

## BRAMEDA RESOURCES LTD.

## SUKUNKA COAL TESTING

SEAM: CHAMBERLAIN

COAST ELDRIDGE

COMMERCIAL TESTING &amp; ENGINEERING

| HOLE NO. | SAMPLE NO. | FROM   | TO       | WIDTH FT. | REC. FT. | TOTAL MOISTURE                     | SURFACE MOISTURE | INHERENT MOISTURE | ASH%  | VOLATILE | FIXED CARBON | B.T.U. AIR DRY | SULPHUR % | F.S.I | WEIGHT LBS. |
|----------|------------|--------|----------|-----------|----------|------------------------------------|------------------|-------------------|-------|----------|--------------|----------------|-----------|-------|-------------|
| S-1      | S-012      | 432.0  | 437.1    | 5.1       | 4.5      | 3.24                               | 2.57             | 0.70              | 3.45  | 25.05    | 70.80        | 15,220         | 0.38      | 8.0   |             |
| S-2      | (a)        | 100.7  | 129.5    | 28.8      | 14.0     | Analysed in Japan                  | -                | 0.90              | 7.40  | 25.90    | 65.80        | 14,300         | 0.34      | 3.5   |             |
|          | (b)        | 100.7  | 129.5    | 28.8      | 14.0     |                                    | -                | 1.12              | 7.90  | 24.02    | 66.96        | 14,800         | 0.57      | 8.0   |             |
| S-4      | S-041      | 54.0   | 63.2     | 9.2       | 6.5      | 1.83                               | 1.29             | 0.55              | 8.65  | 22.78    | 68.02        | 14,546         | 0.48      | 5.0   |             |
| S-5      | S-052      | 512.7  | 521.8    | 9.1       | 8.0      | 3.16                               | 2.70             | 0.47              | 6.90  | 19.66    | 72.97        | 14,970         | 0.64      | 6.0   |             |
| S-6      | CH-6       | 912.7  | 917.4    | 4.7       | 2.0      | 2.43                               | -                | 0.66              | 4.63  | 22.26    | 72.45        | 14,741         | 0.31      | 5.5   |             |
| S-8      | S-081      | 141.5  | 146.1    | 4.6       | 4.6      | 2.92                               | 2.17             | 0.77              | 3.50  | 24.28    | 71.45        | 15,095         | 0.52      | 7.5   | 6.75        |
| S-11     | S-11-2     | 275.0  | 283.0    | 8.0       | 6.0      | 1.48                               | 1.11             | 0.37              | 6.85  | 24.13    | 69.65        | 14,870         | 0.47      | 6.5   |             |
| S-12     | S-12-1     | 444.5  | 453.0    | 8.5       | 8.5      | 1.92                               | 1.53             | 0.40              | 4.95  | 23.45    | 71.20        | 15,269         | 0.46      | 8.5   | 13.0        |
| S-13     | S-13-1     | 369.5  | 381.0    | 11.5      | 11.5     | 1.64                               | 1.13             | 0.52              | 5.65  | 24.23    | 69.60        | 15,170         | 0.47      | 7.5   | 26.5        |
| S-14     | S-14-1     | 246.0  | 257.0    | 11.0      | 6.0      | 3.44                               | 3.00             | 0.45              | 8.0   | 24.80    | 66.75        | 14,696         | 0.52      | 7.0   | 6.5         |
| S-15     | S-15-1     | 229.0  | 237.5    | 8.5       | 8.0      | 1.92                               | 1.50             | 0.43              | 6.55  | 22.25    | 70.77        | 14,970         | 0.45      | 7.0   | 9.0         |
|          |            |        |          |           |          |                                    |                  |                   |       |          |              |                |           |       |             |
| S-16     | B-16-1     | 1258.0 | 1273.0 ? | 10 +      | -4.0     | 1.50 Core broken                   |                  | 0.78              | 10.33 | 21.40    | 67.49        | 13,736         | 0.33      | 6.0   | 3.386       |
| S-17     | A-17-1     | 276.0  | 283.0    | 7.0       | 7.0      | 0.89                               |                  | 0.89              | 4.68  | 25.25    | 69.18        | 14,663         | 0.34      | 8.5   | 9.524       |
| S-18     | A-18-1     | 282.5  | 292.0    | 9.5       | 9.5      | 0.93                               |                  | 0.75              | 4.73  | 23.72    | 70.80        | 14,668         | 0.46      | 7.5   | 11.764      |
| S-19     | A-19-2     | 157.0  | 162.5    | 5.0+      | 5.0      | 1.51                               |                  | 0.74              | 3.68  | 25.78    | 69.80        | 14,896         | 0.52      | 9.0   | 1.698       |
| S-20     | A-20-1     | 1238.0 | 1246.0   | 8.0       | 4.5      | 1.88                               |                  | 0.58              | 6.85  | 24.70    | 67.87        | 14,334         | 0.50      | 6.5   | 3.049       |
| S-21     | A-21-1     | 625.5  | 634.0    | 8.5       | 7.5      | 0.86                               |                  | 0.86              | 5.54  | 22.66    | 70.94        | 14,500         | 0.45      | 7.0   | 7.515       |
| S-22     | A-22-1     | 708.5  | 716.2    | 7.7       | 7.7      | 1.48                               |                  | 0.82              | 6.14  | 22.98    | 70.06        | 14,504         | 0.58      | 9.0   | 11.082      |
| S-23     |            |        |          |           |          | Chamberlain seam cut out by fault? |                  |                   |       |          |              |                |           |       |             |
| S-24     | A-24-1     | 909.5  | 918.0    | 8.5       | 8.5      | 1.13                               |                  | 0.99              | 4.47  | 23.06    | 71.48        | 14,759         | 0.37      | 8.0   | 6.188       |
| S-25     | A-25-1     | 1474.0 | 1482.0   | 8.5       | 8.5      | 0.87                               |                  | 0.74              | 4.11  | 24.04    | 71.11        | 14,845         | 0.35      | 8.5   | 5.090       |

BRAMEDA RESOURCES LTD.  
SUKUNKA COAL TESTING

SEAM: CHAMBERLAIN

- 2 -

| HOLE NO. | SAMPLE NO. | FROM   | TO     | WIDTH FT. | REC. FT. | FLOAT SINK | WEIGHT % | INHERENT MOISTURE | ASH%  | VOLATILE | FIXED CARBON | B.T.U. AIR DRY | SULPHUR % | F.S.1 | WEIGHT LBS. |
|----------|------------|--------|--------|-----------|----------|------------|----------|-------------------|-------|----------|--------------|----------------|-----------|-------|-------------|
| S-25     | CH-25      | 1474.0 | 1482.3 | 8.5       | 8.5      | Float      | 97.1     | 0.68              | 4.06  | 23.46    | 71.80        | 14,886         | 0.44      | 9.0   | 4.436       |
|          |            |        |        |           |          | Sink       | 2.9      | 0.54              | 41.35 |          |              |                | 0.56      |       |             |
| S-26     | CH-26      | 1369.5 | 1377.5 | 8.0       | 6.5      | Float      | 96.2     | 0.81              | 5.13  | 22.84    | 71.22        | 14,743         | 0.46      | 8.0   | 7.579       |
|          |            |        |        |           |          | Sink       | 3.8      | 0.94              | 47.60 |          |              |                | 0.72      |       |             |
| S-27A    | CH-27      | 1234.0 | 1243.0 | 9.0       | 9.0      | Float      | 96.5     | 0.82              | 4.11  | 22.25    | 72.82        | 14,911         | 0.48      | 9.0   | 13.490      |
|          |            |        |        |           |          | Sink       | 3.5      | 0.64              | 44.96 |          |              |                | 0.49      |       |             |
| S-28     | CH-28      | 1086.0 | 1095.5 | 9.5       | 9.5      | Float      | 97.1     | 0.78              | 4.80  | 22.01    | 72.41        | 14,793         | 0.43      | 8.5   | 12.374      |
|          |            |        |        |           |          | Sink       | 2.9      | 0.19              | 43.17 |          |              |                | 0.40      |       |             |
| S-29     | CH-29      | 1515.2 | 1525.0 | 9.8       | 9.5      | Float      | 99.0     | 0.78              | 4.18  | 22.70    | 72.34        | 14,933         | 0.41      | 9.0   | 12.989      |
|          |            |        |        |           |          | Sink       | 1.0      | 0.65              | 32.58 |          |              |                | 0.25      |       |             |
| S-30     | CH-30      | 1353.0 | 1375.2 | 22.2      | 21.0     | Float      | 98.3     | 0.90              | 4.54  | 22.19    | 72.37        | 14,813         | 0.43      | 8.0   | 24.381      |
|          |            |        |        |           |          | Sink       | 1.7      | 1.01              | 43.86 |          |              |                | 0.34      |       |             |
| S-31     | CH-31      | 1530.0 | 1545.0 | 15.0      | 2.0      | -          | -        | 1.02              | 7.04  | 22.83    | 69.11        | 14,272         | 0.39      | 9.0   | 2.154       |
|          |            |        |        |           |          |            |          |                   |       |          |              |                |           |       |             |
| S-32     | CH-32-1    | 1140.4 | 1145.4 | 5.0       | 5.0      | Float      | 95.5     | 0.94              | 5.12  | 22.57    | 72.37        | 14,661         | 0.31      | 4.5   | 6.501       |
|          |            |        |        |           |          | Sink       | 4.5      | 0.72              | 59.05 |          |              |                | 0.17      |       |             |
| S-32     | CH-32-2    | 1145.4 | 1155.0 | 9.6       | 8.7      | Float      | 95.3     | 0.97n             | 5.09  | 22.14    | 71.80        | 14,597         | 0.22      | 8.5   | 11.096      |
|          |            |        |        |           |          | Sink       | 4.7      | 0.81              | 53.47 |          |              |                | 0.10      |       |             |
| S-34     | CH-34      | 913.0  | 951.0  | 38.0      | 32.0     | -          | -        | 1.10              | 4.88  | 25.10    | 68.92        | 14,661         | 0.33      | 8.5   | 30.295      |
| S-35     | CH-35      | 1725.5 | 1733.5 | 8.0       | 7.0      | Float      | 93.1     | 1.00              | 5.10  | 22.32    | 71.58        | 14,667         | 0.48      | 9.0+  | 8.452       |
|          |            |        |        |           |          | Sink       | 6.9      | 0.76              | 51.14 |          |              |                | 0.61      |       |             |
| S-36     | CH-36      | 1203.5 | 1213.5 | 10.0      | 8.5      | Float      | 97.0     | 1.05              | 5.96  | 22.57    | 70.42        | 14,490         | 0.40      | 9.0   | 11.314      |
|          |            |        |        |           |          | Sink       | 3.0      | 0.80              | 60.56 |          |              |                | 0.21      |       |             |

- 3 -

CHAMBERLAIN

[illegible]

BRAMEDA RESOURCES LTD. \*Shale partings included - analyses  
SUKUNKA COAL TESTING by Coast Eldridge. Other samples,  
shale partings over 1" omitted.

\*Shale partings included - analyses  
by Coast Eldridge. Other samples,  
shale partings over 1" omitted,  
analysed by C. T. & E.

SEAM: SKEETER

[illegible]

# SUKUNKA COAL TESTING

**SEAM:** COMMOTION SEAM "A"

[illegible]

## BRAMEDA RESOURCES LIMITED

## SUKUNKA COAL TESTING

## CHAMBERLAIN SEAM

(All analyses except for S-2 by Warnock  
Hersey-Coast Eldridge, Vancouver, B.C.)

| Hole No. | Sample No. | From  | To    | Feet | Recovery Feet | Weight (lb)          | Total Moisture As Received | Surface Moisture | Inherent Moisture | Ash % | Volat. | Fixed C | B.T.U. Air Dry | S %  | F.S.I. |
|----------|------------|-------|-------|------|---------------|----------------------|----------------------------|------------------|-------------------|-------|--------|---------|----------------|------|--------|
| S-1      | S-012      | 432.0 | 437.1 | 5.1  | 4.5           |                      | 3.24                       | 2.57             | 0.70              | 3.45  | 25.05  | 70.80   | 15,220         | 0.38 | 8.0    |
| S-2      | (a)        | 100.7 | 129.5 | 28.8 | 14.0          | Analysed<br>in Japan |                            | -                | 0.90              | 7.40  | 25.90  | 65.80   | 14,300         | 0.34 | 3.5    |
|          | (b)        | 100.7 | 129.5 | 28.8 | 14.0          |                      |                            | -                | 1.12              | 7.90  | 24.02  | 66.96   | 14,800         | 0.57 | 8.0    |
| S-4      | S-041      | 54.0  | 63.2  | 9.2  | 6.5           |                      | 1.83                       | 1.29             | 0.55              | 8.65  | 22.78  | 68.02   | 14,546         | 0.48 | 5.0    |
| S-5      | S-052      | 512.7 | 521.8 | 9.1  | 8.0           |                      | 3.16                       | 2.70             | 0.47              | 6.90  | 19.66  | 72.97   | 14,970         | 0.64 | 6.0    |
| S-8      | S-081      | 141.5 | 146.1 | 4.6  | 4.6           | 6.75                 | 2.92                       | 2.17             | 0.77              | 3.50  | 24.28  | 71.45   | 15,095         | 0.52 | 7.5    |
| S-11     | S11-2      | 275.0 | 283.0 | 8.0  | 6.0           |                      | 1.11                       | 1.48             | 0.37              | 6.85  | 24.13  | 69.65   | 14,870         | 0.47 | 6.5    |
| S-12     | S12-1      | 444.5 | 453.0 | 8.5  | 8.5           | 13.0                 | 1.92                       | 1.53             | 0.40              | 4.95  | 23.45  | 71.20   | 15,269         | 0.46 | 8.5    |
| S-13     | S13-1      | 369.5 | 381.0 | 11.5 | 11.5          | 26.5                 | 1.64                       | 1.13             | 0.52              | 5.65  | 24.23  | 69.60   | 15,170         | 0.47 | 7.5    |
| S-14     | S14-1      | 246.0 | 257.0 | 11.0 | 6.0           | 6.5                  | 3.44                       | 3.00             | 0.45              | 8.0   | 24.80  | 66.75   | 14,696         | 0.52 | 7.0    |
| S-15     | S15-1      | 229.0 | 237.5 | 8.5  | 8.0           | 9.0                  | 1.92                       | 1.50             | 0.43              | 6.55  | 22.25  | 70.77   | 14,970         | 0.45 | 7.0    |
| S-16     |            |       |       |      |               |                      |                            |                  |                   |       |        |         |                |      |        |
| S-17     |            | 276.0 | 283.0 | 7.0  | 7.0           |                      |                            |                  |                   |       |        |         |                |      |        |
| S-18     |            | 282.5 | 292.0 | 9.5  | 9.5           |                      |                            |                  |                   |       |        |         |                |      |        |

DATE STARTED : February 18, 1970

CO-ORDINATES

DATE COMPLETED : March 1, 1970

NORTH EAST WEST ELEVATION

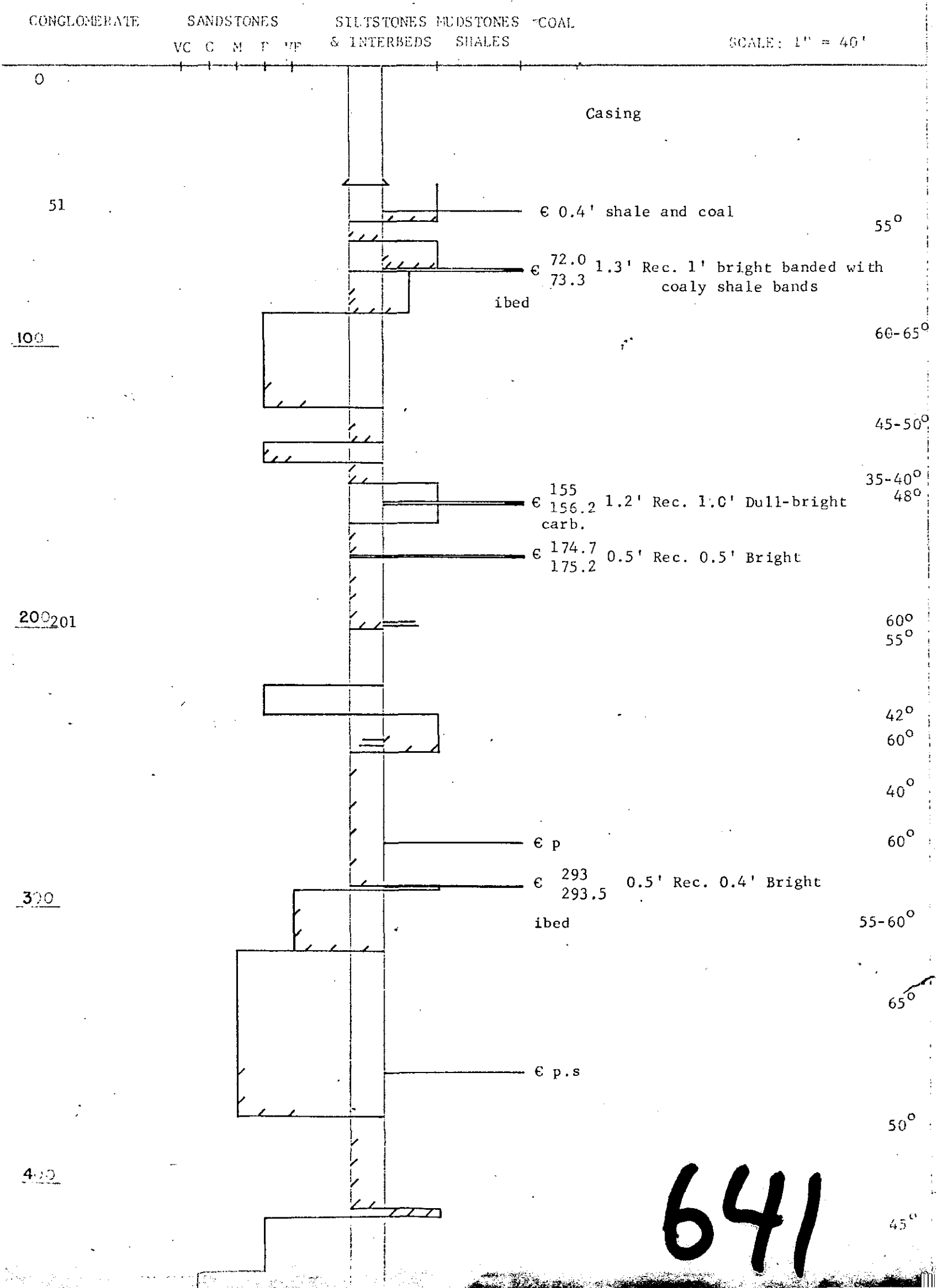
LOGGED BY : N. Nambu

PRELIMINARY

Rocky Creek

DRAWN BY : R.E.S.

FINAL



641

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

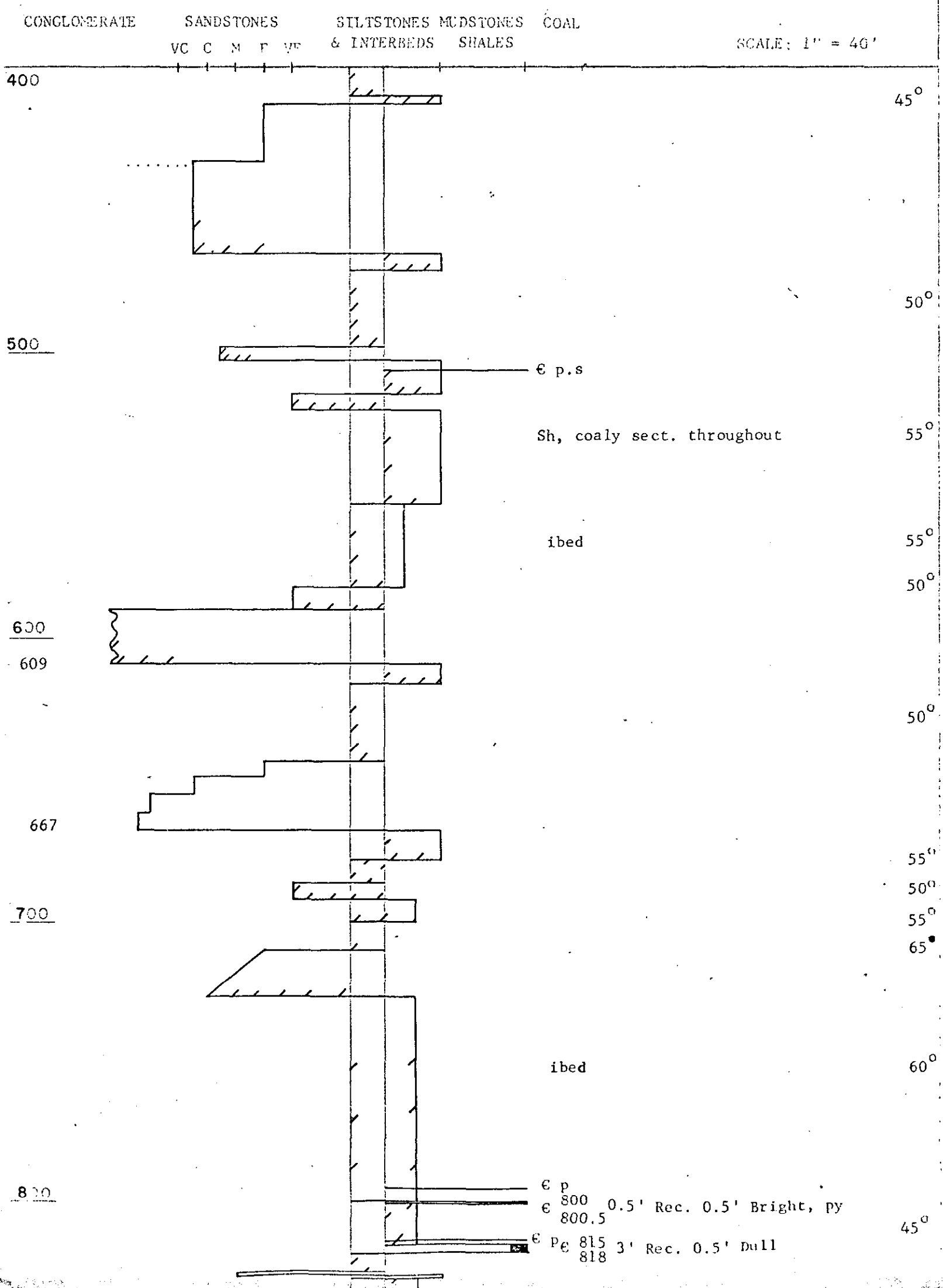
NORTH EAST WEST ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

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11. 10. 11. 12. 13.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

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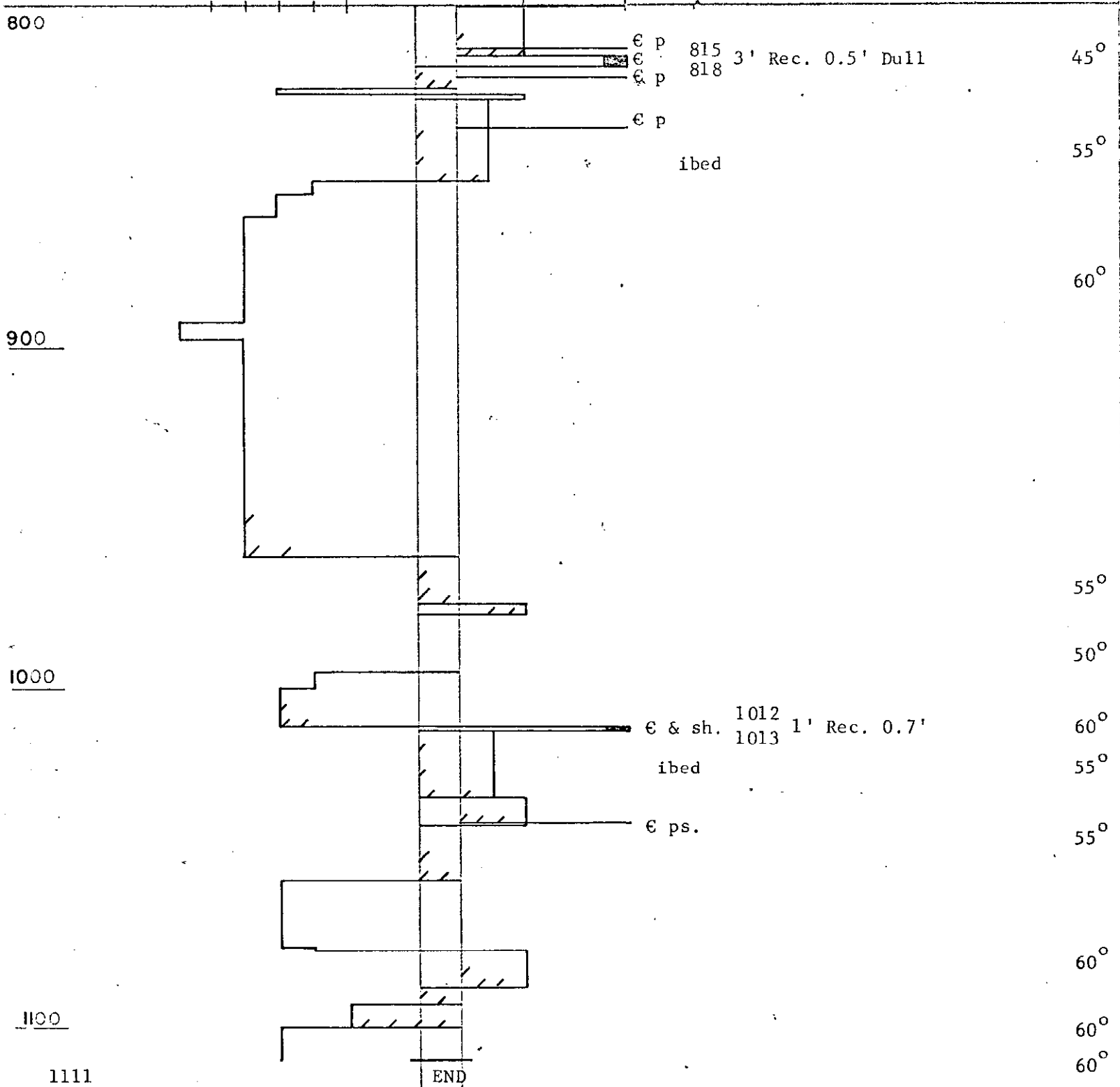
PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



COAL LICENCE : 1079

DATE : 1953

BY : J.E.H.

BY : J.E.H.

BY : L.B.

FINAL

4100'

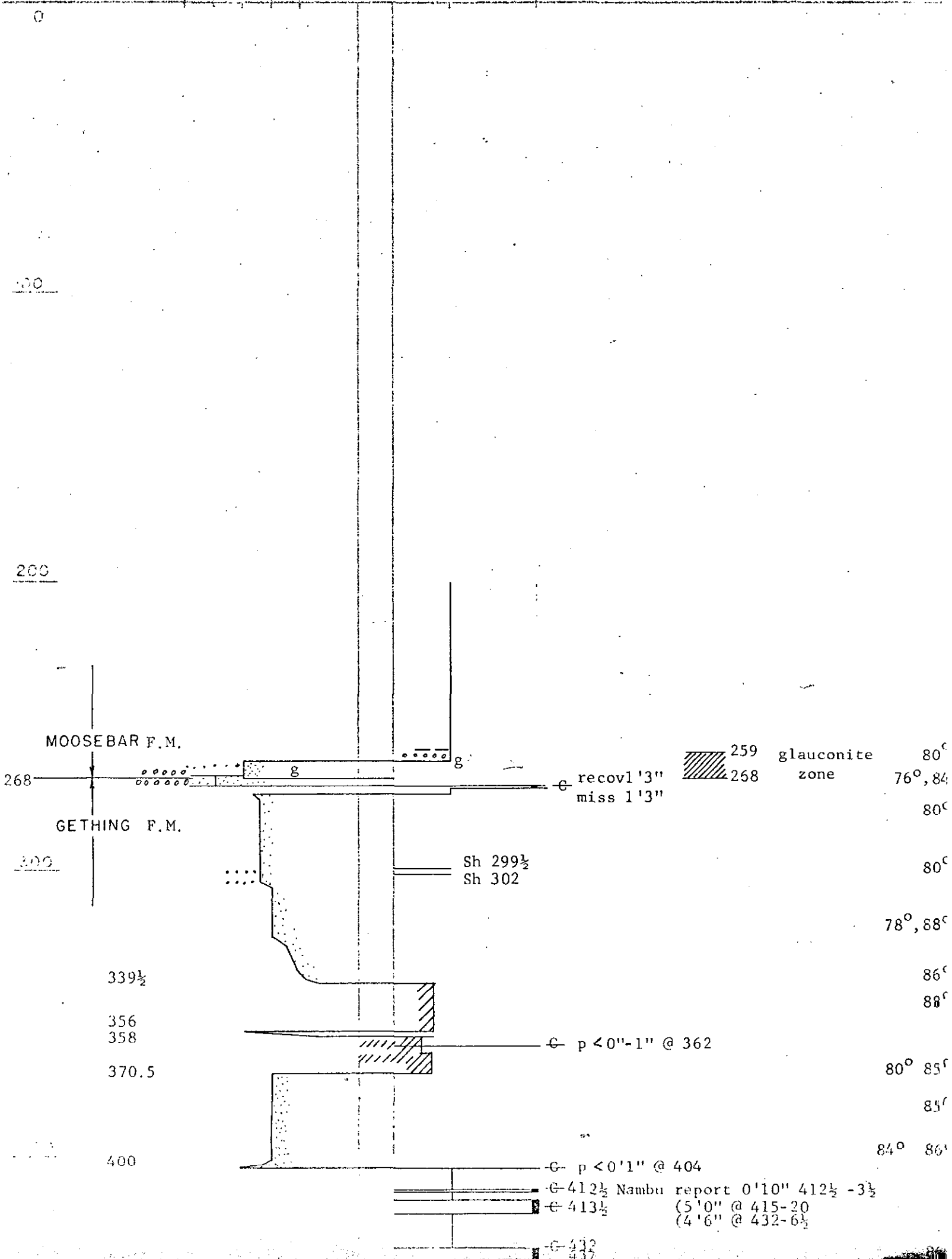
48,639.42 78,477.80 4147.3'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL

VC C H F W

& Interbeds. STRIPS

SCALE: 1" = 40'



WELL NO. :

CO-ORDINATES

DATE COMPLETED :

WELL

EAST

NORTH

DEPTH

LOGGED BY : J.E.H.

PRELIMINARY

4100'

DRAWN BY : L.B.

WELL

48,639.42

78,477.80

4147.3'

CONGLOMERATE

SANDSTONES

SILTSTONES MIDSTONES

COAL

SCALE: 1" = 40'

VC C M F W

Interbeds SHALES

400

437

G 432

G 437

84°

Sh 453

G 0"-7" @ 459

86°

85°

500

500

507

515

86°

Total Depth

600

700

8 0

COAL LICENCE : 1087

DATE : November 8, 1969

DATE COMPLETED : November 26, 1969

PREPARED BY : J.E.H.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

73,550

123,550

3500'

DESIGNED BY : L.B.

FINAL

39,027.64

82,570.80

3498.7'

CONGLOMERATE

SANDSTONES

SILTSTONES MIDSTONES

COAL

SCALE: 1" = 40'

VC C V F VP

Interbeds

SHALES

0

12

GETTING FM.

Casing

60°

66°, 68°, 45°, 15°, 0°

0°, 70°

70°

80°

75°

100

104

104

miss 3'3"  
-G Recov. 14'0"  
miss 9'0"  
miss 2'6"

127

142

80°

84°

85°

85°

174

85°

200

195

(Sh thin i-beds  
to 2")

85°

83°

80°

78°

265

85°

300

324

324

325 g

342½

80°, 84°

84°

369

386

C Fossil: shell band 386-7

390

393

g pyr

391'10"  
393'3"

DATE ST RLD : November 8, 1969

DATE COMPLETED : November 26, 1969.

LOGGED BY : J.E.H.

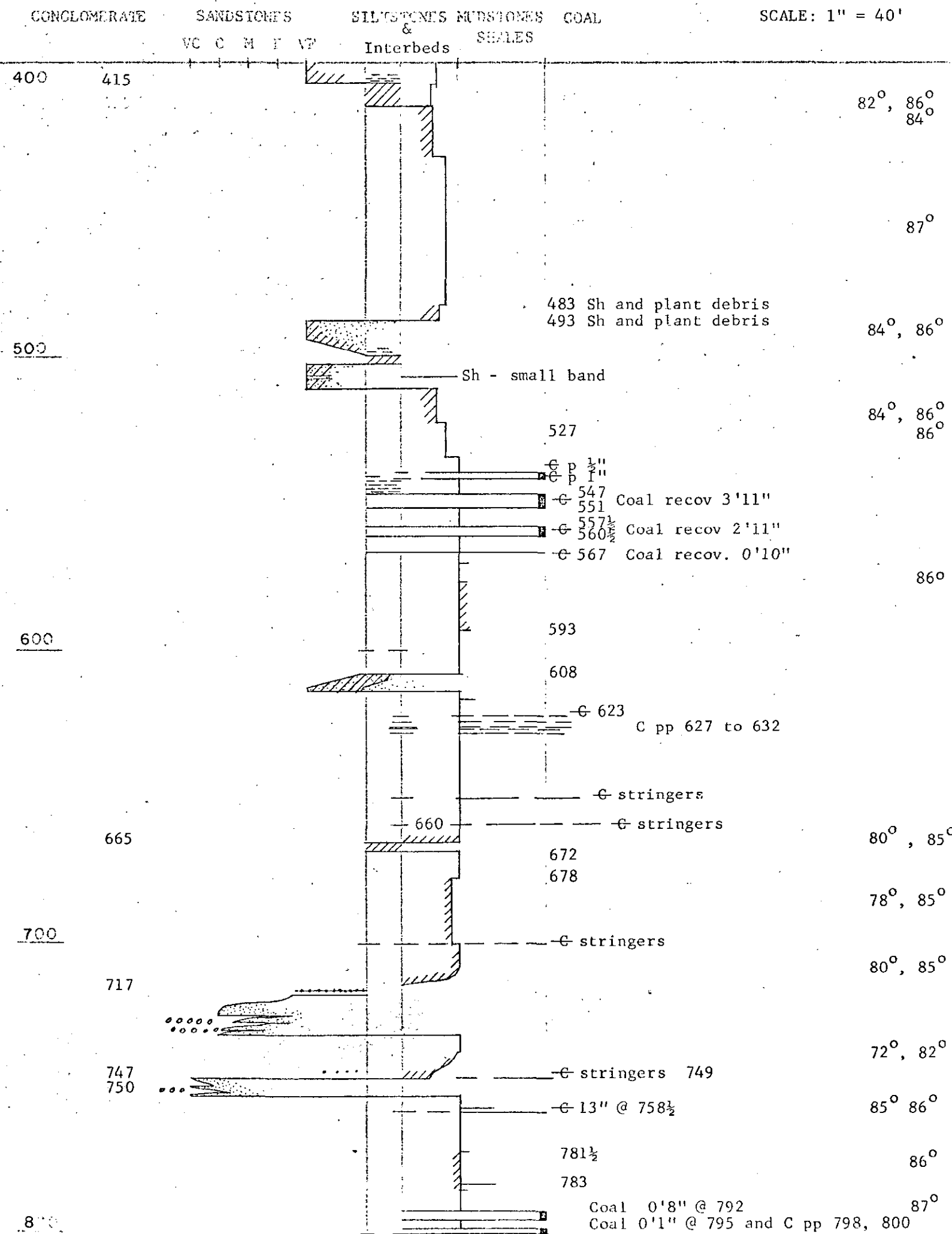
DRAWN BY : L.B.

PRELIMINARY

FINAL

CO-ORDINATES

| NORTH     | EAST      | ELEV    | SECTION |
|-----------|-----------|---------|---------|
| 73,550    | 123,550   | 3500'   |         |
| 39,027.64 | 82,570.80 | 3498.7' |         |



CO-ORDINATES

| NAME | EAST | WEST | FEEL | IGN |
|------|------|------|------|-----|
| 1    |      |      |      |     |
| 2    |      |      |      |     |
| 3    |      |      |      |     |
| 4    |      |      |      |     |
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| 96   |      |      |      |     |
| 97   |      |      |      |     |
| 98   |      |      |      |     |
| 99   |      |      |      |     |
| 100  |      |      |      |     |

## DECLARATION

73,550

123,550 .

3500'

## SIGN

39,027.64

82,570.80

3498.7'

## SANDSTONES

STILES, JONES MEDS POLS

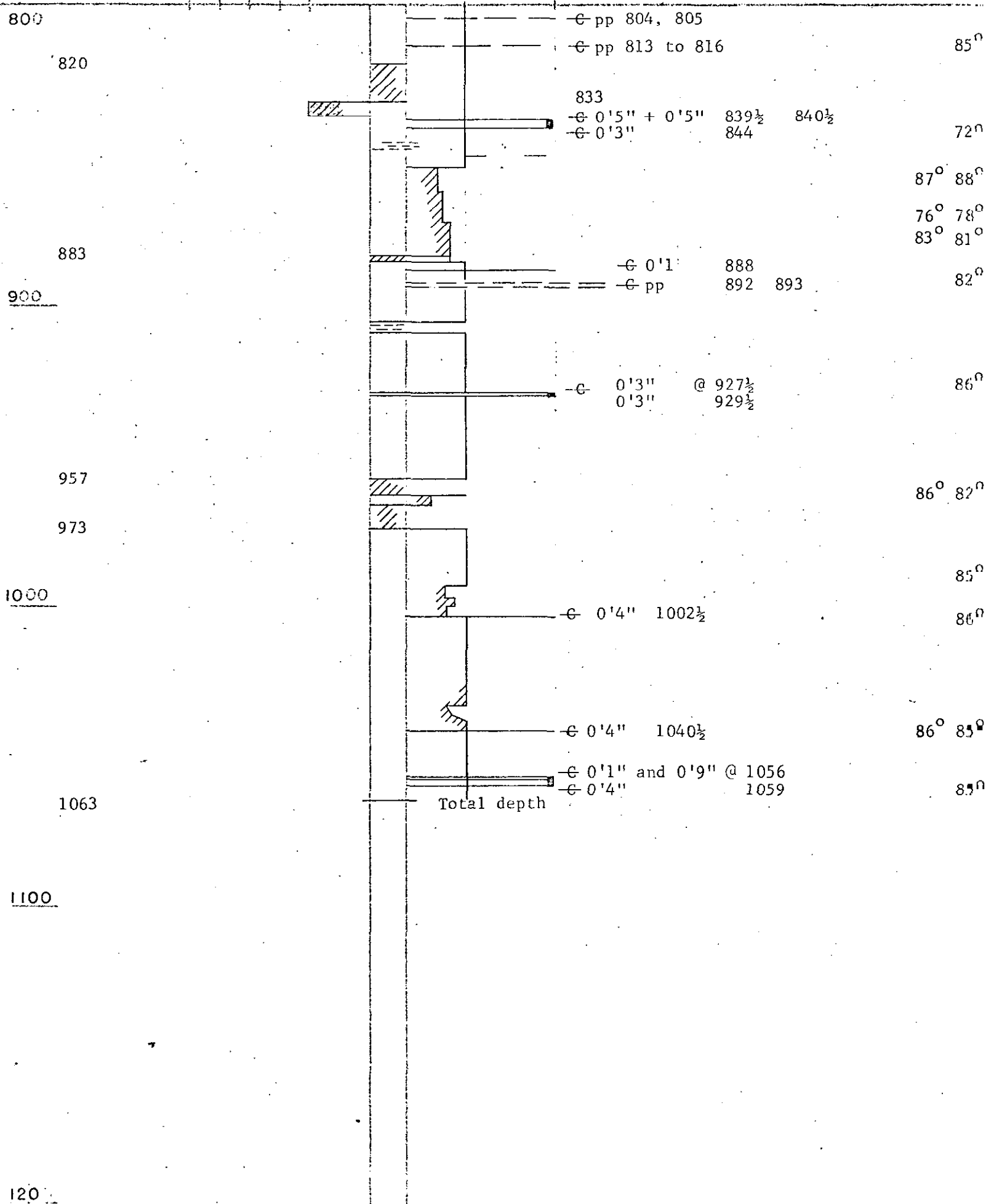
COAL.

SCALE: 1" = 40'

VC C M T FF

## & Interbeds

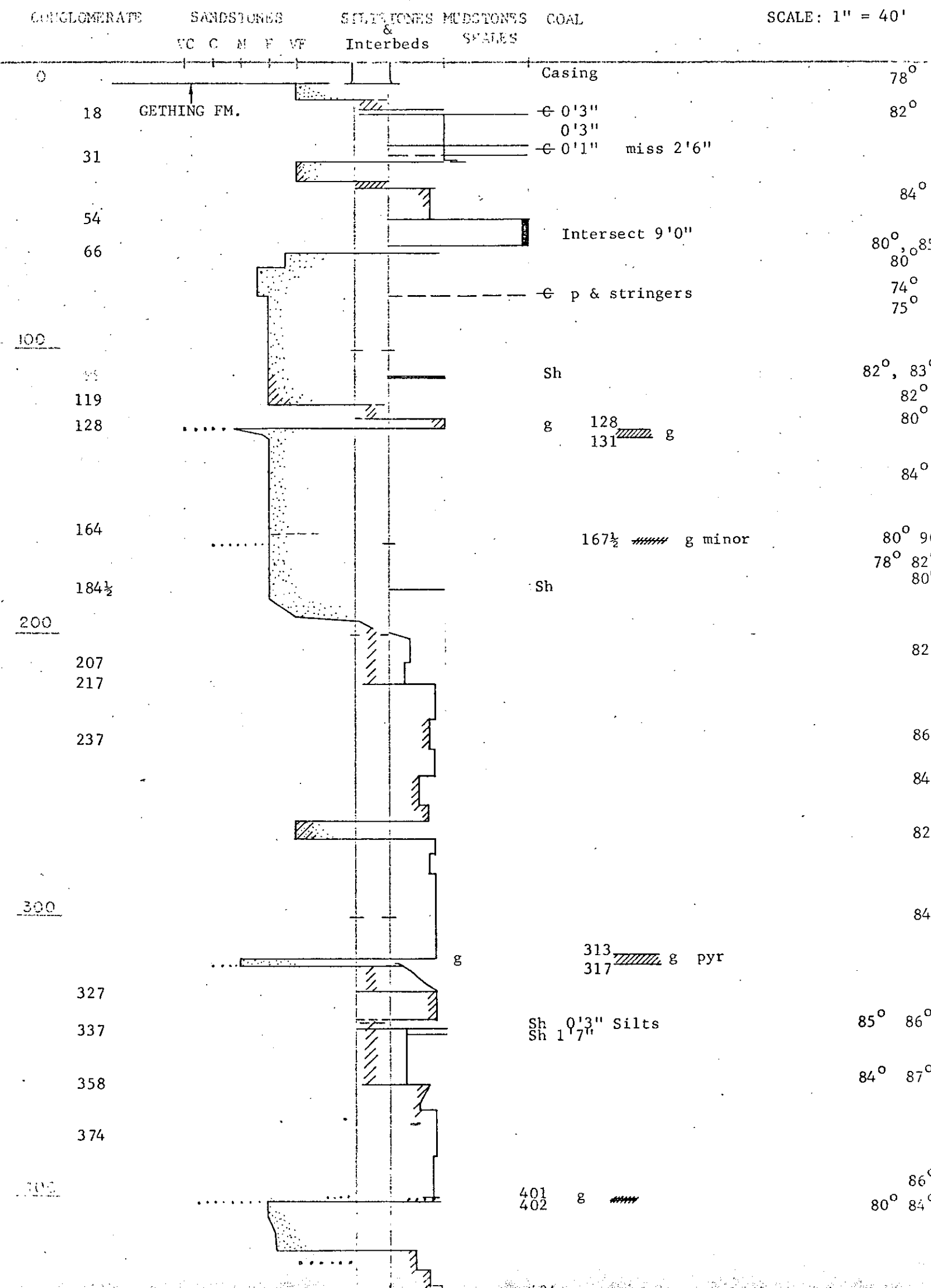
SP-1252



COAL LICENCE: 1088  
DATE RECORDED: November 27, 1969  
DATE EXTENDED: December 1, 1969  
PROPERTY: J.E.H.  
MEASURE: L.B.

PRELIMINARY  
FINAL

| CO-ORDINATES |           |         |           |
|--------------|-----------|---------|-----------|
| NORTH        | EAST      | WEST    | ALTIMETER |
| 73,260       |           | 119,835 | 3650'     |
| 39,138.17    | 86,456.21 |         | 3592.2'   |



DATE STARTED : November 27, 1969

DATE COMPLETED : December 1, 1969

REPORTED BY : J.E.H.

PRELIMINARY

REPORTED BY : L.B.

FINAL

COORDINATES

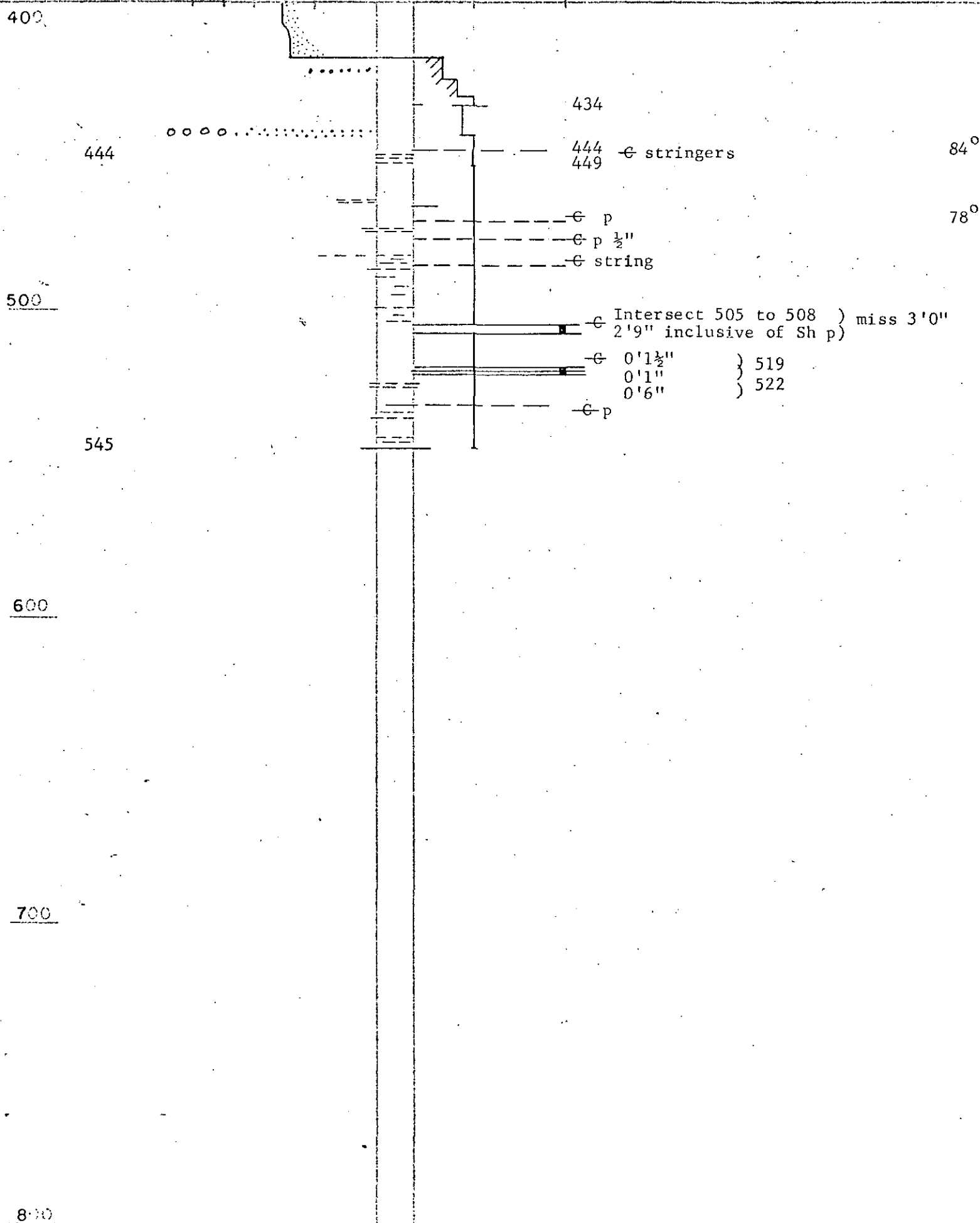
NORTH EAST WEST ELEVATION

73,260 119,835 3650'

39,138.17 86,456.21 3592.2'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & Interbeds SHALES

SCALE: 1" = 40'



COAL LICENCE: 1080

DATE: November 27, 1969

DATE: December 8, 1969.

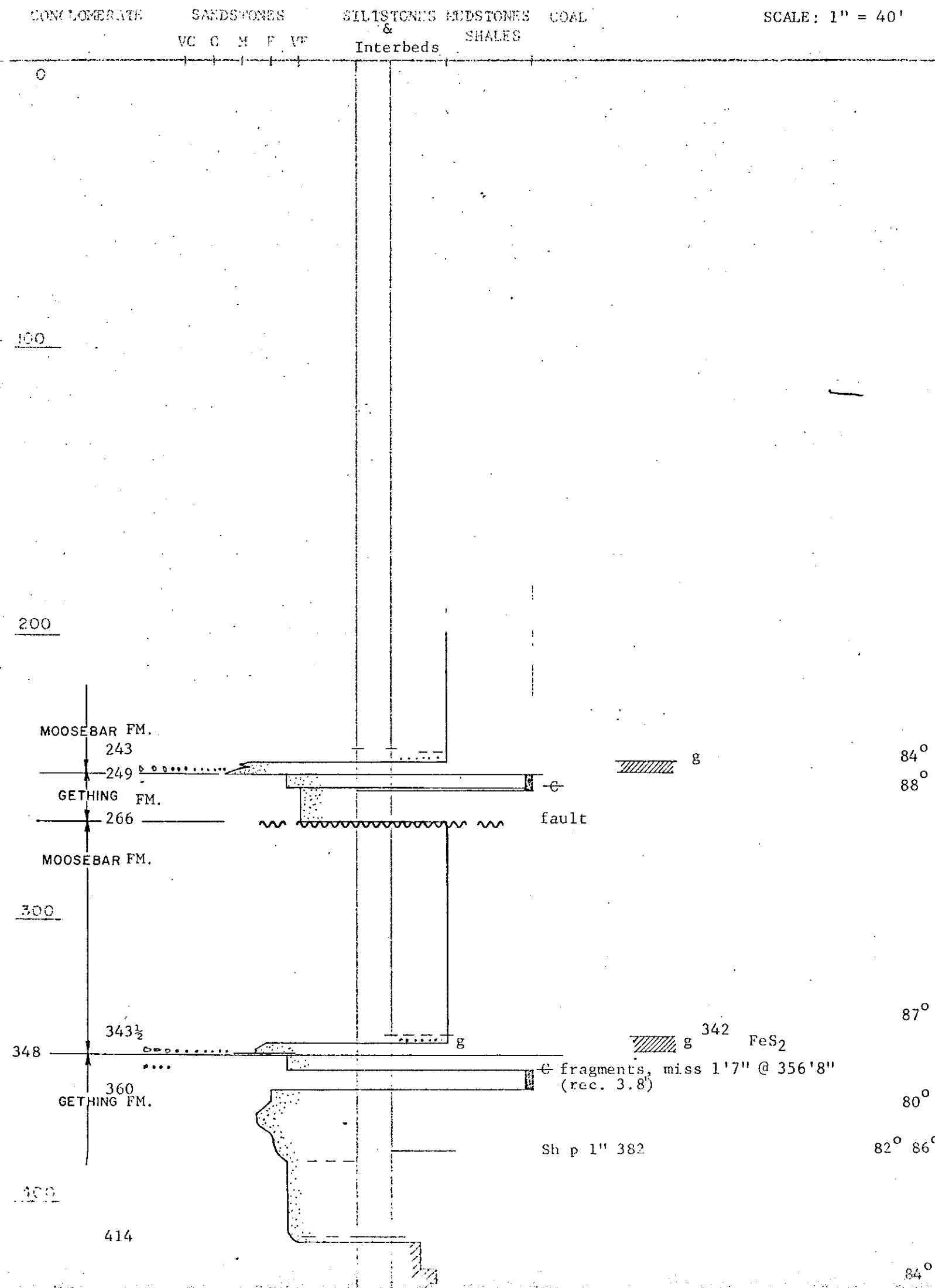
PREPARED BY: J.E.H.

APPROVED BY: L.B.

PRELIMINARY

FINAL

| COORDINATES |           |      |           |
|-------------|-----------|------|-----------|
| NORTH       | EAST      | WEST | ELEVATION |
| 80,920      |           |      | 4100'     |
| 46,406.04   | 85,663.51 |      | 4125.2'   |



DATE RECEIVED : November 27, 1969.

DATE COMPLETED : December 8, 1969.

WORKED BY : J.E.H.

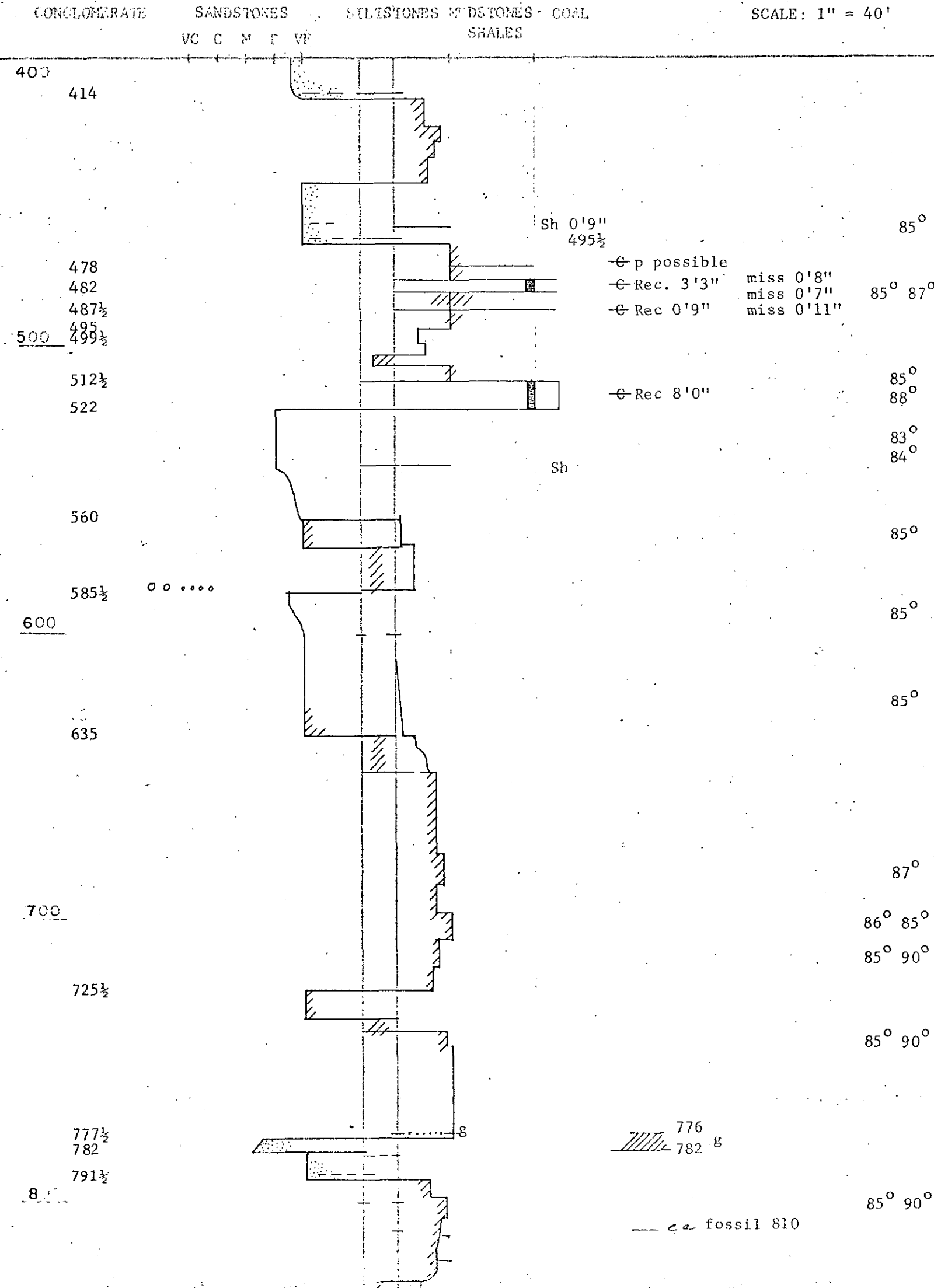
PRELIMINARY

WORKED BY : L.B.

FINAL

COORDINATES

| NORTH     | EAST      | WEST | ELEVATION |
|-----------|-----------|------|-----------|
| 80,920    |           |      | 4100'     |
| 46,406.04 | 85,663.51 |      | 4125.2'   |



DATE: November 27, 1969.

DATE: December 8, 1969.

NAME: J.E.H.

SPILLWAY

80,920

4100'

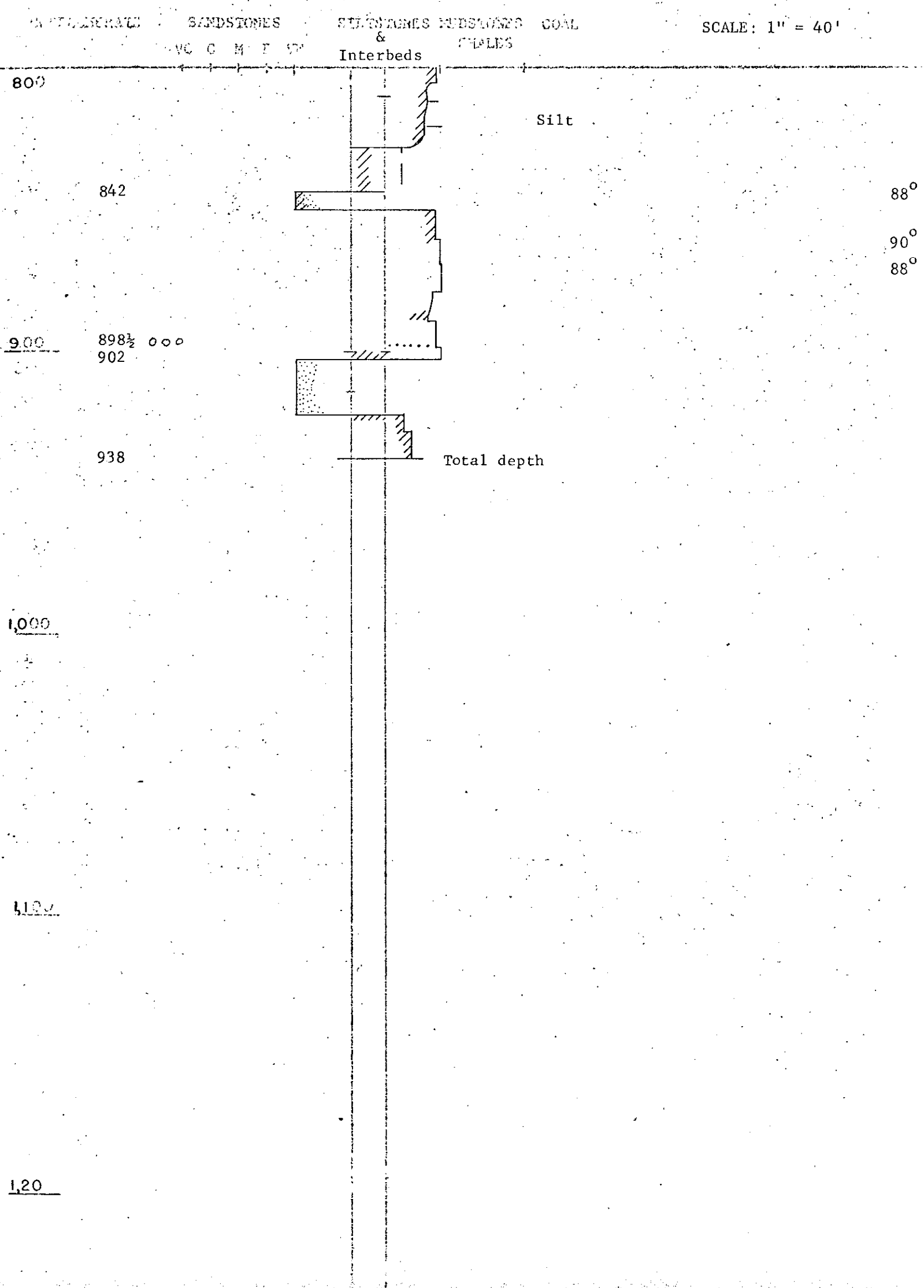
NAME: L.B.

REEL

46,406.04

85,663.51

4125.2'



COAL LICENCE: 1073

DATE: December 2, 1969

DATE: 1969

DRILLED BY: J.E.H.

DRILLER: L.B.

PRELIMINARY

FINAL

85,300

50,463.96

COORDINATES

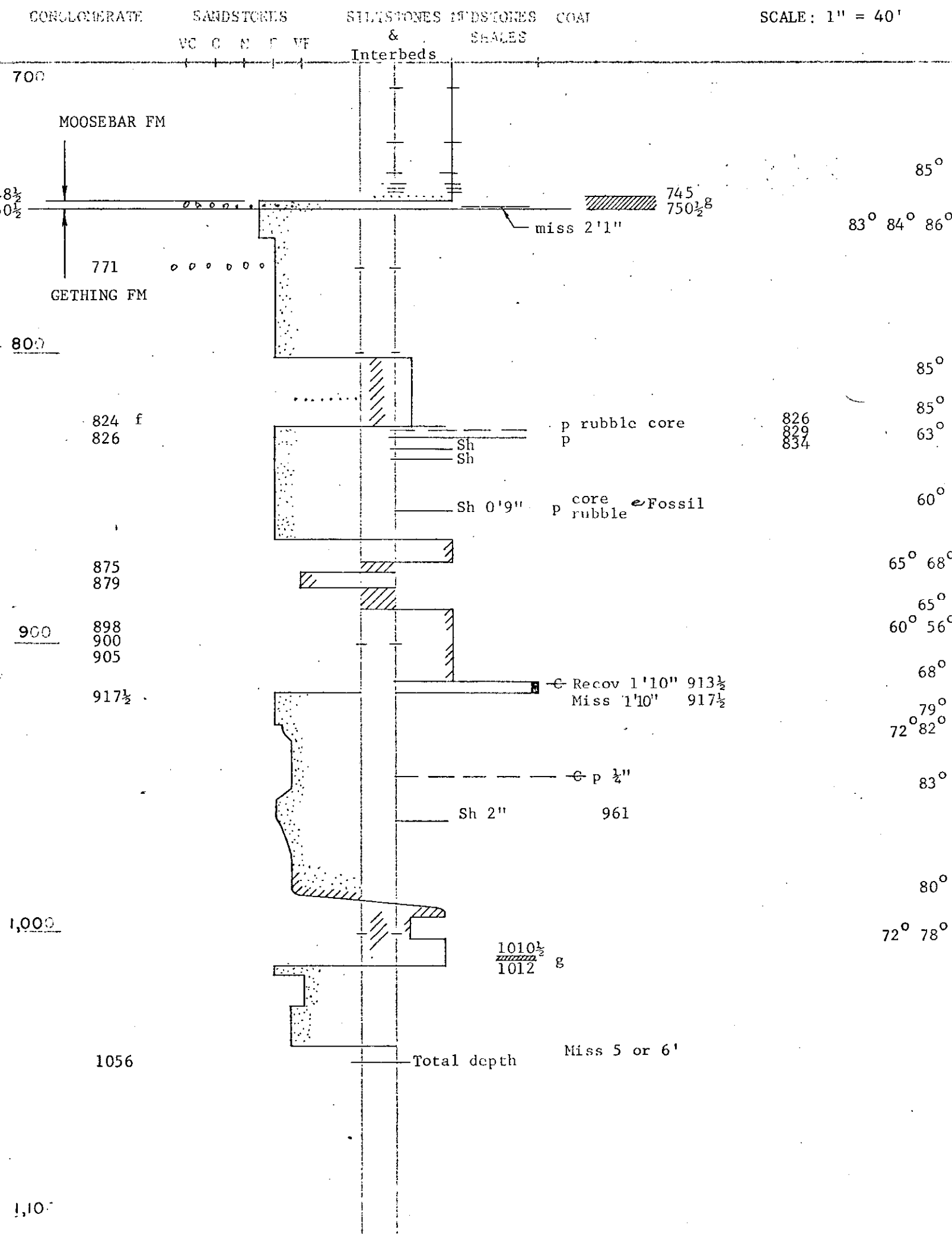
NORTH EAST WEST ELEVATION

117,950

86,724.64

4100'

4020.0'



COAL LICENCE: 1087

DATE: December 3, 1969

DATE: 1969

BY: J.E.H.

PRELIMINARY

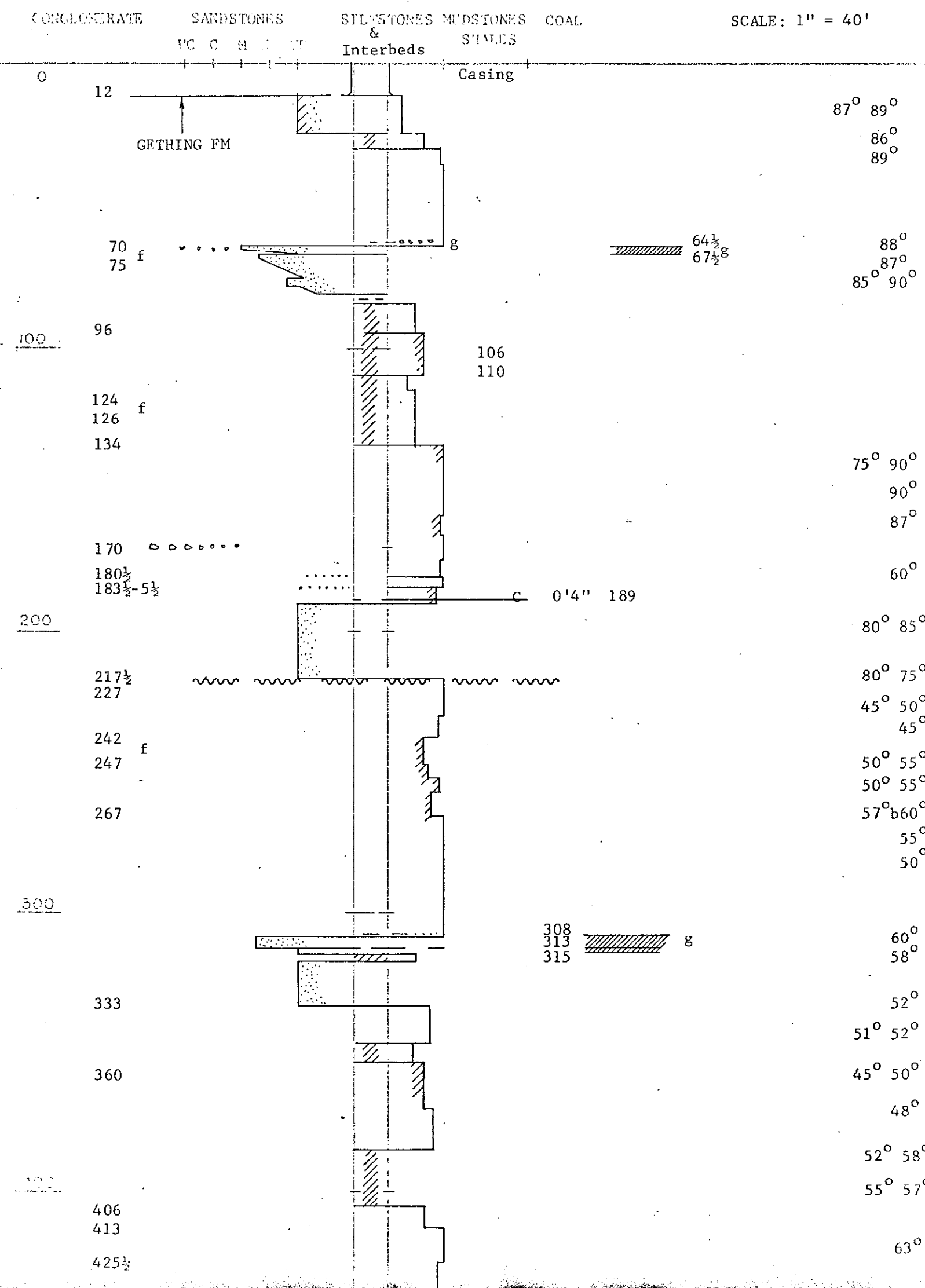
NORTH EAST WEST ELEVATION

78,290 127,750 3650'

BY: L.B.

FINAL

43,737.98 79,042.49 3644.8'



DATE: December 3, 1969.

PROJECT: COMPLETE

BY: J.E.H.

PRELIMINARY

78,290

127,750

3650'

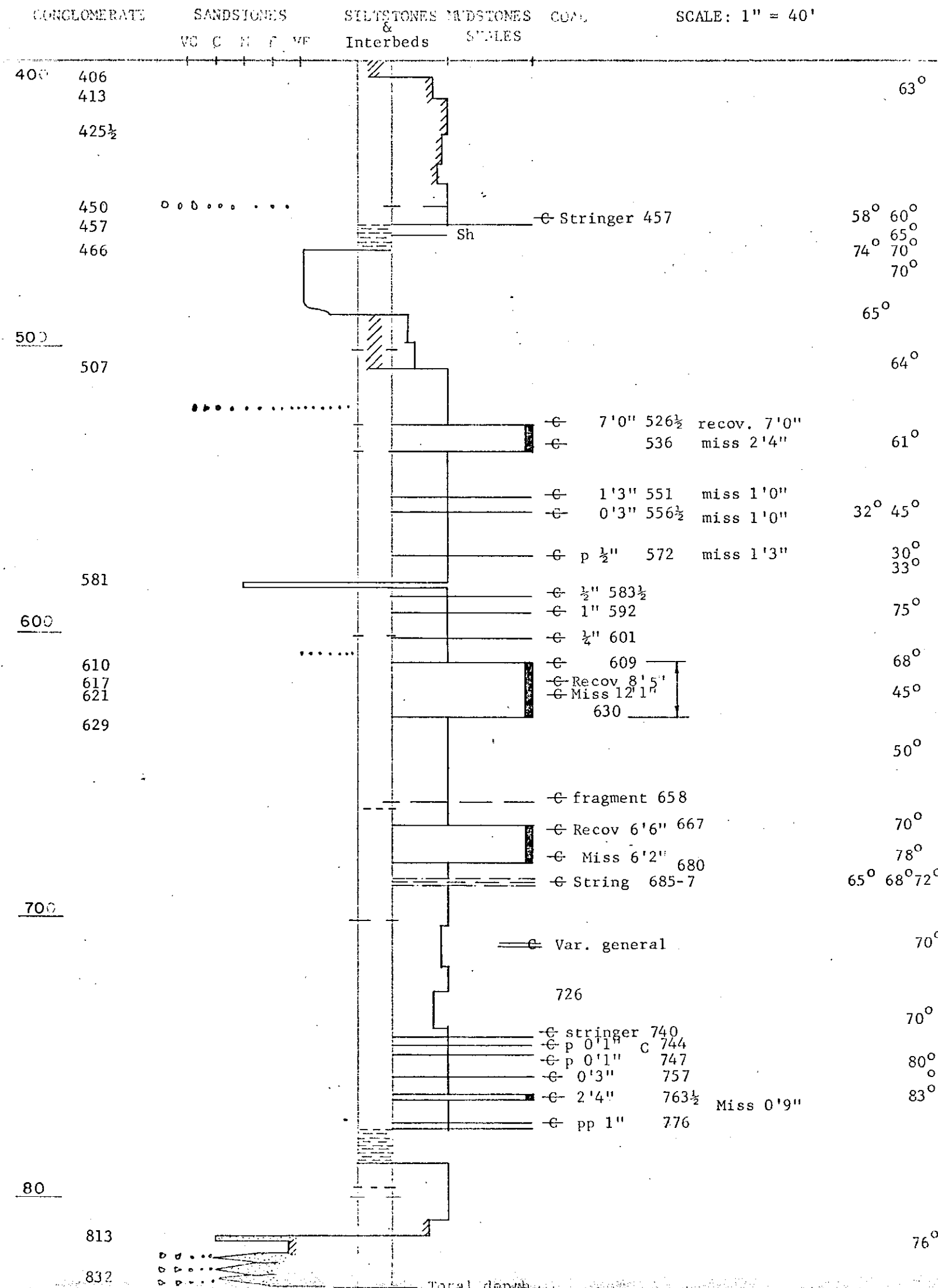
BY: L.B.

FINAL

43,737.98

79,042.49

3644.8'



COAL LICENCE : 1072

DATE STRUCK : December 11, 1969

DATE CORRECTED :

LOGGED BY : J.E.H.

DRAWN BY : L.B.

PRELIMINARY

FINAL

NORTH

84,420

TO ORIENTALS

EAST

128,260

WEST

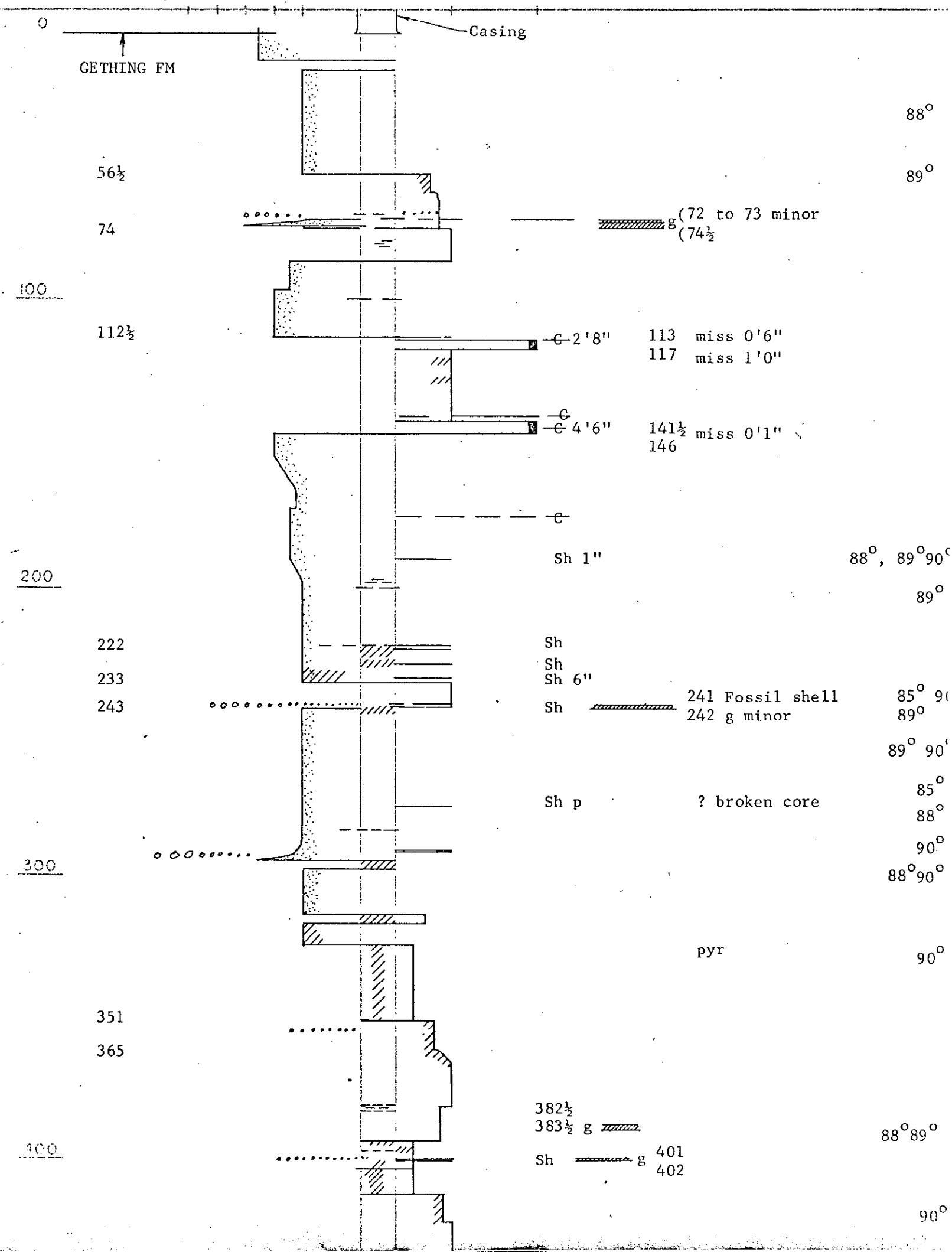
3950'

ELEVATION

3908.6'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F P Interbeds SHALES

SCALE: 1" = 40'



DATE OF LOG : December 11, 1969:

CO-ORDINATES

WELL COMPLETED :

LOGGED BY : J.E.H.

DEVELOPMENT

DEPTH

EAST

NUT.

ELEVATION

84,420

128,260

3950'

DRILLER : L.B.

FINAL

50,071.48

78,042.96

3908.6'

CONGLOMERATE

SANDSTONES

SILTSTONES

MUDSTONES

COAL

SCALE: 1" = 40'

VC C M F T

Interbeds

SILTUS

400

453

477

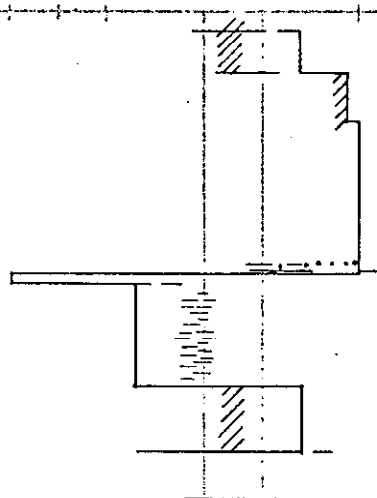
490

500

600

700

800



453  
455 1/2 8

90°

COAL LICENCE: 1072

DATE : 9 February 1970

DATE : 11 February 1970

BY : J.E.H.

BY : L.B.

CO-ORDINATES

PRELIMINARY

50,385

78,291

3806.0'

FINAL

CONGLOMERATE

SANDSTONES

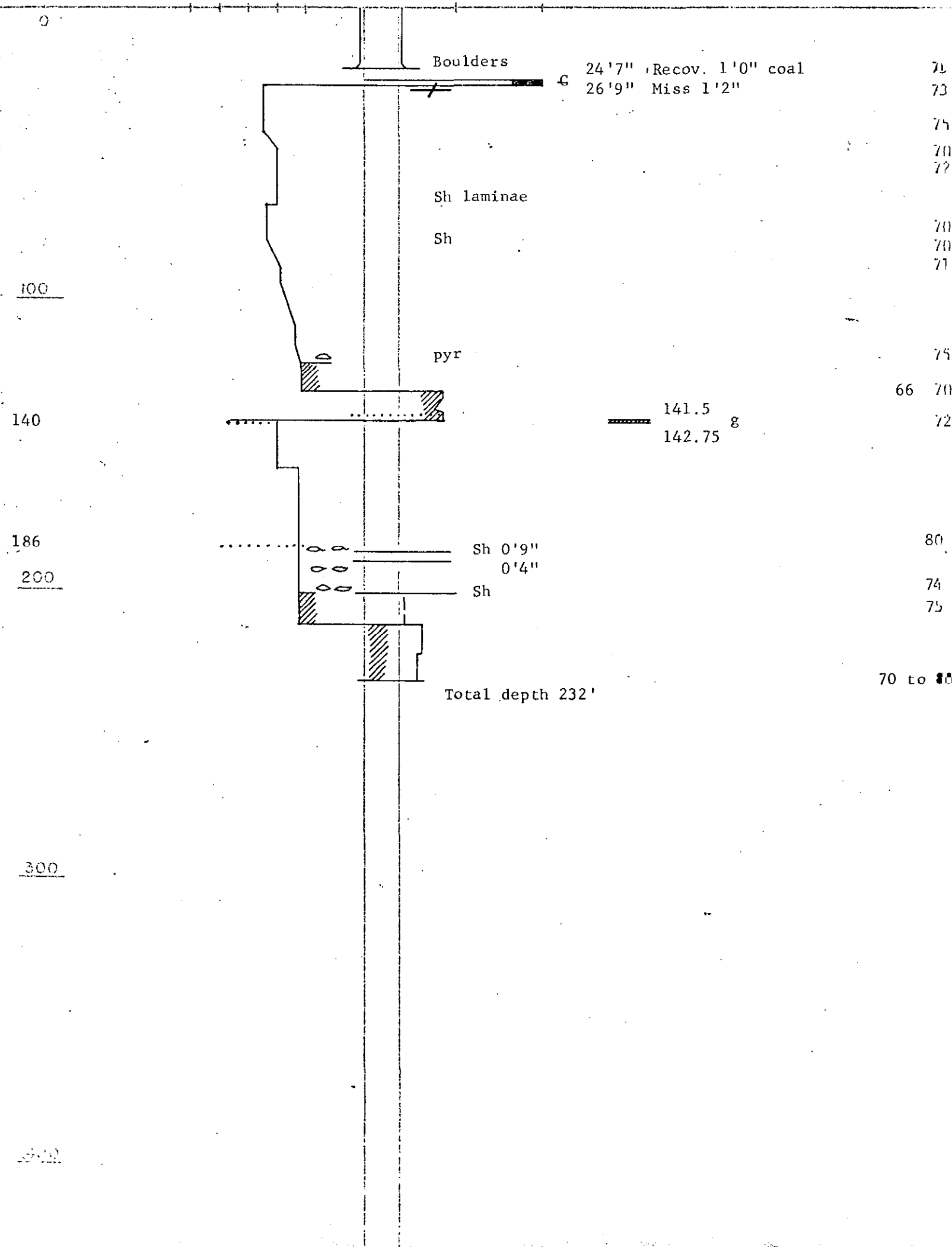
SILTSTONES MUDSTONES

COAL

VC C M F

& Interbeds SHALES

Scale : 1" = 40'



BRANEDA RESOURCES LIMITED  
SUKUNKA RIVER COAL PROJECT  
LIARD M.D., B.C.

D.D.H. S-11  
SHEET 2 of 2

DATE STARTED : February 20, 1970

CO-ORDINATES

DATE COMPLETED : February 22, 1970

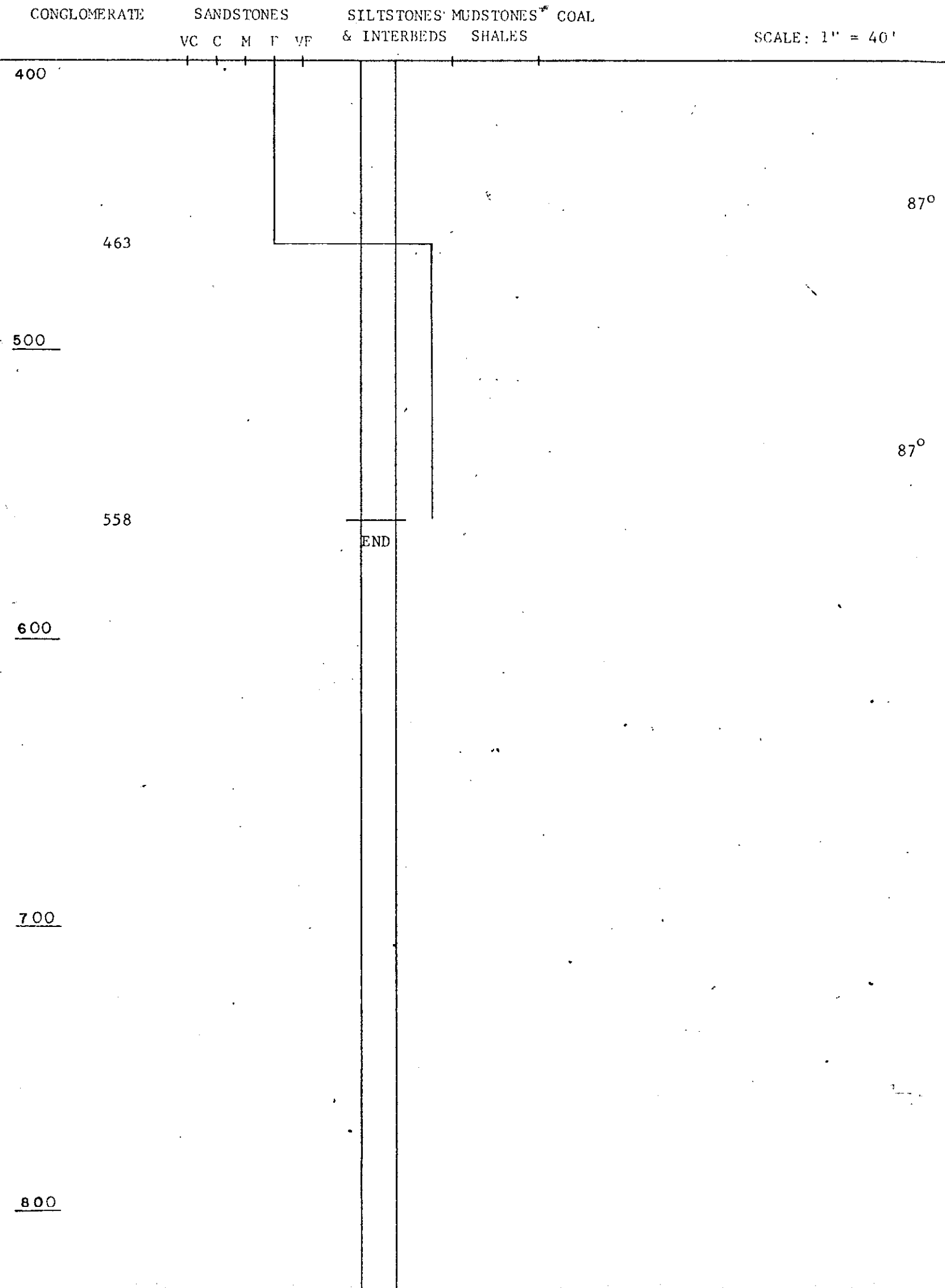
LOGGED BY : R.E S.

PRELIMINARY

| NORTH  | EAST   | WEST | ELEVATION |
|--------|--------|------|-----------|
| 39,160 | 90,505 |      | 4020'     |

DRAWN BY :

FINAL



LIARD M.D., B.C.

COAL LICENCE: 1089

DATE STARTED : February 20, 1970

CO-ORDINATES

DATE COMPLETED : February 22, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

39,160

90,505

4020'

DRAWN BY :

FINAL

39,091.90

90,509.30

4039.1

CONGLOMERATE

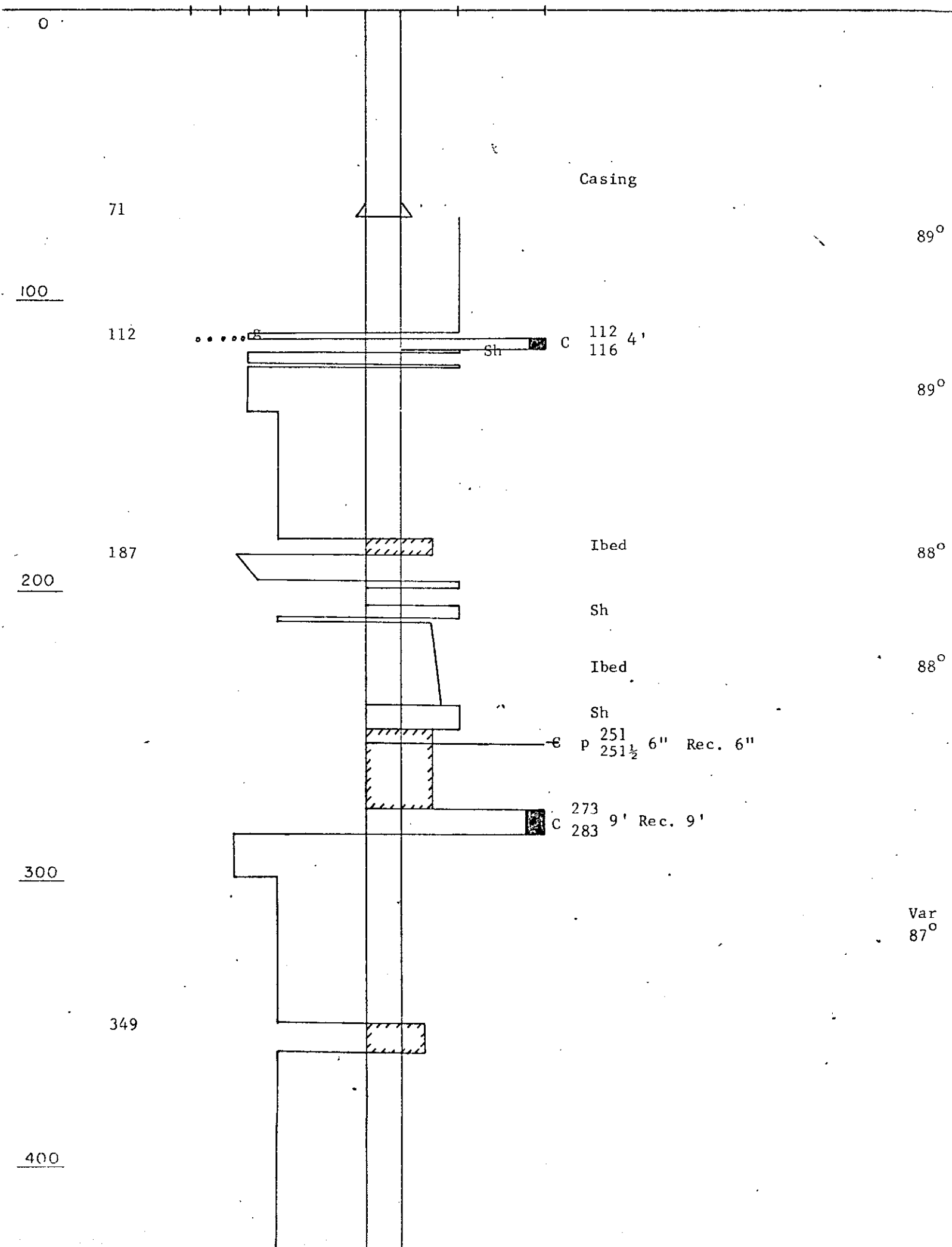
SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

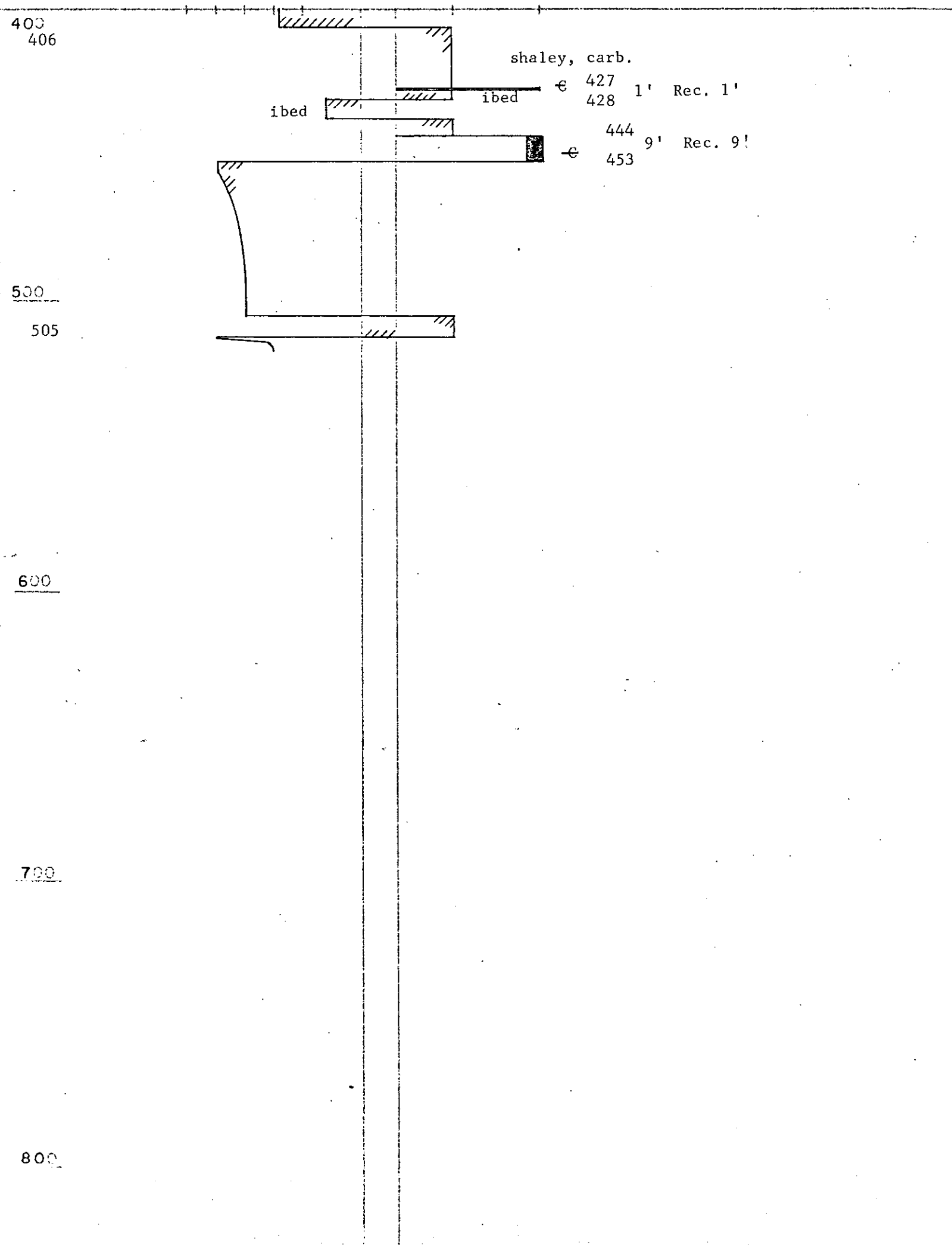
BOUNDED BY : R. Shields

PRELIMINARY

DRAWN BY : L.B.

FINAL

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL SHALES



COAL LICENCE: 1097  
DATE SURVEYED: 25 February 1970  
DATE COMPLETED: 5 March 1970

DRAWN BY: R. Shields

PRELIMINARY

COORDINATES  
NORTH EAST WEST ELEVATION

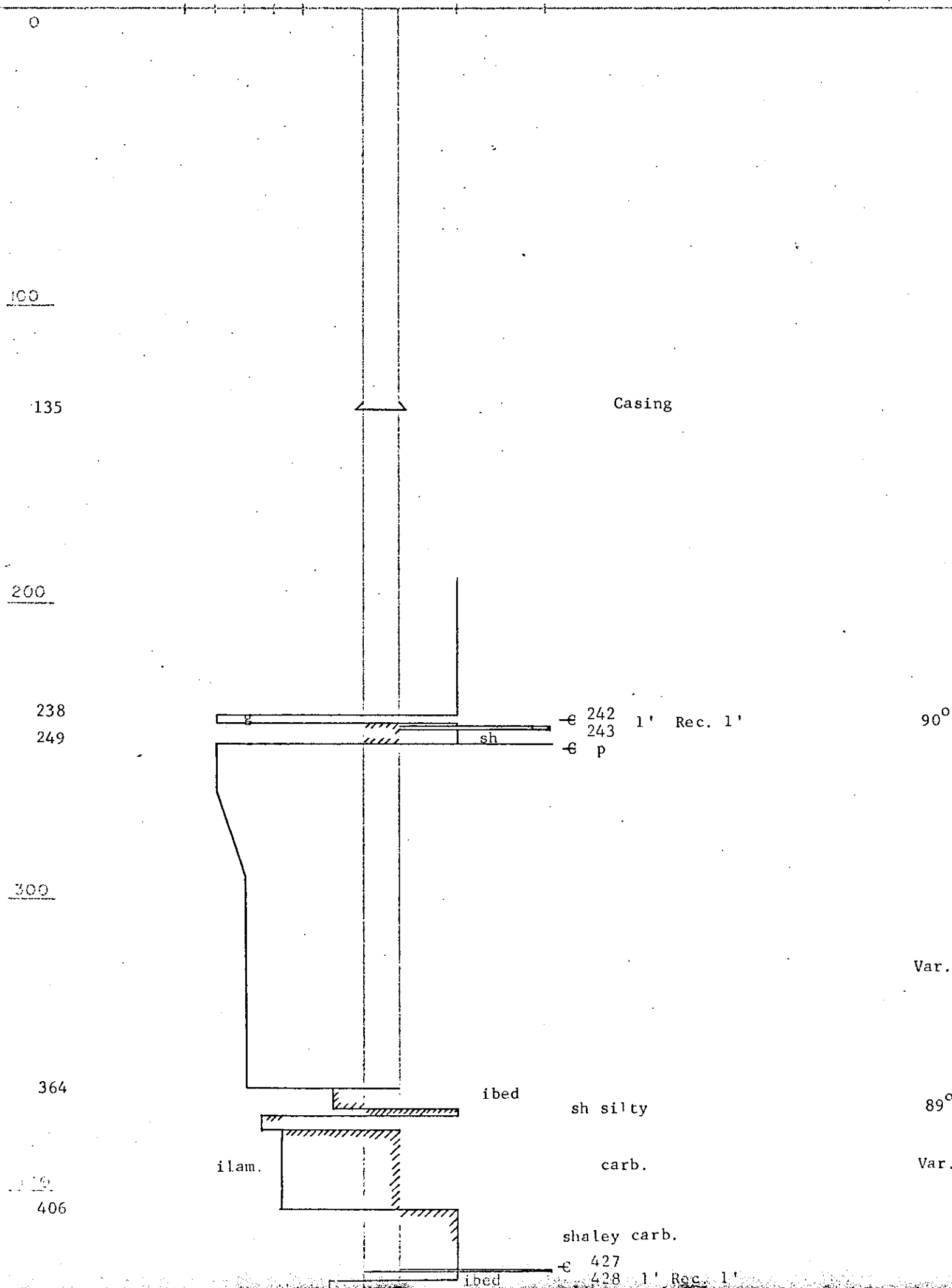
DRAWN BY: L B

FINAL

36,070 89,010 4120  
36,037.09 88,968.90 4170.6'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C S F W SHALES

Scale: 1" = 40'



BRAMIDA RESOURCES LIMITED  
SUKUNDA RIVER COAL PROJECT

D.D.H. S-13

SHEET 1 of 1

COAL LICENCE: 1097

LIARD M.D., B.C.

DATE STARTED : 8 March, 1970

CO-ORDINATES

DATE COMPLETED : 10 March 1970

LOGGED BY : R. Shields

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

DRAWN BY : L.B.

FINAL

38,180

88,630

3965

37,997.20

88,578.60

4021.0

CONGLOMERATE

SANDSTONES

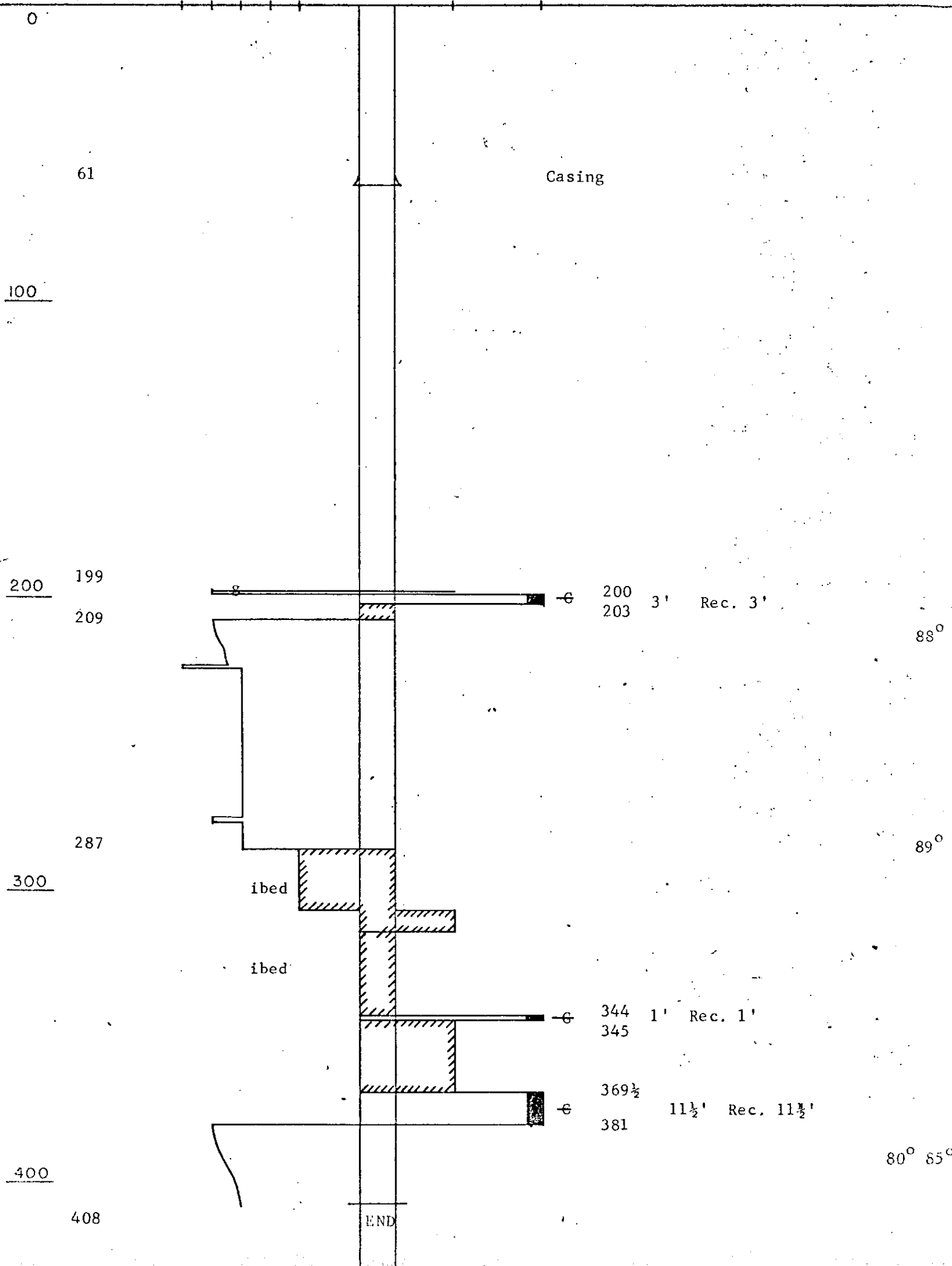
SILTSTONES MUDSTONES\*

COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

COAL LICENCE: 1079

DATE STARTED : 12 March 1970

DATE COMPLETED : 15 March 1970

LOGGED BY : R. Shields

DRAWN BY : L.B.

PRELIMINARY

FINAL

CO-ORDINATES

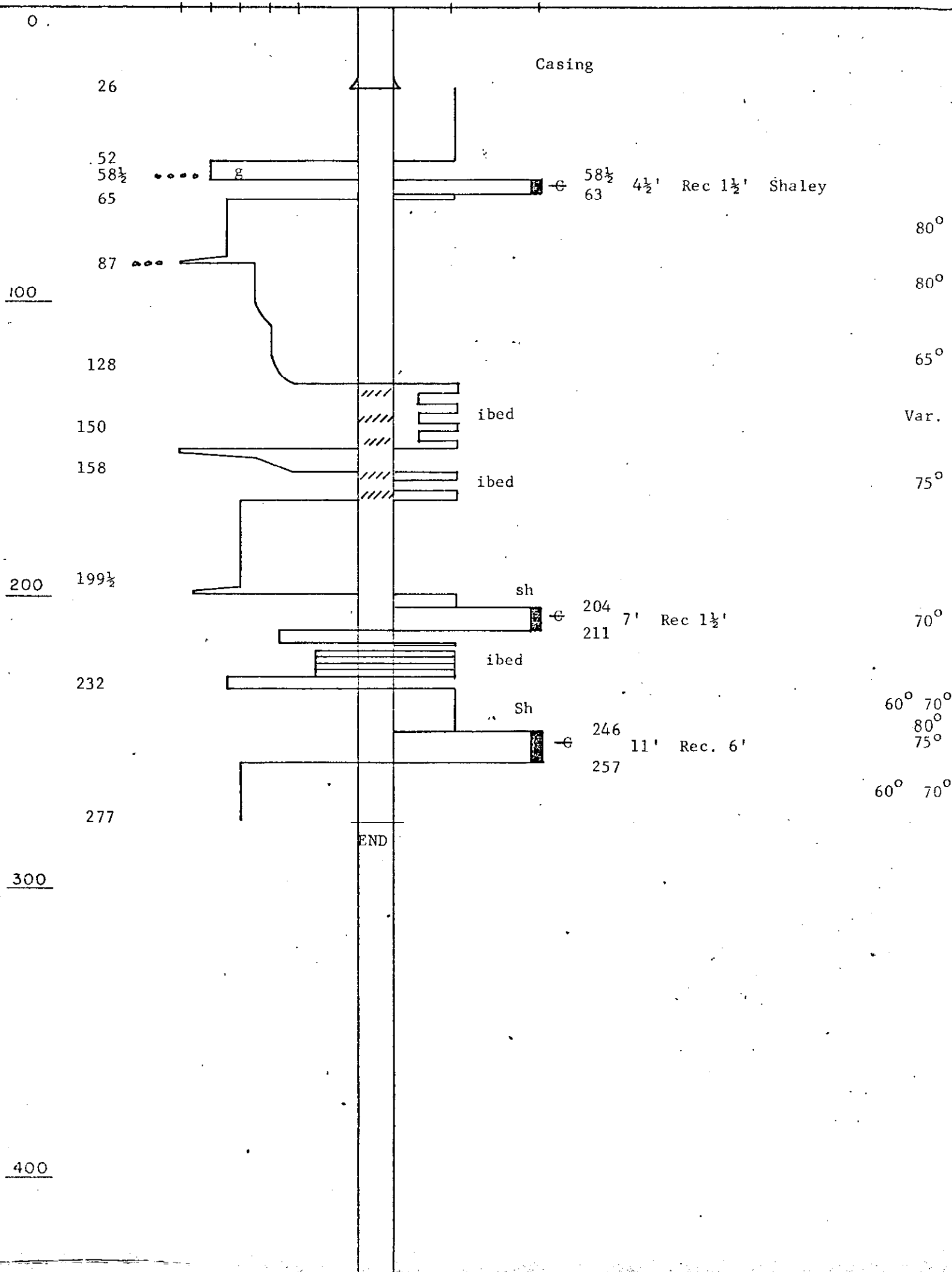
NORTH EAST WEST ELEVATION

46,450 78,720

46,417.80 78,719.50 4169.8

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES, COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



COAL LICENCE: 1096

LIARD M.D., B.C.

DATE STARTED : 13 March 1970

CO-ORDINATES

DATE COMPLETED : 14 March 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R. Shields

PRELIMINARY

38,100 85,300

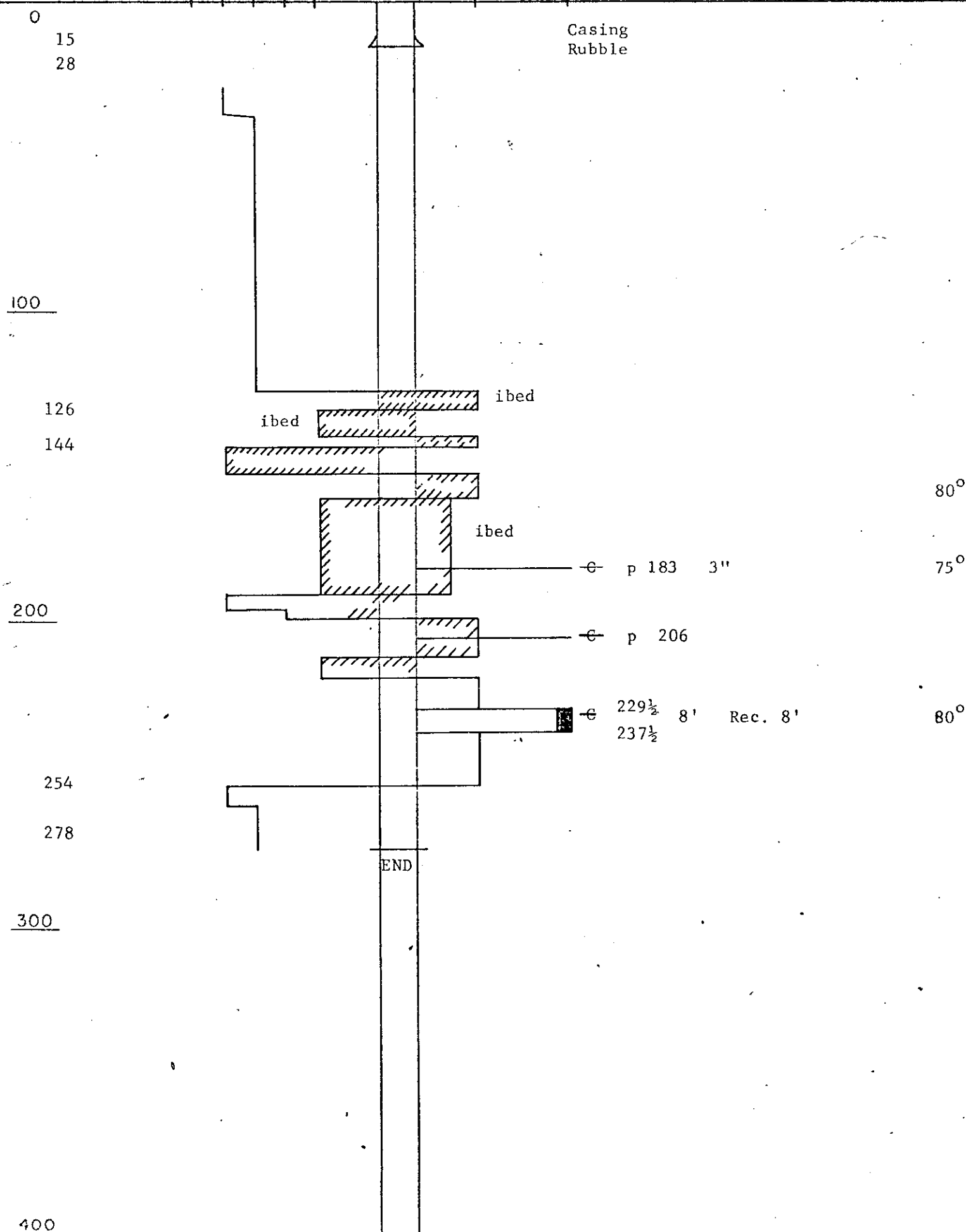
DRAWN BY : L.B.

FINAL

38,154.20 85,278.70, 3983.1'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

COAL LICENCE:

DATE STARTED : 18 March 1970

CO-ORDINATES

DATE COMPLETED : 1 April 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R. Shields

PRELIMINARY

4900

DRAWN BY : L.B.

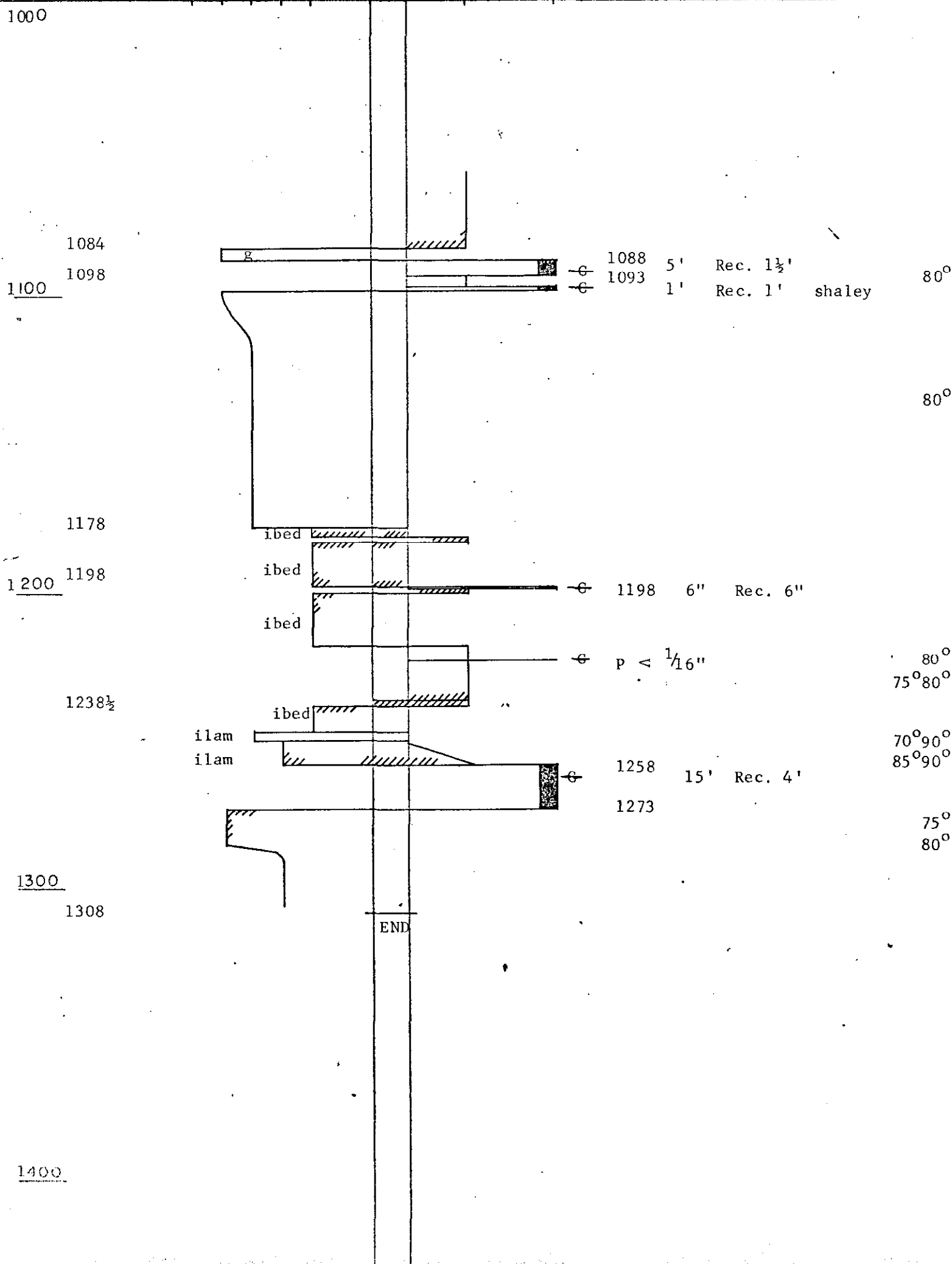
FINAL

33,111.30 88,978.00

4889.1

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



BRAMEDA RESOURCES LIMITED  
SUKUNKA RIVER COAL PROJECT

D.D.H. S-17

SHEET 1 of 1

LIARD M.D., B.C.

COAL LICENCE: 1079

DATE STARTED : 21 March, 1970

CO-ORDINATES

DATE COMPLETED : 24 March 1970

LOGGED BY : R. Shields

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

44,835 80,000

DRAWN BY : L.B.

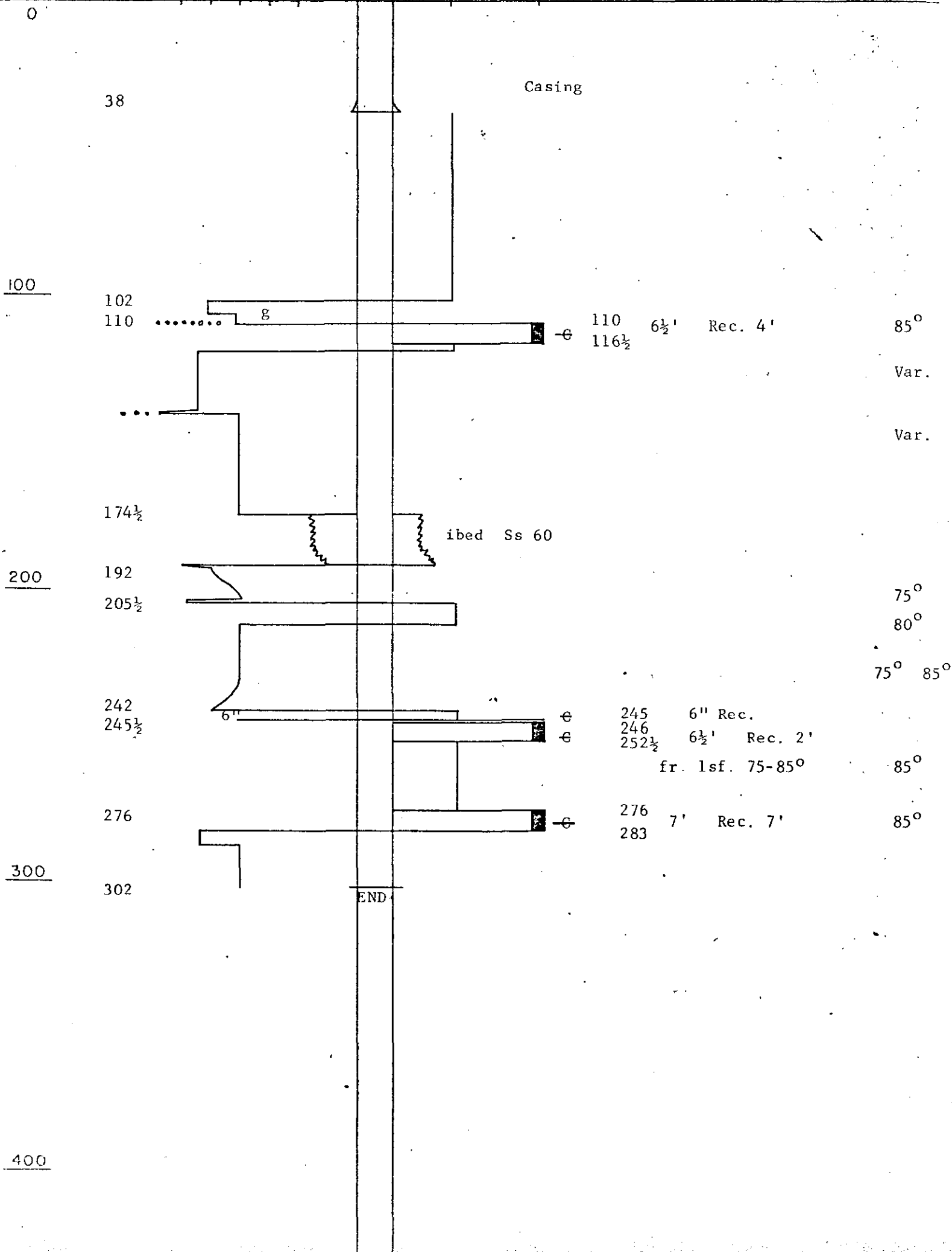
FINAL

44,921.50 79,886.90

4213.0'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



BRAMFORD RESOURCES LIMITED  
SUKUMKA RIVER COAL PROJECT

D.D.H. S-18

SHEET 2 of 2

LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R. Shields

PRELIMINARY

46,850

83,275

DRAWN BY : L.B.

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES

COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

415

457

END

500

600

700

800

ibed

75° 80°

COAL LICENCE: 1080

LIARD M.D., B.C.

DATE STARTED : 28 March, 1970

CO-ORDINATES

DATE COMPLETED : 1 April 1970

LOGGED BY : R Shields

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

46,850

83,275

DRAWN BY : L.B.

FINAL

46,830.70

83,329.80

4054.0'

CONGLOMERATE

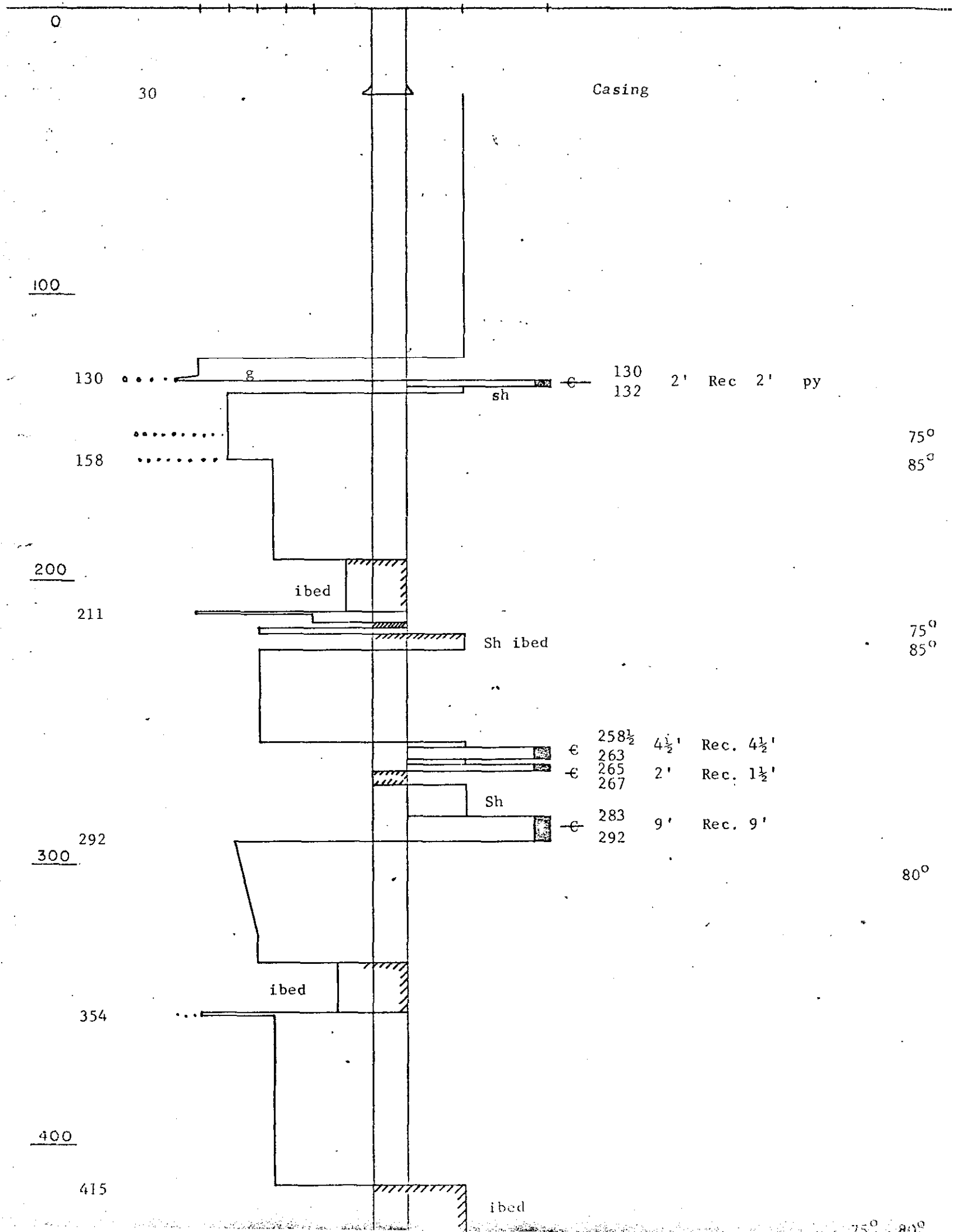
SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

COAL LICENCE: 1079

DATE STARTED : 3 April 1970

CO-ORDINATES

DATE COMPLETED : 5 April 1970

LOGGED BY : R. Shields

PRELIMINARY

| NORTH  | EAST   | WEST | ELEVATION |
|--------|--------|------|-----------|
| 48,550 | 82,150 |      |           |

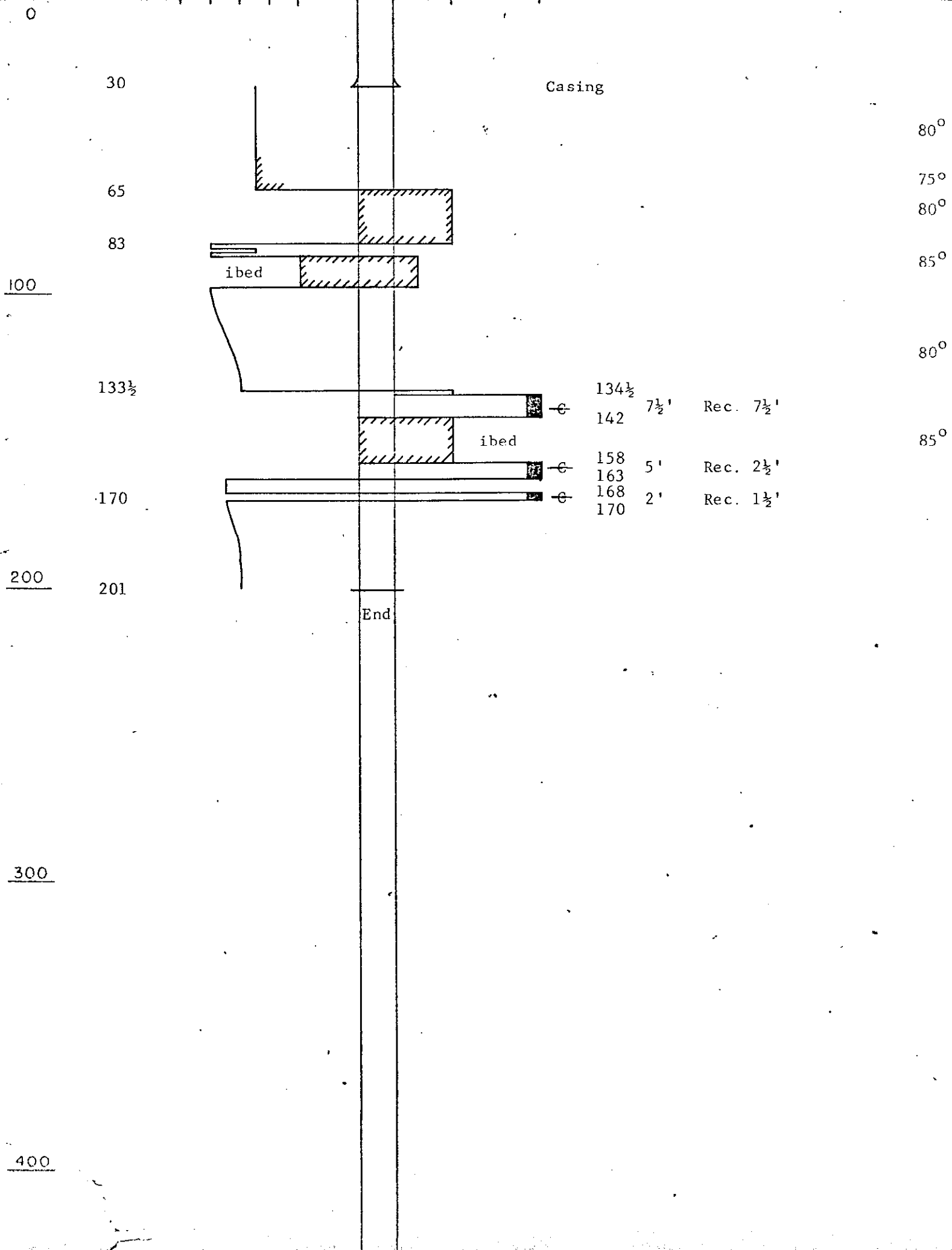
DRAWN BY : L B

FINAL

|           |           |        |
|-----------|-----------|--------|
| 48,702.70 | 82,103.50 | 3983.5 |
|-----------|-----------|--------|

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



BRANEDA RESOURCES LIMITED  
 SIKUMBA RIVER COAL PROJECT  
 LIARD M.D., B.C.

D.D.H. S-20  
 SHEET 4 of 4

DATE STARTED : April 6, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970.

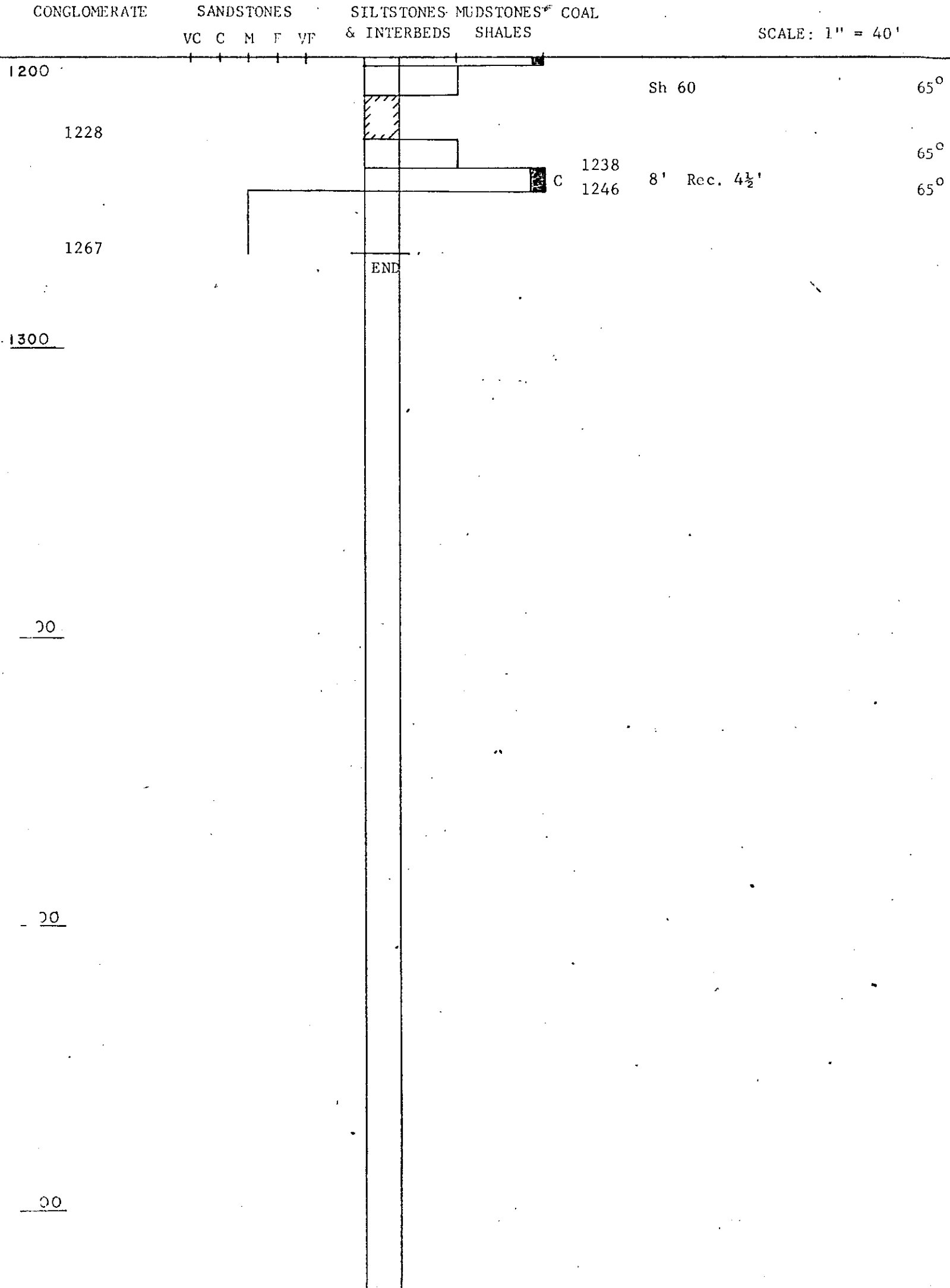
LOGGED BY : R.E.S.

PRELIMINARY

| NORTH  | EAST   | WEST | ELEVATION |
|--------|--------|------|-----------|
| 44,400 | 82,800 |      | 4800      |

DRAWN BY :

FINAL



LIARD M.D., B.C.

DATE STARTED : April 6, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

44,400 82,800 4800

DRAWN BY :

FINAL

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'

800

900

971

1000

1058

1068½

1100

1134

1152

1191

1200

974½ 3½' Rec. 2'  
978 Sh C

Ibed Mx 20

Ibed fault zone slickensides  
Sh inclusion

Sh silty

1198 5' Rec. 3'  
1203 Sh 60 C

75-80°

80°

75°

70-75°

70°

20-0-20

65-70°

65-70°

65°

65°

65°

65°

65°

BRAMEDA RESOURCES LIMITED  
SUKUNKA RIVER COAL PROJECT

D.D.H. S-20

SHEET 2 of 4

LIARD M.D., B.C.

DATE STARTED : April 6, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

44,400

82,800

4800

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>W</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

80°

500

80°

600

598

80°

700

Ms

800

75-80°

BRAMFIDA RESOURCES LIMITED  
SUKUNKA RIVER COAL PROJECT

D.D.H. S-20

SHEET 1 of 4

LIARD M.D., B.C.

COAL LICENCE: 1080

DATE STARTED : April 6, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

44,400

82,800

4800

DRAWN BY :

FINAL

44,193.30

82,959.70

4863.0'

CONGLOMERATE

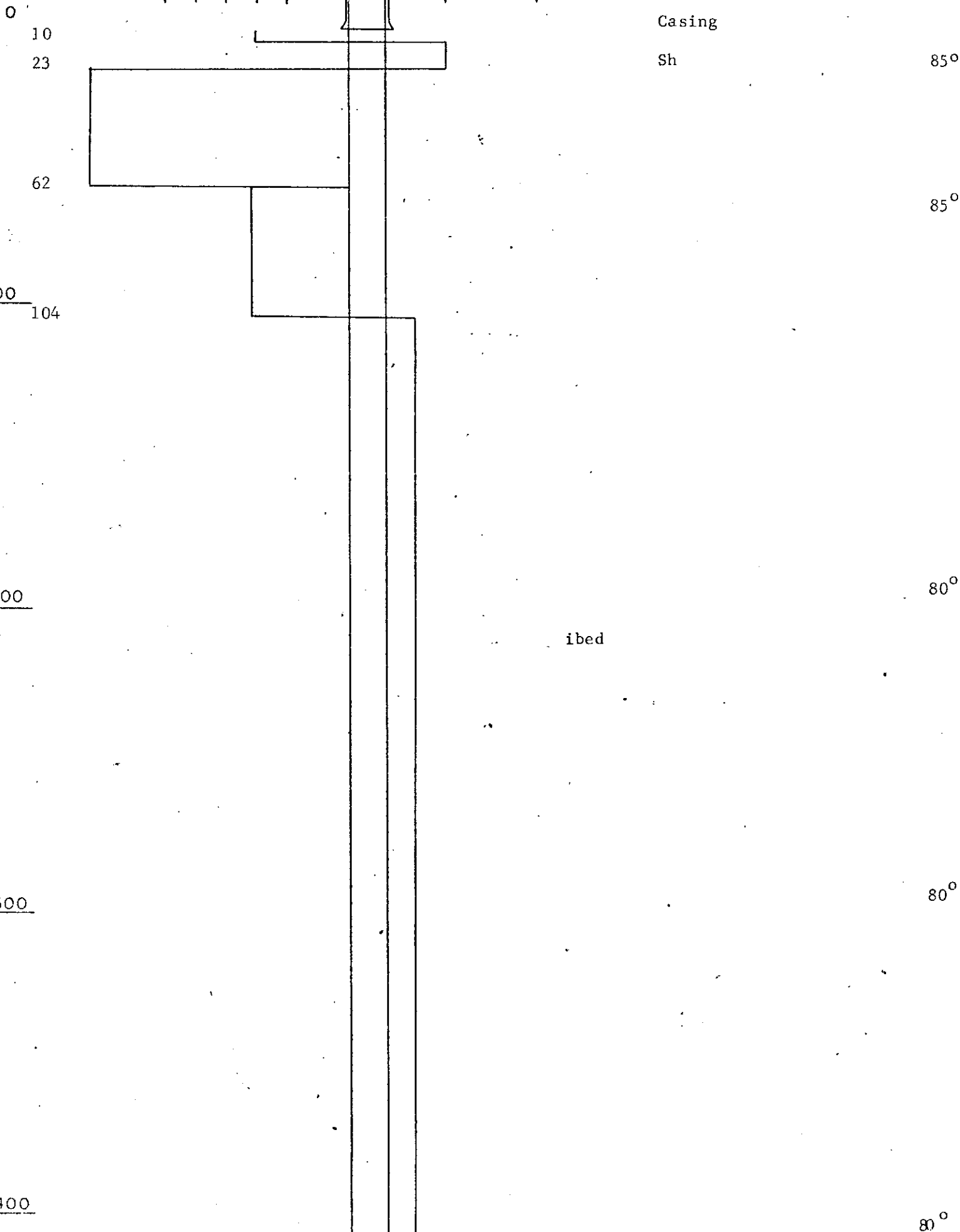
SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

DATE STARTED : April 9, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

45,575

84,400

DRAWN BY :

FINAL

4363'

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

458

..... / G C 458 4' Rec. 3½  
462

486

....

500

87°

Ibed

Sh

85°

600

593

Sh

C 594 8' rec. 8'  
602

87°  
85°

625½

C 634 8½' rec. 7½'

80°  
87°

658

END

700

800

LIARD M.D., B.C.

COAL LICENCE: 1080

DATE STARTED : April 9, 1970

CO-ORDINATES

DATE COMPLETED : April 14, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

45,575

84,400

DRAWN BY :

FINAL

45,570.10

84,430.50

4350.2'

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

0

31

Casing

100

Ibed Ms 10

87°

148

200

300

400

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

DRAWN BY : L.B.

FINAL

47,727.8 80,535.3

4497.3

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F WF & INTERBEDS SHALES

SCALE: 1" = 40'

500

Moosebar Fm

551.4

Clayst.

551.4 R € 0.4

555.4 W 0.5

Gething Fm.

86, 87°

600

87°

85°

85, 86°

673.5

R € 4.2

683.2

W 1.2

87, 88°

700

87°

45°

708.5

R € 7.1

716.2

87°

87°

748

END

800

00

COAL LICENCE: 1079

L. 1000 D. 1000

DATE STARTED : June 8, 1970

CO-ORDINATES

DATE COMPLETED : June 12, 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

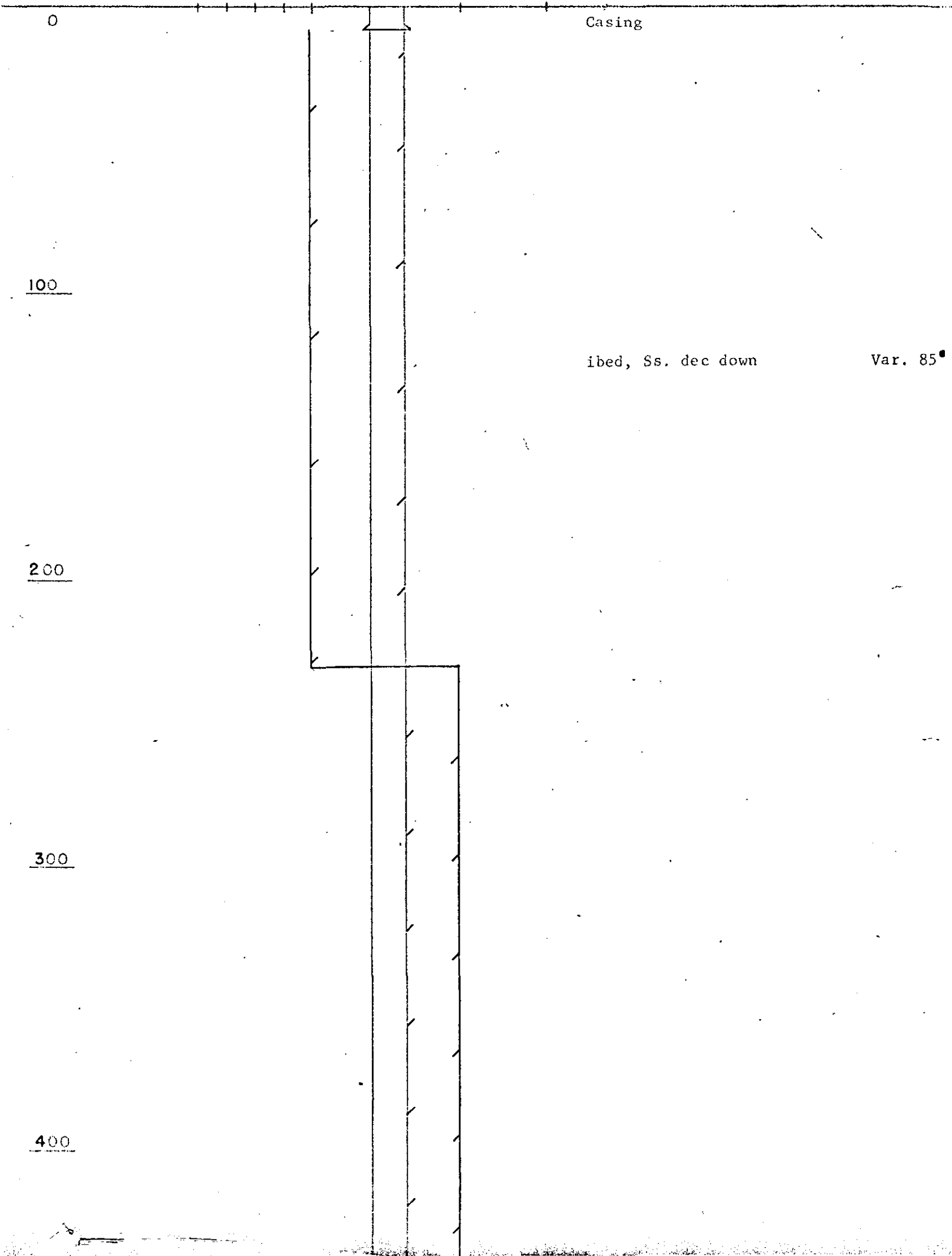
DRAWN BY : R.E.S.

FINAL

47,727.8 80,535.3 4497.3

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



LEEDS, D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

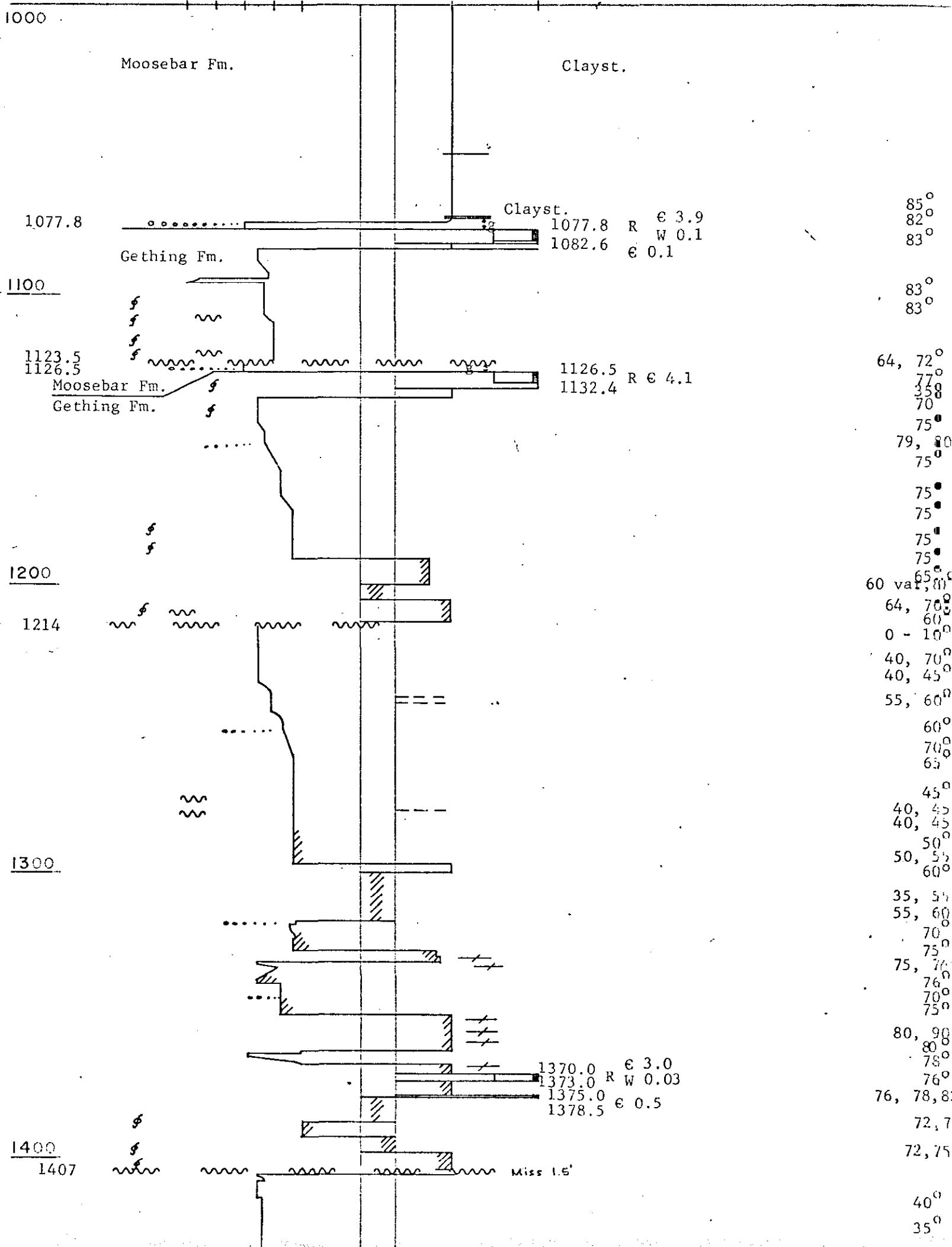
DRAWN BY : L.B.

FINAL

43,831.1 85,259.3 4960.3

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES + COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



LIVERPOOL, B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

ibed

86°

492

500

Fault zone

45°

521

86°

ibed

600

86°

700

ibed, Ss dec. down

86°

800

808

COAL LICENCE: 1088

LIARD R.D., B.C.

DATE STARTED : June 13, 1970

CO-ORDINATES

DATE COMPLETED : June 26, 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

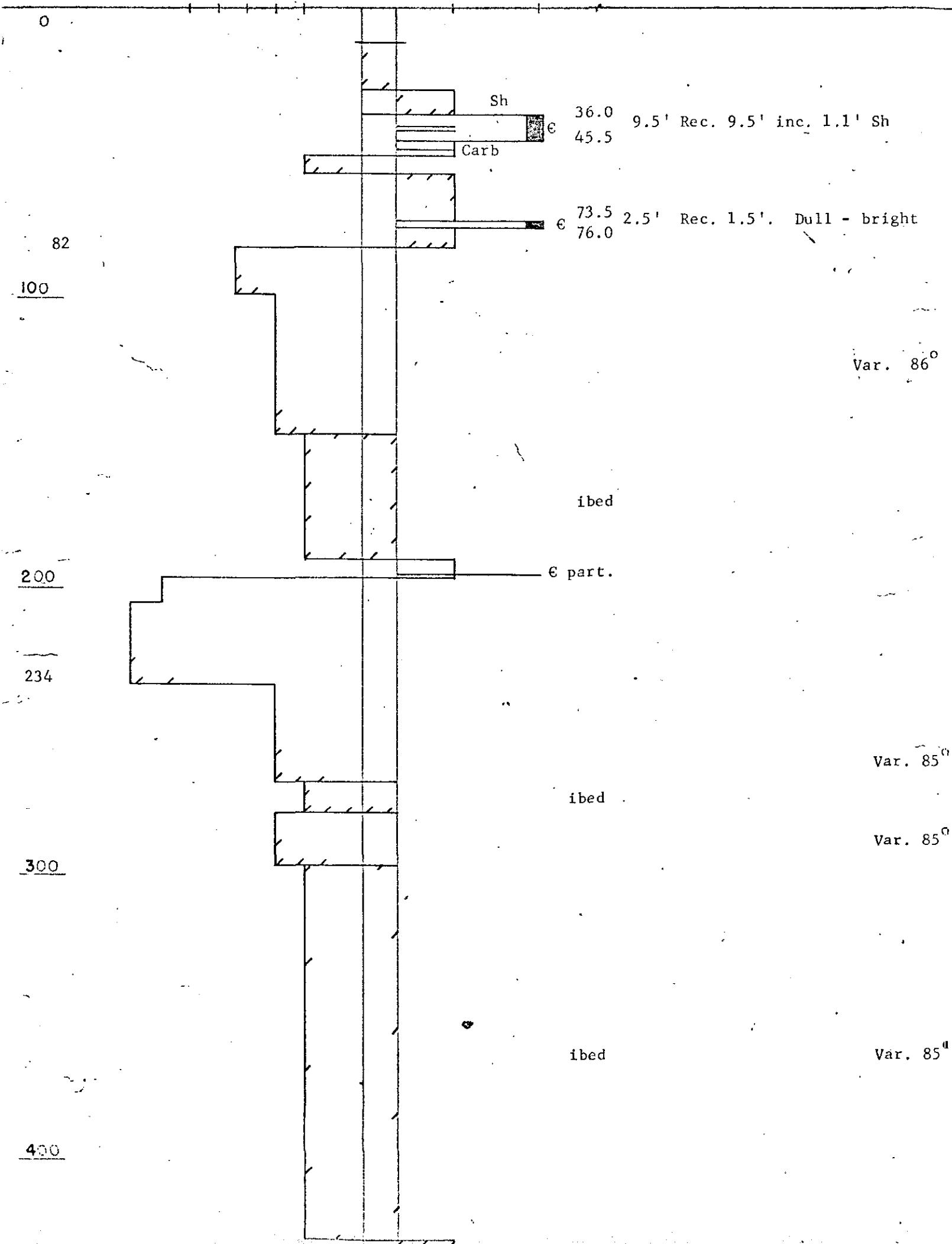
DRAWN BY : R.E.S.

FINAL

43,831.1 85,259.3 4960.3

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



WARD M. L. E. C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

DRAWN BY : L.B.

FINAL

46,008.1

81,578.0

4659.4

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

&amp; INTERBEDS SHALES

SCALE: 1" = 40'

600

Moosebar Fm.

700

Clayst.

720.1

720.1 R € 2.8  
724.0 W 0.1  
e p

Gething Fm.

g

87°

89°

85°

90°

800

Clay bands

90°

88°

84°

88°

90°

65°

90°

70°

65°

80, 84°

900

clay bands

868.1 € 7.1

R W 1.2

877.1

80°

88°

87°

928

909.2 R € 8.4

918.2

88°

END

CO

LAND M.D., B.C.

COAL LICENCE: 1079

DATE STARTED : June 13, 1970

CO-ORDINATES

DATE COMPLETED : June 18, 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

46,008.1

81,578.0

4659.4

CONGLOMERATE

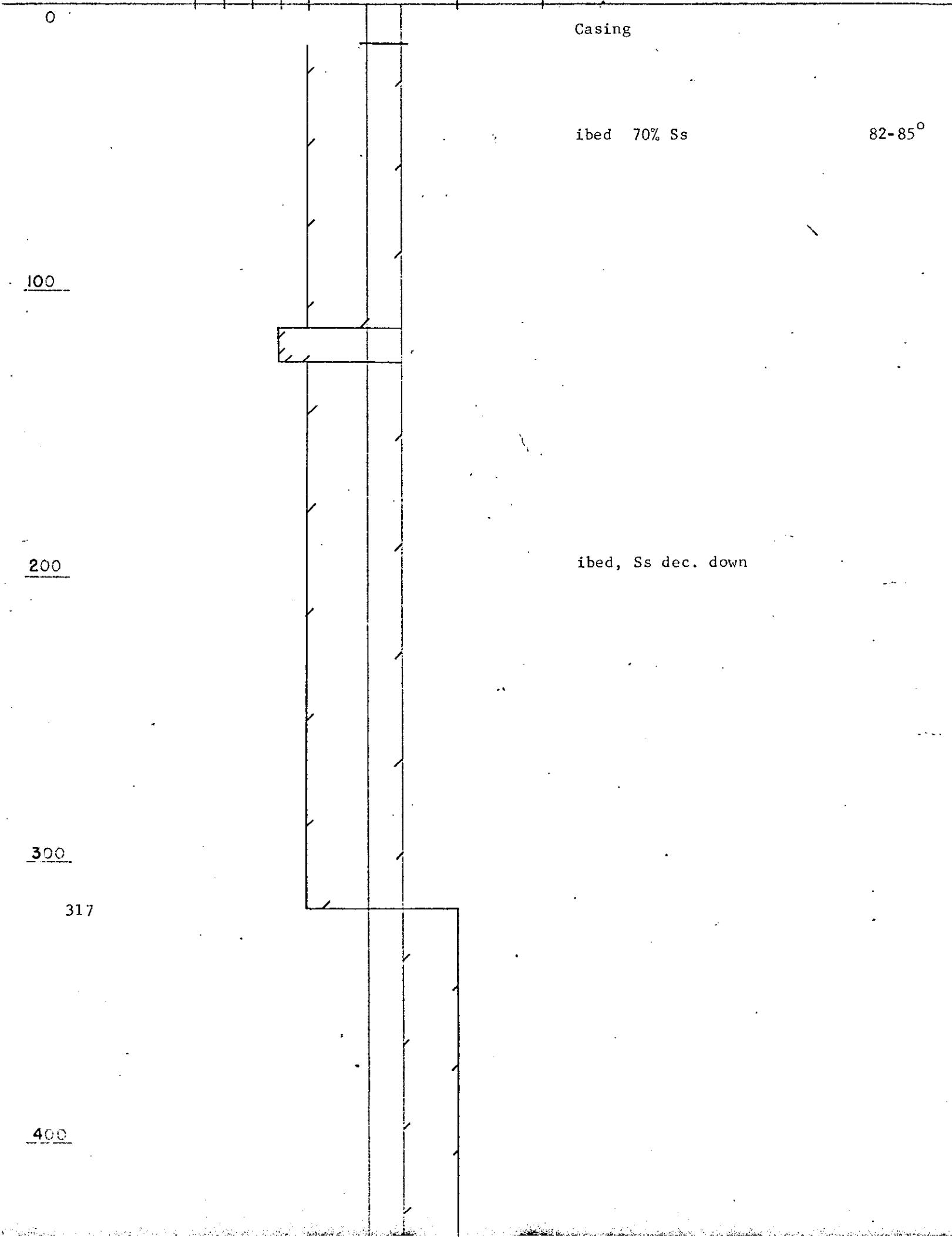
SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



STRATA MONITORING  
L.H.P. & D.L. E.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

DRAWN BY : L.B.

FINAL

42,613.7

86,679.7

5001.9

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES, COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

Moosebar Fm.

1300

1299.3

Clayst.

1299.3 R € 1.0  
1302.0 € p

85°

Gething Fm.

0.5

C fossil

80, 85°

76, 78°

82°

1400

80°

1450.1 € 1.6  
1456.5 R W 2.3

80°

75°

80°

1474.0 R € 7.0  
1482.4

80°

1500

81°

1508

END

LIAPU H.D., E.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

ibed, Ss dec. down.

85°

900

938

1000

1100

1200

BRAMEDA RESOURCES LIMITED  
SUKLKA RIVER COAL PROJECT  
LIARD M.D., B.C.

D.D.H. S-25

SHEET 2 of 3

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

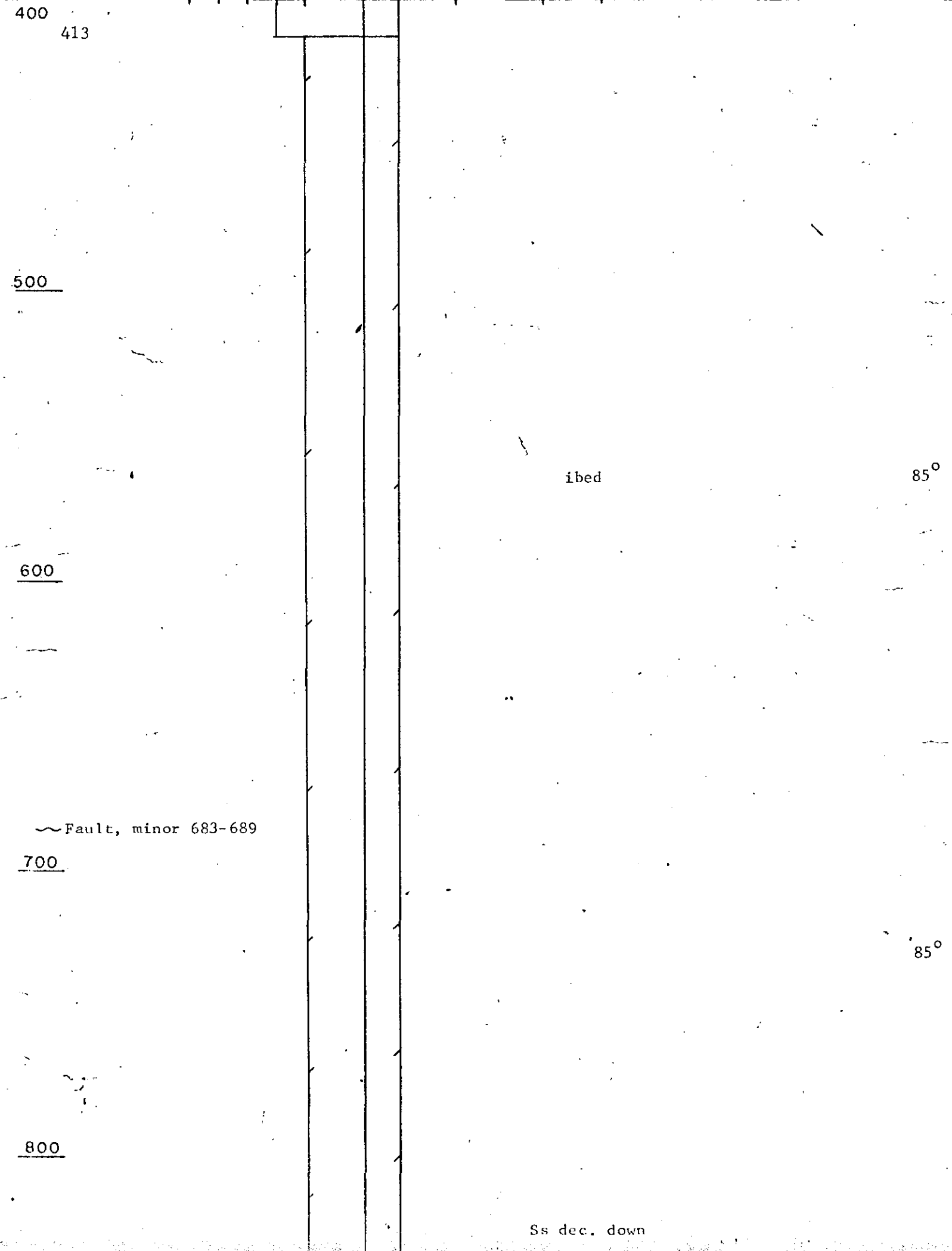
SILTSTONES MUDSTONES

COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



COAL LICENCE 1088

LIARD H.D., B.C.

DATE STARTED : June 20, 1970

CO-ORDINATES

DATE COMPLETED : June 29, 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

42,613.7 86,679.7

5001.9

CONGLOMERATE

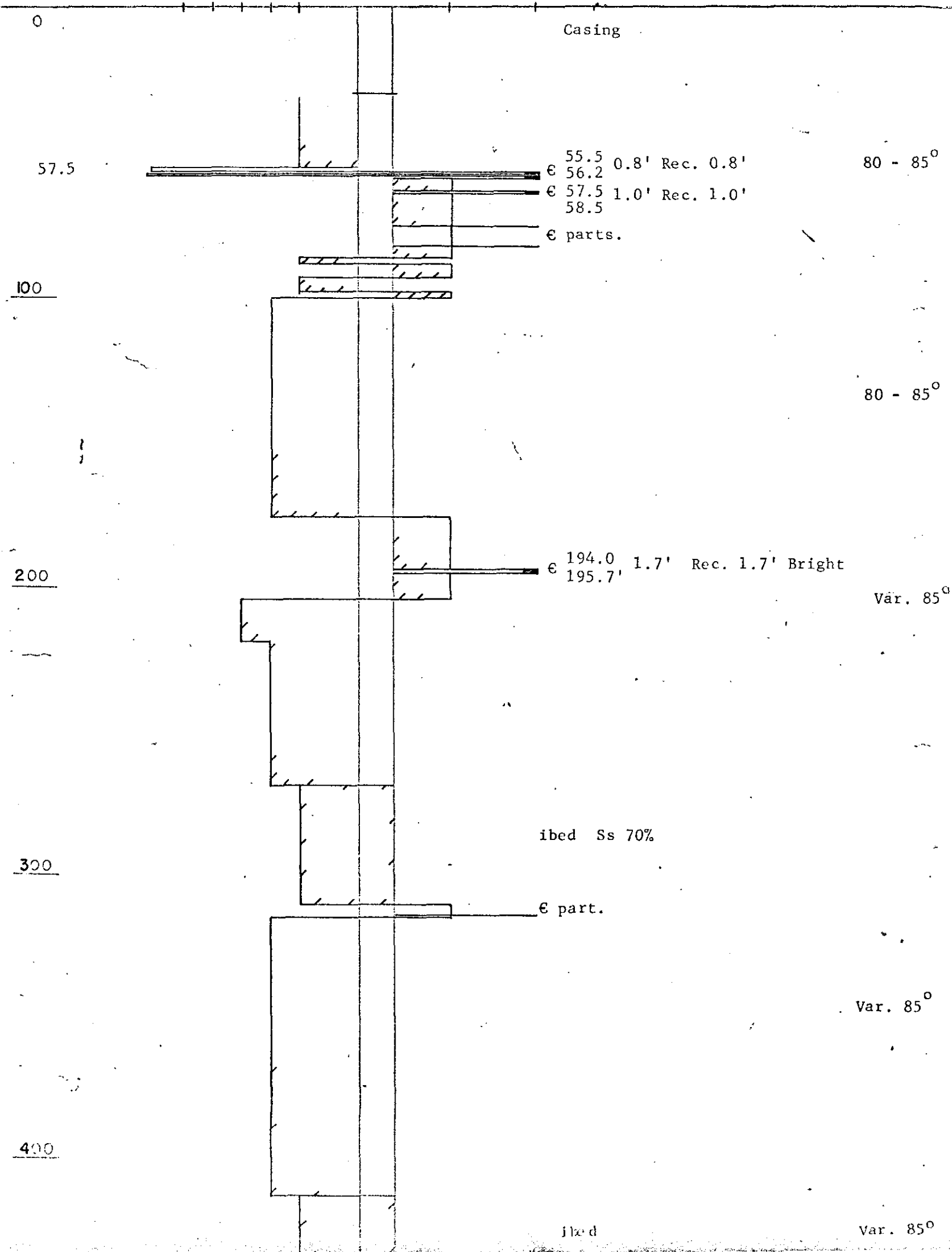
SANDSTONES

SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



L. B. M. D., R. C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

DRAWN BY : L. B.

FINAL

42,570.9

84,012.6

4739.4

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>CO</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1100

1112.5

1112.5

1116.3

R € 2.7

76, 71°

75, 80°

78°

76, 78°

77°

65°

1200

f

8

1210.5

1215.7

R € 3.1

W 0.7

80°

80, 85

87, 8

1300

85°

83°

84°

88°

1348.5

1350.0

1369.5

1377.5

1390

00

END

00

LIAPPE M.D., E.C.

COAL LICENCE: 1088

DATE STARTED : 29 June 1970

CO-ORDINATES

DATE COMPLETED : 17 July 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

42,570.9

84,012.6

4739.4

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES

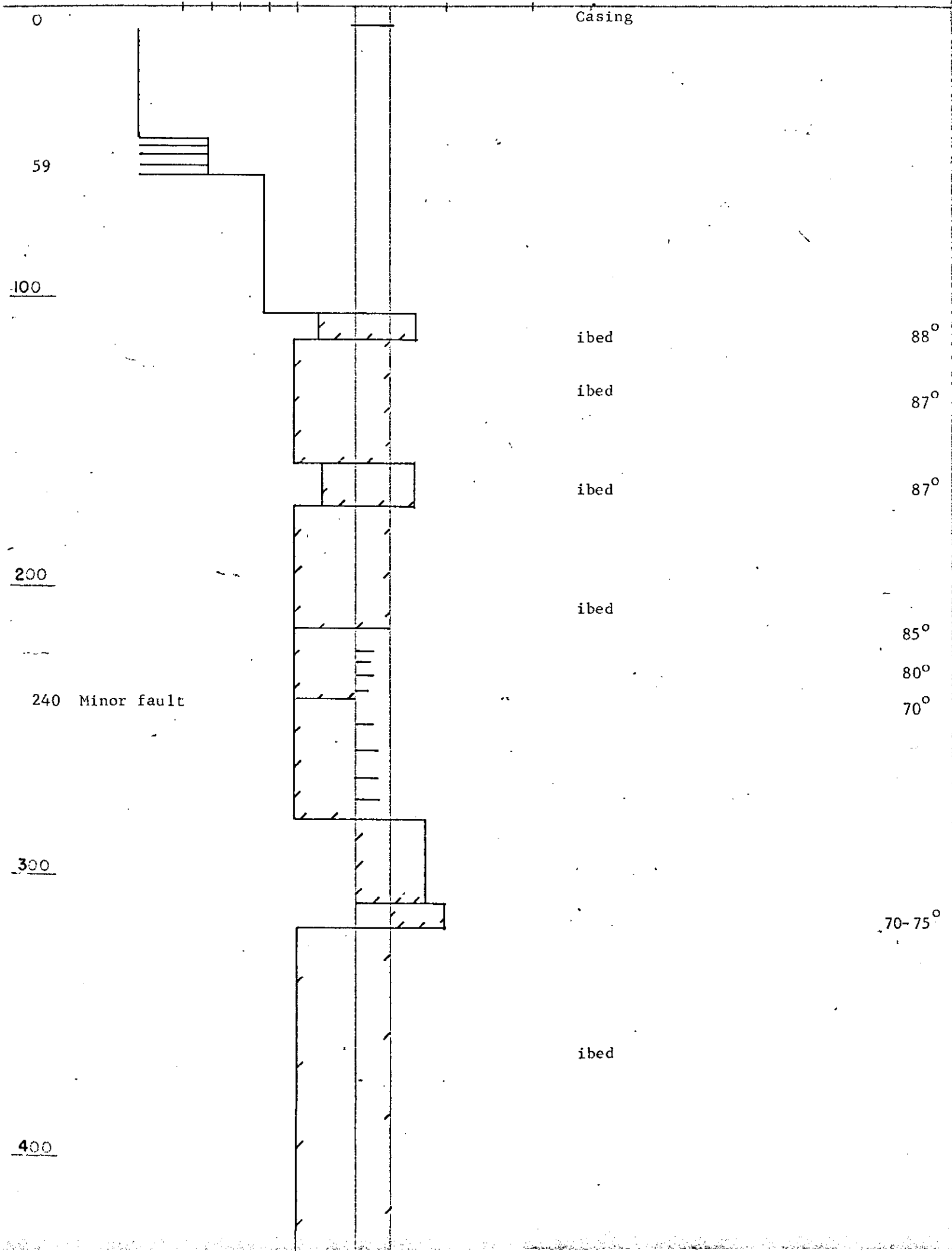
COAL

VC C M F VF

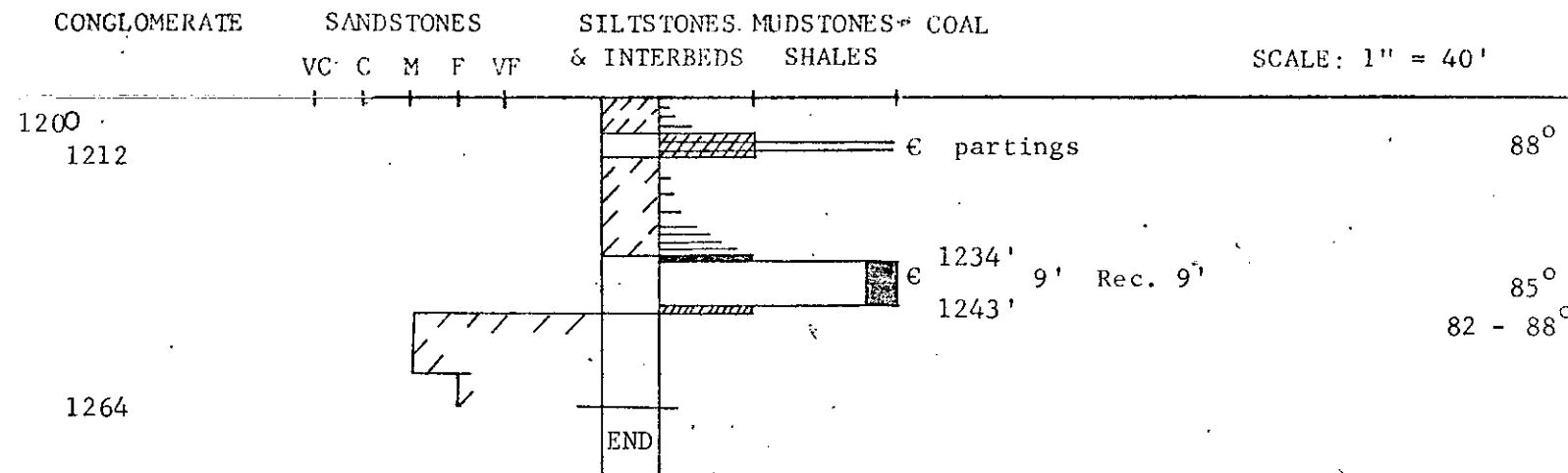
& INTERBEDS

SHALES

SCALE: 1" = 40'



DATE STARTED :  
DATE COMPLETED :  
LOGGED BY :  
DRAWN BY :  
CO-ORDINATES  
NORTH EAST WEST ELEVATION  
PRELIMINARY  
FINAL



Roof  
1212 - 1233' - Interlaminated siltstone and mudstone. 65% siltstone, decreasing to 35% at 1233.  
1233 - 1233.5' Mudstone, fissile.  
1233.5 - 1234' Carbonaceous shale, relatively hard. 88°.  
Coal  
1234 - 1243' Bright banded, hard.  
Floor  
1243 - 1244.5' Carbonaceous mudstone, relatively hard. 85°  
1244.5 - 1264' Sandstone.

COAL LICENCE: 1089

LIARD M.D., B.C.

DATE STARTED : August 5, 1970

CO-ORDINATES

DATE COMPLETED : August 12, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

DRAWN BY : R.E.S.

FINAL

G

E

4800

41,092.30

88,145.70

4869.0

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES \* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

900

1000

1100

1200

€ 1074  
1078 4'. Rec. 4' Py

€ 1188.7 1.5'. Rec. 1.5'  
1190.2 Inc. 2 - 1" sh. bands

€ partings

Sh

88°

89°

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY :

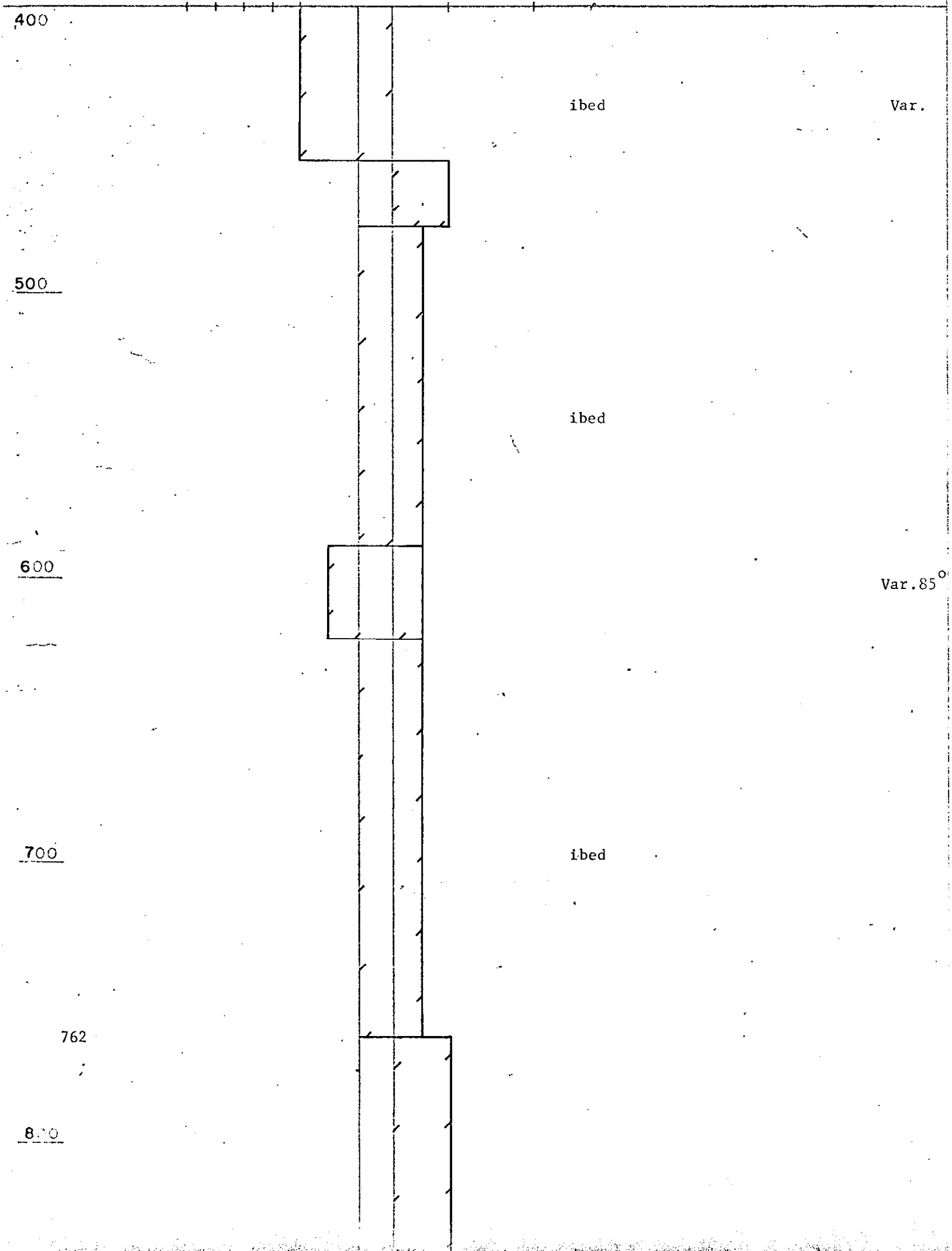
PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES + COAL  
VC C H F VF & INTERBEDS SHALES

SCALE: 1" = 40'



COAL LICENCE: 1089

DATE STARTED : 2 July 1970

CO-ORDINATES

DATE COMPLETED : 12 July 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

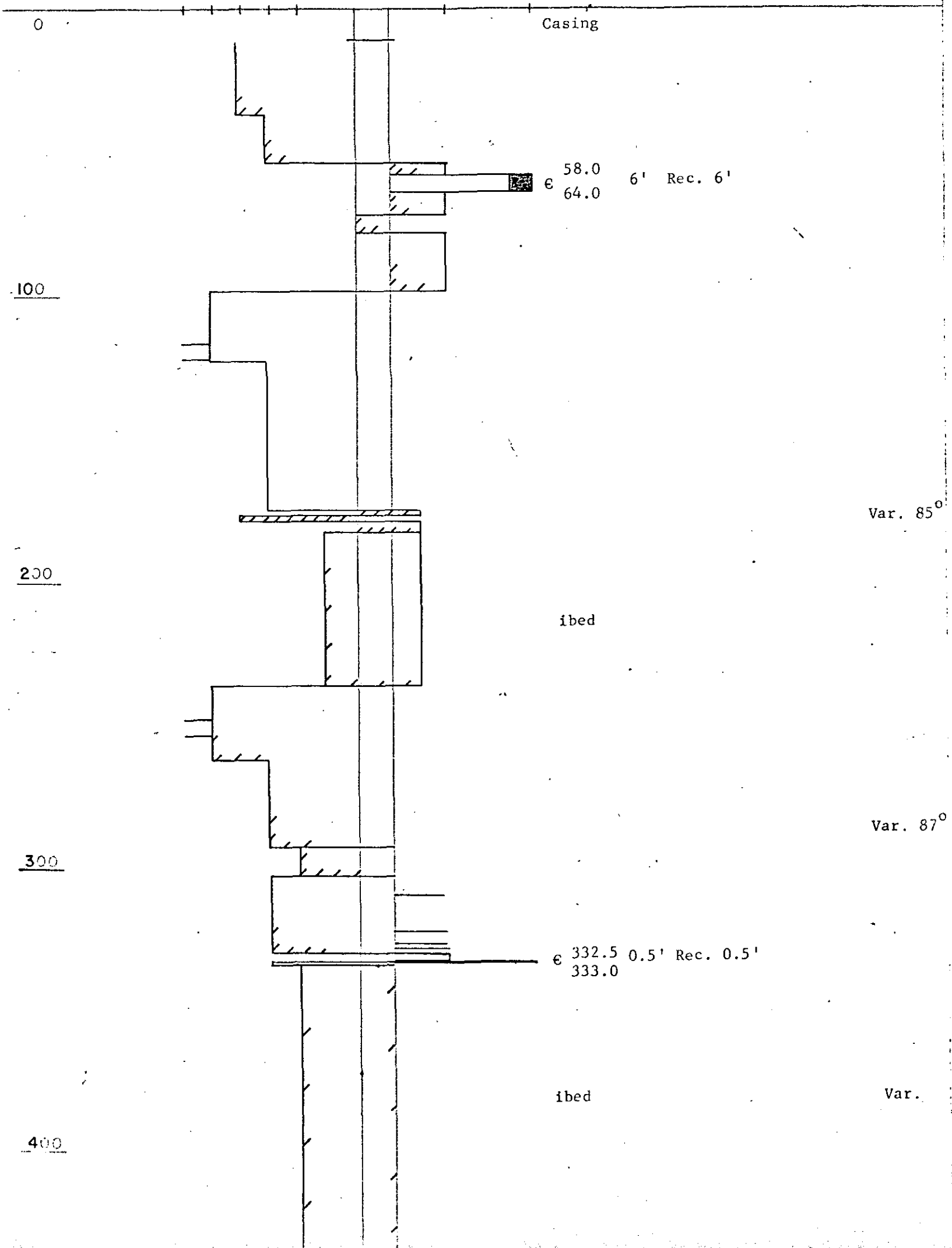
DRAWN BY : R.E.S.

FINAL

41,092.3 88,145.7 4869.0

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

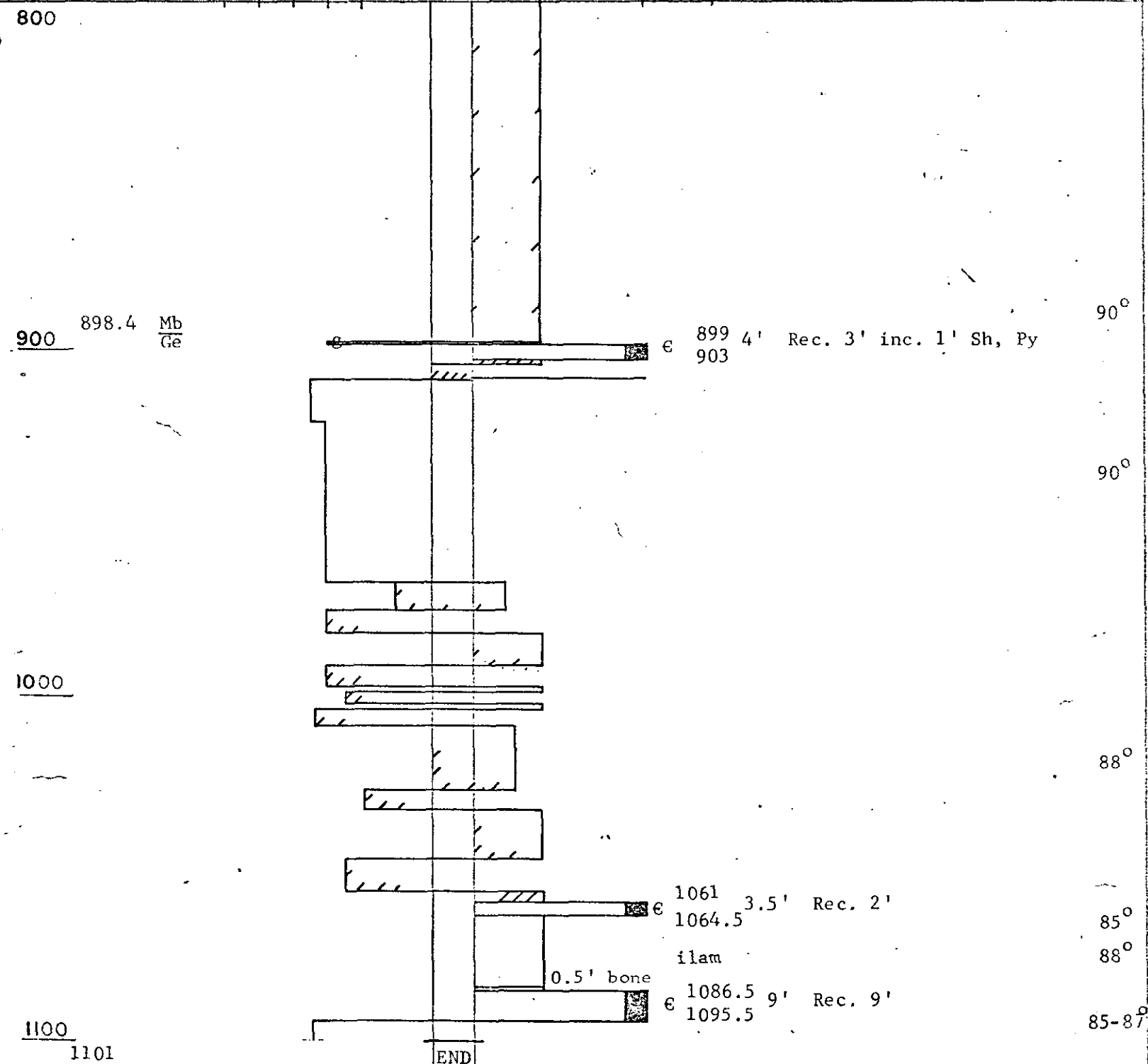
SANDSTONES

SILTSTONES MUDSTONES + COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



Roof

21' Ilam silts and sh. compact  
0.5' Ilam silts and sh. sub fissile  
0.5' Bone

88°

Coal

9' Bright hard.

Floor

Sandstone 85-87°

1200

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES

COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

573

600

700

800

90°

90°

LIARD, M. P., b.C.

### CO-ORDINATES

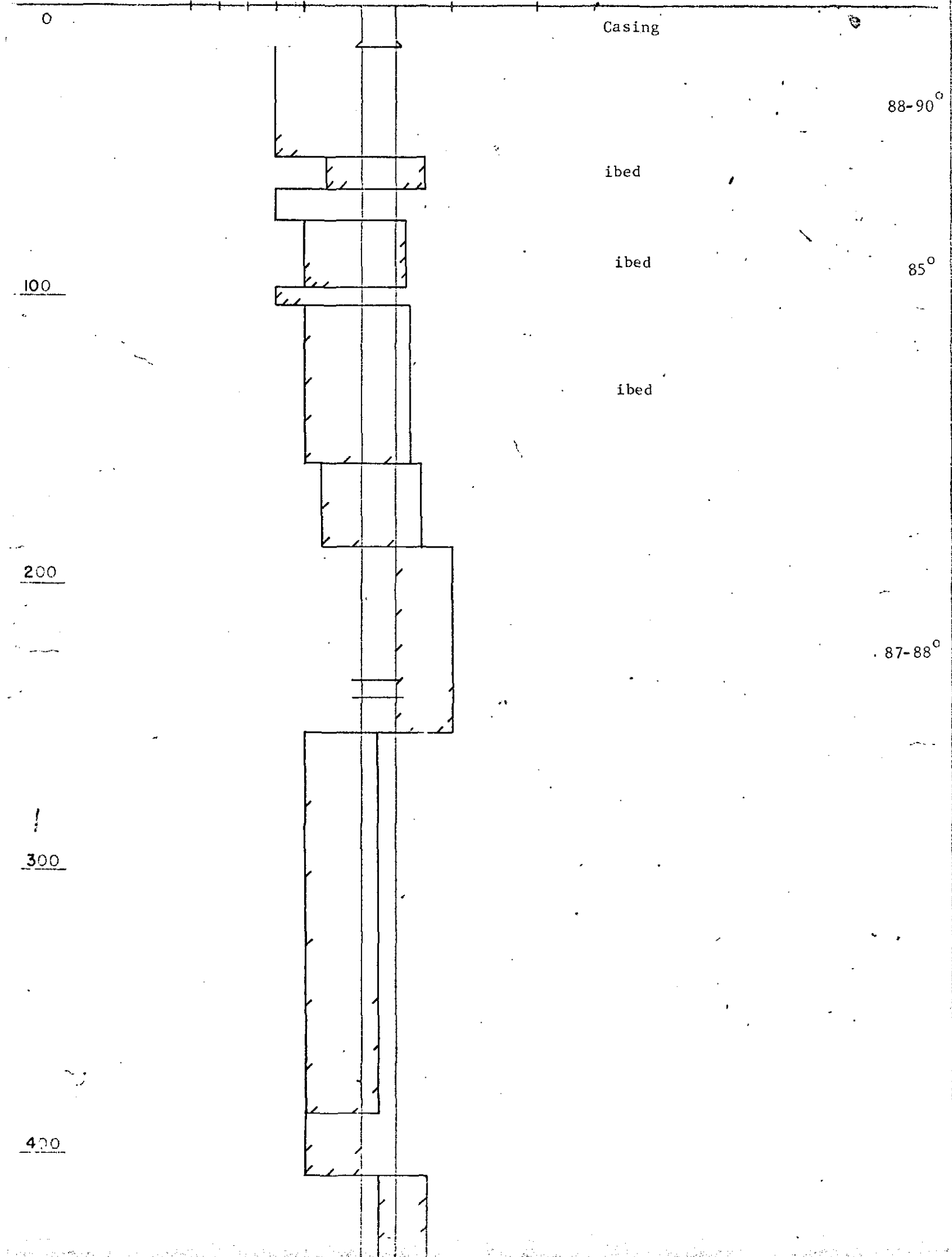
[illegible]

**PRELIMINARY**

FINAL

40,773.8      85,099.9      4504.4

SCALE: 1" = 40'



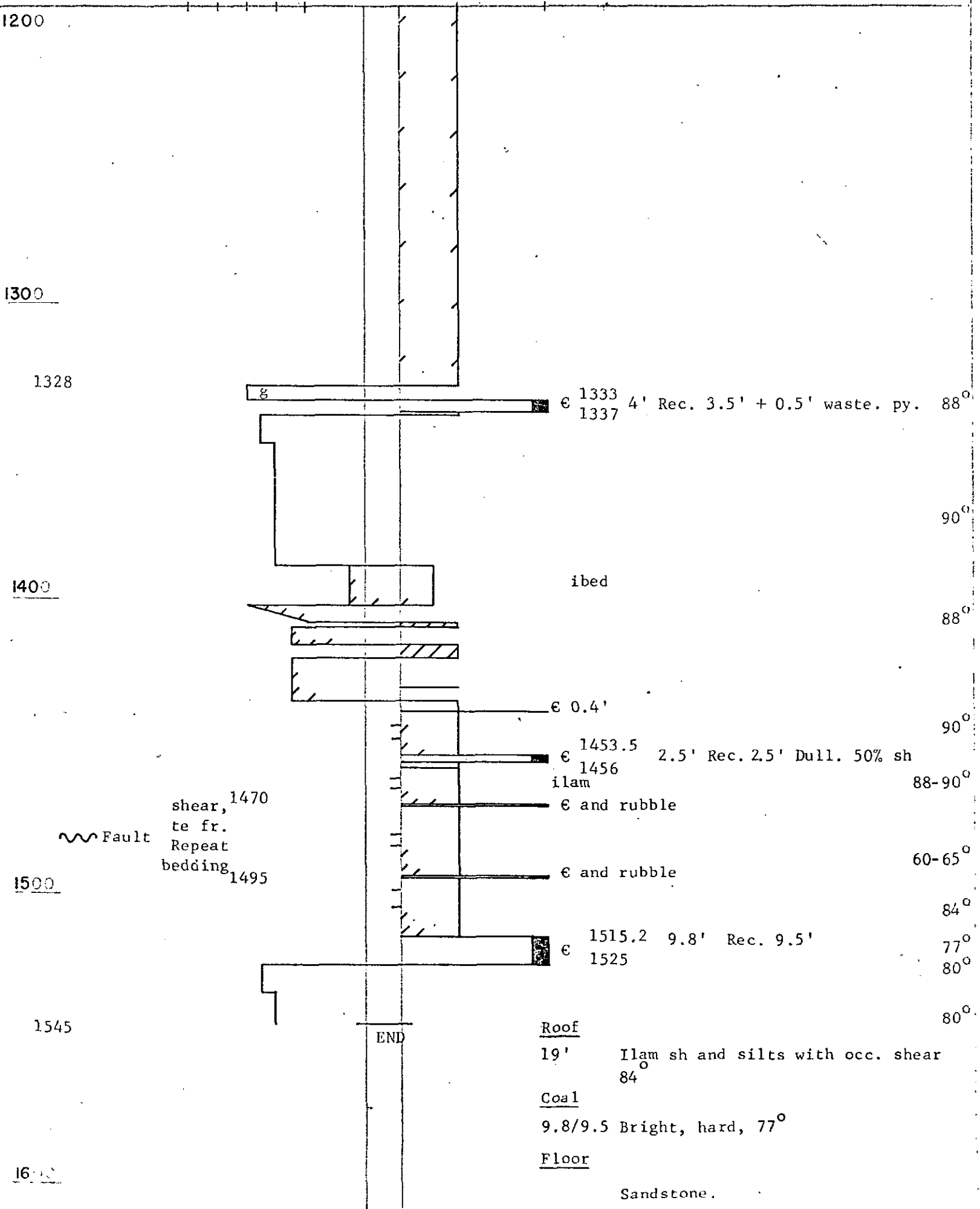
DATE STARTED :  
DATE COMPLETED :  
RECORDED BY :  
DRAWN BY :

PRELIMINARY  
FINAL

CO-ORDINATES  
NORTH EAST WEST ELEVATION

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES & COAL  
VC C M F T & INTERBEDS SHALES

SCALE: 1" = 40'



1111 N.D., P.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

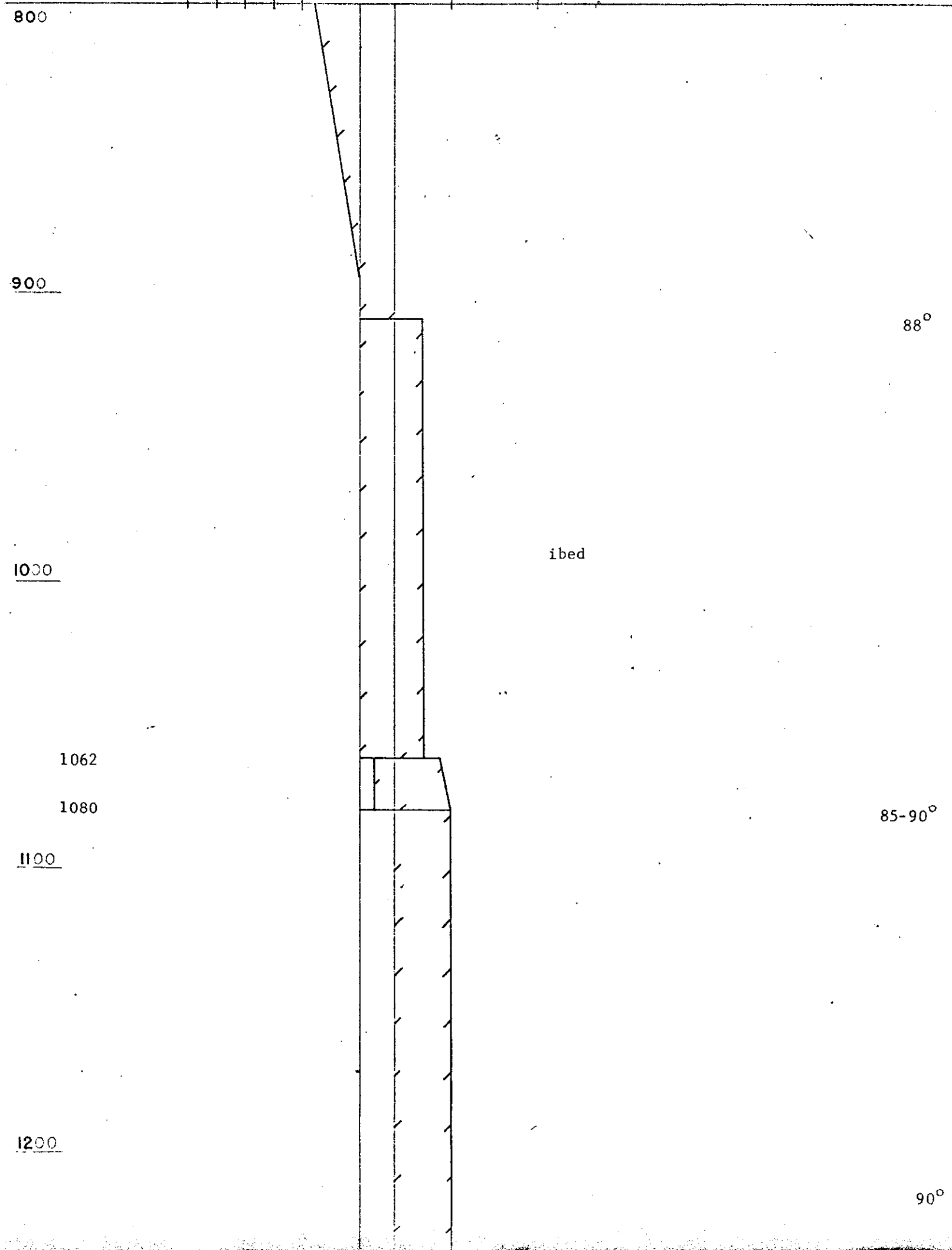
SANDSTONES

SILTSTONES MUDSTONES \*COAL

VC C M F

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

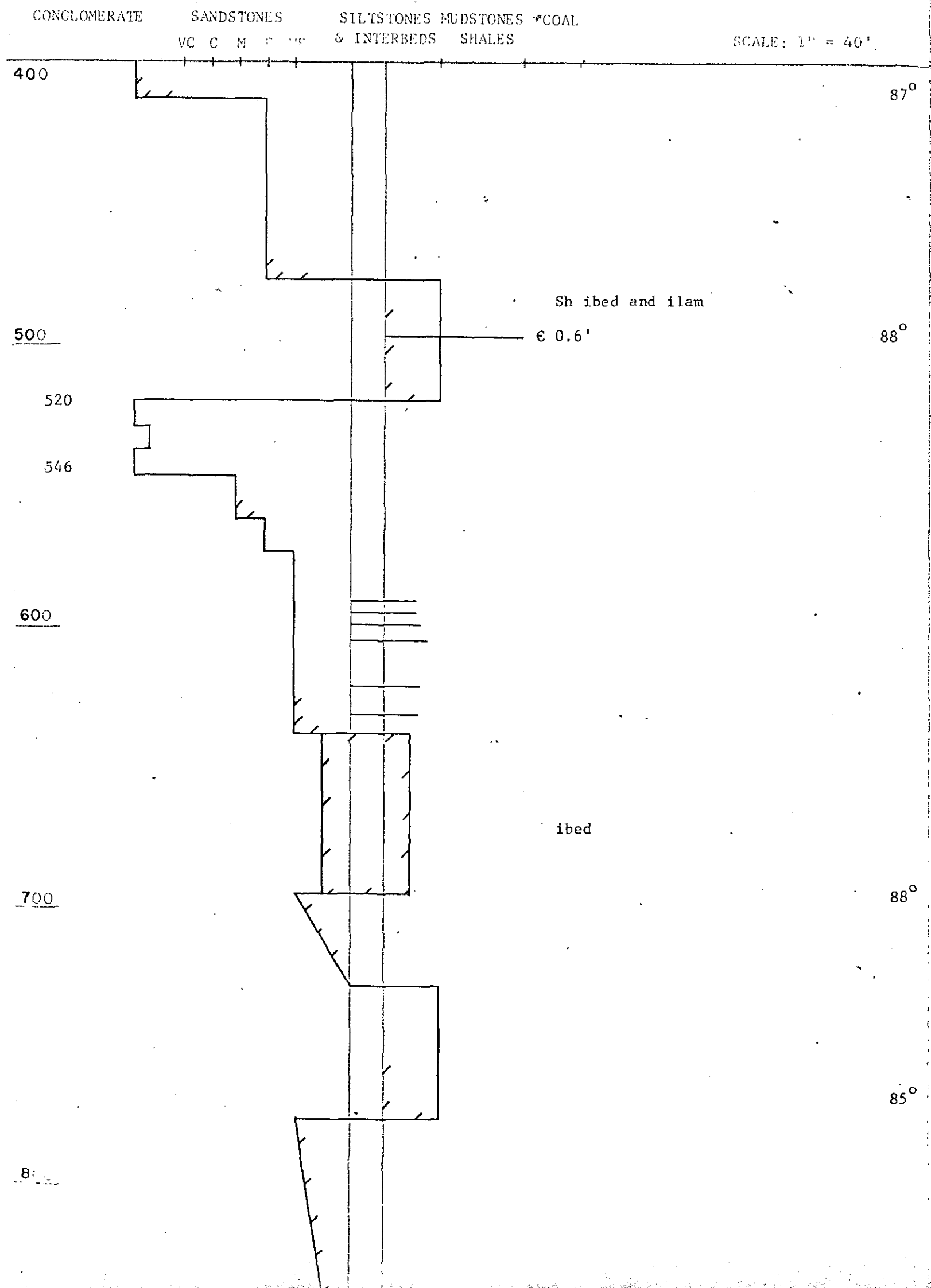
NORTH EAST WEST ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL



COAL LICENCE 1081

DATE STARTED : July 20, 1970

DATE COMPLETED : August 3, 1970

LOGGED BY : J.E.H.

DRAWN BY : R.E.S.

CO-ORDINATES

NORTH EAST WEST ELEVATION

PRELIMINARY

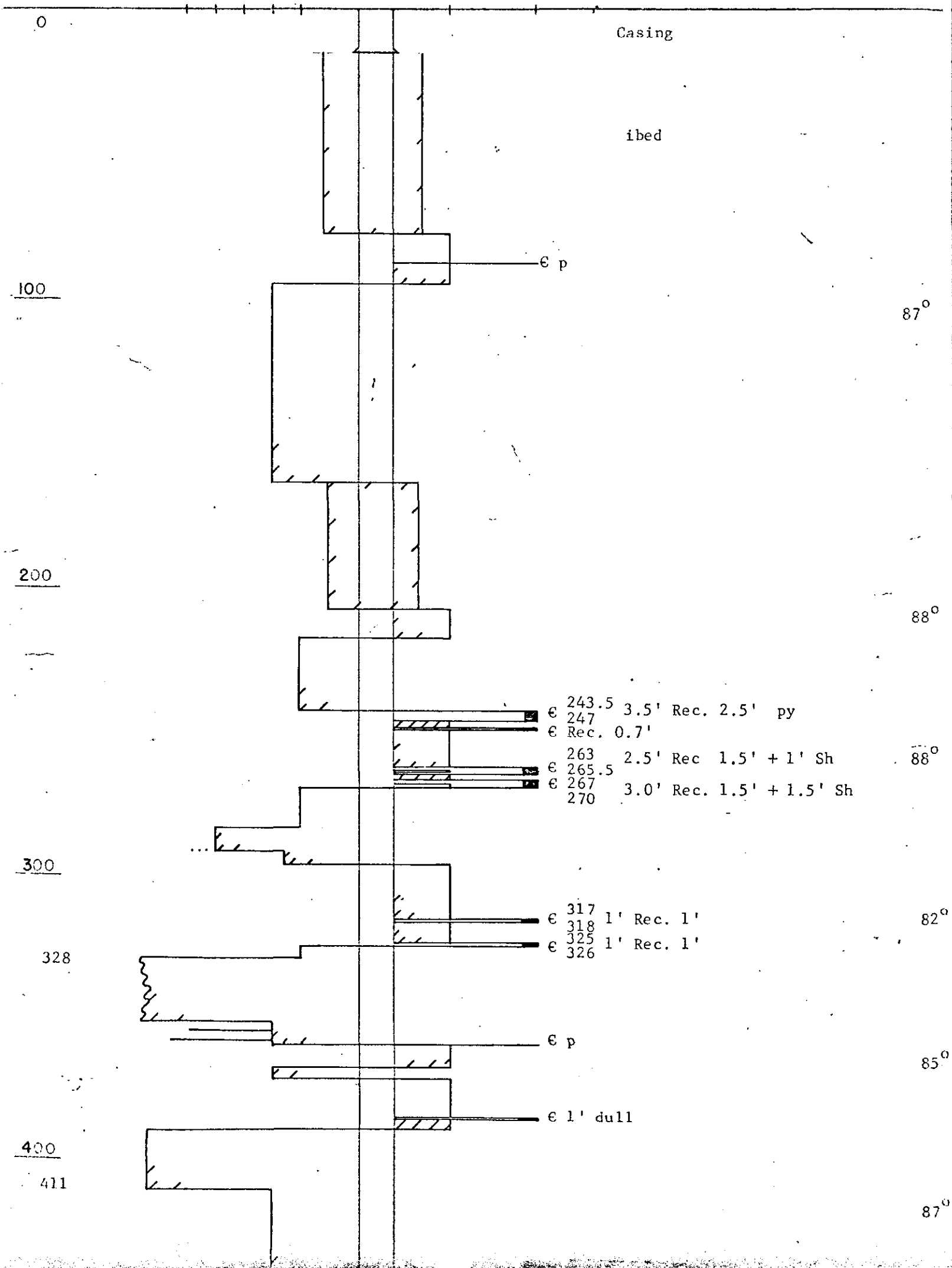
FINAL

44,572.1 90,080.7

5385.7

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

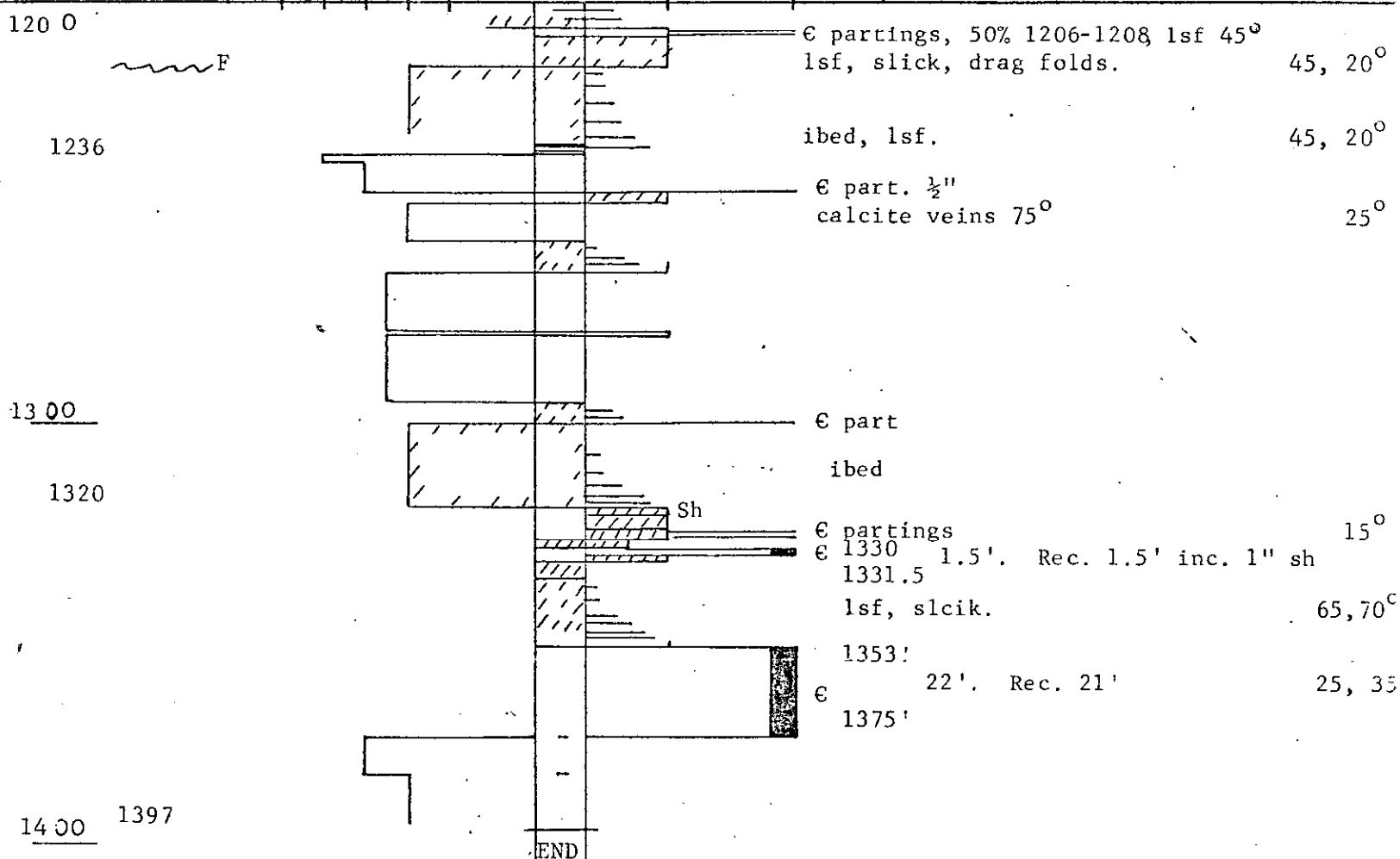
SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

&amp; INTERBEDS SHALES

SCALE: 1" = 40'



END

Roof

1333 - 1352.5' Siltstone with shale laminations  
solid except for slickenside at  
1346.5'. 65-70°

1352.5 - 1353' Mudstone, soft.

Coal

Bright banded, hard but sheared and broken.

Floor

Carbonaceous medium gr. sandstone. Floor contact  
35 - 40°

BRAMEDA RESOURCES LIMITED  
 SLUKUNKA RIVER COAL PROJECT  
 LIARD M.D., B.C.

D.D.H. S-30

SHEET 3 of 4

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

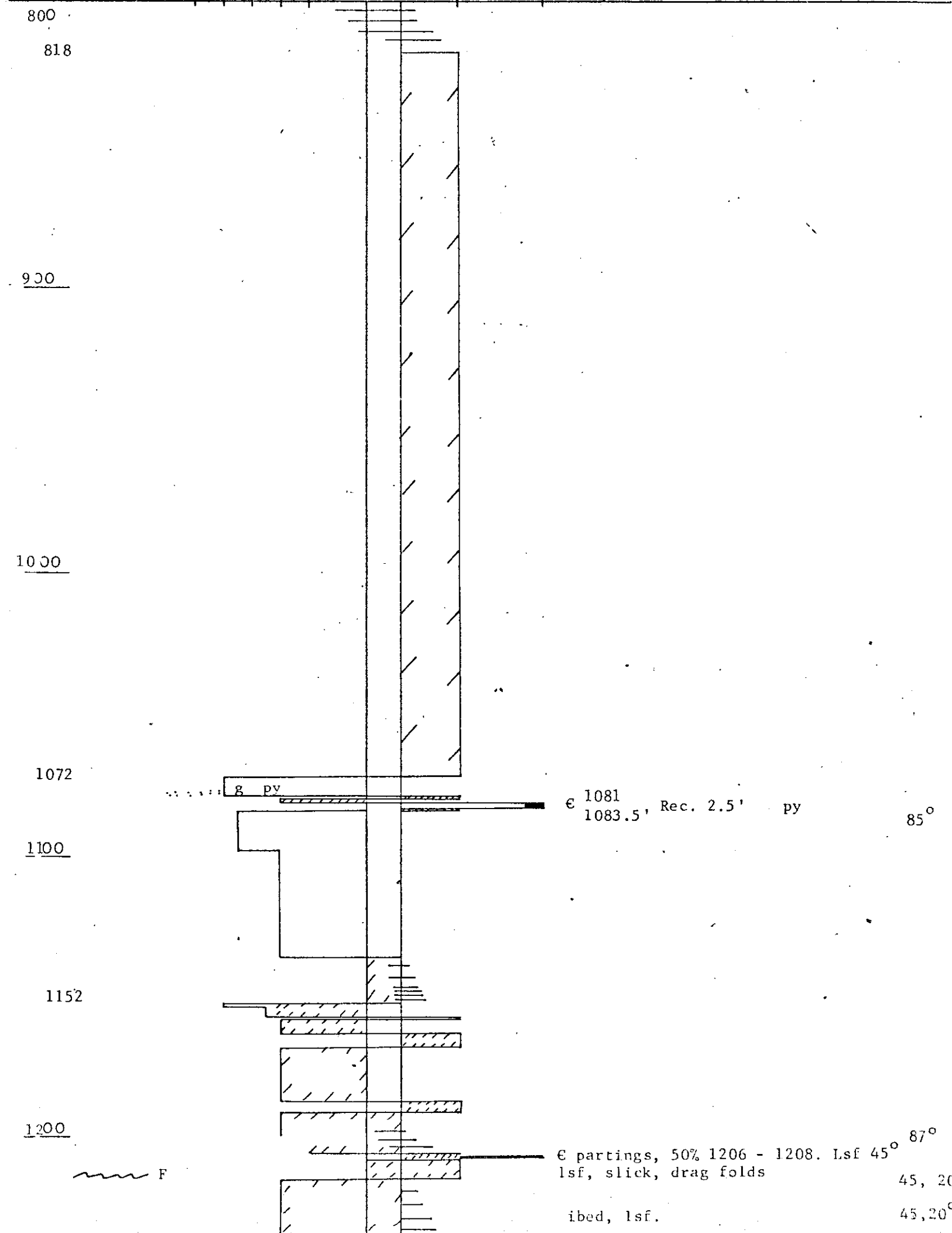
SANDSTONES

SILTSTONES, MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES \* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

600

700

800

818

ibed, ilam Sandstone, siltstone and mudstone.  
Sandstone decreasing downwards.  
Mudstone increasing downwards.

COAL LICENCE: 1081

DATE STARTED : August 3, 1970

CO-ORDINATES

DATE COMPLETED : August 13, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

DRAWN BY : R.E.S.

FINAL

E

5

5085

46,221.80

88,963.30

5105.8'

CONGLOMERATE

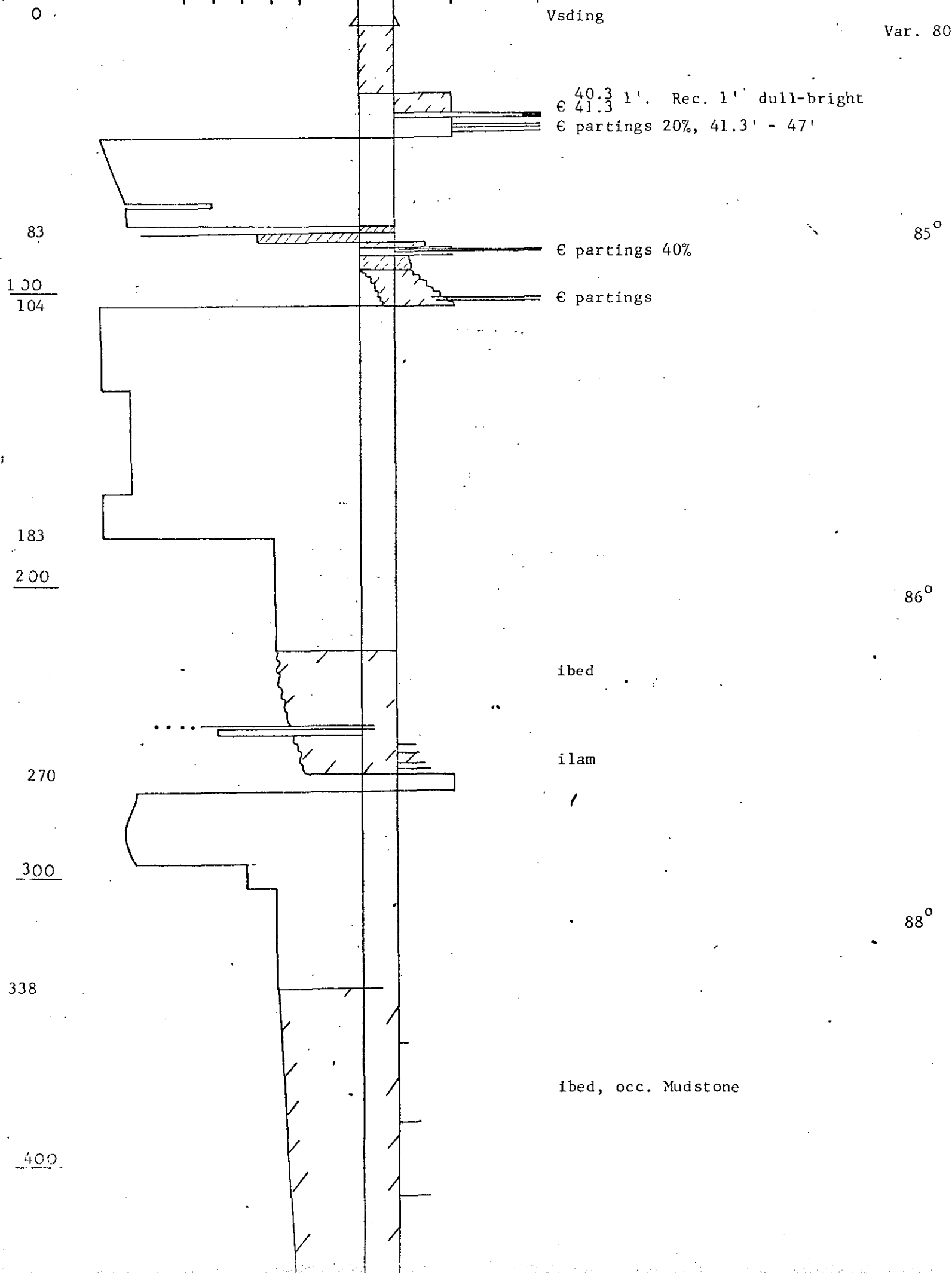
SANDSTONES

SILTSTONES, MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES · MUDSTONES · COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

1253.5'

ibed, ilam

ilam.

88°

sh. carb.

€ part <1/8"  
ilam

1300

F

€ 1313 2.5' Rec. 0.9' fissile.  
1315.5

lsf, fract., drag golds, calcite  
veins

0,90°

Coal flour at contact

45, 80°

lsf  
lsf

45°

carb, lsf, frac, calcite.

75°

1400

F

80°

1438.5

ilam.

Sh.

Sh. carb.

80°

€ part.

1500

F

ilam, drag fold, lsf.

€ 1507.5 3.5' Rec. 1.5' friable.  
1511

ilam  
lsf

80°

45°

€ 1530 15' Rec. 2' friable

1545

floor 65°

1558

END

Roof

1511-1527 Interlaminated siltstone and  
mudstone with a few lsf. 80°

1527 - 1530 Mudstone, silty, lsf, drag folds,  
fissile. 45°

Coal

Badly broken, rubble, some bright hard pieces.

Floor

Carbonaceous medium gr. sandstone, with

calcareous nodules, floor contact to

1600

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES, MUDSTONES, COAL  
& INTERBEDS SHALES

VC C M F VF

SCALE: 1" = 40'

800

900

1000

1070

F

1100

1112

6" cons volcanic ash, lsf, g,  
calcite, lsf, carb.

0.1' ash  
g, calcite, carb, lsf.  
1112 2'. Rec. 0.7'  
1114

calcite veining 20°

calcite veining  $\angle$ var.

80, 88°

1167

F

6 part. lsf.

Var. 82°

1200

83°

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES & COAL  
& INTERBEDS SHALES

SCALE: 1" = 40'

VC C M F VF

400

ibed, ilam.

Var.

459

2 - 6" ash partings

500

600

ibed, ilam.

Var.

700

786

800

COAL LICENCE: 1080

DATE STARTED : August 14, 1970

DATE COMPLETED : August 31, 1970

LOGGED BY : R.E.S.

DRAWN BY : R.E.S.

PRELIMINARY

FINAL

CO-ORDINATES

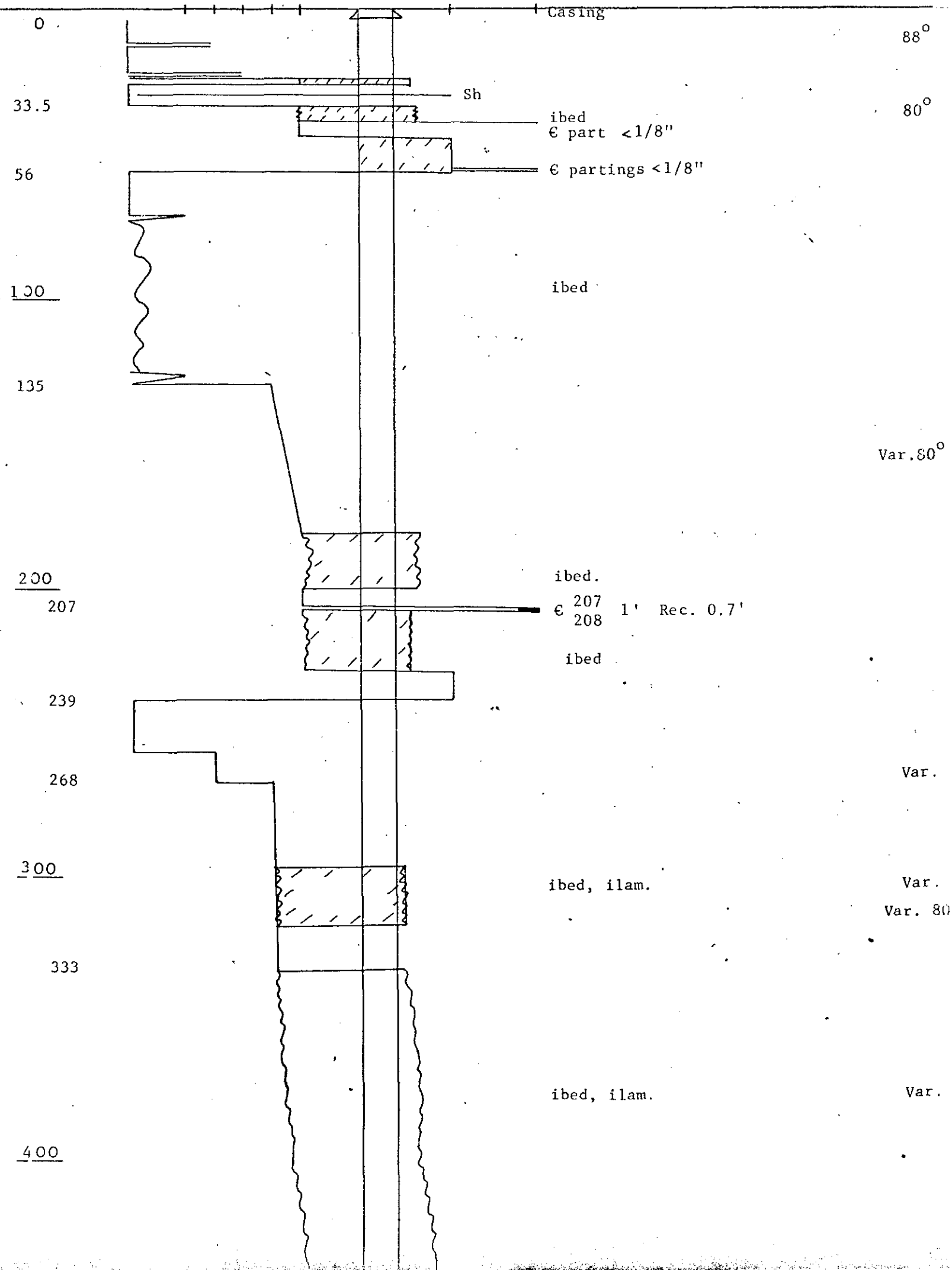
NORTH EAST WEST ELEVATION

D 5 5000 G

47,574.60 87,625.40 4970.7'

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES & COAL  
 VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES, MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

900

1000

1020

1100

1140.4

1155

1168

1200

€ 994  
995 1'. Rec. 1'

80°

80°

ilam

75, 80°

€ parts. 3 - 1/2"

Sh

silty, 1sf.

1140.4  
€ 1155.0 14.6'. Rec. 12.7'

87°

inc. 1" Sis @ 1145.4'

85°

82°

End

Roof

1126 - 1133

Siltstone, solid rock. 80°

1133 - 1138

Shale, silty, thin bedded, a few 1sf. 85

1138 - 1139

Shale, mudstone, 1sf. 87°

1139 - 1140.0

Mudstone, crumples easily. 80°

Coal

Bright banded, hard, inc. 1" Sis.

Floor

Chalk sandstone, massive bedding. Floor contact 85°

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE SANDSTONES SILTSTONES, MUDSTONES, COAL  
 VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'

400

Ss 10, SiS 20 Ms 70

500

ibed, SiS inc. downwards Var.

600

700

ibed, ilam, Ms inc. down.

Var.

800

LIARD M.D., B.C.

COAL LICENCE: 1090

DATE STARTED : August 16, 1970

CO-ORDINATES

DATE COMPLETED : August 23, 1970

LOGGED BY : R.E.S.

PRELIMINARY

NORTH

EAST

WEST

ELEVATION

DRAWN BY : R.E.S.

FINAL

39,031.81

97,483.29

5651.5'

CONGLOMERATE

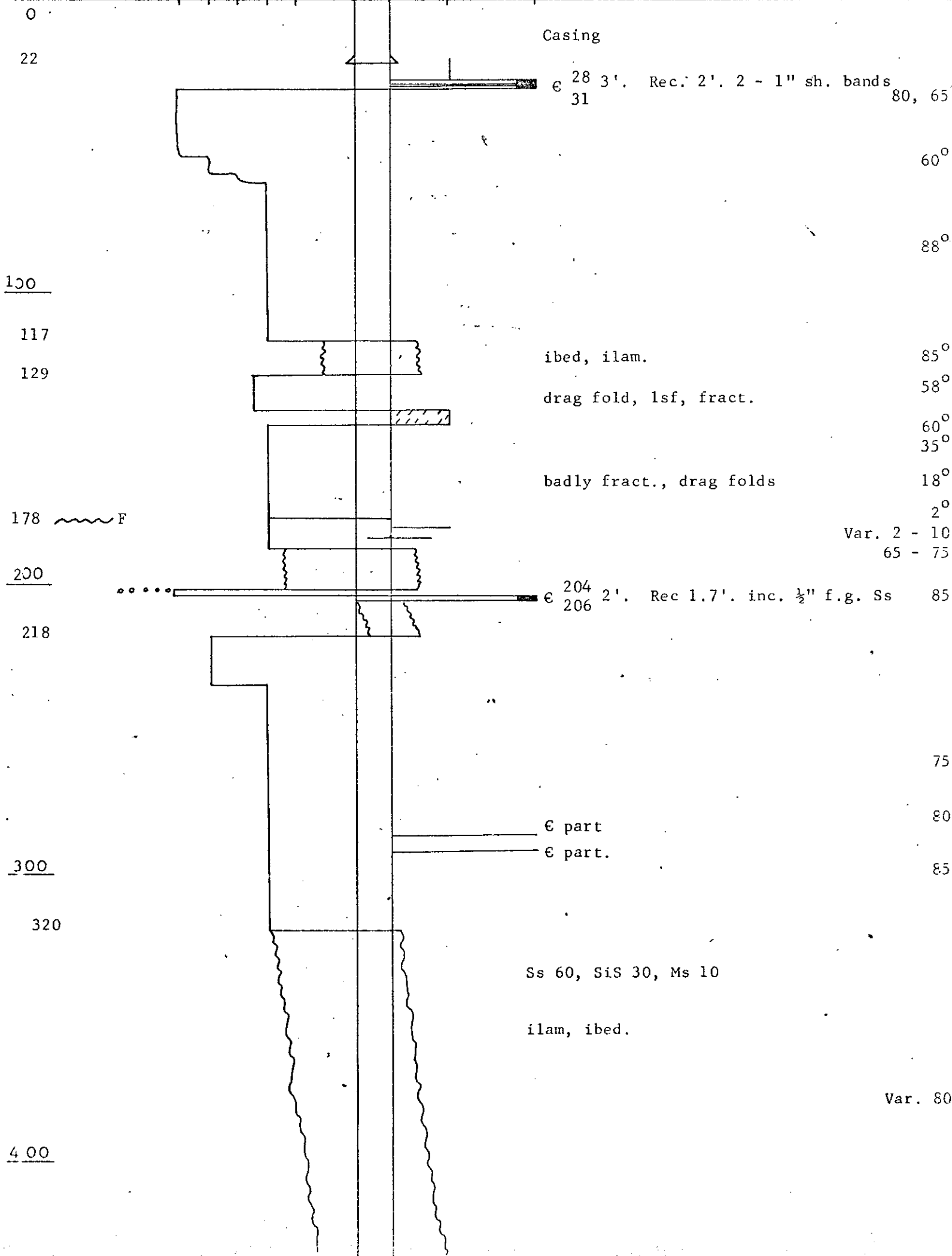
SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

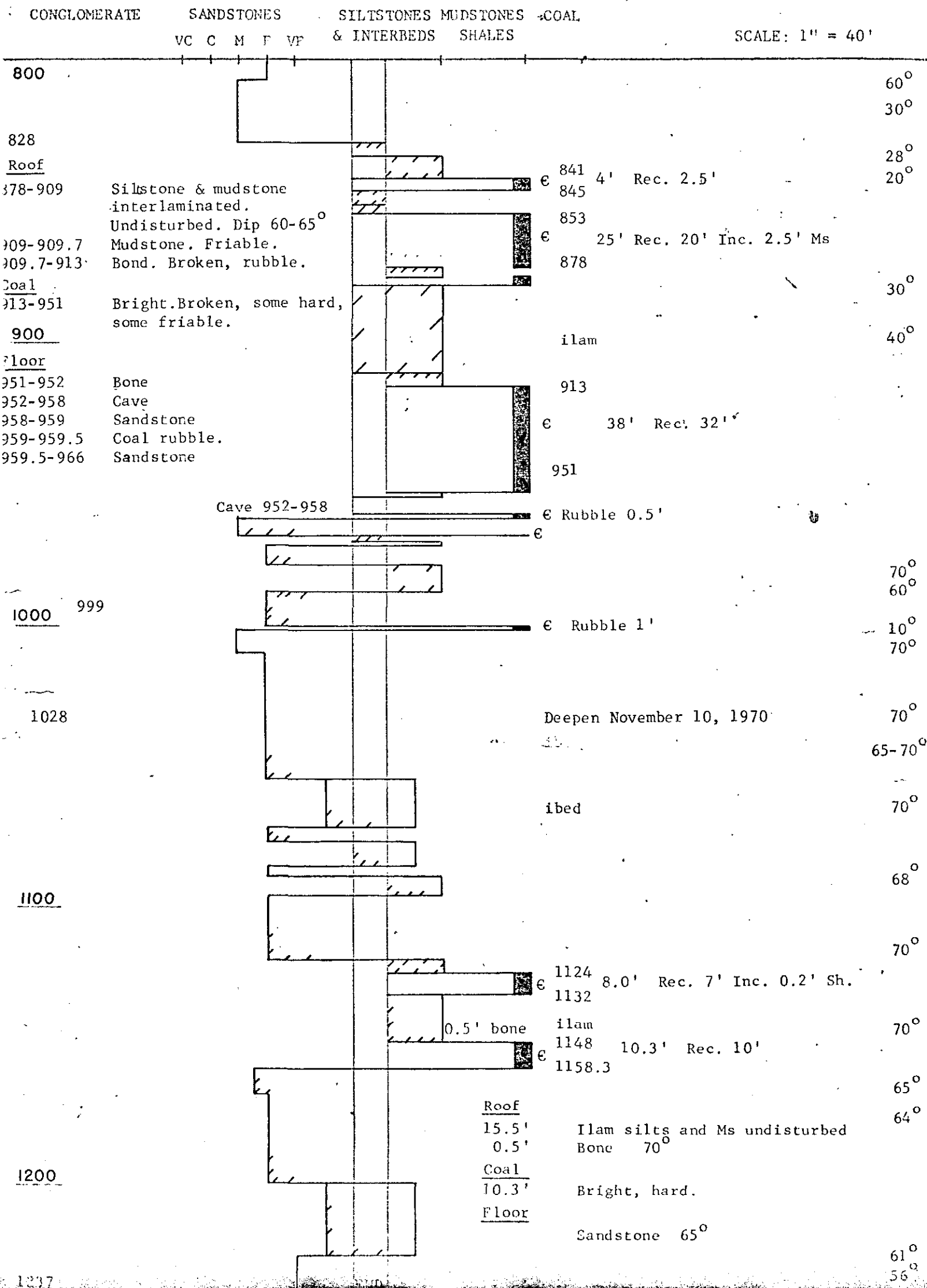
ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

500

600

700

653

800

900

g

€ 663.2 4.5' Rec. 4.5'  
 667.7

lsf, broken, calcite

ibed

€ part.

70°

65°

10°

0°

10°

45°

60°

30°

70°

67°

LIARD M.D., B.C.

COAL LICENCE : 1087

DATE STARTED : 3 September 1970

CO-ORDINATES

DATE COMPLETED : 16 September 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

42,993.27

81,315.92

4718.00

CONGLOMERATE

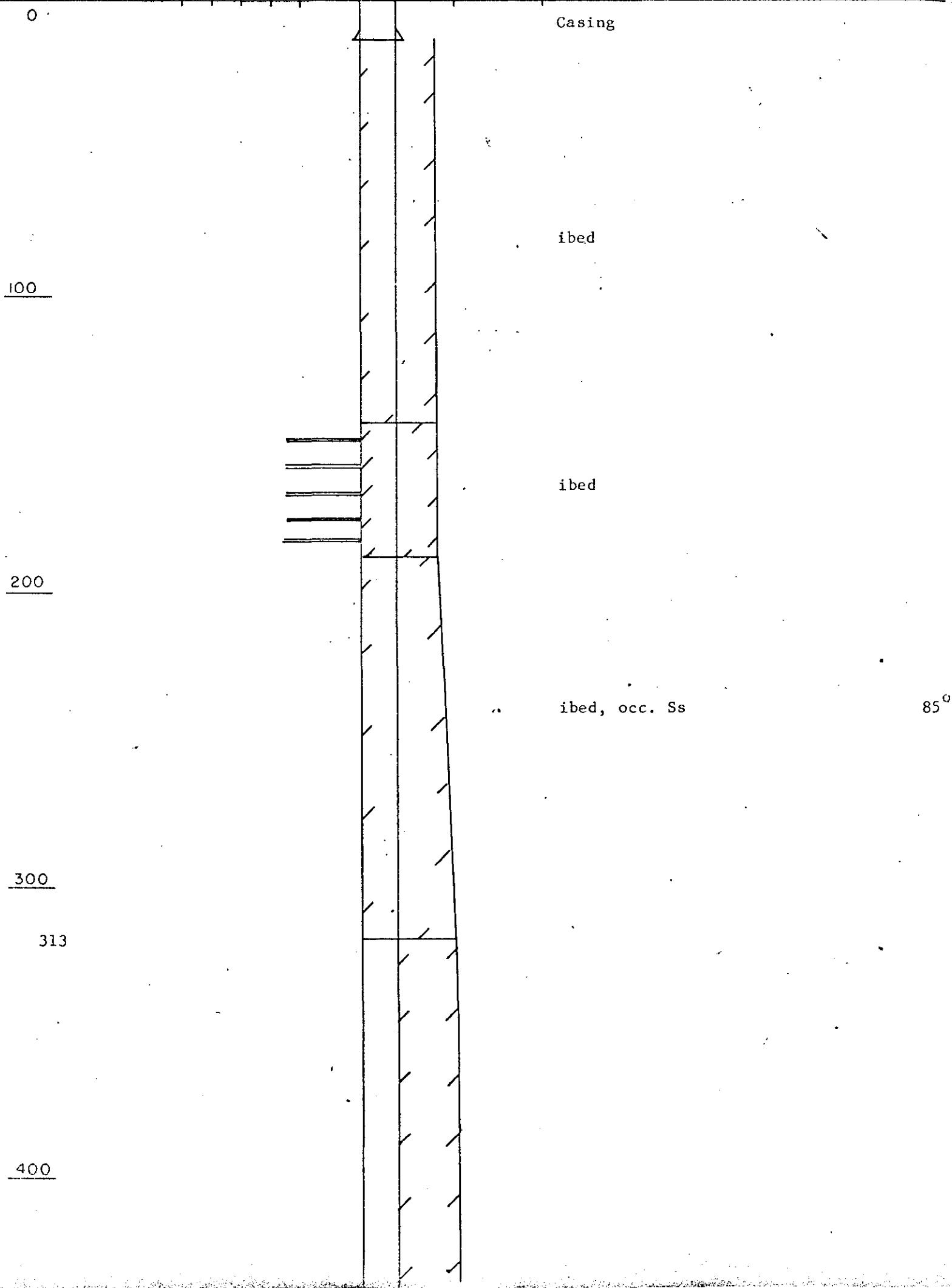
SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

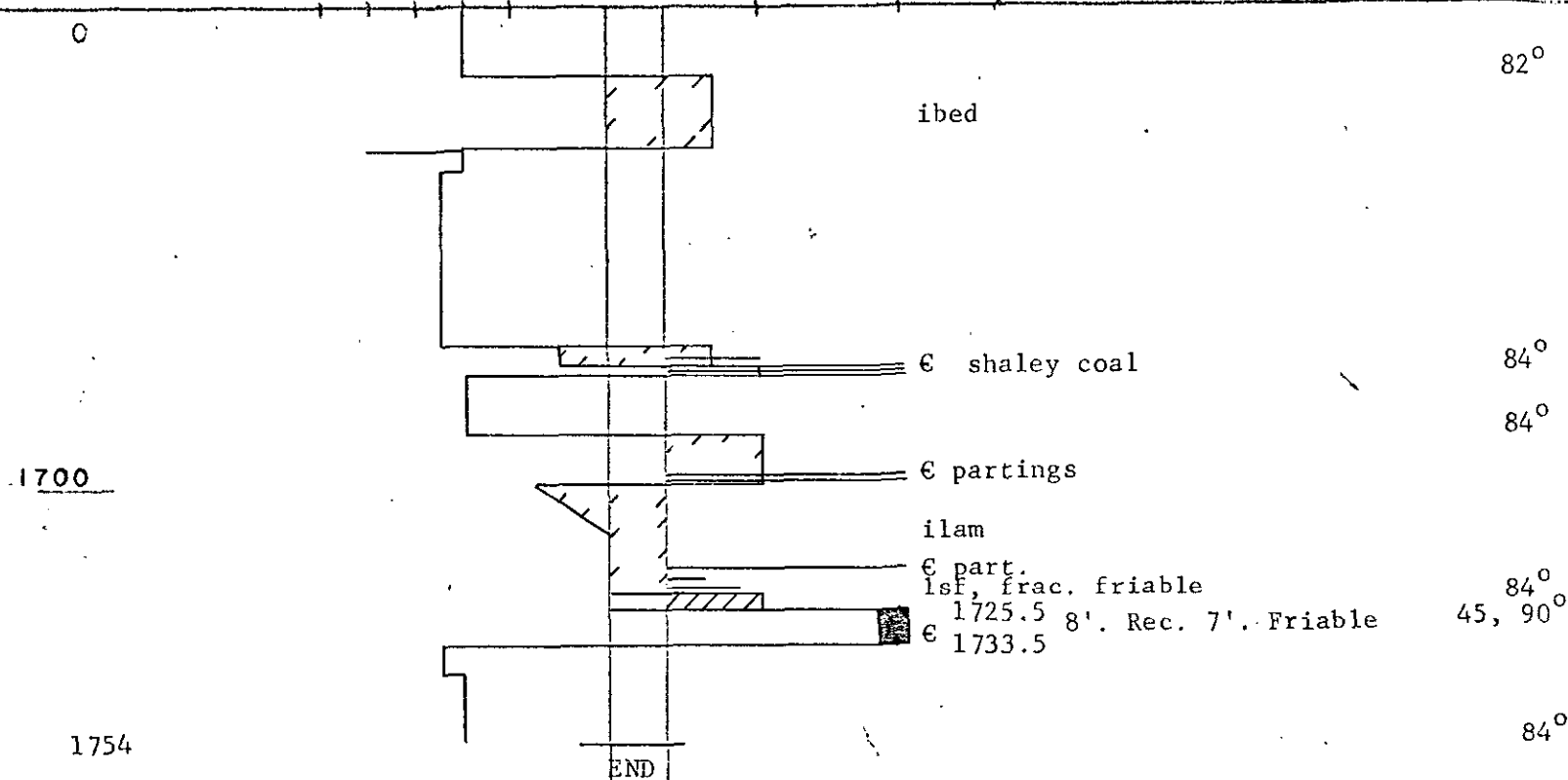
SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



Roof

1699.5 - 1722.0 Sandstone becoming siltstone with thin shale laminations increasing downwards.

1722.0 - 1723.0 Mudstone

1723.0 - 1725.5 Shale, fractured, lsf, slicken, friable. CA 45-90°.

Coal

1725.5 - 1733.5 8'/7' Bright, broken, friable.

Floor

1733.5 - Sandstone, bedding CA 84°

00

00

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

### ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

## SANDSTONES

SILTSTONES MUDSTONES- COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

0

900

87°

Cm  
Mb

1000

1100

1200

LEACH A.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

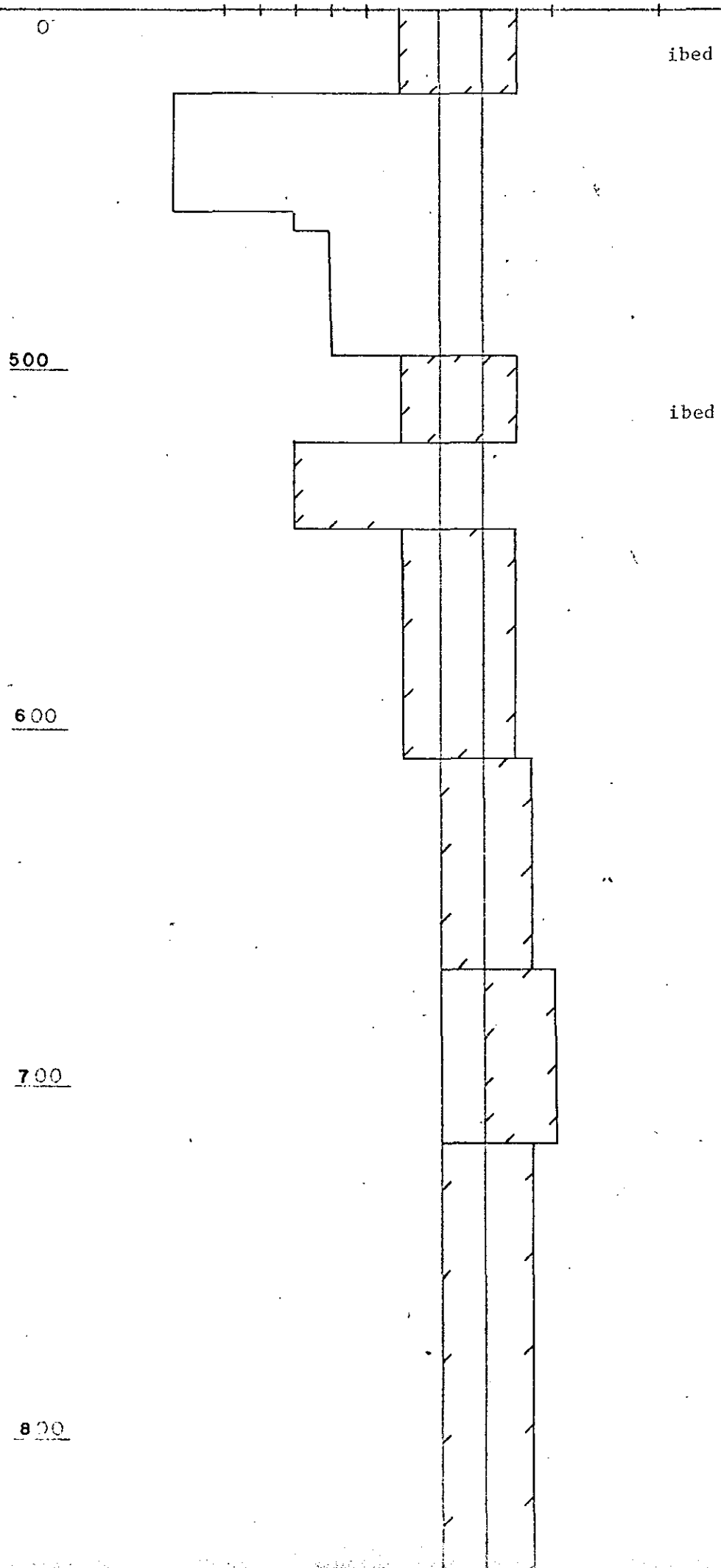
SANDSTONES

SILTSTONES MUDSTONES - COAL

VC C N F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



COAL LICENCE : 1081

DATE STARTED : 2 September 1970

CO-ORDINATES

DATE COMPLETED : 20 September 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

45,598.10

91,459.30

5445.10

CONGLOMERATE

SANDSTONES

SILTSTONES MIDSTONES, COAL

VC C M F VP

&amp; INTERBEDS SHALES

SCALE: 1" = 40'

0 Casing

87°

100 ibed

87°

133 € 1'. Rec. 0.5'

141 € 1.7'. Rec. 1.5'

€ partings

161 € partings

€ 1'. Rec. 1'

200

197 2'. Rec. 1.8'

€ 199

€ 200 5'. Rec. 2'. Sh parts, 3" cong.

205

87°

85°

84°

€ parting

300

400

ibed

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>6</sup> COAL

VC C M F VT

& INTERBEDS SHALES

SCALE: 1" = 40'

800

Roof

1170 - 1189.5 Siltstone becoming  
silty shale. CA 81°

1189.5 - 1197 Mudstone, silty,  
carbonaceous from  
1196 - 1197

1197 - 1199 Coal, Bright, bard inc.  
0.1' Sh

1199 - 1202.5 Siltstone becoming -  
1202.5 - 1203.5 Silty shale. CA 83°.

Coal

1203.5 - 1213.5 10/8.5. Bright, hard.  
Pulled core barrel in  
middle of coal - could  
account for recovery.

Floor

Sandstone. CA 82°

900

1000

1018.5

1020 4' Rec. 3.5'  
1024

1100

80°

ibed

80°

Sh

Sh

81°

1200

1197 2' Rec. 2'  
1199

1203.5 10' Rec. 8.5'  
1213.5

83°

82°

1223

END

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES - COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400  
ibed

430

500

ibed

80°

600

Ms inc. downward

700

767

800

COAL LICENCE 1090

DATE STARTED : September 2, 1970

CO-ORDINATES

DATE COMPLETED : September 10, 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

42,379.4 93,871.3

5367.7

CONGLOMERATE

SANDSTONES

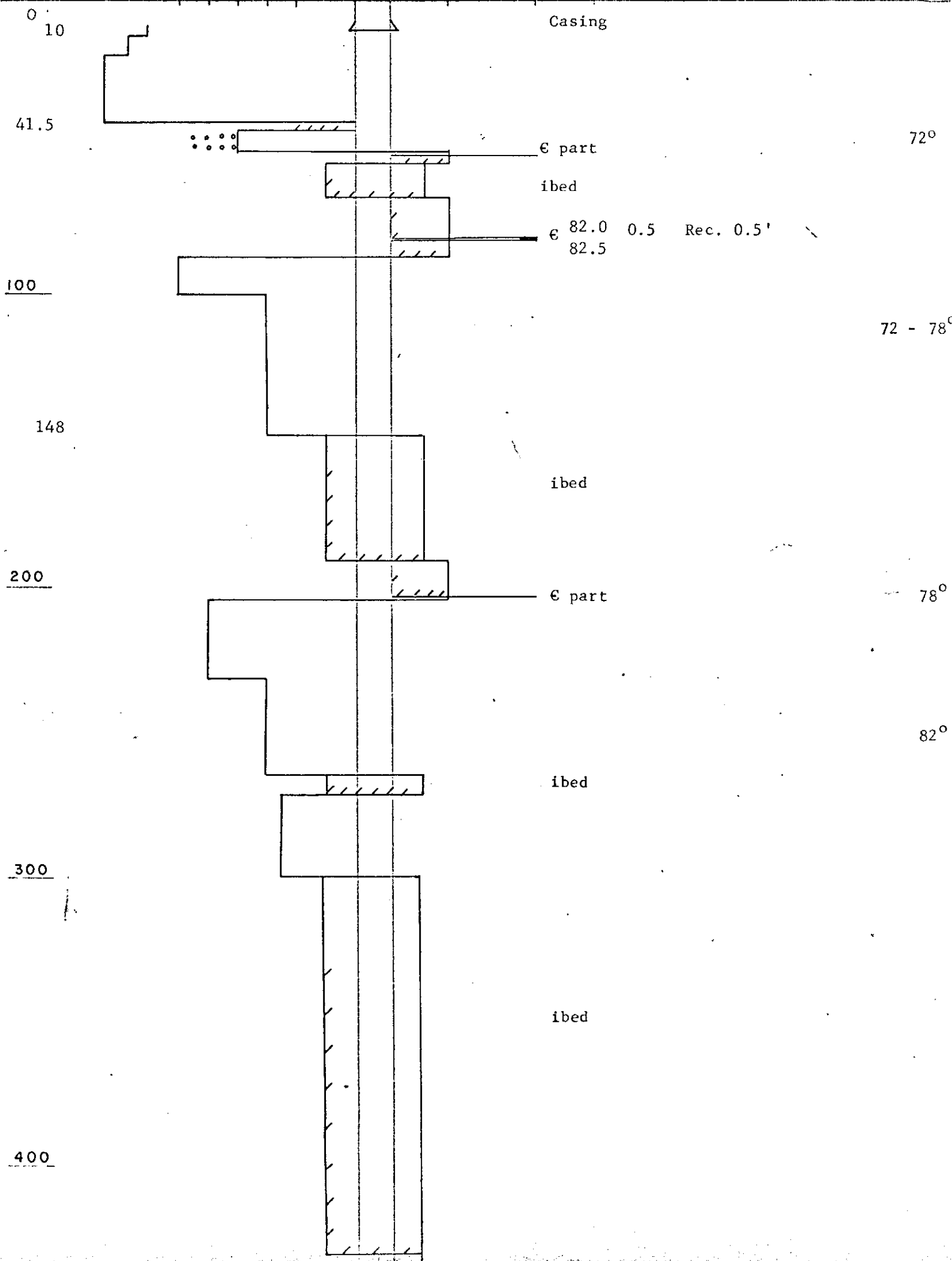
SILTSTONES MUDSTONES\* COAL

DIP TEST 87°

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



LEARD H.D., S.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES, COAL

VC C M F VT

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

80 - 82°

ibed

ibed

80°

Var. 79°

1300

ibed

1400

1408

END

Var.

Roof

1171.7 - 1181.5 Siltstone and silty shale.  
Undisturbed. Dip 8°

1181.5 - 1182.2 "Bone"

Coal

1182.2 - 1192.5 10.3/10 Bright, hard.

Floor

1192.5 - Sandstone. Dip 8 - 10°

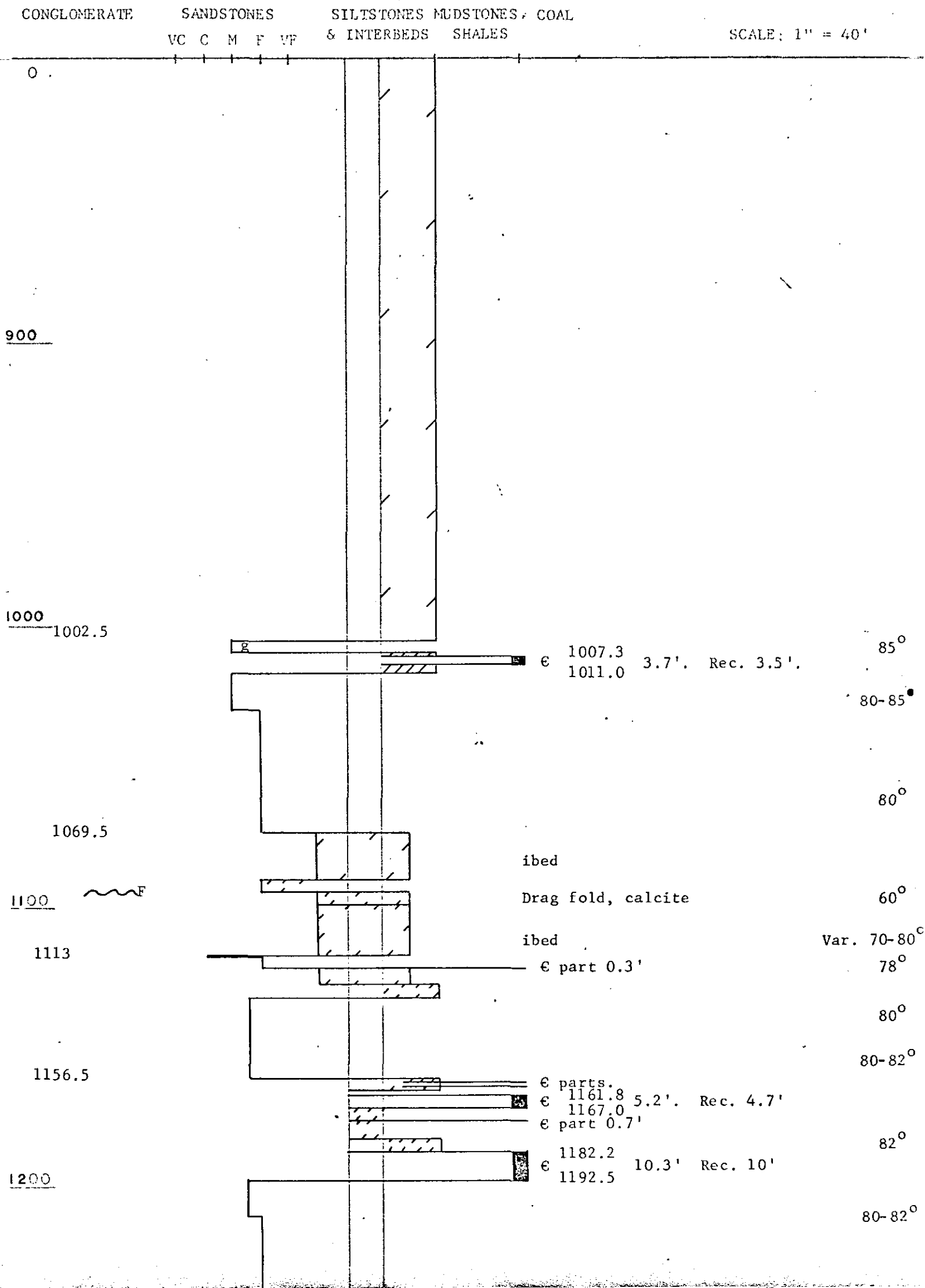
1500

00

DATE STARTED :  
DATE COMPLETED :  
LOGGED BY :  
DRAWN BY :

CO-ORDINATES  
NORTH EAST WEST ELEVATION

PRELIMINARY  
FINAL



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES · MUDSTONES · COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

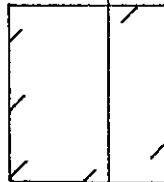
400

500

600

700

800



libed

"Flat"

566 - 588 Slicken, lsf, broken

"Flat"

COAL LICENCE : 1088

DATE STARTED : 13 September 1970

CO-ORDINATES

DATE COMPLETED : 21 September 1970

| NORTH | EAST | WEST | ELEVATION |
|-------|------|------|-----------|
|-------|------|------|-----------|

LOGGED BY : R. E. S.

## PRELIMINARY

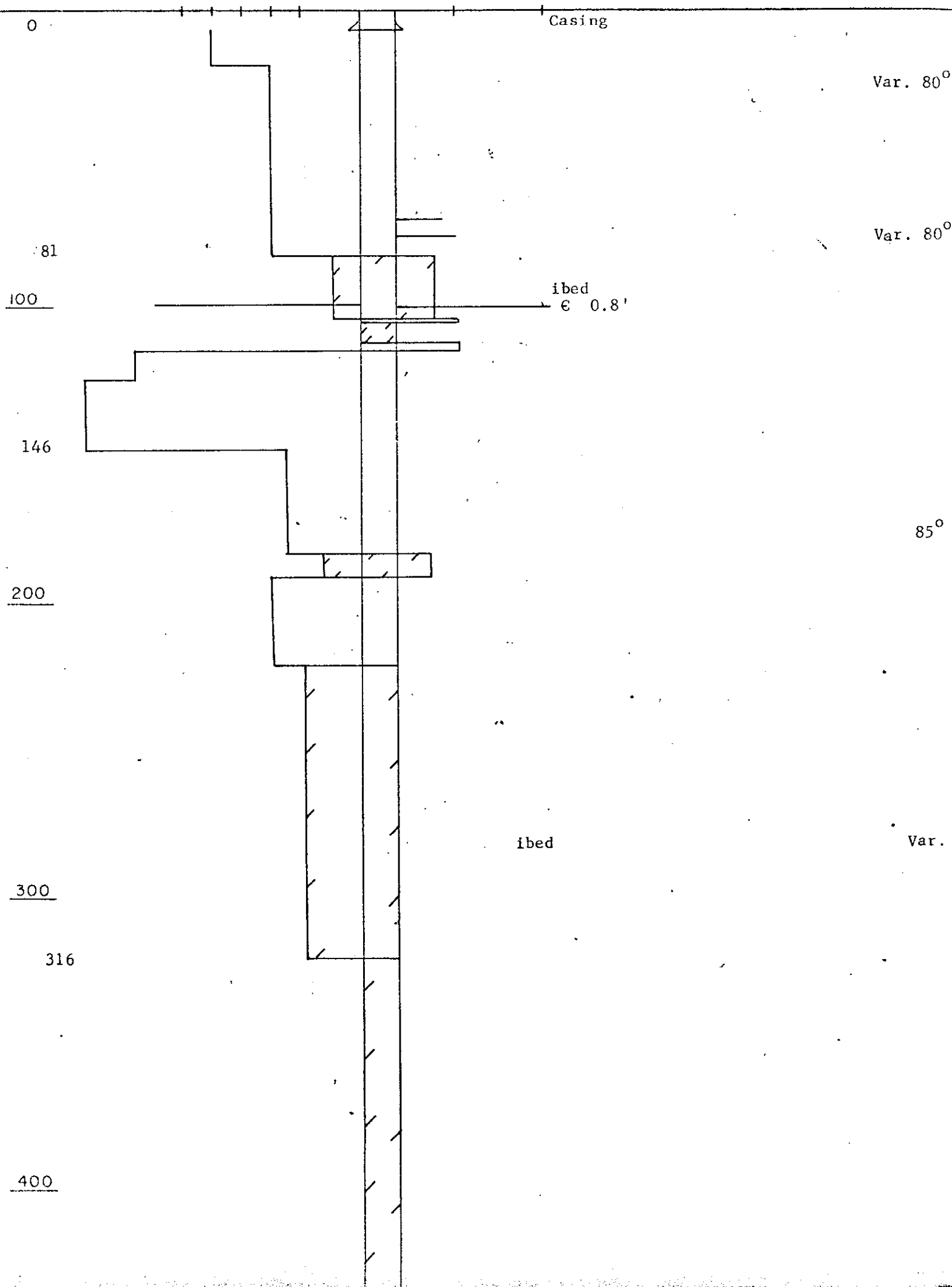
DRAWN BY : R. E. S.

FINAL

44,083.18    84,155.83                    4926.8

| CONGLOMERATE | SANDSTONES | SILTSTONES, MUDSTONES & COAL<br>& INTERBEDS | SHALES |
|--------------|------------|---------------------------------------------|--------|
| VC           | C          | M                                           | F      |
|              | VF         |                                             |        |

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

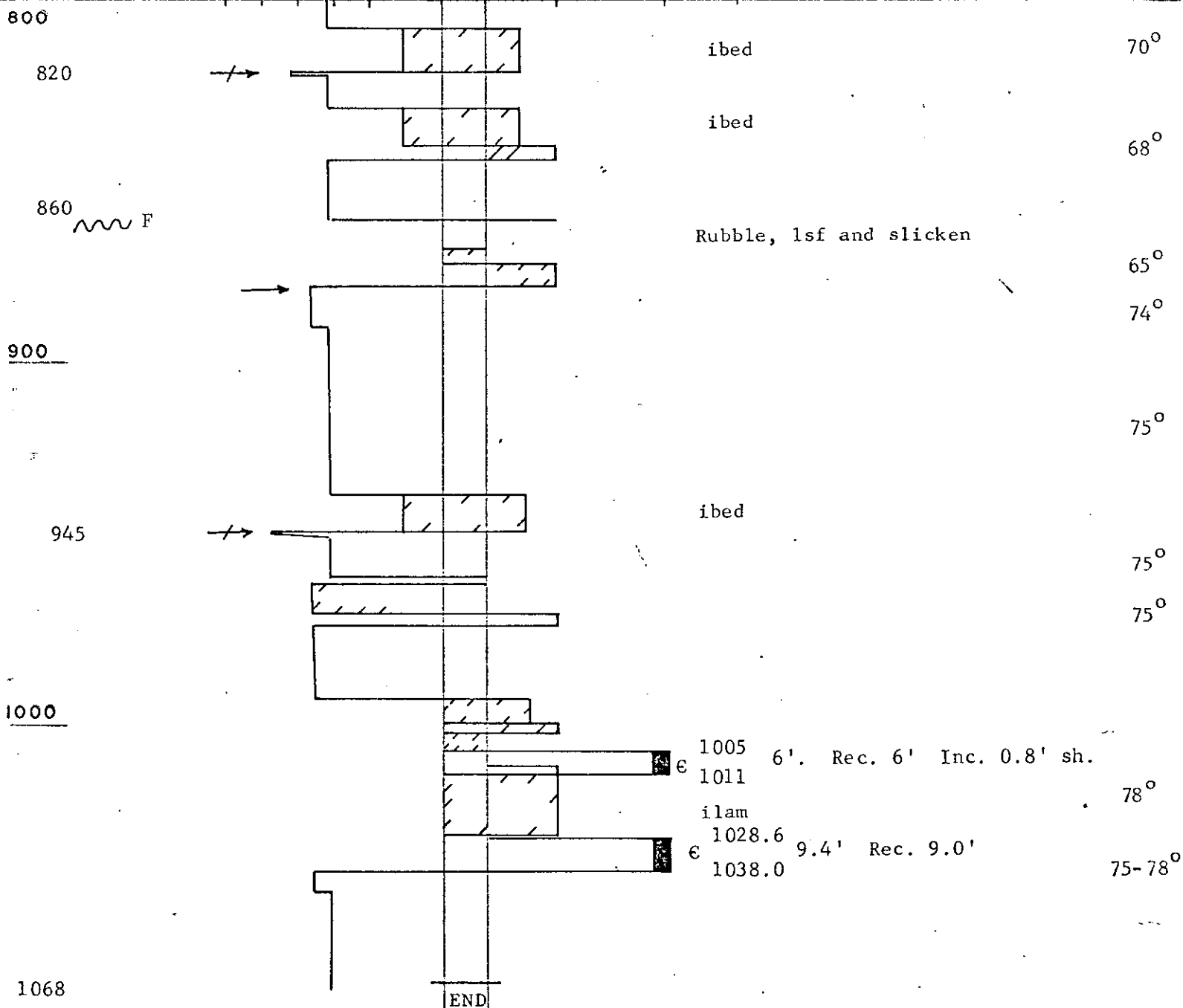
SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



Roof

1012 - 1028

Siltstone and mudstone thinly laminated. Minor drag fold  
1019 - 1022. Dip 12°.

1028 - 1028.6

" Bone "

Coal

1028.6 - 1038.0

9.4/9.0 Bright, hard,

Floor

Sandstone

LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

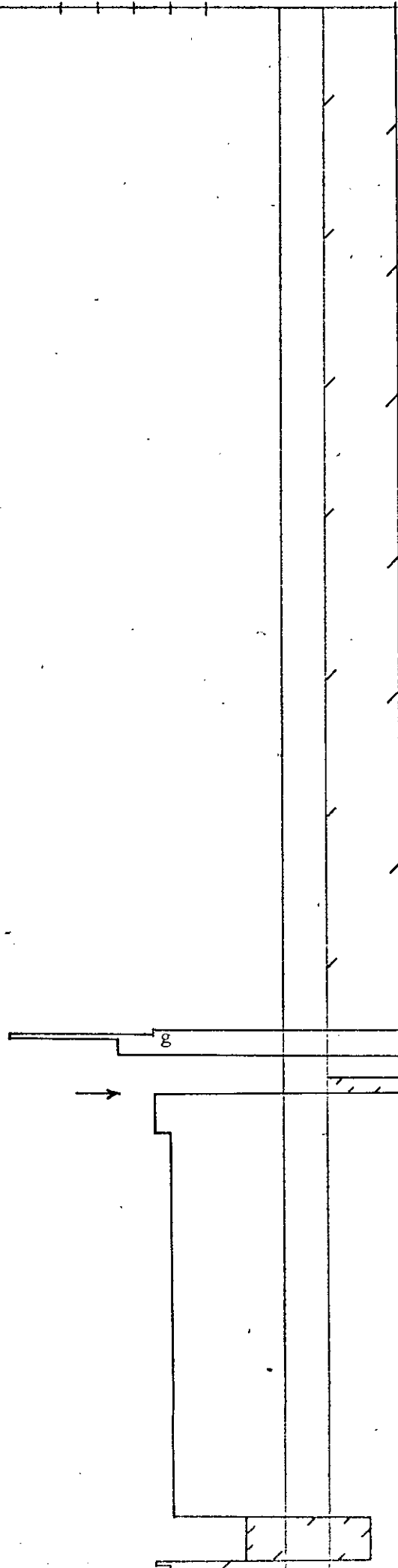
600

675

700

800

820



682.5 5.5' Rec. 4.5'

688.0

84°

80°

84°

drag fold, 60, 0, 60  
calcite

75 - 70

70°

COAL LICENCE: 1087

LIARD M.D., B.C.

DATE STARTED : 19 September 1970

CO-ORDINATES

DATE COMPLETED : 23 September 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

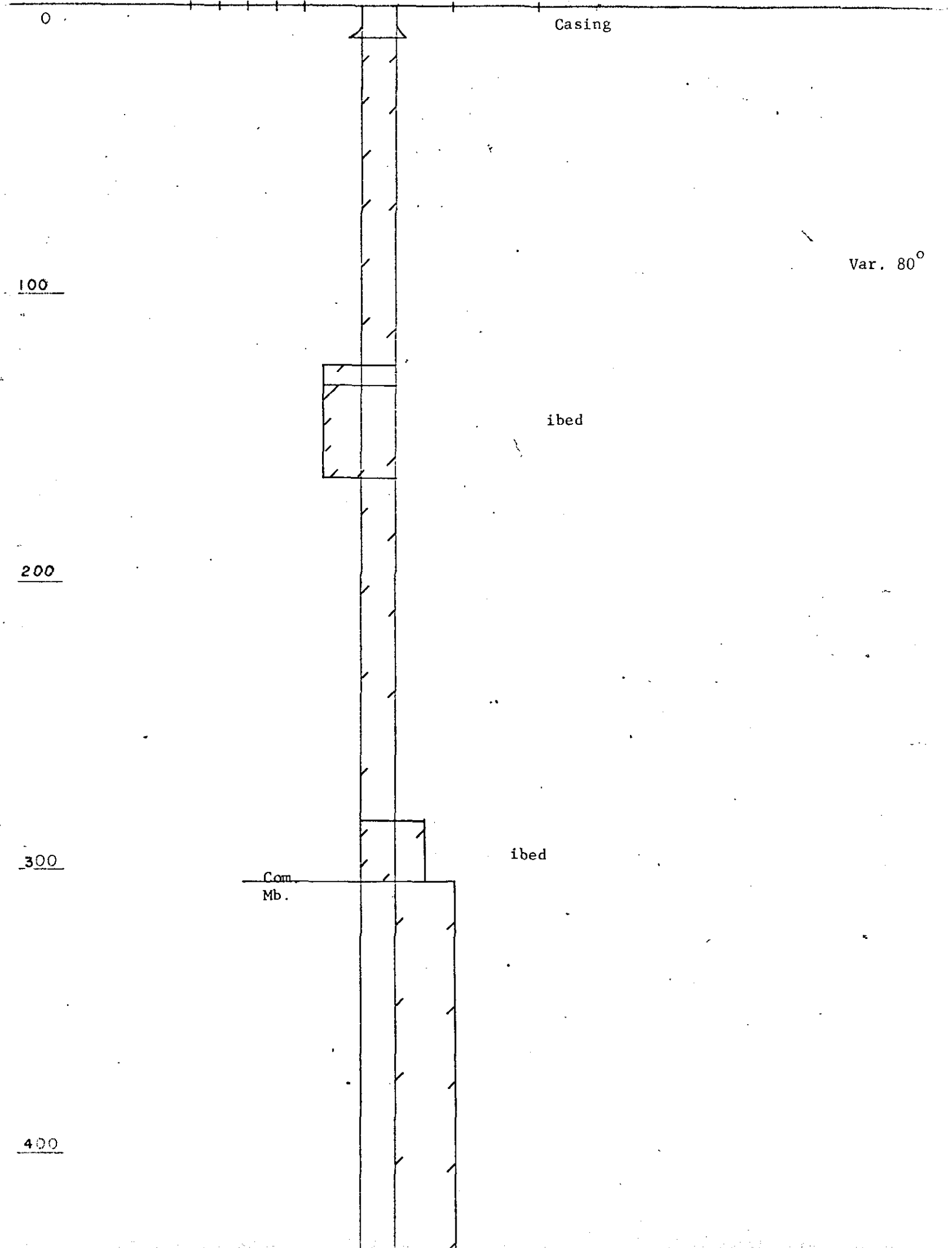
DRAWN BY : R.E.S.

FINAL

41,453.09 82,462.04 4550.7

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES & COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES · MUDSTONES · COAL

VC C M F VP

& INTERBEDS SHALES

SCALE: 1" = 40'

0

Roof

1558-1566.5'

Siltstone and shale interbedded undisturbed.  
Dip 17°.

1566.5-1569.1'

Mudstone. Silty.  
Undisturbed.

Coal

1569.1-1573.6'

Bright, hard. Slightly  
disturbed. 4.5' Rec. 3'.

1573.6-1578.0'

Siltstone. Occasional  
listric surface on bedding  
plane. Dip 17°.

1578.0-1580.0'

Coal. Bright, hard,  
broken. 2' Rec. 1.7'.

Floor

Sandstone. Dip 17°.

00

00

00

00

LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

Stress planes @ 70°

1300

1292.2  
1299.5

py Ash

€ 1292.2 2.8' Rec. 2.8' py.  
€ 1295.0  
€ 1298.5 1' Rec. 0.9'  
1299.5

70°

1400

Sh

Sh

70°

Sh

1451

€ 1454

3' Rec. 3' Dull-bright, some shale.

1st broken  
gouge

F

1500

€ 1569.1  
€ 1573.6  
€ 1578.0  
€ 1580.0

4.5' Rec. 3' Bright, hard.  
2' Rec. 1.7' Bright, hard,  
broken

1600

1608

END

BRAMEDA RESOURCES LIMITED  
SUKUNKA RIVER COAL PROJECT  
LIARD M.D., B.C.

D.D.H. S-39

SHEET 3 of 5

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES COAL  
& INTERBEDS SHALES

SCALE: 1" = 40'

VC C M F VP

800

Var. 80-85°

900

1000

1100

1200

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>W</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

407 - 443. Broken, slickensides,  
gouge.

Var.

ibed

500

ibed

78°

600

ibed

700

ibed

80°

800

Var. 80  
85°

DATE STARTED : September 23, 1970

CO-ORDINATES

DATE COMPLETED : October 8, 1970.

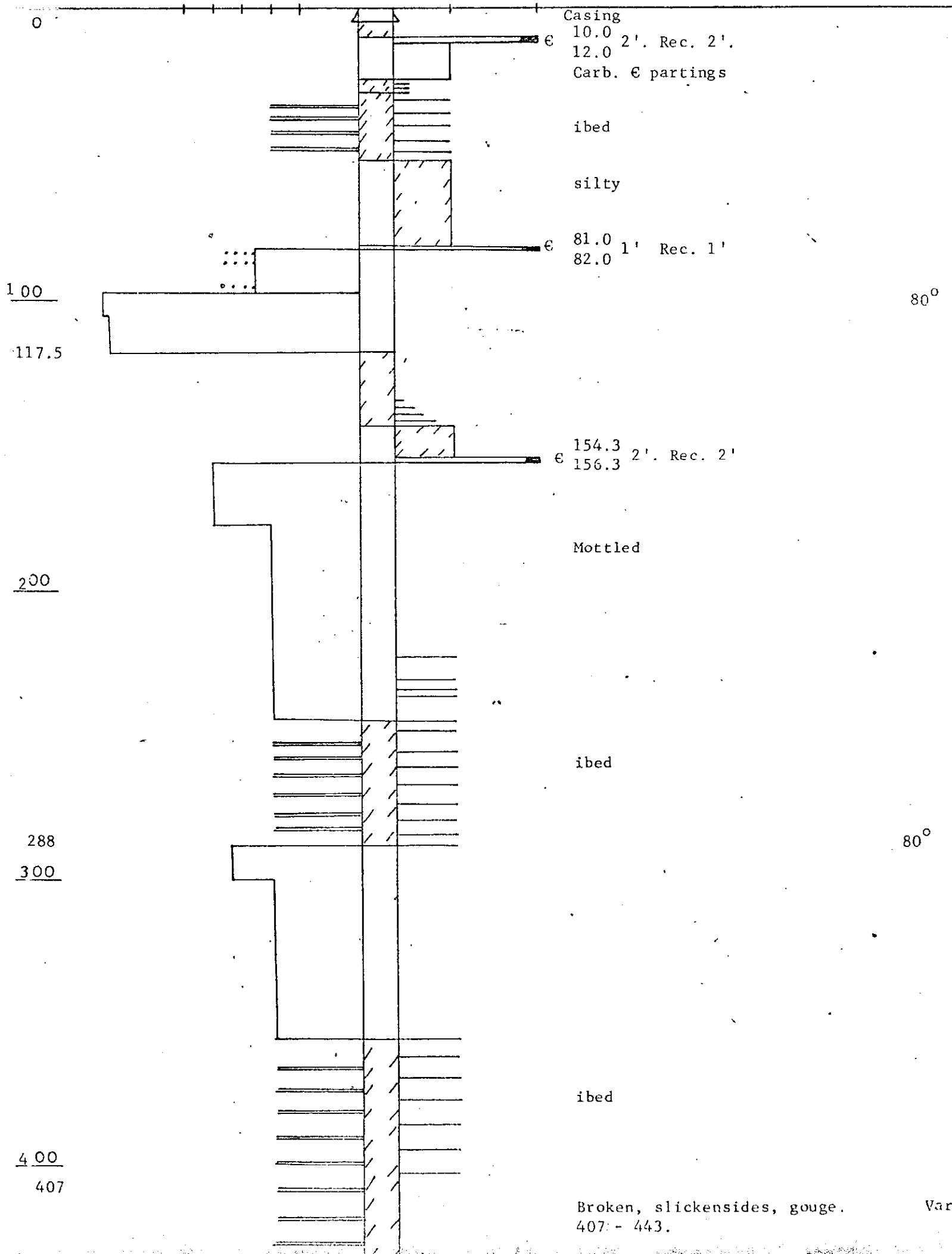
NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S. PRELIMINARY

DRAWN BY : R.E.S. FINAL 38,839.22 94,350.35 5391.5

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES " COAL  
& INTERBEDS SHALES

SCALE: 1" = 40'

1200

VC C M F VF

E 0.7'  
ilam

87°

E 1218  
1227

9.0' Rec. 9.0'

85 - 90

88°

1258

END

Roof

1203.7 - 1217.8 Siltstone becoming silty shale.  
Undisturbed. CA 87°.

1217.8 - 1218.0 Bone.

Coal

1218 - 1227 9/9 Bright, hard.

Floor

1227 Sandstone. CA 85 - 90.

1300

00

00

00

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES, MUDSTONES & COAL  
& INTERBEDS SHALES

VC C M F VF

SCALE: 1" = 40'

800

900

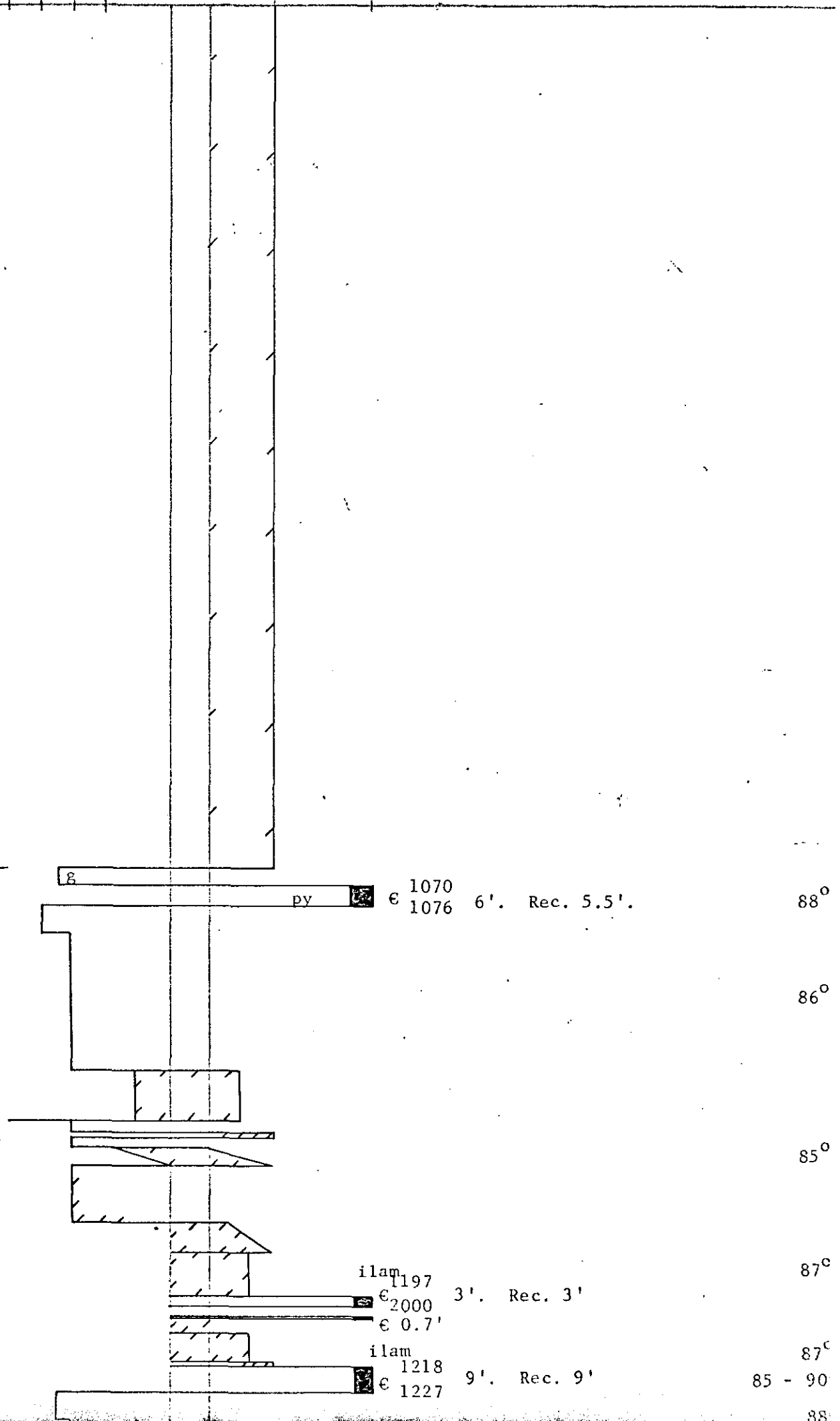
1000

1064

Mb  
Ge

1100

1200



LIARD M.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES

COAL

VC C M F VE

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

600

700

800

ibed

COAL LICENCE : 1080

DATE STARTED : 23 September 1970

CO-ORDINATES

DATE COMPLETED : 30 September 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

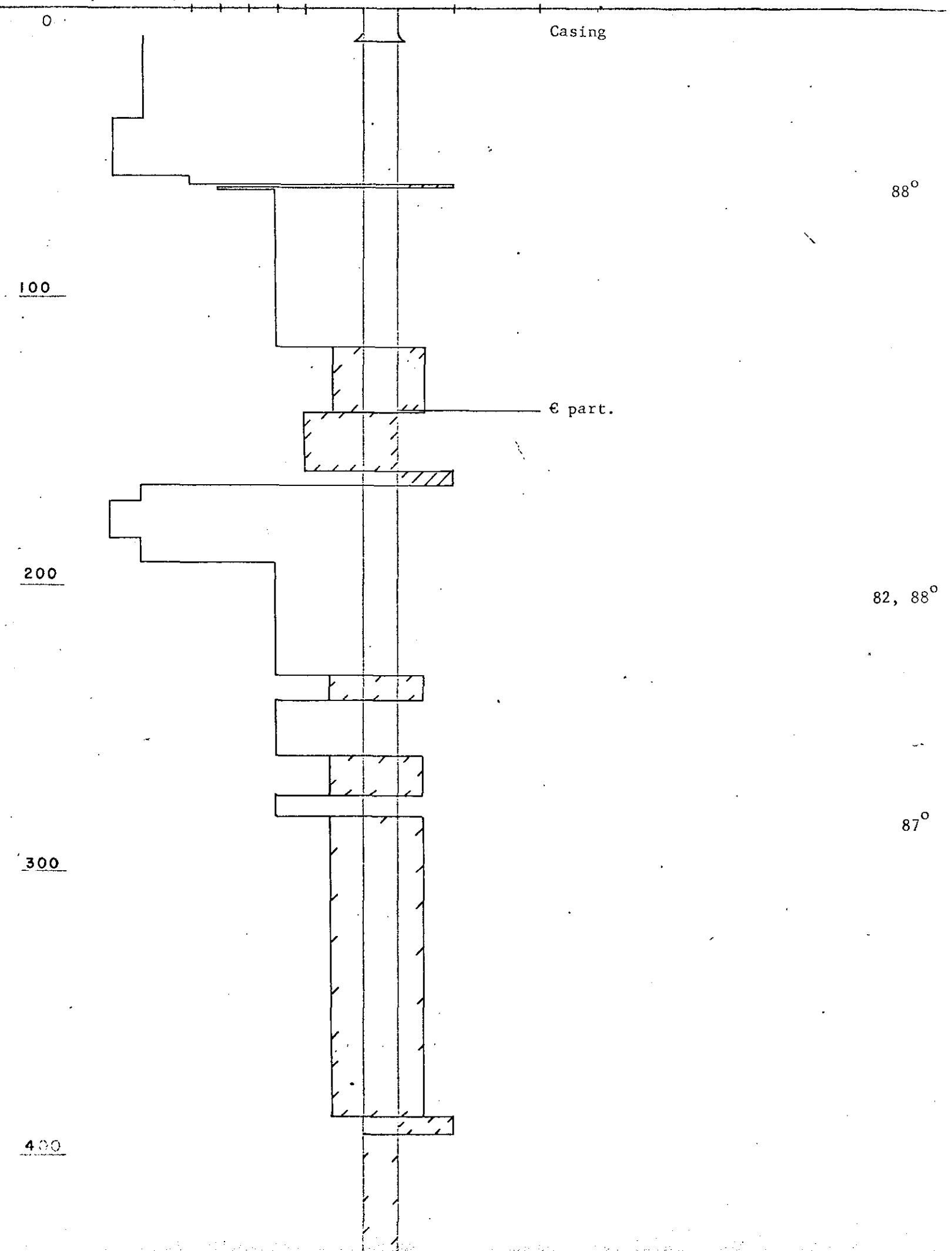
FINAL

45,371.00 87,020.50

4929.9

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

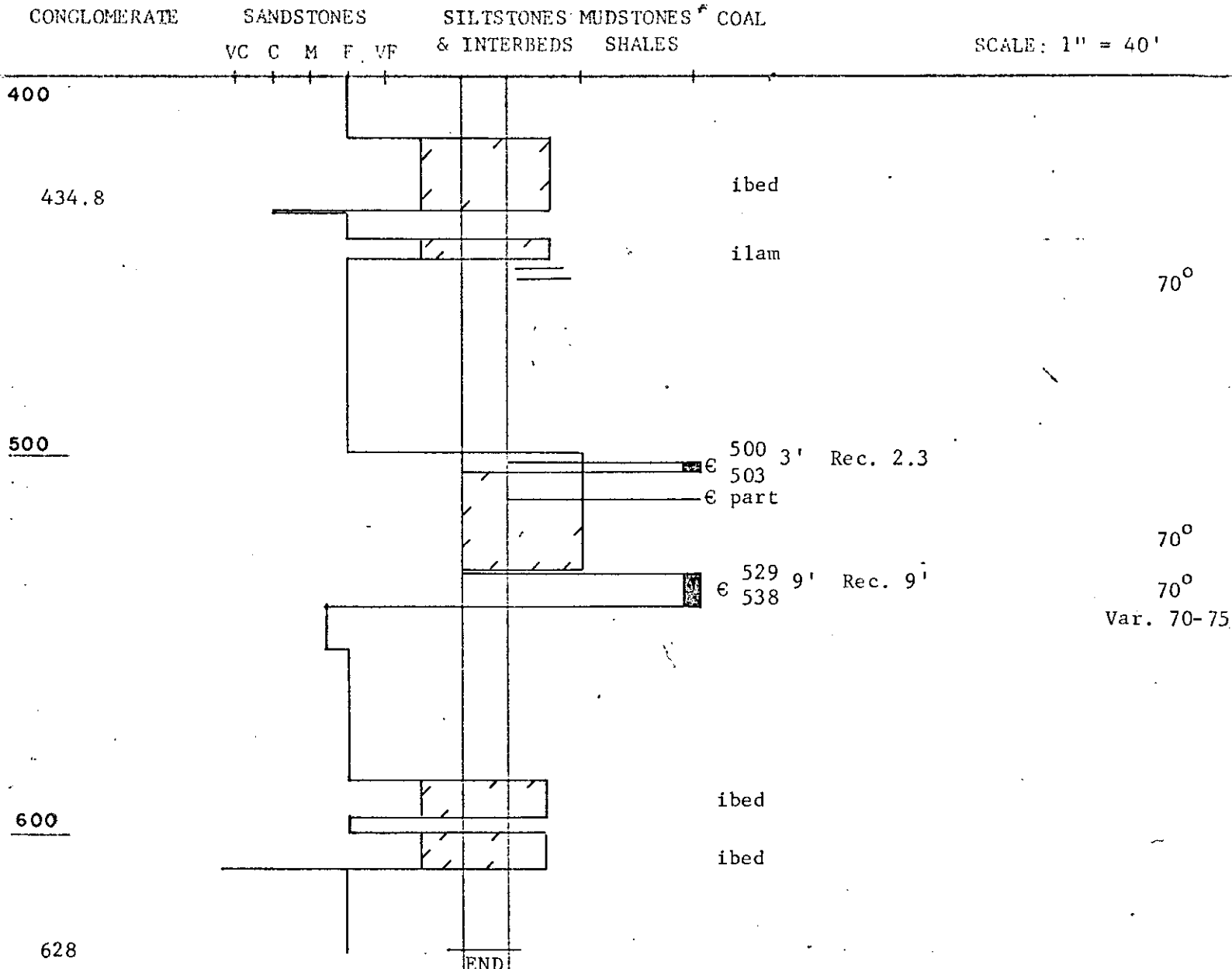
ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL



Roof

503 - 528.5

Siltstone and mudstone thinly laminated. Slight flexure 517'-520' remainder undisturbed. Dip 20°

528.5 - 529

"Bone".

Coal

529 - 538.0

9/9 Bright, hard. 15% friable.

Floor

538 -

Sandstone. Floor dip 20°. Bedding 15-20°

COAL LICENCE : 1080

LIARD H.D., E.C.

DATE STARTED : 27 September 1970

CO-ORDINATES

DATE COMPLETED : 2 October 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S

PRELIMINARY

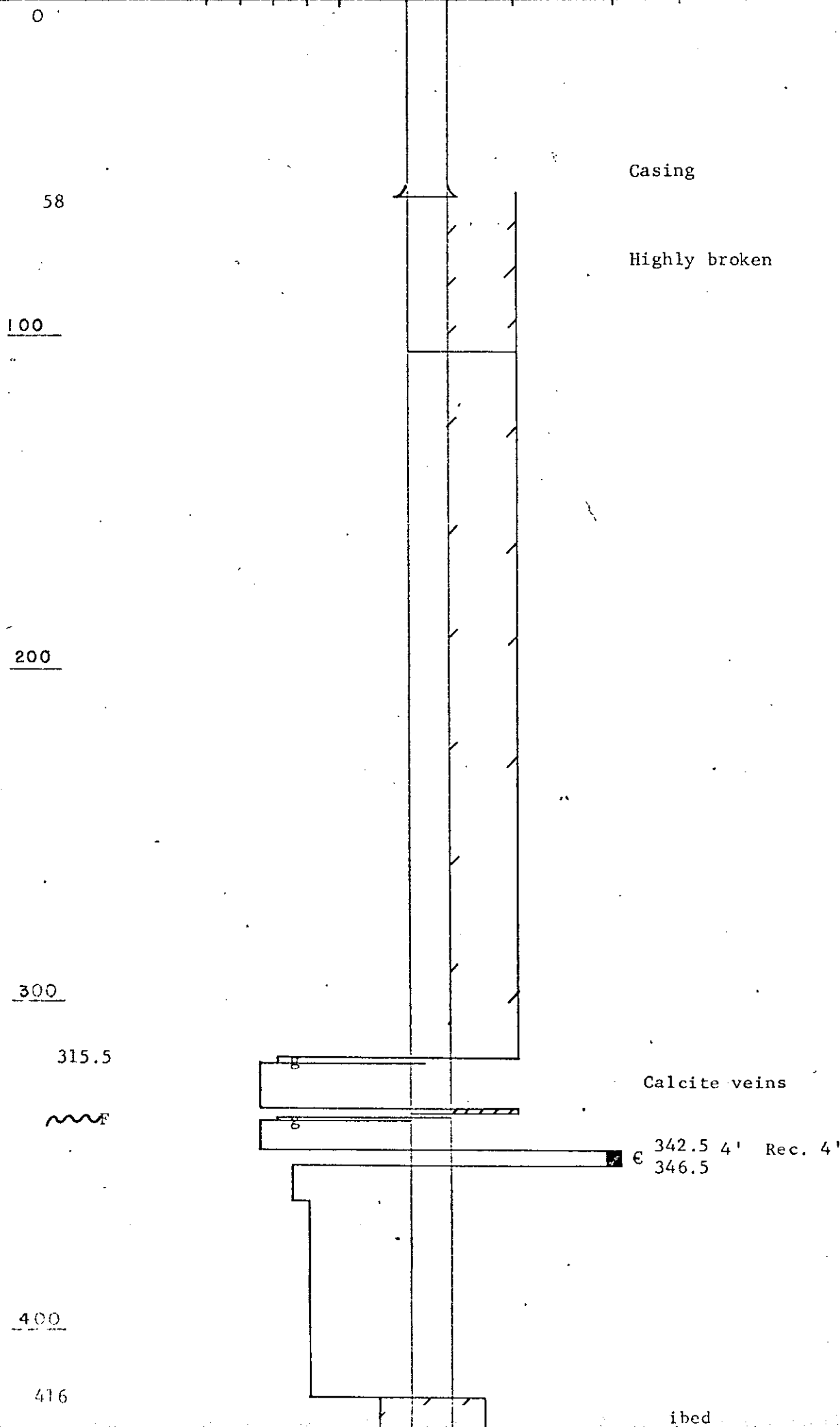
DRAWN BY : R E S.

FINAL

47,788.39 84,972.99 4132.6

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES<sup>+</sup> COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



70°

65°

65-70°

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

86°

1300

1310

Shell fossils € part

87°

ilam, broken, disturbed. 30, 60, 87

€ 1336' 3.5' Rec. 2.7. Broken

ilam

86°

Var. 55°

F Gouge, broken, highly disturbed, calcite.

ilam, lsf

65°

Slicken, calcite.

30, 0, 60°

80°

1400

1401

Shell fossils

€ 1.2'

87°

1420.2 4.5' Rec. 4.2'

€ 1424.7

86°

ilam

1435.1

86°

€ 1444.8

9.7' Rec. 9.7'

86°

84 - 86°

1500

END

1488

Roof

1425 - 1434.7 Siltstone and mudstone thinly laminated. Undisturbed. CA 86.

1434.7 - 1435.1 Bone

Coal

1435.1 - 1444.8 9.7/9.7 Bright, hard. Occ. friable

Floor

1444.8 - Sandstone. Bedding CA 86

CO

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES' COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

900

923

1000

1100

1184

1200

1186.3 2.4' Rec. 2.4'  
1188.7  
0.5'

85°

ALBERTA D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES, COAL

VC C M F VT

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

600

700

800

83°

ibed

Occ. Ss

ibed.

83°

COAL LICENCE: 1097  
DATE STARTED : 3 October 1970  
DATE COMPLETED : 19 October 1970  
LOGGED BY : R.E.S.  
DRAWN BY : R.E.S.

CO-ORDINATES

NORTH EAST WEST ELEVATION

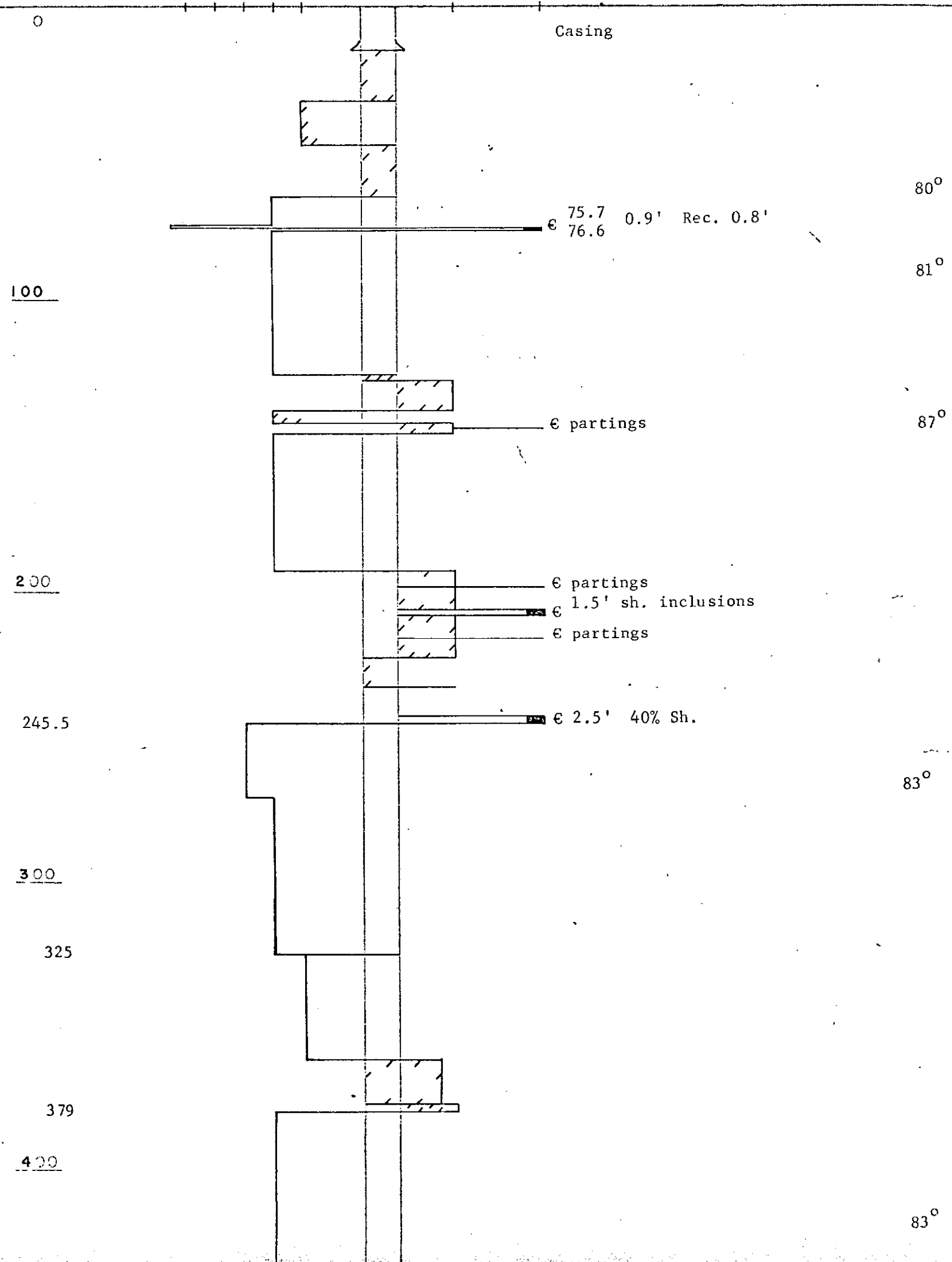
PRELIMINARY

FINAL

36,956.18 91,956.33 5248.5

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES + COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>W</sup> COAL

VC C M F VP

& INTERBEDS SHALES

SCALE: 1" = 40'

400

500

00

00

00

Var. 65°

END

503

Roof

329.5 - 351.5

Siltstone and mudstone thinly laminated. Occ lsf on bedding planes. Dip 10°E

351.5 - 352.1

Shaley coal (0.05'). Bone (0.55') fractured. H.W. contact dip 10°E.

Coal

352.1 - 363.0

10.9/10.9 Bright, hard. 10% friable.

Floor

363 -

Sandstone. Dip 10°E.

LIAISON, R.C.

CO-ORDINATES

[illegible]

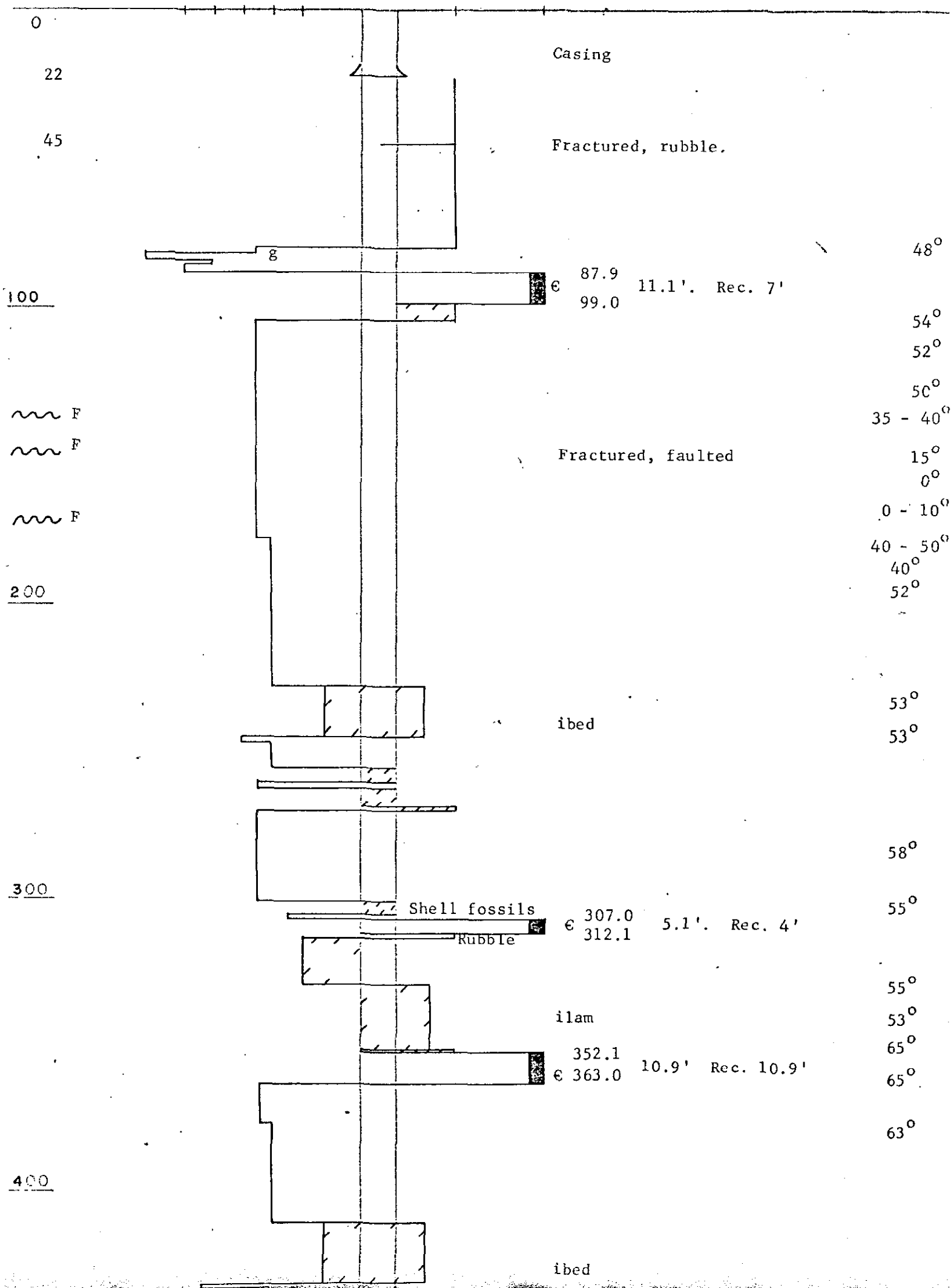
PRELIMINARY

FINAL

4169.9

SCALE: 1" = 40'

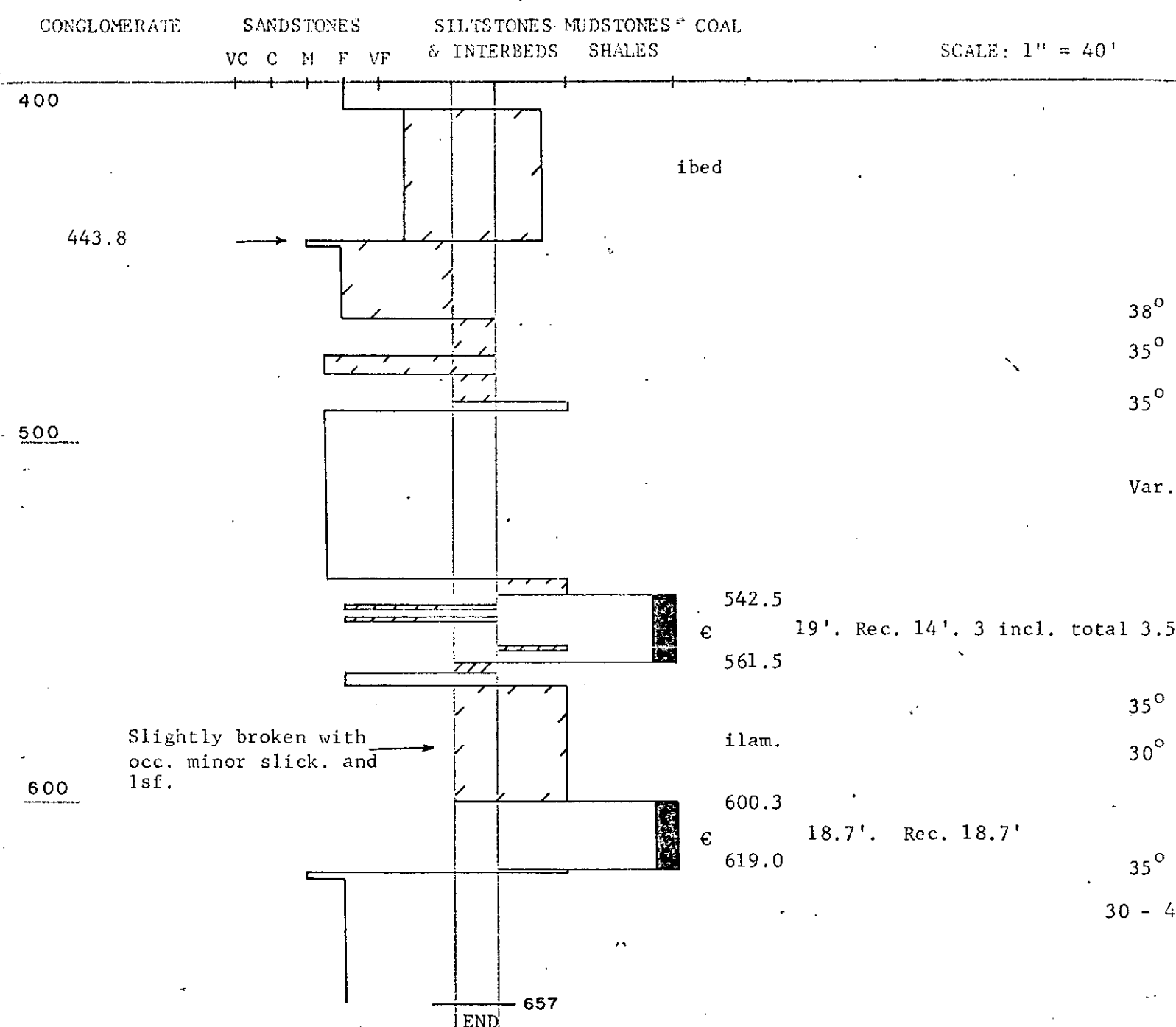
SCALE: 1" = 40'



DATE STARTED :  
DATE COMPLETED :  
LOGGED BY :  
DRAWN BY :

CO-ORDINATES  
NORTH EAST WEST ELEVATION

PRELIMINARY  
FINAL



|               |                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| END           |                                                                                                                               |
| Roof          |                                                                                                                               |
| 567.8 - 599.5 | Siltstone and mudstone thinly laminated. Slightly broken with occ. lsf on bedding plane and minor slickensides. Dip 7 - 12°E. |
| 599.5 - 600.3 | Mudstone. Carb. and hard. "Bone" H.W. dip 12°E.                                                                               |
| Coal          |                                                                                                                               |
| 600.3 - 619.0 | 18.7/18.7 Bright. 70% hard, 30% friable.                                                                                      |
| Floor         |                                                                                                                               |
| 619.0 - 620.1 | Mudstone with coal partings.                                                                                                  |
| 620.1 - 657.0 | Sandstone.                                                                                                                    |

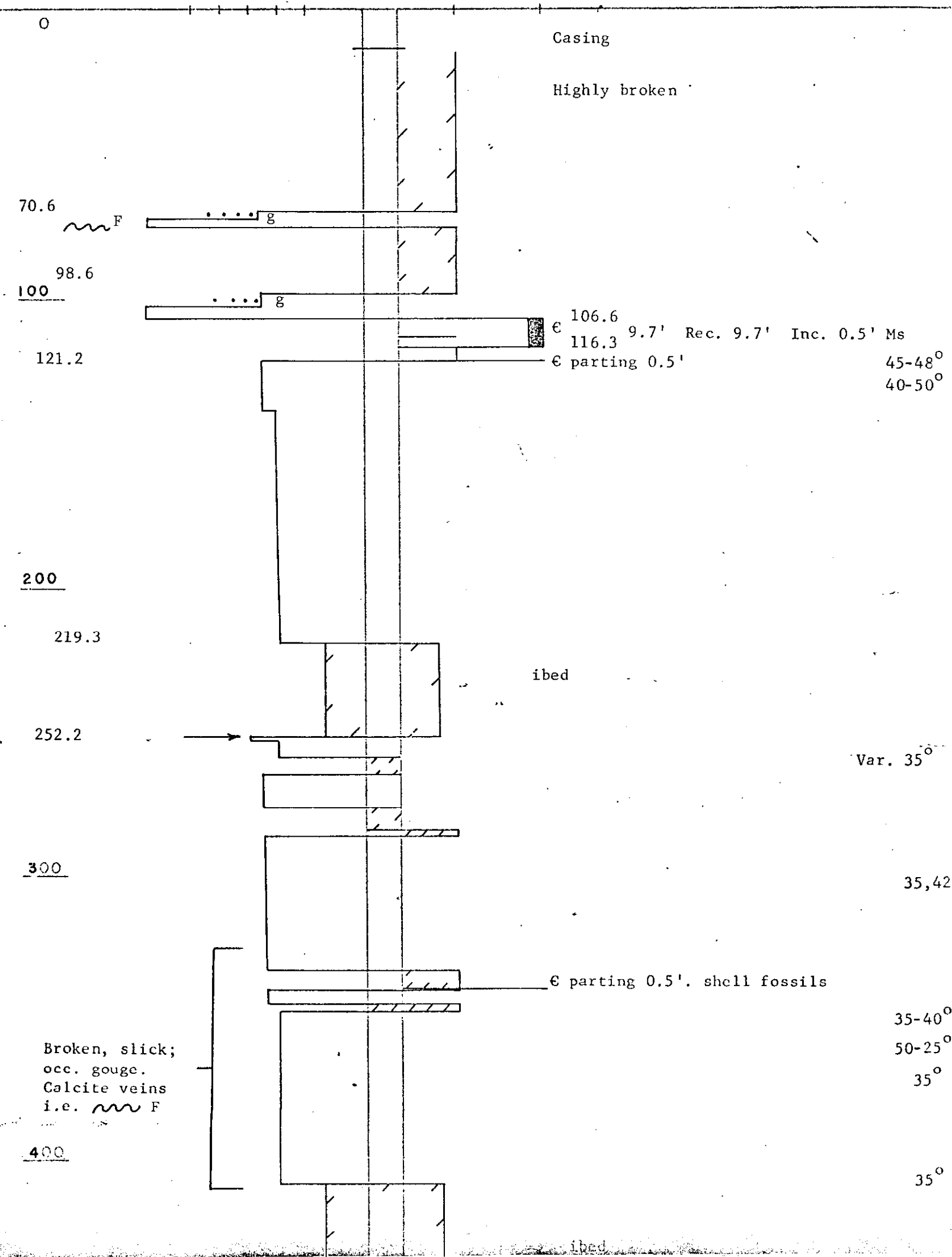
COAL LICENCE : 1087  
DATE STARTED : 25 October 1970  
DATE COMPLETED : 1 November 1970

CO-ORDINATES  
NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S. PRELIMINARY

DRAWN BY : R.E.S. FINAL 42,687.84 80,304.14 4169.9  
BEARING N.55°E -45°

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES SCALE: 1" = 40'



U.S. GEOLOGICAL SURVEY

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

80°

75°

ibed

70°

477

glauconite

500

30°

ibed, slickensides

20°

0°

0°

0°

600

40°

618

45°

END

Roof

267 - 278.6

Siltstone and mudstone thinly laminated. Undisturbed. Dip 5-7°.

278.6 - 279.1

Mudstone. Carbonaceous, hard. "Bone"

Coal

279.1 - 289.0

Bright, hard. 100% Recovery.

Floor

289 -

Sandstone. Bedding dip 7°

700

800

COAL LICENCE : 1087

WARD N.D., B.C.

DATE STARTED : 8 October 1970

CO-ORDINATES

DATE COMPLETED : 13 October 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

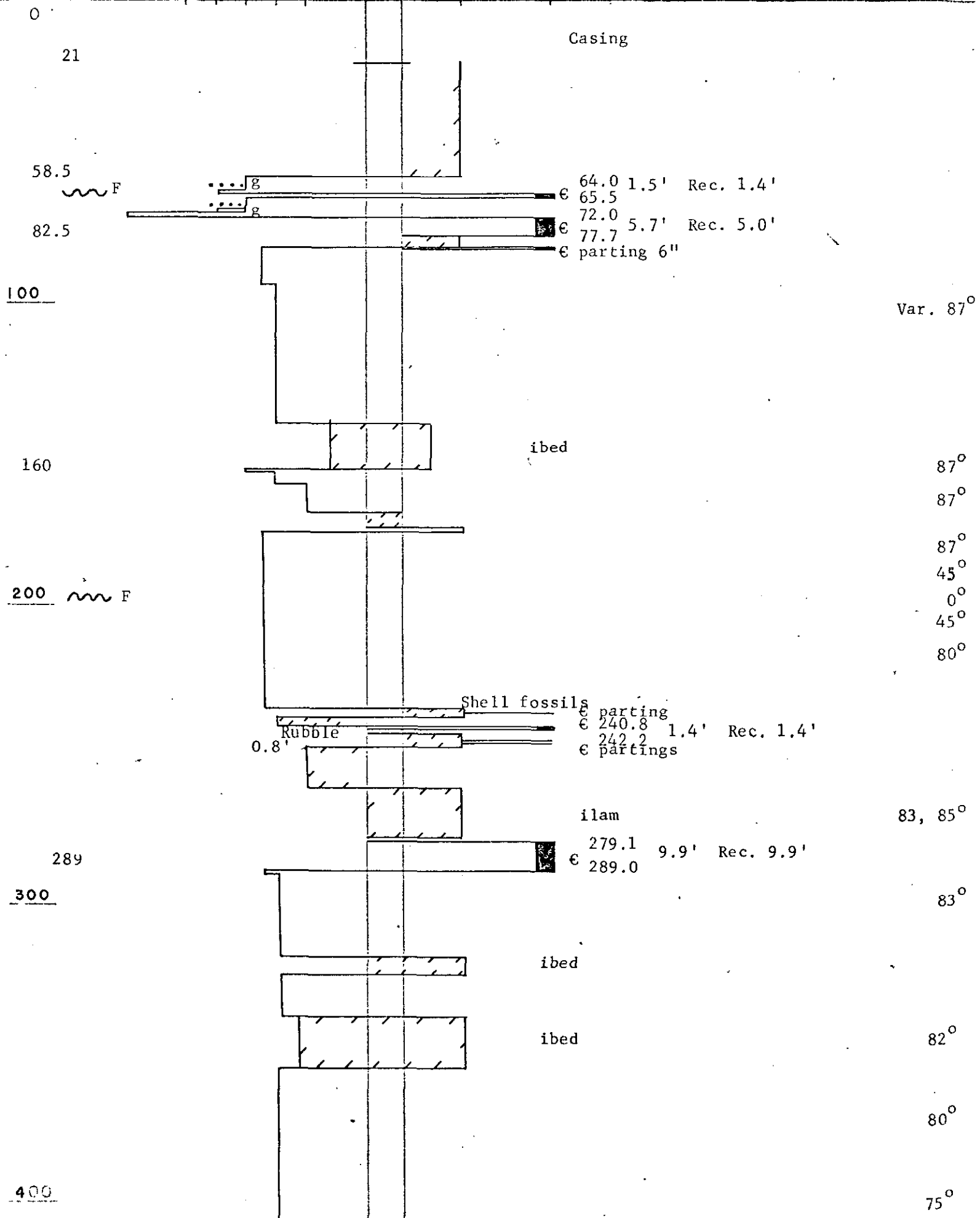
DRAWN BY : R.E.S.

FINAL

42,687.84 80,304.14 4169.9

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES\* COAL  
VC C M F VP & INTERBEDS SHALES

SCALE: 1" = 40'



LIARD M.T., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

1300

1347.5

Mb  
Ge

g

1347.5  
1350.8  
part.

3.3' Rec. 3.3

Var. 85

1400

ibed

86°

Var. 87°

part, shell fossils

partings

ilam

87°

1500

1515.5

1504.5  
1513.0  
partings

8.5 Rec. 8.5'

87°

1528

END

Roof

1490 - 1504.5. Siltstone and mudstone thinly laminated. Undisturbed except for occ lsf. on bedding planes. CA 87

Coal

1504.5 - 1513 8.5/ 8.5 Bright, hard.

Floor

1513 - 1515.5 Carbonaceous mudstone with occ. parting.

1515.5 Sandstone, CA 87

1600

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

900

1000

1088

Cm  
Mb

1100

1200

LIARD H.D., B.C.

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

6

411.2  
413

1.8' Rec. 1.8'

Var. 80 - 86

ibed

500

Var. 82

600

700

800

COAL LICENCE : 1089

LIARD R.D., B.C.

DATE STARTED : 11 October 1970

CO-ORDINATES

DATE COMPLETED : 22 October 1970

NORTH EAST WEST ELEVATION

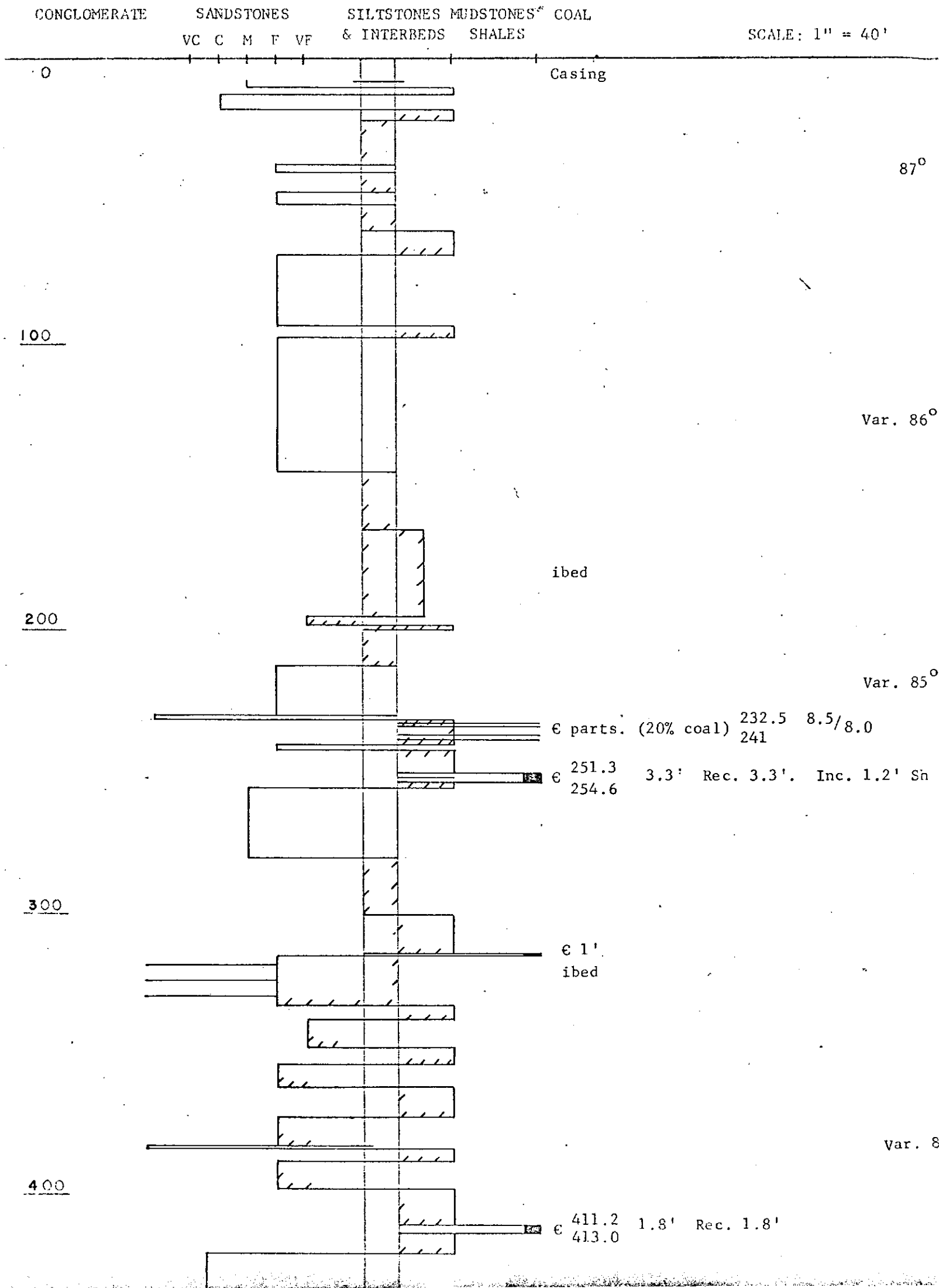
LOGGED BY :

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

42,609.83 90,828.21 5346.5



CO-ORDINATES

DATE COMPLETED :

**NORTH**

EAST

WEST

### ELEVATION

LOCKED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

## SANDSTONES

SILTSTONES MUDSTONES<sup>4</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

1200

ibed

Var. 80

1245'

END

Roof

1163.5 - 1174.1 Siltstone and mudstone thinly laminated. Undisturbed. Dip 10°

1174.1 - 1174.8 Mudstone. "Bone".

Coal

1174.8 - 1183.2      8.4/8.4    Bright, hard.

Floor

Sandstone. Bedding "flat".

00

00

00

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MIDSTONES\* COAL

VC C M T VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

900

1000

1020

1000

936 - 941 Slicken, broken.

1024.9 4.1' Rec. 3.5' 80°  
€ 1029.0  
€ 0.6' 83°

1089

1100

ibed

€ parting

80°

1152.5 8.2' Rec. 8.2' 80°  
€ 1160.7

ilam

1174.8 8.4' Rec. 8.4' 80°  
€ 1183.2

1200

DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

387 - 458 Slicken, broken.

65°

ibed

55°

70°

500

Var. 71

Occ. Ss

Var. 70

600

658

700

800

LINDA M. D., B.C.

CO-ORDINATES

| NORTH | EAST | WEST | ELEVATION |
|-------|------|------|-----------|
|-------|------|------|-----------|

PRELIMINARY

FINAL

4890.8'

SCALE: 1" = 40'



387 - 458. Slicker, broken.

COAL LICENCE: 1096

LI. RD H P., L. C.

D.D. 13-46

SHEET 1013

DATE STARTED : November 5, 1970

CO-ORDINATES

DATE COMPLETED : November 11, 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

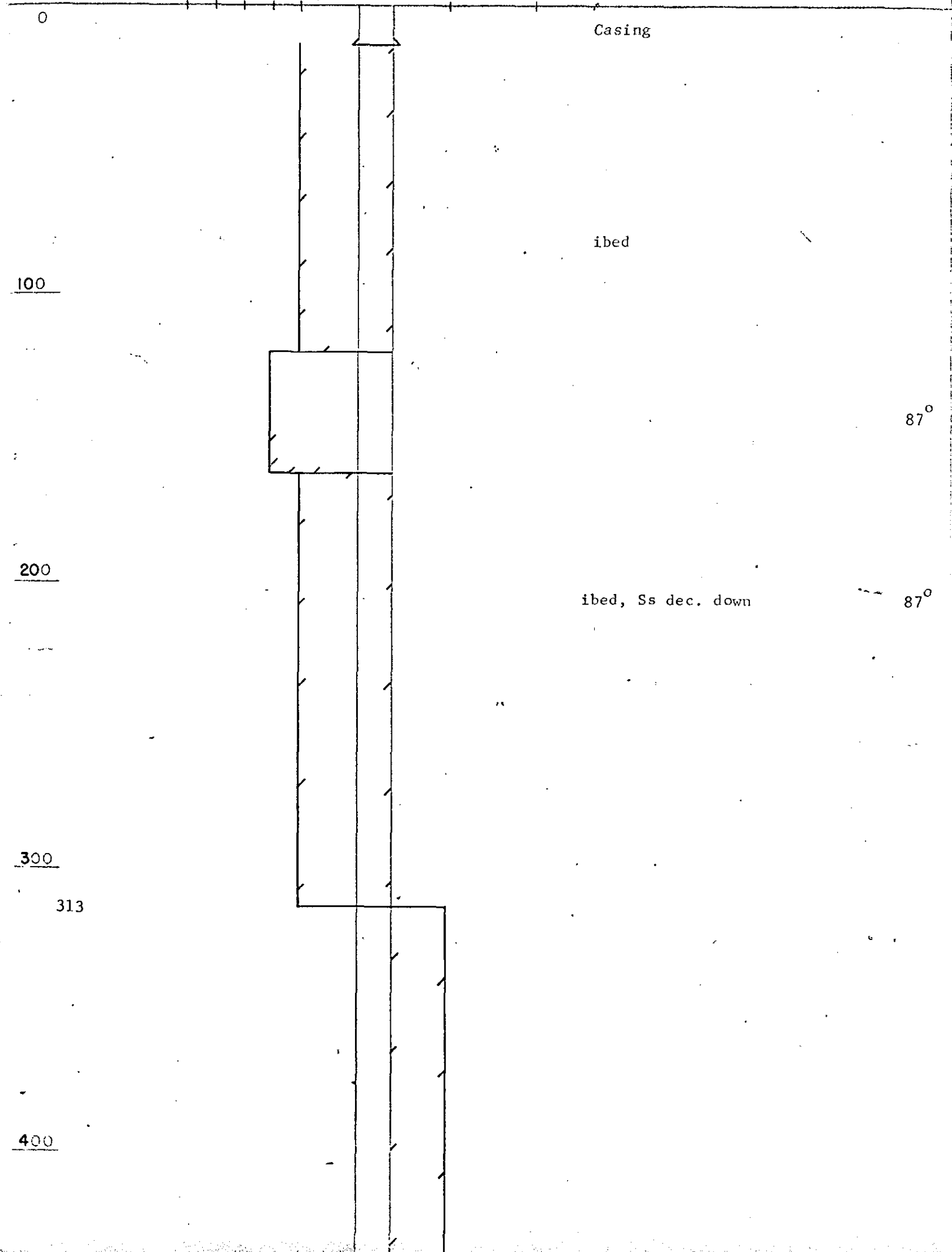
DRAWN BY : R.E.S.

FINAL

35,795.7 86,287.7 4567.7

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES COAL  
VC C M F VF & INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

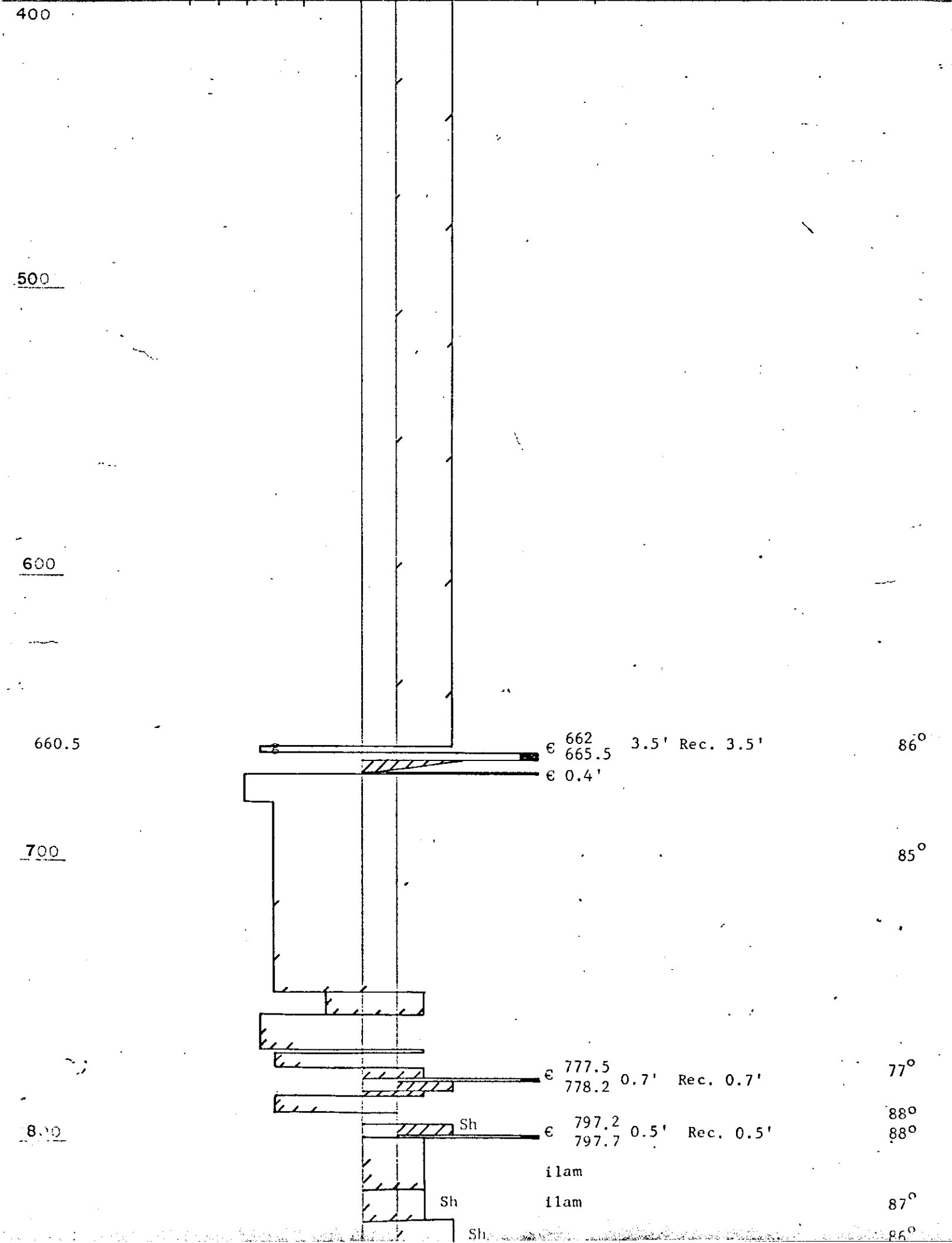
SANDSTONES

SILTSTONES MUDSTONES \*COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



CO-ORDINATES

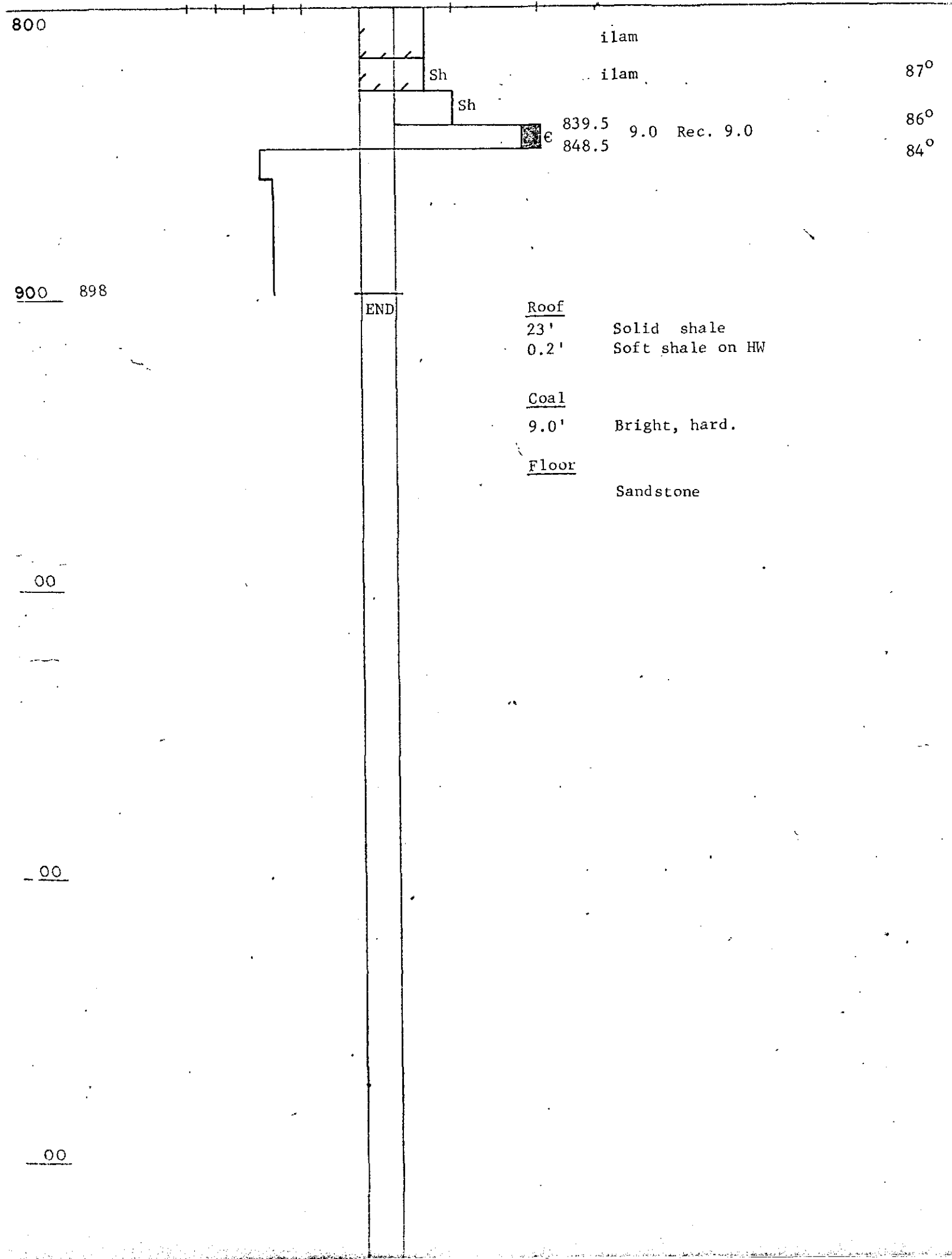
NORTH EAST WEST ELEVATION

PRELIMINARY

## FINAL

| CONGLOMERATE | SANDSTONES |   |   |   |    | SILTSTONES  | MUDSTONES | COAL |
|--------------|------------|---|---|---|----|-------------|-----------|------|
|              | VC         | C | M | F | VF | & INTERBEDS | SHALES    |      |

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY : J. Hughes

PRELIMINARY

DRAWN BY : L.B.

FINAL

49,334.7 79,220.1

4176.1

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F MF

& INTERBEDS SHALES

SCALE: 1" = 40'

100

Moosebar Fm.

200

211.0

Gething Fm.

211.0 R € 2.0

213.0 R € p

76°

85°

88°

75°

82°

83°

87°

82°

300

75°

334.5 R € 4.1

344.0 R € 1.6

75°

81°

79°

362.5 R € { 0.5 C split.  
367.4 R € 4.4

400

C - 0.5

f.1  
m

417

END

00

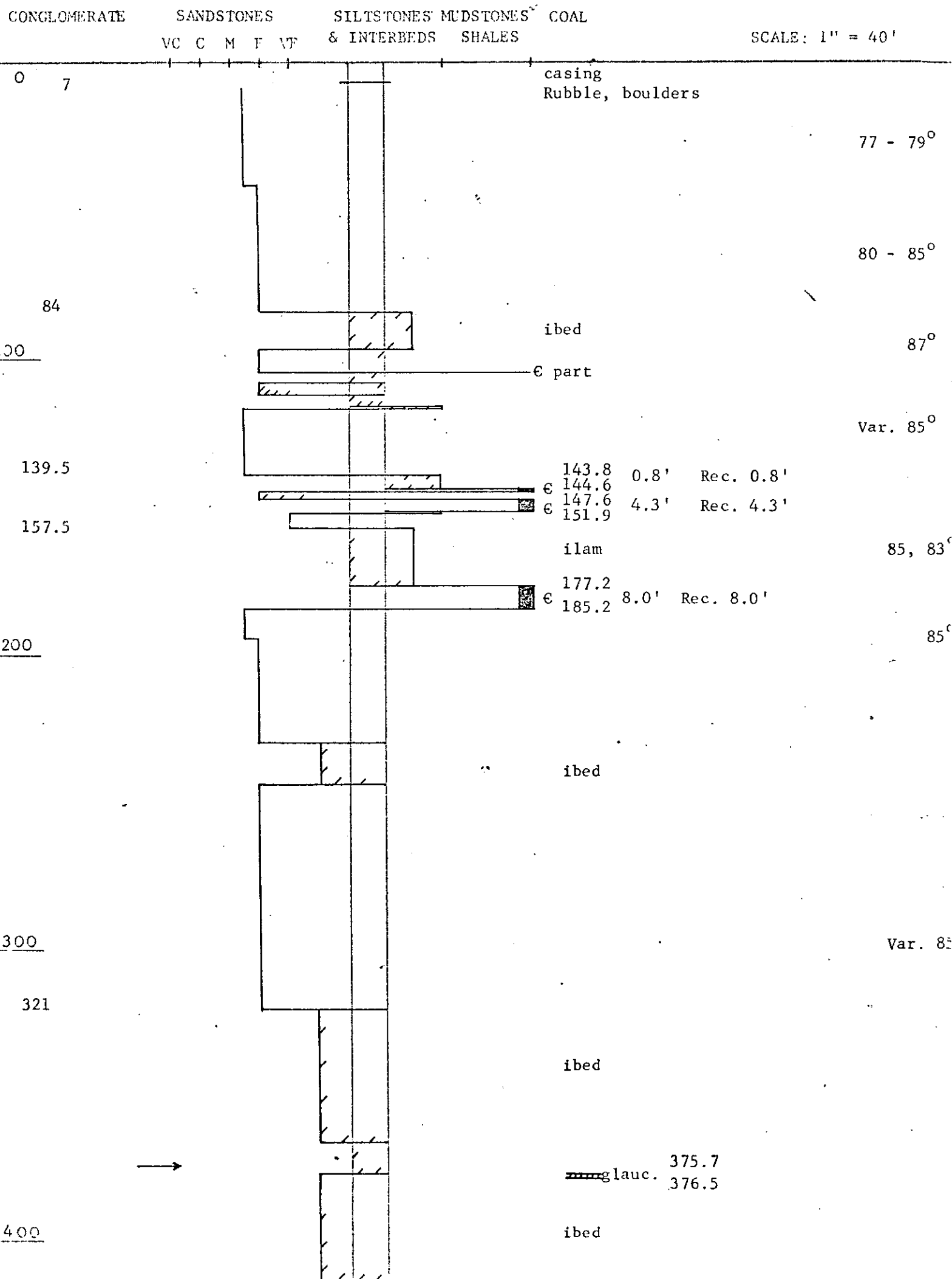
L. J. M. D., 3. C.

CO-ORDINATES

| NORTH | EAST | WEST | ELEVATION |
|-------|------|------|-----------|
|-------|------|------|-----------|

412'0

FINAL



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

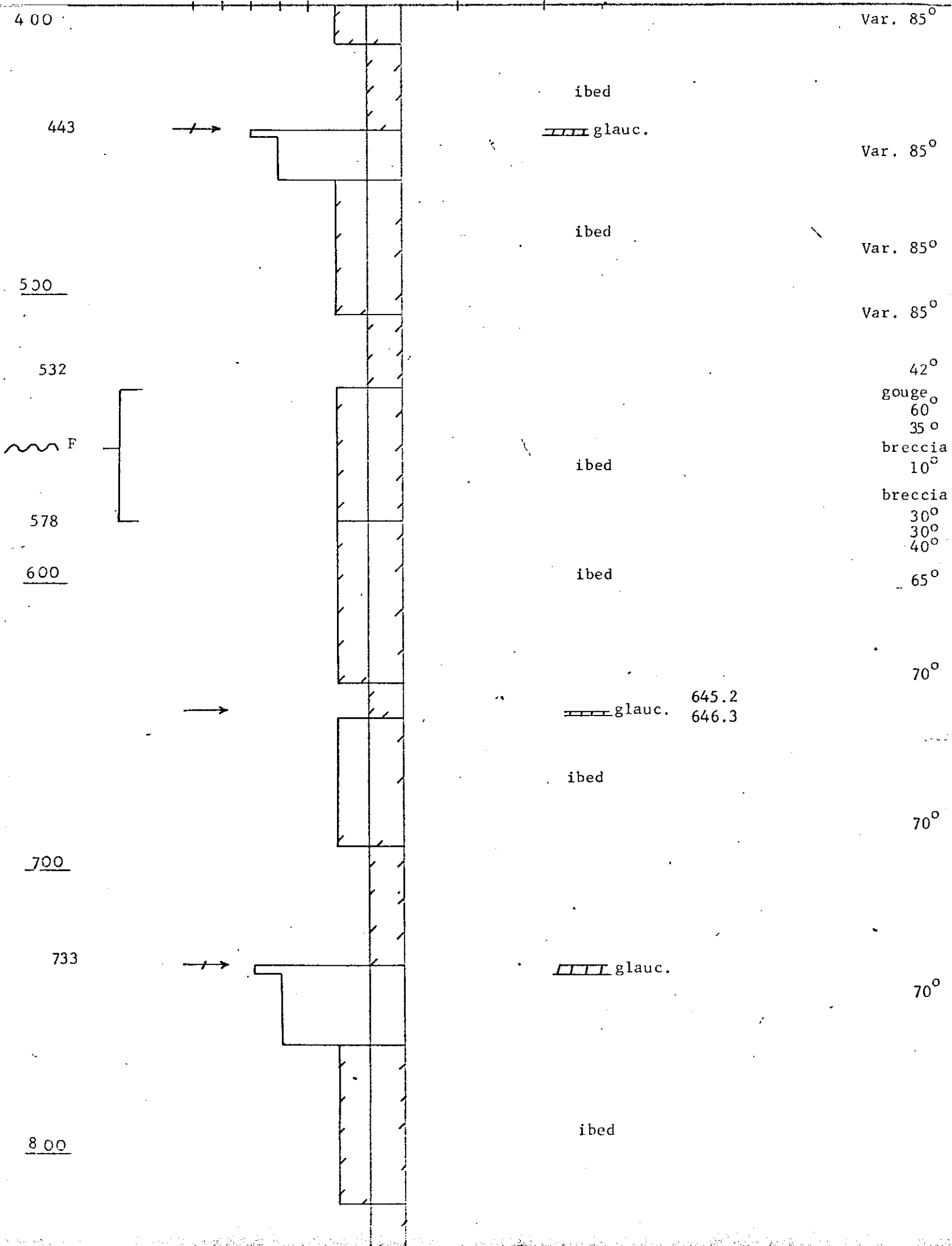
SANDSTONES

SILTSTONES MUDSTONES<sup>a</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH

EAST

WEST

ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES<sup>+</sup> COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

800

70°

867

70°

END

00

Roof

157.5 - 176.6 Siltstone and mudstone thinly laminated. Undisturbed except for 174.2 - 175.3, highly broken with listric surfaces. Dip 5-8°.

176.6 - 177.2 Bone.

Coal

177.2 - 185.2 8/8. Bright, hard.

Floor

185.2 - Sandstone. Dip 5°.

00

00

00

COAL LICENCE: 1079

LHARD N.D., P.C.

DATE STARTED : November 18, 1970

CO-ORDINATES

DATE COMPLETED : November 20, 1970

NORTH

EAST

WEST

ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

DRAWN BY : R.E.S.

FINAL

48,179.6 77,716.0

4117.3

CONGLOMERATE

SANDSTONES

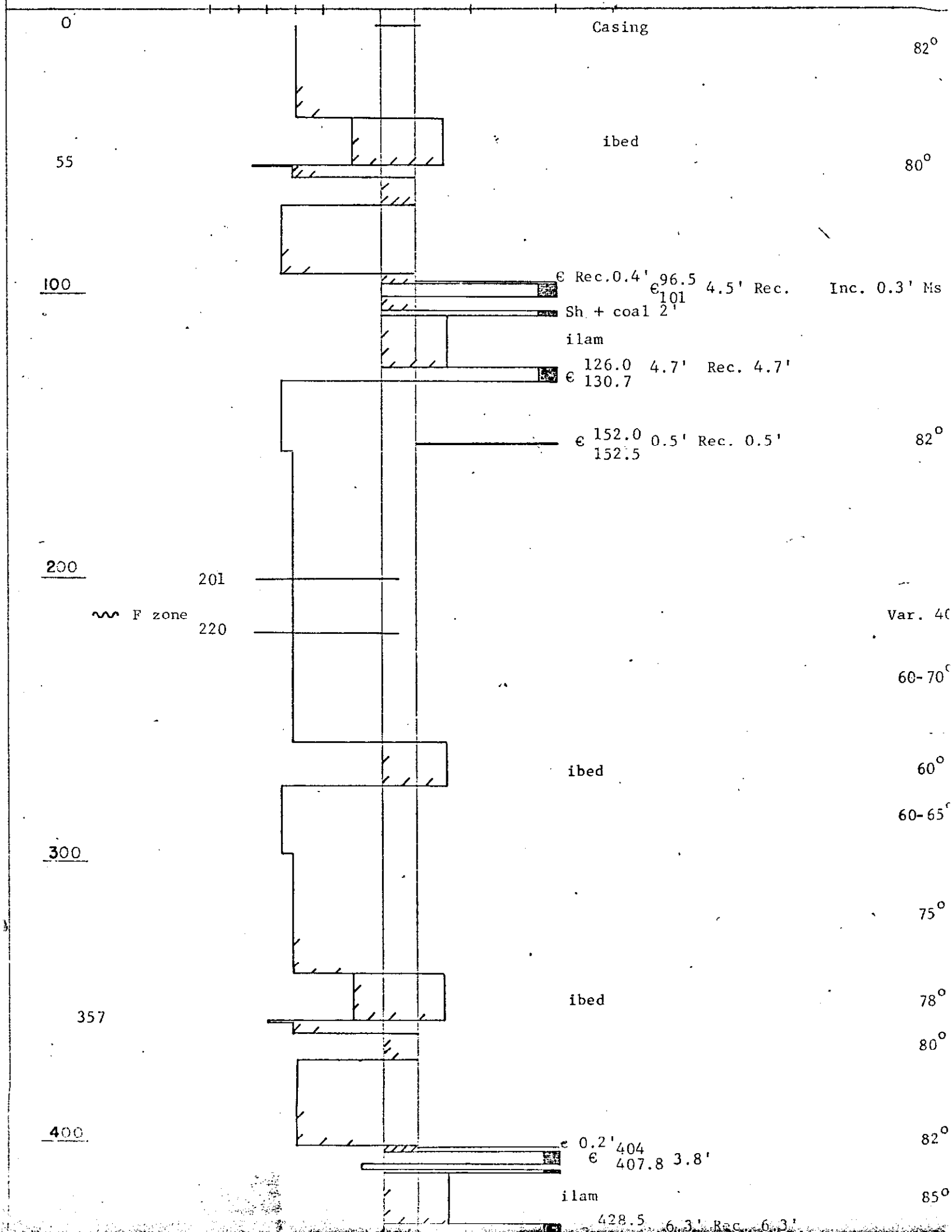
SILTSTONES MUDSTONES

COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



DATE STARTED :

CO-ORDINATES

DATE COMPLETED :

NORTH EAST WEST ELEVATION

LOGGED BY :

PRELIMINARY

DRAWN BY :

FINAL

CONGLOMERATE

SANDSTONES

SILTSTONES MUDSTONES\* COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'

400

€ 0.2' 404 3.8' Rec.  
€ 407.8

ilam

€ 428.5 6.3' Rec. 6.3'  
€ 434.8

85°

85°

500

ibed

END

Roof

18' Competent ilam silts and Ms

Coal

6.3' Bright, hard.

Floor

Sandstone

600

00

00

LIAND M.D., B.C.

COAL LICENCE 1072

DATE STARTED : 23 November 1970

CO-ORDINATES

DATE COMPLETED : 23 November 1970

NORTH EAST WEST ELEVATION

LOGGED BY : R.E.S.

PRELIMINARY

A 3

DRAWN BY : R.E.S.

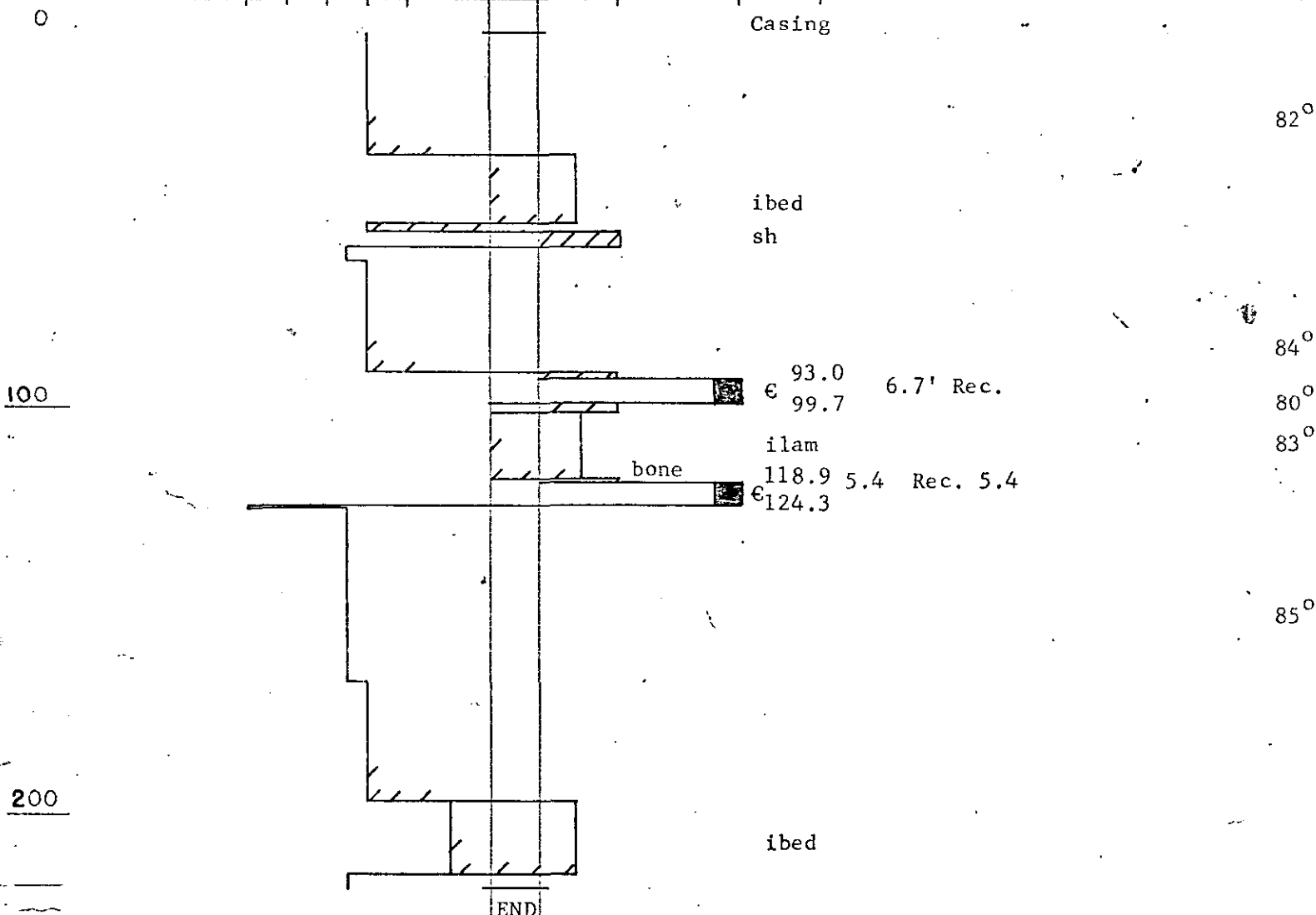
FINAL

CONGLOMERATE SANDSTONES SILTSTONES MUDSTONES & COAL

VC C M F VF

& INTERBEDS SHALES

SCALE: 1" = 40'



END

Roof

16' Competent ilam silts and Ms  
0.6' Bone (soft)

Coal

5.4' Bright hard.