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GEOLOGICAL MODELLING AND RESOURCE ESTIMATION FOR THE RUKWA COAL PROJECT

Report prepared for: EDENVILLE ENERGY PLC

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EXECUTIVE SUMMARY

Edenville Energy PLC ("Edenville Energy") has access to two Prospecting Licences and 66 Primary Mining Licences in the Rukwa Coalfield of southwest Tanzania through its acquisition from the Upendo Group Limited in 2010. Edenville initially acquired an in initial 70% interest in the licences and has subsequently exercised its option right and has increased its interest to 90%. The Upendo Group holds the remaining 10% as an undivided, free-carry interest.

Edenville Energy began an initial exploration program within the Rukwa licence areas during the 2011 field season, and undertook a second phase of exploration drilling in 2012. Sound Mining Solution (Pty) Ltd ("Sound Mining") was requested to assist with this second phase of exploration drilling by providing services for borehole logging, database management, geological modelling and coal resource estimation reporting. A preliminary site visit was conducted during June 2012 by senior personnel involved in the project, after which multiple follow-up site visits were made by Mr Pieter Hamman in order to conduct training and project supervision of the site geologists. During these visits the coal sampling of the boreholes was completed under the supervision of Mr Hamman to ensure that all procedures of core and material handling was compliant with internationally accepted quality assurance and quality control (QA/QC) standards. All borehole drilling was complete by the end of 2012, with the last sample analyses received from the laboratories in January 2013.

During the 2011 drilling program 22 boreholes were drilled within the Mkomolo Block and 8 were drilled within the Namwele Block. All work completed in 2011 was completed under the supervision of Wardell Armstong International ("WAI"). WAI made a number of site visits during 2011 to ensure that the company's exploration work was QA/QC compliant and were responsible for the maiden resource statement published in April 2012. During the 2012 drilling program a further 19 boreholes were drilled within the Mkomolo Block, 4 within the Namwele Block and 5 within the Muze Block.

With this additional data received as a result of the additional drilling conducted in 2012, Sound Mining was able to construct a more detailed geological model than what was previously developed by WAI, which was based on only the 2011 data. The geological modelling conducted by WAI considers the full coal measure interval thickness per borehole, and calculates the average sample yield, weighted on the sampled thickness against the barren interval thickness, and applies this average yield to the coal measure in order to obtain a washed tonnage for the coal measures. The geological modelling conducted by Sound Mining identified coal zones within the coal measures and the structural model was based on these zones. A block model was constructed and the qualities interpolated, using average washed qualities with a yield equal to 0 for the unsampled waste intervals, effectively excluding the waste interburden from the washed product resource estimate and rendering a detailed three dimensional structural and quality model.

In total 6 fault blocks were identified within the Mkomolo Block, with up to four coal zones being identified within the fault blocks. Only a single fault block with a single coal zone was identified at Namwele, and a single fault block with 2 coal zones identified at Muze. With the identification of Sound Mining received guidance from Edenville as to physical parameter cutoffs to be applied to the coal resource model, these being 500m along strike and 500m down-dip from the outer-most boreholes. Raw qualities, qualities at a wash RD of 1.7 and 2.0, and a washed product of CV = 17 MJ/kg were modelled.



The tables below show a summary of the estimated coal resource and the associated qualities. To estimate the total tonnes in situ ("TTIS") from the gross tonnes in situ ("GTIS") geological losses have been applied as follows:

- Measured = 10%
- Indicated = 15%
- Inferred = 20%

The resulting tonnes of product have then been determined by applying the theoretical yield percentage to the tonnes in situ.

Fault Block	Classification	Volume (m ³)	Quantity (GTIS)	Quantity (TTIS)	RD
	Measured	22,334,200	41,064,546	36,958,091	1.8
Mkomolo	Indicated	58,586,300	109,899,978	93,414,982	1.83
	Inferred	1,307,050	2,404,772	1,923,817	1.79
	Measured	9,658,350	19,065,363	17,158,826	1.9
Namwele	Indicated	7,791,500	15,015,492	12,763,169	1.88
	Inferred	-	-	-	-
	Measured	4,705,150	8,172,498	7,355,248	1.69
Muze	Indicated	2,322,900	4,049,823	3,442,349	1.68
	Inferred	-	-	-	-
	Measured	36,697,700	68,302,406	61,472,166	1.79
TOTAL	Indicated	68,700,700	128,965,293	109,620,499	1.83
	Inferred	1,307,050	2,404,772	1,923,817	1.79

Fault Block	Quality	Quantity (Product Tonnes)	Classification	ASH (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)
		36,958,091	Measured	66.24	3.43	12.78	17.54	8.52	3.48	100
	RAW	93,414,982	Indicated	64.26	3.42	14.78	17.54	8.70	3.73	100
		1,923,817	Inferred	67.74	4.22	14.08	13.96	7.02	3.46	100
		8,435,750	Measured	25.95	4.62	28.76	39.55	21.29	2.91	22.79
0	RD=1.7	18,855,411	Indicated	26.60	4.68	28.78	39.02	21.06	3.60	19.97
lon		431,176	Inferred	25.66	5.09	29.43	38.76	21.39	3.56	22.40
kor		13,379,881	Measured	36.31	4.13	25.56	34.01	17.90	2.85	36.17
≥ _{RD}	RD=2.0	31,888,824	Indicated	37.44	4.10	25.37	33.09	17.50	3.55	33.84
		635,187	Inferred	35.09	4.55	26.18	34.19	18.43	3.70	33.00
		14,203,821	Measured	37.64	4.02	25.30	32.99	17.43	3.06	38.37
	CV=17	32,892,965	Indicated	37.84	4.05	25.31	32.75	17.35	3.65	34.92
		748,425	Inferred	37.72	4.38	25.37	32.50	17.46	4.36	38.88
		17,158,826	Measured	69.44	3.22	13.34	14.00	6.72	3.69	100
	RAW	12,763,169	Indicated	69.73	3.32	12.69	14.25	6.91	4.03	100
		-	Inferred	-	-	-	-	-	-	-
ee		1,974,981	Measured	26.11	5.16	29.47	38.00	20.78	4.82	11.51
Ň	RD=1.7	1,497,120	Indicated	25.63	5.06	29.73	38.11	20.96	4.66	11.73
Nar		-	Inferred	-	-	-	-	-	-	-
		4,142,141	Measured	39.03	4.75	24.22	32.00	16.53	4.19	24.14
	RD=2.0	2,838,529	Indicated	37.51	4.61	25.25	32.63	17.16	4.35	22.24
		-	Inferred	-	-	-	-	-	-	-



Fault Block	Quality	Quantity (Product Tonnes)	Classification	ASH (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	TS (%)	YLD (%)
		3,903,633	Measured	37.29	4.71	25.35	32.43	17.12	4.81	22.75
	CV=17	2,975,095	Indicated	37.49	4.55	25.39	32.39	17.14	4.70	23.31
		-	Inferred	-	-	-	-	-	-	-
		7,355,248	Measured	55.38	4.22	18.08	22.32	11.24	3.03	100
	RAW	3,442,349	Indicated	55.82	4.39	17.72	22.06	10.95	3.29	100
		-	Inferred	-	-	-	-	-	-	-
		2,433,319	Measured	28.21	4.78	27.99	37.96	19.85	2.83	32.79
	RD=1.7	1,043,958	Indicated	28.40	5.01	27.61	37.75	19.67	2.94	29.93
ze	l I		Inferred	-	-	-	-	-	-	-
Μ		3,691,527	Measured	39.08	4.24	24.99	31.70	16.46	2.67	49.85
	RD=2.0	1,545,746	Indicated	38.13	4.48	25.02	32.37	16.73	2.80	44.46
		- '	Inferred	-	-	-	-	-	-	-
		3,281,635	Measured	35.78	4.41	26.12	33.66	17.59	2.92	44.09
	CV=17	1,361,474	Indicated	34.98	4.71	26.15	34.12	17.80	3.01	38.86
		- '	Inferred	-	-	-	-	-	-	-

ASH=Ash, IM=Inherent Moisture, VM=Volatile Matter, FC=Fixed Carbon, CV=Calorific Value, TS=Total Sulphur, YLD=Yield, RD=Relative Density



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LIST OF ABBREVIATIONS

Abbreviation	Quantity	Unit
ASH	Ash	%
СР	Competent Person	
CV	Calorific Value	MJ/kg
FC	Fixed Carbon	%
GBIS 7	Geological Borehole Information Systems version 7 by Micromine©	
GTIS	Gross Tonnes in situ	Metric tonnes
IM	Inherent Moisture	%
m	Metres	
m ³	Volume	Cubic metres
Mt	Million Tonnes	Metric tonnes
RD	Relative Density	-
TTIS	Total tonnes in situ	Metric tonnes
TS	Total Sulphur	%
VM	Volatile Matter	%
YLD	Theoretical Yield	%



1. INTRODUCTION

Edenville Energy PLC ("Edenville Energy") currently has access to 2 Prospecting Licences and 66 Primary Mining Licences (Appendix 1) covering 3 known coal deposits namely Mkomolo, Namwele, and Muze of the Rukwa Coalfield, located in southwest Tanzania, through its acquisition from the Upendo Group Limited in 2010. Edenville acquired an initial 70% interest in the licences and has subsequently exercised its option right and has increased its interest to 90%. The Upendo Group holds the remaining 10% as an undivided, free-carry interest. Sound Mining Solution (Pty) Ltd ("Sound Mining") was requested by Edenville Energy to assist with exploration borehole logging, data management, geological modelling and coal resource estimation and reporting of the currently held areas.

1.1. Purpose of the Report

This report has been prepared for Edenville Energy to record all aspects of the project, including the site visit by the Competent Person, the borehole logging and sampling, and the subsequent geological modelling and coal resource estimation. This reporting is based on the JORC standard for the reporting of coal resources.

1.2. Qualifications of Competent Persons and Other Personnel

In order to complete the scope of work, Mr Peet Meyer of PC Meyer Consulting cc. was contracted as a Competent Person ("CP") for coal exploration and coal resource estimation. PC Meyer Consulting is a South African based consultancy that has as its sole proprietor Mr Petrus Cornelius Meyer ("PC Meyer"). PC Meyer has more than 20 years experience in the South African Coal Industry, has B.Sc. Hons. (Geology) and M.Sc (Earth Science Practice and Management) degrees from the University of Pretoria, is a member of the Geological Society of South Africa and Fossil Fuel Foundation.

PC Meyer is a registered natural scientist (Pr. Sci. Nat 400025/03). He is also familiar with and adheres to the South African Minerals and Petroleum Resources Development Act of 2002 (ACT No. 28 of 2002), the JORC, SAMREC and SAMVAL codes and the South African Guide to the Systematic Evaluation of Coal Resources and Coal Reserves (SANS 10320:2004).

Mr Pieter Hamman, who has been working in coal exploration since 1979, was contracted to assist on site with borehole logging and coal sampling. Mr Toni Fernandes of Datamatix cc. was contracted to carry out the data capturing and database compilation. This was done using the commercial software GBIS, "Geological Borehole Information Systems", which allows the capturing of all borehole and associated data into a single, fully auditable, integrated database.

The author, Mrs Diana van Buren, is a geologist with Sound Mining Solution (Pty) Ltd ("Sound Mining") and holds a BSc Honours (Geology) degree from the University of the Witwatersrand, Johannesburg and is a member with the Geological Association of South Africa ("GSSA"). She has 7 years experience in the mining industry, including 5 years in which she has specifically worked on the geological modelling of African coal deposits.



Sound Mining adheres to the JORC, SAMREC and SAMVAL codes for the reporting of mineral resources, as well as to the South African Guide to the Systematic Evaluation of Coal Resources and Coal Reserves (SANS 10320:2004).

1.3. Project Outline

The scope of the work undertaken by Sound Mining included:

- Site visit by the Competent Person;
- Project Plan Development;
- Provision for an on-site geologist to assist with borehole logging and coal sampling;
- Database management and data capturing;
- Geological modelling and coal resource estimation;
- Reporting.

1.4. Project History

During 2010 Edenville Energy began their exploration within the Rukwa Coalfield with geological mapping and trial pitting of coal outcrops (Figure 1). This work assisted in the development of a borehole drilling program which was completed by the end of 2011 and consisted of 22 boreholes within the Mkomolo Block and 8 boreholes within the Namwele Block. This data was then used by Wardell Armstrong International ("WAI") for geological modelling, from which they released a resource estimate in April 2012. Sound Mining had access to these results in the report by WAI "Summary Report on the 2011 Coal Exploration in the Mkomolo Block, Rukwa Coalfield, South-West Tanzania".

An inferred coal resource of approximately 39Mt was declared at calorific value = 17 MJ/kg, with 16Mt being at depths less than 150m.

The WAI report included an update of the regional geology map as found in the report by Semkiwa et al. 1998. Figure 1 shows the regional geology map by WAI which was digitised by Sound Mining and overlain with the 2011 and 2012 borehole and trial pit positions. It should be noted that this map was digitised using points of the Mkomolo and Namwele Blocks, and due to the distortion of lines when converting between a latitude-longitude coordinate system and the UTM system, the borehole positions of Muze, which locate approximately 12km to the east, are displaced approximately 300m west of their true location due to the geo-referencing distortion. This map was digitised in order to investigate the mapped structural locations in the Mkomolo and Namwele Blocks, and has not influenced the coal resource estimate at Muze.

In June 2012 Edenville Energy appointed Sound Mining to assist with the second drilling program and update the coal resource estimation.





Figure 1 - Regional geology map (WAI 2012) overlain with the borehole positions

1.5. Project Location and Description

The Rukwa Coal Project is located in the in the Rukwa Region of southwest Tanzania, between Lake Rukwa and Lake Tanganyika (Figure 2). The project is divided into 3 areas, namely the Mkomolo Block to the north, the Namwele Block to the south, and the Muze Block to the east. The southern-most point of the Namwele Block lies approximately 19km northwest of the regional capital of Sumbawanga which is the closest landing strip to the project area. From Sumbawanga the project area can be accessed via the B8 Road which runs through Ntendo, through Nkundi up to Milundikwa, 16km northwest of the project area.





Figure 2 - Location of the Rukwa Coal Project

2. PROJECT DATA

2.1. Data Management and Database

During the 2011 drilling program 22 boreholes were drilled within the Mkomolo Block and 8 were drilled within the Namwele Block. During the 2012 drilling program a further 19 boreholes were drilled within the Mkomolo Block, another 4 drilled within the Namwele Block and 5 within the Muze Block (Table 1).





Figure 3 - All boreholes within the Mkomolo Block

Figure 4 - All boreholes within the Namwele Block







Figure 5 - All boreholes within the Muze Block

During the 2012 drilling program PC Meyer was responsible for quality control and quality assurance of the project to ensure compliance with JORC reporting standards. Tanzanian geologists employed by Edenville Energy provided constant on-site support in terms of supervising the core handling, geological logging of the core and sample handling. Due to the limited amount of coal exploration in that country, training was needed for accurate coal logging and sampling. Training of Edenville Energy staff was the responsibility of PC Meyer, and conducted under the supervision of Mr Pieter Hamman, a highly experienced coal exploration geologist.

Mr Hamman was in charge of the onsite training and supervision of Edenville Energy's geologists and acted in a supervisory role throughout the process (Figure 6). All coal measure and coal seam logging and sampling was carried out by Pieter Hamman and, under Mr Hamman's guidance, all logging of the overburden and interburden was carried out by the local geologists. All borehole coal strata, except the last borehole at Muze, MZ12-05, were logged and sampled by Mr Hamman. After extensive training MZ12-05 was logged and sampled by the on-site geologists.



Figure 6 - On site training with members of Edenville Energy's team and Sound Mining



All the 2012 borehole drilling was completed as diamond wireline core drilling under contract by Layne Drilling Tanzania (Pty) Ltd. All boreholes were drilled as HQ3 size (61.1 mm core diameter) using the triple-tube method to maximise core recovery. All boreholes were drilled vertically and no inclinations are assumed. All borehole collars were surveyed and provided in the UTM ARC 1960 coordinate system.

Once drilling was complete the entire borehole core was packed in core boxes (Figure 7) and transported to the field camp where the lithology was described and logged, with the coal intervals recorded by Mr Hamman. The coal intervals were logged together by the all the geologists and the samples taken and packed into plastic bags and clearly marked.



Figure 7 - Core boxes



Mr Hamman visited the project on 4 occasions between June to November, carrying out the coal interval logging and sampling during these site visits:

- 30 June 19 July 2012
- 18 August 27 August 2012
- 25 September 1 October 2012
- 30 October 5 November 2012.

All the borehole lithology logs were initially captured onsite in code form into pre-formatted Excel spreadsheets. Once again Pieter Hamman provided the training for the geologists to understand the Excel format and the principle of using codes to record the borehole logging. These spreadsheets where then captured automatically by means of macros into the coal database software GBIS 7 (Geological Borehole Information Systems version 7 by Micromine[©]) by Mr Toni Fernandes of Datamatix cc.

All the sample bags were sealed with security tags and transported by road on public transport, accompanied by an Edenville Energy representative, to Dar es Salaam from where it was dispatched via DHL Courier Services to the laboratory of Knight Energy Services Limited in the United Kingdom for analyses.

Once these raw and washed quality analyses were returned from the laboratory, the spreadsheets of the results were also sent to Mr Fernandes for capturing into GBIS 7.



Downhole geophysical logging of the boreholes ceased in the early stages of the program due to boreholes collapsing.

Whereas this section focuses on the detail of the 2012 drilling program, all available 2011 data was also imported into the GBIS 7 database to provide a single integrated set of data. This data was provided by Edenville Energy. All coal quality analyses were captured from original laboratory result sheets. There were raw, but no washed qualities available for the following 2011 boreholes:

- MK11-02
- MK11-03
- MK11-04
- MK11-06
- MK11-08
- MK11-09
- MK11-10
- MK11-11

This is consistent with what is reported by WAI.

Table 1 - All borehole collars

Borehole ID	X UTM	Y UTM	Z UTM
Mkomolo Boreholes	;		
MK11-01	329881.48000	9143588.58000	1694.67000
MK11-02	330212.68000	9143124.20000	1691.20000
MK11-03	330476.09000	9142778.40000	1704.35000
MK11-04	330706.18000	9142306.68000	1702.80000
MK11-05	330865.86000	9141802.45000	1700.38000
MK11-06	330117.95000	9143009.88000	1695.93000
MK11-07	329750.68000	9143477.27000	1704.79000
MK11-08	329596.63000	9144013.43000	1704.43000
MK11-09	329216.10000	9144334.55000	1713.43000
MK11-10	328760.64000	9144934.60000	1712.92000
MK11-11	328602.99000	9145123.17000	1710.23000
MK11-12	328817.61000	9144654.61000	1731.02000
MK11-13	328437.71000	9145638.10000	1721.70000
MK11-14	328320.82000	9145809.69000	1726.54000
MK11-15	328180.21000	9146077.43000	1715.36000
MK11-16	327962.11000	9145905.01000	1751.75000
MK11-17	327536.11000	9146412.57000	1748.89000
MK11-18	327213.82000	9146793.31000	1735.73000
MK11-19	327748.25000	9146549.88000	1736.60000
MK11-20	328216.57000	9144803.01000	1757.74000
MK11-21	328805.06000	9144046.93000	1760.55000
MK11-22	329974.99000	9142539.26000	1702.46000
MK12-23	330250.44000	9142694.40000	1719.62000
MK12-24	329638.99000	9143313.10000	1703.52000



Borehole ID	X UTM	YUTM	Z UTM
MK12-25	329263.44000	9143762.07000	1735.42000
MK12-26	328999.23000	9144212.42000	1742.54000
MK12-27	328698.83000	9144557.08000	1741.25000
MK12-28	328110.28000	9146426.55000	1720.18000
MK12-29	327394.37000	9146917.94000	1725.38000
MK12-30	326986.86000	9147247.50000	1742.11000
MK12-31	326483.52000	9147522.14000	1745.62000
MK12-32	325808.78000	9148025.68000	1738.16000
MK12-33	327806.49000	9146246.73000	1741.20000
MK12-34	328245.41000	9145356.53000	1741.04000
MK12-35	328400.40000	9144982.39000	1737.91000
MK12-35B	328395.87000	9144984.22000	1737.96000
MK12-36	328550.55000	9144403.93000	1758.51000
MK12-37	324181.86000	9149931.20000	1765.52000
MK12-38	324758.33000	9149323.91000	1753.32000
MK12-39	325119.01000	9148957.76000	1754.27000
MK12-40	327313.03000	9146309.97000	1756.72000
Muze Boreholes			
MZ12-01	340310.00000	9149430.00000	898.00000
MZ12-02	340145.00000	9149535.00000	900.00000
MZ12-03	340190.00000	9149205.00000	905.00000
MZ12-04	340076.00000	9149290.00000	905.00000
MZ12-05	340300.00000	9148870.00000	903.00000
Namwele Boreholes			
NM11-01	334521.04000	9138014.48000	1797.60000
NM11-02	334441.44000	9137931.20000	1792.43000
NM11-03	334058.23000	9138632.59000	1781.04000
NM11-04	333816.53000	9139051.25000	1770.95000
NM11-05	333726.59000	9138972.26000	1766.04000
NM11-06	333677.84000	9138912.15000	1764.36000
NM11-07	333314.96000	9139314.68000	1749.16000
NM11-08	332961.53000	9139617.81000	1754.52000
NM12-10	334430.53000	9138480.54000	1805.36000
NM12-11	333964.75000	9138504.26000	1774.57000
NM12-12	333656.64000	9138904.46000	1761.56000
NM12-13	333214.44000	9139242.87000	1759.72000



2.2. Spatial Data

All borehole collars were surveyed post drilling and provided in the UTM ARC 1960 coordinate system.

2.3. Geological Data

In preparation for the 2012 drilling program, all available data from the work conducted in 2011 was used. The basic form of the orebody was known at Mkomolo and Namwele; it outcrops within the project area along its strike line and dips at approximately 20° to the southwest. The extent to which faulting affects the orebody is not well understood, but there are clear indications of southwest-northeast trending faults having broken the body along its strike. The area also has northwest-southeast trending faults as can be identified by the water course trending northwest-southeast to the east of the outcrop.

2.4. Regional Geology

The coal-bearing strata within Tanzania are of Permian age and have formed in a series of intracratonic rift basins (Semkiwa et al. 1998). The project area is located within the Rukwa Basin, southwest Tanzania, within a northwestsoutheast trending corridor which extends south into Zambia and Malawi (Figure 8). Coal in this region has not formed as distinct seams, but rather as thick interbedded coal packages where the coal plies are interbedded with mudstone and shale.



Figure 8 - Location of the Rukwa Basin



3. SAMPLING AND ANALYSIS

3.1. Coal Sampling Procedures

The guideline issued and followed by Mr Pieter Hamman for all 2012 coal was as follows:

"The minimum borehole core sample width shall be such that the resulting sample mass will satisfy, as far as possible, the analytical requirements, depending on the type of analysis to be undertaken. Therefore, raw coal analyses can accommodate thinner sample intervals than full washability tests. The following procedure serves as a guide and it is up to the logger to use his own discretion defining sample interval and whether coal/mudstone should be included or excluded in the sample above or below.

- 1. Describe the lithology of the coal and non-coal layers in detail and measure the depth and calculate the thickness of the different layers.
- 2. If the lithology of the coal is not visible the core must be split lengthwise.
- 3. Mark out the samples by starting at the bottom of the coal seam working upwards.
- 4. Coal packages are divided into separate samples on the basis of change in the lithology of the coal seam.
- 5. The minimum length of a sample shall be not less than 0.30 m and the maximum length not more than 2.50 m. The maximum length of a sample can exceed 2.5 m in cases where there is no or little variation in the lithology of the coal. If a sample is too big for one bag rather split it into separate bags, each with its own from and to depths. Keep the same number for the samples but differentiate it by A, B etc. E.g. MK12-25 A; MK12-25 B.
- 6. Non-coal layers less than 0.30 m shall also be sampled and include in the sample above or below depending on the total length of the samples.
- 7. Non-coal layers more than 0.30 m can be discarded or sampled separately depending on the carbon content of the sedimentary rock (carbonaceous mudstone / shale).
- 8. The description of the sample must include the borehole number, the top and bottom depth and/or the thickness of the sample. e.g. MK12-25/01 for borehole MK12-25 sample 01.
- 9. It is recommended to use two tags, one inside the sample bag and another one tied on the outside.
- 10. The sample bags shall be tied properly with cable ties or stapled and stored out of the direct sun."

Once sampling was complete the samples were transferred to Dar es Salaam using public transport, accompanied by an Edenville Energy representative, and from there to Knight Energy Services Limited in the United Kingdom.

3.2. Sample Analysis

All sample analyses are reported on an air-dry basis. The following instructions were issued and followed by the laboratories for the 2011 and 2012 sample analyses:



1. Basic Analysis

 Analysis: Total Moisture (As Received);
Proximate Analysis (Air Dried) – Moisture, Ash, Volatile Matter, Fixed Carbon;
Total Sulphur (Air Dried), Gross and Net CV (Air Dried), Density (Air Dried).

2. Float and Sink Analysis

Crush to 25mm topsize.

Divide off 1/8th and test raw: Total Moisture (As Received); Proximate analysis Air Dried (Moisture, Ash, Volatile Matter, FC); Total Sulphur (AD) and GCV(AD), NCV (AD), Density (AD).

From other 7/8th:

Sieve out fines <0.5mm size (determine %age <0.5mm) and do raw analysis on fines of: Proximate analysis air dried (M, A, VM, FC); Total Sulphur (AD), GCV(AD) and NCV(AD).

On 0.5mm – 25mm size, carry out: Determine Float and sink @ following floats: 1.3, 1.35, 1.4, 1.45, 1.5, 1.55, 1.6, 1.7, 1.8, 1.9, 2.0, and sinks @2.0.

On each float: Yield%, Proximate analysis air dried (M, A, VM, FC); Total Sulphur (AD), GCV and NCV(AD).

On sink: Yield%, Proximate analysis air dried (M, A, VM, FC); Total Sulphur (AD), GCV and NCV(AD) All results as Fractionals and Cumulatives.

The 2012 sample analyses were conducted by Knight Energy Services which is a wholly owned subsidiary of the Alfred H. Knight Group of Companies and is ISO/IEC 17025:2005 accredited for several coal sample preparation and analysis test methods.

The laboratory carried out full proximate and ultimate analyses on all samples, both on the raw samples as well as washed fractional analysis.

The results returned for the raw analyses included moisture (%), Ash (%), Volatile matter (%), fixed carbon (calculated %), calorific value (MJ/kg), total sulphur (%), and raw relative density.

The results returned for the washed fractional analyses included float wash fractions for RD=1.30, RD=1.35, RD=1.40, RD=1.45, RD=1.50, RD=1.55, RD=1.60, RD=1.70, RD=1.80, RD=1.90, and RD=2.00. The following qualities were stated: yield (%) moisture (%), Ash (%), Volatile matter (%), fixed carbon (calculated %), calorific value (MJ/kg), and total sulphur (%).



Sample analysis for the 2011 drilling program was done by Inspectorate M&L (Pty) Ltd in Middelburg, South Africa. Both raw analyses and washed fractional analyses were carried out on the same wash fractions as the 2012 samples. The methods used for analysis can be seen in Table 2.

Table 2 -	Methods	of coal	analysis
-----------	---------	---------	----------

Method			
H2O %	C030-403-W (Based on SANS 5925)		
Volatile %	C030-404-W (Based on ISO 562)		
Ash %	C030-401-W (Based on ISO 1171)		
Total Sulphur %	C030-402-W (Based on ASTM:D4239)		
Gross CV(MJ/kg)	C030-405-W (Based on ISO 1928)		
Total Moisture %	C030-406W- Based on ISO 589		
Float & Sink	*ISO 7936		
Hydrogen %	*C030-408-W (Based on ASTM D5373:08)		
Particle size	*ISO 1953		
Analysis marked with	* NOT SANAS ACCREDITED.		

4. Geological Modelling

4.1. Structural Modelling

In order to begin the structural modelling all available data was imported into the geological modelling software, Micromine 2011, Version 12.5.5 Build 869.

All borehole data was available as a series of files exported from GBIS 7, from the final verified database. This data included:

- All borehole collars
- Borehole lithological logging
- Borehole sampling intervals
- Raw qualities per sample
- Washed fractional analysis per sample

Additional data imported into Micromine© included:

- Prospecting Licence boundaries
- Maps from the WAI report and Semkiwa et al. 1998 were digitised into Micromine©

A borehole database was then created within Micromine consisting of the borehole collars, lithologies, sample intervals and raw and washed qualities. An example of the downhole data for borehole MK12-29 can be seen in Figure 9.

Once all the data had been imported, it was necessary to investigate possible faulting in the area.



1/25m	E	• MK12-29	ME		빌	1725m
1700	2300		7600	1629Z	MK12-29E0438 1629Z	1700
1720m	33		32	1628Z	MR12-29E0436 1628Z MR12-29E0435 1627Z	1/20m
1715-	48		4	1626Z	16262	1746.00
1715m				1625Z	16252	1/10m
1710-				1623Z	16232	1740
				1622Z	16222	1/10m
1705-				1621Z 1620Z	MK12-29E0434 16212 MK12-29E0433 16202	1705-
- vom				16192	MK12-29E0432 16192 MK12-29E0431 16192	1/05m
1700-				1618Z	MK12-29E0430 1618Z	1700
1700m				16162	MK12-29E0427 1616Z	1700m
1005				1615Z 16147	1615Z MK12-29E0426 16142	4005
1695m				1613Z	16132	1695m
1000-				1612Z	16122	
1690m				1610Z	MK12-29E0425 1610Z	1690m
1005-				1609Z	16092	1000-
				1607Z	16072	mcool
1000-				16062	MK12-29E0424 16062 MK12-29E0423 16062	1000-
Todum				1604Z	16032 16042 16042	10600
1070				16032	MK12-29E0419 1603Z MK12-29E0418	
				1601Z	MK12-29E0417 16022	16/5m
1070-				1600Z	16002	4070
16/0m				1599Z 1598Z	MK12-29E0416 1599Z	1670m
1005				1597Z	15972	
1665m				1596Z 15957	MR12:39E8413 15962	1665m
in the second				1594Z	15952	1
1660m				1593Z	15932	1660m
				1592Z 1591Z	MK12-29E0413 1592Z	
1655m				1590Z	MK12-29E0412 1590Z	1655m
				1589Z	MK12-29E8410 15892	
1650m				15872	MK12-29E0409 MK12-29E0408 1587Z	1650m
100-000				1586Z	MR12:29E8486 15862	9 0
1645m			1	1584Z	MK12 2050404 1584Z	1645m
• 1			/	1583Z	MK12-29E0403 1583Z	
1640m			/	1581Z	MK12-29E0402 1582Z	1640m
			_/	1580Z	MK12-29E0401 1580Z	()
1635m			1	1579Z 1578Z	MK12-29E0550 15782	1635m
2				15772	MK12-29E0549 1577Z	
1630m		HK12 2050420		1576Z	MR12:29E0849 15762	1630m
		M R15:58EB838				
1625m						1625m
1620m		MK12-29E0433 MK12-29E0432				1620m
1615m		MK12-29E0427 MK12-29E0426				1015
12/2022					Lithology:	
1610m		MK12-29E0425				
					Coal	
_1605m					Dright Cool	
		N 812-28E8319			Bright Coal	
1600m		MUS2 2000417			Dull Coal	
		MK12-29E0416				
1595m		MR12:29E0413			Shale with interlaminated Coa	al
		and the second sec				8
1590m		MK12-29E0413 MK12-29E0412			Coal with interlaminated Shal	е
					Sandy - Gritty Coal	
1585m		₩ K12:29E0406			Sandy - Onity Coal	
		NK12-28E8484			Lustrous Coal	
1580m		MK12-29E0402				
100 (0-0-100)		MR12-29E0550 MK12-29E0549			Mixed Coal	
1575m		MK12:29E0549				
S					Carbonaceous Mudstone	
1570m					Mudstone - Fines	
area Martana						
1565m					Sandstone - Siltstone	
		200000			No Core	
6Mo	Ň	Borebolo MK12 00		Scale 1 : 3550	Dwyka / Basement	
and a	WEE	Logging and Sampli	na 📙		Limestone	
and based because provide	-	Logging and Gampin		500 50m		
	2					

Figure 9 - An example illustrating the data within the borehole database



4.1.1. Fault Blocks

In order to investigate possible faulting in the area various data sets were analysed. The first data analysed were the maps found within the WAI report and the report by Semkiwa et al. 1998. The coordinates on these maps, in degrees and minutes , were converted to the UTM ARC 1960 coordinate system. Post conversion, the data points were imported into Micromine and digitised to locate on the correct XY space. The published structures were then included as surface lines within the 3D project (Figure 10). These fault lines were used to guide the structural modelling in terms of the maximum possible extents by which each Block could be modelled.





The second data set analysed was Google Earth® images. All lineaments delineating possible structures in and near the project area were traced within Google Earth and an image then saved. By using distinct points which could be identified and geo-referenced within the maps and on Google Earth, points from the digitised maps could be assigned to the saved image and this image also digitised and brought into the Micromine project. These lineaments were once again drawn as surface lines within the project (Figure 11).

These lineaments agree with the lineament orientations within the published data. They were also used to identify possible structural orientations within the Blocks.





Figure 11 - Structural lines digitised from Google Earth®

The third data set used to identify possible structures was the borehole and coal sample logging information and descriptions. Section views of the boreholes were viewed along strike and points were identified along strike where distinct changes occur in coal depth and the sample logging (Figure 12). Due to the dip of the coal strata, care was taken that this change in depth was considered in three dimensions, and so was considered more of a change in the orientation of the coal strata as opposed to a change in the absolute depth. Care was also taken to consider possible variations in coal logging due to the logging being done at different time periods and by different geologists. An example from fault block 2 showing corresponding logging from a 2011 and a 2012 borehole can be seen in Figure 13.









Figure 13 - Corresponding coal logging

The resulting fault blocks used in the modelling process can be seen in Figure 14. Six fault blocks were used to define the areas within the Mkomolo Block, and one each for the Namwele and Muze Blocks. Up to 4 coal zones were identified within the fault blocks.







4.1.2. Coal Zone Roof and Floor Surface Modelling

Once the fault blocks were established, roof and floor surfaces were constructed for each coal zone within each fault block.

Due to boreholes collapsing, geophysical downhole logging was only completed for one borehole and thus could not be used for coal zone correlation. Thus coal zone correlation was done on a visual basis. The coal zones within the model were numbered from the bottom upwards. Please note that it has not been determined which zones correspond across fault blocks and as such, for example, zone 3 within fault blocks 1, 2, 3 and 4 may or may not be the same horizon.

Table 3 shows the number of coal zones identified within each fault block.

Fault Block	Coal Zones
1	1, 2, 3, 4
1A	1, 2
2	1, 2, 3, 4
3	1, 2, 3
4	1, 2, 3, 4
5	1
6	1
7	1, 2

Table 3 - Number of coal zones modelled within each fault block

Once these coal zone correlations had been decided upon, tie-lines were generated between the top contact points of corresponding zones within fault blocks (Figure 15). Similarly tie-lines were created



between the bottom contact points of corresponding zones within fault blocks. These tie-lines were then extended up and down dip along their "between-borehole" trajectory so that they extended above the borehole collars, 600m down-dip from the deepest borehole intersection across strike at that point, and 500m along strike length from the last borehole (Figure 16). An example from fault block 4 can be seen in Figure 16.

Once these lines had been created, they were used to generate roof and floor surfaces, per coal zone, per fault block. Corresponding roof and floor surfaces were then joined using Micromine's in-built functions to create three dimensional solids. In order to cut these wireframes to the surface topography, the borehole collars were gridded and this surface used as the upper limit (Figure 17).

These wireframes were subsequently assigned into the sample file in order to associate each sample and its qualities with the specific coal zone.



Figure 15 - All Mkomolo tie-lines





Figure 16 - Zoomed in view of tie-lines used in fault block 4

Figure 17 - Mkomolo coal zone wireframes



4.1.3. Blank Block Model

Once the wireframe solids had been created, blank block models were created for each wireframe. In order to maintain the structural detail the blocks were created with the dimensions $10m \times 10m \times 0.5m$ (XYZ, no rotation). The Z dimension was also chosen to relate to the sample compositing, to be discussed in Section 4.2.1.



4.2. Coal Qualities

4.2.1. Sample Compositing

Due to the nature of the coal sampling, only coal intervals were sampled. In order to model the coal qualities into the coal zone wireframes, which by their nature include waste partings, it was necessary to include dummy quality values for these waste intervals. The values assigned can be seen in Table 4. The values for the raw qualities were chosen to represent a poor quality carbonaceous shale, while the washed qualities were calculated from the average sample qualities for that wash and yield assigned to zero. This method for the washed qualities was adopted so that the final qualities for a particular block were not a down-graded product, but the actual product qualities with a lower yield.

Quality	RD	CV MJ/kg	IM (%)	Ash (%)	VM (%)	FC (%)	TS (%)	YL (%)
Raw	1.85	5.00	3.50	80.00	5.00	11.50	3.80	100
Wash at RD=1.7	1.82	19.31	4.41	26.24	26.57	36.22	3.43	0.00
Wash at RD=2.0	1.82	17.15	4.20	37.97	24.94	32.89	3.61	0.00
Product, CV=17	1.82	17.41	4.14	37.25	25.18	33.23	3.51	0.00

Table 4 - Dummy quality values for waste partings

Once the dummy values had been assigned the samples were composited downhole to a 0.5m spacing, corresponding to the average sample width (Figure 18). Using the coal zone wireframes the composited samples were then assigned the corresponding coal zone ID and fault block number (Figure 19).

Figure 18 - Sample Widths







Figure 19 - Original vs composited quality points for fault block 6

4.2.2. Quality Interpolation

Because coal is deposited in an essentially flat environment, Micromine's in-built "flattening" function was used to flatten each coal zone per fault block, relative to the top surface, along with its corresponding composited qualities (Figure 20).





During the quality interpolation Sound Mining aimed to preserve the vertical differentiation logged within each borehole. To this end the



composited qualities were interpolated into the flattened block model per coal zone per fault block, using a search ellipse with vertical radius of 0.5m. The X and Y radii were assigned lengths of 700m each to ensure coverage of the entire model. Inverse distance squared was selected for the quality interpolation. Figure 21 shows the modelled volatile matter content of fault block 4. Correlations can be seen between boreholes, based on the horizontal "stripes" of value. This is expected if the corresponding zones and coal plies are matched correctly.



Figure 21 - Flattened block models and composited qualities for fault block 4 coloured according to volatile matter

The following quality sets were investigated:

- Raw
- At a wash RD = 1.7
- At a wash RD = 2.0
- A washed product of CV = 17 MJ/kg

On request by Edenville Energy the block model was restricted to a depth of 500m down dip from the deepest boreholes intersection across strike at that point and 500m along strike from the last borehole intersecting coal. Sound Mining feels that this structural extrapolation is reasonable as it extends the estimated coal resource into the indicated classification (Section 4.3) and is within published fault blocks. On the southern edge of Mkomolo the depth has been restricted further due to boreholes MK11-22 and MK11-23 which intersect basement without intersecting coal. Within the Muze Block the maximum depth is restricted by the property boundary.

The maximum vertical depth is approximately 550m within fault block 2, where borehole MK12-40 has been drilled to a depth of 428.8m. The average depth to which the model extends within the Mkomolo



and Namwele Blocks is approximately 350m, and 260m within the Muze Block.

In order to restrict the block model the dip and dip direction of each fault block was measured and lines of 500m length created, per fault block, starting at surface with these dips and directions. The bottom points of these lines were then joined to create the lowest extent for the block model (Figure 22) and extended along strike for 500m in either direction. An ID was assigned into the block model identifying those blocks which locate above and below this marker.

Figure 22 - 500m down dip lines



4.3. Coal Classifications

Resource classification according to the JORC code states:

- An Inferred Coal Resource is that part of the total Inventory Coal or Coal Resource estimate for which quantity and quality can only be estimated with low levels of confidence. The quantity and quality are inferred using Points of Observation that may be supported by Interpretive Data. Estimates for this confidence category are likely to change significantly with further exploration.
- An Indicated Coal Resource is that part of the total Inventory Coal or Coal Resource for which quantity and quality can be estimated with reasonable levels of confidence, based on information gathered from Points of Observation that may be supported by Interpretive Data. The Points of Observation are sufficient for continuity to be assumed; but are too widely or inappropriately spaced to confirm geological and/or quality continuity.
- A Measured Coal Resource is that part of the total Inventory Coal or Coal Resource for which quantity and quality can be estimated with a high level of confidence, based on information gathered from Points of



Observation that may be supported by Interpretive Data. The Points of Observation are spaced closely enough to confirm geological and/or quality continuity.

In order to classify the resource an investigation into the spatial relationships of the sample points was undertaken by plotting variograms of the data. This was done per fault block, per coal zone on the flattened, composited data. Due to the low number of boreholes within some of the fault blocks, there was insufficient data and so fault block 5 and fault block 6 were used and the relationships were assumed for all fault blocks (Table 5).

Table 5 - Variography results

	Fault Block 5	Fault Block 6
Direction of maximum correlation	132°	120°
Range	1000m	988m
Range at 75% of sill value	390m	440m

The direction of maximum correlation corresponds with the approximate strike of the coal strata, with there being insufficient data in other directions to obtain a robust result. The value of 400m between boreholes was chosen for a measured resource for all fault blocks and 1000m for indicated.

In order to define the classification, boreholes with washed qualities were used. Classifications were determined within fault blocks due to the uncertainty of the correlation of the coal zones (Figure 23 to Figure 25).



Figure 23 - Mkomolo Classification



Figure 24 - Namwele Classification









5. **RESOURCE ESTIMATE**

The coal resource estimate for the Rukwa Coal Project can be seen in Table 6 to Table 8. Geological losses due to structural uncertainties and modelling estimates have been applied to the gross in situ tonnes based on the classification:

- Measured 10%
- Indicated 15%
- Inferred 20%

The 2012 Report by WAI declared the inferred coal resource within the Mkomolo Block as 39Mt at a float density of 2.0, CV=17 MJ/kg and a theoretical yield of 26%. The WAI report provided an indication of the tonnage of processed coal that may be obtained from the coal measures once the theoretical yields from the laboratory testing have been applied to the estimates of in situ coal measure tonnages.

Sound Mining have developed a more robust geological model based on the additional borehole data, with the resource estimated within discrete coal zones identified within the overall coal measures as used by WAI. The coal resource can now be estimated as having a combined measured and indicated resource of 57Mt, 46Mt at Mkomolo, 6.9Mt at Namwele and 5.2Mt at Muze at a similar float density of 2.0.

With regards to the tables please note: RD = relative density AS = Ash IM = Inherent moisture VM = Volatile matter FC = Fixed carbon CV = calorific value TS = Total sulphur YLD = Yield



TUN																
Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	-	-	-	-	-	-	-	-	-
		-	-	-	-	Raw	Indicated	8,498,627	58.96	3.23	16.27	21.54	10.26	3.83	100.00	15%
FB1 Zone2 FB1 Zone2 FB1 Zone2	Measured						Inferred	-	-	-	-	-	-	-	-	-
							Measured	-	-	-	-	-	-	-	-	-
			9,998,385	8,498,627	1.76	RD = 1.7 Wash	Indicated	1,861,199	27.07	4.62	25.13	42.62	20.94	3.45	21.90	15%
	Indicated	E 452 000				Wash	Inferred	-	-	-	-	-	-	-	-	-
	Indicated	5,452,000					Measured	-	-	-	-	-	-	-	-	-
						RD = 2.0 Wash	Indicated	3,729,198	37.98	3.90	23.61	34.52	17.03	3.65	43.88	15%
	Inferred	-	-	-	-	Wash	Inferred	-	-	-	-	-	-	-	-	-
						CV = 17 MJ/kg	Measured	-	-	-	-	-	-	-	-	-
							Indicated	3,359,507	36.70	3.95	23.61	35.70	17.59	3.57	39.53	15%
							Inferred	-	-	-	-	-	-	-	-	-
	Magazirad	-	-	-	-	Raw	Measured	-	-	-	-	-	-	-	-	-
							Indicated	688,243	55.53	3.58	21.49	19.40	11.67	5.75	100.00	15%
FB1 Zone3 FB1 Zone1 FB1 Zone1	weasureu						Inferred	-	-	-	-	-	-	-	-	-
							Measured	-	-	-	-	-	-	-	-	-
		446,250	809,697	688,243	1.81	Wash	Indicated	200,692	34.83	4.64	29.07	30.06	18.16	6.20	29.16	15%
	Indicated						Inferred	-	-	-	-	-	-	-	-	-
						RD = 2.0	Measured	-	-	-	-	-	-	-	-	-
Ш							Indicated	383,695	42.01	4.25	27.37	26.37	15.96	6.07	55.75	15%
		-	-	-			Inferred	-	-	-	-	-	-	-	-	-
	Inferred				-	CV = 17 MJ/kg	Measured	-	-	-	-	-	-	-	-	-
	Interred						Indicated	271,168	39.02	4.45	28.37	28.12	17.12	6.52	39.40	15%
							Inferred	-	-	-	-	-	-	-	-	-
			-	-	-	Raw	Measured	-	-	-	-	-	-	-	-	-
31 Je3	Measured						Indicated	3,392,956	60.01	3.22	18.05	18.73	9.47	4.69	100.00	15%
FB1 FB1 Zone2 FB1 Zone1	Measured	-					Inferred	-	-	-	-	-	-	-	-	-
						RD = 1.7	Measured	-	-	-	-	-	-	-	-	-

Table 6 - Coal resource estimation - Mkomolo

SMS/083/13 - MARCH 2013


Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
						Wash	Indicated	445,495	28.94	4.47	28.97	36.99	20.22	5.03	13.13	15%
	Indiacted	2 116 750	2 001 712	2 202 056	1 00		Inferred	-	-	-	-	-	-	-	-	-
	Indicated	2,110,750	3,991,713	3,392,950	1.00		Measured	-	-	-	-	-	-	-	-	-
						RD = 2.0	Indicated	1,304,252	44.87	3.54	23.23	28.36	14.77	4.62	38.44	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Inforrad					01/ 17	Measured	-	-	-	-	-	-	-	-	-
	meneu	-	-	-	-	CV = 17	Indicated	863,507	38.52	3.88	25.35	32.20	17.04	4.84	25.45	15%
						ND/Kg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	-	-	-	-	-	-	-	-	-
	Managurad					Raw	Indicated	14,587,180	56.67	3.74	18.64	20.95	10.86	3.50	100.00	15%
	Measured	-	-	-	-		Inferred	1,199,102	73.79	4.39	11.60	10.21	4.93	2.37	100.00	20%
1e4							Measured	-	-	•	-	-	-	-	-	-
						RD = 1.7 Wash	Indicated	4,414,081	26.77	4.84	28.98	38.75	20.92	3.24	30.26	15%
one	Indicated	0 250 250	17 161 299	14 597 190	1 01	Wash	Inferred	301,814	25.96	5.20	29.39	38.76	21.35	2.98	25.17	20%
N	mulcaleu	9,339,230	17,101,300	14,567,160	1.01		Measured	-	-	•	-	-	-	-	-	-
Ш Ц						RD = 2.0 Wash	Indicated	6,397,937	36.51	4.32	25.58	33.59	17.78	3.05	43.86	15%
						Wash	Inferred	436,833	35.48	4.56	25.91	34.06	18.31	3.03	36.43	20%
	Inforrod	817.050	1 409 977	1 100 102	1 70	0)/ 47	Measured	-	-	•	-	-	-	-	-	-
	Interreu	617,050	1,490,077	1,199,102	1.79	CV = 17 M I/kg	Indicated	6,886,607	37.26	4.26	25.39	33.07	17.50	3.34	47.21	15%
						Morkg	Inferred	514,415	38.12	4.40	25.10	32.37	17.33	3.53	42.90	20%
							Measured	-	-	-	-	-	-	-	-	-
	Maggurod					Raw	Indicated	17,873,341	74.37	3.02	10.12	12.50	5.87	4.14	100.00	15%
~	Measureu	-	-	-	-		Inferred	-	-	-	-	-	-	-	-	-
FB1A Zone1							Measured	-	-	-	-	-	-	-	-	-
						Wash	Indicated	1,152,830	27.24	4.13	28.51	38.83	21.05	3.89	6.45	15%
	Indicated	10 546 200	21 027 460	17 972 2/1	2.01	Wabh	Inferred	-	-	-	-	-	-	-	-	-
	mulcaled	10,540,500	∠1,0∠ <i>1</i> ,400	17,073,341	2.01		Measured	-	-	-	-	-	-	-	-	-
						KD = 2.0 Wash	Indicated	2,704,236	40.01	3.57	24.81	31.61	16.80	3.88	15.13	15%
	Inferred	-	-	-	-	Wash	Inferred	-	-	-	-	-	-	-	-	-



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
						o. /	Measured	-	-	-	-	-	-	-	-	-
						CV = 17	Indicated	2,698,874	39.25	3.56	25.18	31.93	17.08	3.76	15.10	15%
						IVIJ/KY	Inferred	-	-	-	-	-	-	-	-	-
							Measured	-	-	-	-	-	-	-	-	-
						Raw	Indicated	6,279,559	70.55	3.42	10.53	15.50	7.21	3.43	100.00	15%
	Measured	-	-	-	-		Inferred	-	-	-	-	-	-	-	-	-
							Measured	-	-	-	-	-	-	-	-	-
le2						RD = 1.7 Wash	Indicated	1,595,008	23.22	4.89	31.50	40.06	22.61	3.15	25.40	15%
Zon	Indicated	2 742 200	7 207 716	6 270 550	1 00	Wash	Inferred	-	-	-	-	-	-	-	-	-
A	Indicated	3,742,200	7,367,710	6,279,559	1.99		Measured	-	-	-	-	-	-	-	-	-
FB1						RD = 2.0 Wash	Indicated	2,472,262	33.73	4.38	27.46	34.42	18.83	2.97	39.37	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Informed					0)/ 17	Measured	-	-	-	-	-	-	-	-	-
	merrea	-	-	-	-	CV = 17	Indicated	3,082,635	38.75	4.09	25.81	31.35	17.02	2.88	49.09	15%
						NO/Kg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	895,410	67.01	3.54	12.20	17.25	8.57	3.26	100.00	10%
		F 47 000	004.000	005 440	4.04	Raw	Indicated	462,451	66.11	3.54	12.77	17.57	8.79	3.20	100.00	15%
	Measured	547,900	994,900	895,410	1.81		Inferred	-	-	-	-	-	-	-	-	-
							Measured	190,543	30.12	4.18	27.41	37.33	20.14	3.41	21.28	10%
5						RD = 1.7	Indicated	98,641	30.34	4.03	27.57	37.17	20.22	3.64	21.33	15%
one	Indiacted	201 100	E44.000	460 461	1 00	Wash	Inferred	-	-	-	-	-	-	-	-	-
2 2	Indicated	301,100	544,060	462,451	1.80		Measured	361,298	38.19	3.83	24.61	33.35	17.27	3.38	40.35	10%
FB2						RD = 2.0	Indicated	188,541	38.49	3.71	24.50	33.28	17.22	3.56	40.77	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	lus formo d					01/ 1-	Measured	347,543	38.55	3.77	24.90	32.74	17.16	3.17	37.93	10%
	Interrea	-	-	-	-	CV = 17	Indicated	179,378	38.71	3.64	24.84	32.75	17.17	3.34	37.85	15%
						IVIJ/KY	Inferred	-	-	-	-	-	-	-	-	-



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	1,043,077	72.66	2.80	10.20	14.35	6.03	2.70	100.00	10%
	Maggurod	625 500	1 159 074	1 042 077	1 0 2	Raw	Indicated	548,561	71.95	2.79	10.38	14.88	6.23	2.61	100.00	15%
	Measureu	625,500	1,150,974	1,043,077	1.05		Inferred	-	-	-	-	-	-	-	-	-
							Measured	217,169	29.34	4.17	27.01	37.87	20.11	4.12	20.82	10%
e2						RD = 1.7 Wash	Indicated	114,375	30.06	4.18	26.81	37.73	20.00	4.32	20.85	15%
ŭo.	Indiacted	252 500	645 266	E 4 9 E C 4	1 0 0	Wash	Inferred	-	-	-	-	-	-	-	-	-
32 2	mulcaleu	352,500	045,500	546,501	1.02		Measured	456,868	41.35	3.66	23.95	31.03	16.22	3.54	43.80	10%
Ë						KD = 2.0 Wash	Indicated	241,806	41.60	3.68	23.89	30.82	16.12	3.68	44.08	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Inforred					0)/ 47	Measured	414,440	38.94	3.76	24.45	32.69	17.07	3.68	39.13	10%
	Interred	-	-	-	-	CV = 17	Indicated	210,555	39.08	3.79	24.38	32.66	17.06	3.95	37.65	15%
						NO/Kg	Inferred	-	-	•	-	-	-	-	-	-
							Measured	2,337,972	72.40	3.39	9.35	14.86	6.79	3.34	100.00	10%
	Maggurad	1 424 400	2 507 746	0 007 070	1 70	Raw	Indicated	1,304,638	72.54	3.42	9.27	14.77	6.79	3.38	100.00	15%
	weasured	1,424,400	2,597,740	2,337,972	1.79		Inferred	-	-	-	-	-	-	-	-	-
							Measured	712,380	24.22	4.86	29.80	40.26	22.13	2.41	30.47	10%
e3						KD = 1.7 Wash	Indicated	408,221	24.10	4.90	29.80	40.28	22.16	2.48	31.29	15%
ŭ0]	Indicated	840.050	1 534 860	1 304 638	1 77	Wabh	Inferred	-	-	-	-	-	-	-	-	-
22	Indicated	049,900	1,554,009	1,304,030	1.77		Measured	1,068,687	34.26	4.35	26.44	34.96	18.67	2.48	45.71	10%
Ш						KD = 2.0 Wash	Indicated	608,353	34.08	4.39	26.51	35.03	18.74	2.57	46.63	15%
						Traon	Inferred	-	-	-	-	-	-	-	-	-
	Inferred	_	_	-	_	CV = 17	Measured	1,227,076	38.01	4.13	25.31	32.54	17.36	2.55	52.29	10%
	interred	_	_	_	_	CV = 17 Μ.Ι/kα	Indicated	702,899	38.04	4.14	25.30	32.50	17.37	2.63	53.64	15%
						morkg	Inferred	-	-	-	-	-	-	-	-	-
4							Measured	592,702	74.30	3.54	7.80	14.36	6.53	4.11	100.00	10%
-B2 Zone4	Measured	363.000	658 558	502 702	1.80	Raw	Indicated	422,328	74.41	3.52	7.78	14.29	6.53	4.11	100.00	15%
	MEASUIEU	303,000	000,000	552,102	1.00		Inferred	-	-	-	-	-	-	-	-	-
						RD = 1.7	Measured	96,018	28.54	4.25	26.81	38.57	20.28	2.52	16.20	10%
LL	Indicated	275,150	496,857	422,328	1.78	Wash	Indicated	67,868	29.50	3.96	26.58	38.30	20.16	2.48	16.07	15%



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Inferred	-	-	-	-	-	-	-	-	-
							Measured	130,750	35.70	3.93	25.08	35.29	18.29	2.95	22.06	10%
						RD = 2.0	Indicated	93,926	36.29	3.67	24.98	35.06	18.23	2.95	22.24	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Inforred					0)/ 47	Measured	149,377	39.07	3.74	23.98	33.19	17.11	3.51	24.62	10%
	meneu	-	-	-	-	CV = 17 M I/kg	Indicated	104,490	39.57	3.48	23.91	33.03	17.10	3.58	23.85	15%
						Mo/Rg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	434,510	57.13	3.91	16.61	22.35	11.05	3.57	100.00	10%
	Maggurad	270 450	100 700	424 510	1 70	Raw	Indicated	178,049	56.57	4.03	16.51	22.89	11.25	3.34	100.00	15%
	weasureu	270,450	402,700	434,510	1.70		Inferred	-	-	-	-	-	-	-	-	-
							Measured	143,171	31.11	4.52	25.07	37.67	19.21	2.27	32.95	10%
e1						Wash	Indicated	61,605	30.75	4.59	25.17	38.08	19.36	2.25	34.60	15%
Zone1	Indicated	118 100	209 /69	178 0/0	1 77	Traon	Inferred	-	-	-	-	-	-	-	-	-
33 2	malcated	110,100	203,403	170,043	1.77	DD - 20	Measured	234,244	39.25	4.12	23.49	33.14	16.75	2.47	53.91	10%
Ë						Wash	Indicated	95,131	37.91	4.25	23.84	34.00	17.17	2.35	53.43	15%
							Inferred	-	-	-	-	-	-	-	-	-
	Inferred	_	-	_	-	CV = 17	Measured	217,863	38.24	4.19	23.79	33.74	17.10	2.40	50.14	10%
	inicirca					MJ/ka	Indicated	96,164	38.15	4.22	23.79	33.81	17.09	2.37	54.01	15%
							Inferred	-	-	-	-	-	-	-	-	-
							Measured	942,239	60.04	3.74	15.95	20.26	9.85	4.36	100.00	10%
	Measured	589 800	1 046 933	942 239	1 76	Raw	Indicated	223,528	66.29	3.84	11.75	18.11	8.55	4.40	100.00	15%
	Modourou	000,000	1,010,000	012,200	1.70		Inferred	-	-	-	-	-	-	-	-	-
le2						RD = 1 7	Measured	235,183	28.11	5.11	25.78	39.43	20.01	3.41	24.96	10%
FB3 Zone						Wash	Indicated	35,608	27.29	5.02	25.95	38.99	19.90	3.43	15.93	15%
	Indicated	146.850	262.974	223.528	1.77		Inferred	-	-	-	-	-	-	-	-	-
		,	,			RD = 20	Measured	379,063	36.72	4.59	23.85	34.84	17.48	3.93	40.23	10%
						Wash	Indicated	65,740	37.48	4.52	24.03	33.97	17.16	3.93	29.41	15%
	Inferred	-	-	-	-		Inferred	-	-	-	-	-	-	-	-	-
						CV = 17	Measured	395,364	37.73	4.49	23.58	34.14	17.10	4.20	41.96	10%



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	TS (%)	YLD (%)	Geological Loss (%)
						MJ/kg	Indicated	59,660	37.30	4.51	24.04	34.06	17.17	4.25	26.69	15%
							Inferred	-	-	-	-	-	-	-	-	-
							Measured	1,747,850	52.76	3.48	19.69	24.07	12.31	2.83	100.00	10%
	Maggurad	1 077 550	1 0 4 2 0 5 6	1 747 950	1 70	Raw	Indicated	879,862	49.37	3.74	21.18	25.71	13.44	2.86	100.00	15%
	Measured	1,077,550	1,942,056	1,747,650	1.70		Inferred	-	-	-	-	-	-	-	-	-
							Measured	535,891	27.34	4.62	27.79	39.79	20.90	2.32	30.66	10%
e3						KD = 1.7 Wash	Indicated	278,828	27.37	4.73	28.12	39.48	20.93	2.23	31.69	15%
Jon	Indicated	580 800	1 035 132	879 862	1 77	Traon	Inferred	-	-	-	-	-	-	-	-	-
33 Z	Indicated	560,600	1,000,102	079,002	1.77	PD - 20	Measured	890,005	39.68	3.99	23.55	32.78	16.72	2.19	50.92	10%
L.						Wash	Indicated	442,659	39.42	4.04	23.94	32.60	16.84	2.18	50.31	15%
							Inferred	-	-	-	-	-	-	-	-	-
	Inferred	_	_	-	_	CV = 17	Measured	792,301	38.26	4.06	24.07	33.60	17.20	2.39	45.33	10%
	interred	_	_		_	0 V = 17 MJ/ka	Indicated	403,769	38.56	4.06	24.29	33.08	17.13	2.28	45.89	15%
							Inferred	-	-	-	-	-	-	-	-	-
							Measured	3,234,593	67.53	3.50	11.04	17.93	8.80	3.62	100.00	10%
	Moosurod	2 052 250	2 502 002	2 224 502	1 50	Raw	Indicated	1,550,323	69.64	3.46	10.33	16.57	8.10	3.60	100.00	15%
	ivieasureu	2,055,550	3,595,995	3,234,393	1.59		Inferred	-	-	-	-	-	-	-	-	-
						PD - 17	Measured	607,133	24.78	4.20	27.99	41.74	21.85	2.38	18.77	10%
e1						Wash	Indicated	250,377	25.22	4.17	28.11	41.06	21.63	2.38	16.15	15%
Zon	Indicated	1 031 950	1 823 909	1 550 323	1.61		Inferred	-	-	-	-	-	-	-	-	-
34 2	indicated	1,001,000	1,020,303	1,000,020	1.01	PD – 2.0	Measured	735,547	29.76	4.03	27.33	38.88	20.46	2.48	22.74	10%
L.						Wash	Indicated	309,134	30.58	3.99	27.43	38.00	20.15	2.46	19.94	15%
							Inferred	-	-	-	-	-	-	-	-	-
	Inferred	_	_	-	_	CV = 17	Measured	795,063	31.61	3.92	26.94	37.49	19.78	2.76	24.58	10%
	interred	_	_	_	_	Cv = 17 M.I/kg	Indicated	336,110	32.47	3.89	27.00	36.60	19.46	2.56	21.68	15%
						moring	Inferred	-	-	-	-	-	-	-	-	-
- 0							Measured	1,752,134	68.60	3.06	12.54	15.80	7.98	4.03	100.00	10%
≥ no	Measured	989,300	1,946,816	1,752,134	1.97	Raw	Indicated	1,099,783	66.67	3.03	13.52	16.78	8.51	4.10	100.00	15%
- N							Inferred	-	-	-	-	-	-	-	-	-



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	317,312	26.04	4.10	28.72	40.39	21.70	3.24	18.11	10%
						RD = 1.7	Indicated	189,273	25.77	4.06	27.97	41.43	21.81	3.26	17.21	15%
	Indiacted	656 200	1 202 862	1 000 702	2.00	Wash	Inferred	-	-	-	-	-	-	-	-	-
	muicateu	050,500	1,293,002	1,099,703	2.00		Measured	585,738	36.59	3.56	26.78	33.07	18.11	3.34	33.43	10%
						RD = 2.0 Wash	Indicated	341,923	36.03	3.57	26.09	34.32	18.31	3.31	31.09	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Inferred		_	_	_	01/ 47	Measured	731,866	39.56	3.37	26.30	30.76	17.05	3.88	41.77	10%
	Interred	-	-	-	-	GV = 17 M.I/kg	Indicated	445,962	39.54	3.35	25.55	31.53	17.05	3.78	40.55	15%
						moritg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	4,086,178	61.13	3.45	14.66	20.76	9.97	3.30	100.00	10%
	Moosurod	2 505 050	4 540 107	1 096 179	1 70	Raw	Indicated	1,727,110	60.98	3.30	15.07	20.65	10.00	3.55	100.00	15%
e3	ivieasureu	2,505,950	4,540,197	4,000,170	1.79		Inferred	-	-	-	-	-	-	-	-	-
							Measured	1,264,672	27.56	4.47	26.70	40.28	20.74	2.35	30.95	10%
						Wash	Indicated	544,040	28.05	4.27	26.50	40.62	20.82	2.34	31.50	15%
, on	Indicated	1 104 850	2 031 80/	1 727 110	1.83	maon	Inferred	-	-	-	-	-	-	-	-	-
34 2	malcated	1,104,000	2,001,004	1,727,110	1.00	BD - 2.0	Measured	2,159,136	37.32	4.03	23.82	34.83	17.49	2.41	52.84	10%
Ë						Wash	Indicated	966,663	37.74	3.83	23.56	34.87	17.45	2.41	55.97	15%
						maon	Inferred	-	-	-	-	-	-	-	-	-
	Inferred	-	_	_	_	CV = 17	Measured	2,194,277	37.88	3.95	23.86	34.27	17.30	2.62	53.70	10%
	mened					MJ/kg	Indicated	997,924	38.57	3.75	23.49	34.18	17.16	2.57	57.78	15%
							Inferred	-	-	-	-	-	-	-	-	-
							Measured	14,337,760	68.10	3.47	11.58	16.85	8.15	3.67	100.00	10%
	Measured	8 557 350	15 930 844	1/ 337 760	1.82	Raw	Indicated	8,180,692	66.57	3.49	12.21	17.73	8.60	3.60	100.00	15%
FB4 Zone4	weasured	0,007,000	13,930,044	14,337,700	1.02		Inferred	-	-	-	-	-	-	-	-	-
							Measured	3,033,870	24.67	4.79	29.79	39.55	21.63	2.74	21.16	10%
						Wash	Indicated	1,755,576	25.43	4.46	29.47	39.36	21.45	2.91	21.46	15%
	Indicated	5 143 250	9 624 343	8 180 692	1.83		Inferred	-	-	-	-	-	-	-	-	-
	maioatoa	0,140,200	0,024,040	3,100,032	1.00	RD = 2.0	Measured	4,578,047	35.44	4.25	26.27	34.04	18.13	2.54	31.93	10%
						Wash	Indicated	2,589,189	35.66	4.03	26.15	34.15	18.16	2.67	31.65	15%



Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Inferred	-	-	-	-	-	-	-	-	-
	luc for uno al					o	Measured	5,052,627	37.41	4.09	25.70	32.74	17.46	2.82	35.24	10%
	merred	-	-	-	-	CV = 17	Indicated	2,918,053	37.66	3.87	25.53	32.89	17.48	3.02	35.67	15%
						M0/Kg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	5,553,666	65.00	3.40	15.00	16.60	8.24	3.09	100.00	10%
	Maggurad	2 220 650	6 170 740		1 0 2	Raw	Indicated	25,517,751	61.77	3.57	16.84	17.82	9.06	3.56	100.00	15%
	Measured	3,329,050	6,170,740	5,553,000	1.03		Inferred	724,716	55.90	3.88	18.92	21.30	11.10	5.59	100.00	20%
							Measured	1,082,410	26.06	4.68	30.28	37.76	21.21	4.49	19.49	10%
e1						Wash	Indicated	5,381,694	26.99	4.81	29.22	37.72	20.73	4.38	21.09	15%
Zon	Indicated	16 362 750	30 020 884	25 517 751	1 81	Wall	Inferred	129,362	24.96	4.85	29.51	38.76	21.50	4.90	17.85	20%
FB5 Z	maloated	10,002,700	00,020,004	20,017,701	1.01	BD - 20	Measured	1,800,499	37.33	4.17	26.33	32.17	17.59	4.20	32.42	10%
						KD = 2.0 Wash	Indicated	8,954,179	37.60	4.26	25.71	32.43	17.47	4.22	35.09	15%
							Inferred	198,355	34.24	4.53	26.76	34.47	18.71	5.16	27.37	20%
	Inferred	490 000	905 895	724 716	1 81	CV = 17	Measured	1,886,025	38.50	4.14	26.12	31.19	17.12	4.25	33.96	10%
	interied	400,000	505,055	724,710	1.01	GV = 17 MJ/ka	Indicated	9,275,702	37.78	4.24	25.82	32.11	17.33	4.43	36.35	15%
						menng	Inferred	234,011	36.85	4.35	25.96	32.79	17.74	6.17	32.29	20%
							Measured	36,958,091	66.24	3.43	12.78	17.54	8.52	3.48	100.00	10%
	Measured	22 334 200	11 061 516	36 058 001	1.80	Raw	Indicated	93,414,982	64.26	3.42	14.78	17.54	8.70	3.73	100.00	15%
	Measureu	22,334,200	41,004,040	30,930,091	1.00		Inferred	1,923,817	67.74	4.22	14.08	13.96	7.02	3.46	100.00	20%
						PD _ 1 7	Measured	8,435,750	25.95	4.62	28.76	39.55	21.29	2.91	22.79	10%
						Wash	Indicated	18,855,411	26.60	4.68	28.78	39.02	21.06	3.60	19.97	15%
TAL	Indicated	58 586 300	109 899 978	93 414 982	1.83		Inferred	431,176	25.66	5.09	29.43	38.76	21.39	3.56	22.40	20%
TOT	maloated	50,500,500	100,000,070	55,414,562	1.00	PD - 20	Measured	13,379,881	36.31	4.13	25.56	34.01	17.90	2.85	36.17	10%
						Wash	Indicated	31,888,824	37.44	4.10	25.37	33.09	17.50	3.55	33.84	15%
							Inferred	635,187	35.09	4.55	26.18	34.19	18.43	3.70	33.00	20%
	Inferred	1 307 050	2 404 772	1 923 817	1 79	CV - 17	Measured	14,203,821	37.64	4.02	25.30	32.99	17.43	3.06	38.37	10%
	meried	1,007,000	2,404,172	1,020,017	1.75	MJ/ka	Indicated	32,892,965	37.84	4.05	25.31	32.75	17.35	3.65	34.92	15%
							Inferred	748,425	37.72	4.38	25.37	32.50	17.46	4.36	38.88	20%



Table 7 - Coal resource estimation - Namwele

Fault Block	Classification	Volume (m³)	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	17,158,826	69.44	3.22	13.34	14.00	6.72	3.69	100.00	10%
	Management	0.050.050	40.005.000	47 450 000	1.00	Raw	Indicated	12,763,169	69.73	3.32	12.69	14.25	6.91	4.03	100.00	15%
	Measured	9,658,350	19,065,363	17,158,826	1.90		Inferred		-	-	-	-	-	-	-	-
, AL							Measured	1,974,981	26.11	5.16	29.47	38.00	20.78	4.82	11.51	10%
						RD = 1.7 Wash	Indicated	1,497,120	25.63	5.06	29.73	38.11	20.96	4.66	11.73	15%
	Indicated	7 701 600	15 015 402	40 760 460	1 00	VVasii	Inferred	-	-	-	-	-	-	-	-	-
Б-	Indicated	7,791,500	15,015,492	12,703,109	1.00		Measured	4,142,141	39.03	4.75	24.22	32.00	16.53	4.19	24.14	10%
F						RD = 2.0	Indicated	2,838,529	37.51	4.61	25.25	32.63	17.16	4.35	22.24	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Informed					0)/ 17	Measured	3,903,633	37.29	4.71	25.35	32.43	17.12	4.81	22.75	10%
	merred	-	-	-	-	CV = 17	Indicated	2,975,095	37.49	4.55	25.39	32.39	17.14	4.70	23.31	15%
						wio/Kg	Inferred	-	-	-	-	-	-	-	-	



Table 8 - Coal resource estimation - Muze

Fault Block	Classification	Volume	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	3,213,971	59.81	4.22	15.46	20.51	9.50	3.29	100.00	10%
		4 004 400	0 574 070	0.040.074	4 70	Raw	Indicated	1,906,359	60.05	4.31	15.40	20.24	9.28	3.55	100.00	15%
	weasured	1,991,400	3,571,079	3,213,971	1.72		Inferred	-	-	-	-	-	-	-	-	-
							Measured	696,467	32.06	4.47	24.67	37.78	18.56	3.09	21.67	10%
o						KD=1.7 Wash	Indicated	372,884	31.69	4.61	24.25	38.30	18.64	3.14	19.56	15%
oue	Indicated	1 249 700	2 242 775	1 006 250	1 70	Wash	Inferred	-	-	-	-	-	-	-	-	-
Z Z	Indicated	1,246,700	2,242,775	1,906,359	1.72		Measured	1,182,741	43.71	3.82	21.96	30.51	14.88	2.72	36.80	10%
E E						RD = 2.0 Wash	Indicated	628,145	42.84	3.98	21.84	31.34	15.17	2.81	32.95	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Informed					0)/ 17	Measured	760,425	34.66	4.41	24.29	36.61	17.97	3.52	23.66	10%
	meneu	-	-	-	-	CV = 17	Indicated	395,951	34.26	4.58	23.89	37.23	18.10	3.46	20.77	15%
						MD/Kg	Inferred	-	-	-	-	-	-	-	-	-
							Measured	4,141,278	51.84	4.21	20.17	23.78	12.63	2.83	100.00	10%
	Maggurad	2 742 750	4 601 410	4 4 4 4 0 7 0	1.67	Raw	Indicated	1,535,990	50.37	4.51	20.71	24.42	13.10	2.95	100.00	15%
	weasured	2,713,750	4,601,419	4,141,270	1.07		Inferred	-	-	-	-	-	-	-	-	-
							Measured	1,736,852	26.57	4.91	29.40	38.03	20.40	2.72	41.94	10%
97 97						KD=1.7 Wash	Indicated	671,074	26.44	5.25	29.60	37.42	20.29	2.82	43.69	15%
oue	Indicated	1 074 200	1 907 047	1 525 000	1 66	Wash	Inferred	-	-	-	-	-	-	-	-	-
	mulcaleu	1,074,200	1,007,047	1,555,990	1.00		Measured	2,508,786	36.77	4.45	26.49	32.29	17.24	2.64	60.58	10%
E E						RD = 2.0 Wash	Indicated	917,601	34.68	4.84	27.35	33.13	17.87	2.80	59.74	15%
ш						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Inforred					01/ 47	Measured	2,521,210	36.14	4.41	26.70	32.72	17.47	2.73	60.88	10%
	inierieu	-	-	-	-	UV = 17 M I/kg	Indicated	965,523	35.30	4.77	27.15	32.76	17.67	2.81	62.86	15%
						inio/itg	Inferred	-	-	-	-	-	-	-	-	-



Fault Block	Classification	Volume	Quantity (GTIS)	Quantity (TTIS)	RD	Quality	Classification	Quantity (Product Tonnes)	AS (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)	Geological Loss (%)
							Measured	7,355,248	55.38	4.22	18.08	22.32	11.24	3.03	100.00	10%
	Moosurod	4 705 150	9 172 /09	7 255 249	1 60	Raw	Indicated	3,442,349	55.82	4.39	17.72	22.06	10.95	3.29	100.00	15%
	ivieasureu	4,705,150	0,172,490	7,355,240	1.09		Inferred	-	-	-	-	-	-	-	100.00	-
							Measured	2,433,319	28.21	4.78	27.99	37.96	19.85	2.83	32.79	10%
						KD=1.7 Wash	Indicated	1,043,958	28.40	5.01	27.61	37.75	19.67	2.94	29.93	15%
TAL	Indiacted	2 222 000	4 0 4 0 9 2 2	2 4 4 2 2 4 0	1 69	Wash	Inferred	-	-	-	-	-	-	-	-	-
0	muicateu	2,322,900	4,049,023	3,442,349	1.00		Measured	3,691,527	39.08	4.24	24.99	31.70	16.46	2.67	49.85	10%
•						RD = 2.0	Indicated	1,545,746	38.13	4.48	25.02	32.37	16.73	2.80	44.46	15%
						Wash	Inferred	-	-	-	-	-	-	-	-	-
	Informed					0)/ 17	Measured	3,281,635	35.78	4.41	26.12	33.66	17.59	2.92	44.09	10%
	merrea	-	-	-	-	CV = 17	Indicated	1,361,474	34.98	4.71	26.15	34.12	17.80	3.01	38.86	15%
						wij/kg	Inferred	-	-	-	-	-	-	-	-	-



6. CONCLUSIONS

During the 2012 drilling program an additional 19 boreholes were drilled within the Mkomolo Block, 4 within the Namwele Block and 5 within the Muze Block.

With this additional data received as a result of the additional drilling conducted in 2012, Sound Mining was able to construct a more detailed geological model than what was previously developed by WAI, which was based on only the 2011 data. The geological modelling conducted by WAI considers the full coal measure interval thickness per borehole, and calculates the average sample yield, weighted on the sampled thickness against the barren interval thickness, and applies this average yield to the coal measure in order to obtain a washed tonnage for the coal measures. The geological modelling conducted by Sound Mining identified coal zones within the coal measures and the structural model was based on these zones. A block model was constructed and the qualities interpolated, using average washed qualities with a yield equal to 0 for the unsampled waste intervals, effectively excluding the waste interburden from the washed product resource estimate and rendering a detailed three dimensional structural and quality model.

In total 6 fault blocks were identified within the Mkomolo Block, with up to 4 coal zones being identified within the fault blocks. Only a single fault block and coal zone were identified within the Namwele Block, and a single fault block at Muze divided into two coal zones. The coal resource model was restricted to a maximum depth of 500m down dip from coal intersections within boreholes, and 500m along strike from the furtherest boreholes. Raw qualities, qualities at a wash RD of 1.7 and 2.0, and a washed product of CV = 17 MJ/kg were modelled.

The 2012 Report by WAI declared the coal resource within the Mkomolo Block as 39Mt at a float density of 2.0, CV=17 MJ/kg and a theoretical yield of 26%. Table 9 and Table 10 shows a summary of the coal resource estimate by Sound Mining.

Fault Block	Classification	Volume (m ³)	Quantity (GTIS)	Quantity (TTIS)	RD
	Measured	22,334,200	41,064,546	36,958,091	1.8
Mkomolo	Indicated	58,586,300	109,899,978	93,414,982	1.83
	Inferred	1,307,050	2,404,772	1,923,817	1.79
	Measured	9,658,350	19,065,363	17,158,826	1.9
Namwele	Indicated	7,791,500	15,015,492	12,763,169	1.88
	Inferred	-	-	-	-
	Measured	4,705,150	8,172,498	7,355,248	1.69
Muze	Indicated	2,322,900	4,049,823	3,442,349	1.68
	Inferred	-	-	-	-
	Measured	36,697,700	68,302,406	61,472,166	1.79
TOTAL	Indicated	68,700,700	128,965,293	109,620,499	1.83
	Inferred	1,307,050	2,404,772	1,923,817	1.79

Table 9 - Summary resource table



Fault Block	Quality	Quantity (Product Tonnes)	Classification	ASH (%)	IM (%)	VM (%)	FC (%)	CV (MJ/kg)	ТS (%)	YLD (%)
		36,958,091	Measured	66.24	3.43	12.78	17.54	8.52	3.48	100
	RAW	93,414,982	Indicated	64.26	3.42	14.78	17.54	8.70	3.73	100
		1,923,817	Inferred	67.74	4.22	14.08	13.96	7.02	3.46	100
		8,435,750	Measured	25.95	4.62	28.76	39.55	21.29	2.91	22.79
0	RD=1.7	18,855,411	Indicated	26.60	4.68	28.78	39.02	21.06	3.60	19.97
lou		431,176	Inferred	25.66	5.09	29.43	38.76	21.39	3.56	22.40
kor		13,379,881	Measured	36.31	4.13	25.56	34.01	17.90	2.85	36.17
Σ	RD=2.0	31,888,824	Indicated	37.44	4.10	25.37	33.09	17.50	3.55	33.84
		635,187	Inferred	35.09	4.55	26.18	34.19	18.43	3.70	33.00
		14,203,821	Measured	37.64	4.02	25.3	32.99	17.43	3.06	38.37
	CV=17	32,892,965	Indicated	37.84	4.05	25.31	32.75	17.35	3.65	34.92
		748,425	Inferred	37.72	4.38	25.37	32.50	17.46	4.36	38.88
		17,158,826	Measured	69.44	3.22	13.34	14.00	6.72	3.69	100
	RAW	12,763,169	Indicated	69.73	3.32	12.69	14.25	6.91	4.03	100
-		-	Inferred	-	-	-	-	-	-	-
		1,974,981	Measured	26.11	5.16	29.47	38.00	20.78	4.82	11.51
Ð	RD=1.7	1,497,120	Indicated	25.63	5.06	29.73	38.11	20.96	4.66	11.73
wel		-	Inferred	-	-	-	-	-	-	-
an		4,142,141	Measured	39.03	4.75	24.22	32.00	16.53	4.19	24.14
Ž	RD=2.0	2,838,529	Indicated	37.51	4.61	25.25	32.63	17.16	4.35	22.24
		-	Inferred	-	-	-	-	-	-	-
		3,903,633	Measured	37.29	4.71	25.35	32.43	17.12	4.81	22.75
	CV=17	2,975,095	Indicated	37.49	4.55	25.39	32.39	17.14	4.70	23.31
		-	Inferred	-	-	-	-	-	-	-
		7,355,248	Measured	55.38	4.22	18.08	22.32	11.24	3.03	100
	RAW	3,442,349	Indicated	55.82	4.39	17.72	22.06	10.95	3.29	100
		-	Inferred	-	-	-	-	-	-	-
		2,433,319	Measured	28.21	4.78	27.99	37.96	19.85	2.83	32.79
	RD=1.7	1,043,958	Indicated	28.40	5.01	27.61	37.75	19.67	2.94	29.93
ze		-	Inferred	-	-	-	-	-	-	-
Mu		3,691,527	Measured	39.08	4.24	24.99	31.70	16.46	2.67	49.85
≥	RD=2.0	1,545,746	Indicated	38.13	4.48	25.02	32.37	16.73	2.80	44.46
		-	Inferred	-	-	-	-	-	-	-
		3,281,635	Measured	35.78	4.41	26.12	33.66	17.59	2.92	44.09
	CV=17	1,361,474	Indicated	34.98	4.71	26.15	34.12	17.80	3.01	38.86
		-	Inferred	-	-	-	-	-	-	-

Table 10 - Summary of coal resource estimate qualities

7. **REFERENCES**

Lowman, R.D.W., Birtles, A., Summary Report on the 2011 Coal Exploration in the *Mkomolo Block, Rukwa Coalfield, South-West Tanzania*, 2012, Wardell Armstrong International, ZS700028

Semkiwa, P., Kalkreuth, W., Utting, J., Mayagilo, F., Mpanju, F., Hagemann, H., *The geology, petrology, palynology and geochemistry of Permian coal basins in Tanzania. 1. Namwele - Mkomolo, Muze and Galula coalfields*, 1998, International Journal of Coal Geology 36, p 63 - 110



REPORT SIGNATURE PAGE

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22/03/2013

Date



Appendix 1 - Prospecting Licences and Primary Mining Licences



THE UNITED REPUBLIC OF TANZANIA MINISTRY OF ENERGY AND MINERALS

PROSPECTING LICENCE NO. PL 6101/2009

GRANTED PURSUANT TO SECTION 29 OF THE MINING ACT, 1998

WHEREAS M/S Upendo Group Limited of P.O. Box 336, Sumbawanga-Tanzania has fulfilled the conditions for grant of Prospecting Licence pursuant to Section 28 of the Mining Act, 1998;

I, William M. Ngeleja (MP), Minister for Energy and Minerals subject to the provisions of the Mining Act, 1998 and of the regulations thereunder now in force, or which may come into force during the continuance of this Licence, or any renewal thereof and pursuant to the powers conferred upon me under Section 29 of the Mining Act, 1998 hereby grant to M/S Upendo Group Limited (hereinafter called the Licensee) a Prospecting License - All Minerals other than Building Materials and Gemstones, at Nkomolo - Namwele, in Nkasi and Sumbawanga Districts, over an area described in Annex A (hereinafter called the Licence Area), conferring on the Licensee the right to carry on such prospecting operations and execute such other works as are necessary for that purpose.

This Licence, unless sooner cancelled, suspended or surrendered pursuant to the provisions of the Mining Act, 1998, shall be valid for a period of thirty six (36) months, effective from the date of grant.

Granted this day of

William M. Ngeleja (MP) MINISTER FOR ENERGY AND MINERALS

1/4



THE UNITED REPUBLIC OF TANZANIA MINISTRY OF ENERGY AND MINERALS

PROSPECTING LICENCE NO. PLR 5630/2009

GRANTED PURSUANT TO SECTION 29 OF THE MINING ACT, 1998

WHEREAS M/S Gulban Mhanze of P.O. Box 5259, Dar es Salaam - Tanzania has fulfilled the conditions for grant of a Prospecting Licence pursuant to Section 28 of the Mining Act, 1998;

I, William M. Ngeleja (MP), Minister for Energy and Minerals subject to the provisions of the Mining Act, 1998 and of the regulations thereunder now in force, or which may come into force during the continuance of this Licence, or any renewal thereof and pursuant to the powers conferred upon me under Section 29 of the Mining Act, 1998 hereby grant to M/S Gulban Mhanze (hereinafter called the Licensee) a licence of type Prospecting License with Reconnaissance Period-All Minerals other than Building Materials and Gemstones, at Namwela, in Nkasi and Sumbawanga Districts, over an area described in Annex A (hereinafter called the Licence Area), to carry on such prospecting operations and execute such other works as are necessary for that purpose.

This Prospecting Licence, unless sooner cancelled, suspended or surrendered pursuant to the provisions of the Mining Act, 1998, shall be valid for a period of twenty four (24) months, effective from the date of grant.

	inth	Cohre	
Granted this	151	day of	19

William M. Ngeleja (MP) MINISTER FOR ENERGY AND MINERALS

1/5



PML 0006404

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	44 min 20.8068 sec.	31 deg. 27 min. 13.2588 sec.
B. 07 deg.	44 min 4.1244 sec.	31 deg. 27 min. 7.6644 sec.
C. 07 deg.	44 min 02.0292 sec.	31 deg. 27 min.13.59 sec.
D. 07 deg.	44 min 17.4264 sec.	31 deg. 27 min.18.6012 sec.

An area of approximately 10.00 Hectares

RENT:	Shs.				EOR	ALLIALD
Year 1	ERV NoZIZI	۵ 591 Amour	t .50,000/=	Date. 04.0	S. P. O. MPAND	ox 75 A
Year 2	ERV No. 254	54525 Amour	t 50000(_	Date 21 - 11	.07	
Year 3	ERV No. 3610	1660 Amour	t 50000 (=	Date 17.03.	(0	\bigcirc
Year 4	ERV No. 3610	Amour	t 50000/2	Date 17.03	.10	
Vear 5 RENE The validity of this lin to OTH MARC ERV No: 3610166 Zonal Mines Officer (Signature) Dete: 31:03:2015	ERV No 561 WAL cence is renewed u H 2015 I. Dete: 17/3/col WESTEW Zone	2010/11 ER 2010/11 ER 2011/12 ER	t	Date. 1 (-10 (1072011 3. (12) 11	
						*



PML 0006403

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 44 min 20.8068 sec.31 deg. 27 min. 13.2588 sec.B. 07 deg. 44 min 4.1244 sec.31 deg. 27 min. 7.6644 sec.C. 07 deg. 44 min 8.0196 sec.31 deg. 27 min.1.6956 sec.D. 07 deg. 44 min 22.5276 sec.31 deg. 27 min.7.7652 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Year 1	ERV No 2121	591 Amount	50,000/-	Date. 04.05.059 1010
Year 2	ERV No. 2543	Amount	500001-	Date 21:11:07
Year 3	ERV No. 3610	1660 Amount	50000 (~	Date. (7.03.10
Year 4	ERV No. 3610	Amount	50000/2	Date. 17.03.10
Year 5	ERV No. 3610	Amount	-100002	Date 17. 63.10
RENE The validity of this lid to914 MARCH ERV No: 3610166 Statement Zonal Mines Officer (Signature)	WAL zence is renewed u 2015 Date: 17/3hou WENERN Zone	2010/11 GAJ 2011/12 GR	36119429 (5 3612 1787, 7	h. 600 000/2 2 (101 201) 32. 60,000/2 13.10.(1
Date: 31.03.2	010			
	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	e.l		



PML	0006402
T TATT	0000402

:00*

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 45 min 1.8576 sec.31 deg. 27 min. 41.2092 sec.B. 07 deg. 44 min 48.4872 sec.31 deg. 27 min. 31.5576 sec.C. 07 deg. 44 min 44.826 sec.31 deg. 27 min. 36.8532 sec.D. 07 deg. 44 min 58.2576 sec.31 deg. 27 min. 46.4688 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

				ZONAL MINES OFFICER
Year 1	ERV No. 21210591	Amount 50,000/=		SP. 0. BOX 75 MPANDA
Year 2	ERV No. 25434525	Amount Sogool-	Date. 21.11.0	?
Year 3	ERV No. 36101660	mount Socoo(Date 17-3-13	2.
Year 4	ERV No. 36101660	Amount	Date (7.03.(0
Year 5	ERV No. 36101660	Amount	∽	(<i>v</i>
RENE	WAL 12010/11	GKJ26119428T	sh 100 adul 21.0	7.11
The validity of this lid o	ance is renewed up 1 Roll Dete: 17/2/2000	GRU 36121786,7	sh, (00,000/=" (3·10·1	<i>t</i>
Zonal Mines Officer (Signature) Dete: 31:03:2010	WESTERN Zone			



	PML 0006401	
DESCRIPTION OF THE L	ICENCE AREA	
Mkomolo area in Sumbawanga District Q and longitude having the following corner	g Act, 1998 the Licence Area is at DS 206/4 Define the lines of latitude coordinates:-	ĸ
Latitude (S)	Longitude (E)	
A 07 deg 44 min 35 0052 sec	31 deg 27 min 22 1202 sec	-
B. 07 deg. 44 min 20 8068 sec.	31 deg 27 min 13 2588 sec	
C. 07 deg. 44 min 17.4264 sec.	31 deg. 27 min. 18 6012 sec.	
D. 07 deg. 44 min 31.3332 sec.	31 deg. 27 min. 27.3816 sec.	
	5	
An area of approximately 10.00	Hectares	
RENT: Shs.	FOR! ZONAL MI	NER OFFICER
Not Year 1 ERV No. 21210591 Amount	50,000/= Date 04.05.05 MPAN	De la
1/12 Var 2 EDV No 25434525 Amount	S00001- D. 21.11.07	
00/07 real 2 ERV NO	Com-1 17 03.10	
GT/65 Year 3 ERV No. 36101660	Date 17.02.10	0
Ver 4 ERV No	Date. ((, 0 5 · (0	
09/(0 Crait icenters Mageweeded 550 Amount	Soooo(Date. 1(,03,15	
The Validity MARCH 2015 2010/11 62V	36119427 Tsh. 60,000k, 21.07.11	
10:000 36101661 Date: 17/3/2010 2011/12 EW	36121788, Th. 109,000(= 13.10.11	
ERVING		
saeune westach		
Zonal Mines Officer		
(Signature)		
Data		
P.		
		221



PML 0006166

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	45 min.	28.0008 sec.	31 deg.	28 min.	0.9984 sec.
B. 07 deg.	45 min.	14.1912 sec.	31 deg.	27 min.	52.1424 sec.
C. 07 deg.	45 min.	19.2168 sec.	31 deg.	27 min.	46.9116 sec.
D. 07 deg.	45 min.	31.7376 sec.	31 deg.	27 min.	56.1996 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

or S Year 1	ERV No?	1232413	Amount 50,0	000 <u> </u> =	. Date. 010.70	OR OWAL O. AND	40
05/06 Year 2	ERV No	5434525	Amount .500	00/-	. Date 21 . 11.0	4 A. MA	-
0607 Year 3	ERV No. 3	6101660	Amount	000/2	. Date 17:03- 11	2	
07/08 Year 4	ERV No. 3	6101660	Amount	000/=	. Date. 7.03. (7	0	
08/09 Year 5	ERV No	6101660	Amount	-1000	. Date 7,03.1	ð.	
The validity of to to2 Monormal No. ERV No365 Sone Minss (Signature)	All Street Stree	ITON AND 2	sidu, GRU 30	0119420/1	sh logad=24	יסקינו	
Date:		And the second se					
	4 1 K						
not the							



PML 0006400

FOR

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 45 min 14.1912 sec.31 deg. 27 min. 52.1424 sec.B. 07 deg. 45 min 1.8576 sec.31 deg. 27 min. 41.2092 sec.C. 07 deg. 45 min 5.4648 sec.31 deg. 27 min. 37.0836 sec.D. 07 deg. 45 min 19.2168 sec.31 deg. 27 min. 46.9116 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

ZONAL MINES OFFICER Box 75 21210591 Amount .50,000 20.20.40 Year 1 ERV No. MDANDA Date 500001 ERV No. 25434525 Amount Year 2 Date. 21.11-07 ab 36101660 0000 17.03.10 Year 3 ERV 18 Amount Date 36101660 17.03.10 0000 281 ERV Year 4 Amount 7.03.10 36101660 600 09 ERV No. ... lo Year 5 Amount Date. Tsh. 600 000/2 21.07.11 RENEWAL 2010/11 6RJ 36/19426 The validity of this licence is renewed up 13,10,2-011 36121784 2011/12 ERV Tsh/00,0002 10 JTH MARCH 2015 ERV No: 36101661 Date: 17/3/2010 Hennel WESTERN Zonal Mines Officer Zone (Signature)

Date: 31.03.2010



PML 0006168

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	45 min.	1.8576 sec.	31 deg.	27 min.	41.2092 sec.
B. 07 deg.	44 min.	48.4872 sec.	31 deg.	27 min.	31.5576 sec.
C. 07 deg.	44 min.	51.2124 sec.	31 deg.	27 min.	25.2792 sec.
D. 07 deg.	45 min.	5.4648 sec.	31 deg.	27 min.	37.0836 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Year 1	ERV No. 21232413 Amount 50,000/= Date 01.07.05 where
Year 2	ERV No. 25434525 Amount 50000 (- Date 21.11.87 10 P. W
Year 3	ERV No. 36101660 Amount 50000/= Date 17-030/0'
Year 4	ERV No. 36101660 Amount 50000/2 Date 7.03.10
Year 5	ERV No. 36101660 Amount 50000/- Date 7.03.10
to 2 No: 36 Lo	2009/10 36119406 TSh. 50 000/2 21.07.11 2010/11 36119422, TSh. 60,000/2 21.07.11 1661. Date: 17/32010
Zon#I Mines C (Signature	l Lifestala Micer Zone
Dato:	12-010



PML 0006167

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	45 min.	14.1912 sec.	31 deg.	27 min.	52.1424 sec.
B. 07 deg.	45 min.	1.8576 sec.	31 deg.	27 min.	41.2092 sec.
C. 07 deg.	44 min.	58.2576 sec.	31 deg.	27 min.	46.4688 sec.
D. 07 deg.	45 min.	10.764 sec.	31 deg.	27 min.	57.6252 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Year 1	ERV No. 212324	13. Amount .50	0,000/=	ate. 01.07.05	WAL D. NO
Year 2	ERV No. 252-345	25 Amount	0000 /= D	ate 21.11.07	6. Wobe
Year 3	ERV No. 3610166	O Amount	0000 D	ate 17.03.10	
Year 4	ERV No. 3616166	Amount	0000 D	ate (7.03.00	
Year Sru The validity of the to. 2 May ERV No: 36.00 Sale Zonal Mines ((Signatur Date:31.07	JERV No. 361016 is licence is 1.2015 1.661 Date: 17/3/25 1.2015 1.2015 1.2015 1.2016 1.2016 1.2016 1.2016 1.2015 1	50 Amount 2009 (10, ERV 2009 (10, ERV	0,000 D 36119405 TJh J 361194021, TJh	ate	



PML 0006165

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 45 min. 28.0008 sec. 31 deg. 28 min. 0.9984 sec.

B. 07 deg. 45 min. 14.1912 sec. 31 deg. 27 min. 52.1424 sec.
C. 07 deg. 45 min. 10.764 sec. 31 deg. 27 min. 57.6252 sec.
D. 07 deg. 45 min. 24.57 sec. 31 deg. 28 min. 6.4344 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

RENT:	Shs.
Year 1	ERV No. 21232413 Amount 50,000/= Date 01-07-05-001004
Year 2	ERV No. 25434525 Amount 50,000/= Date 21,11.07
Year 3	ERV No. 36101660 Amount 50000 (- Date 17.03.10
Year 4	ERV No. 36101660 Amount SQ000/2 Date 17.03/17
Year 5	ERV No. 36101660 Amount SOODA Date 17.03.70
The validit to	RENEWAL y of this licence is renewed up NOV. 2014 16101661 Date: 17/03/2010 MUL WESTERNA mes Officer Zone mature)



PML 0006399

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	44 min 48.4872 sec.	31 deg. 27 min. 31 5576 sec
B. 07 deg.	44 min 35.0052 sec.	31 deg 27 min 22 1202 sec
C. 07 deg.	44 min 38.3892 sec.	31 deg 27 min 16 542 sec.
D. 07 deg.	44 min 51.2124 sec.	31 deg. 27 min. 25.2792 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

RENT:	: Shs.	OFFICER
Year 1	ERV No. 21210591 Amount 50,000/= Date 04.05.85 MM	MILLES
Year 2	ERV No. 25434526 Amount 50000 = Date 21.11.07	7
Year 3	ERV No. 36101660 Amount 50000 (= Date 17.03.10	\sim
Year 4	ERV No. 3610(660 Amount 50000/= Date (7.03.10	
Year 5	ERV No. 36101660 Amount S0000/- Data 17.03.10	
REN The validity of this is to	EVAL Vicence is renewed up 2010/11 ERV 36 19425, TSL 100,000/= 21.07.11 2015 2014/22 GW 36 19425, TSL 100,000/= 13:10.11 36121783, TSL 100,000/= 13:10.11 WESTELN WESTELN	



PML 0006398

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 44 min 48.4872 sec. 31 deg. 27 min. 31.5576 sec.

 B. 07 deg. 44 min 35.0052 sec.
 31 deg. 27 min. 22.1292 sec.

 C. 07 deg. 44 min 31.3332 sec.
 31 deg. 27 min. 27.3816 sec.

 D. 07 deg. 44 min 44.826 sec.
 31 deg. 27 min. 36.8532 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Year 1	ERV No. 21210591 Amount 50,000/= Date 04.05, 001
Year 2	ERV No. 25434525 Amount S00001= Date 21-11-07
Year 3	ERV No. 36101660 Amount 5000 h Date 17.03,10
Year 4	ERV No. 36101660 Amount S0000/= Date 17,03, (0
Year 5	ERV No. 36101660 Amount S0000/~ Date 7.03, (D
The validity of this I to	icence is renewed up 2011/12 B(V.36121782, Bh. 100,000). 21:07:11 1. 2015.
Zonal Minus Office (Signature) Date: 31:63:20	WESTELN Zone



PML 0006407

FOR:

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 44 min 04.1244 sec. 31 deg. 27 min. 7.6644sec.

 B. 07 deg. 43 min 53.6484 sec.
 31 deg. 26 min. 55.7124 sec.

 C. 07 deg. 43 min 49.3428 sec.
 31 deg. 27 min. 1.332 sec.

 D. 07 deg. 44 min 2.0292 sec.
 31 deg. 27 min. 13.59 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

KENT.	3115.				ZONAL	
Year 1	ERV No. 21210591	Amount .50	0,000/=	. Date. 04.05.05	P. O. JOX	OFFICER 75
Year 2	ERV No. 2543452	S Amount	0000/-	. Date 21 . 11 . 07	7	
Year 3	ERV No. 3610166	Amount	50000(-	. Date. 17. 03. 10	2	0
Year 4	ERV No. 3610166	Amount	5000/=	. Date. 17.03. (0	
Year 5	ERV No. 3610166	O Amount	= 100062	. Date. 17,03, (0	
The validity of this is to 974 MARC ERV No: 3.61.0.166 December Zonal Mines Officer (Signature) Date:	EWAL cence is renewed up at 2015 Date: 17/2/2010 WESTERN Zone	LOU/12 GRU 3	612 1791, Tsh	(00,000= 13.10	in te	



	PML 0006406
DESCRIPTION OF T	HE LICENCE AREA
Subject to Section 95 of the M	Mining Act, 1998 the Licence Area is at
Mkomolo area in Sumbawanga Dist	rict QDS 206/4 Define the lines of latitude
and longitude having the following c	orner coordinates:-
Latitude (S)	Longitude (E)
	~
A. 07 deg. 41 min 34.43 s	ec. 31 deg. 33 min. 42.98 sec.
B. 07 deg. 41 min 34.43 s	ec. 31 deg. 33 min. 49.59 sec.
C. 07 deg. 41 min 18.44 s	ec. 31 deg. 33 min. 49.59 sec.
D. 07 deg. 41 min 18.44 s	ec. 31 deg. 33 min. 42.98 sec.
An area of approximately 1	0.00 Hectares
DENTE OL	
REN1: Shs.	EOR!
2121059	P DEFICER
Year 1 ERV No	mount 50,000/ Date 04.05.03 M
Year 2 ERV No. 25 93 45 25 A	mount
Year 3 ERV No. 36101660 A	mount 50000 (= Date 17,63,10
Var 1 ERV No 36101660	S0000/- Det 17.03,10
2410166D	Soool 17 N2 ID
Year 5 ERV No	mount
The validity of this license is many 1 2019/11	6RJ 36119454 154.100,0000 21.07 2011
to 9TH MARCH 2015	2 ERU 3612175 TSL. 109 000 13:10:11
FRV No: 36181661 Ber 17/2011	12 000 3000
Sherne WESTERN	
Zonal Mines Officer Zone	
(Signature)	
Date: 31.03. 2-010	
	÷



PML 0006405

EOR!

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 44 min 4.1244 sec. 31 deg. 27 min. 7.6644 sec. B. 07 deg. 43 min 53.6448 sec. 31 deg. 26 min. 55.7124 sec. C. 07 deg. 43 min 58.0728 sec. 31 deg. 26 min. 50.4168 sec. D. 07 deg. 44 min 8.0196 sec. 31 deg. 27 min. 1.6956 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

	21210	-0.	ED DOD -	AU.04.05	P. Box 75
Year 1	ERV No	Amount		Date	MI NDA
Year 2	ERV No. 25434	Amount	500001=	Date. 21.11.07	
Year 3	ERV No. 361014	Amount	50000/2	Date 17.03.10	\sim
Year 4	ERV No. 36101	660 Amount	50000/2	Date. (7, 03, (7	
Year 5	ERV No. 361014	Amount	5000 0/2	Date (7.03. 10	
RENE	WAL	2010/11, ERV	3611943 Tih.	100,000/2 21:07.11	
The valicity of this lic to 9TH MARCH ERV No: 361.9166	ance is renewed up 2015 L. Dete: \7/3/2ds	2011/12, ER	36121789 134	60000- 13.10-11	
Zonal Mines Officer (Signature)	WESTERN Zone	1			
Data: 31:0312-01	0	i			



PML 0006397

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 44 min 35.0052 sec.
B. 07 deg. 44 min 20.8068 sec.
C. 07 deg. 44 min 22.5276 sec.
D. 07 deg. 44 min 38.3892 sec.
C. 07 deg. 44 min 38.3892 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Vear 1	ERV No	10. NO2
Year 2	ERV No. 25434525 Amount 50,000/= Date 21-11-07	A. AUA.
Year 3	ERV No. 36101660 Amount 50000/= Date 17.03.10	6
Year 4	ERV No. 36101660 Amount S000/- Date 17.05.00	
Year 5	ERV No. 36101660 Amount S0000 Date 1705.10	
The validity of thi to914 MAR ERV No: 36(0) Xmenuel Zonel Mines Off (Signature) Data: 31:03:2	s licence is renewed up cH 2015 bl. Date: 17/3/2010 WESTGLN icer Zone -010	
and the second s		



PML 0006408

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Mkomolo area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 36.37 sec.B. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 42.98 sec.C. 07 deg. 41 min 18.44 sec.31 deg. 33 min. 42.98 sec.D. 07 deg. 41 min 18.44 sec.31 deg. 33 min. 36.37 sec.

An area of approximately 10.00 Hectares

-6	RENT: S	hs. FOR:	
	Year 1	ERV No. 21210591 Amount 50,000/= Date 024.05.05 PMD	MINTS OFFICER
	Year 2	ERV No. 25434525 Amount 50000 (= Date 21.11.07	NNDA 1
	Year 3	ERV No. 36101660 Amount 50000/- Date 17.03.10	
	Year 4	ERV No. 36101660 Amount 50000 Date 17-03.10	
to ERV No: Zonal Min (Sign	ARCH 3610166 Lund nes Officer eture)	2015 201/12, GRU 3612 1792, TSL. 100,000, 13.10.11 Date: 17/3/200 WESTERN Zone	
Date:	1.03, 20	10	



PML 0005549

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwele area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E

A. 07 deg.	46 min.	29.74 sec.	31 deg.	28 min.	52.16 sec.
B. 07 deg.	46 min.	27.6636 sec.	31 deg.	28 min.	58.494 sec.
C. 07 deg.	46 min.	39 sec.	31 deg.	29 min.	13 sec.
D. 07 deg.	46 min.	42 sec.	31 deg.	29 min.	08 sec.

An area of approximately 9.957 Hectares

RENT: Shs.

05/66 Year 2 ERV No. 21237576 Amount 49785/- Date 21.8.06 06/67 Year 3 ERV No. 36101660 Amount 49785/- Date 17.03.10 07/8 Year 4 ERV No. 36101660 Amount 49785/- Date 17.03.10 07/8 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 08/67 Year 5 ERV No. 36101660 Amount 49785/- Date 17.03.10 10 68/67 Year 5 ERV No. 36101660 10 68/7 Year 5 Year 5 10 68/7 Year 7 State 7 10 68/7 Year 7 Year 7 10 68/7 Year 7 Year 7 10 68/7 Year 7 Year 7 10 78	OHOS Year 1	ERV No. 1976417	3 Amount 49,7	BS = Date. 16	5.07. BAR 9. 8	
06/07 Year 3 ERV No. 36101660 Amount 49785/= Date 17.03.10 07/88 Year 4 ERV No. 36101660 Amount 49785/= Date 17.03.10 08/97 Year 5 ERV No. 36101660 Amount 49785/= Date 17.03.10 08/97 Year 5 ERV No. 36101660 Amount 49785/= Date 17.03.10 08/97 Year 5 ERV No. 36101660 Amount 49785/= Date 17.03.10 08/97 Year 5 ERV No. 36101660 Amount 49785/= Date 17.03.10 10 RENEWAL 2007/10.684 36119402 Tsk 50.004 21.07.2011 10 Att+ July 2014 2007/10.684 36119402 Tsk 50.004 21.07.2011 10 Att+ July 2014 ERV No: 36101661 Date: 17.3.2010 10 State 17.03 WestGRN 2008/10 EW 36119402 Tsk 50.004 21.07.2011 10 ERV No: 36101661 Date: 17.3.2010 10 WestGRN Xonel Mines Officer 2008/10 State 2008/10.000 Atten 2008/21.000 2019/10 Date: 17.3.2010 Atten 2008/21.000 2019/10 State 2008/21.000 Atten 2008/21.000 2019/10 State 2008/21.000 Atten 2008/21.000<	05/06 Year 2	ERV No. 21237576	Amount	85/ Date 21	. 8.06	
of 8 Year 4 ERV No. 36101660 Amount 49785/= Date. 17.03.10 8/9 Year 5 ERV No. 36101660 Amount 49785/= Date. 17.03.10 RENEWAL The validity of this licence is renewed up to	06/07 Year 3	ERV No. 36101660	Amount	8.5/= Date	7.03.10	\sim
8 9 Year 5 ERV No. 36101660 Amount 497.85/- Date 1003.10 RENEWAL The velicity of this licence is renewed up to. 4744 JULY 2014 ERV No: 36 101661. Date: 17:3-2010 Note: 36 101661. Date: 17:3-2010 Note: 31/0.3 (Date) Date: 31/0.3 (Date)	67/8 Year 4	ERV No. 36101660	Amount	8.5./= Date	T. 03. (D	
RENEWAL The validity of this licence is renewed up to4TH, JULY 2014 ERV No: 36 101661. Date: 17-3-2010 Noneture) Date:31/0.3/Dato	08 og Year 5	ERV No	Amount	85/~ Date	03.10	
	The validity of to4t+ Ju ERV No: 36 Xaacmus Zonel Mines (Signetur Date: 31/0	RENEWAL this licence is renewed up (LY 2014 lol661 Date: 17-3-2010 WESTERN Officer Zone e) 3./2010	2007/10, DKJ 38 2010/U, EW 3	1119402, Jish SQ ,649418, Tsh-14	2000/221.07-20U	Ž
						8



PML 0005548

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwele area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	46 min.	33.76 sec. \	31 deg.	28 min.	52.76 sec.
B. 07 deg.	46 min.	29.74 sec.	31 deg.	28 min.	52.16 sec.
C. 07 deg.	46 min.	42 sec.	31 deg.	29 min.	08 sec.
D. 07 deg.	46 min.	49.6848 sec.	31 deg.	29 min.	5.1288 sec.

An area of approximately 9.317 Hectares

RENT: Shs.

Year 1 Year 2 Year 3 Year 4 Year 5	ERV No. 19764173 ERV No. 21232576 ERV No. 36101660 ERV No. 36101660 ERV No. 36101660	Amount Amount Amount Amount Amount	6,585 = 6,585 = 6,585 - 6,585 - 6,585 -	Date 21, 8, 04 Date 21, 8, 04 Date 17, 03, 1 Date 17, 03, 1 Date 17, 03, 5	Con
The validity of t to. 0.4tH ERV No: 3.619 When Zonal Minos C (Signature Date: 3(1.03	ENEWAL his licence is renewed up muy 2014 1661 Date: 17:03.2010 ~L. WESTERN ficer Zone 2010.	2009 (10. ER) 2019 (11, GR)	3611940175 3611940175	sh 50,000/- 21	1.07.20U



PML 0005547

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	34 sec.	31 deg.	29 min.	48 sec.
B. 07 deg.	47 min.	29.6052 sec.	31 deg.	29 min.	52.746 sec.
C. 07 deg.	47 min.	43.21 sec.	31 deg.	30 min.	2.28 sec.
D. 07 deg.	47 min.	46.95 sec.	31 deg.	29 min.	56.94 sec.

An area of approximately 9.879 Hectares

RENT: Shs.

Year 1	ERV No. 19764173	Amount	49,395/=	Date	6.07.04	a du
Year 2	ERV No. 21232576	Amount	49395	Date:	21.08.06	
Year 3	ERV No. 36101660	Amount	49,395	/= Date!	7.03,10	
Year 4	ERV No. 36101660	Amount	49'395	Date.,!	7.03.10	
Year 5	ERV No. 36101660	Amount	49393		17.03.10	
The validity of toOut H.J ERV No: 3.6. Knew Zonal Mines (Signatu Date:	this licence is renewed up tury 2014 101661 Date: 17:03-2019 We WESTERN Officer Zone 100 3:2019	2010/11/	GLV 361(941)	6, TSh. 100,	000;2107111	



PML 0005546

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	38.922 sec.	31 deg.	29 min.	43.0692 sec.
B. 07 deg.	47 min.	34 sec.	31 deg.	29 min.	48 sec.
C. 07 deg.	47 min.	46.95 sec.	31 deg.	29 min.	56.94 sec.
D. 07 deg.	47 min.	51.07 sec.	31 deg.	29 min.	51.19 sec.

An area of approximately 9.978 Hectares

RENT: Shs.

	Year 1	ERV No. 19764173 Amount 49,890/= Date 16,07,00,000	
	Year 2	ERV No. 21232576 Amount 49,890/= Date 21,8,06	
	Year 3	ERV No. 36101660 Amount 49,890/= Date 17.03.10	
	Year 4	ERV No. 36101660 Amount 49,890/= Date 17.03.10	
	Year 5	ERV No. 36101660 Amount 49890/- Date 17.03.10	
100		2009 (0, EX 36114999, 18h. 50,000 = 21.07.41	
The Co Zo	validity (RENEWAL por this licence is renewed up July 2014 101661 Dete: 17:03:2010 Officer Zone 3.2010	


PML 0005545

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	21 sec.	31 deg.	29 min.	38 sec.
B. 07 deg.	47 min.	16.7316 sec.	31 deg.	29 min.	43.0008 sec.
C. 07 deg.	47 min.	29.6052 sec.	31 deg.	29 min.	52.746 sec.
D. 07 deg.	47 min.	34 sec.	31 deg.	29 min.	48 sec.

An area of approximately 10.00 Hectares

Year 1	ERV No. 19764173 Amount 50,000/= Date 16,57,00
Year 2	ERV No. 21232576 Amount 50,000 (= Date 21, 8,06
Year 3	ERV No. 36[01660 Amount 50000]= Date [(, 03,])
Year 4	ERV No. 36/01660 Amount Date 1(, 03, 10
Year 5	ERV No. 3610(660 Amount Date 1(.03.10 2007 10, ERV 36114998 10, 50000 = 21.07.11
The validity toQ.y.t.t ERV No: 3.	RENEWAL vor this licence is renewed up 1 July 2014 6101661 Date: 17:03.2010
Zonal Min (Signi Date:	Mul Westow es Officer Zone eture)



PML 0005544

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	26.6316 sec.	31 deg.	29 min.	34.1268 sec.
B. 07 deg.	47 min.	21 sec.	31 deg.	29 min.	38 sec.
C. 07 deg.	47 min.	34 sec.	31 deg.	29 min.	48 sec.
D. 07 deg.	47 min.	38.922 sec.	31 deg.	29 min.	43.0692 sec.

An area of approximately 9.986 Hectares

Year 1	ERV No. 1976473 Amount 49,930/= Date 16:07.043.202	
Year 2	ERV No. 21232576 Amount 49930/- Date 21.8.06	
Year 3	ERV No. 36101660 Amount 49930/= Date 17.03.10	\sim
Year 4	ERV No. 36101660 Amount 49930/= Date 17.03. 10	
Year 5	ERV No. 36101660 Amount 49930/= Date 103.10	
	2007/0 ERV36114997 Tob 9000= 21.07-20	1
ERV No:	36101661 Date: 17.03.2010 www. western estories Zone	
Date: 31	03.2010	
1		



PML 0005543

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	08 sec.	31 deg.	29 min.	28 sec.
B. 07 deg.	47 min.	04 sec.	31 deg.	29 min.	33 sec.
C. 07 deg.	47 min.	16.7316 sec.	31 deg.	29 min.	43.008 sec.
D. 07 deg.	47 min.	21 sec.	31 deg.	29 min.	38 sec.

An area of approximately 9.992 Hectares

Year 1	ERV No. 19764173 Amount 49.9601= Date 6,07,048,80.8	
Year 2	ERV No. 2123 25/6 Amount 49960 Date 21. 8.06	
Year 3	ERV No. 36101660 Amount 49960 Date 17.03. (0	
Year 4	ERV No. 36101660 Amount 49960 Date 7.03, 10	
Year 5	ERV No. 36101660 Amount 49960 Date 17.03.10	
The validity of o41tt ERV No: 36 Security Zonal Mine (Signal Testa: 3.1:0	RENEWAL St this licence is renewed up July 2014 10.16k1Dete: 17.03.2010 WESTERN IS Officer Zone ture) 3.2010	



PML 0005542

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

- -

Longitude (E)

A. 0/ deg.	47 min.	13.9524 sec.	31 deg	29 min	21 3156
B 07 deg	47 min	00	ar deg.	~> mm.	24.5450 sec.
D. OT deg.	47 mm.	U8 sec.	31 deg.	29 min.	28 sec.
C. 07 deg.	47 min.	21 sec	31 deg	20	20
D 07 day	47 .		of deg.	29 min.	38 sec.
D. 07 deg.	4/ min.	26.6316 sec.	31 deg.	29 min.	34.1268 sec.

An area of approximately 9.982 Hectares

		10	50	1.4.0	1	A NO.	2011
	Year 1	ERV No	1+6-6173 A	mount 49,910	Date 1	6. 37.04. 30.	
	Year 2	ERV No.	21232576	mount 499th	= Date 2	1 8.04	
	Year 3	ERV No. 2	36101660	W99	Date	1.1.2.00	
4	Year 4	EDVNo	36101660	Lan	Date	,03,10	\sim
Sectores.	Tear 4	ERV No	2(1511/2	mount	Date	103.10	
	Year RI	NEW 9	SELDIBEO A	mount	10- Date 1	703.00	
The	validity of th	is licence is n	nowed un 200	10 ERV 36 11	1995 50.174410	a Ta man 21.7	· 1 Kaliscon
to	4TH JUL	2014	2010	du BRUBBUS	1411 Tol 100	and 21 navinte	fler.
ERV	No: 36101	obl Deter	17:62.2010		in stride	0001 1.0111 0	reed
		revenues a forentier,				76.	
8	Renne	WE	STERN				
Zoni	Mines Of	icer z	000				
	(signature)						
Date:	31/03/	20(0					
			and the second s				



PML 0005541

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	46 min.	55 sec.	31 deg.	29 min.	17 sec.
B. 07 deg.	46 min.	52 sec.	31 deg.	29 min.	23 sec.
C. 07 deg.	47 min.	04 sec.	31 deg.	29 min.	33 sec.
D. 07 deg.	47 min.	08 sec.	31 deg.	29 min.	28 sec.

An area of approximately 9.972 Hectares

Year 1	ERV No. 1976417	3 Amount	49,860/=	Date	6.07.04	ZOW.
Year 2	ERV No. 2123257	Amount	49,860/-	Date. ?	21.8.06	
Year 3	ERV No. 36101660	Amount	498601=	Date!	7.03.00	\sim
Year 4	ERV No. 36101660	Amount	49,860	Date	7-03-10	
Year 5 P The validity of the 47# Jun 36101 Dremuu 31.03.2	ERV No. 06101660 Is iconce is renewed up LY 2014 661 Die 17:03:2010 L. WESTGLIN	2009/11 2009/11 2019/11,	9682 3611 491 Ben 3611 94	Date 94 Tsh, St + (ο Tsh,	Report 21	17-1 Shert



PML 0005540

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	47 min.	2.8248 sec.	31 deg.	29 min.	14.8812 sec.
B. 07 deg.	46 min.	55 sec.	31 deg.	29 min.	17 sec.
C. 07 deg.	47 min.	08 sec.	31 deg.	29 min.	28 sec.
D. 07 deg.	47 min.	13.9524 sec.	31 deg.	29 min.	24.3456 sec.

An area of approximately 9.955 Hectares

04 of Year 1	ERV No. 19764173 Amount 49,7751= Date 16.04:04:04:04:04:04:04:04:04:04:04:04:04:0
os de Year 2	ERV No. 21232576 Amount 49775/- Date 21. 8.06
obor Year 3	ERV No. 36101660 Amount 49775/= Date 17.03,10
07/8 Year 4	ERV No. 36101660 Amount 49775/= Date 1703-10
08/09 Year 5	ERV No. 36101660 Amount 49775/= Date 103,10
The validity of t to474. Ju ERV No:.3640 Zonal Mines O (Signature Date:31.03.	L. WESTERN Micer Zone



PML 0005539

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg.	46 min.	42 sec.	31 deg.	29 min.	08 sec.
B. 07 deg.	46 min.	39 sec.	31 deg.	29 min.	13 sec.
C. 07 deg.	46 min.	52 sec.	31 deg.	29 min.	23 sec.
D. 07 deg.	46 min.	55 sec.	31 deg.	29 min.	19 sec.

An area of approximately 9.448 Hectares

2/= Date 10.02.9€	Year 1 ERV No. 1976417
0 (= Date. 21. 8.06	Year 2 ERV No. 2123 254
Date. 17.03. (D	Year 3 ERV No. 36101660
Date. (7.03-10	Year 4 ERV No. 36101660
to - Date. 17 03, 10	Year 5 ERV No. 36101660
511 4986 Toh. Sologen 400 200 10 10 10 10 10 10 10 10 10 10 10 10 1	RENEWAL The validity of this licence is renewed up to 47th Jack Park ERV No: 36(01661 Date: 17:03-240 ERV No: 36(01661 Date: 17:03-240 WESTERN Zonel Mines Officer Zone (Signature)



PML 0005538

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Namwale area in Sumbawanga District QDS 206/4 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 4	6 min.	49.6848 sec.	31 deg.	29 min.	5.1288 sec.
B. 07 deg. 40	6 min	42 sec.	31 deg.	29 min.	08 sec.
C. 07 deg. 40	6 min.	55 sec.	31 deg.	29 min.	17 sec.
D. 07 deg. 4	7 min.	2.8248 sec.	31 deg.	29 min.	14.8812 sec.

An area of approximately 9.959 Hectares

0405 Year 1	ERV No. 1976-4173	Amount	49,795/=	Date. 16+0	7.00.2
05/06 Year 2 06/07 Year 3	ERV No. 36101660	Amount	49795	Date. 7.03	. (0
07/08 Year 4	ERV No. 36101660	Amount	49795	Date. 17 10	3.10
The validity of the to4The J ERV No:36(o) Scherman Zonel Mines OI (Scherman) Ante: 31.03.	ENEWAL his licence is renewed up MLY 2014 1661 Date: 17.03.2010 WESTGAN Koor Zome	2009/10! 2010/11	ERV 36114985 ERV 361194 6	77h. 50 000	29 (64/2011) 29 10 07 - 11



PM	L	00	063	385

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S) Longitude (E)

A. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 3.32 sec.B. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 3.32 sec.C. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 9.93 sec.D. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 9.93 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

06 07 Year 1 ERV No. 21232425 Amount 50000/- Date 21.11.07 07 07 8 Year 2 ERV No. 36101660 Amount 50000/- Date 17.03.10 08 07 Year 3 ERV No. 36101660 Amount 50000/- Date 17.03.10 08 07 Year 4 ERV No. 36101660 Amount 50000/- Date 17.03.10 08 Vear 4 ERV No. 36101660 Amount 50000/- Date 17.03.10 08 Vear 4 ERV No. 36101660 Amount 50000/- Date 17.03.10 08 Vear 5 New 7 36101660 Amount 50000/- Date 17.03.10 100 Year 4 ERV No. 36101660 Amount 50000/- Date 17.03.10 100 Material Material 2016 Amount 50000/- Date 12.0.11 100 Material Date: 17.320(0 2016 20.0.21.07.2010 20.0.21.07.2010 20.0.21.07.2010 <th></th>	



PML 0006386

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S) Longitude (E)

A. 07 deg.	42 min	38.39 sec.	31 deg. 32 min. 56.71 sec.
B. 07 deg.	42 min	38.39 sec.	31 deg. 33 min. 03.32 sec.
C. 07 deg.	42 min	22.40 sec.	31 deg. 33 min. 03.32 sec.
D. 07 deg.	42 min	22.40 sec.	31 deg. 32 min. 56.71 sec.

An area of approximately 10.00 Hectares

00 07 Year 1 ERV No. 212324 01 Year 2 ERV No. 361016 01 Year 3 ERV No. 361016 01 Year 3 ERV No. 361016 01 Year 3 ERV No. 361016 The validity catthis lice ROS No renowed up to. 11 DECEMBER 2016 ERV No: 36101661 Date: 17.03140 DECEMBER 2016 ERV No: 36101661 Date: 17.03140 Date: 17.03140 Date: 31.03.2010	25 Amount $50000[=]$ Date 21.11.07 60 Amount $50000[=]$ Date $17.03.10$ 60 Amount $50000[=]$ Date $17.03.10$ 2000[2 EV 3649456, The logon= 21.07.1]	



	PML 0006470
	DESCRIPTION OF THE LICENCE AREA
	Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
	Latitude (S) Longitude (E)
	A. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 29.76 sec. B. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 36.37sec. C. 07 deg. 41 min 18.44 sec. 31 deg. 33 min. 36.37sec. D. 07 deg. 41 min 18.44 sec. 31 deg. 33 min. 29.76 sec.
	An area of approximately 10.00 Hectares
	RENT: Shs.
	Year 1 ERV No. 21232913 Amount $50,000/=$ Date $01.7.0000$ minut
	Year 3 ERV No. 36/01660 Amount 50000/= Date 71.03.10
	Year 4 ERV No. 36101660 Amount $50000/=$ Date 17.03.10 Year 5 - ERV No. 36101660 Amount $50000/=$ Date 17.03.10
	The validity of this licence is renewed up $2010/12 \text{ GRU}$; $100,000/= 13.10.2011$
	ERV No: 36161661 Date: 17/03/2010/11, 1511 36119437, 100,00013 210711
	Zonal Mines Officer Zone (Signature) Date: 31:03 Jack
Ł	



	PML 0006471
DESCRIPTION OF TH	E LICENCE AREA
Subject to Section 95 of the Minir area in Sumbawanga District QDS longitude having the following corner of	ng Act, 1998 the Licence Area is at Muze 207/1 Define the lines of latitude and coordinates:-
Latitude (S)	Longitude (E)
A. 07 deg. 41 min 34.43 sec. B. 07 deg. 41 min 34.43 sec. C. 07 deg. 41 min 18.44 sec. D. 07 deg. 41 min 18.44 sec.	31 deg. 33 min. 23.15 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 23.15 sec.
An area of approximately 10.	00 Hectares
RENT: Shs. Year 1 ERV No. 25434525 Am. Year 2 ERV No. 25434525 Am. Year 3 ERV No. 36101660 Am. Year 4 ERV No. 36101660 Am. Year 57 ERVANO 36101660 Am. Year 57 ERVANO 36101660 Am. Year 57 ERVANO 36101660 Am. New 26101660 Am. A. O. (2000) The valit" y of ance is renewed up a out/2 to 3074 Jaw 2015 RV No. 36161661 Date: 17/03/2010 A. O. (2000) Date: 31.03.2015	ount $50,000$ = Date $01.07.000$ to the period to the per



PML 0006472

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 16.54 sec.
B. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 23.15 sec.
C. 07 deg. 41 min 18.44 sec.	31 deg. 33 min. 23.15 sec.
D. 07 deg. 41 min 18.44 sec.	31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

nul

Zonal Mines Officer

(Signature) Date: 3103.2010 WESTERN

Zone

TOAC

Year 1	ERV No. 21232913	Amount	50,000/=	Date. 01.07.02 2	8
Year 2	ERV No. 25.43.4525	Amount	50000L	Date 21-11-07	
Year 3	ERV No. 36101660	Amount	50000/=	Date 17-03-10	
Year 4	ERV No. 36101660	. Amount	50000/=	Date 17.03.10	
Year R	NEWAR	Amount	Sõooo/>	Date. 17.03.10	

The validity of this licence is renewed up to. 3074 JAN 2015 2010/12 ERV 36121795 Tsh. 100,000= 13:10:2011 2010/11, ERV 36121795 Tsh. 100,000= 21:07:11 ERV NO:36161661 Date: 17/03/2010



PML 0006473 DESCRIPTION OF THE LICENCE AREA Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and	
Latitude (S) Longitude (E)	
A. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 9.93 sec. B. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 16.54 sec. C. 07 deg. 41 min 18.44 sec. 31 deg. 33 min. 16.54 sec. D. 07 deg. 41 min 18.44 sec. 31 deg. 33 min. 9.93 sec. An area of approximately 10.00 Hectares	0
RENT: Shs. Year 1 ERV No. 21232413 Amount 50,000/= Date 01.074940000 + 050001 Year 2 ERV No. 25434525 Amount 50,000/= Date 21.11.07 Year 3 ERV No. 36/01660 Amount 50,000/= Date 21.11.07 Year 3 ERV No. 36/01660 Amount 50,000/= Date 17.03.10 Year 4 Zer EBWA2 36/01660 Amount 50,000/= Date 17.03.10 Year 4 Zer EBWA2 36/01660 Amount 50,000/= Date 17.03.10 Year 4 Zer EBWA2 36/01660 Amount 50,000/= Date 17.03.10 Year 5 Zonal Mines Officer Zone (Signature) 2014/12 ERV 36/12/3962/900,000/= 13.03.201/ Date: 31:03:2 delo , ,	×
	*



	PML 0006474
DESCRIPTION OF THE LICENCE AREA	
Subject to Section 95 of the Mining Act, 1998 the Licence A area in Sumbawanga District QDS 207/1 Define the lines of longitude having the following corner coordinates:-	rea is at Muze f latitude and
Latitude (S) Longitude (E)	
A. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 3.32 sec.B. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 9.93 sec.C. 07 deg. 41 min 18.44 sec.31 deg. 33 min. 9.93 sec.D. 07 deg. 41 min 18.44 sec.31 deg. 33 min. 3.32 sec.	0
An area of approximately 10.00 Hectares	
RENT: Shs.	MILES OFFICER
Year 1 ERV No. 21232413 Amount 59,000/- Date Year 2 ERV No. 25434525 Amount 50,000/- Date Year 3 ERV No. 36101660 Amount 50,000/- Date Year 4 ERV No. 36101660 Amount 50,000/- Date Year 5ENERVINO. 36101660 Amount 50,000/- Date The validity of this licence is renewed up to 3014 TAN 2015 ERV No: 36161661 Date: 17/03/240 2010/11 G2V 36121797 The 100 of ERV No: 36161661 Date: 17/03/240 2010/11 G2V 3612977 De 100,00 ERV No: 36161661 Date: 17/03/240 2010/11 G2V 361944, Be 100,00 ERV No: 36161661 Date: 17/03/240 2010/11 G2V 361944, Be 100,00 ERV No: 36161661 Zone (Signature) Date: 31:032010	01.07.0502 10112 00 00 21.11.07 17.03.10 17.03.10 17.03.10 12/2011 22/207/11
J	



PML 0006475
DESCRIPTION OF THE LICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A. 07 deg. 41 min 34.43 sec. 31 deg. 32 min. 56.71 sec. B. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 03.32 sec. C. 07 deg. 41 min 18.44 sec. 31 deg. 33 min. 03.32 sec. D. 07 deg. 41 min 18.44 sec. 31 deg. 32 min. 56.71 sec.
An area of approximately 10.00 Heaterer
An area of approximately 10.00 Hectares
RENT: Shs.
Year 1 ERV No. 21232413 Amount $50,000/=$ Date $01/0.2$ 01
Zonal Minos Officer Zone (Signature) Date: 31.03.2010



PML 0006476	
DESCRIPTION OF THE LICENCE AREA	
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-	
Latitude (S) Longitude (E)	
A. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 42.98 sec.B. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 49.59 sec.C. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 49.59 sec.D. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 42.98 sec.	
An area of approximately 10.00 Hectares	
RENT: Shs.	FICER
Year 1 ERV No. 2[2324]3 Amount 50,000]= Date 0[-07-05] inter 0.000 Year 2 ERV No. 25434525 Amount 50,000]= Date 21.411-07 Year 3 ERV No. 36101660 Amount 50,000/= Date 17.03.10 Year 4 ERV No. 36101660 Amount 50,000/= Date 17.03.10 Year 4 ERV No. 36101660 Amount 50,000/= Date 17.03.10 Year 5EALHEWIND 36101660 Amount 50,000/= Date 17.03.10 Year 7EALHEWIND 36101660 Amount 50,000/= 21.07 Year 7EALHEWIND 36101660 Amount 50,000/= 21.07 Year 7EALHEW	



PML 0006477
DESCRIPTION OF THE LICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 36.37 sec.B. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 42.98 sec.C. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 42.98 sec.D. 07 deg. 41 min 34.43 sec.31 deg. 33 min. 36.37 sec.
An area of approximately 10.00 Hectares
RENT: Shs. Year 1 ERV No. $2.2.3.2.4.13$ Amount $50,000/=$ Date $0(.07.90.2014)$ Million to be the second
Zonal Mines Officer Zone (Signature) Date: 31.03.2-010



PML 0006478
DESCRIPTION OF THE LICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 29.76 sec. B. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 36.37 sec. C. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 36.37 sec. D. 07 deg. 41 min 34.43 sec. 31 deg. 33 min. 29.76 sec.
An area of approximately 10.00 Hectares
RENT: Shs. Year 1 ERV No. 21232913 Amount 50,000/- Date 04:07.050-0000, provide the provi



	PML 0006479
DESCRIPTION OF THE	LICENCE AREA
Subject to Section 95 of the Mining area in Sumbawanga District QDS 20 longitude having the following corner co	Act, 1998 the Licence Area is at Muze 7/1 Define the lines of latitude and ordinates:-
Latitude (S)	Longitude (E)
A. 07 deg. 41 min 50.42 sec. B. 07 deg. 41 min 50.42 sec. C. 07 deg. 41 min 34.43 sec. D. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 23.15 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 23.15 sec.
An area of approximately 10.00	Hectares
RENT: Shs.	WINS OFFICER
Year 1 ERV No. 21232413 Amoun	nt .50,000/=
Year 2 ERV No. 36101660 Amount	nt 50000 Date 21.11.07
Year 4 ERV No. 36101660 Amoun	nt
RENEWAL 2000	nt Date Dat
to Batt JANUARY 2015 2010/11,	BRU 36119440, Tsh 100, 000/2 21.07+211
ERV No: 36161661 Date: 17/03/2019	
Zonal Mines Officer Zone	
(Signature) Date: 31.03.0.0019	



PML 0006480

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 41 min 50.42 sec.	31 deg. 33 min. 16.54 sec.
B. 07 deg. 41 min 50.42 sec.	31 deg. 33 min. 23.15 sec.
C. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 23.15 sec.
D. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

05/26 Year 1 ERV No. 21232+13 Amount 50,000/= Date 01:07-0505 1000, 50 100	
Wy Year 2 ERV No. 25434525 Amount 50000 (- Date 21.11.07	
678 Year 3 ERV No. 36101660 Amount 50000/ Date 17.03.10	
08/07 Year 4 ERV No. 36101660 Amount S0000/- Date 17.03. 10	
4/0 Year 5 ERV No. 36101660 Amount 50000/~ Date 17.03.10	
RENEWAL The validity of this licence is renewed up 2010/2 ERV 36120603 Tsh. 100,000/- 13.10.2011 to. 30TH JAN 2015 2010/11 ERV 36119447, Tsh. 100,000/= 21.07.11	
ERV No: 36161661 Date: 17/03/2019	
theme western	
Zonal Mines Officer Zone (Signature)	
Date: 31. 03.9010 1	
i de la companya de l	



		PML	0006481
DESCRIP	TION OF TH	E LICENCE AREA	
Subject to Section 9 area in Sumbawanga I longitude having the foll	25 of the Mining District QDS 2 lowing corner c	g Act, 1998 the Licence Area is 207/1 Define the lines of lati oordinates:-	s at Muze itude and
Latitud	e (S)	Longitude (E)	
A. 07 deg. 41 n B. 07 deg. 41 n C. 07 deg. 41 n D. 07 deg. 41 n	min 50.42 sec. nin 50.42 sec. nin 34.43 sec. min 34.43 sec.	31 deg. 33 min. 9.93 sec. 31 deg. 33 min. 16.54 sec. 31 deg. 33 min. 16.54 sec. 31 deg. 33 min. 9.93 sec.	
An area of app	proximately 10.0	00 Hectares	æ
RENT: Shs.			will soft
Year 1 ERV No. 2123 Year 2 ERV No. 250 Year 3 ERV No. 361 Year 4 ERV No. 361 Year 4 ERV No. 361 Year 5 ERV No. 361 RENEWAL The validity of this licence is renew to 30TH 3 And 2015 ERV No: 36161661 Date: 17:0 Date: 13:03:2019	82413 Amo 34525 Amo 10[660 Amo 0[660 Amo 0[660 Amo 0[660 Amo 0[660 Amo 20[0/[1] 20]0/[1]	S0,000/= Date 01: punt $S0,000/=$ Date 21: punt $S0,000/=$ Date 17: punt $S0,000/=$ Date 17: <t< th=""><th>07.08.000 -11.07 03.10 03.00 13.10.11 13.10.11 21.07.11</th></t<>	07.08.000 -11.07 03.10 03.00 13.10.11 13.10.11 21.07.11
			n



PML 0006482

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 41 min 50.42 sec.	31 deg. 33 min. 3.32 sec.
B. 07 deg. 41 min 50.42 sec.	31 deg. 33 min. 9.93 sec.
C. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 9.93 sec.
D. 07 deg. 41 min 34.43 sec.	31 deg. 33 min. 3.32 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Vear 1	ERV No 21232413 Amount 50,000/= Date 01.07
Vera 2	ERVING 25634525 Amount 50000 (- Data 21/1107
Year 2	36101660 Stocola Di 17.02.10
Year 3	24 101 640 Amount Social June 17.03.10
Year 4	ERV No. 20101000 Amount Date 17.03/D
Year 5	ERV No
RE The validity of this to. 30.TH TAN ERV No: 361618 SACMAL Zonal Mines Offi	NEWAL s licence is renewed up 2011/2 GRJ 36(19449)Tsh-100,000= 21.07.11 2011/2 GRJ 36(19449)Tsh-100,000= 21.07.11 2011/2 GRJ 36(19449)Tsh-100,000= 21.07.11 Date: 17/03/2010 WIESTERN ICER ZONE

(Signature) Date: 31.03,2010



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, Q
1 3 X 10.6
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PML 0006484
DESCRIPTION OF THE LICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 42.98 sec. B. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 49.59 sec. C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 49.59 sec. D. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 42.98 sec.
An area of approximately 10.00 Hectares
DENT: Che
Year 1 ERV No. 21232412 Amount $50,000/=$ Date $01.07-20.000$
Year 3 ERV No. 36101660 Amount $50000/=$ Date $17.03.10$
Year 4 ERV No. 36101660 Amount 50000/2 Date 17.03.10
Year 5 ERV No. 36101660 Amount 50,000/- Date 14,03,10
The validity of this licence is renewed up 2011/2 GRV 3611945 Tsh 100,004 21,07.11
FRV No. 36161661 Data 17/03/246
Josephine LEFERN
Zonal Mines Officer Zone
Date: 31:03:2:010



PML 0006485	

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 6.41 sec.31 deg. 33 min. 36.37 sec.B. 07 deg. 42 min 6.41 sec.31 deg. 33 min. 42.98 sec.C. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 42.98 sec.D. 07 deg. 41 min 50.42 sec.31 deg. 33 min. 36.37 sec.

An area of approximately 10.00 Hectares

Year 1 ERV No. 21232413 Year 2 ERV No. 25430525 Year 3 ERV No. 36101660 Year 4 ERV No. 36101660	Amount $\frac{50,000}{=}$ Amount $\frac{50000}{-}$ Amount $\frac{50000}{-}$ Amount $\frac{50000}{-}$	Date 0(07-05 000
RENEWAL The validity of this licence is renewed up to .30TH JAN 2015 ERV No: 36.1616.61 Date: 17/03/2010 KALENNA WESTERN Zonal Mines Officer Zone (Signature) Date: 31.03.2010	Amount 2010/12 CRJ 3611943 2011/12 ' ERJ. 3612066 2010/11 ERJ 3611945	15 TSh 60000 21.7.11 8. TSh 60000 13.10.11 2. TSh 60,000 = 2.1.0711
)	



PML 0006544

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 38.39 sec.	31 deg. 33 min. 29.76 sec.
B. 07 deg. 42 min 38.39 sec.	31 deg. 33 min. 36.37 sec.
C. 07 deg. 42 min 22.40 sec.	31 deg. 33 min. 36.37 sec.
D. 07 deg. 42 min 22.40 sec.	31 deg. 33 min. 29.76 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

i

	10. M
Year 1 ERV No 2.1.7.3.3	2413 Amount 50,000/= Date 01.07.05 89.8
Year 2 ERV No. 25434	525 Amount 500001_ Date 21.11.07
Year 3 ERV No	660 Amount 50,000 - Date 17.03.10
Year 4 ERV No. 3610	1660 Amount 50,000/= Date 17.03.10
Year 5 ERV No. 3610	560 Amount 50000/= Date 17.03.10
RENEWAL The validity of this licence is renewed 2.3674 JAN 2.015 IRV NO: 3616 [66] Date: 3.17/34 BREMME WESTERN Zonal Mines Officer Zone (Signature) Date:	40 2009/10 2010/11 36/20609 13/10/2011 theme. 2010/11, ESU 36/19453, TSh. 100,000/= Sherne. 2010/12, ESU 36/20609 TSh. 100,000/= Sherne.



PML (006545
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DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 38.39 sec.	31 deg. 33 min. 23.15 sec.
B. 07 deg. 42 min 38.39 sec.	31 deg. 33 min. 29.76 sec.
C. 07 deg. 42 min 22.40 sec.	31 deg. 33 min. 29.76 sec.
D. 07 deg. 42 min 22.40 sec.	31 deg. 33 min. 23.15 sec.

An area of approximately 10.00 Hectares

					a so Ca.	
Year 1	ERV No. 2123241	3 Amount 50	2,000/=	Date. 01:07:00	e Tout & Milbert	
Year 2	ERV No. 254345	25. Amount	,0000 L-	Date 21:11:07		
Year 3	ERV No. 3610166	Amount	50000 k	Date 17.03.10	8	
Year 4	ERV No. 3610166	O Amount	50000/2	Date. 17.03. [0	Ē	
Year 5	ERV No. 3610166	Amount	50,000/=	Date	2	
RE he validity of th 	NEWAL s licence is renewed up AN 2015 obl Date: 17/03/240 AL WESTAN ficer Zone	200/10 3612 2010/11 3611 2010/12 361	0660 100,00 19454 100,00 20610, 10000	0/2 13/10/201 00/2 -13/10/201	o strend.	
1010110101 Jato 31.031	2-010					
2010						8



PML 0006546

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

31 deg. 33 min. 16.54 sec.
31 deg. 33 min. 23.15 sec.
31 deg. 33 min. 23.15 sec.
31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

		200 11	
Year 1	ERV No. 21232413 Amount 50,000/= Date 01.07.05	40. ANOS	
Year 2	ERV No. 25434525 Amount 50001- Date 21 1107	A. Mr	
Year 3	ERV No. 36161660 Amount 50000 Date 17.03.10		
Year 4	ERV No. 36101660 Amount 50,000 Date 17.03.10		
Year 5	ERV No. 36101660 Amount 50,000 Date 17.03,10		
he validity of th 3 gTH JAN RV No: 36161	us licence is renewed up 2 2015 661 Date: 17/03/2012		
Zonal Mines Off (Signature) ate: 31.03.2	NESTERN Ficer Zone		



6547	00	PML
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DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 9.93 sec.B. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 9.93 sec.C. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 16.54 sec.D. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

ERV No. 2543455 ERV No. 2543455 ERV No. 3610166	Amount	500001-	Date 21.	1.07	2.6.40
ERV No. 2543455 ERV No. 3610166	25 Amount	500001-	Date QL -	11.07	
ERV No. 3610166	D.	The second		* * * * * *** *	
· · · · · · / /	Amount	500001=	Date	03.10	
ERV No. 3610166	Amount	50000/=	Date	03.10	
ERV No. 3610166	Ö Amount	50000/=	Date. 17.	03,10	
EWAL icence is renewed up 2015 Date: 17/03/2010 MESTERN r Zone	2009/10, 2010/U	36(20612, 10 36(19456, T	0,000/2 1-1 Sh. 100,000/2 21	(07/20U ¥	spend.
	ERV No. 3610166 EVVAL licence is renewed up 2015 21. Date: 17/03/2010 WESTERN T Zone	ERV No. 36101660 Amount EWAL Icence is renewed up 2015 21 Date: 17/03/2010 KLESTERN TZONE	ERV No. 36101660 Amount 50000/2 EVVAL icence is renewed up 2015 21 Date: 17/03/2010 KLESTGRN TONE	ERV No. 36101660 Amount $G000/2$ Date 17. EVAL EVAL icence is renewed up 201/12 2010/11 36120612 100,000/2 21 2010/11 36119456, $751100,000/2212010/112010/1136119456$, $751100,000/221212010/112010/1136119456$, $751100,000/221212010/11200/11200/$	ERV No. 36101660 Amount $G000/2$ Date 17.03,10 2011/12 Date 17.03,10 2011/12 Date 12/00/2 13/00/2 001/2 13/00/2011 8 2011/12 36120612, 100,000/2 13/00/2011 8 2010/11 36119456, Tsh 100,000/2 21/07/2011 8 2010/11 36119456, Tsh 100,000/2011 8 2010/11 36119466, Tsh 100,000/2011 8 200/11 36119466, Tsh 100,000/2011 8 200/11 36119466, Tsh 100,000/2011 8 200/11 3611966, Tsh 100,000/2011 8 200/11 36119666, Tsh 100,000/2011 8 2



PML 0006548

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

 A. 07 deg. 42 min 22.40 sec.
 31 deg. 33 min. 3.32 sec.

 B. 07 deg. 42 min 22.40 sec.
 31 deg. 33 min. 9.93 sec.

 C. 07 deg. 42 min 6.41 sec.
 31 deg. 33 min. 9.93 sec.

 D. 07 deg. 42 min 6.41 sec.
 31 deg. 33 min. 3.32 sec.

An area of approximately 10.00 Hectares

RENT:	Shs.	
5 66 Year 1 4 7 Year 2 68 9 Year 3 08 9 Year 4 9 0 Year 5	ERV No. 21232413 Amount $50,000/2$ Date $01.07.055$ 0100 0100 ERV No. 25434525 Amount $50000/2$ Date $21.14.07$ ERV No. 36101660 Amount $50000/2$ Date $17.03.10$	
REI is validity of this .3 of th. JAN .V No: 3616161	2004/0 36120613 100,000 15(10/2011 Brent. licence is renewed up 2010/11, ERN 361(9457, Tsh. 100,000= 2(107.11) Brent. 2010/11, ERN 361(9457, Tsh. 100,000= 2(107.11) Brent.	
 ional Mines Offic (Signature) vate: 31-03-2-0	o	



	PML 0006549
	DESCRIPTION OF THE LICENCE AREA
Su area i longitu	ubject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze n Sumbawanga District QDS 207/1 Define the lines of latitude and ude having the following corner coordinates:-
	Latitude (S) Longitude (E)
	A. 07 deg. 42 min 22.40 sec. 31 deg. 32 min. 56.71 sec. B. 07 deg. 42 min 22.40 sec. 31 deg. 33 min. 3.32 sec. C. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 3.32 sec. D. 07 deg. 42 min 6.41 sec. 31 deg. 32 min. 56.71 sec.
	An area of approximately 10.00 Heatener
	Hectares
RENT:	Shs. official
Year 1	FRUND 2127 24217 . CO 000/-
Year 2	FRV No. 25434526 Amount 50,000 - Date. 0(-07-04 10) Date. 000
Veor 2	ERV No
Voor 4	ERV No. Amount Socool Date 17.03. (0
Vee 6	2610166 Amount
Year 5	ERV No Amount Date 17.03.10
N of this	100000 13 10 2010/10 ERV: 36120614 100,000/ 13/10/2016 December
HTAN	2015 20107. 11 OFALL ERU 36 119458 Thilogood 21.07. 11 OFALL
11/11/	2011/12 GW Sollow, 154, 100,000/2 05:10:0011 BAEUR

The validity of this licence is renewed up .RV No: 36161661 Date: 17/03/2010

WESTERN Zone

Zonal Mines Officer

(Signature) 2010: 31:03,2010



PMT. 0006550
DESCRIPTION OF THE LICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 42.98 sec.B. 07 deg. 42 min 38.39 sec.31 deg. 33 min. 49.59 sec.C. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 49.59 sec.D. 07 deg. 42 min 22.40 sec.31 deg. 33 min. 42.98 sec.
An area of approximately 10.00 Hectares
RENT: Shs.
Year 1 ERV No. 21232413 Amount 50,000/= Date 01.07.000 journ 0.000
Year 2 ERV No. 25435525 Amount S0000 Date 21,11-07
Year 3 ERV No. 36101660 Amount 50000/= Date [7,03,10
Year 4 ERV No. 36101660 Amount 5000/= Date 17.03.10
RENEWAL 2018/ Contract 20/15/2011 There is a
The validity of this licence is renewed up to. 30TH JAN 2015 2010/11, ERU 36120615, TSh 100,000/2, 21.07.2010 there ERV No.36161661 Dete: 17/03/2010 2011/12, ERU 36120615, TSh 100,000/2, 13:10-11 15ment
trend used
Zonal Mines Officer Zone
Date: 31:03.2010



	PML 0006551
DESCRIPTION OF THE L	ICENCE AREA
oject to Section 95 of the Mining A Sumbawanga District QDS 207 de having the following corner coor	ct, 1998 the Licence Area is at Muze (1 Define the lines of latitude and dinates:-
Latitude (S)	Longitude (E)
 A. 07 deg. 42 min 38.39 sec. 31 B. 07 deg. 42 min 38.39 sec. 31 C. 07 deg. 42 min 22.40 sec. 31 D. 07 deg. 42 min 22.40 sec. 31 An area of approximately 10.00 1 	deg. 33 min. 36.37 sec. deg. 33 min. 42.98 sec. deg. 33 min. 42.98 sec. deg. 33 min. 36.37 sec. Hectares
Shs.	WES OFFICE
ERV No. 21232413 Amount ERV No. 25434525 Amount ERV No. 36101660 Amount ERV No. 36101660 Amount ERV No. 36101660 Amount ERV No. 36101660 Amount VEWAL licence is renewed up N. 2015 661. Date: $12/22/2420$ WESTERD OF Zone	50,000/= Date 01:07-001 1010 000 50,000/= Date 21:11:07 50,000/= Date 17:03.10 50,000/= Date 17:03.10 50,000/= Date 17:03.10 20:36120615 100,000/= 13/10/2011 20:36120615 100,000/= 21:07.201
	DESCRIPTION OF THE L oject to Section 95 of the Mining A Sumbawanga District QDS 207/ de having the following corner coor Latitude (S) A. 07 deg. 42 min 38.39 sec. 31 B. 07 deg. 42 min 38.39 sec. 31 C. 07 deg. 42 min 22.40 sec. 31 D. 07 deg. 42 min 22.40 sec. 31 D. 07 deg. 42 min 22.40 sec. 31 D. 07 deg. 42 min 22.40 sec. 31 Shs. ERV No. 212.32413 Amount ERV No. 2543452 Amount ERV No. 36101660 Amount



	PMI	. 00	065	552

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 3.32 sec.
B. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 9.93 sec.
C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 9.93 sec.
D. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 3.32 sec.

An area of approximately 10.00 Hectares

T3 T33	1.100	100	633	1.33
KE.	NI	1.	SI	ns.
Tree.			~	

					FUR TONAL MINES
Year 1	ERV No. 21210590) Amount	50,000/-	Date	05.05 P. O. BO MPANDA
Year 2	ERV No. 254345	25 Amount	SOUDE	Date 21 1	((-07
Year 3	ERV No. 361016	60 Amount	50000/2	Date	3.10
Year 4	ERV No. 36(0(6	Amount	50000/=	Date .! 7:0	5,0
Year 5	ERV No. 56(0(6	Amount	50004-	Date	1
REN The validity of this li 	EWAL cence is renewed up 44 2015 Dete: 17/03/2010 WEST 62N Zone	2010/11, 60	1 3611946(₁ 75	h-100,000/= 2	1.07.2011



			PML 0006553
	DESCRIPTION OF 1	THE LICENCE AREA	
Sul area in longitud	bject to Section 95 of the Min Sumbawanga District QD de having the following corne	ning Act, 1998 the Licence S 207/1 Define the line er coordinates:-	e Area is at Muze s of latitude and
	Latitude (S)	Longitude (E)
	A. 07 deg. 42 min 22.40 se B. 07 deg. 42 min 22.40 se C. 07 deg. 42 min 6.41 sec D. 07 deg. 42 min 6.41 sec An area of approximately 1	 c. 31 deg. 33 min. 42.98 c. 31 deg. 33 min. 49.59 . 31 deg. 33 min. 49.59 . 31 deg. 33 min. 42.98 	3 sec.). sec. sec. sec.
			-9.8
RENT:	Shs.		1 th
Year 1	ERV No. 21210590	Amount 50,000 /=	Date 04:05:00 00000
Year 2	ERV No. 25434525	1 mount 50,000/-	Date. 21-11+07
Year 3	ERV No. 36101660	Amount 50000/-	Date 17.03.10
Year 4	ERV No. 2610(660	mount	Date. 17.03.10
Year 5	ERV No	12 ERJ 36120618 100,0	13.10.2011 torene.
The validity of this	licence is renewed up 2010	1, GRJ 36119462, TShil	00,000/= 21.07.2011 strent.
RV No: 361616	61 Date: 17/03/2019.		
Zonal Mines Offic (Signature)	WESTERN Ter Zone		
1 Date:	01.0		
			6


PN	1L 0006554
DESCRIPTION OF THE LIGENCE ADDA	
DESCRIPTION OF THE LICENCE AREA	
Subject to Section 95 of the Mining Act, 1998 the Licence Area area in Sumbawanga District QDS 207/1 Define the lines of 1 longitude having the following corner coordinates:-	is at Muze atitude and
Latitude (S) Longitude (E)	0
A. 07 deg. 42 min 6.41 sec. 31 deg. 32 min. 56.71 sec. B. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 3.32 sec. C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 3.32 sec. D. 07 deg. 41 min 50.42 sec. 31 deg. 32 min. 56.71 sec.	
An area of approximately 10.00 Hectares	
	Sec. B.
RENT: Shs.	ALC: NOT
Year 1 ERV No. 21210590 Amount 50,000/- Date.	4.05.98 012.00
Year 2 ERV No. 25636525 Amount $500001=$ Date 2	1-11-07
Ver 4 ERV No. 36101660 Amount S0,000/= Date 17	03.10
Year 5 ERV No. 36(01660 Amount 50000/= Date 17	03.10
RENEWAL The validity of this licence is renewed up a. 1 aTH HAT 2015 Streamed RV No: 36161661 Date: 17/03/2410 Zonel Mines Officer Zone (Signature) Date: 31:03.2010	0/2011 Strend: 2, 21.07.11 Strend.
Date: 31:03,200	



PML 0006555
DESCRIPTION OF THE LICENCE ADEA
DESCRIPTION OF THE EICENCE AREA
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze
area in Sumbawanga District QDS 207/1 Define the lines of latitude and
Tongitude having the following corner coordinates:-
Latitude (S) Longitude (E)
A 07 dog 42 min 22 40 min 21 do 22 i 26 27
$A. 07 \deg. 42 \min 22.40 \sec. 31 \deg. 33 \min. 36.37 \sec.$ B. 07 deg. 42 min 22.40 sec. 31 deg. 33 min 42.98 sec.
C. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 42.98 sec.
D. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 36.37 sec.
An area of approximately 10.00 Hectares
RENT: Shs.
Year 1 ERV No. 21210590 Amount 50,000 = Date 04.05.05 000 0
Year 2 ERV No. 25434525 Amount 50,000 f= Date 21.11.07
Year 3 ERV No. 36101660 Amount 50000 (= Date 17.03.10
Year 4 ERV No. 36101660 Amount 50000/- Date 17.03, P
Year 5 ERV No. 36101660 Amount 50000/~ Date 17,03,10
The validity of this licence is renewed up 20 th 2 FRV 36120620; 100,000/- 13 10/2011
3. JOTH JANS 2015 mene. 2019/11 610 36119404, United book
RV No: 361616.61 Date: 17/03/1910
Stennel. WEGGIN
Wines Officer Zone
(Signatura)



PML 0006556	
DESCRIPTION OF THE LICENCE AREA	
Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-	0
Latitude (S) Longitude (E)	
A. 07 deg. 42 min 22.40 sec. 31 deg. 33 min. 29.76 sec. B. 07 deg. 42 min 22.40 sec. 31 deg. 33 min. 36.37 sec. C. 07 deg. 42 min 06.41 sec. 31 deg. 33 min. 36.37 sec.	
D. 07 deg. 42 min 06.41 sec. 31 deg. 33 min. 29.76 sec.	
An area of approximately 10.00 Hectares	
RENT: Shs.	10-bit
Veril ERVING 21732412 50001- 0107.000 1000	4
Year 2 ERV No. 36101660 Amount 50000 Pate 17.03, 10	
Year 3 ERV No. 36101660 Amount 50000/= Date 17.03.10	
Year 4 ERV No. 36101660 Amount 50007/2 Date 17.03.10	
Year 5 ERV No. 36101660 Amount	
The validity of this licence is renewed up 2010/11-11/12 CRN 36120621, The 2000/2 13/10/2011	A
10.3014 JAN 2019 TRV No: 36161661 Dete: 17/03/2010	
Zonal Mines Officer Zona	
(Signature) Date: 34.03.2010	



	PML 0006557
DESCRIPTION OF TI	HE LICENCE AREA
Subject to Section 95 of the Mini area in Sumbawanga District QDS longitude having the following corner	ng Act, 1998 the Licence Area is at Muze 207/1 Define the lines of latitude and coordinates:-
Latitude (S)	Longitude (E)
A. 07 deg. 42 min 22.40 sec. B. 07 deg. 42 min 22.40 sec. C. 07 deg. 42 min 6.41 sec. D. 07 deg. 42 min 6.41 sec.	 31 deg. 33 min. 23.15 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 29.76 sec. 31 deg. 33 min. 23.15 sec.
An area of approximately 10	0.00 Hectares
RENT: Shs.	WE STAN
Year 1 ERV No. 21232413. An	nount 50,000/= Date 01.07.055 1044 0400
Year 2 ERV No. 36101660 An	nount
Year 3 ERV No	nount 5000/= Date (7.03.10
Year 4 ERV No. 36101660 An	Date ((, 03, 10)
RENEWAL 2009 0	-20to/11 36120622 200 000- 13/10/2011 10000
The validity of this licence is renewed up 2019/11	-2011/12 36120622,75h 200000 13/10/211 tonet
ERV No: 36161661 Date: 12/03/2000	
trenne. WESTERN	
Zonal Mines Officer Zone (Signature)	
Date: 3693. 2010	



PML 0006558

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 22.40 sec. 31 deg. 33 min. 16.54 sec. B. 07 deg. 42 min 22.40 sec. 31 deg. 33 min. 23.15 sec. C. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 23.15 sec. D. 07 deg. 42 min 6.41 sec. 31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

21232413 Amount 50,000/= OSO6 Year 1 ERV No. Date. 36106660 Amount ... 5000/- Date 17.03.10 ERV No. Year 2 36101660 Amount ... 50000/= 17.03.10 ERV No. ... Date. A Year 3 50000/= 17.03.10 ERV No. 9 Year 4 Date 18 50000/-36101660 .. Amount 04/16 Year 5 ERV 2040/18-2016/12: ERV 36120623 200,000/2 13.10.201 200

tin

RENEWAL ite validity of this licence is renewed up 3014 JAN 2015 W NO. 36161661. Date: 17/2/200 WESTERN Thenne ional Millies Officer 7079 (Signatura)



		PML 0006559	
	DESCRIPTION OF TH	IE LICENCE AREA	
	Subject to Section 95 of the Minin area in Sumbawanga District QDS longitude having the following corner of	ng Act, 1998 the Licence Area is at Muze 207/1 Define the lines of latitude and coordinates:-	$\widehat{}$
	Latitude (S)	Longitude (E)	
	 A. 07 deg. 42 min 22.40 sec. B. 07 deg. 42 min 22.40 sec. C. 07 deg. 42 min 6.41 sec. D. 07 deg. 42 min 6.41 sec. 	31 deg. 33 min. 9.93 sec. 31 deg. 33 min. 16.54 sec. 31 deg. 33 min. 16.54 sec. 31 deg. 33 min. 9.93 sec.	
	An area of approximately 10.	.00 Hectares	
	DENT: She		OFFICER
1	RENT. SIIS.		ANBOX IS
05/06	Year 1 ERV No. 2123 2413 Am	100001 = 50,000 = 01.07.92.000	all and
06/07	Year 2 ERV No. 36101660 Am	50000/= Date (1.03.10 50000/= Date (1.03.10	
08/09	Year 4 ERV No. 36101660 Am	$\begin{array}{c} \text{Date} (1) \\ \text{Date} (7,03,10) \\ Dat$	
01/05	Year 5 ERV No. 36101660 Am	ount	
The valid	RENEWAL ty of this licence is renewed up the JAN JE IS	-2010/12 ERV; 200,000/2 13.10.201	1 then f
RV No:	56161661 Date: 1/1922		
ional M (Sig	ines Officer Zone nature)		
Date:	1.03.2010		
			8



PML 0006647

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 29.76 sec.
B. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 36.37 sec.
C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 36.37 sec.
D. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 29.76 sec.

An area of approximately 10.00 Hectares

RENT: Shs. 50,000 = Date 01.07.05 2011 ERV No. 21232413 Amount ... Year 1 9.49 36/04660 Amount . 50000/= Date. 17.03.10 ERV No. . Year 2 5000/-36101660 .. Date. (7.03, 10 ... Amount . ERV No. 1 AR Year 3 50000/-36101660 17.03.10 .. Amount .. Date ... 08/09 ERV No. . Year 4 50000 17.03.10 36101660 Date. o Year 5 ERV No ... Amount 09 2019/11-11/2 13/192011 Spend. 2009/20 36120625 200000 RENEWAL The validity of this licence is renewed up 10. 17TH APRIL 2015 RV No: 36161661 Date: 17/02/2000 Mennel WESTERN Conal Mines Officer Zone (Signature) 31.03.2013 3. e.



PML 0006648

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S) Longitude (E)

A. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 23.15 sec.
B. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 29.76 sec.
C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 29.76 sec.
D. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 23.15 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

Year 1	ERV No. 21232913 Amount 50,000/= Date 01-07-0508 jonth 0: which	
Year 2	ERV No. 3610/660 Amount 50000/- Date 17.03,10	
Year 3	ERV No. 36/01660 Amount 50,000/- Date 17.03.10	
Year 4	ERV No. 36101660 Amount 50000/- Date 17,03,10	
Year 5	ERV No. 36/01660 Amount 50007- Date 17.03.10	
RE The validity of this io1774 fb RV No:36.[6] Saecon Zonal Mines Offi (Signature) Date:31.03.2	NEWAL licence is renewed up RIL 2015 66(Date: 12/3/2000) k = WESTERN cer Zone	



PML 0006649

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence Area is at Muze area in Sumbawanga District QDS 207/1 Define the lines of latitude and longitude having the following corner coordinates:-

Latitude (S)

Longitude (E)

A. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 16.54 sec. B. 07 deg. 42 min 6.41sec. 31 deg. 33 min. 23.15 sec. C. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 23.15 sec. D. 07 deg. 41 min 50.42 sec. 31 deg. 33 min. 16.54 sec.

An area of approximately 10.00 Hectares

RENT: Shs.

RENT:	Shs.
05/06 Year 1 06/07 Year 2 07/08 Year 3 08/09 Year 4 09/00 Year 5	ERV No. $2.12.32.413$ Amount $50,000/=$ Date. 07.07.05.410000 and 00000 and 00000 and 000000 and 0000000000
The validity of this to 17TH Pr RV No: 361616 Zonel Mines Offic (Signature) Date: 31:03.7	VEWAL licence is renewed up RRIL 2015 61. Date: 17/3/200 WESTERN ar Zone 010



			PML 0006650	
DESCE	IPTION OF TH	E LICENCE ARE	Δ	
o Li co co ci				
Subject to Section area in Sumbawang longitude having the	n 95 of the Minin a District QDS following corner of	207/1 Define the coordinates:-	lines of latitude and	I
Latit	ude (S)	Longitude	e (E)	0
A. 07 deg. 4 B. 07 deg. 4 C. 07 deg. 4 D. 07 deg. 4	42 min 6.41sec. 42 min 6.41sec. 41 min 50.42 sec. 41 min 50.42 sec.	31 deg. 33 min. 09. 31 deg. 33 min. 16. 31 deg. 33 min. 10 31 deg. 33 min. 9	93 sec. 54 sec. 6.54 sec. .93 sec.	
An area of	approximately 10.	00 Hectares		
RENT: Shs.				IS OFFICER
05/06 Year 1 ERV No. 2 06/07 Year 2 ERV No. 3 07/08 Year 3 ERV No. 3 08/09 Year 4 ERV No. 3 08/09 Year 4 ERV No. 3 08/09 Year 5 ERV No. 3 RENEWAL The validity of this licence is rem 10. (774 APRIL 2.01) RV No: 36161661 Date: 12 2000 Mines Officer Zon (Signature) Date: 3(-03, 2010)	1232413 Am 6101660 Am 6101660 Am 36101660 Am 36101660 Am 36101660 Am	$\begin{array}{c} \text{ount} & 50,000 = \\ \text{ount} & 50,00$	Date 01.07.05 Date 17.03.10 Date 17.03.10 Date 17.03.10 Date 17.03.10 Tsh 100,000 21.0	ALIX