

1924

E. AFRICA  
S. AFRICA

548 ~~26~~

C. O.  
33246  
14 JUL 24

59  
FROM  
ZERVAS, ALFRED L.

DATE  
10th July 1924.

On CIRCULATION:-

Mr. *Fitzroy*  
Mr. *Scott*  
Mr. *Porter*  
U.S. of S.

**TRANSPORT DEVELOPMENT.  
THE MUELLER RAILLESS TRAIN.**

Explains his system of transport, which has long been in use in Australia, and indicates routes in Africa where it would prove especially suitable.

U.S. of S.  
Part U.S. of S.  
Secretary of State

Previous Paper

**MINUTES**

Whatever the merits of the Mueller Railless train may be Bavaria is surely the last place on earth that the 'Royal British Port' would go either for ideas for linking up E. Africa or for the means of transport

Reply that the S. of S. is unable to consider his proposal (Dow Dept. to see)

S.W. 15.7.24

In tropical Africa where there is a heavy rainfall the cost of road construction & upkeep would quickly exceed any initial saving, but we might ask the A. if they have any information

16 AUG 1924  
both with copy about to Muller & A.S.A. Coy

Subsequent Paper

40661

MINUTES.

MINUTES NOT TO BE WRITTEN  
ON THIS SIDE.

about this further means of  
transport.

270 C.A. problems

16.7.24

(Just to be sure he has done it  
& to be sure he is up to the  
C.A.)

17/7/24

The backing arrangement  
seems inferior & if the  
man can half drive the  
whole it must be a great  
saving. But if the  
unimpaired back unit  
is used  
one motor drives them  
means the same chance  
of a bon fire.

Have asked Mr. Hance  
(who looks after the E.C.G.  
Co's enquiries, in  
mechanical transport if  
he knows anything of this  
he will test.

any scheme which requires  
high class road is poor  
limited application in the  
is it as intended. C.D. &  
would see later.

6.15 17.7.24

*[Handwritten signature/initials]*

*Crown Agents*

549

May we have your observations

please?

14.7.24

Mr. Corder. Colonial Office.

I have read the letter dated the 10th July  
from Herr Alfred L. Zervas to the Colonial  
Office, wherein he advocates the extensive  
use of the Mueller Railless Train, in which  
he is commercially interested, for the  
development of the Colonies.

The idea of using Road Trains is by no means  
new. In 1908, the Daimler Company of Coventry  
produced a similar Train which was known as  
the Renard Road Train, but abandoned its  
manufacture shortly afterwards owing to lack  
of demand. The British War Office submitted  
one of these Trains to a series of tests and  
came to the conclusion that so far as Military  
purposes were concerned it was not to be re-  
commended. The Austro-Daimler Company of  
Vienna revived the manufacture of the Renard  
Train about 1913 but with little success. In  
1923 they produced a modified form of this  
Train for Military purposes, known as the  
Gigant in which petrol-electric drive  
replaced the petrol-shaft drive adopted in  
the Renard. Early in 1922 Messrs. Armstrong  
Whitworth & Company of Newcastle-on-Tyne,  
attempted to revive the use of Road Trains  
but I do not think they built more than two  
before abandoning their manufacture through  
lack of orders.

The reason why Road Trains have failed to become popular is that their scope of application is very limited to give commercially successful results.

*Our*  
My opinion is that Road Trains can only be applied successfully where the conditions are particularly favourable, for instance, on a good road and where the run is long and where the Goods Traffic enables full loads to be carried and a regular Traffic Service to be maintained; such a service for instance as from a Mine or Quarry to a Port or Railhead. It is also necessary in order to maintain steady work at the places of loading and unloading, that each tractor should be equipped with three sets of trailers, one set being loaded at the place of embarkation while the second set is being unloaded at the Port of destination, and the third being in course of transit.

It will be seen that these conditions seriously affect the mobility of this form of transport, and it is also practically a necessity that there should be a spare tractor in case of breakdown.

The low speed at which these trains run, usually not more than 6 to 8 miles per hour, is a serious drawback compared with ordinary motor lorries. I note that Herr Zervas claims that his tractor can be regulated up to 46 miles per hour, but presumably this is without load, for it would not be safe

to proceed at a greater speed than 15 miles per hour when more than one trailer is attached and if the number of trailers exceeds three, I doubt whether 12 miles per hour could be exceeded with safety even assuming the tractor is sufficiently powerful.

Herr Zervas suggests a service in which the Train detaches and leaves its trailers at various farms and stations along its allotted route and collects them fully laden on the return journey. This sounds very attractive, but in practice it has been found that it is an awkward matter to couple-up these heavy trailers when laden, since a train of this type cannot be shunted backwards with sufficient accuracy to enable coupling-up to be done without man handling of the trailer and this is a serious matter with such heavy vehicles.

Consequently coupling and uncoupling of each trailer entails considerable delay and seriously reduces the average speed with which a given load can be transported.

Hence, excepting for the special conditions which I have already described, the Railless Train system is less suitable for transport work in the Colonies than independently operated Units.

August 6th, 1954.

Mr. D. J. ...  
 Sir H. ...

... receipt of Herr Zervas' letter, any ...  
 have been made but that he is not aware of any opportunity of  
 making a trial of his system. W.C.  
 8.8.54

*W. C. ...*  
 ...  
 8/8/54

10 July, 1924.

552

To the

Minister for Colonial Affairs,

L O N D O N .

Referring to:-Railway connection between  
the British Colonies in Africa.

Honourable Lordship!

Please allow me to take few minutes of your very precious time in order to lay before your Lordship a proposal for the connection of the various Colonies in Africa (Uganda, British South-Africa, Tanganyika Territory, Rhodesia, Nyassa, Matabeleland, Transvaal, Natal and Orange River Colonial Territories) in order to enable the Colonial Office to raise the productivity of these colonies to a very much higher standard than at present prevailing. It is not a very easy task when proposed by a stranger, but, after being down in these regions several times my self personally, I am able to assume that I know what is needed and what can be done in the shortest time with the least expenses.

The idea -- to build railroads in the old sense of the word is not at all recommendable in some of the above named territories because of the climatical conditions and because of the enormous expenses that a line of tracks would cost through some of the regions. I only mention the very difficult stretch between Mombasa and Victoria Sea, also the routes between Bukoba (Victoria Sea) and Kituta (Tanganyika Sea) and the routes between Kituta and Livingstone and the Victoria Falls at the head of the Zambesi River. Also not to forget the routes between Wankie and Pretoria as well these routes

between Bloemfontein and the Cape. These routes have each one for itself, problems that cannot be solved by building a railroad according to the now prevailing methods because some routes are mountainous, some are desert routes and others go through swampy land. It would take many years were a railroad to be laid in these colonies over this vast length of travel and traffic. My aim now is to draw the attention and interest of the Royal-British Colonial-Office to the knowledge that it is not at all necessary to build any railroad at all because there are resp. is a method, already over 10 years in use in Australia, that means the saving of the total expenses of the rails, switch and all other railway accessories and has at the same time the privilege of being able to run over desert as well through swampy country sections as well as normally good streets and roads.

This train of which I speak is the so-called Muller-Railless Train. The M-R-T has been in use in Australia over ten years and has worked to absolute satisfaction of the gentlemen there so that we can say that the M-R-T is an almost non-destructible, rail train good for heavy use and wearing in all tropical and sub-tropical countries. The M-R-T is a Motortrain with 10-12 trailers carrying a load of 30 to 60 tons efficient weight, over any length of traffic. The running expenses are very small and low because the M-R-T needs less fuel and oil than any Motortruck with one or two trailers would need. This is only possible by means of the M-R-T System of Multiple-Drives. No trailers are drawn or pulled, all trailers propel themselves. The steepest grades of hills and mountains are traversed

traversed up to 15% = 150 n/oo and more. The speed can be regulated from one inch per hour to 45 miles an hour. The trains follow in absolute straight lines, and in the curves, one behind the other as if they were running on rails. In order to give the Colonial-Office a better idea of the M-R-T I am enclosing a few pictures of the M-R-T- and beg the gentlemen of the Foreign Office and the Office for Colonial-Affairs to grant these views an examination. The pictures were made by myself in Australia in the year 1914 in May. Trains for lumber and any other kind of freight or for conveyance of passengers can also be delivered. I do not know if it is necessary to remark that we also build these trains on "Reparations-Conte." This would mean that the trains cost the Royal British Government practically nothing and enable the Royal British Government to connect these colonies under another by means of a railroading system that in case of war or any other internal-colonial necessities can be immediately transferred to the Section of country where a larger traffic is quickly needed. This cannot be attained with railroads that have tracks and the like. By the M-R-T it is possible to change any route of travel inside of a few minutes when wanted or necessary. The Costs for doing this are nought because the trains are only put on the new route and then travel on this route until needed somewhere else. In war there are then no lines of traffic that can be damaged and the trains are able to keep up the connections without the risks that a normally built track system would be submitted to.

It may be necessary that somebody makes a trip to the colonies in order to lay down the exact road of connections. It may also be the case that this can be done without travelling to Africa. I am willing to

to come to London or to go to Africa to settle the travelling connections at any time when the Royal British Government should ask me to do so. Of course it must be understood that I travel at the expense of the Government because I am not wealthy enough to carry these costs myself personally. I believe, that when a commission or committee is founded and travels to the colonies, that the whole line can laid down in about 4-6 months of time. I am specialist on railroading and trafical institutions and methods and therefore work without having first to consider every point of the line closer than necessary. I am a born American and am used to work in the tropics because I have travelled in almost all countries in the world.

I am willing to give information of all kinds necessary and beg of you to give me answer at all events as to whether the Colonial Office has interest in building a connection between its colonies or not. Trains with more than 12 trailers can also be run when required. The fuel consume, even when running through very hot countries, is very much smaller than any creeper, trakto-motortruck or railway-train now known. Our train in Australia runs over sections of desertsand for many hours without stopping, where the average temperature reaches 100 Degrees Fahrenheit and more. This is a height of temperature which usually causes all motor-trucks to become impossible for use over hot sand stretches. Besides the high temperature it is impossible for motortrucks to travel through the deep loose sand prevailing in deserts. Creeper and trakto-machines have the same incumberances to battle with because there is no means of adequate help against these two very prominent

prominent factors. The M-R-T has the privilege of being the only system that can easily and surely overcome these vast difficulties. The M-R-T needs only one man to run the whole train. This is the case if the train consists of one car or of 20 cars (trailers).

As I do not know how many trailers the various trains would need when in service in the colonies I am not making any estimates of probable costs. When writing me the number of cars please let me know how many trailers are wanted the length of the probable route, whether hills, mountains or valleys are to be traversed, what kind of freight is to be conveyed, if the trailers are to be hauled from farms (our M-R-T hauls trailers out of yards are loading stations that are as much as 1000 feet = 334 yards away from the power). It is not necessary that the M-R-T-Powercar drives into the farmyard or the factoryyard because the train can haul the trailers out onto the road over a distance as just mentioned with an efficient load on the cars of 6 tons. Also mention in your letter the following costs: 1 chauffeur with one year's wages; costs of benzol, benzoin, naphtha, and gas-oil, grease and lubricatives; the wages of a mechanic for making repairs for one year; and a reserve mechanic who can serve as Reservedriver for one year. On these informations I can then set up an estimate as to what the service with a M-R-T would cost for one year. This estimate reduces from year to year because of the expenses themselves also reducing from year to year.

It would give me great pleasure if the Royal-British-African-Colonies and other British Colonies were to adopt this unexceedable method of traffic-system because

because it would mean the saving of many 1000£ of 557  
expenses and many 1000£ of labourcosts as well as a great  
lot of time. A M-R-T can be put into service 6-7 months  
after given in order. The trains are delivered directly  
to the station named in the order and there mounted  
(fitted) together and are ready for unbroken and hard use  
for many, many long years. In such countries where  
snow and ice prevails, for instance Canada, the M-R-T  
can do service with absolute reliance through snow depths  
up to 3,25 feet with an efficient load on board of 60 tons  
and more. No wheels of a M-R-T can slip or glide  
because of the multiple-drive which assures the M-R-T a  
sure running over all kinds of roads, paths, ways and  
stretches.

As already mentioned, I am willing to make  
any travels or voyages that the Royal-British-Government  
should request me to make under the consideration that  
the Royal-British-Government forward me the expenses for  
a such trip and the expenses connected with stay of the  
length of time necessary to fix up and lay down all  
information needed for the affairs.

Hoping to hear very soon from the Royal-British  
Government at all events, I am, at all times at the  
disposal of the Government, with assurance of my highest  
esteem

Your obedient servant!

(Signed) ALFRED POOLN ZERVUS.

Engineer for  
Traffic in the tropics - Navalconstruction  
Mining - and Civilengineering.

20/24.

Downing Street,

10 August, 1924.

Sir,

In reply to your letter of the 10th of July, I am directed to inform you that enquiries have been made but that there appears to be no opportunity for making a trial of your system of road transport in East Africa.

As regards the Union of South Africa and Southern Rhodesia, the matter is one for the consideration of the Governments concerned: copies of your letter are therefore being forwarded to the High Commissioner for the Union in London and to the Agents in London of the Government of Southern Rhodesia.

I am,

Sir,

Your obedient servant,

Signed: H. READ

WILFRED L. ZERVAS.

33246/24.

Downing Street,

16 August, 1924.

Sir,

In reply to your letter of the 10th of July, I am directed to inform you that enquiries have been made but that there appears to be no opportunity for making a trial of your system of road transport in East Africa.

2. As regards the Union of South Africa and Southern Rhodesia, the matter is one for the consideration of the Governments concerned: copies of your letter are therefore being forwarded to the High Commissioner for the Union in London and to the Agents in London of the Government of Southern Rhodesia.

I am,

Sir,

Your obedient servant,

(Signed) H. J. READ

ALFRED L. ZERVAS.

ed L. Zervas

ingenieur  
Anlagen, Maschinen und  
Gleislose Bahnen.

Braunstein,  
Wechsel-Bank  
No. 55047

559

Braunstein in Bavaria....Den July,10th,1924.

To: the

MINISTER for COLONIAL AFFAIRS.

33246

LONDON.

14 JUL 24

connection between  
Colonies in Afrika.

Honorable Lordship

please me to take few minutes of your very

time in order to lay before your Lordship a proposal for the commercial  
development of the various Colonies in Afrika (Uganda, British South-afrika, Tangany-  
territory, Rhodesia, Nyassa, Botswana, Transvaal, Natal and Orange River Colonies  
territories) in order to enable the Colonial Office to raise the productivity  
of the colonies to very much higher standards than at present prevailing. It is  
a very easy task when proposed by a stranger, but, after being down in these  
places several times my self personally, I am able to assure that I know what is  
possible and what can be done in the shortest time with the least expenses.

The idea to build railroads in the old sense of the word is not at  
all recommendable in some of the above named territories because of the climatical  
reasons and because of the enormous expenses that a line of tracks would cost  
in some of regions. I only mention the very difficult stretch between Mozambique  
Victoria Sea, also the routes between Bukoba (Victoria Sea) and Kituta (Tanganyika  
Sea) the routes between Kituta and Livingstone and the Victoria Falls at the  
mouth of the Zambesi River. Also not to forget the routes between Namak and Pretoria  
and these routes between Bloemfontein and the Cape. These routes have, each one  
itself, problems that cannot be solved by building a railroad according to the  
prevailing methods because some routes are mountainous, some are desert routes  
others go through swampy land. It would take many years were a railroad to be  
built in these colonies over this vast length of travel and traffic. My aim now is to  
draw the attention and the interest of the Royal-British Colonial-Office to the

Alfred L. Zervas

Ingenieur

Anlagen, Maschinen und  
Eisenbahnen.

Summe Zervas Traunstein  
Bankkonto  
Eisenbahnen und Wechsel Bank  
Poststelle Traunstein  
Postfach München Nr 55647

500

Page 2 to the letter of Den July, 10th, 1924.

knowledge that it is not at all necessary to build any  
any railroad at all because there are resp. is a me-  
already ever 10 years in use in Australia, that means the saving of the total  
cases of the rails, switches and all other railway accessories and has at the  
time the privilege of being able to run over deserts and as well through swa-  
country sections as well <sup>as</sup> ever normally good streets and roads.

This train of which I speak is the so-called Mueller-Railless Train. The  
has been in use in Australia ever ten years and has worked to absolut satis-  
faction of the Gentlemen there so that we can say that the M-R-T is an almost  
indestructible, railless train good for heavy use and wearing in all tropical  
and sub-tropical countries. The M-R-T is a Motortruck with 10-12 trailers carrying a  
load of 30 to 60 tons/efficient weight, ever any length of traffic. The running ex-  
penses are very small and low because the M-R-T needs less fuel and Oil than  
a motortruck with one or two trailers would need. This is only possible by means of  
the M-R-T-System of Multiple Drives. No trailers are drawn or pulled, all trailers  
pull themselves. The steepest grades of hills and mountains are traversed up to  
1000 ft and more. The speed can be regulated from one inch per hour to 45  
miles per hour. The trains follow in absolute straight lines, <sup>and in the</sup> one behind the other  
they were running on rails. In order to give the Colonial-Office a better  
idea of the M-R-T I am enclosing a few pictures of the M-R-T as seen by the Gentle-  
men of the Foreign Office and the Office for Colonial-affairs to grant these views  
examination. The pictures were made by myself in Australia in the year 1914 in  
order to transport lumber and any other kind of freight for conveyance of passen-  
gers can also be delivered. I do not know if it is necessary to remark that we also  
use these trains on Reparations-Center. This would mean that the trains cost the  
British Government practically nothing and enable the Royal British Govern-  
ment to connect this colonies under another by means of a railless system that

Alfred L. Zervas

561

Ingenieur,  
Kraft-Anlagen, Maschinen und  
Gleislose Bahnen.

Page 3 to letter of.....*Dr.* July, 10th, 1924.

Telegramme - Zervas Transätern.  
Bankkonto:  
Österreichische Hypothek- und Wechsel Bank  
Zweigstelle Traunstein  
Postsparkasse-Konto - München Nr. 55047.

in case of war or any other internal-colonial necessities can be immediately transferred to the section of country where a larger traffic is quickly needed. This cannot be attained with railroads that have tracks and the like. By the M-R-T it is possible to change any route of travel inside of a few minutes when wanted or necessary. The costs for doing this are brought because the trains are only put on the new route and then travel on it this route until needed somewhere else. In war there are then no lines of traffic that can be damaged and the trains are able to keep up the connections without risks that a normally built tracksystem would be submitted to.

It may be necessary that somebody makes a trip to the colonies in order to lay down the exact road of connections. It may also be the case that this can be done without travelling to Afrika. I am willing to come to London or to Afrika to settle the travelling connections at any time when the Royal British Government should ask me to do so. Of course it must be understood that I travel at the expense of the Government because I am <sup>not</sup> wealthy enough to carry these costs myself personally. I believe that when a commission or committee is founded and travels to the colonies, that the whole line can laid down in about 4-5 months of time. I am specialist on railroading and traffical institutions and methods and can therefore work without having first to consider every point on the line closer than necessary. I am a born American and am used to work in the tropics because I have travelled in almost all countries in the world.

I am willing to give information of all kinds necessary and beg of you to give me answer at all events as to whether the colonial-office has interest in building a connection between its colonies or not. Trains with more than 12 trailers can also be run when required. The fuelconsumption, even when running through very hot countries, is very much smaller than any creeper, traktor, motortruck or railway train now known. Our train in Australia runs over sections of deserts and

Alfred L. Zervas

Ingenieur

Kraft-Anlagen, Maschinen und  
Gleislose Bahnen.

Telegramme Zervas Traunstein

Bankkonto:

Deutsche Hypothek- und Wechsel-Bank

Zweigstelle Traunstein

Postfach-Konto München Nr 55647

562

Page 4 to the letter of... Den. July, 10th, 1924.

for many hours without stopping, where the average temperature reaches 100 Degrees Fahrenheit and more. This is the height of temperature which usually causes all motortrucks to become impossible for use over hot sand streaks. Besides the high temperature it is impossible for motortrucks to travel through the deep loose sand prevailing in deserts. Green and traktormachines have the same inconveniences to battle with because there is a want of adequate help against these two very prominent factors. The L-R-T has the privilege of being the only system that can easily and surely overcome these difficulties. The L-R-T needs only one man to run whole train. This is the case the train consists of one car or of 20 cars (trailers).

As I do not know how many trailers the various trains would need when in service in the colonies I am not making any estimations of probable cost. In writing me the number of cars please let me know how many trailers are wanted, the length of the probable route, whether hills, mountains or valleys are to be traversed, what kind of freight is to be conveyed, if the trailers are to be taken from farms (our L-R-T hauls trailers out of yards are loading stations that are such as 1000 feet=334 yards away from the powercar). It is not necessary that the L-R-T powercar arrives into the farmyard or the factory yard because the train will pull the trailers out onto the road over a distance as just mentioned with an electric lead on the cars of 6 tons. Also mention in your letter the following estimates: the cost of a chauffeur for one year's wages; costs of benzol, kerosin, napftha, and general, greases and lubricatives; the wages of a mechanic for making repairs for one year, and a reserve mechanic who can serve as Reserve driver for one year. On these information I can then set up an estimate as to what the service with a L-R-T would cost for one year. This estimate renews, from year to year because the expenses themselves also renew from year to year.

It would give me great pleasure if the Royal-British-African-Colony and other British Colonies were to adopt this unexcessable method of traffic-

fred L. Zervas

563

ingenieur  
Maschinen und  
Eisenbahnen.

Page 5 to letter of.....Oct., July, 10th, 1924.

Zervas Traunstein  
Kontokonto  
Bank und Wechsel-Bank  
Traunstein  
München Nr. 55647.

system because it would mean the saving of many 10000  
of expenses and many 10000 of labor as well as a  
great lot of time. A M-R-T can be put into service 6-7 months after given in order  
The trains are delivered directly to the station named in the order and there  
put together and are ready for operation and hard use for many, many  
years. In such countries where snow and ice prevails, for instance Canada, the  
can be service with absolute reliance through snow depths up to 3,25 feet  
an efficient load on board of 60 tons and more. No wheels of a M-R-T can slip  
because of the multiple-drive which assures the M-R-T a sure running over  
all kinds of roads, paths, ways and stretches.

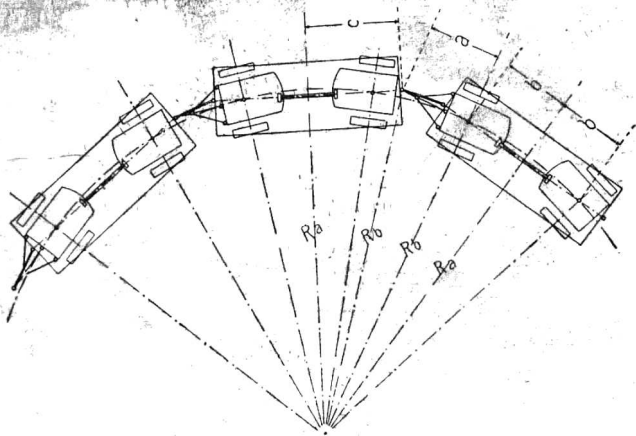
As already mentioned, I am willing to make any travels or voyages that  
the Royal-British-Government should request me to make under the consideration that  
the Royal-British-Government forward me the expenses for a such trip and the ex-  
penses connected with stay of the length of time necessary to fix up and lay  
information needed for the affairs.

Hoping to hear very soon from the Royal-British-Government at a  
event I am, at all times at the disposal of the Government, with a sincere  
highest esteem

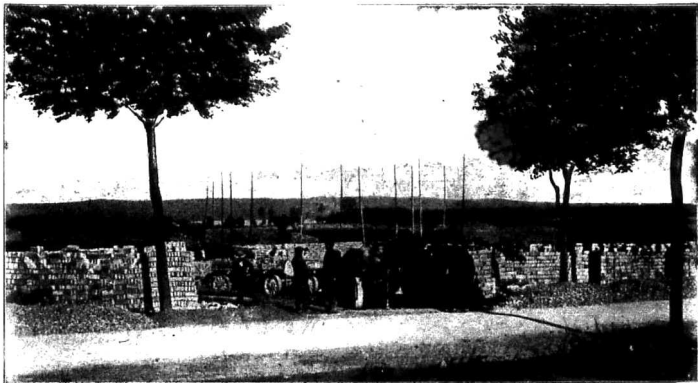
Your obedient servant!

*Alfred L. Zervas*

Engineer for  
Traffic in the tropics---Naval construction  
Mining---and Civil engineering.









33246/24

S. A.

571

S. A. 16 August 1924

Sir

C. D.  
13 AUG

~~Dear Sir~~

Reply to

~~your letter of the~~  
10th of July, & to inform

you that ~~it has~~ made  
had been with  
Eugenio L. ~~that~~ that

~~to insert a notice of~~  
this affair to be no  
long opportunity for

making a list of

your system of roads

transport in East Africa

~~or South Africa~~

DRAFT.

88

Address L. Zerr...

amster...  
Bavaria  
40661

MINUTE.

Mr. Whiteaker 11.0.

Mr. ~~Whiteaker~~ 11.15

Mr. Parkin 11.20

David.

Sir G. Grindle.

Sir H. Read.

Sir J. Masterton Smith.

Lord Arnold.

Mr. Thomas.

copy of Zerran letter  
and send it to this is the case  
U.S.S. of course it is  
I do this  
revised to them.

2) As regards  
the Union of S. Africa and  
the matter is one for  
the creation of the

Govt's <sup>concerned</sup> ~~of that~~ copies  
~~a copy~~ of your letter is  
therefore being  
forwarded to the  
H<sup>o</sup> of the Union

London & to the Agents in  
London of the Govt. of S. Rhodesia

(Signed) H. J. READ