FIGURE 4
Stepped room and pillar method — Detailed panel layout
FIGURE 5

NOT TO SCALE

Stages in the partial extraction of pillars

STAGES IN THE PARTIAL EXTRACTION OF PILLARS

During secondary extraction operations, several pillars are systematically reduced in size simultaneously. Mining takes place on retreat on strike, as shown on the attached plan.

Referring to the attached plan, the various stages are as follows:-

Stage 1
Round 1 is taken down dip of reef from the room. The area is supported by roofbolts and reef loaded out.

Stage 2
Round 2 is taken from the access hoisting. The area is supported by roofbolts and reef loaded out.

Stage 3
Round 3 is taken and loaded out; no support being installed.

The above stages take place in a cyclic manner, each stage being carried out on several pillars simultaneously (the planned rate of production will dictate the actual number being worked at any one time).

The final pillar size is 5 metres × 5 metres.
FIGURE 6
Stope ventilation layout
FIGURE 7
90 N 11 tip excavation
STEEL SPECIFICATIONS

<table>
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<tr>
<th>Item</th>
<th>Qty</th>
<th>Description</th>
<th>BS 5000/4329</th>
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<tr>
<td>3</td>
<td>4</td>
<td>Grizzlies 600 x 300</td>
<td>✔</td>
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<tr>
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<tr>
<td>5</td>
<td>1</td>
<td>Barricade beam</td>
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<tr>
<td>6</td>
<td>1</td>
<td>Breaker machine</td>
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<td>7</td>
<td>2</td>
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<tr>
<td>8</td>
<td>1</td>
<td>Curb angle</td>
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<tr>
<td>10</td>
<td>12</td>
<td>Liner</td>
<td>✔</td>
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FIGURE 8
Randfontein Estates G.M. Co. (W) Ltd
Cooke 2
90 Level Grizzlies
Trackless mining support required: 2.7m long x 25mm diameter Full column resin grouted rebar

FIGURE 9
Contour drives and roadways (support system)
FIGURE 10
Trackless mining support system (stoping)
FIGURE 13
Cooke 2 trackless mining — No. 2 workshop
**SURFACE**

![Diagram](image)

**Notes**

- **T1**: 25m$^3$ diesel tank
- **T2 + T3 + T4**: 9m$^3$ diesel tanks
- **M1**: Liquid control meter
- **V1, V2**: Solenoid valves
- **P1**: Pump

**FIGURE 14**
Schematic arrangements of service fuel tanks
ANNEXURE 4.1

Motivational Report for the 95 Level UE1A
Narrow Reef Project
Our Ref. A.10/85/CJP/an

ADDRESS
P.O.Box 2, Randfontein

TELEGRAMS and CABLES
"METALLIZE" RANDFONTEIN

TELEPHONE 693-2211
INTERNATIONAL TELEX 4-28016SA

ALL COMMUNICATIONS MUST BE ADDRESSED TO THE GENERAL MANAGER

1 February 1985

The Consulting Engineer
The Randfontein Estates Gold Mining Company Witwatersrand Limited
Room 473 J.C.I. House
Johannesburg
2001

Dear Sir

95 LEVEL UE1A TRACKLESS MINING PROJECT

I hereby submit an R.T.S. application form, number R361 for the 95 Level UE1A Trackless Mining Project.

I also attach a motivation report for this project submitted by K.A. Rhodes, Manager Mining, Cooke 2 Shaft.

I wish to bring to your attention that the speed of implementation of this project is vital in order to achieve the required grade in terms of the 5 year plan now being finalised.

Yours faithfully

W.J. VAN DER MEULEN
GENERAL MANAGER

C.J. PHILIPS
MINE MANAGER
RANDFONTEIN SECTION,
COOKE 2 & COOKE 3 SHAFTS

/Encl.

c.c. K.A. Rhodes.

DIRECTORS: C.Y. Nkutu (Chairman & Managing Director), C.H.S. Samford, R.C. Bertram, U.C. Bray
Drs. F.J.P. Roux, H. Scott-Russell, P.F. Relief, C.H. Waddell
ALTERNATES: J.D. Parker (British), E.J. Jackson (British)