SKETCH SHOWING ADVANTAGES OF E.O.D. BUCKET

FIG. a (CONVENTIONAL BUCKET)

FIG. b (E.O.D. BUCKET)

N.B. 1. Roadway height in Fig. (b) is less than in Fig. (a).

2. Reach of L.H.D. (with E.O.D. bucket) in Fig. (b) is greater than for L.H.D. in Fig. (a).
PLAN
SCALE: 1:500

A.S.D. ACCESS STOPE DRIVE

40.0m STOPE PANEL

6.0m HEADING.

3.0m

3.5m

90m x 30m CRUSH PILLAR

30m SIDING DRILLED WITH DRILL RIG

FULL 3.0m ROUND DRILLED WITH DRILL RIG. WASTE BLASTED AND CLEANED BEFORE THE REEF IS BLASTED.

SECTION
SCALE: 1:100

DILUTION CONTROL IN ACCESS STOPE DRIVES.
PROFILE OF L.H.D. UNIT CLEANING IN ACCESS REEF ROADWAY.

NOT TO SCALE
ACCOMPANYING NOTES TO FIGURE 11

CALCULATION OF DILUTION AT TURNING/TIPPING POINTS IN ACCESS REEF ROADWAYS

A) Sidewall Blasting

Area of additional waste blasted = 2 x 9.1 = 18.2 m²
Tons of waste blasted = 18.2 x 1.80 x 2.75 = 90 tons
Where : Average waste height = 180 cms

B) Hangingwall Stripping

Area of hangingwall to be blasted (see diagram) = 20 m³
Tons of waste blasted = 20 x 1.5 x 2.75 = 83 tons
Where : thickness of h/wall stripped = 1.5 m

Total waste tons blasted = 90 + 83 = 173 tons

Total reef produced in a panel = 40 x 150 x 1.20 x 2.75 = 19800 tons
Where : Face length = 40 m
Advance = 150 m
Av. stope width = 110 cm

As 178 tons of waste is produced at turning points for every 18 150 reef tons

\[
\text{Dilution} = \frac{178}{19800} \times 100
\]

\[
= 0.87 \%
\]

N.B : This dilution will only occur if the waste blasted is trammed as reef.
SKETCH OF ASSEMBLY BAY LAYOUT.

PLAN VIEW

CONVENTIONAL TRACK SYSTEM.

OPEN DRAIN

DRAIN WITH GRID.

CRAWL BEAMS

8.0m (wide) x 6.0m (high)

6.0m TRACKLESS.

NOT TO SCALE
GENERAL LAYOUT OF THE WORKSHOP AREA AND ACCESS RAMP

LEGEND:

ORIGINAL DEVELOPMENT.
ANNEXURE 4.3

Technical Motivational Reports for the 101 Level Streamlined Haulage at Cooke 2 Shaft,
REGM
Randfontein Estates Gold Mining Company Witwatersrand Limited
Johannesburg Consolidated
Investment Company Limited
231 Standard Bank Chambers
JOHANNESBURG
2000

28 May 1984

Attention: Mr. P. G. Griffiths

Dear Sir,

101 LEVEL TRANSPORT SYSTEM: COOKE 2 SHAFT

With the mining operations spreading out further from Cooke 2 shaft it has become imperative to establish a well planned ore clearance system. The level which is most suited for this system is 101 level.

The details of the required programme is attached in the form of a report from Mr. K.A. Rhodes.

The estimated on mine costs is of the order of R2.3 Million which still has to be estimated by C.P.C. with the work planned to be complete early in 1985.

As this transport system must be established it would be appreciated if you could approve the attached Request for Technical Services R.186 in order for C.P.C. to prepare the estimates for the necessary Vote application.

Yours faithfully,

W. J. VAN DER MEULEN
GENERAL MANAGER

G.W. TREGONING
MINE MANAGER
RANDFONTEIN SECTION,
COOKE 2 AND COOKE 3 SHAFTS

C.C. K.A. Rhodes
B. Prinsloo
R.B. V.d. Merwe
Johannesburg Consolidated Investment Company, Limited

Technical Services Division

REQUEST for TECHNICAL SERVICES No R 186

Step 1
TC: The Consulting Engineer - Operating: REGM ✓ WAGM ✓ RPM ✓ COAL ✓ BASE METALS ✓

Please supply the necessary services for the undermentioned project/job:

Company: Randfontein Estates Gold Mining Company, (W) Limited

Project/Job Title: 101 Level transport system

Project/Job No: 210 - B18

Brief description of project/job: Upgrading of 101 level haulage to a fully streamlined operation.

Motivation (why the project/job is required, benefits, payback etc): Necessary to improve tramming capacity to 5500 tons/day in order to meet the production requirements of the current 5 year plan.

Step 2
SERVICES REQUIRED

<table>
<thead>
<tr>
<th>Interim vote application</th>
<th>Flow sheets</th>
<th>Mining details</th>
<th>Engineering</th>
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</thead>
<tbody>
<tr>
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<td>Estimating</td>
<td>Vote application</td>
<td>Planning</td>
</tr>
</tbody>
</table>

LIASE WITH

K.A. RHODES

DOCUMENTS ATTACHED

Motivation report for the upgrading of 101 level haulage.

SIGNATURES

K.A. Rhodes
Manager Mining Cooke 2
2/3/84

G.W. Tregouring
Mine Manager
2/5/84

Step 3
DATE

By originator:

Date information or service required

By recipient:

Mutually agreed date when information or service will be available

Step 4
FROM: The Consulting Engineer - Operating: REGM ✓ WAGM ✓ RPM ✓ COAL ✓ BASE METALS ✓

I agree to the above request, please provide the required services

signature

Step 5
Distribution by C.E.O

Action and distribution by Heads of Departments

C.E.O. to:

Initial Date: Pass to:

Manager - C.P.C.

Estimating/Cases Planning Procurement

C.E. Engineering Services

C.M.E.F. Electrical Projects Services Model Planning P.A.D.

C.M. & E.E. for the division

Senior Civil Engineer Corrosion Evaluation Fuels

C.E. - Mining Services

Rock Mechanics Survey Ventilation

C.E. Metallurgical Services

Divisional Metallurgist for: GOLD PLATINUM COAL BASE METALS

C.E. Special Engineering Proj.

Manager - E.R.L.C.

M.P.R.L. Geological/Geophysical

Consulting Mining Engineer

General Manager

Mine REGM

Manager

Manpower

Safety

Medical

Security

Please put ✓ in the appropriate box for the required action
MEMORANDUM

TO : MR. G.W. TREGONING
    MINE MANAGER

FROM : MR. K.A. RHODES
       MANAGER MINING
       COOKE 2 SHAFT

SUBJECT : UPGRADING (PHASE 2) OF THE STREAMLINED
          SYSTEM ON 101 LEVEL AT COOKE 2 SHAFT

DATE : 28 MAY 1984

I hereby submit a motivation for further upgrading (Phase 2) of the streamlined operation on 101 Level at Cooke 2 Shaft.

It is planned to commence this programme of work in May 1984.

K.A. RHODES
UPGRADING (PHASE 2) OF THE STREAMLINED SYSTEM ON 101 LEVEL

AT COOKE 2 SHAFT

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