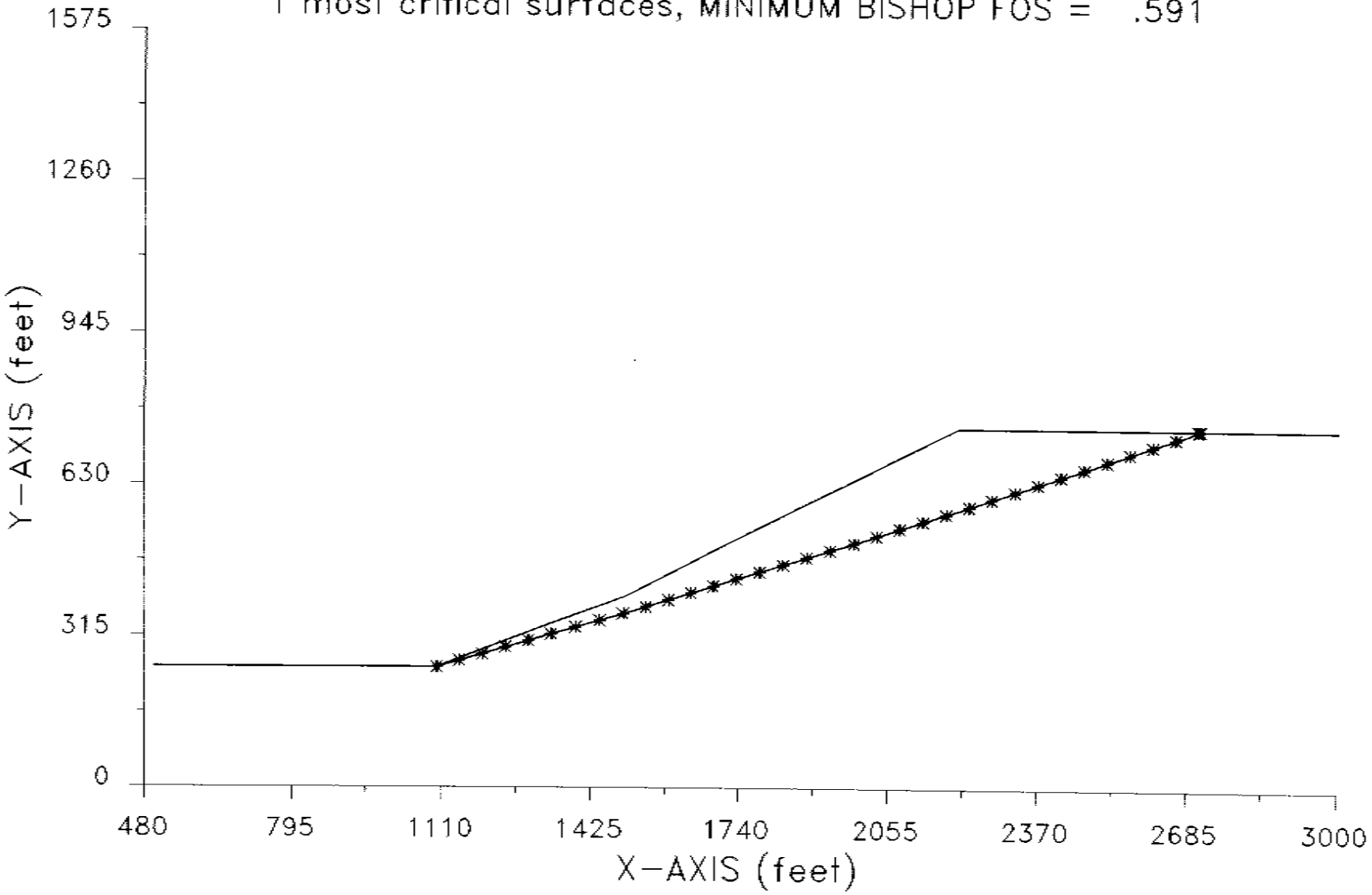
APPENDIX C

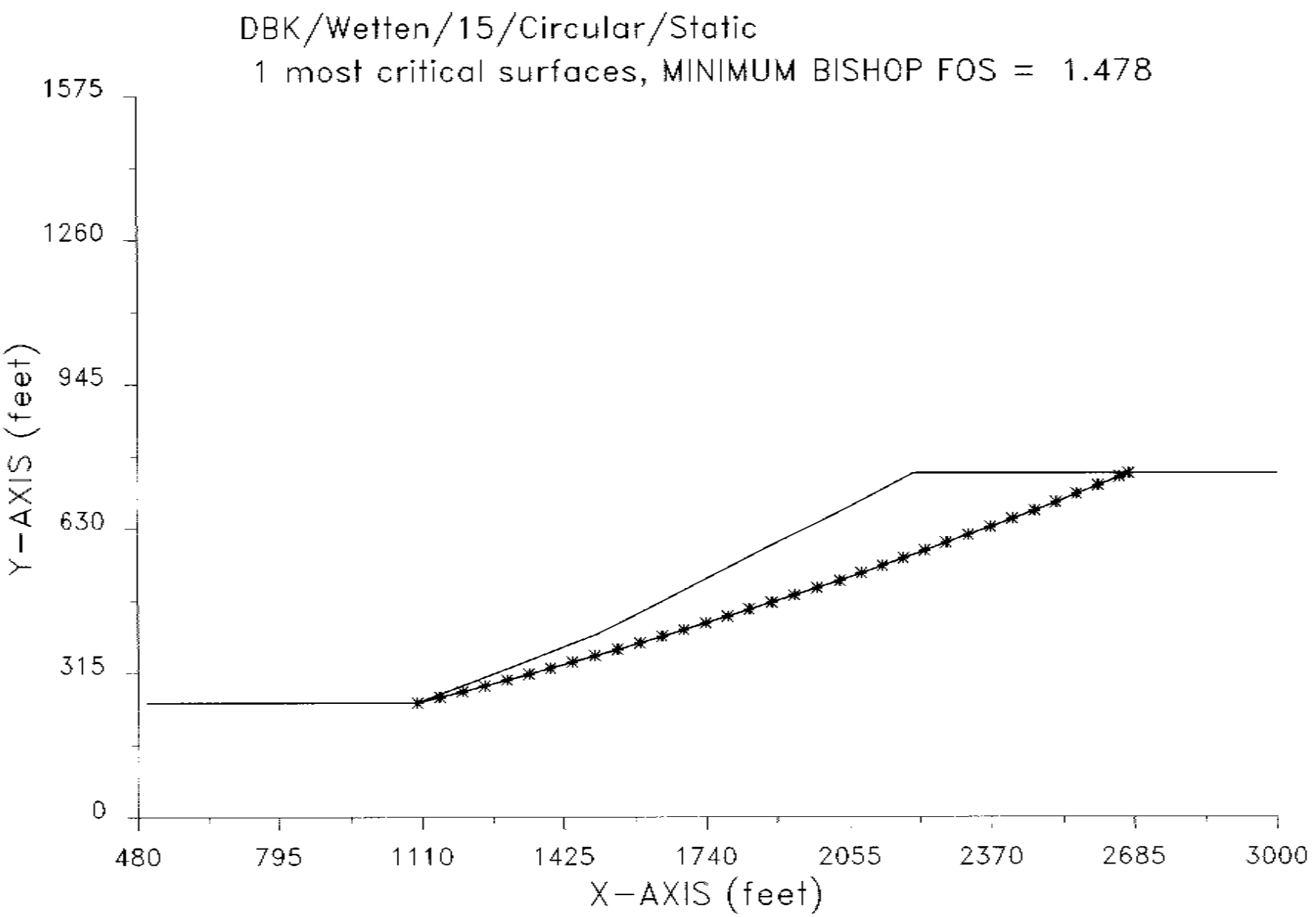
RESULTS OF STABILITY ANALYSES



CY4984A1 8-12-** 11:18

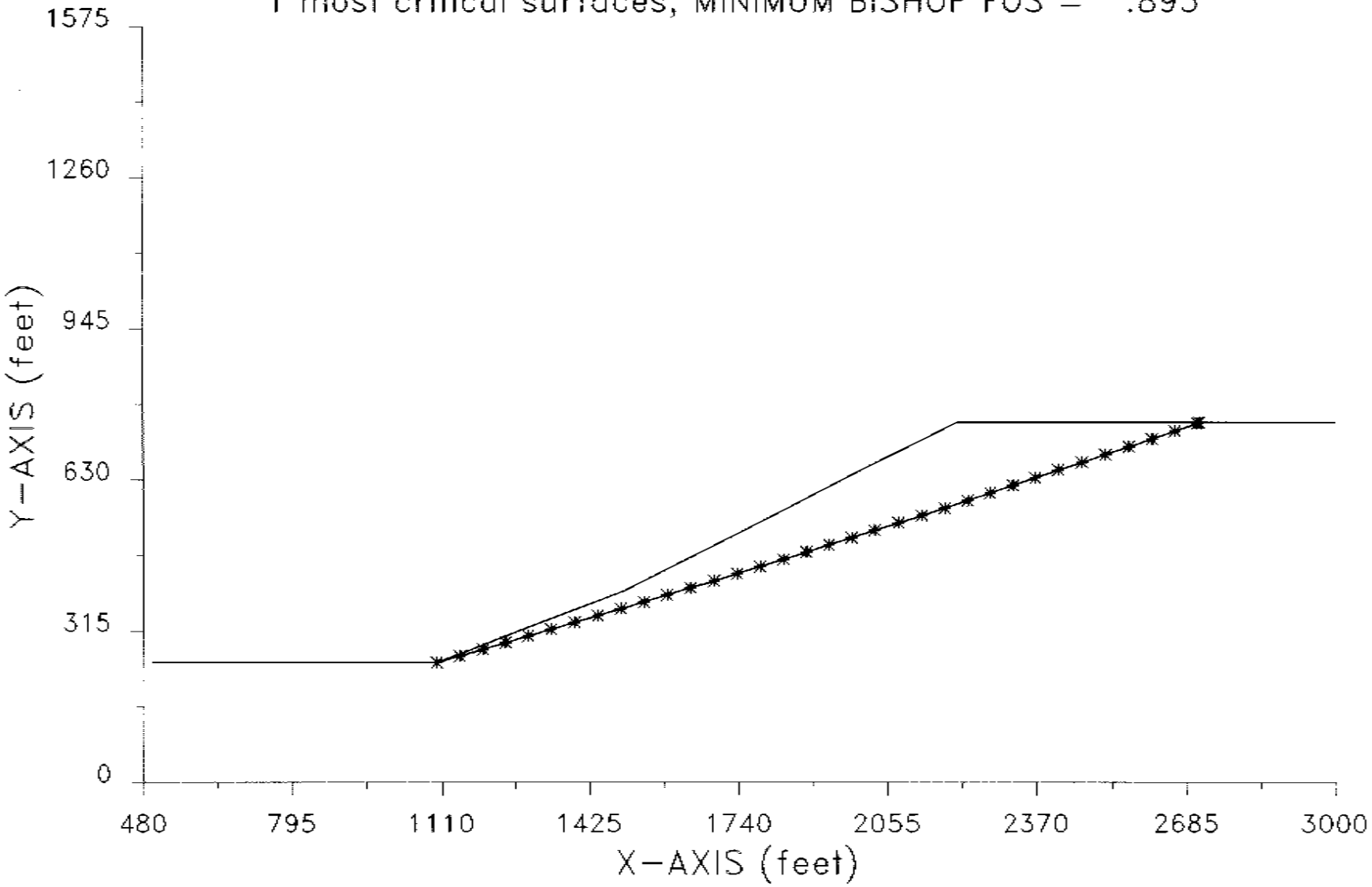
DBK/Wetten/15/Circular/Seismic
1 most critical surfaces, MINIMUM BISHOP FOS = .591



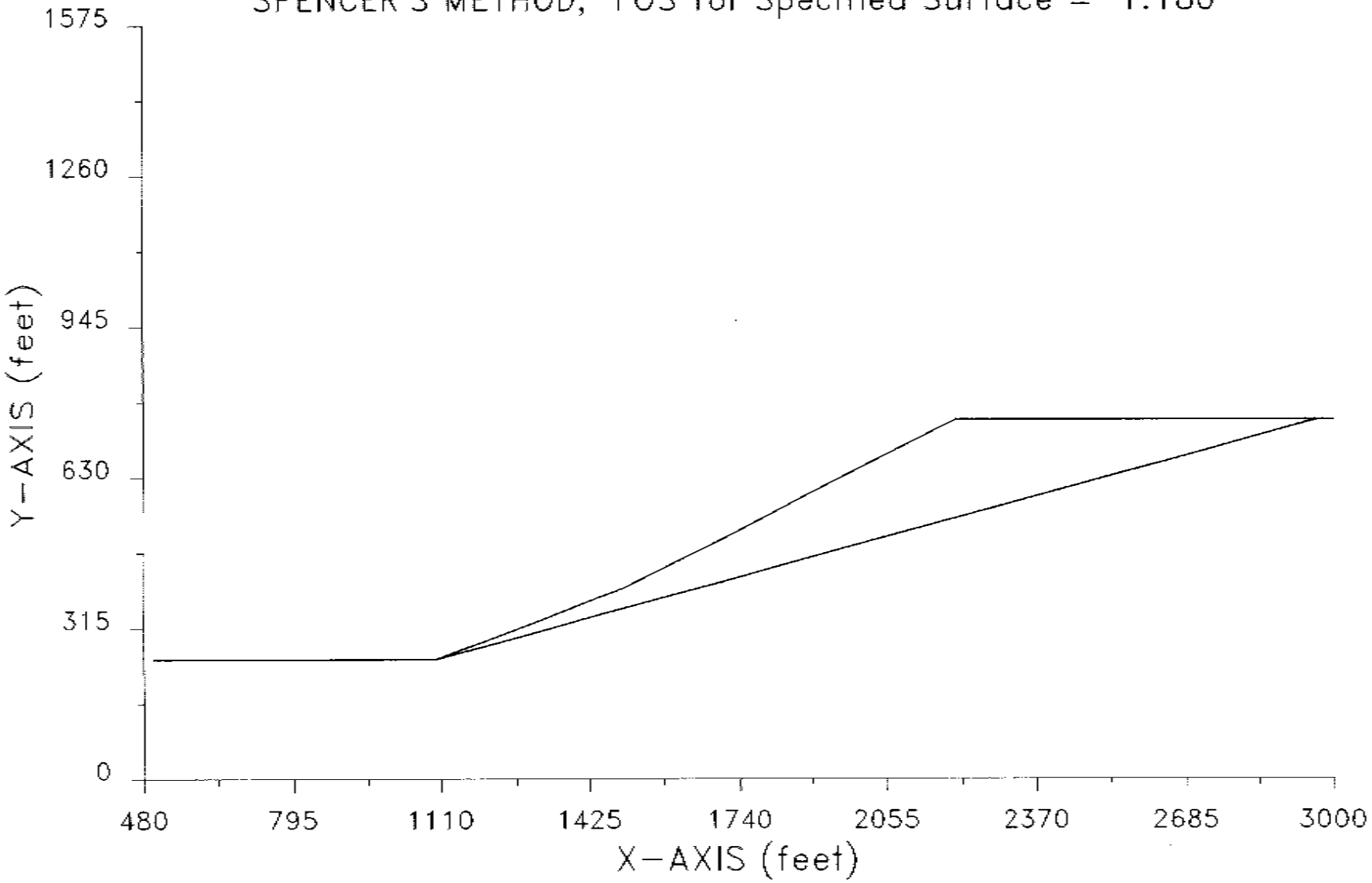

DBK/Wetten/15/Circular/Static
1 most critical surfaces, MINIMUM BISHOP FOS = 1.478
1575
1260
945
630
315
0
Y-AXIS (feet)
480
795
1110
1425
1740
2055
2370
2685
3000
X-AXIS (feet)

DBK/Wetten/15/Circular/Seismic/M2

1 most critical surfaces, MINIMUM BISHOP FOS = .895

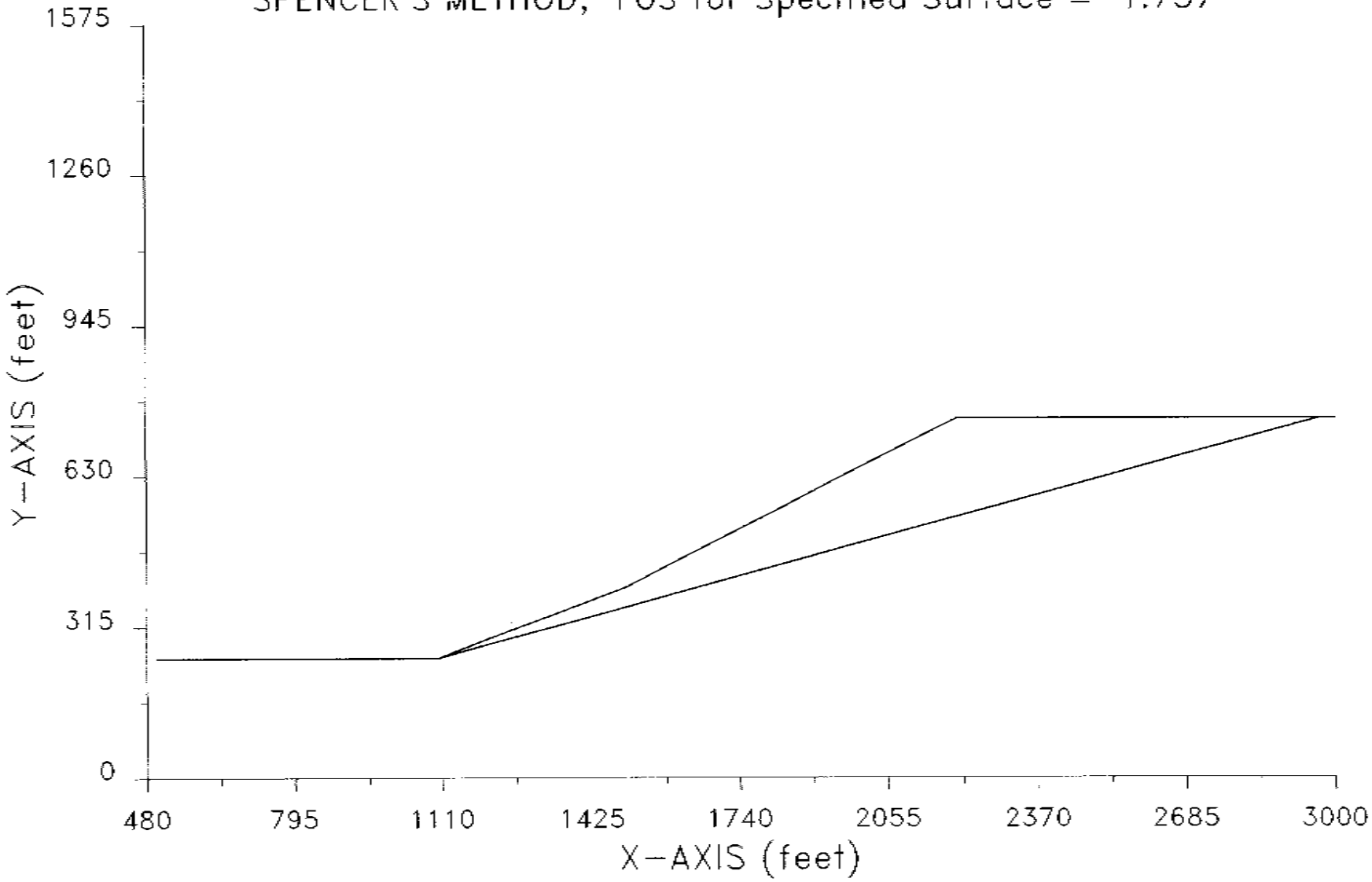


DBK/Wetten/15/Planar/Static
SPENCER'S METHOD, FOS for Specified Surface = 1.180



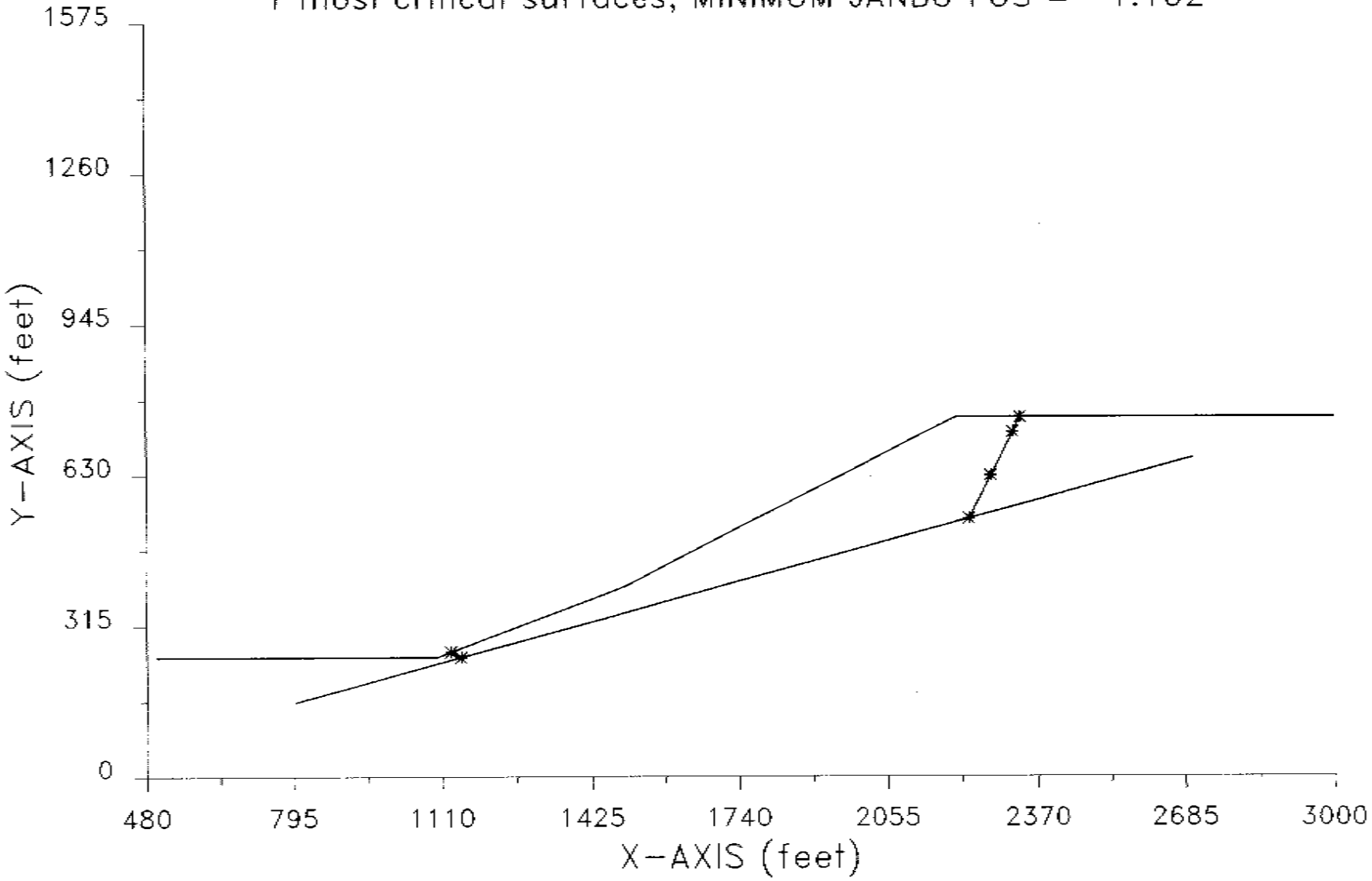
DBK/Wetten/15/Planar/Static/M2

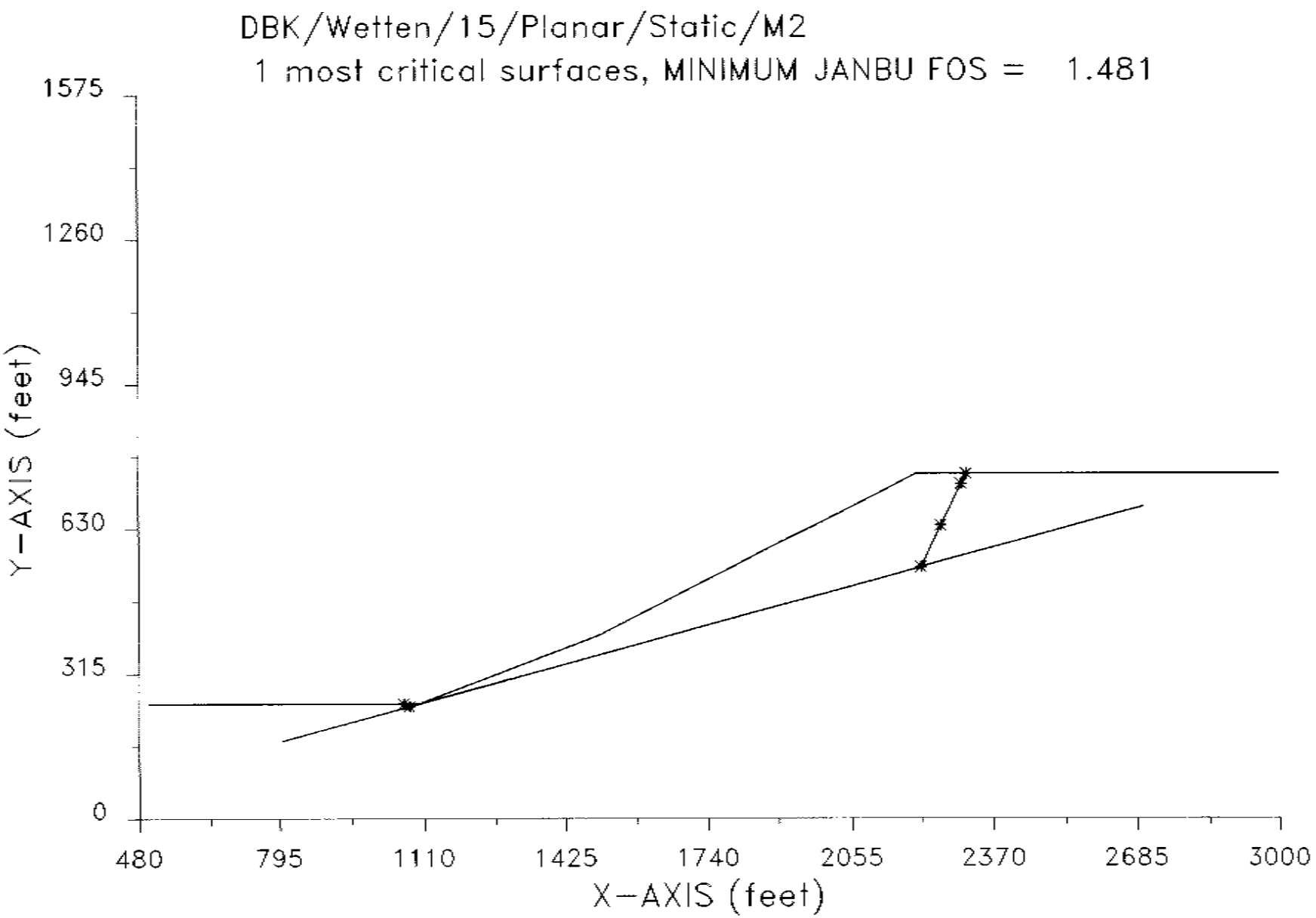
SPENCER'S METHOD, FOS for Specified Surface = 1.737



DBK/Wetten/15/Planar/Static

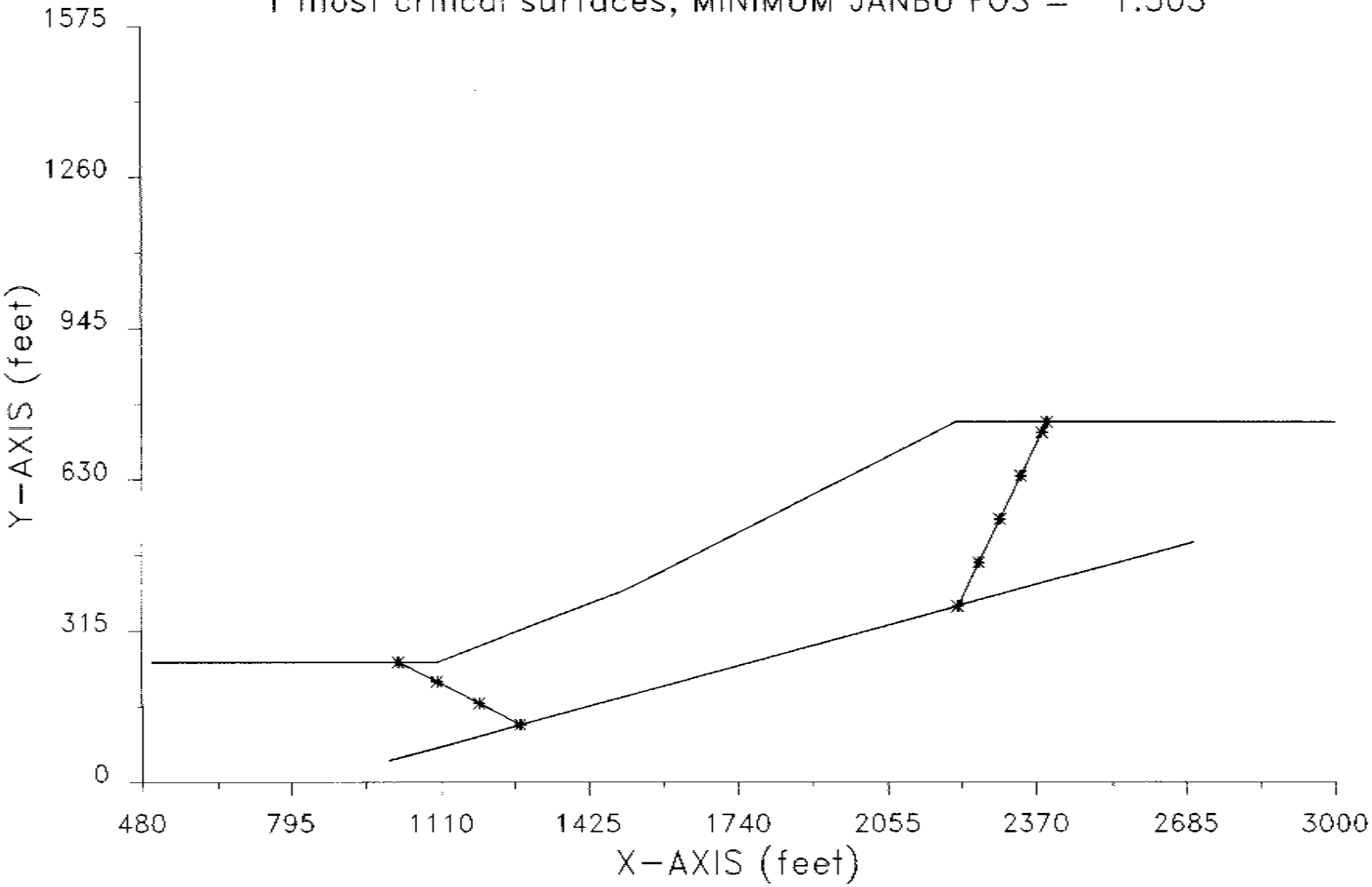
1 most critical surfaces, MINIMUM JANBU FOS = 1.102

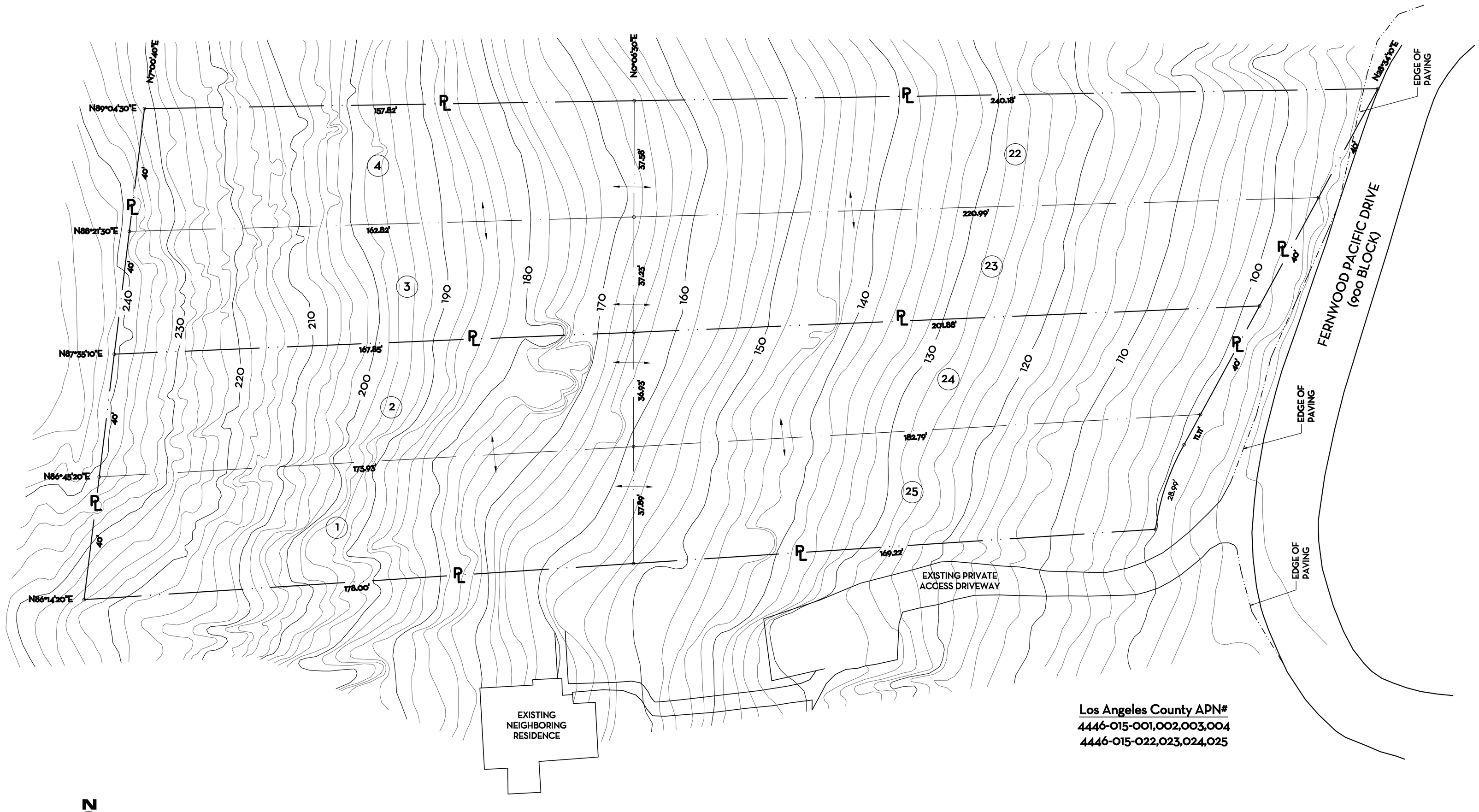



DBK/Wetten/15/Planar/Static/M2
1 most critical surfaces, MINIMUM JANBU FOS = 1.481
1575
1260
945
630
315
0
Y-AXIS (feet)
480
795
1110
1425
1740
2055
2370
2685
3000
X-AXIS (feet)

DBK/Wetten/15/Planar/Static

1 most critical surfaces, MINIMUM JANBU FOS = 1.503





N

SITE SURVEY

SCALE: 1" = 16'-0"

1

929 & 939 FERNWOOD-PACIFIC DRIVE

TOPANGA CANYON, CA 90290

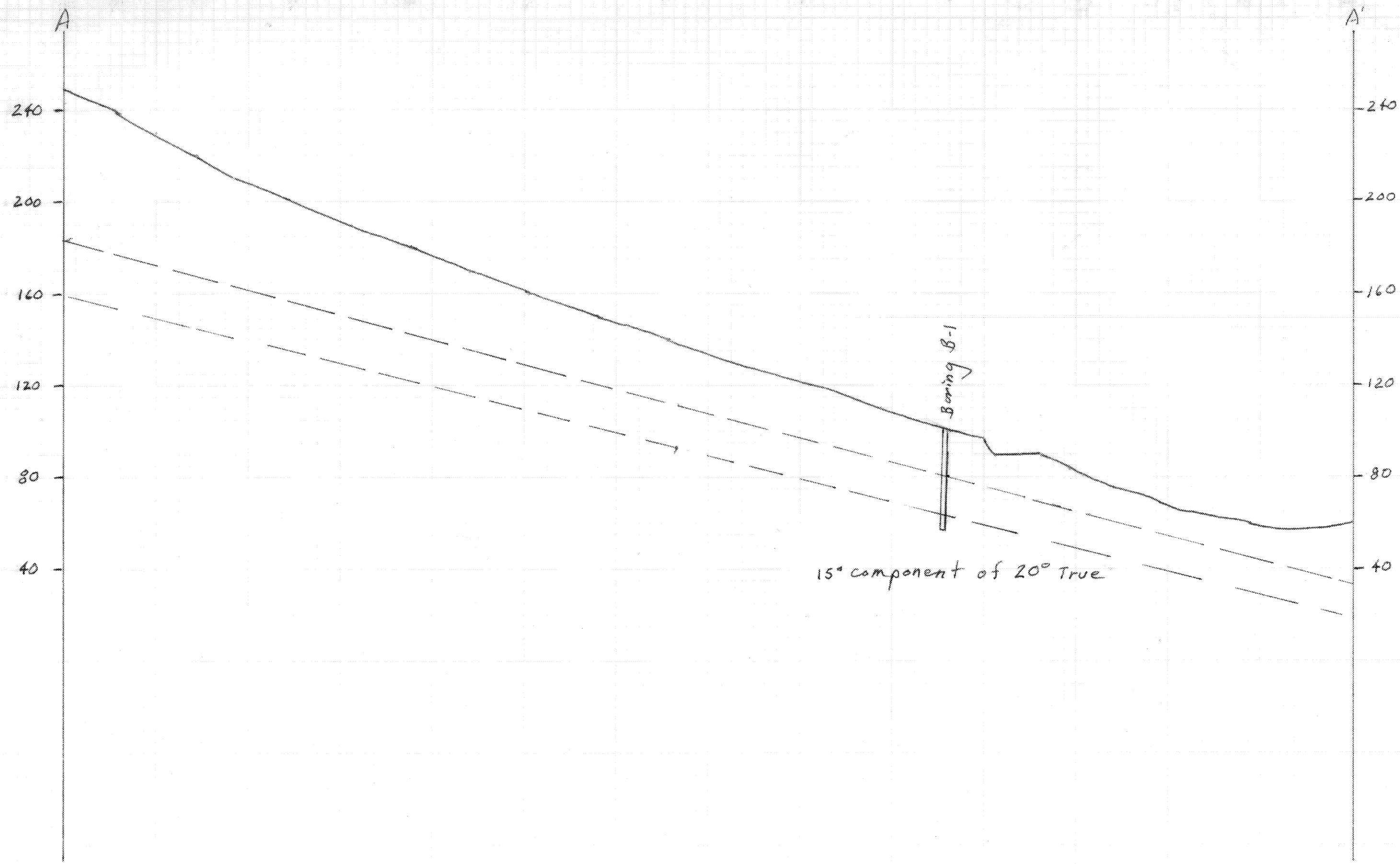


Figure 2
Geologic Cross-section