THE RANDFONTEIN ESTATES GOLD MINING COMPANY, WITWATERSRAND, LIMITED
TECHNICAL EVALUATION - UNDERGROUND UTILITY VEHICLE

ENQUIRY/ED No.: 818
Project No.: NBK 574
DATE: 26 OCTOBER 1984

PRESENT: MESSRS.
K.A. RHODES (CHAIRMAN)
N.E. WILLIAMS
A.M. ERASMUS (COOKE 2)
C. SANGSTER
W. MORELY JEPSON (COOKE 2)
A.P. GUTHRIE (COOKE 2)

APOLOGIES: MR.
D. LEIGH (RESIDENT ENGINEER)

NEW/ds/Ref. IED 115/84

The Technical Evaluation meeting was held at Cooke 2 in the Manager Mining's office. Units were assessed on a points system as follows.

Points were allocated in accordance with the importance of the various features in terms of operational requirements and methods.

Judgements were based on technical specifications and service conditions quoted by suppliers. It must be noted that the types of units under review are not generally in use on South African mines, but cogniscance was taken of the fact that some units are in regular operation in overseas mines and that certain companies have extensive experience with other types of underground mobile machinery.

The evaluation is set out in the attached tabulation. The Normet 1 000 achieved the highest rating overall by a significant margin, and has the second lowest price.

The Volvo unit on offer had the lowest price and the second highest rating but particular reservations were expressed as to the advisability of purchasing the unit for the following reasons.

The unit is not normally used for underground operations and adaptations to the standard surface unit would have to be made.

The parts for the boom and basket arrangement would be purchased from another company and fitted to the Volvo unit. This would virtually place the unit in the class of an experimental unit.

It is therefore recommended that the Normet 1 000 is purchased.

Signed:
Mr. K.A. Rhodes
Mr. A.M. Erasmus
Mr. N.E. Williams
Mr. W. Moreley-Jepson
Mr. A.P. Guthrie
Mr. C.S. Sangster

Manager Mining Cooke 2
Section Manager Cooke 2
Section Manager I.E.D.
Section Engineer Cooke 2
Mine Overseer Mechanisation
Ass. Section Manager Cooke 2
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**Footnotes:**

1. Appendix 1

**Secret Code:**

- Confidential
- Restricted
- Declassified

**Evaluation of Utility Vehicles**

**Performance:**

- Quartiles
  - Lower
  - Middle
  - Higher
- Range
- Price
- Remarks
VOLUME 2

ANNEXURE 3.6

Photographs of an EOD bucket and an LHD (with EOD bucket) loading into a truck
ANNEXURE 3.7

Photographs of 18 ton and 32 ton trucks
ANNEXURE 3.8

Photograph of Land Cruiser in underground workshop
VOLUME 2

ANNEXURE 3.9

Motivation for a Vamping LHD
The Randfontein Estates Gold Mining Company
Witwatersrand, Limited

Our Ref. A152/85/KAR/an

ADDRESS
P.O.Box 2, Randfontein

TELEGRAMS and CABLES
"METALLIZE" RANDFONTAINE

TELEPHONE 693-2211
INTERNATIONAL TELEX: 4-284165A

COMPANY REGISTRATION NUMBER
01/02251/08

ALL COMMUNICATIONS MUST BE
ADRESSED TO
THE GENERAL MANAGER

29 August 1985

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

ATTENTION : MR. P.R. WHEELER

Dear Sir

PURCHASE OF A TORO 150D FOR VAMPING OPERATIONS AT COOKE 2 SHAFT

With reference to your letter Ref. GHSB/PRW/sg dated 20 April 1985 dealing with the above matter, we wish to advise as follows:

The Toro 150D L.H.D. hired from E.L. Bateman as suggested in the above letter since May 1985 has successfully carried out vamping operations at Cooke 2 Shaft; the productivity target of 50 tons per shift has been achieved and confirmed in a study undertaken by the Industrial Engineering Department (copy attached).

We consider that vamping operations by L.H.D. unit as discussed with Mr. P.R. Wheeler in crosscuts and haulages is efficient, economically viable and the only practical method of carrying out these operations and we therefore recommend the immediate purchase of the machine.

We attach a justification report by K.A. Rhodes, the I.E.D. study report and R.T.S. No. R413. Provision for this Capital Expenditure has been planned.

Yours faithfully

[Signatures]

W.J. VAN DER MEULEN
GENERAL MANAGER

C.J. PHILIPS
MINE MANAGER
COOKE 2 & COOKE 3 SHAFTS

c.c. Production Manager Cooke 2 Shaft
/Encl.

DIRECTORS: G.Y.Nisbet(Chairman & Managing Director), G.H.S.Bamford, R.C.Bertram, V.G.Bray.
P.F.Retief, Dr.F.J.P.Roux, H.Scott-Russell, G.H.Waddell
ALTERNATES: J.I.Parker(British), P.J.Cronshaw(British)
**REQUEST for TECHNICAL SERVICES**

**Johannesburg Consolidated Investment Company, Limited**

**Technical Services Division**

**TO:** The Consulting Engineer - Operating: ROOM X

**Project/Job No:** 3.P.4.

**Project/Job Title:** Mechanised Vamping

**Brief Description of project/job:** It is proposed to carry out mechanised vamping operations in haulages/crosscuts with an L.H.D. unit.

**Motivation (why the project/job is required, benefits, payback, etc.):** The use of an L.H.D. unit will operate at a higher labour efficiency and is a practical method.

**SERVICES REQUIRED**

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**WASTE WITH**

K.A. RHODES

**DOCUMENTS ATTACHED**

Report by K.A. Rhodes

**SIGNATURES**

K.A. Rhodes

Production Manager

3.4.1985

**COUNTERSIGNED**

C.J. Phillips

Mine Manager

3.4.1985

**DATE**

Data, information or service required

END

April 1985

**FROM:** The Consulting Engineer - Operating:


**Subject:** Request for Technical Services

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

□ : I cannot agree to the above request

**Signature**

Date

**DISTRIBUTION by C.E.D.**

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**Technical Services Division**

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**REV : 3**
MEMORANDUM

TO : MR. C.J. PHILIPS
MINE MANAGER COOKE 2 & COOKE 3 SHAFTS

FROM : K.A. RHODES
PRODUCTION MANAGER COOKE 2 SHAFT

DATE : 27 AUGUST 1985

SUBJECT : PURCHASE OF A TORO 150D L.H.D. UNIT

I hereby submit a justification for the purchase of a Toro 150D L.H.D. unit for vampping operations at Cooke 2 Shaft.

K.A. RHODES

KAR/an
PROPOSAL TO PURCHASE A 1.5M³ L.H.D. (TORO 150D) FOR VAMPING OPERATIONS AT COOKE 2 SHAFT

1. BACKGROUND

Mechanised vamping operations utilising a Toro 150D L.H.D. unit (on hire ex E.L. Bateman Ltd.) have recently taken place in the 90N11 crosscut (prior to this crosscut being established as a main roadway for truck transport for the 90E8 Trackless Project) and are currently being carried out on 101 level haulage in preparation for the introduction of the streamlined ore clearance system. These operations have proved successful in that the productivity target of 50 tons per shift with the Toro 150D has been achieved. Refer to attached report by Industrial Engineering Department.

2. VALUE DISTRIBUTION

The value of ballast in the 90N11 crosscut and the 101 level haulage has been determined at various stages of the vamping operation.

Figure 1 shows a value distribution in the 90N11 crosscut after vamping operations had removed a top slice of 30 cms and which still reflect pay values; this crosscut was vamped to the footwall.

Figure 2 shows the value distribution in certain sections of the 101 level haulage and at the various stages of vamping. These results indicate that pay values occur in general along the haulage before vamping and it is therefore considered that the removal of the top slice of 30 cms can be a viable operation with a L.H.D. unit; after the removal of this top slice re-sampling should then take place in order to decide if further cleaning should take place.