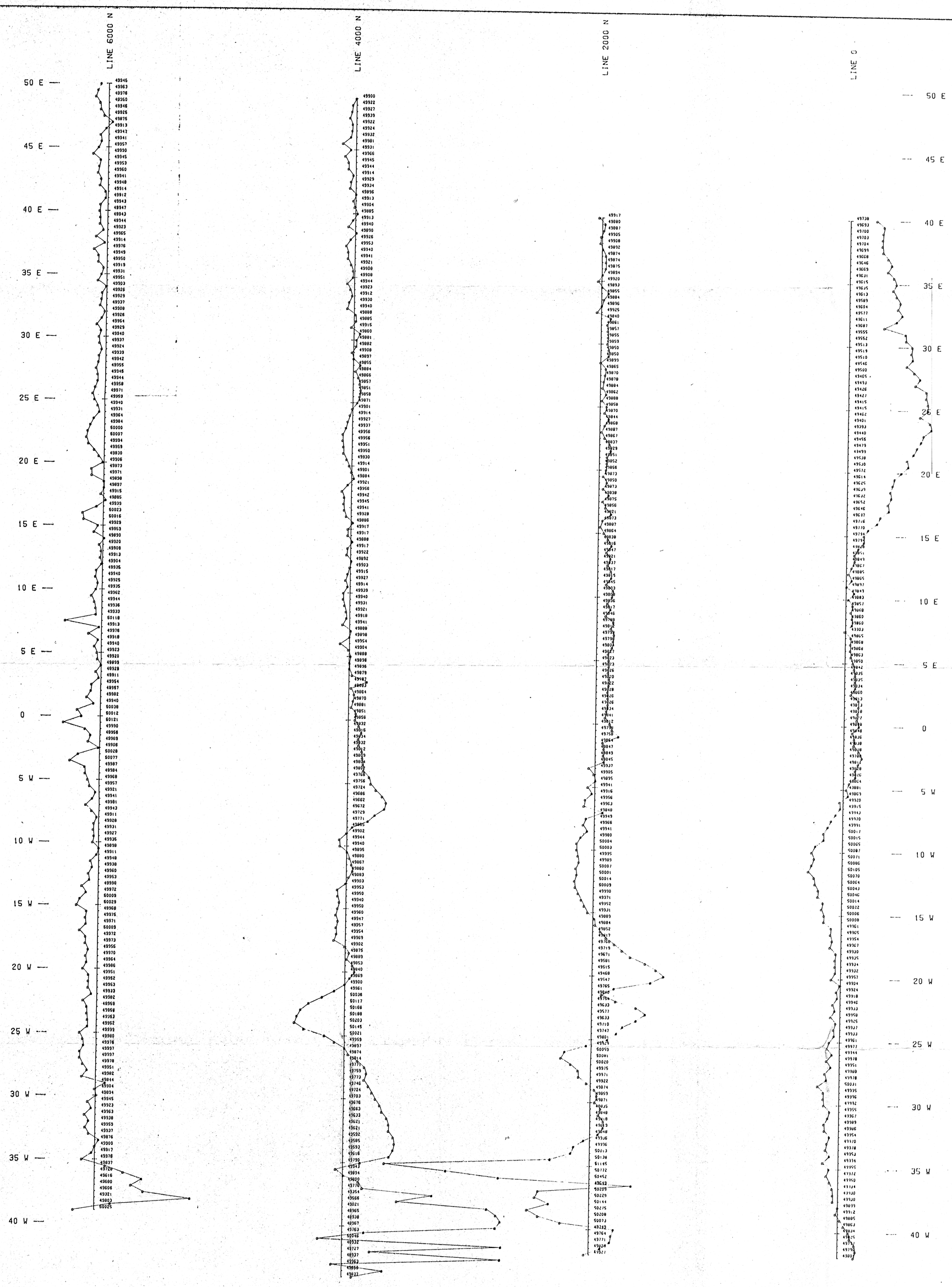
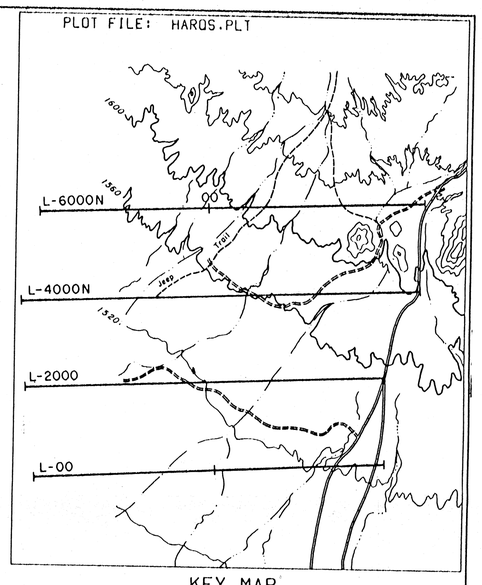




KEY MAP

HARQUAHALA SOUTH
MAG. SURVEY GRID
1 inch equals 1000 feet

ASTRO

LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
PROFILE SCALE? : 1"= 300 GAMMAS
BASE VALUE ON LINE : 900
▲ MAGNETIC BASE STATION

0 400 800 1200 1600
FEET

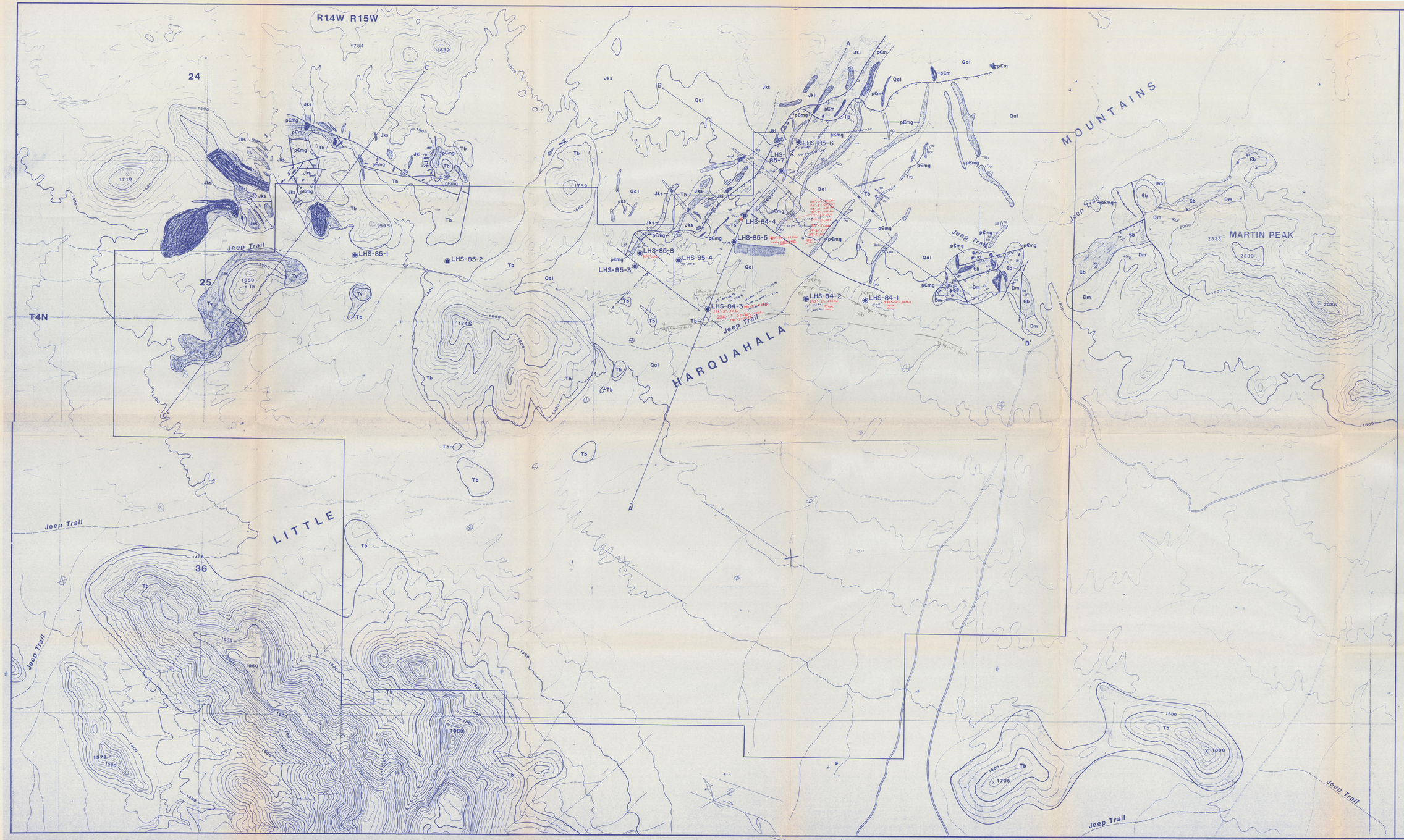
TEXASGULF MINERALS AND METALS, INC.

MAGNETIC SURVEY

HARQUAHALA SOUTH

WORK BY	DATE/TIME
	29-JUN-84 / 12:45:59

Plate 3



LEGEND

Quaternary	Qal	Alluvium
Tertiary	Tv	Rhyolite Flows and Domes
	Tb	Basalt Flows and Dikes
Cretaceous Jurassic	Jks	Undifferentiated Sedimentary Rocks
	Jki	Porphyritic Dacite Intrusive Rocks
Devonian	Dm	Martin Limestone
Cambrian	Cb	Bolsa Quartzite
Pre-Cambrian	pEmg	Megacrystic Granite (usually altered)
	pEm	Undifferentiated Metamorphic Rocks

- Quartz Veins
- Dip and Strike of Beds
- Vertical Beds
- Overturned Beds
- Dip and Strike of Joints
- Vertical Joints
- Fault
- Projected Fault
- Thrust Fault
- Projected Thrust Fault
- Outcrop
- Drill Hole
- Shear Zone with Dip

N

0 500 1000 1500 2000
Scale Feet

Geology: Outlying areas after Richard, (1982), Project and adjacent areas by C. Lane

Texasgulf Minerals and Metals, Inc.
A Division of Texasgulf Inc.

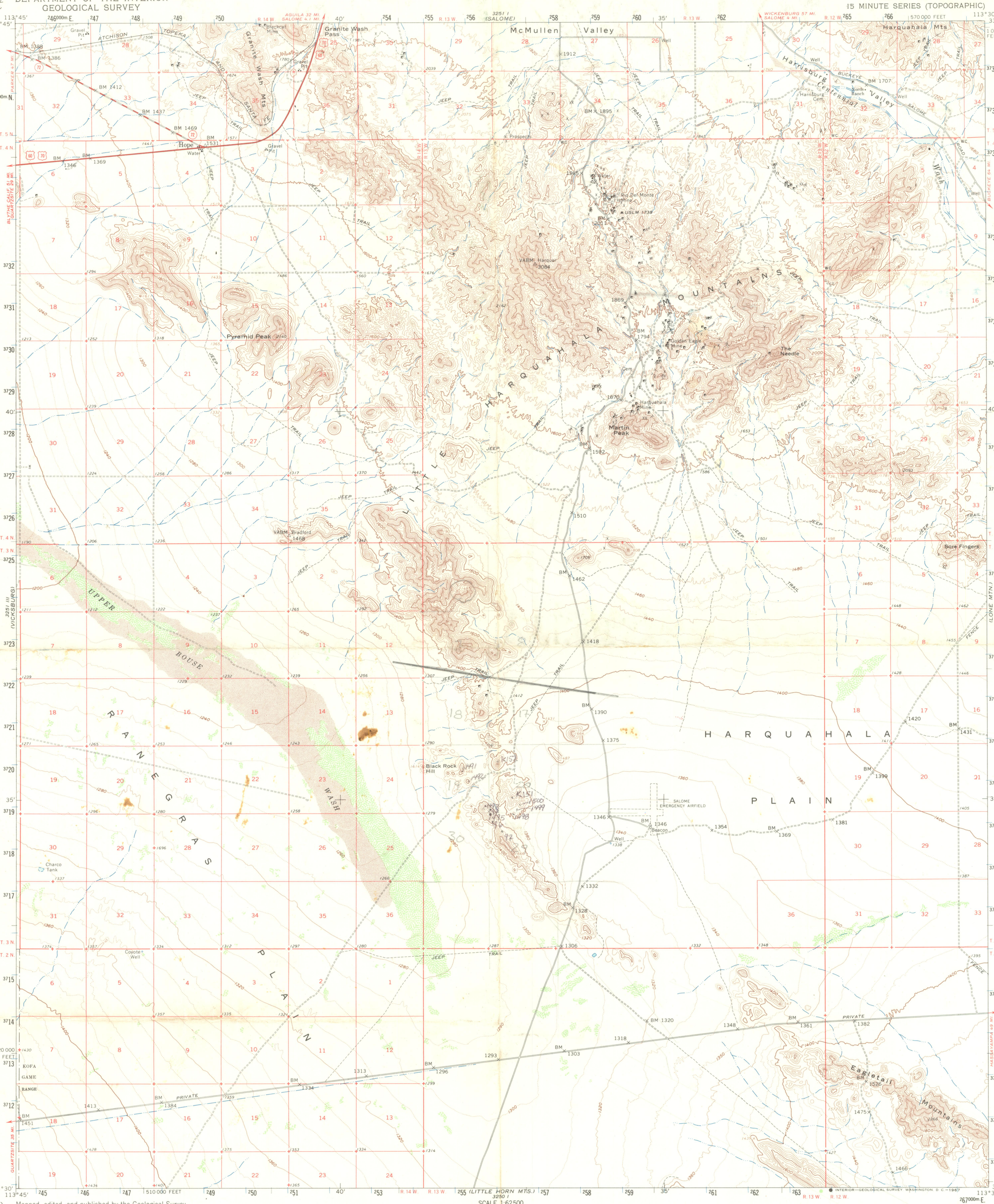
LITTLE HARQUAHALA SOUTH PROJECT
GEOLOGIC MAP

PLATE I

Scale: 1 inch equals 500 feet | Data by: C. LANE
Drafted by: M. Aaplund | Date: Sept. 18, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HOPE QUADRANGLE
ARIZONA–YUMA CO.
15 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1951 and 1960 and planetable surveys 1961

Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, west zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Where omitted, land lines have not been established

UTM GRID AND 1961 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:62 500

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route — State Route

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225 OR WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

HOPE, ARIZ.
N3330—W11330/15

1961

AMS 3251 II—SERIES V798

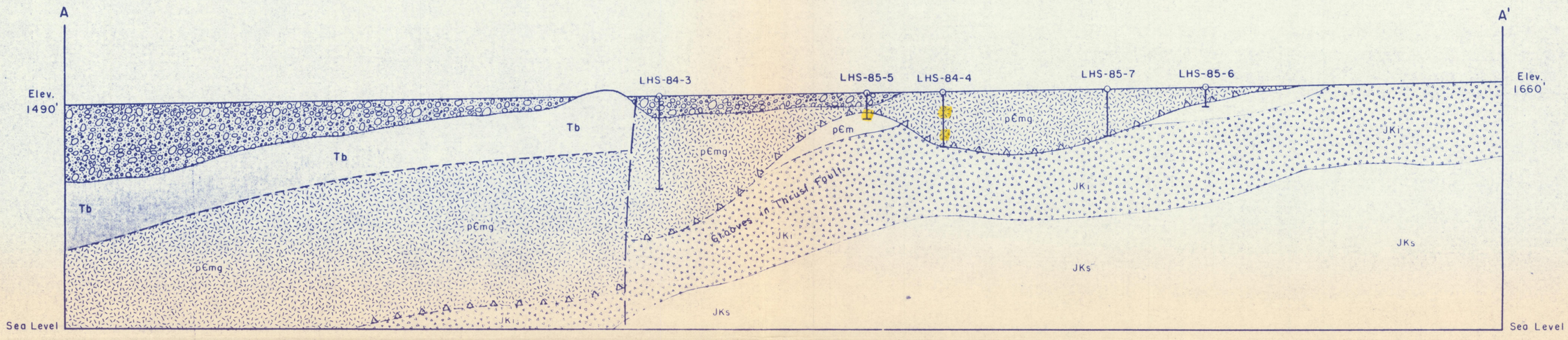
LITTLE HARQUAHALA MOUNTAINS
LINE "A"
LINE "B"
LINE "C"
LINE "D"
00+00
20+00
40+00
60+00
80+00
100+00
Jeep Trail
Gravity Break
Fault D
4-86-1
4-85-1
4-85A
3-16
1448T
1435T
1485T
1483T
1522T
1540
1520
1556
1535
1510
1592
1631
1560
1500
1480
CJN
EF-20
Texasgulf Minerals and Metals Inc
A Division of Texasgulf Inc
LITTLE HARQUAHALA
SOUTH PROJECT
GRAVITY SURVEY
Scale
Date by
Drafted by
Date
Rev

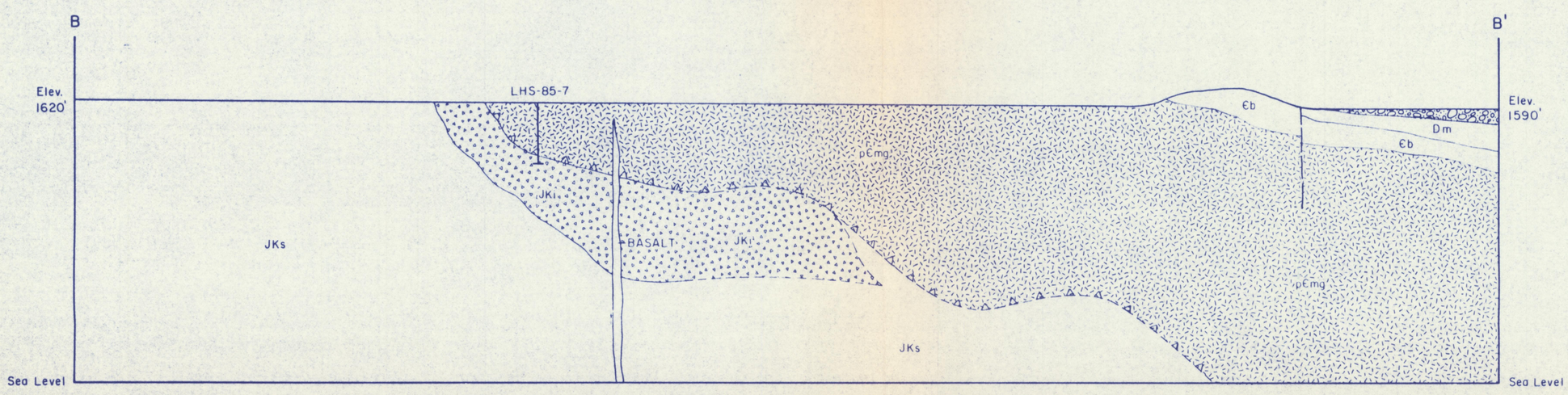
GEOLOGIC MAP OF THE LITTLE HARQUAHALA MOUNTAINS, WEST-CENTRAL ARIZONA

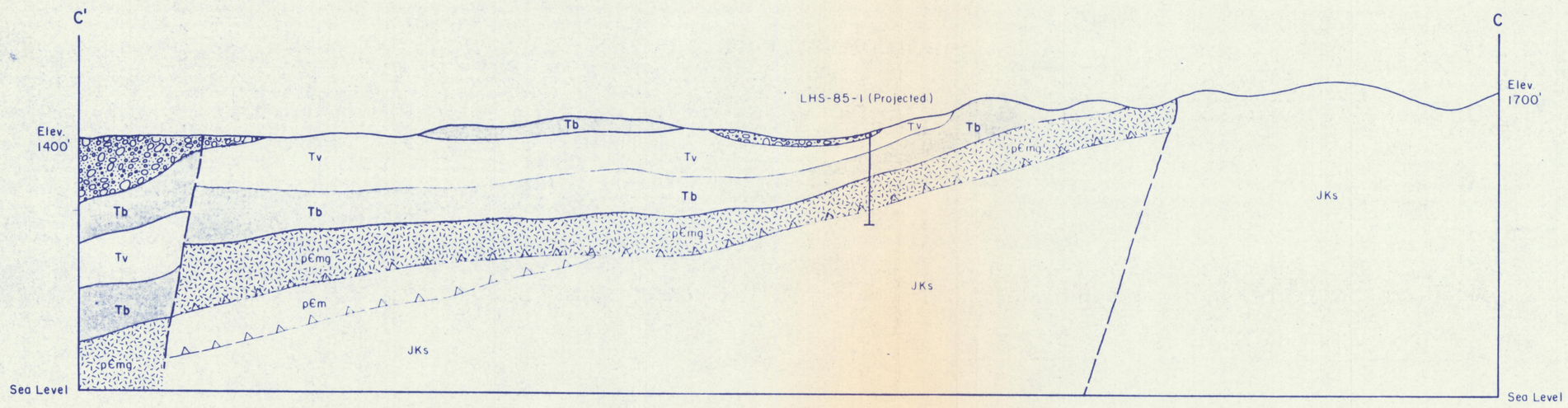
by Jon E. Spencer, Stephen M. Richard, Stephen J. Reynolds

SHEET 1 OF 3

ARIZONA BUREAU OF GEOLOGY
AND MINERAL TECHNOLOGY
OPEN-FILE REPORT 85-9







Quaternary
- Qal — Alluvium

Tertiary
- Tv — Rhyolite Flows and Domes
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Cretaceous Jurassic
- JKs — Undifferentiated Sedimentary Rocks
- JKi — Porphyritic Dacite Intrusive Rocks

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- Dm — Martin Limestone

Cambrian
- Єb — Balsa Quartzite

Pre-Cambrian
- pЄmg — Megacrystic Granite (usually altered)
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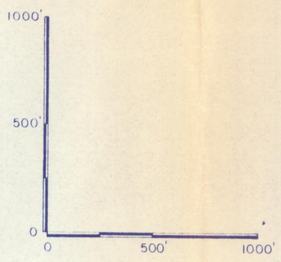

Plate 2

Texasgulf
A Division of Texasgulf Inc.

LITTLE HARQUAHALA SOUTH PROJECT

CROSS SECTIONS

Scale: 1 inch equals 500 feet (vert. and horiz.)		Data by: C. LANE
Drafted by: M.B.	Date: July 22, 1985	