

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINERALS AND GEOSCIENCE DEPARTMENT (MGD)
MINISTRY OF PRIMARY INDUSTRY
MALAYSIA

**THE STUDY
ON
COAL EXPLORATION AND ASSESSMENT
IN
SABAH, MALAYSIA**

FINAL REPORT

PLANS

September 1999

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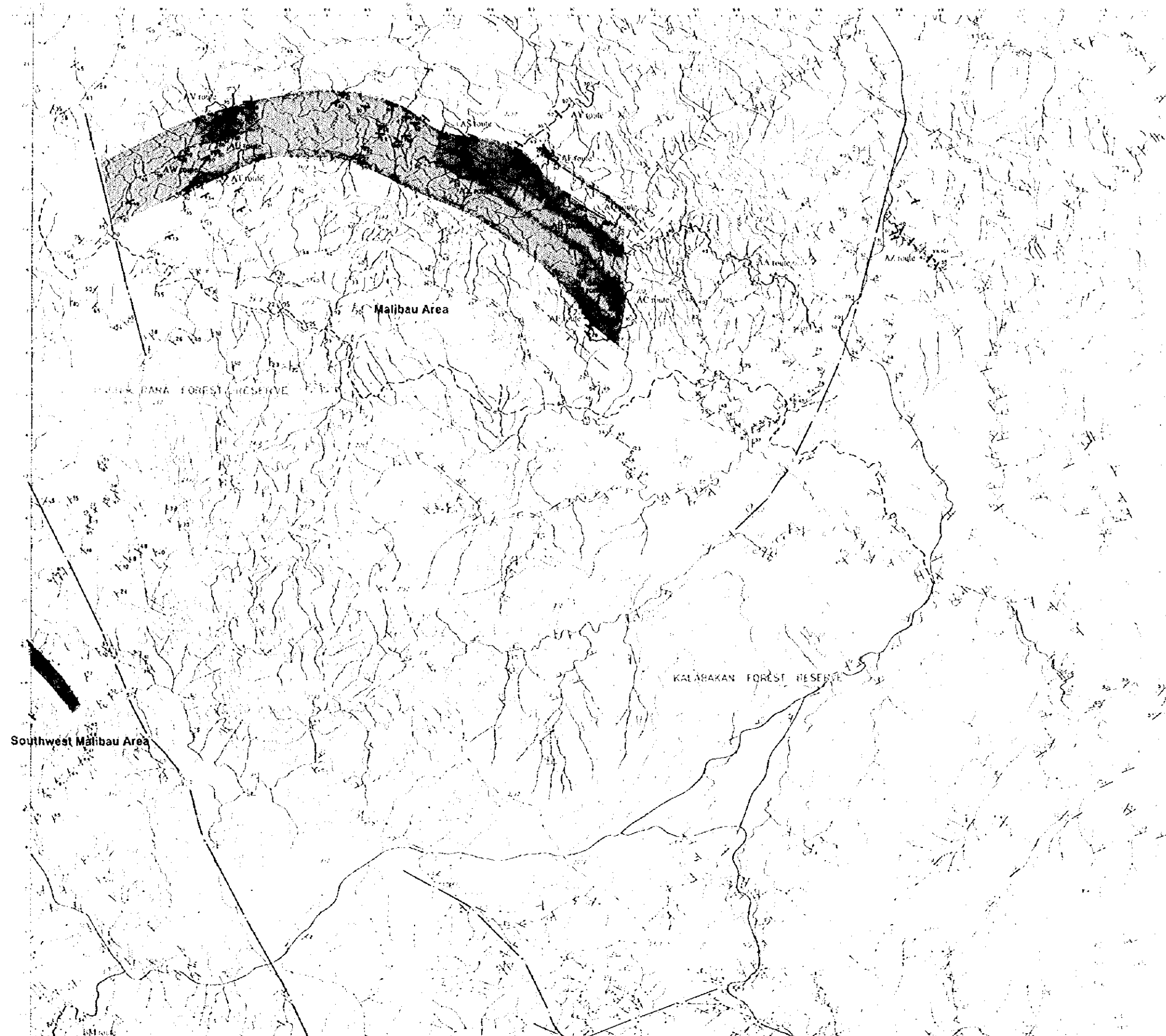
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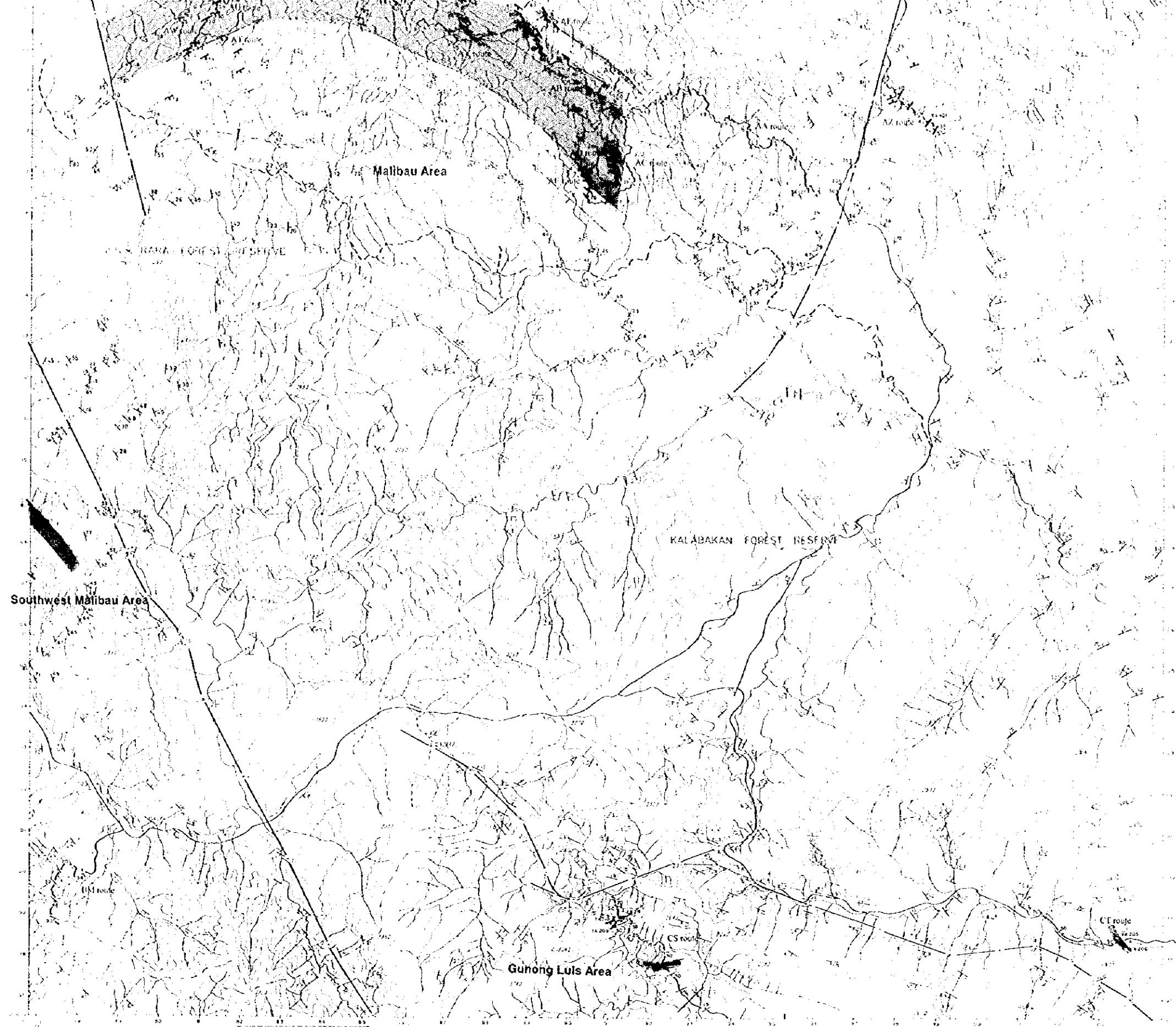
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Figure 2-4-2 Location of Coal Outcrops - Sheet No.4/116/8 (Tambulanan)
Figure 2-4-3 Location of Coal Outcrops - Sheet No.4/116/12 (Gunung Maliat)
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SUNGAI KALABAKAN

Sheet No. 4 / 17 5





- strike and dip of coal with outcrop number
- strike and dip of rock
- mapping route
- coal zone

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





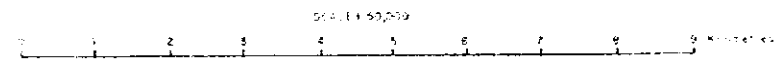
The Study on Coal Exploration and Assessment
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**Location of Coal Outcrop
Sungai Kalabakan**
(Sheet No. 4/117/5)
Figure 2-4-1 Date: Sep 1999

TAMBULANAN (4/116/8)





-  strike and dip of coal with outcrop number
-  strike and dip of rock
-  mapping route
-  coal zone



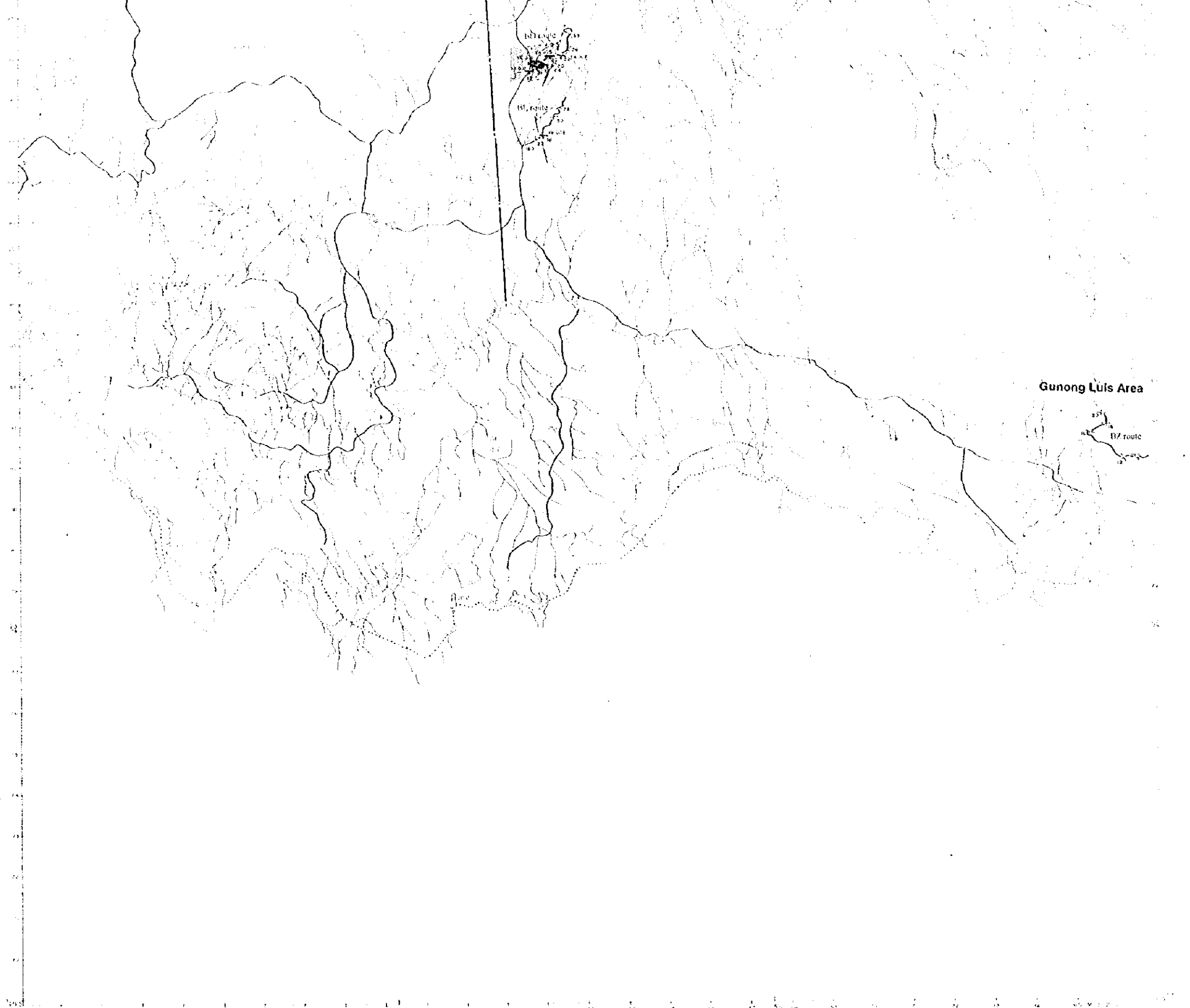
The Study on Coal Exploration and Assessment
 in Sabah, MALAYSIA
**Location of Coal Outcrop
 Tambulanan**
 (Sheet No. 4/116/8)
 Figure 2-4-2 Date: Sep 1999





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GUNUNG MALIAT

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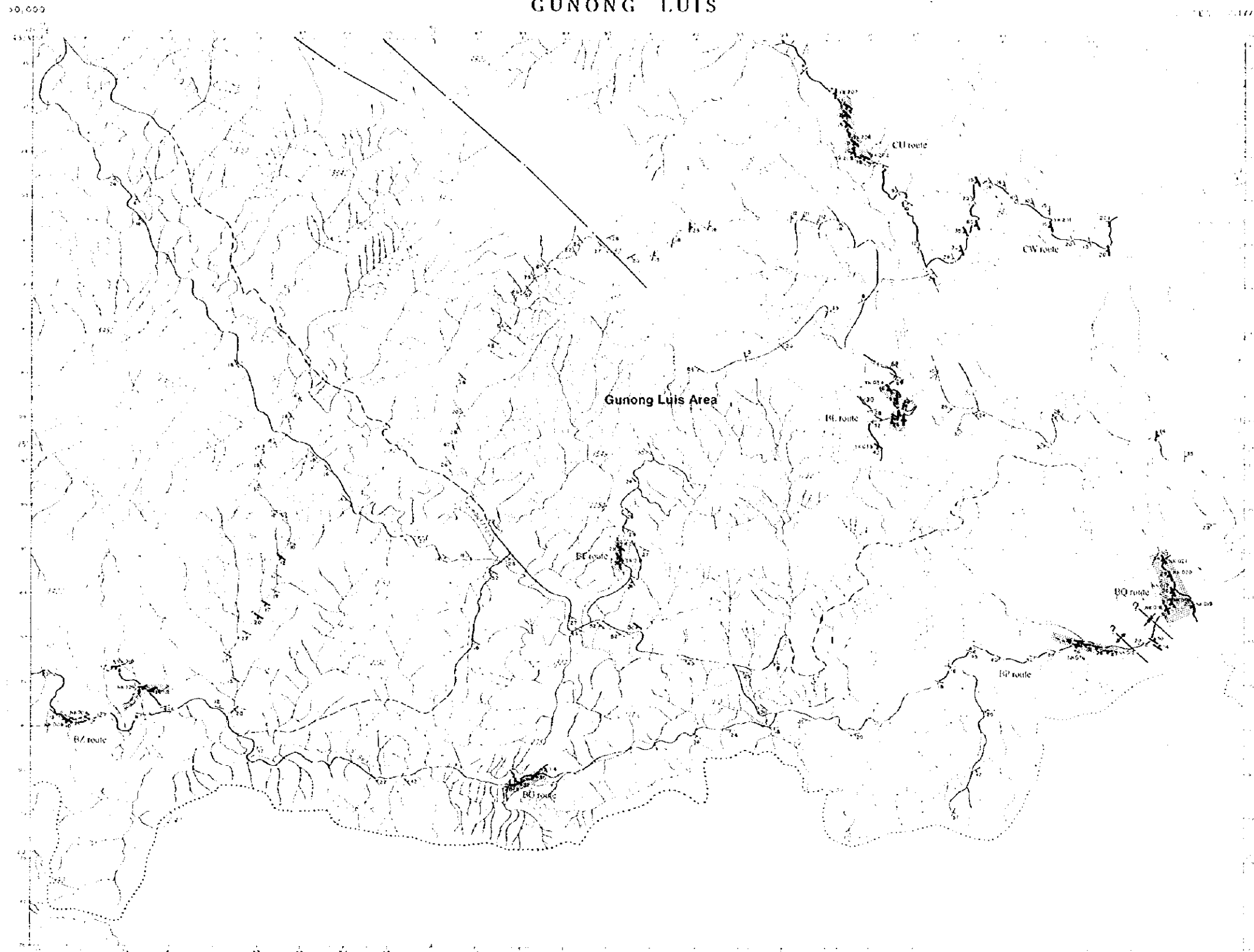


-  strike and dip of coal with outcrop number
-  strike and dip of rock
-  mapping node
-  coal zone

Scale 1 / 50,000
SCALE

The Study on Coal Exploration and Assessment
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**Location of Coal Outcrop
Gunung Maliat
(Sheet No. 4/116/12)**
Figure 2-4-3 Date: Sep. 1989

GUNONG LUIS



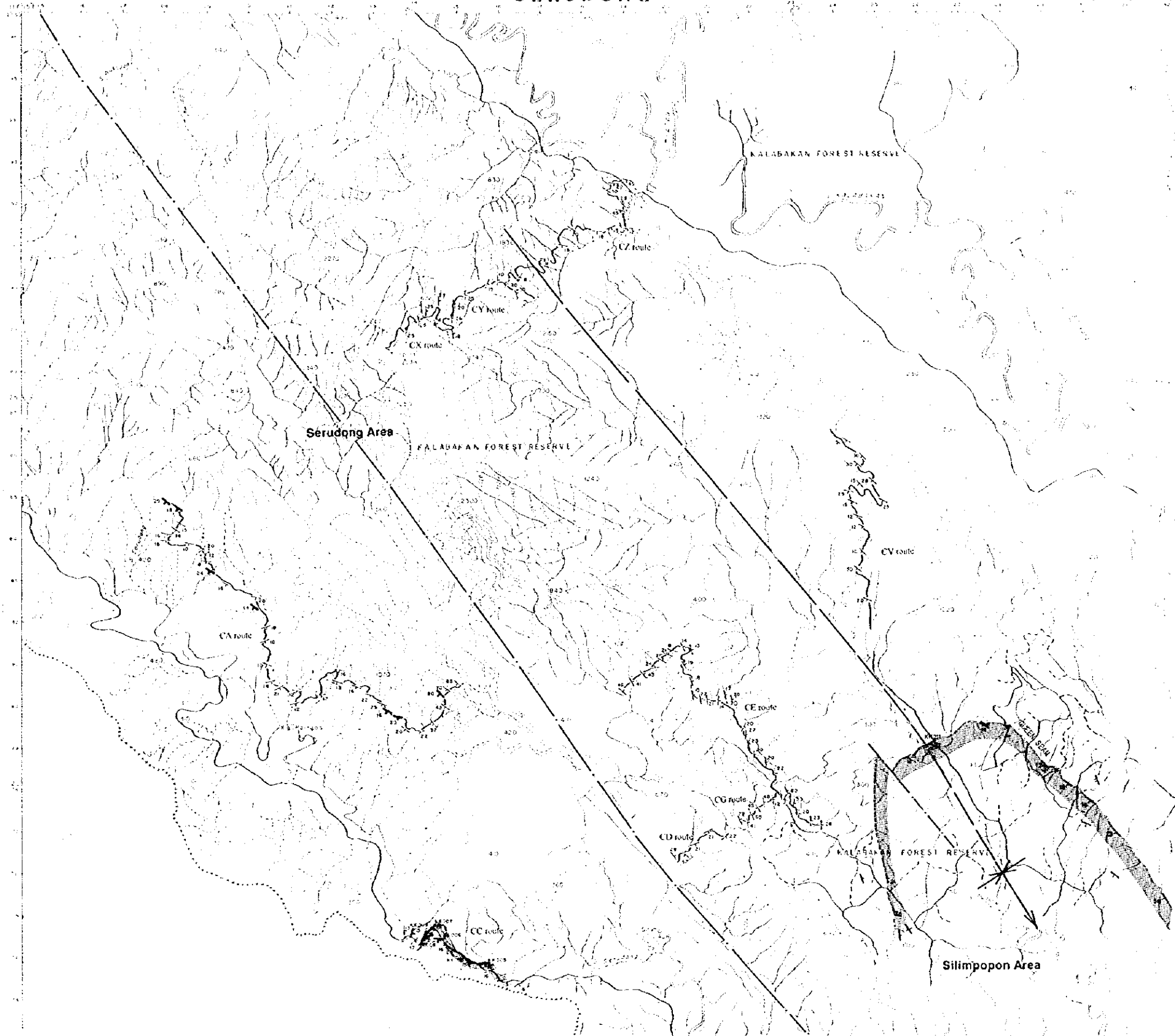
	strike and dip of coal with outcrop number
	strike and dip of rock
	mapping state
	coal zone

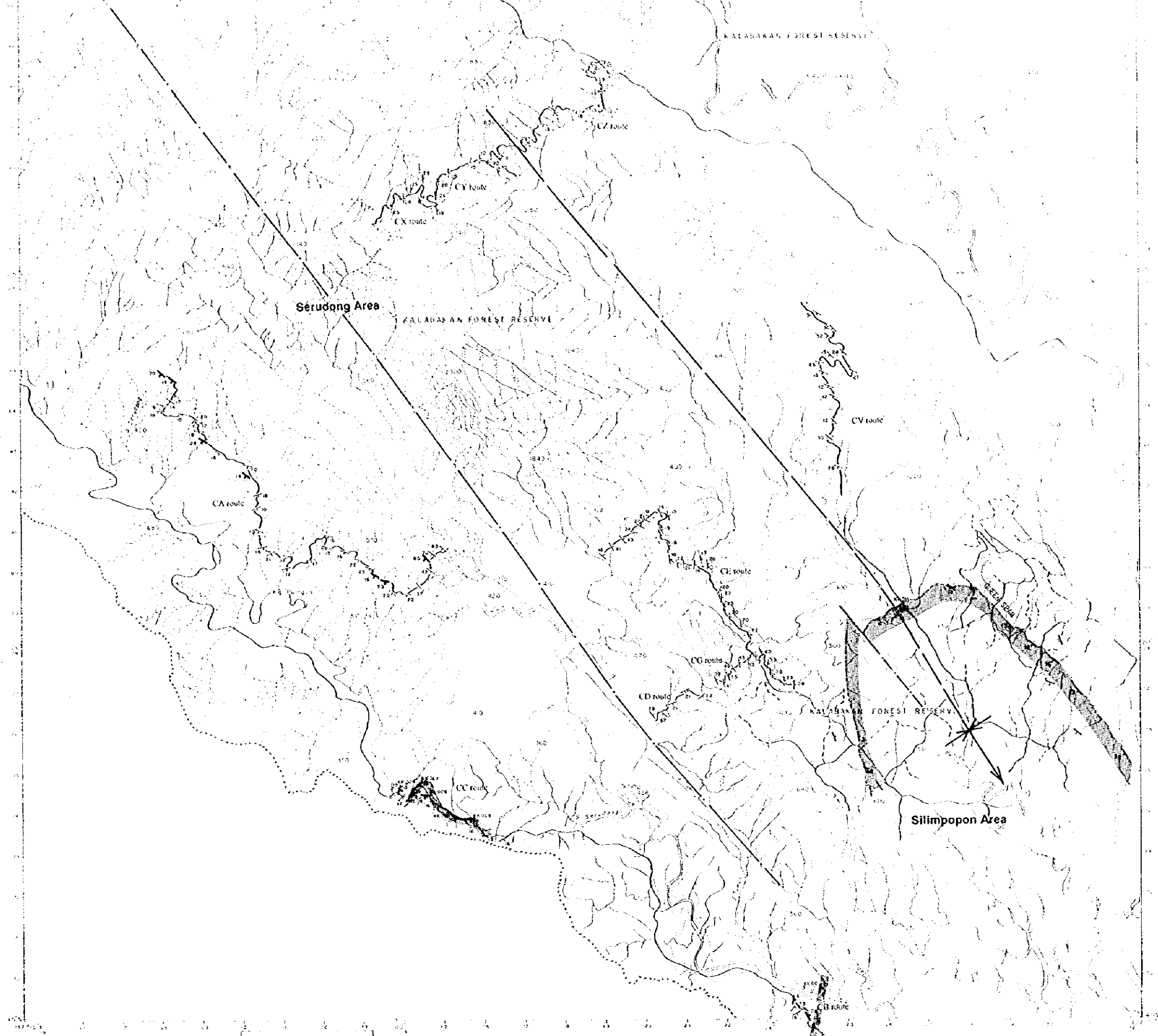
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Location of Coal Outcrop
Gunong Luis
 (Sheet No. 4/117/9)
 Figure 2-4-4 Date: Sep. 1999

SERUDONG

1. 11 / 10

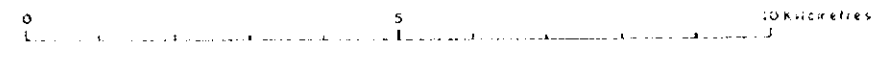




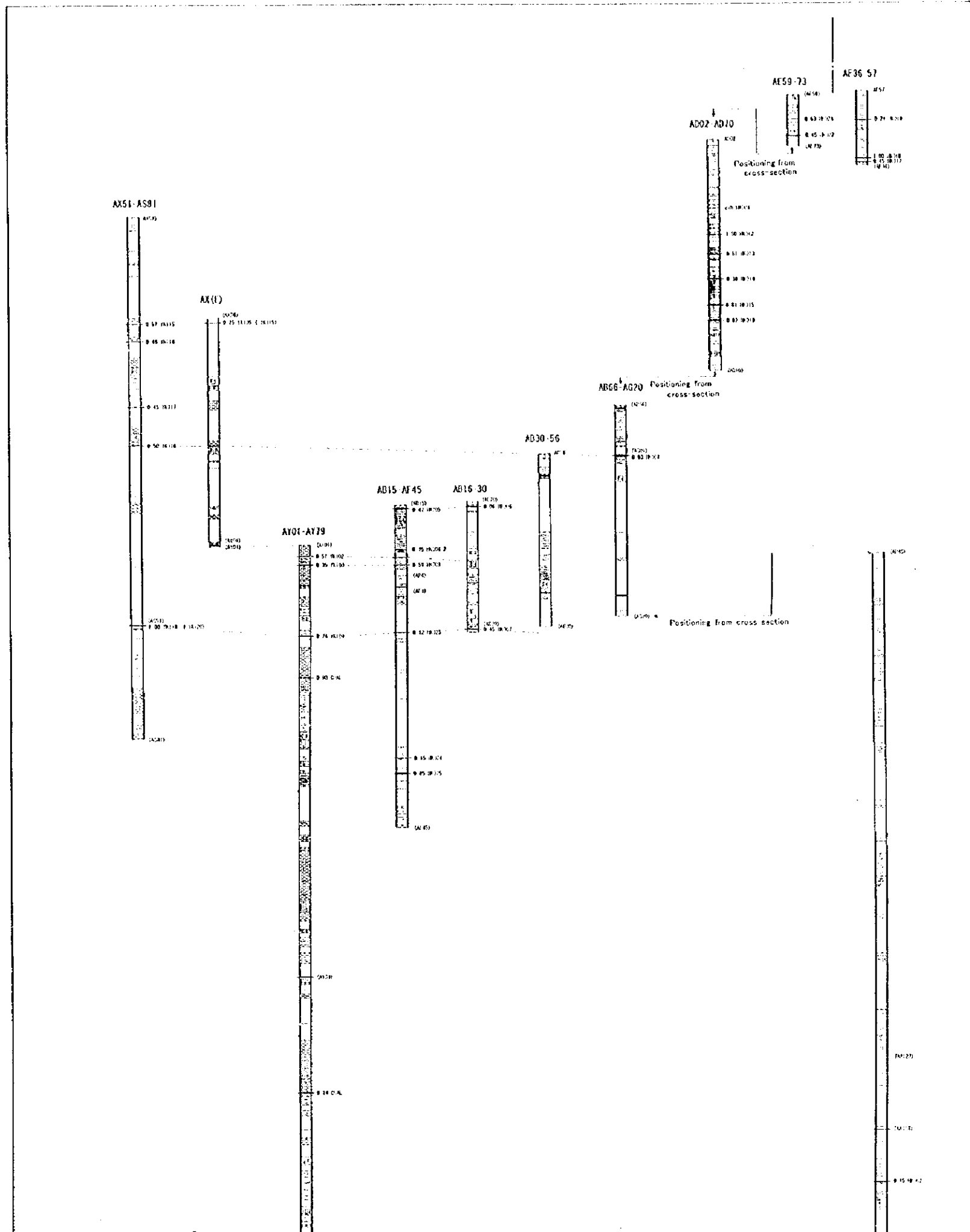
G. S. 331 303 / 50 / 87

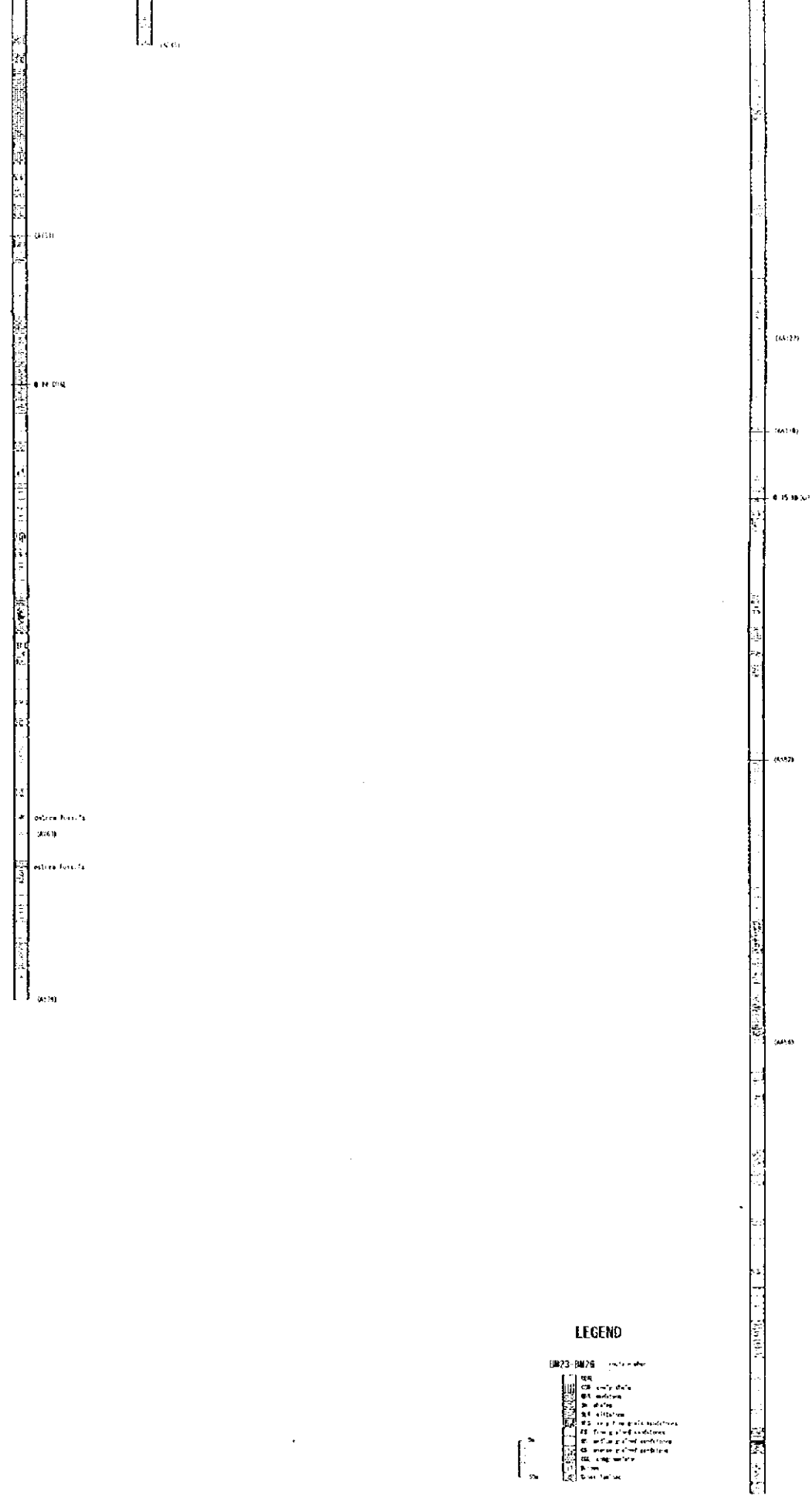
- strike and dip of coal with outcrop number
- strike and dip of rock
- mapping route
- creek line

SCALE 1:50,000



The Study on Coal Exploration and Assessment
in Sabah, MALAYSIA
**Location of Coal Outcrop
Serudong
(Sheet No. 4/117/10)**
Figure 2-4-5 Date: Sep. 1998





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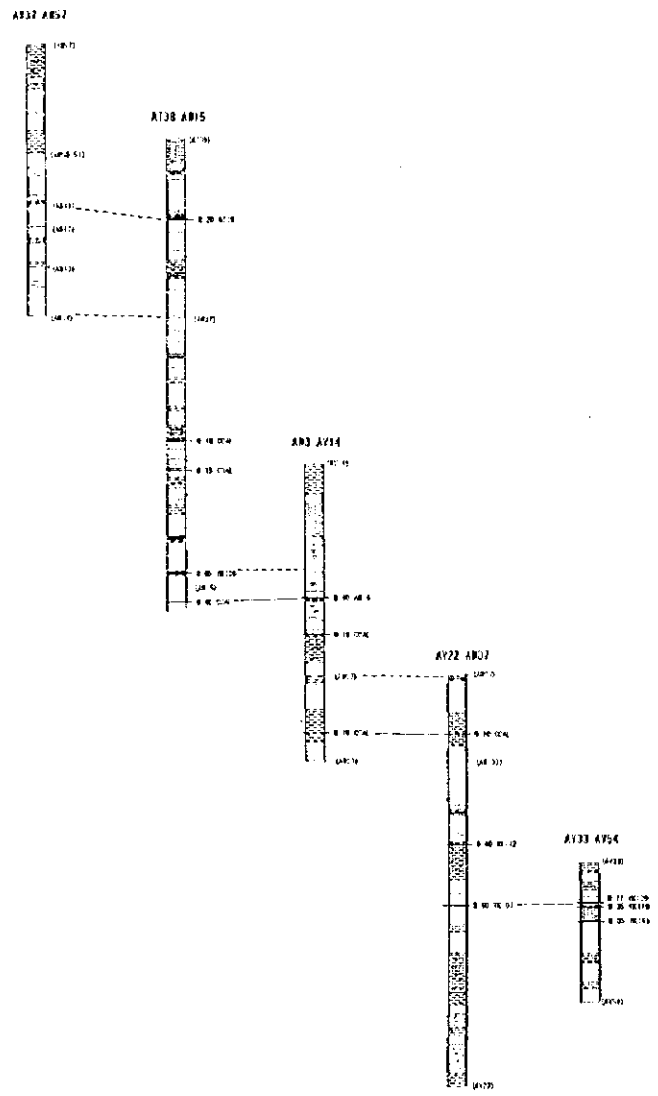
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- Q1000
 - Q1001
 - Q1002
 - Q1003
 - Q1004
 - Q1005
 - Q1006

The Study on Coal Exploration and Assessment
 in Sabah, MALAYSIA

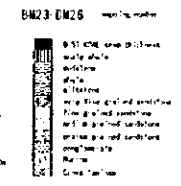
**Lithologic Logs of Mapping Route
 Malibau (Central-East)**

Figure 2-8-1 Date: Sep. 1998

Scale 1 / 4,000

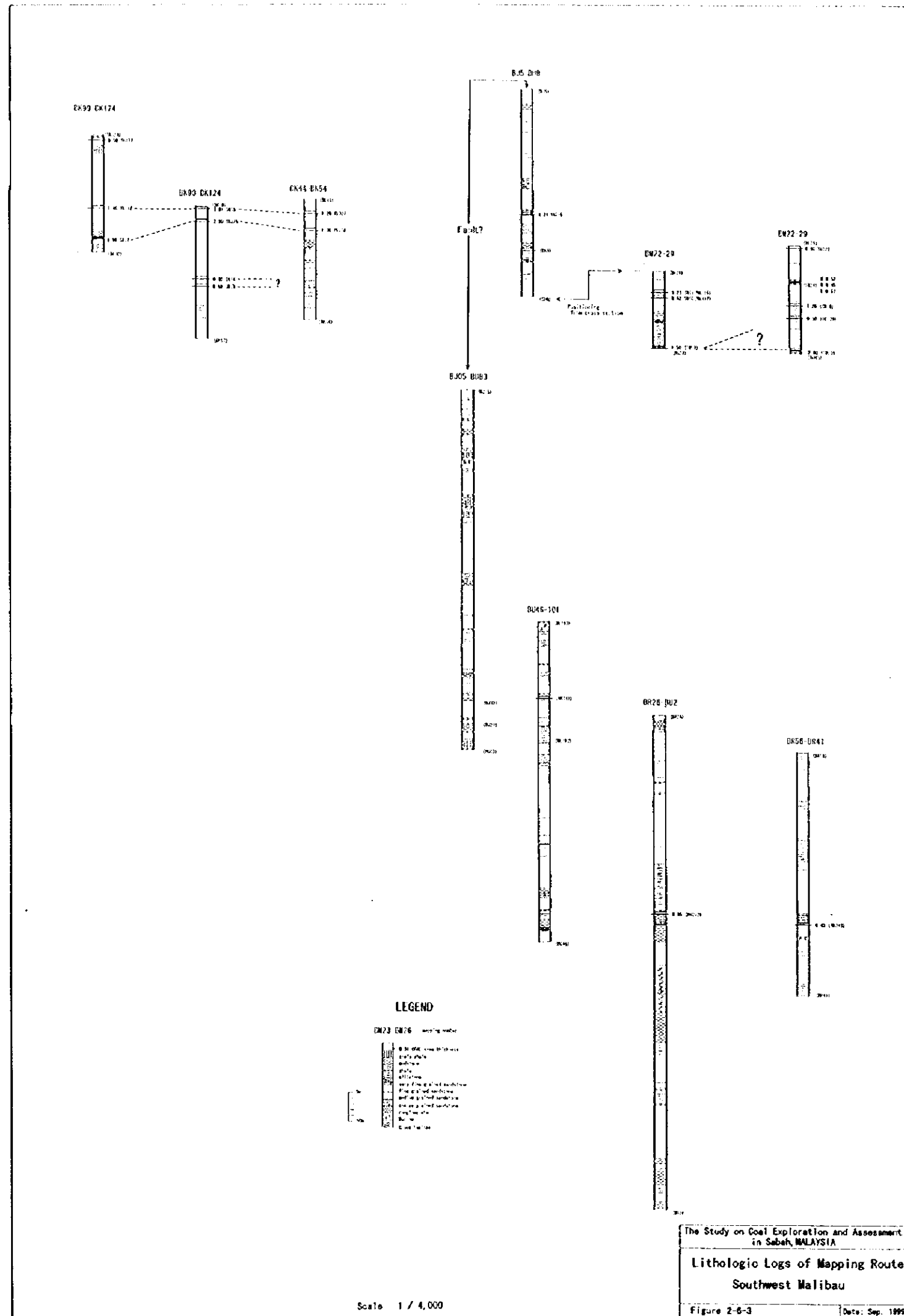


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The Study on Coal Exploration and Assessment
in Sabah, MALAYSIA
**Lithologic Logs of Mapping Route
Malibau (West)**
Figure 2-6-2 Date: Sep. 1990

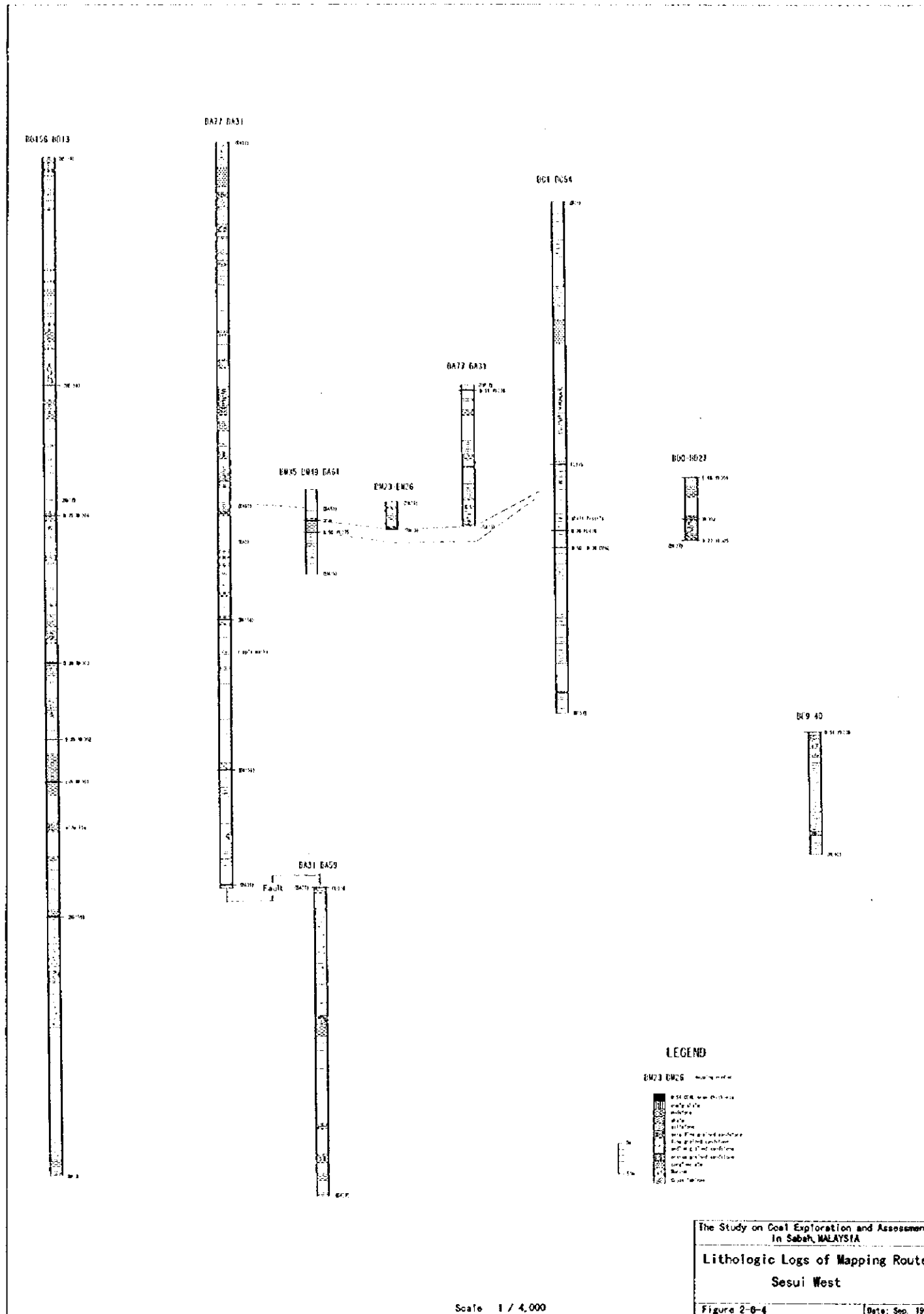
Scale 1 / 4,000



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- EK99 EK124 Borehole
 EK45 EK54 Borehole
 BJS D18 Borehole
 BJS BUB3 Borehole
 BJS BUB1 Borehole
 BJS BUB2 Borehole
 BJS BUB4 Borehole
 Fault
 Scale 1 / 4,000

The Study on Coal Exploration and Assessment
 in Sabah, MALAYSIA
Lithologic Logs of Mapping Route
 Southwest Malibau
 Figure 2-6-3 Date: Sep. 1999

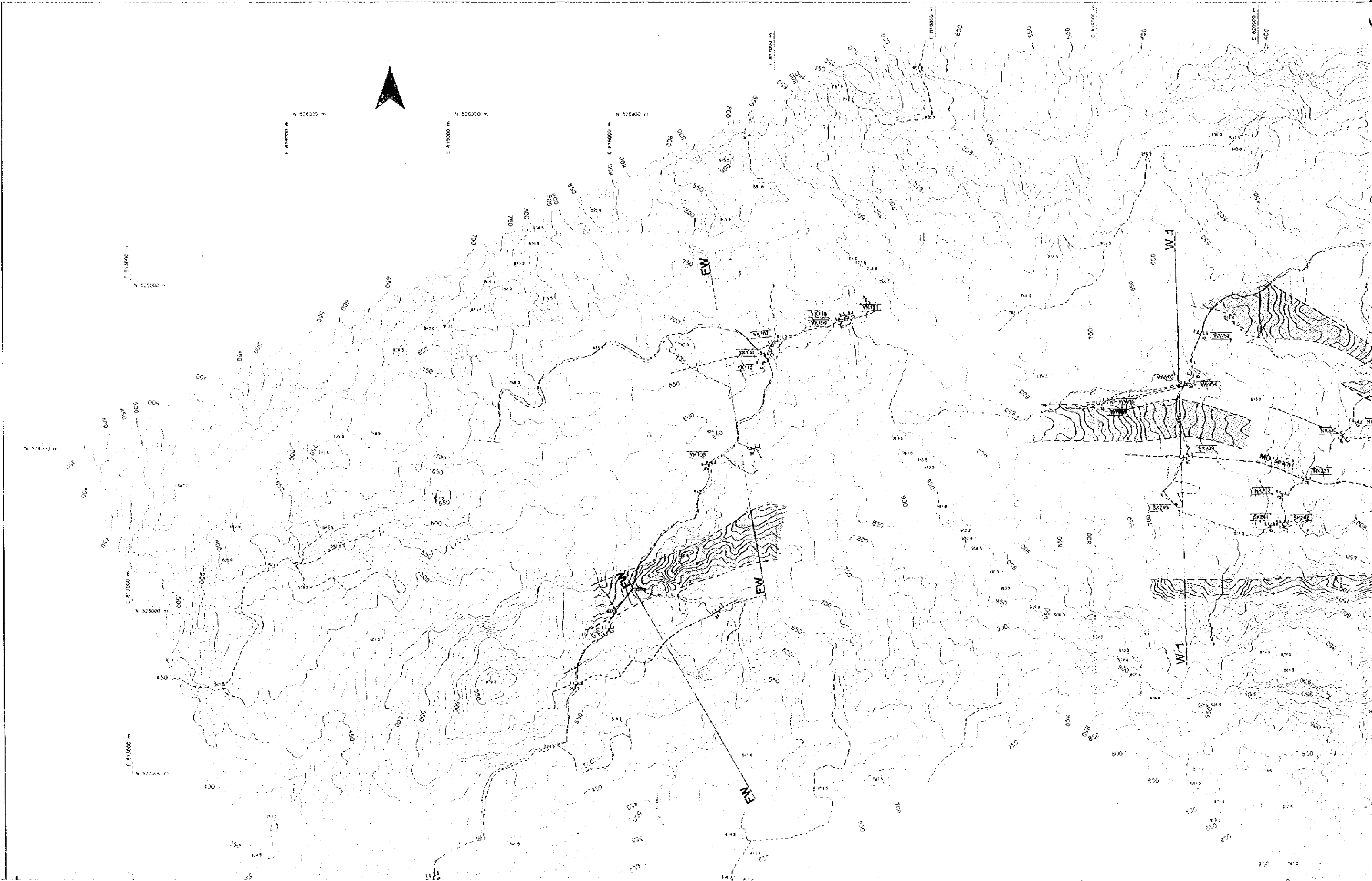


The Study on Coal Exploration and Assessment
In Sabah, MALAYSIA

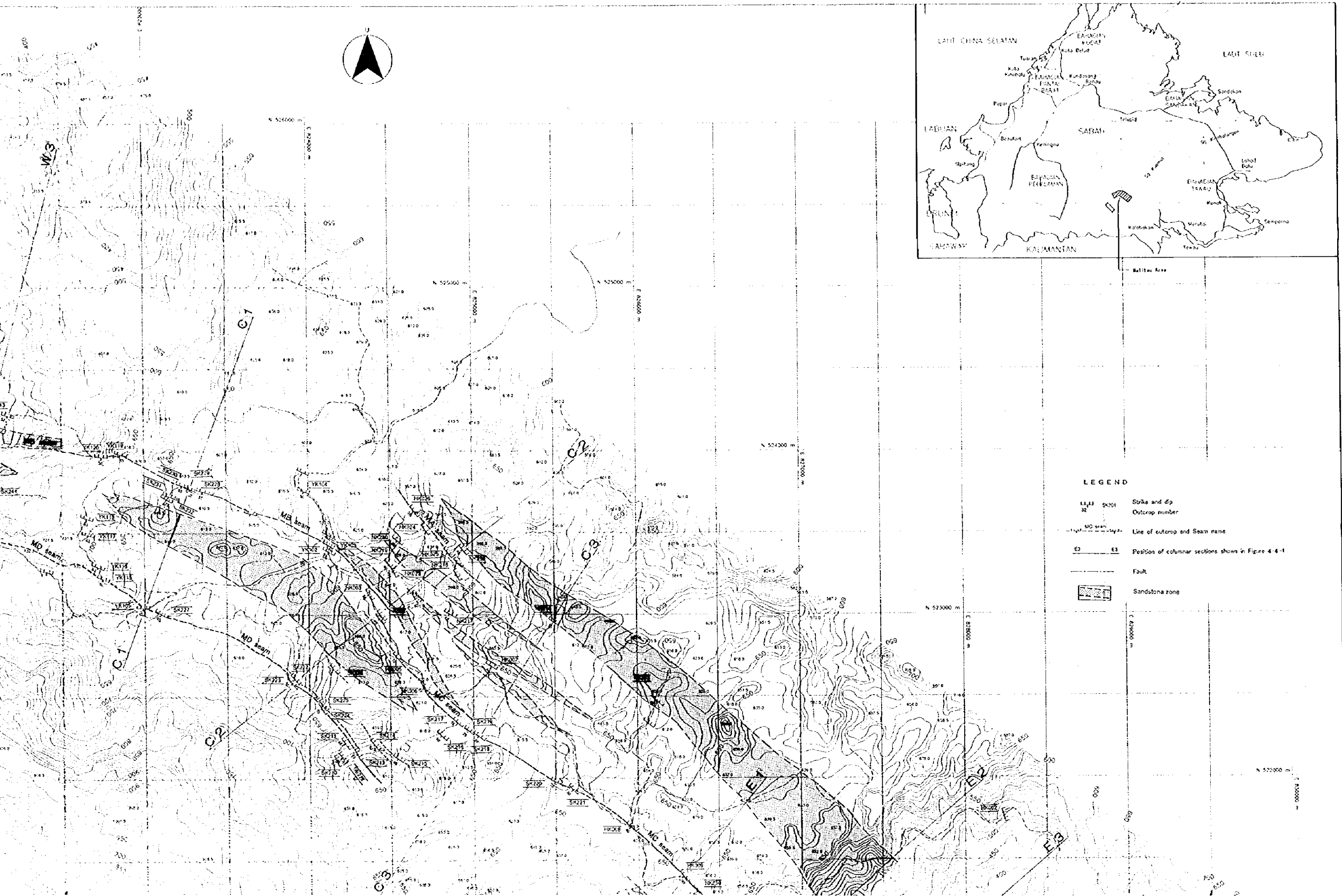
Lithologic Logs of Mapping Route
Sesui West

Figure 2-B-4




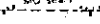


Date: Sep. 1998

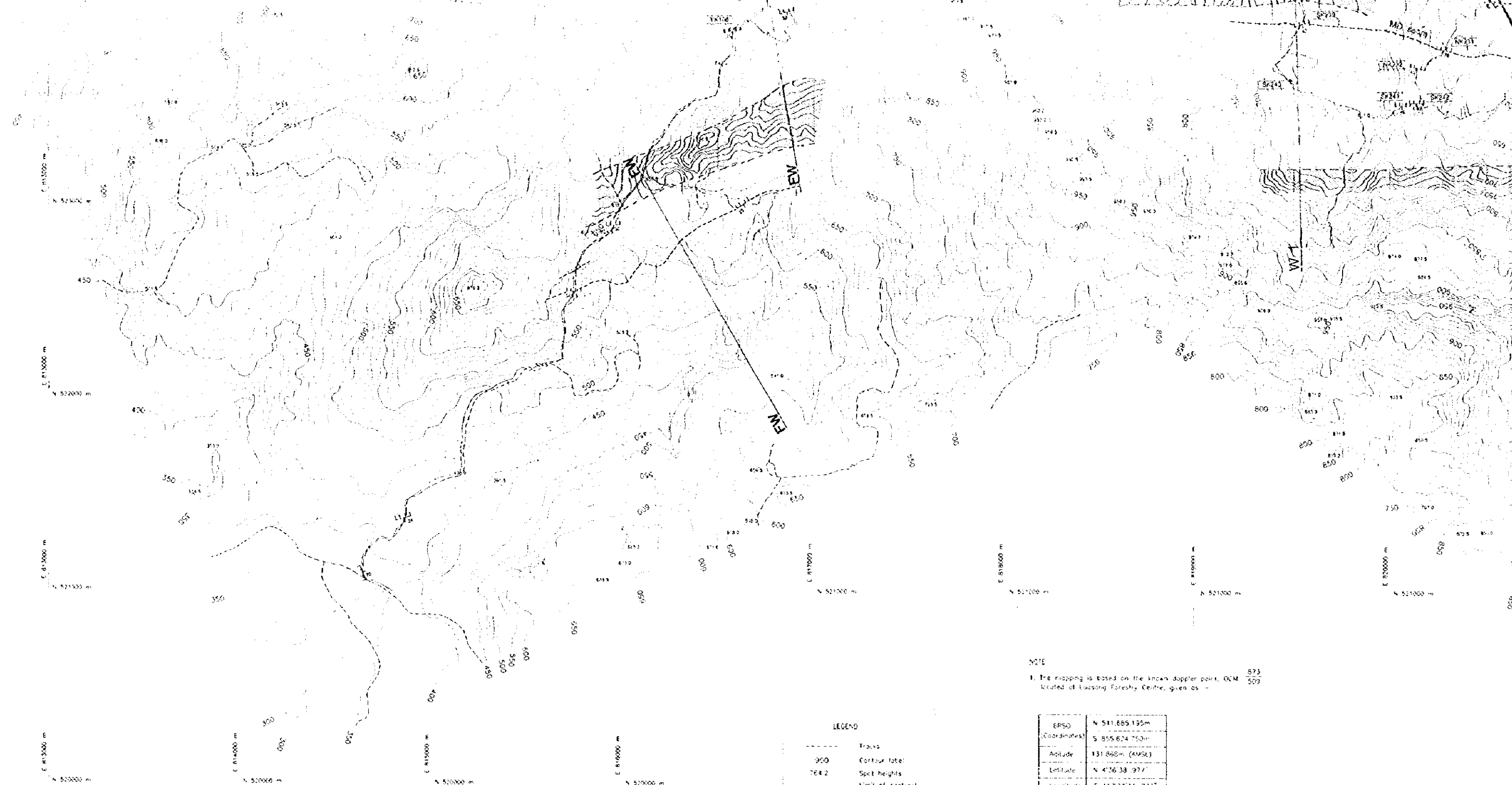






LEGEND

-  SK201 Strike and dip
-  SK202 Outcrop number
-  MD beam Line of outcrop and Seam name
-  E1 E2 Position of columnar sections shown in Figure 4-4-1
-  Fault
-  Sandstone zone

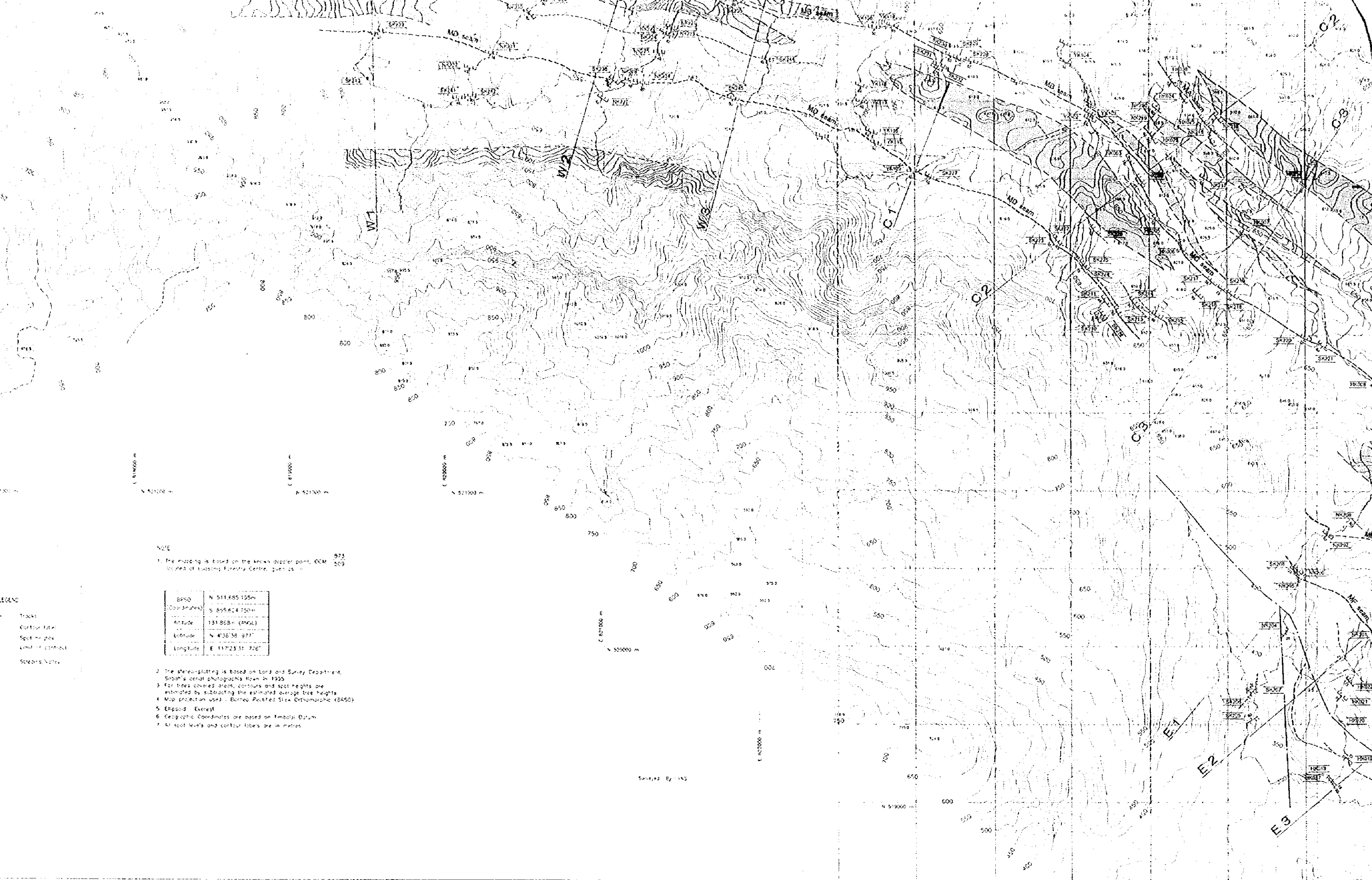


LEGEND

- Traces
- 900 Contour label
- 764.2 Spot heights
- Limit of contact
- Streams/Valley

NOTE

1. The mapping is based on the known doppler point, OCM $\frac{873}{509}$ located at Logging Forestry Centre, given as -
- | | |
|-------------|------------------|
| BRSS | N 511 685 195m |
| Coordinates | S 855 634 750m |
| Altitude | 131.898m (AMSL) |
| Latitude | N 4°26'38.977" |
| Longitude | E 117°23'31.776" |
2. The stereo-plottling is based on Land and Survey Department, Sabah's aerial photographs flown in 1995
 3. For trees covered areas, contours and spot heights are estimated by subtracting the estimated average tree heights
 4. Map projection used - Barnes Rectified Spheroidal (BRSS)
 5. Ellipsoid - Everest
 6. Geographic Coordinates are based on Timbalai Datum
 7. All spot levels and contour labels are in metres



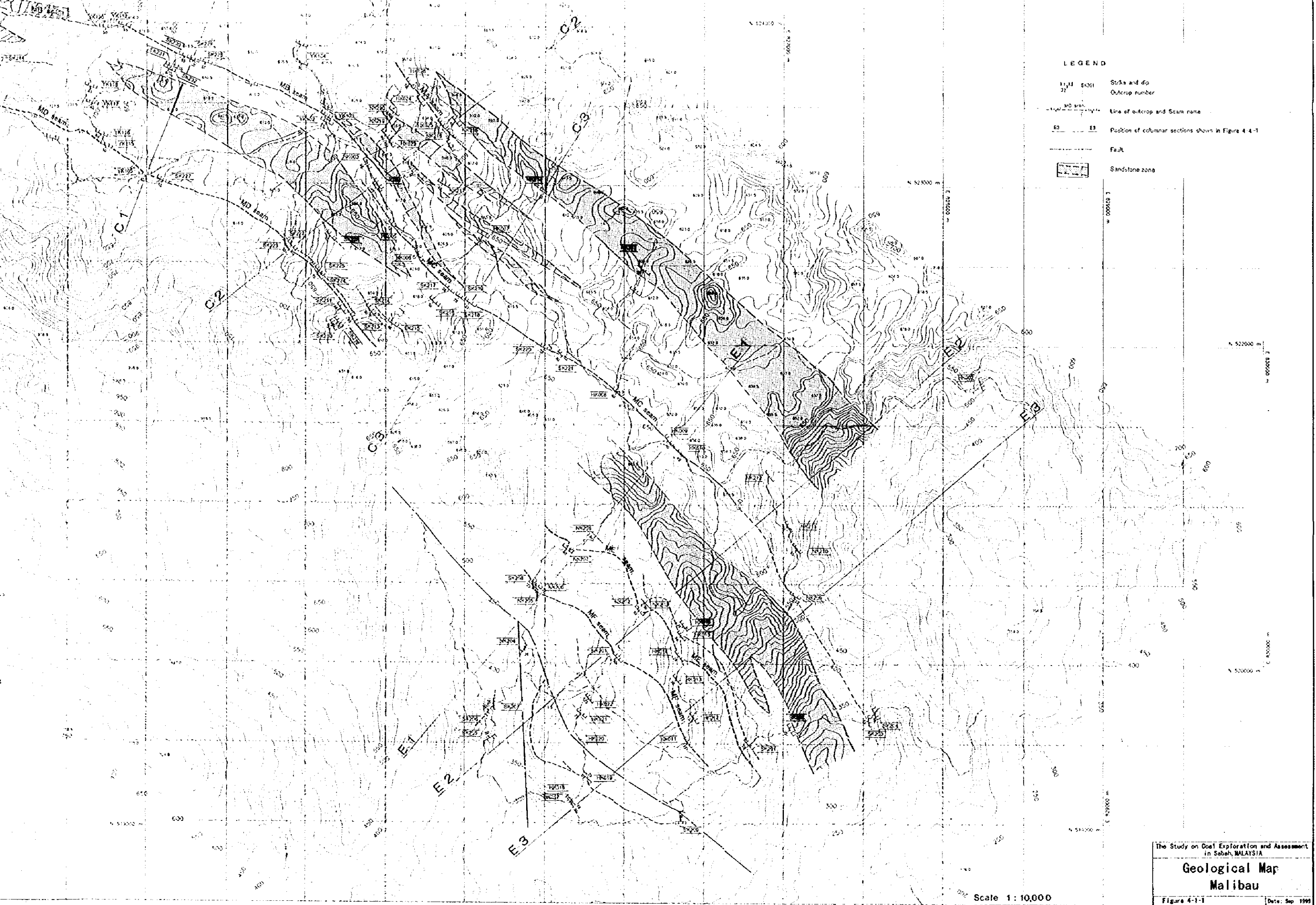
NOTE

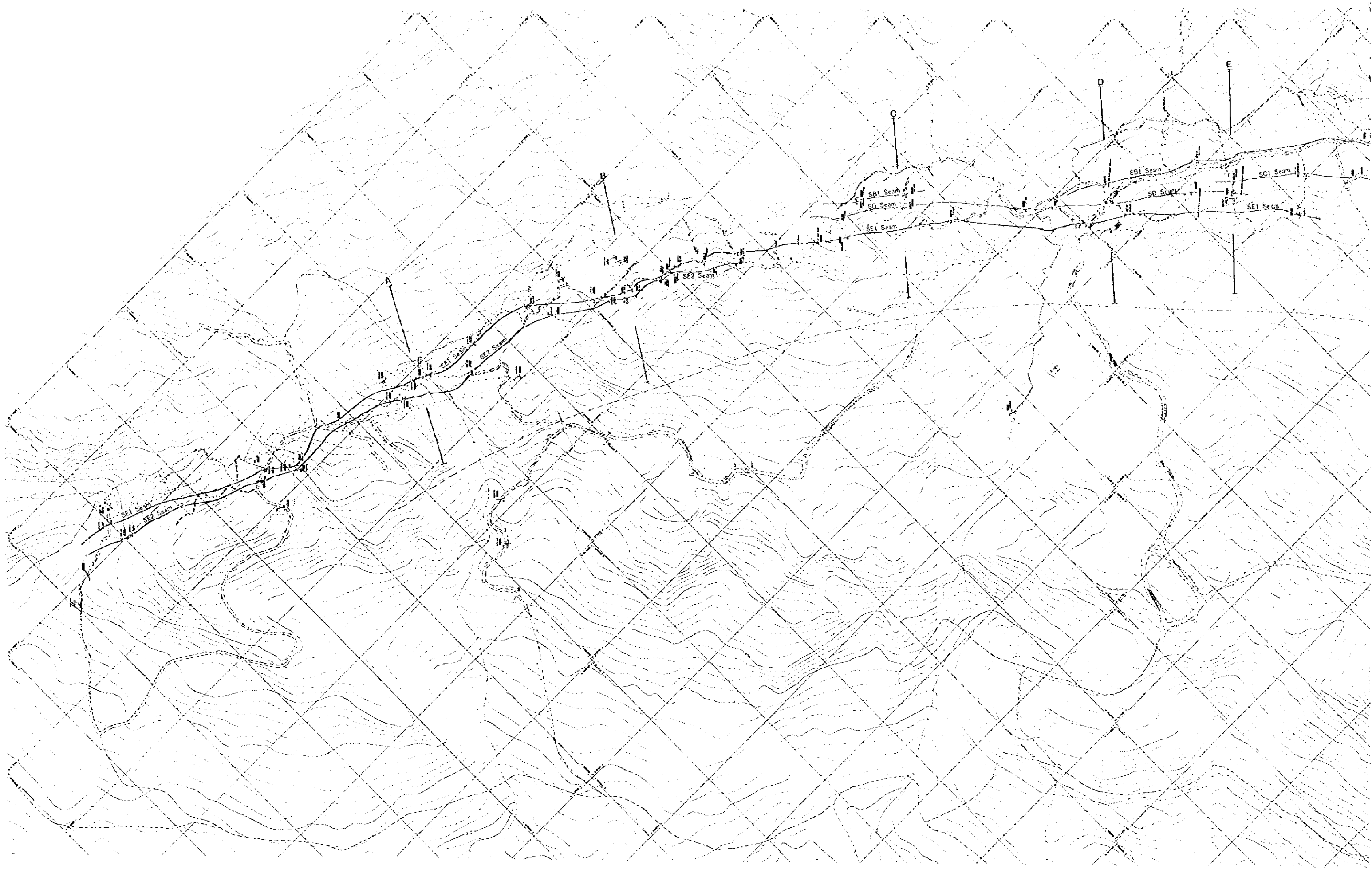
1. The mapping is based on the known datum point, GCM 973 located at Township Forestry Centre, June 25 - 509

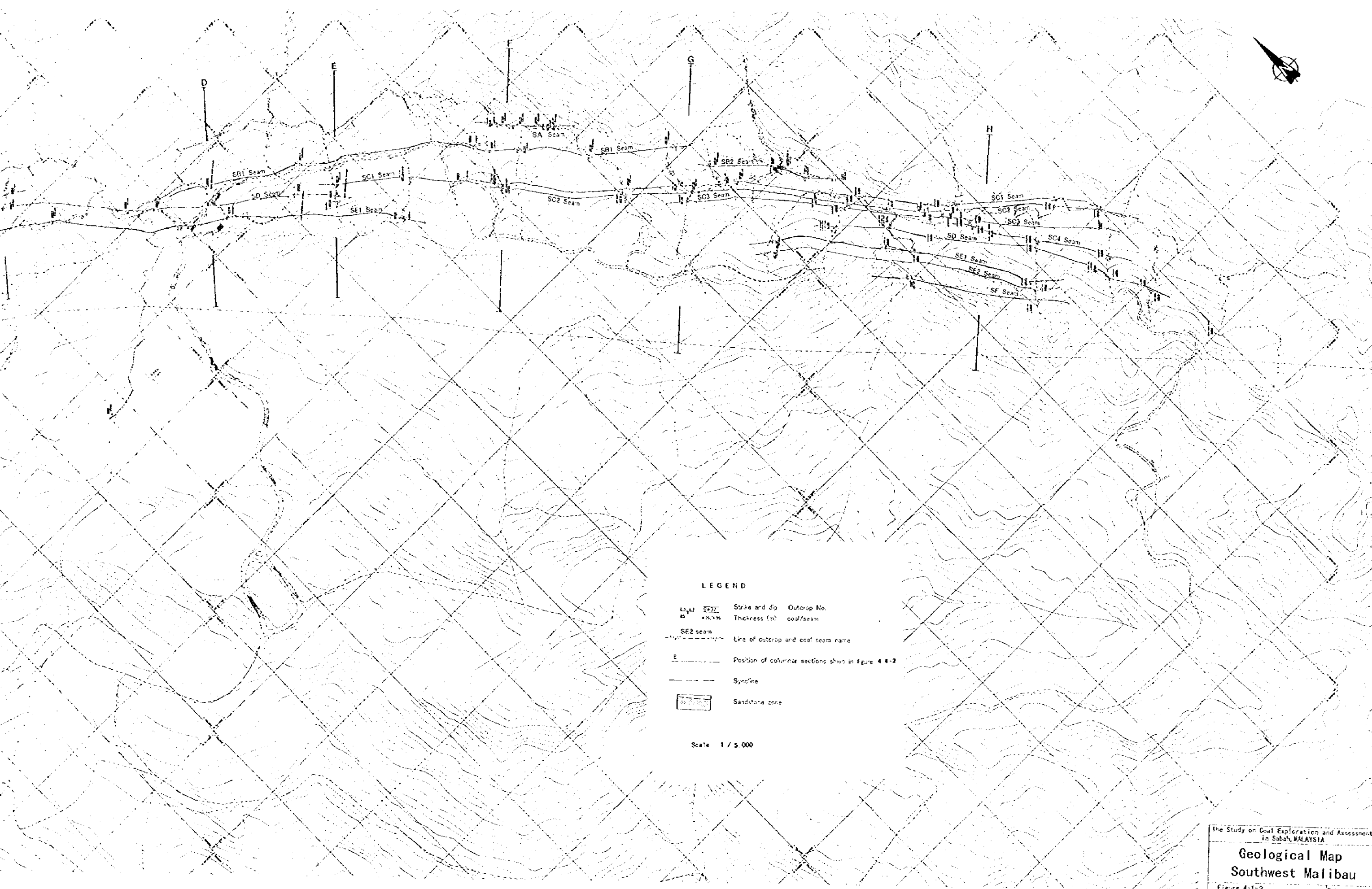
BRSD	N 511 485 125m
Coordinates	S 855 624 750m
Altitude	131 868m (PMGL)
Latitude	N 4°36'38" 977"
Longitude	E 117°23'31" 726"

2. The stereoplating is based on land and Survey Department, Sabah's aerial photographs taken in 1925
3. For trees covered areas, contours and spot heights are estimated by subtracting the estimated average tree heights
4. Map projection used - Bonne Rectified Spheroid (BRSD)
5. Ellipsoid - Everest
6. Geographic Coordinates are based on Imbabi Datum
7. All spot levels and contour labels are in metres

Surveyed By: VAS







LEGEND

- | | | | |
|--------------------|-----|-----|-----|
| L ₁ 1/2 | 1/2 | 1/2 | 1/2 |
| M | 1/2 | 1/2 | 1/2 |

Strike and dip
Outcrop No.
- | | | | |
|-----|-----|-----|-----|
| 1/2 | 1/2 | 1/2 | 1/2 |
| 1/2 | 1/2 | 1/2 | 1/2 |

Thickness (m)
coal/seam
- | | | | |
|----------|-----|-----|-----|
| SE2 seam | 1/2 | 1/2 | 1/2 |
| SE2 seam | 1/2 | 1/2 | 1/2 |

Line of outcrop and coal seam name
- | | | | |
|---|-----|-----|-----|
| E | 1/2 | 1/2 | 1/2 |
| E | 1/2 | 1/2 | 1/2 |

Position of columnar sections shown in figure 4.4-2
- | | | | |
|-----|-----|-----|-----|
| 1/2 | 1/2 | 1/2 | 1/2 |
| 1/2 | 1/2 | 1/2 | 1/2 |

Syncline
- | | | | |
|-----|-----|-----|-----|
| 1/2 | 1/2 | 1/2 | 1/2 |
| 1/2 | 1/2 | 1/2 | 1/2 |

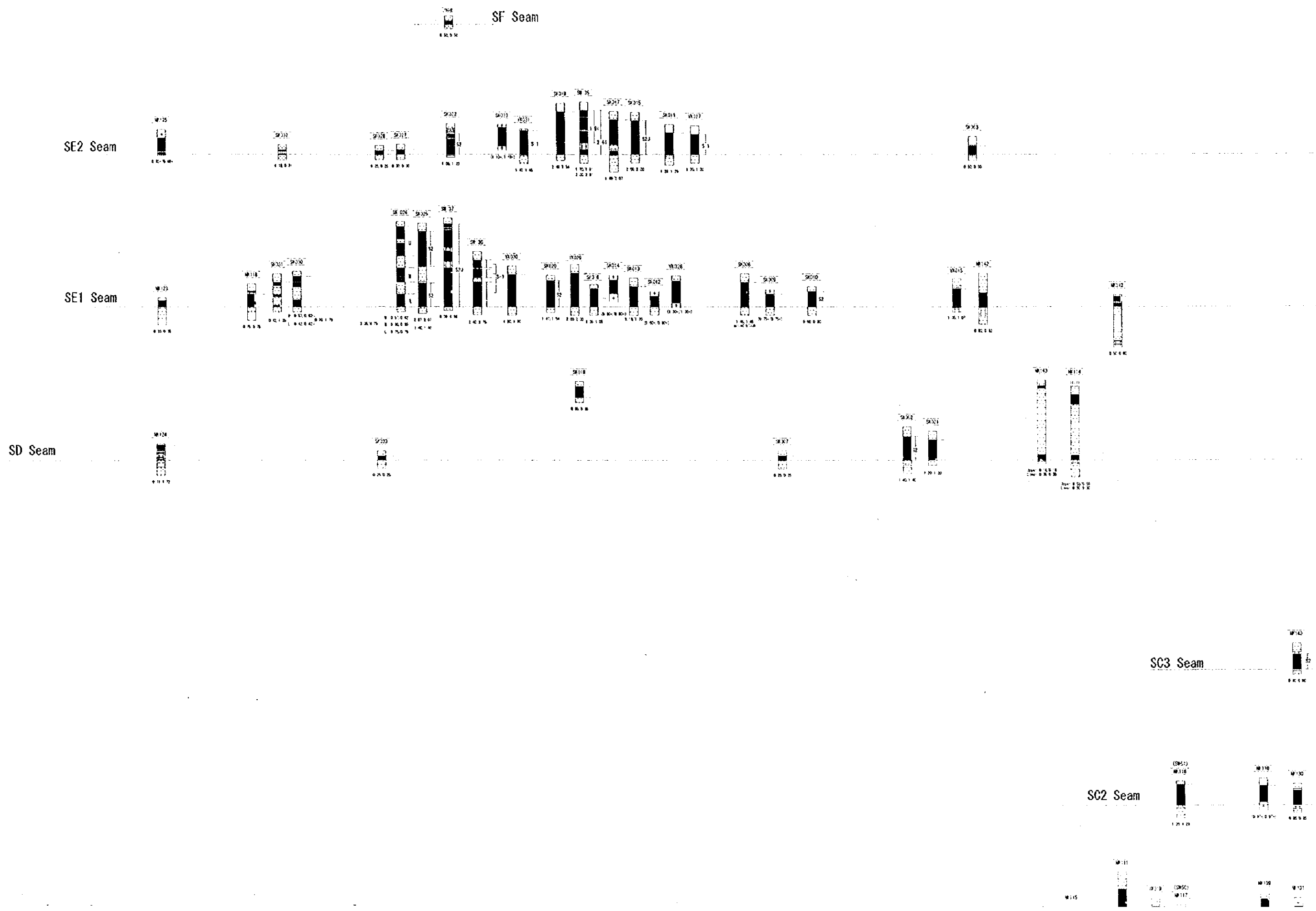
Sandstone zone

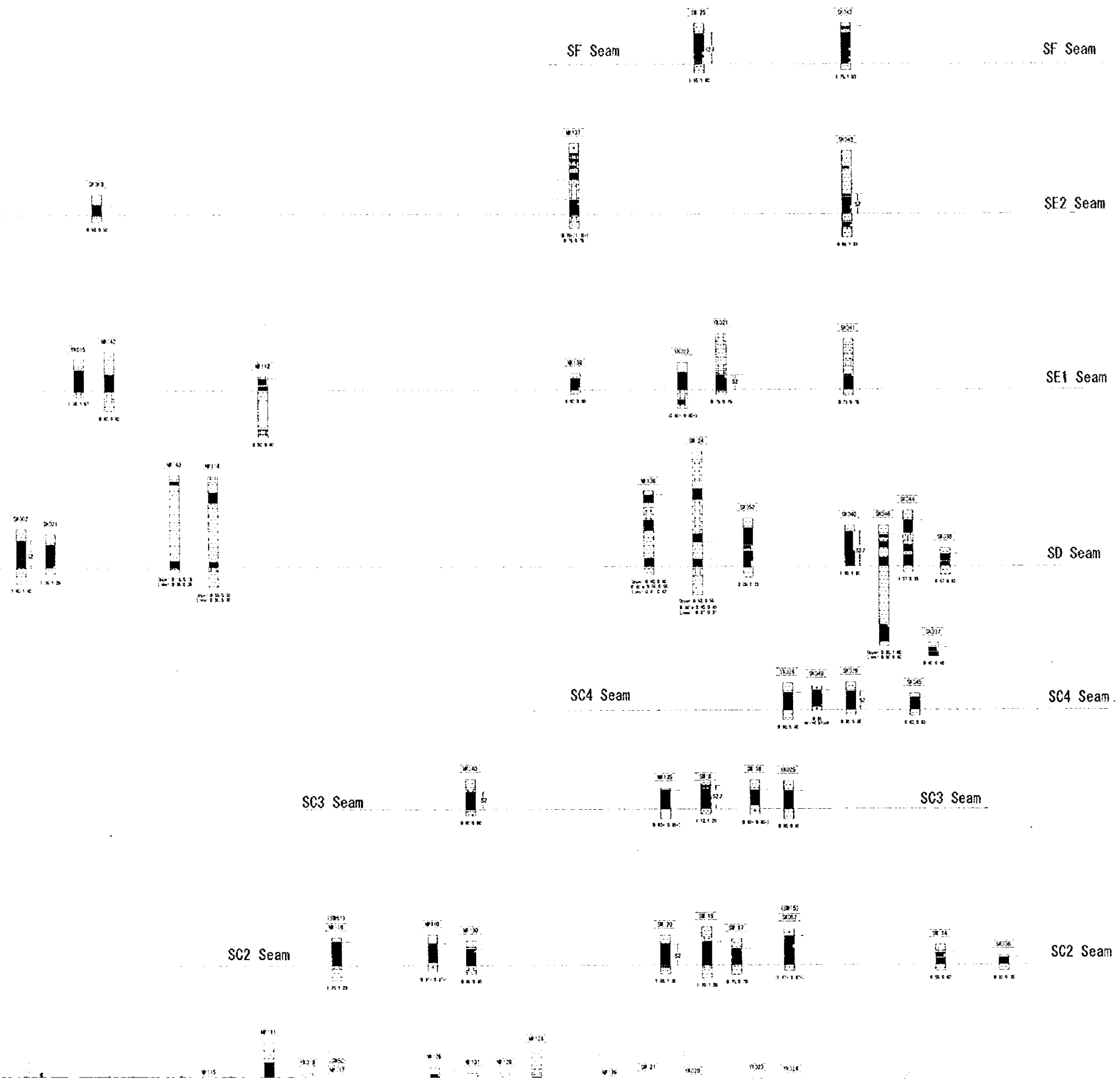
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Geological Map
Southwest Malibau

Figure 4-1-2 Date: Sep 1995





SD Seam

27117

27118

27119

27120

27121

27122

SC3 Seam

W119
4 8 3 3 3

SC2 Seam

W118
1 2 0 1 2

W119
0 1 1 1 1

W120
4 8 3 3 3

SC1 Seam

W115
4 8 3 3 3

W116
1 2 0 1 2

W117
4 8 3 3 3

W118
4 8 3 3 3

W119
1 2 0 1 2

W120
1 2 0 1 2

SB2 Seam

W121
1 2 0 1 2

W122
2 2 0 1 2

W123
1 2 0 1 2

W124
1 2 0 1 2

W125
1 2 0 1 2

W126
1 2 0 1 2

SB1 Seam

W127
4 8 3 3 3

W128
4 8 3 3 3

W129
4 8 3 3 3

W130
4 8 3 3 3

SA Seam

W131
4 8 3 3 3

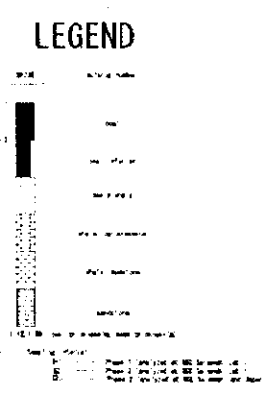
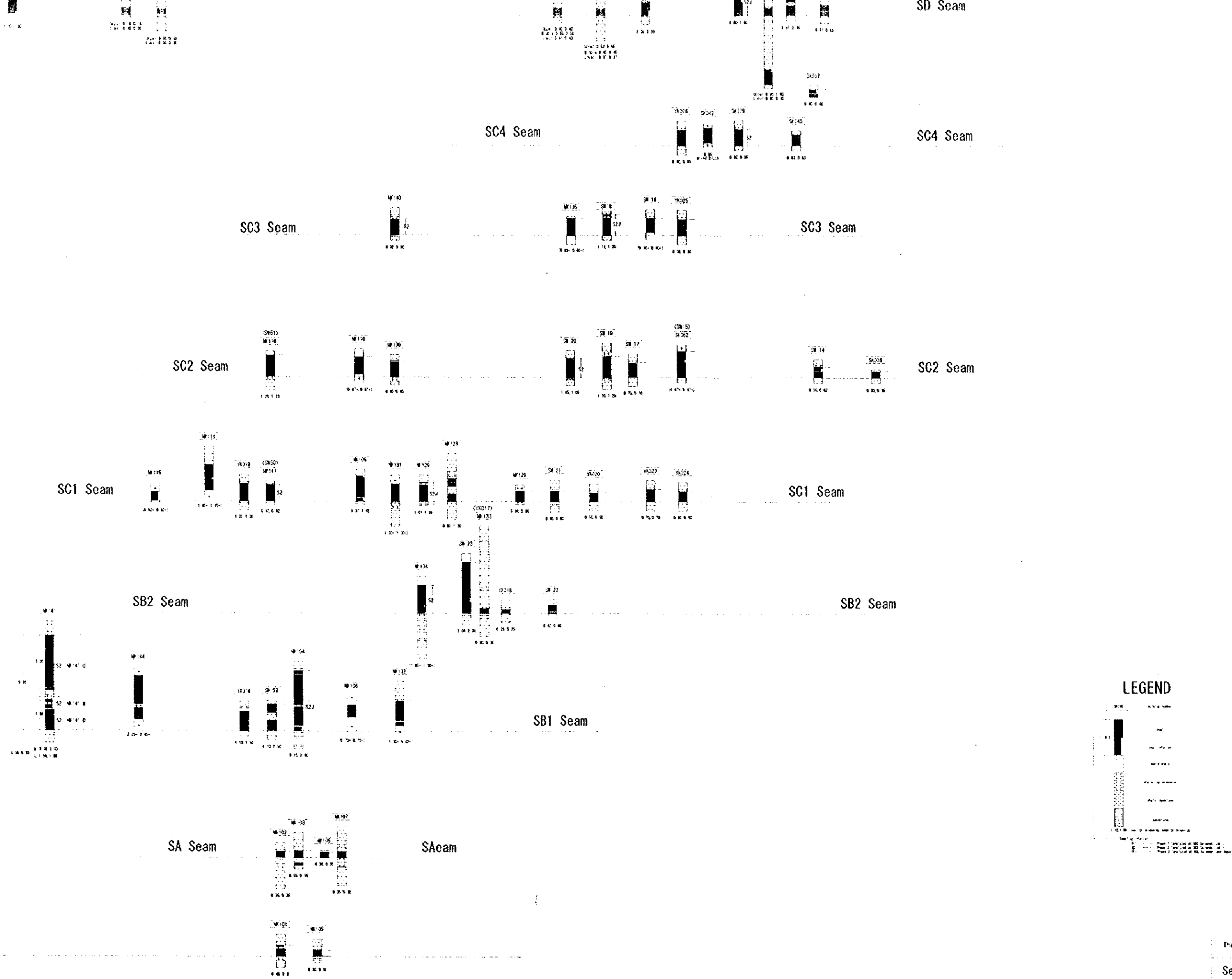
W132
4 8 3 3 3

W133
4 8 3 3 3

SA Seam

W134
4 8 3 3 3

W135
4 8 3 3 3



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**Seam Profiles-
Southwest Malibau**

Figure 4-3-3 Date: Sep 1999

(FW)

(W1)

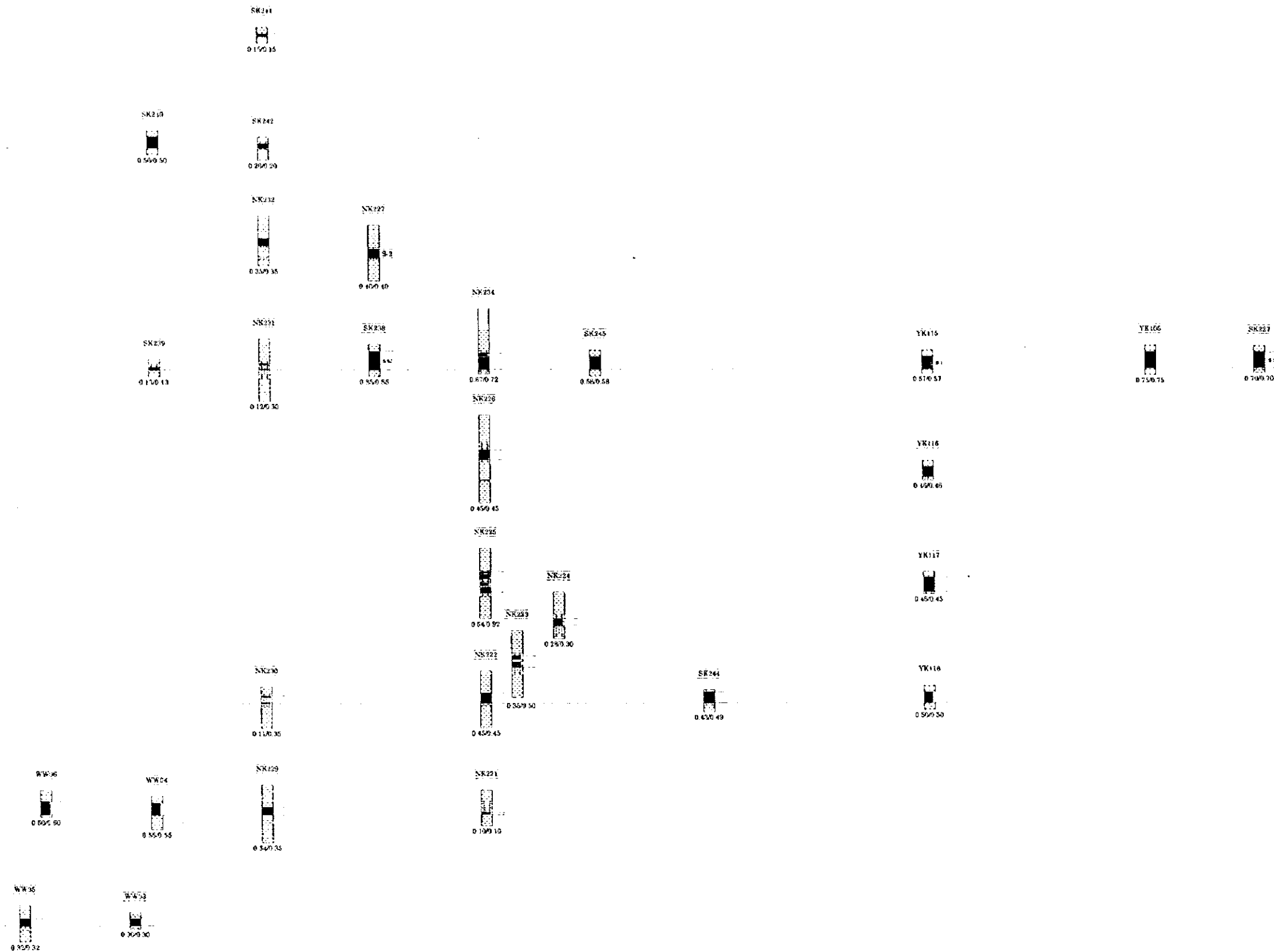
(W2)

(W3)

(C1)

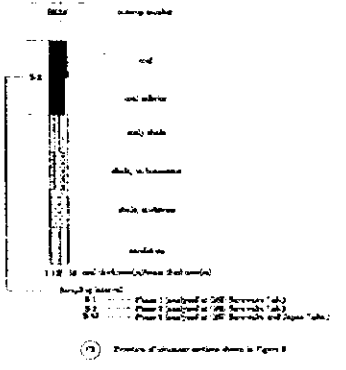
MD Seam

MD Seam





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(E1)

(E2)

(E3)

MF Seam

MF Seam



(C2)

(C3)

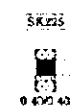
ME Seam

ME Seam



MD Seam

MD Seam



SK214

SK204

C2

C3

ME Seam

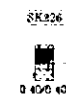
ME Seam

MD Seam

MD Seam

MC Seam

MC Seam

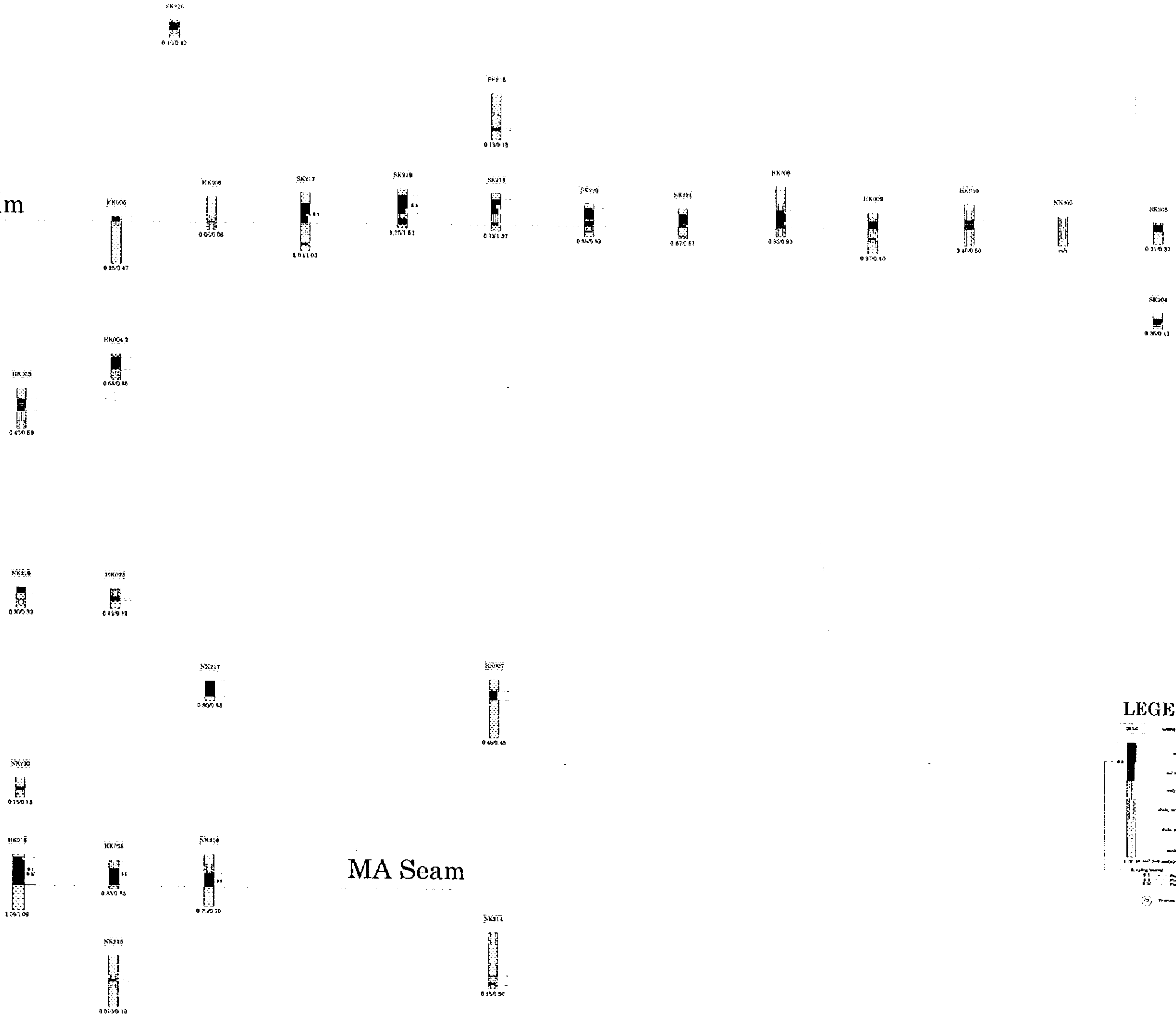


MC Seam

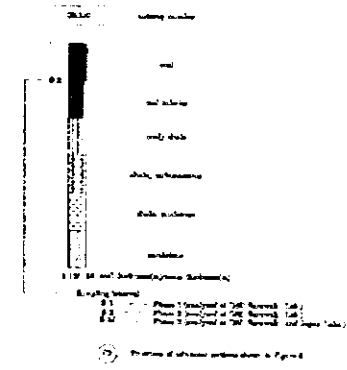
MC Seam

MA Seam

MA Seam



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