



mineral resources

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EC 30/5/1/3/3/2/1/0418 EM
02 March 2010

South African Heritage Resources Agency
P.O. Box 758
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5200

Case no: 2357

ATTENTION: MR. T. LUNGILE

Sir

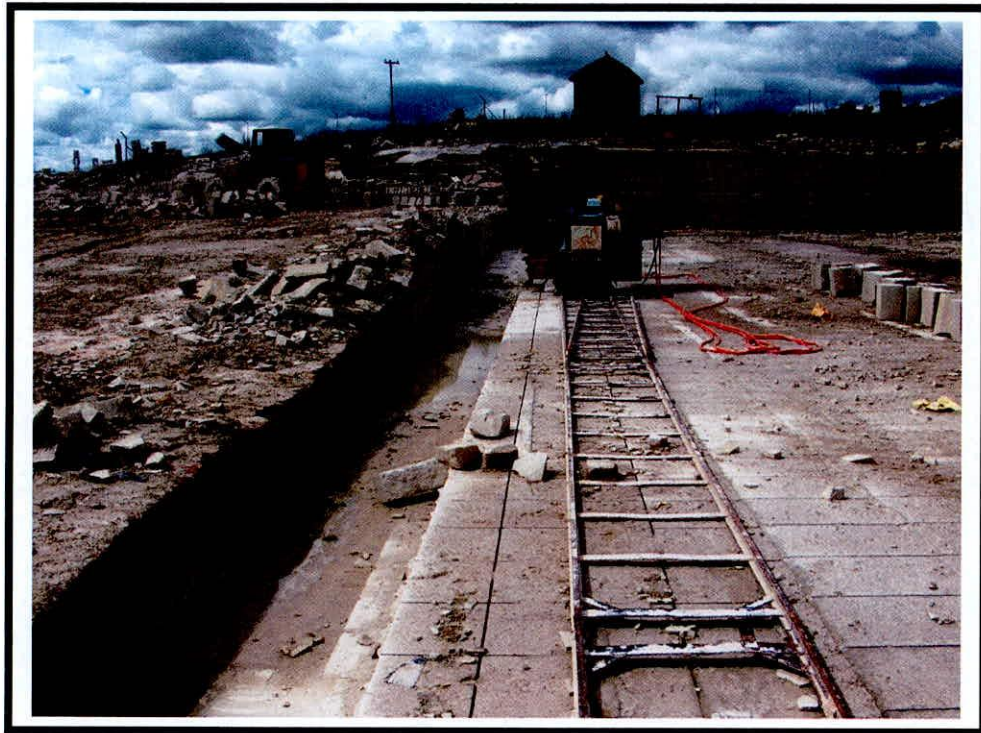
**CONSULTATION IN TERMS OF SECTION 40 OF THE MPRDA OF 2002:
ENVIRONMENTAL MANAGEMENT PLAN, DIMENSION STONE MINING ON THE
FARM TUGELA 77, DIVISION OF HERSHELL: EASTREN CAPE.**

1. Attached herewith, please find a copy of the contact details, a locality map and Mine development plan received from **Hershell sandstone mine cc**, for your comments.
2. Please forward any written comments or requirements your department may have in this regard, to this office not later than **26 April 2007**. Failure to do so, will lead to the assumption that your department has no objection(s) or comments with regard to the said document.
3. Consultation in this regard has also been initiated with other relevant State Departments.
4. Please use the reference number **(EC) 30/5/1/3/3/2/1(0418)** EM in all future correspondence.
5. Your co-operation is appreciated.

Yours faithfully

**REGIONAL MANAGER
EASTERN CAPE**

HERSCHEL SANDSTONE MINE
SCOPING REPORT
AND
ENVIRONMENTAL MANAGEMENT PLAN
FARM 77 TUGELA



FEBRUARY 2010

PREPARED FOR: HERSCHEL SANDSTONE MINE

PREPARED BY: LANDPLAN & ASSOCIATES

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Resources Development Act, 2002 (Act 28 of 2002)
EASTERN CAPE REGION

17 FEB 2010

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DEPARTMENT OF MINERALS AND ENERGY

D/2010/02/17/001
Ec 30/5/11/3/2/0418 MP

REGIONAL MANAGER
MINERALS AND ENERGY
EASTERN CAPE REGION
PRIVATE BAG / PRIVAATSAK X6076

2010 -02- 2 5

PORT ELIZABETH, 6000
STREEKBESTUURDER
MINERALE EN ENERGIË
OOS-KAAPSTREEK

**APPLICATION FOR MINING PERMIT FOR THE
HERSCHEL SANDSTONE MINE**

**On Farm 77 Tugela in the District of Herschel, Eastern
Cape Province – November 2009**

**HERSCHEL SANDSTONE MINE
SCOPING REPORT
AND
ENVIRONMENTAL MANAGEMENT PLAN**

EXECUTIVE SUMMARY

Mining of sandstone blocks, used as the basic building material, has been a practice since habitation of the area around the 19th century. This can be seen throughout the area and the adjoining Lesotho. Sandstone can be found throughout the area and is one of the few natural resources of value to the local people. The practice of hand mining nearly vanished and was reinstated about 12 years ago in the area. Very few artisans remained, because of the time consuming way of the traditional methods and the cost of such blocks. Wastage at the mine is high, because of blocks breaking, further increasing the costs. The large amount of waste creates an environmental impact in the region of the mine that needs to be rectified. By mechanizing the mining process this waste will be reduced.

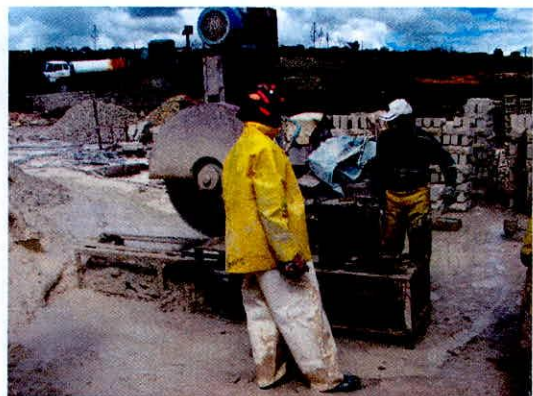
Because people are becoming aware of the qualities of using sandstone blocks and sandstone claddings for building, as well as a multitude of other possible products, demand has increased dramatically lately. For this reason it was decided to increase what was a small local enterprise to a fully-fledged industry that would have a dramatic impact on the local economy through job creation. The proposed mine will be a continuation of the small hand operated business on the edge of Herschel town. The new mine would use machines to cut the stone in the ground after which it would be transported to the processing facility. Here it will be sized for the different products as shown on the photo's below. The final phase of the process incorporates hand dressing to give it a natural look.

Relevance of the proposal

The project will formalize an industry that up till now played a relatively small role in local economics. By increasing in size and becoming a fully-fledged industry it would play a major role in not only the local economy in the Senqu Municipality, but also in the larger aims of the Ukhahlamba District Municipality. Job creation in an otherwise depressed area will boost the local economy, but also play a role in the marketability of the area as tourism destination. With projects such as the Holo Hlahatsi Dam tourism initiative funded by the Department of Environmental Affairs in progress, this project will further enhance the area as a tourism destination.

Problems to be resolved

As it is a going concern in need of funding to expand to a fully-fledged industry, the only problem is finding funds to start the process. A Small Business Loan of R300 000 is being applied for to buy an additional cutting machine that will improve production.



Photo's: 1+2: Cutting machines that will be used in the new mine to produce some of the sandstone products.

Actors involved

A local entrepreneur Lehatisa Qhina started the existing business during 1994. He and his wife will be the owners of the business that will be leasing the land from the Local Tribal Authority. At present negotiations are underway to bring in a partner who has trucks and run

negotiations are underway to bring in a partner who has trucks and run a brick making business in Aliwal North that will also bring in extra capital. With the expansion of the business it is envisaged to recruit a young local man with a B degree in Public Administration to help manage and build up the business. He is at present working as site manager on the Holo Hlahatsi Tourism project. He has very good managerial skills. Mr. Qhina also approached the consultant assisting with the license application to assist the team in future with the development of the business and to assist with Marketing. The local community will benefit in two ways from the project. A royalty will be paid to them based on production. Jobs will be created in the tribal area of Herschel that will boost the local economy.

Objectives and expected results

The objective of the project is to develop an industry in an otherwise depressed area. The existing project has shown that the business can work and that the demand for a good quality product is there.

Added value of the action

At present both National Government as well as the Province and the District Municipality is supporting tourism development through a variety of funding initiatives. By developing an industry that will utilize the one and only natural resource available in abundance in the area, products can be developed that will draw tourists to the mine and processing facility. They will come and view the art of making sandstone products and purchase some of the special items that will be made. Such products can be sold from a factory shop that will be established at the development.

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APPENDIX A: FINANCIAL AND TECHNICAL COMPETENCE

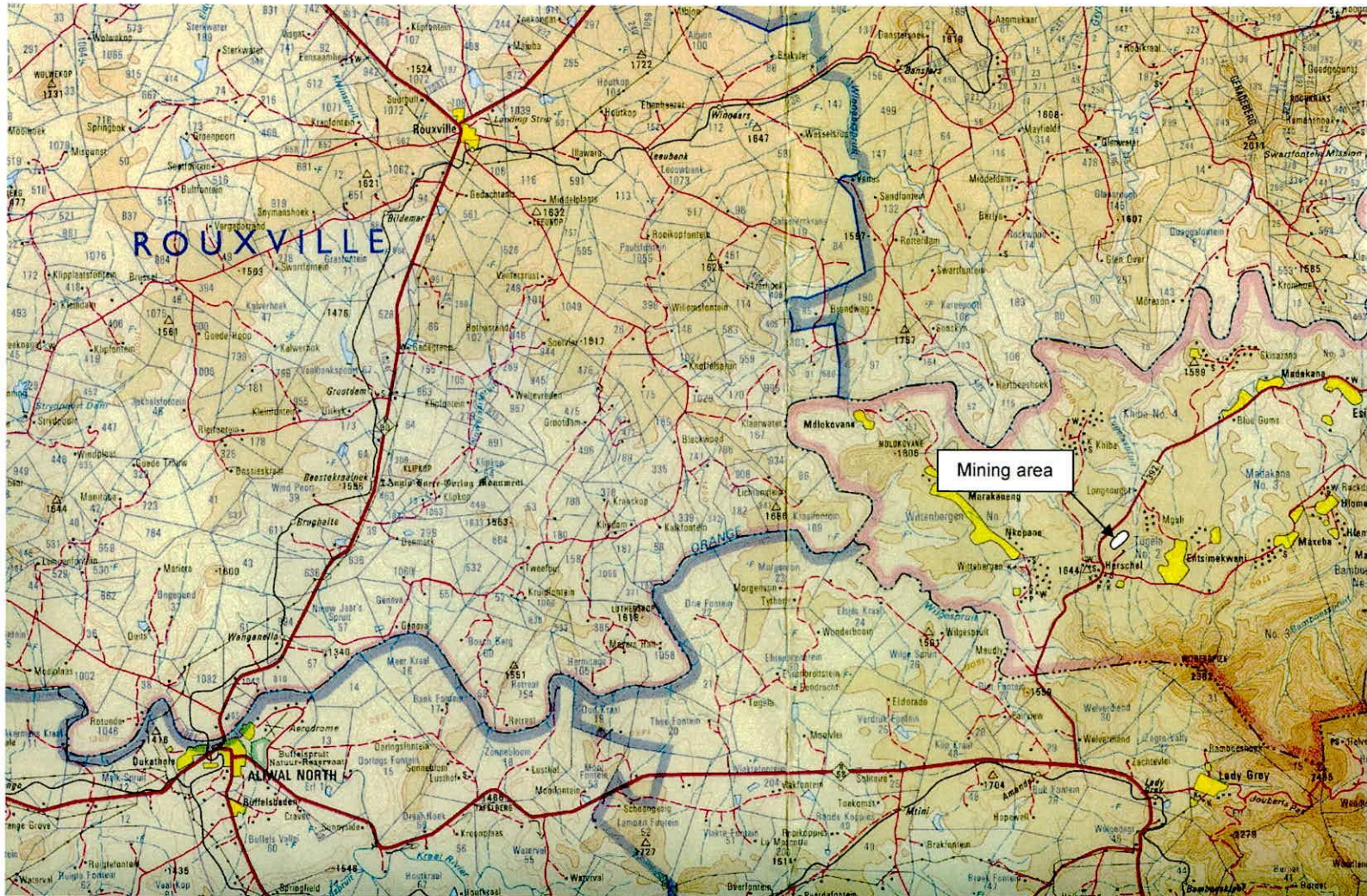
APPENDIX B: PUBLIC PARTICIPATION

APPENDIX C: CADASTRAL INFORMATION

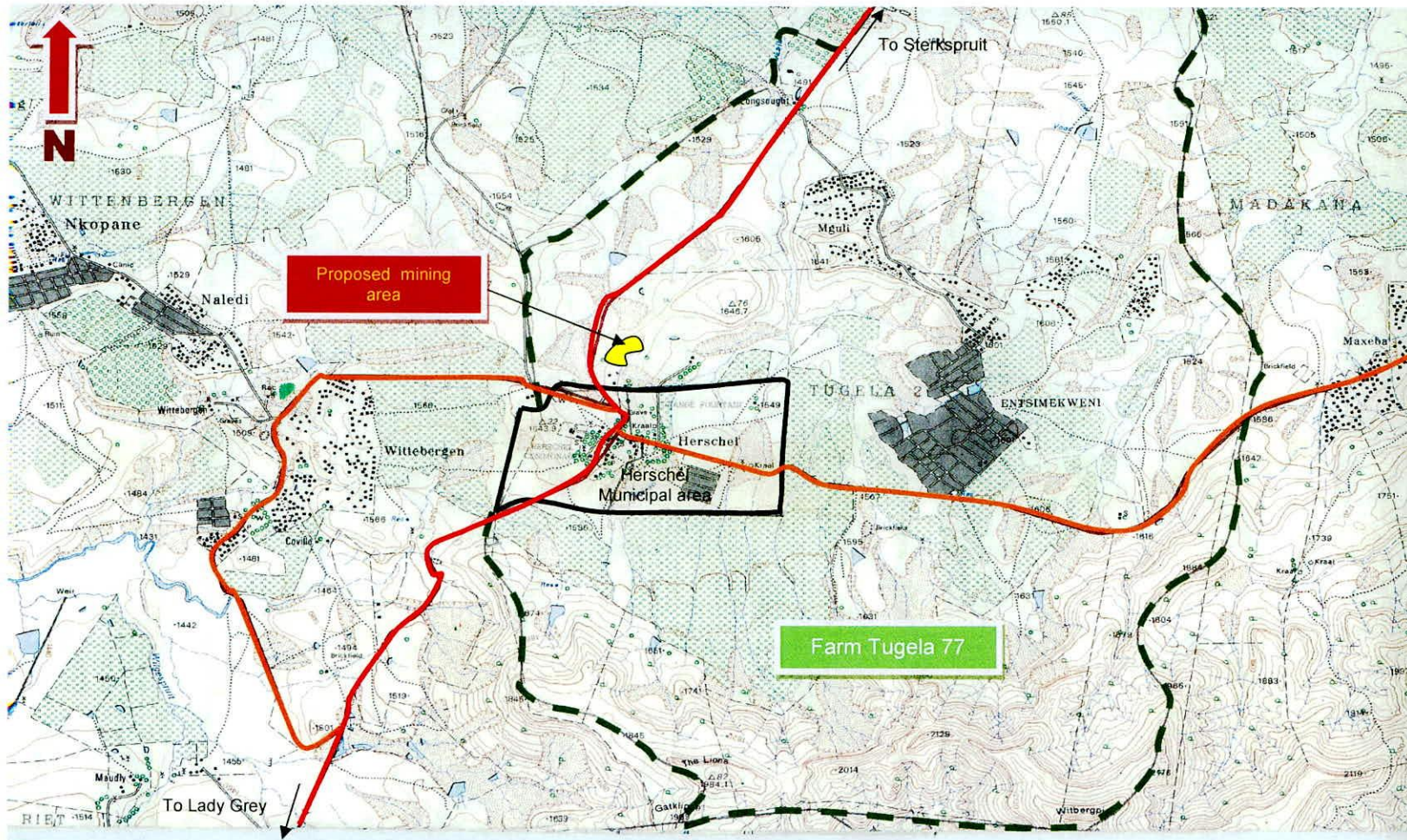
APPENDIX D: COMPANY AND MEMBER DOCUMENTATION

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LANDPLAN & ASSOCIATES		MAP: 1: REGIONAL LOCALITY MAP FOR THE HERSCHEL SANDSTONE MINE		
REGIONAL, ENVIRONMENTAL & DEVELOPMENT PLANNERS PROJECT MANAGERS 26 Tidewaters Drive GONUBIE Tel/Fax: 043- 740 0738 Cell : 082 573 4113	TOWN	HERSCHEL	DRAWN BY	H. LE ROUX
	REGION	EASTERN CAPE	DATE	OCTOBER 2009
	PROJECT	HERSCHEL SANDSTONE MINE	SCALE	1:250 000



LANDPLAN & ASSOCIATES		MAP: 2: LOCAL LOCALITY MAP FOR THE HERSCHEL SANDSTONE MINE		
REGIONAL, ENVIRONMENTAL & DEVELOPMENT PLANNERS PROJECT MANAGERS 26 Tidewaters Drive GONUBIE Tel/Fax: 043- 740 0738 Cell : 082 573 4113	TOWN	HERSCHEL	DRAWN BY	H. LE ROUX
	REGION	EASTERN CAPE	DATE	OCTOBER 2009
	PROJECT	HERSCHEL SANDSTONE MINE	SCALE	1:50 000

CHAPTER 1 : HERSCHEL SANDSTONE MINE PROJECT DESCRIPTION

1.0 PROJECT DESCRIPTION

1.1 THE BUSINESS

1.1.1 Name of the business

The business is registered as "Herschel Sandstone Mine" (A copy of the registration document is attached in Appendix B) The business was registered on 13 March 2007.

1.1.2 Postal Address

The registered address is:

PO Box 54
HERSCHEL
9756

1.1.3 Physical Address

Wittebergen
HERSCHEL
9756

1.1.4 Name of the contact person and Contact Details

Mr. Lehatisa Qhina
PO Box 54
HERSCHEL
9756

Cell: 082 700 8590
Email: tolherberg@xsinet.co.za

1.1.5 Name of CEO/Managing Director

Mr. Lehatisa Qhina

1.1.6 Name of Directors

Mr. Lehatisa Qhina	50% share
Mrs. Sisnyana Qhina	50% share

1.2 KEY MANAGEMENT PERSONNEL

1.2.1 CV of the Ceo

Mr Lehatisa Qhina will be the CEO of Herschel Sandstone Mining. His ID is 371108 5197 085. Copy of his ID is attached in Appendix C.

Mr Qhina has been involved in various small entrepreneurial ventures over the years but all small. He owns a small farm just outside of Herschel next to the Orange River where he keeps a small number of cattle and other small stock.

Since 1997 Mr Qhina has been mining sandstone on a small scale as a cash business. He employed between 3 to 5 people depending on local demand for stone. Mining the stone by hand was slow and wasteful and Mr Qhina decided to mechanize as he has been inundated with calls for the delivery of stone products from as far as Johannesburg.

1.2.2 Financial Manager

At this stage no permanent Financial Manager will be employed. This will be done when the business has established itself and can support such a person in a fulltime capacity.

During the initial stages Mr Deon du Plessis an accountant from Theron du Plessis in Aliwal North will act as Financial Manager on a consultancy basis.

Mr du Plessis has been a chartered accountant for the last 25 years, at the firm Theron du Plessis in Aliwal North.

1.2.3 Production Manager

A Production Manager will be appointed once the business has grown to a level where one can be afforded. This business will be built from the bottom up as finances become available.

1.2.4 Environmental Consultant

Landplan & Associates will continue to act as environmental consultant. He will assist in the environmental control as well as on the production side as he has been involved in the stone business in the past.

Personal Particulars: Mr Herman le Roux – ID – 5010095081083

Qualifications : BSc Forest Management / Nature Conservation (Stell Univ)
MSc Environmental Science (Cape Town Univ)

Experience : Worked for Department of Water Affairs & Forestry 1977 –1989
Seconded to Ciskei 1986 –1989 as Deputy Director Development Planning.
Started own consultancy business – Landplan & Associates 1990 till the present.
Planned 5 stone quarries as well as the environmental management plans (EMP).
Planned EMP's for material mining for 21 road projects.
Owned and ran a tombstone factory in Aliwal North.

1.3 REGIONAL SETTING

1.3.1 Magisterial District Municipality

The mining area falls within the Herschel Magisterial District and the Senqu Local Municipality boundaries. The Senqu Municipality forms part of the Ukhahlamba District Municipality.

1.3.2 Location:

The sandstone mine is situated next to the R 392 road running through Herschel on the way to Sterkspruit. Map 1 shows the location of the mining area in relation to the adjoining towns while Map 2 at a scale of 1:50 000 shows the mining area next to the town of Herschel.

1.3.3 Surface Infrastructure

At present, there is no electricity available at the mining area itself, but an application has been submitted with Eskom to extend the line from the processing area and mining office. The mining area is accessible by a 0.5km long existing dirt road.

1.3.4 Servitudes

No servitudes occur on the mining area

1.3.5 Land Tenure and use of Immediate adjacent land

The mining area is situated on Tribal Land (Farm 77, Tugela) controlled by the Hlubi Traditional Authority that in turn is controlled by the Senqu Municipality. The present operator, Mr Quina, has permission to mine sandstone on the site, from the Hlubi Traditional Authority and has a certificate of occupation from the Department of Agriculture(2006).

An application for Land Allocation with a Lease Agreement from the Department of Rural Development & Land Reform was and is in progress since 2006. According to the Umtata Deeds Office the site, which is situated in the area of Farm 77 Tugela, has been surveyed by a registered surveyor, but is still Unregistered land. The Department of Rural Development & Land Reform will have the area registered with the Surveyor General as soon as the Lease Agreement has been legalized and the Mining Permit has been issued by the DME.

To the west side of the mining area there is a stretch of land running parallel to the road, which is currently used for grazing. To the east side of the mine below the ridge on which the mine is situated, the land is used for grazing. A few graves occur in this patch of land, but will not be affected by mining procedures. A Residential area is situated in the distance of this grazing area. In a northerly direction the area consist of rocky outcrops, used for grazing. To the south and south west there is homesteads and the mine office and processing area. Some of the residents have a vegetable garden around their home. These homes are situated more than 100 meters from the mining area. It should be noted that no blasting would be used at this mine.

1.3.6 Catchment Area

The mine is situated in the upper part of a small catchment area, drained by a small drainage channel. This area forms part of the Orange River catchment system but its contribution to the river is limited. The drainage channel does not have a regular flow. For a visual interpretation of the area, refer to photo 3 below.



Photo3: Shows the drainage channel and the distant residential area of Orangefontein behind it.

1.4 MINING DETAILS

1.4.1 Mineral deposits

The mine is situated on a sandstone ridge consisting of sandstone from the Molteno Formation. The sandstone on this ridge is estimated to be at least 15 m thick. That is the visible thickness of the shelf. Another shelf at a lower level to the northeast could be an extension of this area. The extent of the sandstone will be determined by drilling during phase one of the mining process. There is an abundance of this sandstone in the surrounding area. Photo 4 and 5 below shows the ridge as seen from the road.

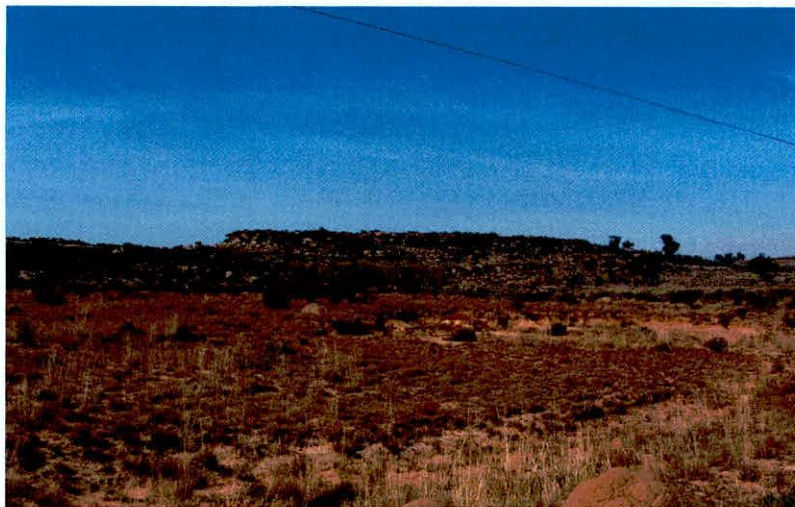


Photo 4: View of the sandstone ridge on which the mine is situated, as seen from the road.

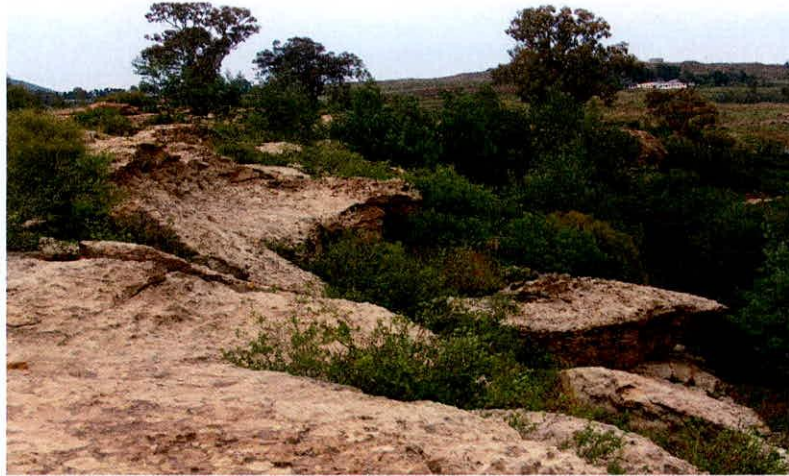


Photo 5: The solid rock as seen on the edge of the ridge. At this point the rock is extending at least 5 meters above the ground at the base of the Krantz.

1.4.2 Mine Products

The mine will produce sandstone products that vary from sandstone blocks of various sizes to sandstone cladding and rivens and tiles used in the building industry. Secondary Products will include garden bird baths and many other products as well as stone chips and pebbles made from the wastage, which will be sold for the use in garden and paving beddings to assist with the prevention of evaporation of water.

1.4.3 Estimated Reserves

Reserves at the mine are vast. The current mining area can be extended to the north as a future project. In order to minimize the visual impact, no mining should be done on the edge of the hill visible from the R392. On the east side of the hill some uncontrolled mining activities is taking place. These have been stopped while the application for a mining permit is in progress. If the mine is extended to the north, mining will have to be done into a lower lying ridge. The reserve for phase 1 and possibly 2 is estimated to be in the region of at least 160 000 cub meters. It is recommended that for the first phase of mining the mine be mined in horizontal layers from a height of 1641m above sea level to a height of 1637m. These layers should not include the edge of the koppie facing the R392. While this mining is in

the edge of the koppie facing the R392. While this mining is in process, experimental drilling should be done to determine what the depth of the reserves are. The estimated calculated reserves allows for a wastage factor of 10% and the sloping of the sides with steps. From all indications a further 10 metres of solid rock should be lying below this first layer. Drilling would determine the extent of the stone and the reserves remaining for a second phase of the mine.

1.4.4 Mining method

The mine will be an open cast operation. At present the stone is removed with a hammer and chisel. A large amount of stone is wasted using this method. By using machines as shown on the photo series, this wastage will be eliminated. This would result in a more efficient method of mining with an increase in production. Losses will be diminished and this will result in a cleaner operation and less problems with rehabilitation.

The mechanized mining process works as follows: Firstly the topsoil is removed and stored as shown on the mining maps in chapter 6. This exposes the bare rock to allow the tracks on which the machine that cuts the sandstone, to be correctly positioned. The machine moves along the tracks and makes vertical cuts into the sandstone. By driving in wedges at the desired height blocks of sandstone with the desired dimensions are loosened. The block is then removed and taken to the saw machine that cuts the big block into smaller blocks, or whatever shape is required. The dressers do the final finishing touches with their chisels and the product is finished and ready to be transported.

1.4.5 Planned Production Rate

When the mining is mechanized the mine will be able to increase production. It is planned to produce about 30000 blocks per month. A market for this quantity of blocks is available in East London and

Bloemfontein. With the increase in production the mine will also be able to market in big markets such as Johannesburg and Cape Town. Plans to advertise on the Internet, which will attract new markets, are also being investigated.

1.4.6 Planned life of the mine

During the first phase of mining the mine will be mined in horizontal layers from a height of 1641m above sea level to a height of 1637m. Figure 2 shows the area to be mined. While this mining is in process, experimental drilling will be done to determine what the depth of the reserves are. At a production rate of 30000 blocks per month and 11 months of mining per year it would take about 10 years to complete phase 1. The two year permit would allow the mine to determine their reserves and thus plan for longer term mining and an increase in production if markets allow for that. An application for a mining right would be submitted before the end of this period to allow them to expand future operations if warranted.

CHAPTER 2 : HERSCHEL SANDSTONE MINE

PRE MINING ENVIRONMENT

2.0 PRE MINING ENVIRONMENT

2.1 GEOLOGY

The area is situated on a sandstone ridge that is on the transitional zone between the Eliot and Molteno formations. The Eliot system contains sandstone and Brownish red and gray mudstone and the Molteno system comprises of Gritty sandstone, gray mudstone, shale and occasional coal seams. As no exploratory drilling has been conducted to date, all mine planning is based on field geological interpretation.

2.2 REGIONAL CLIMATE:

2.2.1 Climate

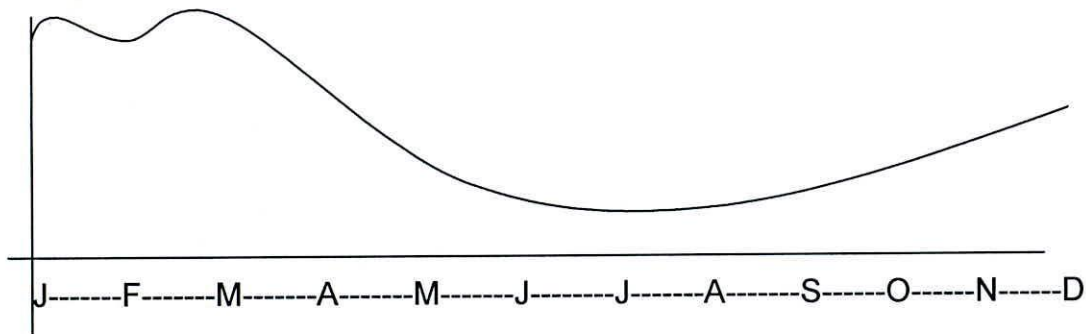
The mine is situated in a summer rainfall area with an average rainfall of 700 mm per annum. The area has warm summers and cold winters with frost that can be expected from April through to October. Frost however generally only occurs from May to August. Rainfall during summer is normally in the form of thunderstorms.

2.2.2 Rainfall

The average annual rainfall for the Herschel area is approximately 670 mm per annum. This average is for a 66-year period. The monthly averages are shown below as a percentage of the annual rainfall.

J	F	M	A	M	J	J	A	S	O	N	D
15	14	15.5	8	5	2.3	2	3	4.4	7	10	12

The rainfall peaks in March with dry winter months. The graph below shows this peak in the rainfall with the dropping off during winter.



2.2.3 Extreme weather condition

The region experiences regular frost and sometimes snow, with very cold nights during the winter. Frost can be experienced anytime from April to October, but normally only occur during the months of May to August. Temperatures below freezing occur regularly in these months. In summer the land is heated by a sun, which is nearly overhead, causing the pressure to fall. Moist maritime tropical air from the Indian Ocean is drawn onto the continent, bringing clouds and rain from the north. This does not mean, however, that the skies are usually cloudy during the summer (Wergner, 1977). Summer day temperatures vary from mild to very hot. Hail normally occurs during the early summer rains when the upper air temperatures can still be low.

2.3 TOPOGRAPHY

Traveling from Lady Grey the terrain rises just before you reach Herschel from about 1500 m in the valley below to 1600m in the town. As you leave town the mining area is situated on a ridge extending

northwards from the municipal area. The highest point of the mining area is at 1641 metres. From here the ground drops down both to the east and west. Map 2 shows the contours and the position of the mine in relation to Herschel town.

2.4 SOILS

The soils on the mining site vary in depth but there is mostly a thin layer of topsoil covering the mining area. The soils are of a sandy nature from the weathering of the sandstone rock. Further away the soils are alluvial soils that had not been investigated, as the mine would have no impact on those areas.

2.5 PRE MINING LAND CAPABILITY

The ridge on which the mine is situated has a low stock carrying capacity because of the shallow soils and sparse vegetation. This particular area can be classed as one with a limited grazing capability.

2.6 LAND USE

2.6.1 Pre mining land use

As described under heading 2.5 the area has a limited grazing potential and this is what the area has been used for in the past. It is possible to use the area for future housing purposes, but this is unlikely as it has been avoided in the past because of the shallow soils and lack of water in the area.

2.6.2 Historical Agricultural Production

As far as can be established there have been no agricultural production on the area other than the extensive grazing that is taking place at present.

2.6.4 Existing structures

There are no structures on the proposed mining area itself. The nearest structures are a few households more than hundred meters to the south of the mining area. The mine office are situated approximately 300m from the mining area.



Photo 6: Structures in the vicinity of the mine. The partly build house in the foreground is more than 100m away. The green building in the background is the mine office.

2.7 NATURAL VEGETATION

2.7.1 Dominant species

Acocks describes the vegetation as Dry Cymbopogon Themeda veld (type 50), while Low and Rebelo in their later classification describe it as moist cold Highveld Grassland. Because of overgrazing it is difficult to identify different species of grass. The area is dominated by Turpentine grass *Cymbopogon plurinodus* and Redgrass *Themeda triandra*. According to Low and Rebelo, prominent forbes include Kleinjakkalstert *Anthospermum rigidum* and Veld Everlasting, *Helichrysum rugulosum*. On the slopes more grasses are found because of being less accessible.

Kleinjakkalstert *Anthospermum rigidum* and Veld Everlasting, *Helichrysum rugulosum*. On the slopes more grasses are found because of being less accessible.

2.7.2 Endangered or Rare Species

No endangered or rare species were found during the site visits.

2.7.3 Invader or exotic species

During site visits no invader or exotic species were observed.

2.8 ANIMAL LIFE

Droppings of rock hare and rodents are present but not plentiful in the area in and around the proposed mining area. This could be contributed to the fact that local residents in the area use snares and dogs to hunt.

2.9 SURFACE WATER

There is no surface water present on the site. To the eastern site a small drainage channel runs parallel to the site. This channel is more than 200m from the site. Due to overgrazing erosion have carved deep trenches in the surrounding land that is scattered all over the landscape. The mine itself being situated in the top of this water catchment does not contribute much runoff. The catchment is a small insignificant catchment with very little water flow except in times of very high rainfall.

2.10 GROUND WATER

Very little groundwater occurs in the mining area with no boreholes on or around the mining site.

2.11 AIR QUALITY

The mining process will generate little dust. Transportation by big vehicles may cause some dust, but can be minimized by spraying water on the short stretch of dirt road leading to the site. This potential impact can further be reduced by rerouting the road around the residential units instead of driving between them.

2.12 NOISE

Noise does not pose a problem at this site. There are only a few households near to the site that can be monitored if necessary. The mine would only operate during the day from eight in the morning to five o'clock in the afternoon.

2.13 SPECIAL SITES

To the east of the proposed mining area there are graves present. They are far enough from the mining area not to be disturbed by mining activities. They are shown on figure 1.

2.14 VISUAL ASPECTS

As mentioned under 5.2.2 the visual impact of such a mine can be big. It is thus advised that mining activities not be allowed on the edge of the hill facing the R392. On the east side of the hill some uncontrolled mining activities is taking place. These have been stopped.

2.14 VISUAL ASPECTS

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2.15 REGIONAL SOCIO ECONOMIC STRUCTURE

2.15.1 Population

The exact population of Herschel is unknown but is in the vicinity of between 3000 and 4000 people. Many of these are unemployed. The majority live on the opposite side of the town in Orangefontein and the new low cost housing development.

2.15.2 Economic activities

Subsistence farming is the main activity in the area.

2.15.3 Unemployment

Unemployment in the area is high but the exact figure is not known.

2.15.4 Infrastructure

The infrastructure is fairly well developed. Municipal supplied electricity and water is utilized at the mine office and storage facilities of the existing small-scale operation. The mining site is situated right next to the R392 road leading to Sterkspruit.

2.16 INTERESTED AND AFFECTED PARTIES

The interested and affected parties are the Department of Rural Development and Land Reform, the Tribal Authority and adjoining residents. Meetings with them resulted in a letter from the Tribal Authority giving permission for the mine to be developed with the

drafting of a Lease Agreement by the Department of Rural Development and Land Reform. Approval for this is being awaited from the Minister in Pretoria.

CHAPTER 3 : HERSCHEL SANDSTONE MINE

MOTIVATION FOR THE PROPOSED PROJECT

3.0 MOTIVATION FOR THE PROPOSED PROJECT

3.1 BENEFITS OF THE PROJECT

The area of Herschel does not provide many opportunities to the local residents, as the agricultural potential is low, because of past overgrazing and a harsh climate. The only product in abundance is the local sandstone that is now in demand as builders and architects return to natural building materials. Sandstone is at present being mined in Lesotho by mainly Chinese producers and exported to the RSA in large quantities.

By developing the Herschel mine it will not only make use of a local product, but also provide in much needed jobs to the local people. As a start 20 to 30 people can be employed. This will increase as the mine develops and more products are produced. As a start only basic stone products will be produced that does not require special skills or expensive machinery. As the workers skills improve and a cash flow is built up management will decide on further expansion.

Once the mine gets going it will bring cash into the local economy that is not there at present. Not only will there be more people earning a permanent income, but money will be ploughed back to the local community through payments to the Tribal Authority to support development projects. These payments would be determined on a

percentage of the income of the mine, as well as on the valuation of the land.

3.2 PROJECT ALTERNATIVES

There are only two alternatives. The first is a hand operation as it is done at present that is slow, wasteful and very expensive. This makes the product produced too expensive pricing it out of the market. With the Chinese producing in Lesotho without the local labor laws and tax restrictions it is not easy to compete.

The second option of mechanization is the only way to compete with the Chinese producers. Mr Qina now wants to follow this route to be able to compete and make proper use of the local stone available for mining.

3.3 MINERAL PROCESSING

The important thing of developing the mine at Herschel is not only the mining of the stone, but also further processing of the stone into various products. During the first phase only basic products will be produced until the workers are skilled enough to work the stone into other types of products such as basins and more elaborate products.

CHAPTER 4 : HERSCHEL SANDSTONE MINE

DETAILED PROJECT DESCRIPTION

4.0 DETAILED PROJECT

4.1 SURFACE INFRASTRUCTURE

4.1.1 Roads, railways and power lines

The R392 linking Aliwal North and Lady Grey with Sterkspruit runs next to the mining area. A short dirt road connects the mining site with the R392. There are no railway lines close to the mine and the one linking Aliwal North with Lady Grey is not in use any more. The closest power connection is at the present processing plant close to the mine. Application has been made to Escom to extend the line.

4.1.2 Solid waste management

Solid domestic waste should be collected at the mining office and disposed of at an appropriate municipal dumping area.

4.1.3 Water pollution management facilities

Domestic wastewater from the site office and worker facilities will have a limited impact on water resources. When the small silt dam is built the runoff water from the processing area will contain no or very little silt resulting in a minimal impact on water sources. The volume of runoff water from the processing plant is relatively small.

4.1.4 Potable Water

The mining office uses water from a municipal supplied source. No boreholes are present on the mining area.

4.1.5 Process water

The mining process will use limited quantities of water to cool the blades of the cutting machines. The equipment that will be used will cut the sandstone with a tungsten blade. During the finishing work on the different blocks water is used. Water may be used for dust suppression on the dirt road.

4.1.6 Mineral processing plant

A machine that cuts the block into the required shapes and thickness does the finish on the blocks. Hand dressing is done as a final process. The water used is supplied from a storage tank on site.

4.1.7 Workshops, administration and other buildings

The site office is situated in a southerly direction from the mining area. At present there are no workshops, but this may change when the mining procedure is mechanized and the need for areas where mechanical parts can be serviced, like vehicles or machinery, arises. Two small storage rooms are presently on site, as well as a half built storage building. Storage facilities will be upgraded in future to accommodate increased production.

4.1.8 Housing, recreation and other employees facilities

No employees will be housed on the mining site. Ablution facilities will be provided for at the new office site. At present all such facilities are available at the existing mining office.

4.1.9 Transport

The completed blocks that is ready for sale is stored and loaded at the mining office. Buyers will use their own transport to collect the products on site.

4.1.10 Water balance

Except for the processing process, water is used for domestic purposes and possible future dust control. The mining process will have a low impact on the water balance of the area.

4.1.11 Disturbance of water courses

No watercourses will be disturbed.

4.1.12 Storm Water

With the overgrazing that takes place many areas are left bare resulting in topsoil being washed away that results in erosion furrows and holes. The area surrounding the mine is in a badly eroded state. The mining operations will not worsen the situation. Many of the erosion dongas will be filled up with mine residue, all which can help prevent further erosion. A drainage ditch will be provided on the southern extremity of the mining area to prevent any storm water from flowing to the houses in that area.

4.2 OPERATIONAL PHASE

4.2.1 Soil utilization guide

The mining area will be cleared of topsoil, which will be used in the rehabilitation process. The layer of topsoil is not very thick so quantities of topsoil is limited. The topsoil will be cleared and stored and used to rehabilitate the area after the mining process.

4.2.2 Surface layout

Figure 2 shows the layout at the mining area. Infrastructure is situated at the existing office site in town. As production increases the need for storage and service facilities will result in the construction of additional structures.

4.2.3 Mining Processing

As previously discussed, the bricks are cut and then finished and readied for the building industry by cutting them into the right sizes. This process is done by both machines and by hand dressing.

4.2.4 Mining Plant residue disposal

The residue of the mine is currently stored at the mining office and at the processing area. The residue should be removed from these areas and used to fill up the bad erosion furrows and holes occurring next to the mining area. This will reduce the visual impact and facilitate the rehabilitation process.

4.2.5 Transport

The bricks that is ready for sale is stored and loaded at the mining office. Buyers use their own transport to fetch and transport the bricks.

4.2.6 River Diversions

No river diversions will be necessary.

CHAPTER 5 : HERSCHEL SANDSTONE MINE

ENVIRONMENTAL IMPACT ASSESSMENT

5.0 ENVIRONMENTAL IMPACT ASSESSMENT

To evaluate significance and duration of expected impacts, the system as described in the DEAT (2002) Impact Significance, Integrated Environmental Management, Information Series 5 of the Department of Environmental Affairs and Tourism were used.

5.1 IMPACT RATING

High:	Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time-consuming or some combination of these. Social, cultural and economic activities of communities are disrupted to such an extent that these come to a halt. In the case of beneficial impacts, the impact is of a substantial order within the bounds of impacts that could occur.
Medium:	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible. Social, cultural and economic activities of communities are changed, but can be continued (albeit in a different form). Modification of the project design or alternative action may be required. In the case of beneficial impacts, other means of achieving the benefit are about equal in time, cost and effort.
Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural and economic activities of communities can continue unchanged. In the case of beneficial impacts, alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming.

a. Spatial Scale of Impacts

Rating	
High	Widespread Far beyond site boundary Regional/national/international scale
Medium	Beyond site boundary Local area
Low	Within site boundary

b. Intensity of Impact

Rating	
High	Disturbance of pristine areas that have important conservation value. Disturbance of rare or endangered species.
Medium	Disturbance of areas that have potential conservation value or are of use as resources.
Low	Disturbance of degraded areas, which have little conservation value.

c. Duration of Impacts

Rating	
High	Permanent. Beyond decommissioning. Long term (More than 15 years).
Medium	Reversible over time. Lifespan of the project. Medium term (5-15 years).
Low	Quickly reversible. Less than the project lifespan. Short term ()-5 years).

d. Mitigatory Potential of Impacts

Rating	
High	High potential to mitigate negative impacts to the level of insignificant effects.
Medium	Potential to mitigate negative impacts. However, the implementation measures may still not prevent some negative effects.
Low	Little or no mechanism to mitigate negative impacts

e. Acceptability of Impact

Rating	
High (unacceptable)	Abandon project in part or in its entirety
Medium (Manageable):	With regulatory controls. With project proponents commitments
Low (Acceptable)	No risk to public health.

f. Degree of certainty

Rating	
Definite	More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment
Probable	Over 70% sure of a particular fact or of the likelihood of that impact occurring. Possible: Only over 40% sure of a particular fact or of the likelihood of an impact occurring
Unsure	Less than 40% sure of a particular fact or the likelihood of an impact occurring.

5.2 OPERATIONAL PHASE

5.2.1 Geology

The area consists of mudstone and sandstone formations and mining it would cause minimal impact on the surrounding geological formations.

5.2.2 Topography and Visual impact

The visual impact is the biggest impact created by the mine. The mine would be visible from 2 directions. To the east it is visible from the



Photo 8: Side view of mine, seen from the west side. The R392 runs in the foreground. Mining will be carried on the level area on tip of the ridge.

Impact 1 : Visual Impact

Criteria	Rating	Description
Spatial Scale	Medium	The mine is visible from 2 directions. To the east it is visible from the R392 road, and from the south it is visible from the access road and the 5 residential units.
Intensity	Medium	In the direct mining area species occurrence will be changed completely. No areas of important conservation value will be changed.
Duration	Medium	The impact would be for the duration of the project with mitigating action afterwards.
Mitigatory potential	Medium	Although it would be possible to mitigate negative impacts it may still not prevent all negative impacts.
Acceptability	Medium	With regulatory controls and with the project proponent's commitments the impact will be

Certainty	Definite	proponent's commitments the impact will be manageable. The impact is there and nothing can be done to prevent it.
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Mitigation Measures :

- Mining will be done away from the edge of the high ground making it invisible from the road.

5.2.3 Soils

Impact on soils takes place within the mining area, because of the movement of heavy vehicles in this area. Compaction of soil results in the reduction of plant growth and penetration of water into the soil. For this reason it is important to restrict vehicle movement to the access roads and loading areas. To counter this ripping and hydroseeding would be necessary during the decommissioning phase.

Impact : 2 : Impact on Soils

Criteria	Rating	Description
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Spatial scale	Low	Compaction of soils only takes place within the site boundary.
Intensity	Medium	A complete change of species occurrence takes place but can be reversed except in the mined area.
Duration	High to Medium	In the mine area the change cannot be reversed. Rehabilitation can reduce the impact.
Mitigatory potential	High to Low	In the mine pit the area is forever changed but the rest of the area can be rehabilitated
Acceptability	Low	There is no risk to public health if all the safety measures related to mining are followed.
Certainty	Definite	The described impacts and potential to rehabilitate is certain.

Mitigation Measures :

- Vehicles entering the area must be guided along demarcated routes and no movement should be allowed outside of these zones.
 - During rehabilitation the vehicle parking areas as well as the access routes must be ripped and hydroseeded to allow for vegetation growth to recover.

5.2.4 Land Capability

The impact on land capability is minimal as the mine impacts a relatively small area. The permanent impact in the reduced area for stock grazing can be expressed as a reduction of about 1,5 large stock units per annum in the area. If this is compared to the benefit of the mine to the local people it cannot be considered as a factor. In the long term the opened area could be of further benefit to the local people as a water reservoir and rehabilitated grazing land.

No detailed impact analysis will be done apart from the description because of the small impact the mine will have. Mining will be a beneficial use to the local residents, as money would be paid to the local tribal authority and many jobs will be created.

5.2.5 Land Use

At present mining of the edges of the rock outcrop is taking place and this has been stopped while the application for mining is in process. Planning for future mining is to mechanize the process that would allow for more economical mining and the protection of the krantz edges. Limited grazing is taking place, but with the shallow soils and low quality grazing available stock seldom use this area.

5.2.6 Natural Vegetation

Vegetation will be lost because of the clearing of topsoil. However the area is relatively small so the impact is minimal. After the mining activities are finished the area will be rehabilitated and will again provide limited grazing possibilities.

5.2.7 Animal Life

Because of human activities very little trace of animal life were observed. The mine should have no impact on animal life.

5.2.8 Surface Water

Because of the position of the mine and the long distance to open water there is no impact on any of the open water systems.

5.2.9 Ground Water

The mining operation will have no effect on the ground water.

5.2.10 Air Quality

Dust is the only factor that can affect air quality and the mine do not have a big problem with dust because of water being used to cool the cutting blades suppressing dust on site. Spraying water on the road can contain dust on the dirt road.

Impact : 3 : Air Quality

Criteria	Rating	Description
Spatial scale	Low	Dust impact is restricted to the site itself.
Intensity	Low	Very little dust will be produced during the mining operations.
Duration	Low	Dust will only be produced during working hours.
Mitigatory potential	Medium	It is possible to implement mitigation measures.
Acceptability	Manageable	Spraying water minimizes the effects of the dust.
Certainty	Definite	Dust cannot be eliminated completely because of the nature of the operation. It will always be there, but in low quantities.

Mitigation Measures :

- * Silicoses are always a threat when working with Sandstone, because of the silicon content of the stone. Water spraying will suppress the dust and limit it to the mining area only. The workers will be given protective masks that must be worn at all times when the machines are being used.

5.2.11 Noise

The mine should not produce excessive amounts of noise. Noise will have a low impact.

Impact : 4 : Noise Pollution

Criteria	Rating	Description
Spatial scale	Medium	Noise is restricted to working hours.
Intensity	Low	Very low impact
Duration	Low	When mining stops the impact also stops.
Mitigatory potential	Medium	Noise levels cannot be reduced but is not a problem.
Acceptability	Acceptable	There is no risk to the public. Operators at the machines should use ear protectors.
Certainty	Definite	The noise is there and cannot be reduced whilst mining

Mitigation Measures :

- Noise will be restricted to close proximity of the machines. Workers must wear protective ear protectors.

5.2.12 Archaeological and cultural sites

To the east of the proposed mining area there are a few graves present. They are far from the mining area not to be disturbed by mining activities. Some old stone buildings occur just outside of the mining area and will not be impacted on by the mining activities as they are below the krantzies.

5.2.13 Sensitive Landscapes

The impact will be low, as no sensitive landscapes exist. The mine is not situated in a scarce landscape or area that is dissimilar from the adjoining areas. Although it does impact on the landscape it is not such that it warrants being moved to another site to save this specific site.

5.2.14 Regional socio-economic structures

As previously mentioned the economic activities in the surrounding area consist mostly of subsistence farming. The mine can provide job opportunities for about 20 to 30 people depending on the scale of operation that will be implemented. It is estimated that employment will start at the lower scale and increase as new markets for the stone products are found at a later stage. This number can eventually increase to above this figure in the second phase of the project. These people will be enabled to learn new skills and support their families.

Impact : 5 : Socio – Economic Impact

Criteria	Rating	Description
Spatial scale	Medium	The mine impacts only Herschel and the surrounding areas.
Intensity	Medium	Supply work for at least 20 or more people in a relatively small community.
Duration	Medium	Once the mining stops, the impact on the local economy would be immediate
Mitigatory potential	Medium	To prevent the impact of job losses alternative employment would have to be found or mining could be extended to a new site in the vicinity.
Acceptability	Acceptable	The project is needed to provide the jobs that are necessary to have a positive impact on the community.
Certainty	Definite	The mine has a definite positive impact on the local economy.

Remedial Measures :

- No remedial measures would be required as this is a positive impact.

5.2.15 Interested and affected Parties

The interested and affected parties include the local residents, the Tribal Authority, Department of Rural Development and Land Reform, and the Senqu Municipality. A meeting was held with the affected

parties and an agreement for the use of the land was obtained from the Tribal Authority. See Appendix for the letter of approval. Lease Agreement and Registration of Surveys at the Surveyor General is in Process with the Department of Rural Development and Land Reform.

5.3 DECOMMISSIONING PHASE

The mine will apply for an operating license for a period of 2 years to cover phase one of the operation. This will allow for testing to determine the extent of the sandstone ridge and plan a long-term plan for mining during phase 2. Application for a mining right would be done before the end of phase 1. There are no plans to close the mine. The importance of the mine to the local economy is high so all effort would be made to keep it open for as long as possible. It is thus recommended that a decommissioning report only be compiled once the mine applies for the mine to be closed down.

5.3.1. Residual Impact after closure

It is envisaged that there would be one possible residual impact at closure. It is erosion on the bare compacted patches of the dirt road and other places of operation. This could however be countered by a ripping and a hydro seeding program that would help to revegetate these areas.

CHAPTER 6 : HERSCHEL SANDSTONE MINE

ENVIRONMENTAL MANAGEMENT PLAN

6.0 ENVIRONMENTAL MANAGEMENT PROGRAM

6.1 LAYOUT FOR THE MANAGEMENT PLAN

This management plan sets out the work that will be required to convert the present hand mining operation to a mechanized mining operation. The scale is at present negligible and the new mine in the area as shown on figure 2 is a completely new mine.

The plan is set out in three phases as shown below. The third phase will only be implemented once the mine closes. This will only take place at a later stage as it is planned that if successful the mine will be in operation for a long time.

The phases are:

- The site preparation stage
- The operational phase
- The decommissioning phase

6.2 THE SITE PREPARATION PHASE

The following guidelines must be followed during the planning for establishment and the implementation thereof.

6.2.1 Surface Infrastructure

It will not be necessary to put up a large site office and workshop facility as these are already available at the present processing yard in town close to the mining area. It is however proposed that the container standing in the present yard be moved to the mining site to be used as store for equipment on site.

6.2.2 Solid Waste

A bin to collect any solid waste on site must be placed at the container. This will only be a small quantity, as the workers will not produce large quantities. This container must be emptied at the local municipal waste site on a regular basis.

6.2.3 Industrial Waste Disposal

The operation will not produce any industrial waste. In the event of an oil or hydraulic leak the spill must be cleared and the material placed in a sealed container for removal at a later stage by a registered company. Records of all such spills must be kept as well as certification of the removal of the waste.

6.2.4 Sewage Management

A small ablution facility with a septic tank and soakaway may be constructed at the container if deep enough soils could be found. In the event that the soils are too shallow, chemical toilets must be placed at the container, for use by the workers.

6.2.5 Portable Water Management

Potable water will be available from the Municipal supply. A tap must be placed at the container and toilet, for use by the workers.

6.2.6 Process Water Supply

Process water will be available from the tank that will be put up at the mining area. Only small quantities will be required and a 5000 liter tank will supply enough for the full operation and the workers.

6.2.7 Pollution Control Dams

Small pollution control dams will be constructed as shown to catch any outflow from the mine to allow silt and mud to settle. Figure 2 show the position of these dams. Spoil rock from the present hand mining will be used to build these structures.

6.2.8 Storm Water Control

No special storm water control measures would be required.

6.2.9 Housing and Employee Facilities

No special housing for the project would be required as workers will be from the local villages. All that would be required is a shelter for the security personnel.

6.3 THE OPERATIONAL PHASE

6.3.1 Environmental work programme during the operational phase

TASK	DETAILS OF TASK	BY WHOM
1. Clearing of the mining area	The rock to be mined has a shallow layer of soil covering it that must be removed before mining can start. The soil must be placed as shown on figures 3 and 4.1 and 4.2 for later use during rehabilitation.	Mine management in consultation with the EAP.
2. Spoil management	During the early stage of the operation there will be spoil rock that must be stored for either later rehabilitation or processing into stone products. A site must be established where this rock will be stored for later use.	EAP will point out the spoil storage area.
3. Dust Control	Regular checks must be done on the potential dust pollution created by the mining process. Control measures must then be implemented if required.	EAP will do regular checks on the situation and inform mine management about control measures if required.
4. Weed Control	During disturbance of soil weeds tend to get a hold and penetrate an area. Regular checks for weeds must be done and all plants must be removed before it gets a chance to grow seeds.	EAP must check and inform management about control measures.
5. Road Upgrade	The access road to the mine falls mainly within the Municipal boundary and serve some houses as well. The mine must apply to the municipality to have this road graveled to support the mining	The condition of the road must be monitored by the EAP together with Municipal Officials to ensure that it is in good condition and does not affect the local residents.

	operation. Within the mining area the mine would maintain the road.	
6. Check on signs of spills affecting the soil.	Vehicles being used to transport the cut rock may leak oil and diesel. Spills must be removed to avoid hydrocarbons entering the soil. Regular checks for this must be done by management.	EAP as well as management at the mine must check.

6.3.2 Mining Work Programme during the Operational Phase.

6.3.2.1 Mine Plans

Maps 1 and 2 show the position of the mine from both a Regional as well as a Local perspective. Figures 1 to 7 show the mining area in detail as well as cross-sections indicating the mining procedure.

6.3.2.2 The Existing Situation

The potential mining area is as shown on figure 1. This area is much larger than required and only an area of 1,5 ha has been demarcated as shown on figure 2 for the mining permit application. This area has never been mined before. The area has only shallow soil covering the rock formation below and would not need much preparation for mining to start.

An access road to the site already exists and is shown on figures 1 and 2. This road must be upgraded once mining starts to allow for the expected increase in traffic when mining is expanded.

6.3.2.3 Future Development

The mining area set out consists of a solid rock formation suitable for mining. Previous small-scale hand mining proved that the rock is of

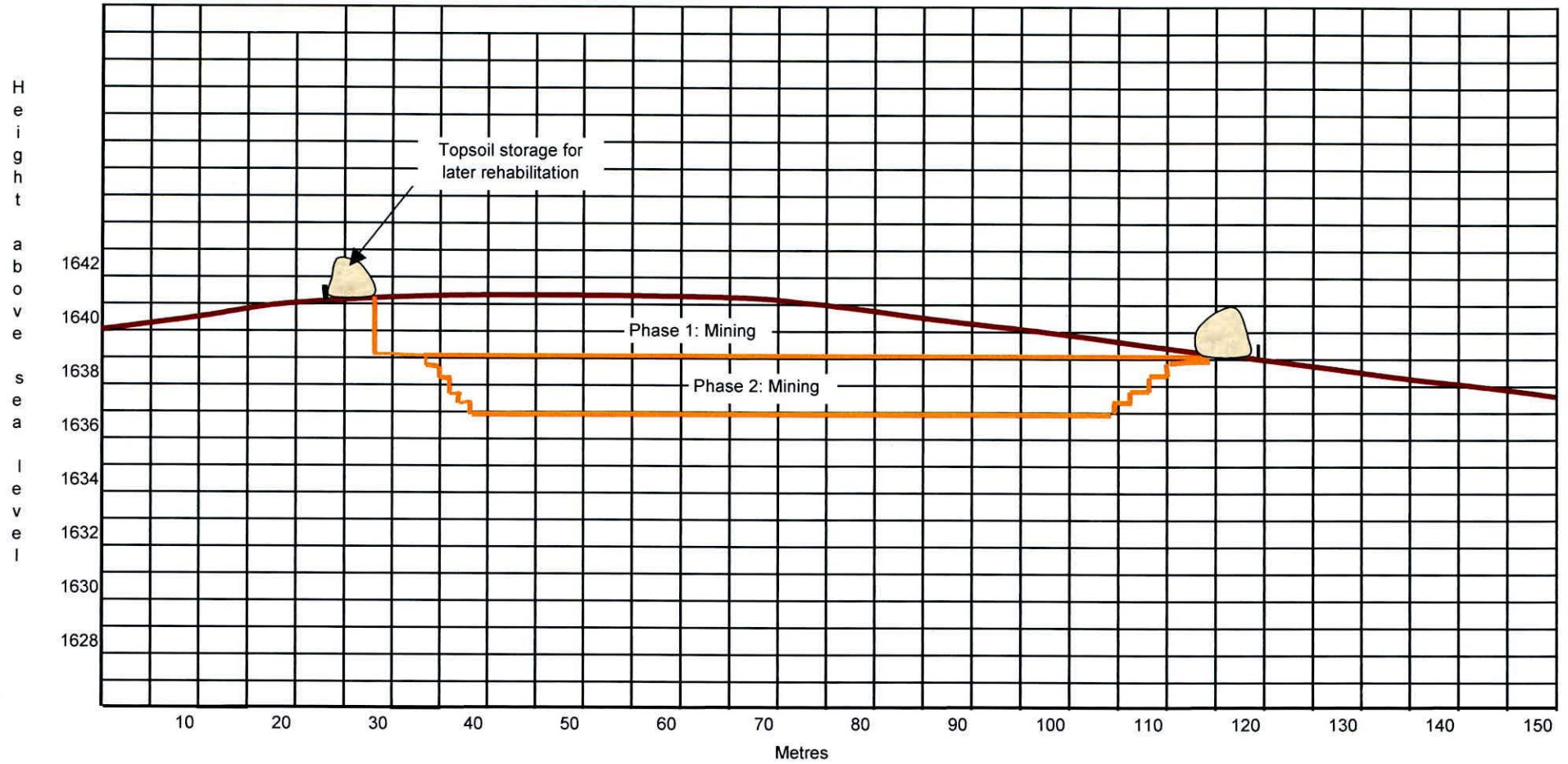
suitable quality for building blocks, cladding and other building material required by the market.

Mining will be done by a mechanized saw, running on rails, making a vertical cut as shown in the photo series below. The photo's are from a similar mine in Lesotho and show the clean operation with limited waste.

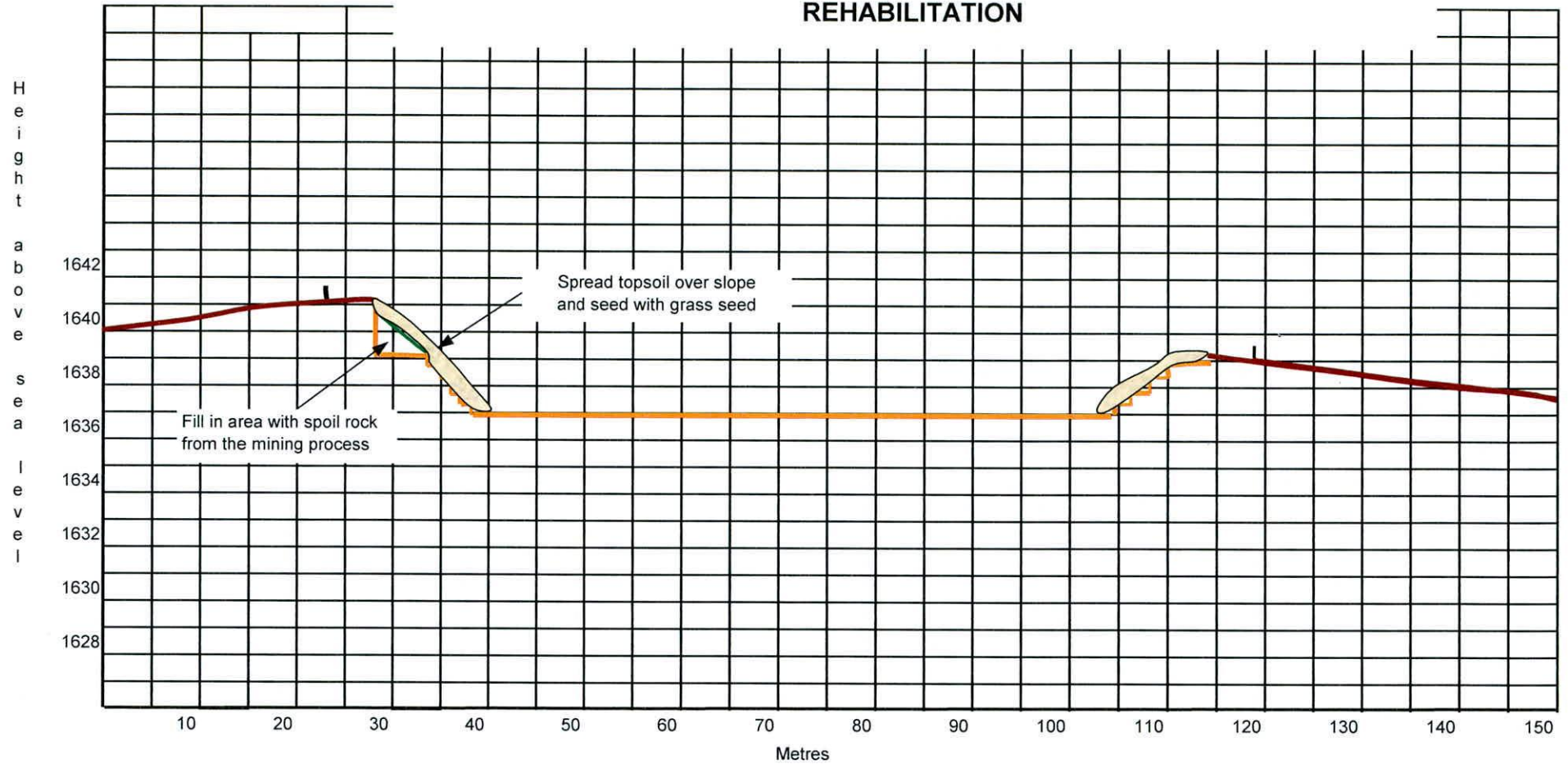
It is planned to start on a small scale as Mr Qina a local entrepreneur cannot afford a big operation right from the beginning. A report in Appendix A setting out the Financial and Technical Competence as well as Mine expansion plans for the long term is attached. With this in mind the mine plan is done in a way that allows for a gradual increase in production and cash flow. This will then allow Mr Qina to qualify for either an external loan or grant from the European Union or another financial institution.

For mining to get underway the following tasks will have to be carried out as shown in the table below:

FIG: 3.1 : HERSHEL SANDSTONE MINE : CROSS-SECTION AA :

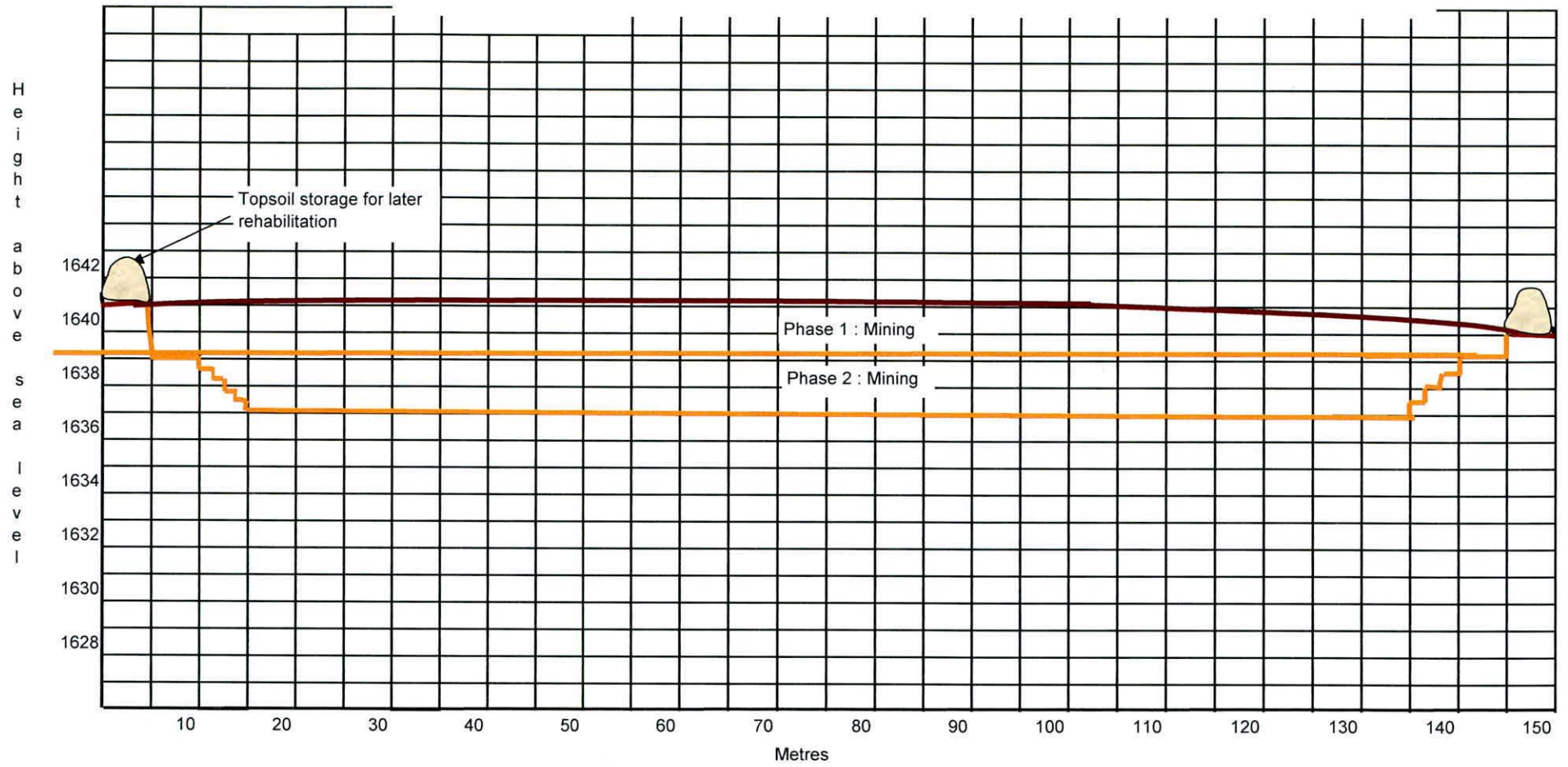


**FIG: 3.2 : HERSCHEL SANDSTONE MINE : CROSS-SECTION AA :
REHABILITATION**

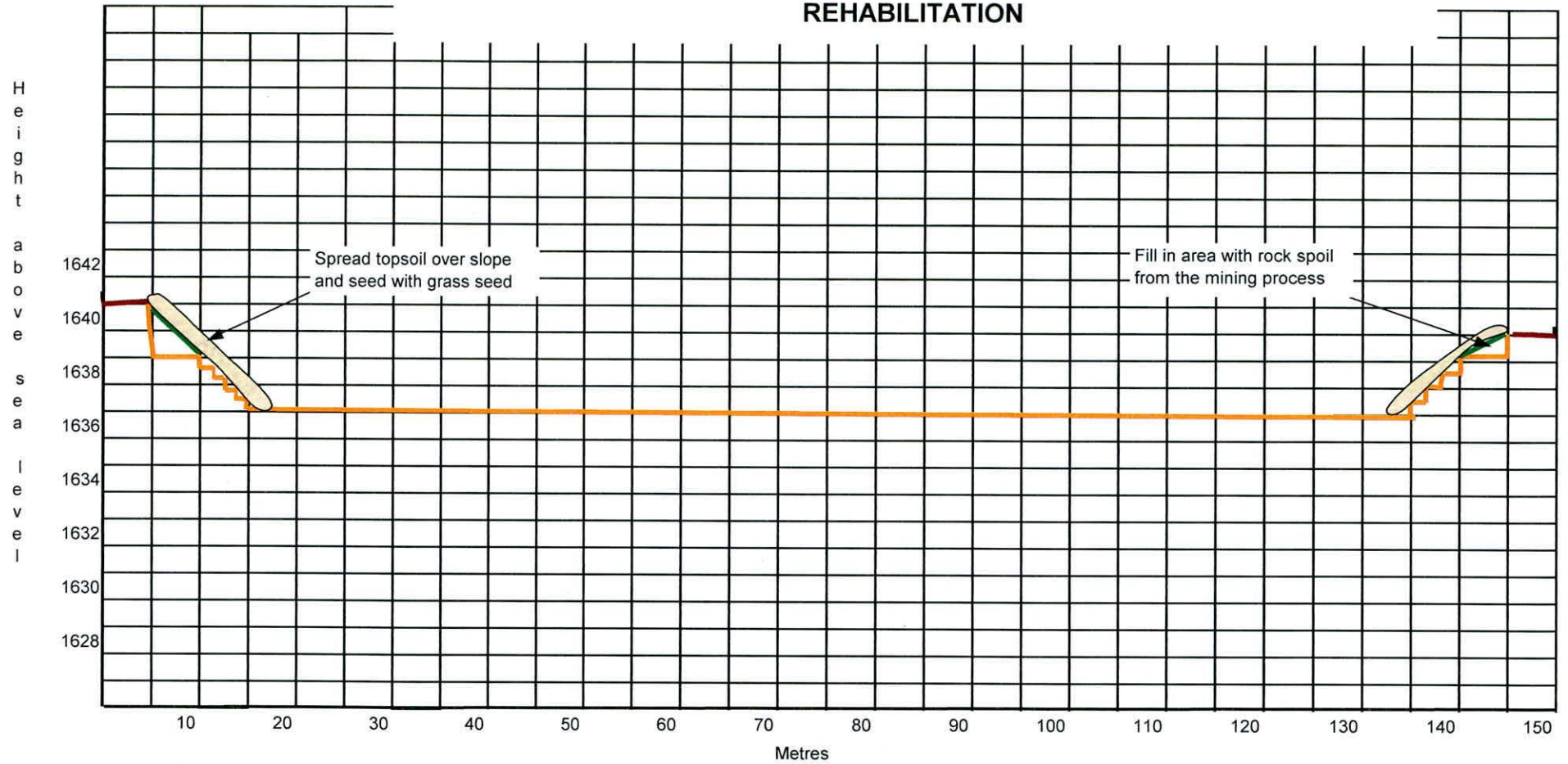


Floor of existing borrow area

FIG: 4.1 : HERSCHEL SANDSTONE MINE : CROSS-SECTION BB



**FIG: 4.2 : HERSCHEL SANDSTONE MINE : CROSS-SECTION BB :
REHABILITATION**



TASK	WORK TO BE DONE
1. Clearing of the mining area.	The thin layer of soil covering the rock must be removed and stored on the edge of the mining area that had been demarcated by the EAP. Figures 3 to 7 show this procedure.
2. Demarcating the access route to the mining site.	The access route is not clear and vehicles can drive anywhere at present. The route must be clearly marked and a parking/waiting area demarcated to avoid vehicles using different routes to get to the mining area and back.
3. Fencing of the Mining Area.	Because the mining area joins onto the Municipal Boundary and is relatively level it is under threat from squatters who do not want to fall inside the Municipal Boundary, but wants to be close to the village. For this reason the mining area must be fenced off to keep such people outside and away from danger.
4. Removal of blocks.	The cut blocks must be stockpiled on the side of the mining area before transport to the processing yard. This must be done inside the mining area and not outside the boundaries.
5. Construction of silt dams.	Storm water will not be a problem at this mine as it is at the top end of the catchment. There are however runoff from the water used on the cutting blade as well as rainwater falling in the mine that wash out the fine sand layer that accumulates in the mine. These will be placed in the runoff area below the mining area.

6.4 DECOMMISSIONING PHASE

6.4.1 Environmental work programme during rehabilitation

TASK	DETAILS OF TASK	BY WHOM
1. Final Rehab Plans.	Before rehabilitation takes place a final plan for rehabilitation must be discussed between the EAP and the mine management.	EAP and mine management.

	This must be done in time before cessation of the mine operation and submitted to DME as part of an application for closure.	
2. Site inspection during rehabilitation.	During the rehabilitation process the work must be inspected to ensure that it is done according to the plans.	EAP and mine management.
3. After Care	Mine Management will be responsible for aftercare for at least a year to ensure that no weeds establish on the rehabilitated area and that there is no erosion taking place.	Mine Management.
4. Final Closure	After one year the EAP will compile a final closure application to DME if everything is found to be in order. This is to allow for final release of warranty money	EAP

6.4.2 General Guidelines during Rehabilitation

The following guidelines are to be followed during the rehabilitation of the mine. Mine Management must comply to obtain a closure certificate and the release of the warranty money.

- Mining and rehabilitation of mining areas should where possible take place concurrently.
- Mining waste material must be brought in and placed on the steps shown in figures 6 and 7. This will assist in holding the topsoil that will be spread over the slopes created by the mining.
- Topsoil can be upgraded with the addition of manure and/ or inorganic fertilizers to improve the chances of grass seed establishing on the slopes.
- All temporary and any permanent structures must be removed and the material can be used on the steps as infill or must be removed from the mining area.

- An anti weed programme must be implemented to ensure that all weeds are removed before seeding. This must carry on for the duration of the after care period of 1 year.
- Stock pile areas or any other disturbed areas that resulted, because of the mining process must be rehabilitated to it's original state.
- Should any other environmental damage be detected, that in the opinion of DME is the result of mining or any process associated with mining, then the mine shall be liable to make good that damage to the satisfaction of DME.

An estimate of potential rehabilitation costs is included in the Financial Competence report in Appendix A. Provision for the cost as warranty must be negotiated with DME. It is proposed that a monthly levy be paid till the amount is paid up to the satisfaction of DME.

CHAPTER 7 : HERSCHELL SANDSTONE MINE

CONCLUSION

7.0 CONCLUSION

The mine has an important role to play in the community. Closure should be avoided because of the importance of the mine to the economy. The potential exists to expand the operation into a major industry in the area that would provide many jobs in an otherwise poor area.

APPENDIX A

FINANCIAL AND TECHNICAL COMPETENCE

1. TECHNICAL COMPETENCE

The Herschel Sandstone Mine has been in operation for about 10 years as a hand operated operation. The mining process used was very slow and because of a drastic increase in demand for the stone produced here, it has become necessary to mechanize the operation to be able to satisfy the demand.

As a first phase it is planned to buy machines to do the cutting of stone that will immediately push up production from the present about 1000 stones per month to about 30 000 per month. This figure will only be reached after a while. Not only will it make the operation more economical, but it will also provide 20 - 30 jobs to many locals in an area where work is not available.

Technical competence has to do with the personnel implications required to conduct the proposed mining. The technical competence is demonstrated by the completion of the following table.

Technical Competence Cost Forecast within 2 years.

Skills Category	Staff	Monthly Salary		
Mine Manager	1	10 000	R10 000	R120 000
Production Manager	1	6 000	R 6 000	R 72 000
Operators of Cutting Mach.	4	3 500	R14 000	R168 000
Stone dressers	6	2 500	R15 000	R180 000
General Labour	6	1 500	R 9 000	R108 000
Security	3	1 500	R 4 500	R 54 000
Non permanent				
Financial Manager	1			R10 000
Environmental cons.	1			R10 000
Health and Safety cons.	1			R10 000
Total per year				R 732 000

Bonus excluded – depend on performance.

2. ABILITY TO MITIGATE AND REHABILITATE RELEVANT ENVIRONMENTAL IMPACTS

REHABILITATION

Rehabilitation fund to be negotiated with DEDEA.

Preliminary operational rehabilitation costs

Operational activities	Potential Impacts	Impact Mitigation measures	Quarterly Costs
Topsoil removal	Surface Disturbance and veg. loss Dust	Very shallow soil with overgrazing. Re-use soil for rehabilitation Isolated location – not required	R2 500
Hydraulic cutting machine	Noise Dust Silt	Isolated location – not required Isolated location – not required Silt Dam packed with stone	R5 000
Stockpiling of product	Surface disturbance Noise Dust	Previously disturbed area None none	-
Loading of product	Noise Dust	None required – load during day Water cart wetting	R1 000
Access road to site	Noise Dust	None required - load during day Water cart wetting	R5 000
Conduct EPA annually	Consultant cost		R10 000
TOTAL			R23 500

Decommissioning rehabilitation costs as follows:

COSTING OF REHABILITATION PROVISION FOR SANDSTONE MINE				
		Units	Rate	Cost
1	Fencing to safeguard the area			0
2	Removal of site office and structures:			10 000.00
2.1	Demolish all brick structures			0
2.2	Removal of loading ramp			0
2.3	Removal of plant and concrete structures			0
2.4	Removal of foundations and footings			0
2.5	Removal of pipelines and cables			0
2.6	Removal of bunds and decontamination			0
3	Ripping and scarify compacted areas			
4	Top soiling faces and spoil area 8500x0,3			40 000.00
5	Hydroseeding of disturbed areas			15 000.00
6	Prepare storm water management system			10 000.00
7	Assessment by EAP			10 000.00
8	AFTERCARE:			
8.1	Maintain storm water system			5 000.00
8.2	Remove Alien vegetation			5 000.00
8.3	Re-seed if necessary			10 000.00
8.4	Final Assessment			10 000.00
	Sub Total			105 000.00
9	Contingencies(10%)			10 000.00
10	Final Plan if new plan is required			20 000.00
	Sub Total			125 000.00
	TOTAL			R 125 000.00

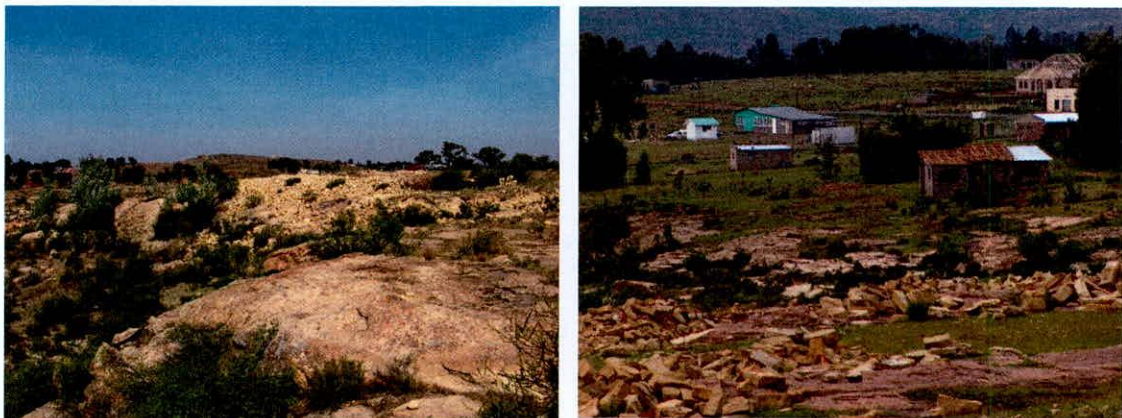
This amount for rehabilitation will be applied for through DEDEA to the Industrial Development Corporation.

3. FINANCIAL COMPETENCE

CURRENT BUSINESS INFORMATION

3.1 CURRENT OPERATIONS

At present Mr Qhina has two and sometimes six persons cutting stone by hand from the source situated about 1km from his processing area. These areas are shown on the photo's below. The processing area is fairly large and does have electricity. On the site is a closed shed with an office. There is also a steel frame that needs a roof as well as a small staff room. There are two table operated saws for cutting blocks and bricks. Dressing of the bricks and blocks are also done at this site.



Photo's: 9 & 10 : The photo on the left shows the mining area. The solid rock formation can be seen where the machines will be cutting blocks to be further processed at the yard seen on the right hand photo. The green building is the shed in the processing yard as seen from the mining area.

3.2 CURRENT PRODUCTS

At present mainly two sizes of bricks and blocks are produced. These are the normal brick size with one face dressed and a bigger block of about 450mm x 140mm x 110mm. One side of these blocks are dressed. Cladding and Tiles are made on a small scale, as well as the sale of stone off cuts.

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3.3 SOCIAL RESPONSIBILITIES

At present the operation is too small to be able to have any social responsibilities, except for job opportunities and a payment to the Tribal Authority, as per agreement. As soon as production starts, more job opportunities and training in the art of stonemasonry will be created in the community. It can also attract tourist to view the art of stonemasons.

4.0 DESCRIPTION OF THE EXPANSION PLAN

4.1 INTENTION OF THE COMPANY

To make the operation a viable proposition it will be necessary to expand and mechanize the operation. Demand for stone has increased and to be able to supply, mechanization is imperative. The hand operation is very wasteful and environmentally unacceptable making mechanization the only option.

As a start the same area will be mined and the existing processing yard will be rearranged to cope with the bigger demand. The processing will be shifted to the mining area as soon as electricity can be supplied to the mining area and the yard will then only be used for stockpiling and the display of products.

4.2 PROPOSED PRODUCTS

The range of products will be increased to that required by the market. A list with prices of products produced by the opposition mines from Lesotho is included as an Appendix. This will lead to new markets and higher production and increased profits.

As a start stone cladding of various sizes will be produced. For this a machine cutting 5 tiles at a time will be introduced to produce this product.

The existing bricks and blocks for construction purposes will be continued to be produced as there is a continuous demand for these products.

All off cuts will be reworked into various products that are becoming popular for garden walls and infilling into walkways. The trend is to cover larger areas as water is becoming scarcer and more expensive. This will also assist in getting rid of unwanted material in the yard.

4.3 RAW MATERIALS REQUIRED FOR PRODUCTION

The Herschel area has large quantities of sandstone resources ranging from the Elliot, Molteno and Clarens sandstone deposits. They all vary in colour and hardness. It is envisaged that eventually all these deposits be exploited providing raw products for a very long time into the future. Approval for the mining area has been obtained from the local tribal council.

4.4 COST OF THE PLANNED PROJECT

CONTRIBUTION FROM THE OWNERS

a. Plant and Equipment:

Table saw	R 36 500-00
Multiblade Cutting Machine	R 17 900-00
Mine Cutting Machine plus support equipment	R186 913.26
Furniture Computer & Equipment	R 20 000-00
Tools	R 25 000-00
Spares	<u>R 30 000-00</u>
Sub Total	R316 313.26

- * The owner Mr. Quina has build a homestead made of the sandstone bricks produced at his mine. This property is situated across the road from the mine. This serves as an advertisement for his business. It could also be used as an office for the manager and a display area for the different sandstone products.
- * A shed that consists of a big storage area with sliding doors and a small office and toilet facilities are already at the processing site.
- * A single room for staff / security is on site.
- * Toilet facilities for staff already exist.

- * A water tank on a stand and linked to the Municipal is already there. This ensures some supply to the cutting machine in the event of a water cut. This emergency supply will be increased with the extra cutting machines that will be installed.
- * A steel shed frame is already up and will be finished with a roof to allow for work to continue in the event of bad weather.
- Two saws on a table to cut stone into sizes.
- One Toyota Bakkie.
- Electricity is already at the processing site, and an application has been submitted at Eskom for an extension to the line.

A Small Business loan is being applied for of plus minus R200 000.00 to purchase a medium size - electrical, horizontal and vertical cutting machine that runs on rails. The rest of the loan will be used for running costs and salaries.

4.5 LOAN VALUE

Herschel Sandstone Mine is busy applying for a Loan from the Small Business section at Standard Bank and will apply for a grant/loan from EU during 2010 for an amount of R3 000 000.

4.6 VALUE OF EU FINANCING TO BE USED FOR:

Plant and Equipment	R 1 500 000-00
Factory Building	R 250 000-00
Working Capital	R 700 000-00
Security Fence	R 120 000-00
Office and other equipment	<u>R 50 000-00</u>
	2 620 000-00
Vat @ 14%	<u>366 800-00</u>
	R2 986 800-00

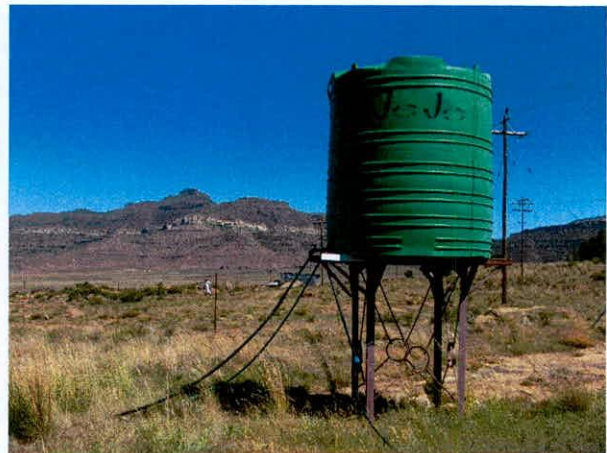
4.7 ADDITIONAL JOBS

The estimated additional jobs that will be created will vary according to production levels. With the planned production at the start of mining an additional 20 - 30 jobs will be created.

4.8 SITE OF THE PROJECT

The mining will take place just outside the town of Herschel while processing will take place at the existing site just within the town of Herschel.

The photo's below show the existing infrastructure at the mine that will be contributed by the owners.



Photo's:11to 14: Pictures of the existing infrastructure in the processing yard in Herschel. Mr. Qhina also has a Light Delivery Vehicle in good condition that will be available to support the operation.



Projected – Cash flow Statement 2010 -2014

	2010	2011	2012	2013	2014
Sales	R1 400 000	R1 600 000	R2 000 000	R2 520 000	R4 470 000
Small Business Loan Loans& Grants Will apply for loan with EU	200 000		3 000 000		
TOTAL RECEIPTS	1 600 000	1 600 000	5 000 000	2 520 000	4 470 000
CASH PAYMENTS					
Equipment Purchase	200 000	100 000	1 736 200	300 000	1 000 000
Loan Repayments	50 000	50 000	500 000	120 000	200 000
Telephone & Fax	24 000	26 000	28 500	30 000	34 000
Electricity	36 000	38 000	45 000	60 000	85 000
Transport	38 000	40 000	50 000	75 000	90 000
Repairs and Maintenance	40 000	42 000	60 000	85 000	100 000
Salaries and Wages	732 000	660 120	700 000	900 000	1 100 000
Community Royalty	36 000	39 600	100 000	120 000	360 000
Interest	36 000	38 000	42 000	50 000	65 000
Purchase Vehicle			600 000	220 000	250 000
Office and other Equipment	20 000	35 000	100 000	40 000	60 000
Working Capital	200 000	250 000	400 000	420 000	500 000
			Rehab	Rehab	Rehab

Security Fence	120 000		20 000	25 000	100 000
TOTAL PAYMENTS	1 532 000	1318 720	4 381 700	2 445 000	3 944 000
Bonuses and Directors Profits	68 000	81 280	218 300	75 000	526 000
TOTAL	1 600 000	1 400 000	4 600 000	2 520 000	4 470 000

CHAPTER 5 : MARKETING INFORMATION

5.1 SIZE OF MARKET

At present stone products are becoming popular and enquiries from architects and engineers show that not enough stone products are being produced within the country. A survey of companies selling stone products in East London indicated that most of them do not actively market local stone products because of a shortage of stock. One supplier in East London - Natural Sandstone, has a truck driving to Lesotho once a week passing Mr Qhina's site to fetch stone for his business.

The main stone product supplier that negotiations have been held with is Out of Africa Stone. This company based in Johannesburg has opened showrooms in most of the major cities of the country. At the moment Out of Africa Stone cannot quote on many development projects, as they cannot supply enough stone. They indicated that they would take whatever stone Herschel Sandstone Mine can produce. An order for 8000 sq m of cladding stone for the expansion of the Tiffendale Ski Resort, that is very close to Herschel, will be placed if the mine can produce 1000 sq m per month. This will be possible if a loan can be secured.

Out of Africa Stone is taking 500 sq m per week from the Chinese in Lesotho for one project in Johannesburg that is taking 14 000 sq m of product. The company has 90 stonemasons working on just this one project.

Investigations at natural stone suppliers in East London show that the majority do not stock and display natural stone from South Africa because of a problem obtaining stock. If samples are supplied and stock guaranteed, they will display the product. As companies are

reluctant to supply sales figures it is difficult to determine an exact market. Enquiries at the three Lesotho mines show that they cannot cope with the demand at present. Maluti Sandstone in Qwa Qwa who supplied about 80% of their production to Kwazulu Natal and 20% to Johannesburg have just closed down due to one of the partners disappearing with funds. They produced up to 4000 sq m per month and could not keep up. This production is now lost to the market creating an even greater demand.

5.2 ADVANTAGES OVER COMPETITORS

The position of the Herschel Sandstone Mine places it in a competitive position being in the centre of the country. It is the closest to the coast and situated close to the main transport routes. Although further away from the Johannesburg market it can still supply that market at competitive prices when there is a shortage of supply.

5.3 EXISTING AND FUTURE CUSTOMERS

At present stone is only supplied to cash buyers at a small scale because of a capacity problem. This will however change if machines can be brought in to greatly increase production.

In the event of getting a loan to purchase machines and establish a mine, negotiations have been held with two companies. They are:

a. OUT OF AFRICA STONE

Here we have been dealing with Mr Chris Macpherson from the Johannesburg office. His contact details are: Telephone 011 – 464 1866

Attached is a copy of a letter indicating his willingness to support the mine. A new request had been received to supply 8000 sq m of stone to the Tiffendale development in the Barkly East District.

Prices for this material at the Lesotho Mines is R136-00 per sq m giving a total income to the mine of R1 088 000. If this contract can be secured because of obtaining a loan it would help the mine to get established much quicker than anticipated.

b. ENDEAVOUR LOGISTIC CC (Natural Sandstone)

This supplier of stone is established in East London and get his stone from Lesotho. Mr John Ashbey is the owner. His contact details are:

Tel 043 740 3285

Cell 082 659 8279

Mr Ashbey wants to become a permanent customer of Herschel Sandstone Mine as it would save him 600km per trip to collect his products. Talks are underway with him to see what the possibilities are of supplying him in East London and that he then uses his truck to supply builders and other markets along the coastal towns.

Further markets will be investigated once a loan can be secured and the mine is established.

c. Stone Connections – Bloemfontein

This Company is operating from Bloemfontein and delivers stone to Johannesburg and Cape Town markets. They are also involved in the granite industry.

The contact person is Mr. Conradie - 0836781881.

5.4 MAIN COMPETITORS

There are three sandstone mines to the Northeast of Maseru. There are also many smaller producers such as Mr Qhina in Lesotho, but they are unreliable to place big orders with. There is also a mine in Qwa Qwa supplying mainly the Kwazulu Natal region (80%) and Johannesburg (20%). This mine is now closed and it is not certain when it will come into operation again. These are the only major competitors in the country.

At present most natural stone companies import stone from India and Turkey. South African stone must be marketed at competitive prices, but must be available to the markets. The market is big and can be penetrated if marketed properly.

IDENTIFICATION

Applicant must sign and date this financial and technical competence report.



Signature

16 FEB 2010

Date

LE SHINA

Print Name

OWNER

Capacity

APPENDIX B
PUBLIC PARTICIPATION

051 6341541

HLUBI TRADITIONAL - AUTHORITY
Private Bag X5001
STERKSPRUIT
9762

Date: 10.11.2009

Enquiries : Z. Siboto
Tel: 0747819040
Fax: 051-6110034/42

Department of Minerals and Energy
Private Bag X6076
PORT ELIZABETH
6000

APPLICATION FOR : HERSCHEL SAND STONE MINE BY LEHATSA
JANTJIE QHINA ID NO 3711085137085 AT HERSCHEL ADMINISTRATIVE
AREA NO 2 IN HERSCHEL DISTRICT.

This is to confirm that the supra cited application at Herschel
Administrative Area (Tugela) No 2, was unanimously recommended by
the Hlubi Traditional Authority at its meeting held on 09.10.2008
Councillor B.R. NGAMLANA proposed the approval and he was seconded
by N.H. BINZA.

This is to confirm that the previous approval letter dated 9 October 2008
is still valid.

This Authority hopes that the said application will be favorably
considered.

Your co-operation will be highly appreciated.

This has been approved by head of Authority :

Traditional Secretary :

Traditional Councillor : 1.

2.

3.

HLUBI TRADITIONAL COUNCIL
2008 -11- 10
STERKSPRUIT 9762

Z. Siboto
B.R. NGAMLANA
N.H. BINZA
E.H. MASIZA
A.N. SKUSOBONE

Dispatch Media

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 Telephone: 043 702 2000
 Telefax: 043 743 8768

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TAX INVOICE / STATEMENT
 VAT NO : 4210133213

Reg. No: 1952/003139/06

LANDPLAN
 P O BOX 794
 ALIWAL NORTH
 5530

BANK DETAILS:

STANDARD EAST LONDON
 081082207
 050021

VAT Reg No: LA103U
 Account No: 302200
 Tax Invoice No: 30/09/2007
 Date : 30/09/2007
 Page : Page 1 of 1

Date of Ins Add No	Doc No CI No	Client Name Caption	Pub Unit/Size	Cat Rep	Pos Col	Rate/Unit Excl Vat	Gross Charge	Sundry Excl Vat	Vat	Total	Settlement Discount	Total Including Vat
2008 / 6		BALANCE BROUGHT FORWARD						766.08		766.08		
		TOTAL OUTSTANDING					0.00	766.08		766.08	0.00	0.00
Queries: DELYS ROBERTSON							129 Days & over	90 Days	60 Days	30 Days	Current	Total Due
Tel: Fax: Email:							0.00	0.00	0.00	766.08	0.00	766.08
PLEASE QUOTE ACCOUNT NUMBER WHEN PAYING												

NOTICE OF MEETING

Notice in terms of interim protection of informal Land Right Act No. 31 of 1996 and in terms of Communal Land Rights Act No. 11 of 2004.

Residents of Senqu Local Municipality in the Tugela Administrative Area are invited to a Public Meeting to take a Community Resolution in favour or against the Sandstone Mine Project at Herschel on **Thursday, 29th March 2007 at 10:00.**

For more information please contact **Mr H. le Roux at (043) 740 0738.**

H03711

APPENDIX C
CADASTRAL INFORMATION

Herman Le Roux

From: "Brian Von Der Decken" <brianvdd@smithtabata.co.za>
To: "Hermann le ROUX" <tolherberg@xsinet.co.za>
Sent: 21 October 2009 01:52 PM
Attach: Farm Tugela 77.pdf; SG1629_2004 1.TIF; SG1629_2004 2.TIF; SG1629_2004 3.TIF
Subject: FARM 77 HERSCHEL

Smith Tabata Inc

Attorneys, Notaries, Conveyancers & Administrators of Estates
Smith Tabata Building, 57A Western Avenue, Vincent, East London
P O Box 11146, Southernwood, 5213
Docex 80, East London
ALSO IN KING WILLIAM'S TOWN, QUEENSTOWN & MTHATHA

Attached find a deeds office search of Farm 77 Herschel – it does not give any information and a physical search at the deeds office might be required. Attached also find the diagram for the farm – it confirms that it is unregistered state land.

Our associate in Umtata is Brezh Sharpley – tel: 047 5312991 if you need someone to go to the Umtata Deeds Office.

The Umtata Registrar of Deeds is:
NW Mantanga
Private Bag X5040 Umtata 5099
Telephone: (047) 531-2150 Fax (047) 531-2873

*Enquiries : Brian von der Decken
Tel : 043-705 7387
Fax : 086 676 1300
e-mail : brianvdd@smithtabata.co.za*

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SIDES		ANGLES OF DIRECTION		CO-ORDINATES	
Metres				Y System: WG 27° X	
Constants:				0,00	+3300 000,00
AB	208,73	238 41 00	A	-14 688,22	+85 633,92
BC	221,79	222 59 20	B	-14 680,97	+85 720,27
CD	2 048,86	232 08 45	C	-15 012,20	+85 558,04
DE	38,93	223 30 10	D	-16 628,35	+84 301,97
EF	23,33	223 50 20	E	-16 655,15	+84 273,73
FG	402,66	224 44 40	F	-16 671,31	+84 256,90
GH	186,98	224 46 30	G	-16 954,78	+83 970,90
HJ	295,24	225 09 20	H	-17 086,47	+83 838,16
JK	327,28	214 21 00	J	-17 285,60	+83 629,96
KL	325,97	214 35 20	K	-17 480,46	+83 359,78
LM	420,19	221 08 40	L	-17 665,49	+83 091,40
MN	1 027,36	233 00 00	M	-17 941,66	+82 774,97
NP	67,45	244 47 20	N	-18 782,45	+82 156,69
PQ	494,23	256 01 30	P	-18 623,48	+82 127,96
QR	863,74	246 17 40	Q	-19 303,07	+82 008,59
RS	65,87	235 08 00	R	-20 112,24	+81 653,28
ST	474,46	235 43 20	S	-20 166,29	+81 615,62
TU	1 019,07	239 56 28	T	-20 558,34	+81 348,40
UV	369,75	352 48 40	U	-21 440,35	+80 637,96
VW	66,73	12 31 20	V	-21 486,63	+81 204,80
WX	1 323,95	357 39 52	W	-21 472,17	+81 269,94
XY	1 213,08	347 27 16	X	-21 526,12	+82 592,79
YZ	713,56	10 56 50	Y	-21 789,91	+83 776,88
Z A1	3 657,04	352 36 09	Z	-21 854,10	+84 477,46
A1B1	403,91	10 13 50	A1	-22 124,94	+88 104,05
B1C1	6,79	34 52 30	B1	-22 053,21	+88 501,54
C1D1	1 323,79	10 30 29	C1	-22 049,33	+88 507,11
D1E1	56,53	28 51 50	D1	-21 807,90	+89 808,70
E1F1	1 200,40	7 48 45	E1	-21 780,62	+89 858,21
F1G1	753,27	24 30 40	F1	-21 617,44	+91 047,47
G1H1	193,19	4 44 50	G1	-21 304,92	+91 732,85
H1J1	880,59	30 24 20	H1	-21 288,93	+91 925,37
J1K1	496,46	50 53 00	J1	-20 843,26	+92 684,85
K1L1	2 780,27	97 08 11	K1	-20 458,66	+92 997,45
L1M1	2 596,90	110 31 28	L1	-17 719,97	+92 654,54

The figure ABCDEFGHJKLMPQRSTUVWXYZA1 B1 C1 D1 E1 F1 G1 H1 J1 K1 L1 M1 N1 P1 Q1 R1 S1 T1 U1 V1 W1 X1 Y1 Z1 A2 B2 C2 D2 E2 F2 G2 H2 J2

represents 6 305,7478 hectares of land being the farm TUGELA 77

Situated in the Senqu Municipality
Administrative District: Herschel
Province: Eastern Cape

Framed in terms of Section 16 of Act 8 of 1997 in March 2004 by me

A.P. de Waal
Professional Land Surveyor
S.P. DE WAAL PLS 0162

This diagram is annexed to No.	The original diagram is	File Herschel 77
d.d.	S.G. No.	S.R. Framed
l.f.o.	Transfer Grant	G.P. Comp. TR6 & TR75
Registrar of Deeds		STATE SURVEY LPI C0920000

SIDES		ANGLES OF DIRECTION		CO-ORDINATES	
Metres				Y System: WG 27° X	
Constants:				0,00	+3300 000,00
M1N1	215,90	115 15 00	M1	-15 287,91	+91 744,04
N1P1	354,44	107 11 20	N1	-15 082,64	+91 651,95
P1Q1	179,78	121 14 00	P1	-14 754,03	+91 547,20
Q1R1	1 037,85	173 21 24	Q1	-14 600,31	+91 453,98
R1S1	694,73	158 58 00	R1	-14 460,24	+90 423,11
S1T1	692,69	188 44 10	S1	-14 247,54	+89 875,79
T1U1	330,75	247 58 50	T1	-14 352,74	+89 191,13
U1V1	807,69	277 02 54	U1	-14 659,37	+89 087,14
V1W1	1 864,69	271 20 20	V1	-15 480,96	+89 166,25
W1X1	1 639,02	162 07 45	W1	-17 325,14	+89 209,82
X1Y1	1 083,14	85 53 03	X1	-17 388,03	+87 571,93
Y1Z1	631,48	230 24 20	Y1	-16 305,88	+87 649,67
Z1 A2	131,25	111 37 10	Z1	-16 792,28	+87 247,19
A2B2	308,71	72 23 50	A2	-16 670,26	+87 198,83
B2C2	129,24	11 07 50	B2	-16 376,01	+87 292,19
C2D2	401,21	51 44 00	C2	-16 351,06	+87 416,99
D2E2	372,16	86 13 20	D2	-16 036,06	+87 667,46
E2F2	585,70	85 48 06	E2	-15 664,69	+87 692,00
F2G2	211,54	102 24 30	F2	-15 080,56	+87 734,68
G2H2	1 097,49	166 38 13	G2	-14 873,98	+87 689,42
H2J2	245,98	190 28 50	H2	-14 601,71	+88 626,23
J2 A	552,12	184 21 10	J2	-14 646,31	+88 384,35
INDICATORY DATA:					
a Z1	12,06	291 37 10	a	-16 781,07	+87 242,75
b A2	28,01	291 37 10	b	-16 644,23	+87 188,51
d D2	21,46	51 44 00	d	-16 052,91	+87 854,18
HERSCHEL NE 78		Δ	-16 803,06	+86 654,30	
VASSIT 85		Δ	-20 180,44	+83 129,53	

Description of Beacons

- A, C, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Z, A1, F1, H1, J1, M1, N1, P1, Q1, R1, S1, H2, J2, a, b, d, B2, C2
- B, G1
- D, E, F
- G, Y, B1, C1, D1, E1, G2, U1
- K1, L1
- T1
- X1, Y1
- Z1, A2, D2
- E2
- F2, V1, W1
- 16mm iron peg and cairn
- 12mm Hole in rock and cairn
- Iron standard in rock
- Iron standard and cairn
- 25mm Pipe in concrete pillar 300mm square, 600mm high
- 12mm iron peg and cairn
- Wooden fence post
- Not beaconed
- 75mm Hole in rock
- Planted stone

S.G. No.
1629/2004
Approved
[Signature]
for
SURVEYOR-GENERAL
2004.05.12

APPENDIX D

COMPANY AND MEMBER DOCUMENTATION

GEREGISTREERDE WOU- en POSADRES

1. Daar waar 'n wyys van 'n GEGEGISTREERDE WOU- en POSADRES in 'n sakkie.
2. Indien u van adres verander het, of indien besonderede van u huidige adres, w. naam en/of -nommer, ens. verander het, moet die vorm KENNISGEWING VAN ADRESVERANDERING, wat in die sakkie agter in die identiteitsdokument, gebruik word om te veranderings aan te meld en moet dit ingedien word by of gopos van die naaste streek- of distrikantoor van die DEPARTEMENT VAN BINNELANDSE SAKE.

POSTAL ADDRESS

REGISTERED RESIDENTIAL AND

address, or if particulars of your residential and/or postal address change, the ADDRESS form in the document should be used to register the change.

I.D.No. 371108 5187 08 5



S.A. BURGER/S.A. CITIZEN

VAN/SURNAME

QHINA

VOORNAME/FORENAMES

LEHATISA JANTJIE

GEBOORTEDISTRIK OF- LAND/
DISTRICT OR- COUNTRY OF BIRTH

SOUTH AFRICA

GEBOORTEDATUM/DATE OF BIRTH 1937-11

DATUM UITGEREIK
DATE ISSUED

1988-02-15



UITGEREIK OP GESAG VAN
DIREKTEUR-GENERAAL
BINNELANDSE SAKE

GEREGISTREERDE WOON- EN POSADRES

1. Bewaar die bewys van u GEREGISTREERDE WOON- EN POSADRES in hierdie sakkie.

2. Indien u van adres verander het, of indien besonderhede van u huidige adres, by straatnaam en/of -nommer, ens. verander het, moet die vorm KENNISGEWING VAN ADRESVERANDERING, wat in die sakkie agter in die identiteitsdokument is, gebruik word om die verandering aan te meld en moet dit ingedien word by of gepos word aan die naaste streek-/distrikkantoor van die DEPARTEMENT VAN BINNELANDSE SAKE.

REGISTERED RESIDENTIAL AND POSTAL ADDRESS

1. Keep the proof of your REGISTERED RESIDENTIAL AND POSTAL ADDRESS in this pocket.

2. If you have changed your address, or, if particulars of your present address, e.g. name of street and/or street number, etc., have been changed, the NOTICE OF CHANGE OF ADDRESS form in the pocket at the back of the identity document must be used to report the change and it must be handed in at or posted to the nearest regional/district office of the DEPARTMENT OF HOME AFFAIRS.

1
I.D.No. 480108 0171 08 2



S. A. BURGER/S. A. CITIZEN

VAN/SURNAME

QHINA

VOORNAME/FORENAMES

SISNYANA LEHA

GEBOORTEDISTRIK OF-LAND/
DISTRICT OR COUNTRY OF BIRTH

SOUTH AFRICA

GEBOORTEDATUM/
DATE OF BIRTH

1948-01-08

DATUM UITGEREIK
DATE ISSUED

1998-05-30



UITGEREIK OP GESAG VAN DIE
DIREKTEUR-GENERAAL:
BINNELANDSE SAKE

ISSUED BY AUTHORITY OF THE
DIRECTOR-GENERAL:
HOME AFFAIRS

APPENDIX E
FINANCIAL MANAGEMENT

THERON DU PLESSIS

GEOKTROOIEERDE REKENMEESTERS(SA) CHARTERED ACCOUNTANTS (SA)

KANTORE / OFFICES

Aliwal Noord / North
Burgersdorp
De Aar

ONAFHANKLIKE GEASSOSIEERDE KANTORE / INDEPENDENT ASSOCIATED OFFICES

Cradock
Durbanville
Middelburg OK / EC

Somerset Wes / West
Villiersdorp

Bankstraat 15 15 Bank Street
Posbus 33, 98 & 118 P O Box 33, 98 & 118
Aliwal Noord 9750 Aliwal Noord 9750
Telefoon 051-6333704 Telephone 051-6333704
Faks 086-6186407 Fax 086-6186407
Docex 1 Aliwal Noord Docex 1 Aliwal North
Epos tdp.an @ tdp.co.za Email tdp.an @ tdp.co.za

Vir korrespondensie gebruik Posbus / For correspondence use P O Box : 98

20 December 2008

The Registrar
Close Corporation
Private Bag 429
PRETORIA
0001

Sir

HERSHELL SANDSTONE MINE

We hereby confirm that we are prepared to act as accountants for and on behalf of the abovementioned close corporation. Our practice number is 963771.

Yours faithfully



THERON DU PLESSIS

MB/cw

THERON DU PLESSIS NOD INGELYF / INCORPORATED REG NO: 1999/016962/21

DIREKTORE / DIRECTORS:

D. M. Koster - B.COMPT(HONS) GR/CA(SA) GRO/RAA
G. J. Du Plessis - B.COMPT(HONS) GR/CA(SA) GRO/RAA

T. M. Moolman - B.COMPT(HONS) GR/CA(SA) GRO/RAA

M. Bekker - B.REK(HONS) GR/CA(SA) GRO/RAA
R. Swanson - B.COMPT(HONS) GR/CA(SA) GRO/RAA

C. R. Moolman - B.COMPT(HONS) GR/CA(SA) GRO/RAA





Notification of registration

HERSHELL SANDSTONE MINE
P.O.BOX 54
HERSHELL
9756

Enquiries should be addressed to SARS:
Branch - BLOEMFONTEIN
C/o Aliwal & Nelson Mandela Drive, Bloemfontein, 9301
Box 313, Bloemfontein, 9300
Tel 051 - 506 3000 Fax 051 - 447 7005

Always quote this reference number in correspondence with this office or during interviews.

Reference number : 9240/172/17/2

Date : 2008-04-14

The Income Tax Reference number allocated to this Company/Close Corporation and the name of the office where the Company/Close Corporation is registered as a taxpayer is shown above.

For ease of reference, your registered particulars are printed below. Please notify this office immediately in writing in case of incorrect or changed bank particulars.

Registered name : HERSHELL SANDSTONE MINE

Trade name :

Postal address : P.O.BOX 54
HERSHELL

Postal code : 9756
Registered address : WITTERBERGEN
HERSHELL

Postal code : 9756
Magistrate district : BLOEMFONTEIN
Co/CC number : 2007/052497/23
Other number :
Registration date : 2007-03-13
Nature of business : MANUFACTURING BRICKS

Turnover :
Language : ENGLISH
Regional Service Council nr.:

Member/Shareholders/Directors detail

Initial(s) and surname : QHINA SL

Income Tax number :
Identity number :

Partners details

Initial(s) and surname : <NONE>

Income Tax number :
Identity number :

APPENDIX F
POTENTIAL MARKETS



ENDEAVOUR LOGISTICS cc

Natural Sandstone Products
Registration No: 2003/061609/23
Vat Reg. No: 4360219960

24 Cornwall Crescent
Eastward Ho
Gonubie
5257

Cell: 082 659 8279
Fax: 043 740 3285

10 November 2009

To Whom It May Concern:

I, John Ashby, have been in the sandstone industry for 6 years. I import Sandstone from Lesotho.

I have met Mr Qhina from, Herschel Sandstone mine, and have purchased raw sandstone from him before. I would be interested in purchasing and marketing his machined products.

Yours Sincerely

A handwritten signature in black ink, appearing to read "John Ashby". The signature is stylized and written over a horizontal line.

John Ashby
Director



OUT OF AFRICA STONE cc

Waterford Farm, 126 William Nicol Drive, Fourways
PO Box 1353, Witkoppen, 2068

Tel: +27 11 464 1866
Fax: +27 11 464 2258
www.outofafricastone.com
outofafrica@webmail.co.za

29 January 2007

Landplan

Att Mr H Le Roux

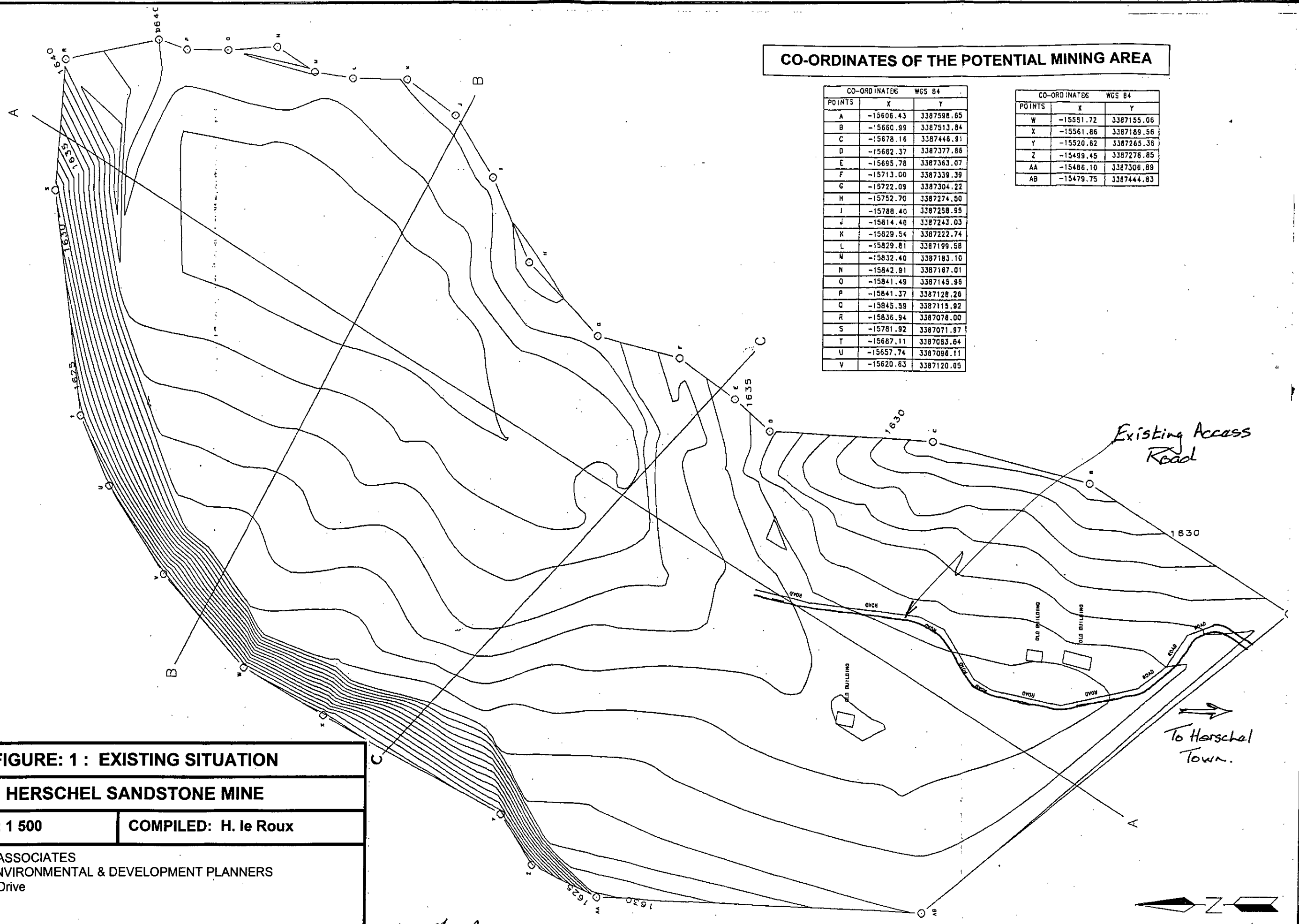
Re: Proposed Mining Operation Mr Lehatisia of Herschel.

We currently have showrooms in Johannesburg and Port Elizabeth selling Sandstone and other natural stone to building contractors, designers, architects, developers, landscapers and the domestic home markets. We have a further network of stone display in the Northern Province, KZN, Pretoria, East Rand, and have plans for additional expansion to identified markets. We have been experiencing not only poor service, but a breakdown in the supply chain with regards to sandstone building modules. We are currently supplying 7000 square meters of building modules to one project. This represents some 56 thirty two ton trucks of stone. All things equal we would happily support Mr Lehatisia not only on this project but on various other projects. As a matter of priority we will require samples of his stone for our various showrooms and outlets. We have visited Mr Lehatisia of Herschel, and examined the stone with which he is working, we find both the stone to be acceptable as well as Mr Lehatisia's astute business ability and outlook.

Should you require any further assistance from our office please do not hesitate to contact us.

Kind regards

CC Macpherson.



CO-ORDINATES OF THE POTENTIAL MINING AREA

POINTS	CO-ORDINATES WGS 84	
	X	Y
A	-15606.43	3387588.65
B	-15660.99	3387513.84
C	-15678.16	3387446.91
D	-15682.37	3387377.86
E	-15695.78	3387363.07
F	-15713.00	3387339.39
G	-15722.09	3387304.22
H	-15752.70	3387274.50
I	-15788.40	3387258.95
J	-15814.40	3387243.03
K	-15829.54	3387222.74
L	-15829.81	3387199.58
M	-15832.40	3387183.10
N	-15842.91	3387187.01
O	-15841.49	3387145.98
P	-15841.37	3387128.28
Q	-15845.59	3387115.82
R	-15836.94	3387078.00
S	-15781.92	3387071.97
T	-15687.11	3387083.64
U	-15657.74	3387098.11
V	-15620.63	3387120.05

POINTS	CO-ORDINATES WGS 84	
	X	Y
W	-15581.72	3387155.06
X	-15561.86	3387189.58
Y	-15520.62	3387265.36
Z	-15499.45	3387278.85
AA	-15486.10	3387306.89
AB	-15479.75	3387444.83

FIGURE: 1 : EXISTING SITUATION

HERSCHEL SANDSTONE MINE

SCALE: 1 : 1 500 **COMPILED: H. le Roux**

LANDPLAN & ASSOCIATES
 REGIONAL, ENVIRONMENTAL & DEVELOPMENT PLANNERS
 26 Tidewaters Drive
 Gonubie
 5257
 Tel/Fax: 043-7400738
 Cell : 082 573 4113
 Email : tolherberg@xsinet.co.za

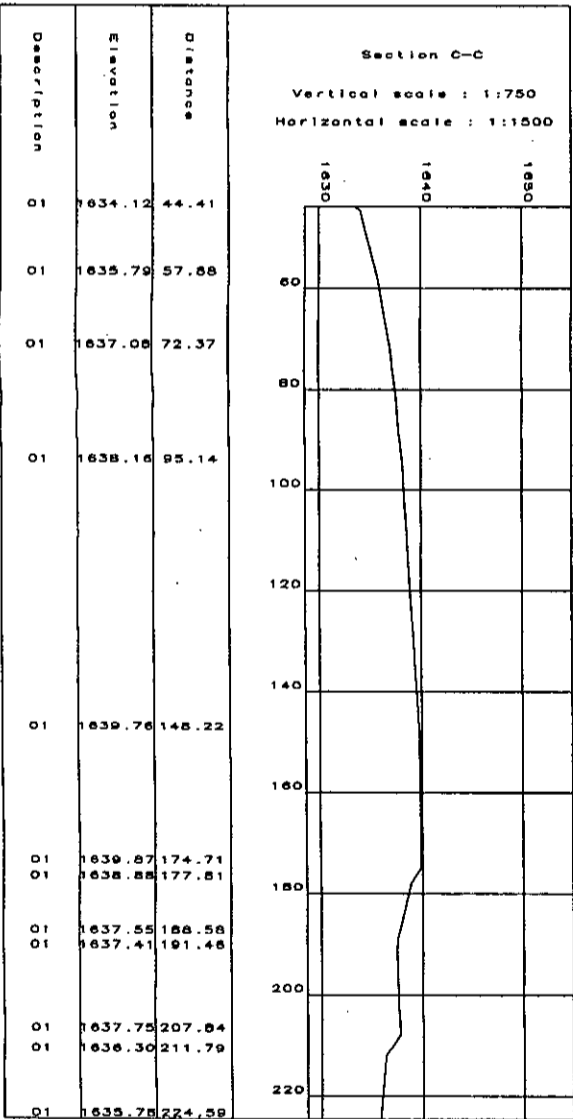
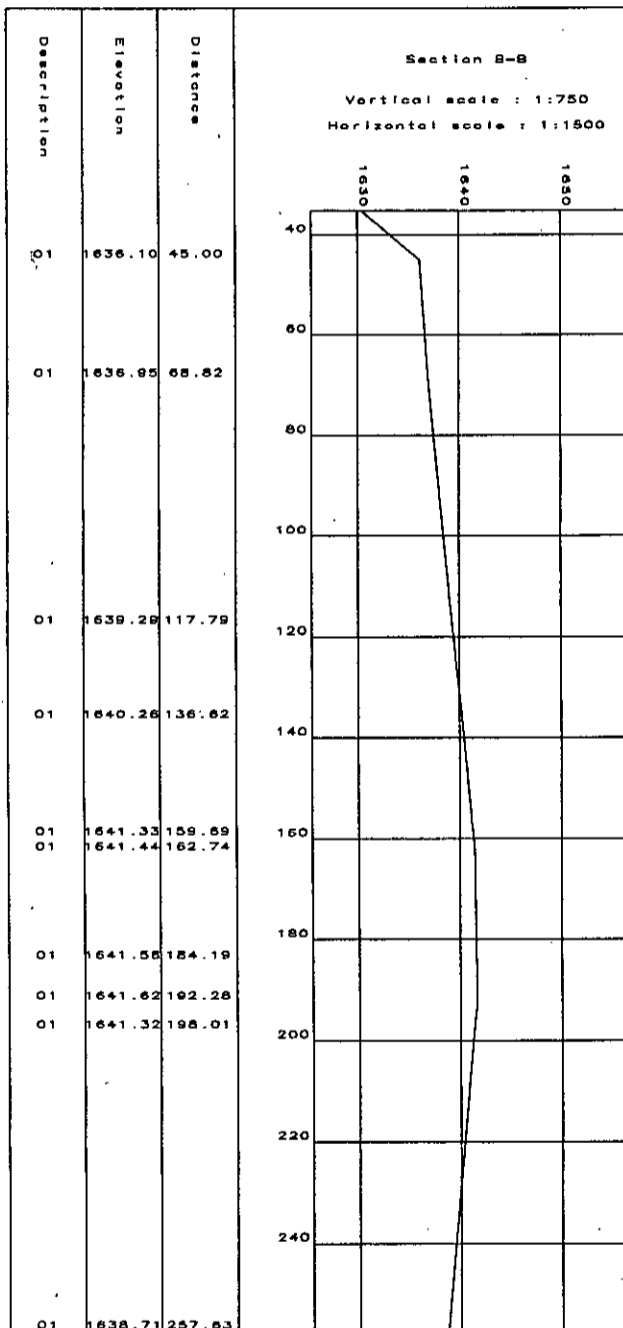
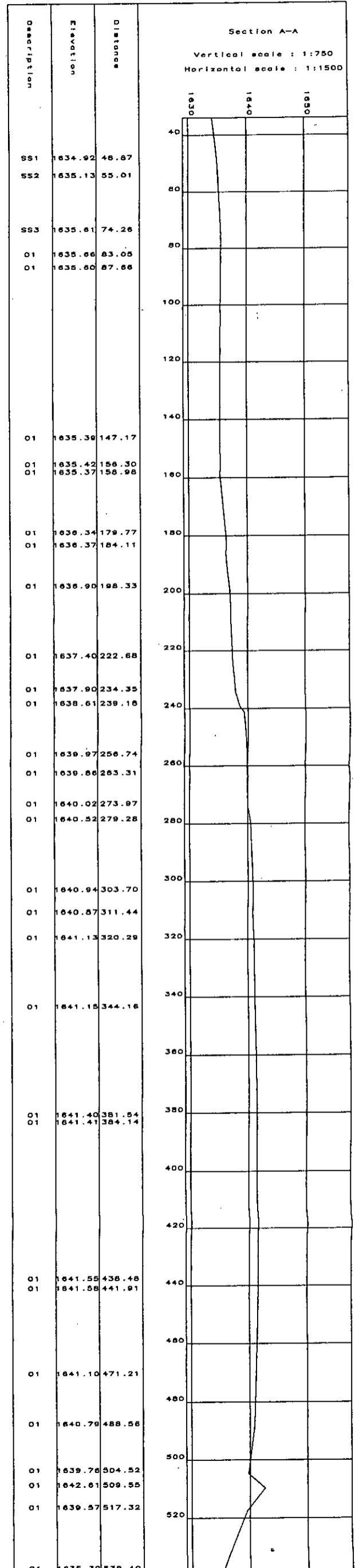
H. le Roux
 PR TECHNICAL ENGINEER NVP DATE 16/01/2006

North arrow pointing right.

SCALE
 1:1500
 FIGURE
 A

LANDPLAN & ASSOCIATES
 REGIONAL, ENVIRONMENTAL & DEVELOPMENT PLANNERS
 26 Tidewaters Drive
 Gouubie
 5257
 Tel/Fax: 043-7400738
 Cell : 082 573 4113
 Email : tolherberg@xsinet.co.za

FIGURE 1.2 : CROSS-SECTIONS
HERSCHEL SANDSTONE MINE
SCALE: 1 : 1 500
COMPILED: H. le Roux



Mining Area 1,5 Ha – Co-ordinates

A	S 30°	36,257'	E 27°	09,867'
B	S 30°	36,285'	E 27°	09,905'
C	S 30°	36,337'	E 27°	09,838'
D	S 30°	36,304'	E 27°	09,772'

Stockpile cut
rock for loading
to process yard.

Silt Trap
for runoff from
mine.

FIGURE: 2 : FUTURE MINING	
HERSCHEL SANDSTONE MINE	
SCALE: 1 : 1 500	COMPILED: H. le Roux
LANDPLAN & ASSOCIATES REGIONAL, ENVIRONMENTAL & DEVELOPMENT PLANNERS 26 Tidewaters Drive Gonubie 5257 Tel/Fax: 043-7400738 Cell : 082 573 4113 Email : tolherberg@xsinet.co.za	

H. le Roux
 Pr Techni Eng : NVP DATE 16/01/2006

