mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: Imerys Refractory Minerals South Africa - Cape Bentonite Mine

PROSPECTING WORK PROGRAMME

SUBMITTED FOR A PROSPECTING RIGHT APPLICATION WITH NO BULK SAMPLING

ON

FARM DORINGRIVIER RE/593

HEIDELBERG, WESTERN CAPE

AS REQUIRED IN TERMS OF SECTION 16 READ TOGETHER WITH REGULATION 7(1) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (ACT 28 of 2002)

STANDARD DIRECTIVE

All applicants for mining rights are herewith, in terms of the provisions of Section 16 and in terms of Regulation 7(1) of the Mineral and Petroleum Resources Development Act, directed to submit a Prospecting Work Programme, strictly under the following headings and in the following format together with the application for a prospecting right.

1. REGULATION 7.1.(a): FULL PARTICULARS OF THE APPLICANT

Table 1: Applicant's Contact Details

ITEM	COMPANY CONTACT DETAILS
Name	Imerys Refractory Minerals South Africa (Pty) Ltd trading as Cape Bentonite Mine
Tel no	012 643 5880
Fax no:	012 643 1966
Cellular no	-
E-mail address	Kallie.roos@imery.com & Siyanda.mabaso@imerys.com
Postal address	P.O Box 8118, Centurion 0046 & Cape Bentonite Mine, Princess Farm, PO Box 242, Heidelberg, Western Province 6665

Table 2: Consultant's Details

ITEM	CONSULTANT CONTACT DETAILS (If applicable)
Name	N/A
Tel no	N/A
Fax no:	N/A
Cellular no	N/A
E-mail address	N/A
Postal address	N/A

2. REGULATION 7(1)(b): PLAN CONTEMPLATED IN REGULATION 2(2) SHOWING THE LAND TO WHICH THE APPLICATION RELATES

Refer to Appendix A: Regulation 2(2) Layout Plan

3. REGULATION 7(1)(c): THE REGISTERED DESCRIPTION OF THE LAND TO WHICH THE APPLICATION RELATES

The property is approximately 9km northwest of the town Heidelberg (Western Cape) and can be accessed via a gravel road off the R322 towards Barrydale.

Table 3: Property Details

FARM NAME	FARM NUMBER	REGISTRATION DIVISION	PORTIONS	SG 21-Digit Code
Doringrivier	593	SWELLENDAM	Remaining Extent	C07300000000059300000

4. REGULATION 7(1)(d) and (e): THE MINERAL OR MINERALS TO BE PROSPECTED FOR

Table 4: Minerals to be Prospected For

ITEM	DETAIL
Type of mineral(s)	Bentonite (CB)
Type of minerals continued	Zeolite (Zs)
Locality **(Direction and distance from nearest town)**	The property is approximately +km northwest of the town Heidelberg (Western Cape) and can be accessed via a gravel road off the R322 towards Barrydale
Extent of the area required for prospecting	Doringrivier RE/593 – 523.71Ha Total property size – 185Ha
Geological formation	Kirkwood Formation of the Uitenhage Group

4.1 Description why the Geological formation substantiates the minerals to be prospected for (provide a justification as to why the geological formation supports the possibility that the minerals applied for could be found therein)

The Bentonite is a clay part of the smectite family, one of the seven clay families. This deposit is situated in the Cape basin, more precisely in one of its subsidiaries, the Heidelberg-Riversdale Basin.

From a global point of view, the Cape Basin was first formed during the Cape Fold Belt orogeny (Permian-Triassic) as a foreland basin. Thereafter it continued to subside during the fragmentation of the Gondwana due to the opening of the South-Atlantic. This second phase was controlled by Normal faulting such as the Worcester Fault governing the Heidelberg-Riversdale Basin. These faults divides the area in two structural blocks:

-Highly deformed rocks of the Cape Fold Belt

-Sediments post orogeny slightly folded but an average dipping of 25 degrees towards the North

During the formation of the Heidelberg-Riversdale basin, alkaline volcanic episodes took place, leading to the deposition of ashes in salted lacustrine environment where they were subjected to hydrothermal variations.

The glass components of the ashes were chemically altered in this low energy environment and consolidated into distinct clay layers. These clay layers currently form the Heidelberg-Riversdale Bentonite Deposits.

These deposits are also outstanding due to the salted environment in which the ashes were deposited. Indeed, this parameter will lead to the formation of Sodium Bentonite. Heidelberg-Riversdale Bentonite deposits are the only, currently mined, Sodium Bentonite deposit in South-Africa.

There are two main kinds of Bentonite:
-Sodium
-Calcium

Both of these clays have Green compressive strength and Dry compressive strength properties, used in the Foundry's industry mainly. However, calcium bentonite needs heavy processing in order to get the sodium bentonite physical properties (High viscosity/Free swell/Base exchange Capacity/Sinter Plate Absorption etc.). As a consequence, Sodium Bentonite requires a minimum energy to be processed in comparison with calcium bentonite which makes its use a lot more sustainable for the environment.

Geological work in this area has indicated that bentonite occurs as several layers in the Kirkwood Formation, overlain by conglomerate and sandstone of the Buffelskloof Formation. Zeolite is found interbedded within the bentonite in places.

4.2 Attach a geological map that justifies the description why there is a possibility that the minerals applied for could occur on the land concerned.

Refer to Appendix B: Geological Map

5 REGULATION 7(1)(f): A DESCRIPTION OF HOW THE MINERAL RESOURCE AND MINERAL DISTRIBUTION OF THE PROSPECTING AREA WILL BE DETERMINED

Field Mapping

Field exploration will be conducted on the farm in order to locate a hint and/or possible outcrops of Bentonite or Zeolite. Geological measurements (dip, direction, etc.) and sampling will be done on the visible outcrops. This process will enable the prospecting company to determine the approximate extension, volume and quality of the layers discovered on the Doringrivier RE/593.

Direct push sampler drilling

The direct push sampler drilling campaign will then be planned and conducted on the expected outcrop area. The sampler holes will have the following maximum temporary footprints – Diameter 60mm; depth 6m = 3.6m^3 overburden material produced by drilling to be backfilled immediately after sample has been taken. Samples would be collected according to the geology.

Borehole Results

Boreholes will be drilled. The drilled boreholes will have the following maximum temporary footprints - diameter 0.2m by 0.2m; depth 30m = 12 m^3 maximum overburden material produced per borehole to be replaced immediately after sample has been taken. Samples would be collected according to the geology.

Sampling Analysis

<1kg of sample material is collected by the geologist from each trench and borehole for testing. The samples collected are sent to the laboratory at the Cape Bentonite Mine processing plant near Heidelberg and tested for specific properties to establish

the quality of ore as well as determine approximate extension and volume of the available ore body**.**

Maps

Maps will be produced showing the location, depth and extent of physical prospecting work, together with, sampling points and the lithology, mineral content and mineral distribution identified, relative to the prospecting area.

Geological Modeling or Reports and Results Statements

Following the results of sample analysis conducted the geological reserve modelling is done by using SURPAC software to determine the grades and quantities of available bentonite and zeolite resources and produce the feasibility reports for the property as investigated/surveyed.

Feasibility Reports or Pre-feasibility Reports

Following the results of sample analysis conducted the geological reserve modelling is done by using SURPAC geological software to determine the grades and quantities of available bentonite and zeolite resources and produce the feasibility reports for the property as investigated/surveyed.

AND

REGULATION 7(1)(h): ALL PLANNED PROSPECTING ACTIVITIES MUST BE CONDUCTED IN PHASES AND WITHIN SPECIFIC TIMEFRAMES

Table 5.1: Planned Prospecting Phases and Timeframes

PHASE	ACTIVITY	TIMEFRAME
1	Field Mapping and Surveying	16 months
2	Literature Review	8 months
3	Drilling and Sampling	24 months
4	Sample Analysis/ Laboratory Work	6 months
5	Reserve and Resource Modeling	6 months

AND

REGULATION 7(1)(i):TECHNICAL DATA DETAILING THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED AND THE TIME REQUIRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION

Table 5.2: Planned Prospecting Phases and Responsible Parties

PHASE	ACTIVITY	RESPONSIBLE PARTY/IES
1	Field Mapping and Surveying	Geologist Surveyor
2	Literature Review	Geologist
3	Drilling Sampling	Mining/prospecting company Drilling contractor/geologist Geologist/field assistant
4	Sample Analysis	Laboratory
5	Reserve and Resource Modeling	Geologist

Table 5.3: Information required in respect of Regulations 7(1)(f), 7(1)(h) and 7(1)(i):

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
Phase 1	**Non-invasive Prospecting**					
	Field Mapping and Surveying	Geologist Surveyor	Month 1 - 16	Identifying suitable prospecting localities	Month 16	Geologist
Phase 2	**Non-invasive Prospecting**					
	Literature Survey	Geologist	Month 16-24	Digital data gathering	Month 24	Geologist
Phase 3	**Invasive Prospecting**					
	Drilling and Sampling	Drilling contractors Geologist	Month 24-48	Physical data/samples collection	Month 48	Geologist
Phase 4	**Non-Invasive Prospecting**					
	Sample Analysis	Laboratory Geologist	Month 48-54	Sample quality and quantity analysis	Month 54	Geologist
Phase 5	**Non-Invasive Prospecting**					
	Reserve and Resource Modeling	Geologist	Month 54-60	Orebody and resource definition and feasibility reports	Month 60	Geologist

6 REGULATION 7(1)(g): A DESCRIPTION OF THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED

The ***proposed prospecting activities*** will entail the following phases:

- ***Phase 1 – Field Mapping and Surveying***

  A qualified geologist will survey/explore the transformed cultivated areas on the proposed prospecting property by foot and map potential visible bentonite and zeolite outcrops. If such visible outcrops are found on the transformed cultivated areas of property the geologist will map these areas for potential sampling during phase 3.

- ***Phase 2 – Literature Review***

  A qualified geologist will research known geological literature of the property and surrounds to assist in determining the approximate location of viable bentonite and zeolite deposits on the transformed cultivated areas of the property.

  After the completion of phases 1 and 2 the geologist will produce potential bentonite and zeolite deposits maps for the property which will serve as guidelines for the next phase which will entail drilling and sampling.

- ***Phase 3 –Drilling and Sampling***

  Direct push sampler drilling and sampling **–** using the maps as produced by the geologist during phases 1 and 2 the geologist will determine which orebodies must be investigated further by direct push sampler drilling. This is conducted by the mining company itself and involves the use of a direct push sampler drill rig.The drill rig will push a stainless steel tube of 50-60cm long into the ground, once full it will bring it up and the sample will be taken out. This process will be carried out until bentonite is found or reaches the depth of around 6m. The hole will then immediately be rehabilitated by backfilling and a month later the site is revisited to determine if any the holes reopened due to decompaction. The sampler holes will have the following maximum temporary footprints – Diameter 60mm; depth 6m = 3.6m^3 overburden material produced by drilling to be backfilled immediately after sample has been taken. Samples would be collected according to the geology. **Approximately 350 sampler holes are proposed for the property, but the final proposed direct sampler holes's amount will be determined during the completion of phases 1 and 2 therefore proposed direct sampler holes amount might increase or decrease.**

  Boreholes and sampling - following the results of the samples collected during the direct push sampler drilling, a qualified drilling contractor will be appointed by the mining company and under the guidance and supervision of the qualified geologist conduct the following drilling activities on the areas as identified by the geologist. Drilling involves using a rotary percussion drilling rig bringing samples to the surface in the form of chips. The drilled boreholes will have the following maximum temporary footprints - diameter 0.2m by 0.2m; depth 30m = 12 m^3 maximum

overburden material produced per borehole to be replaced immediately after sample has been taken. <1kg of sample material is collected by the geologist from each borehole for testing. The drilling samples collected are sent to the laboratory at the cape bentonite mine processing plant near Heidelberg and tested for specific properties to establish the quality of ore as well as determine approximate extension and volume of the available ore body. **Approximately 60 drilling sections/lines with 10 boreholes each are proposed for the property = approximately 600 boreholes in total for the property, but final proposed boreholes amount will be determined during the completion of phases 1 and 2 and direct push sampler drilling results and the number of proposed drilling boreholes therefore might increase or decrease.**

Rehabilitation – immediately (same day) following samples taken during drilling as described above the excavated material will be replaced and existing agricultural land contour structures will be reinstated. The disturbed prospecting areas will be monitored for signs of erosion for at least six months after sampling and erosion rectification and prevention measures will be implemented as and if required. Alien invasive and weed vegetation monitoring and removal will be undertaken for at least a year after sampling on disturbed prospecting areas or until the landowner starts with the annual cultivation activities on the affected land. This must be done by the applicant, landowner or their appointed contractor, using CapeNature approved methodology depending on the contract agreement that the applicant has with the landowner.

- ***Phase 4 – Sample Analysis***

  <1kg of sample material is collected by the geologist from each borehole for testing. The samples collected are sent to the laboratory at the cape bentonite mine processing plant near Heidelberg and tested for specific properties to establish the quality of ore as well as determine approximate extension and volume of the available ore body**.**

- ***Phase 5 – Maps, Reserve and Resource Modelling***

  Maps will be produced showing the location, depth and extent of physical prospecting work, together with, sampling points and the lithology, mineral content and mineral distribution identified, relative to the prospecting area. Following the results of sample analysis conducted the geological reserve modelling is done by using SURPAC geological software to determine the grades and quantities of available bentonite and zeolite resources and produce the feasibility reports for the property as investigated/surveyed.

(i) DESCRIPTION OF PLANNED NON-INVASIVE PROSPECTING ACTIVITIES: (These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc)

- Aerial photography and reconnaissance geological mapping
- Desktop studies

- Research and target identification
- Surveys of prospecting target to classify them in regards of their extension
- Environmental studies
- Literature survey

(ii) DESCRIPTION OF PLANNED INVASIVE PROSPECTING ACTIVITIES: (These activities result in land disturbances e.g. sampling, trenching, drilling, bulk sampling, etc.)

- Rotary percussion borehole drilling
- Direct push sampler drilling
- Boreholes
- Sampling

Commitment to provide addendums in respect of additional prospecting activities

I herewith commit to provide the Department of Mineral Resources with an addendum in respect of both the EM Plan and Prospecting work Programme regarding any future in-fill prospecting required but not described above, prior to undertaking such activities. The addendum will cover all the Regulations as per the Prospecting Work Programme.

I agree that the addendums will provide for similar activities only and if the scope changes I would be required to apply in terms of Section 102 of the MPRDA for an amendment of the Prospecting Work Programme

Mark with X

ACCEPT	**x**

(iii) DESCRIPTION OF PRE-/FEASIBILITY STUDIES
(Activities in this section include but are not limited to: initial, geological modeling, resource determination, possible future funding models, etc.)

- Geological modeling
- Resource determination
- Possible future models

(iv) DESCRIPTION OF BULK SAMPLING ACTIVITIES
This activity requires that an application IN TERMS OF Section 20 of the Act is specifically included in your application for a prospecting Right and cannot be proceeded with if such permission is not specifically granted.

No Bulk Sampling to be performed.

As per bulk sampling definition confirmed by Mr John LC Kilham (M Sc Geology; Pr.Sci.Nat. MGSSA from the Kglagadi Group) bulk sampling occurs when several tonnes to 100's of tonnes of sampling material are removed and disposed of per target site to compile detailed mineralization models.

During drilling the drilled material will not be removed permanently as sampling material nor disposed of, less than 1kg sample is taken of the orebody and material is then immediately replaced, the proposed drilling is therefore not bulk sampling.

NOTE: Detailed description of the required costs MUST be indicated in the cost estimate as per Regulation 7(1) (k)

Commitment to provide for an addendum in respect of additional bulk sampling activities

I herewith commit to provide the Department of Mineral Resources with an addendum to the Prospecting Work Programme, and an Environmental Management programme for approval prior to undertaking any future bulk sampling activities not described above.

Mark with X

Accept	Not applicable

7 REGULATION 7(1)(j)(i):DETAILS WITH DOCUMENTARY PROOF OF THE APPLICANT'S TECHNICAL ABILITY OR ACCESS THERETO TO CONDUCT THE PROPOSED PROSPECTING OPERATION

7.1 Competencies to be employed in terms of the Mine Health and Safety Act

COMPETENCIES TO BE EMPLOYED (List the legal appointments that will be made in terms of the Mine Health and Safety Act, appropriate for the type of operation)
Assistant Manager (2.6.1)
Mine Engineer (2.13.1)

I herewith confirm that I, in Table 8 have budgeted and financially provided for the required skills listed above.

CONFIRMED (Mark with an **X**)	**X**

7.2 List of Appropriate equipment at your disposal (If Applicable)

Table 6: Appropriate Equipment Available

1 x Direct push sampler drill rig
1 x Percussion drilling rig

7.3 Technical skills provided Free of Charge

7.3.1 Information (CV's) in respect of skills already acquired (append)
-Geologist (Field Work / Drilling / Trenching / Modelling): Appendix C
-Laboratory Analyst (Sample Analysis): Appendix D

7.3.2 Copy of the relevant contractual agreements between the service provider and the applicant relative to the duration of the planned prospecting period, where applicable.(append)
N/A

7.3.3 All other evidence of Technical Ability (append)
N/A

8 REGULATION 7(1)(j)(ii):DETAILS WITH DOCUMENTARY PROOF OF A BUDGET AND DOCUMENTARY PROOF OF THE APPLICANT'S FINANCIAL ABILITY OR ACCESS THERETO

AND

9 REGULATION 7(1)(k) A COST ESTIMATE OF THE EXPENDITURE TO BE INCURRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION (remember to also include prospecting fees)

NOTE! If any person (including the applicant) provides services in any job or skills category at a reduced rate or free of charge, then such person's Curriculum Vitae (CV) must be attached as documentary proof of the technical ability available to the applicant.

Table 7: Budget and Cost Estimate of the Expenditure to be Incurred for Each Phase of the Proposed Prospecting Operation

		1st year				2nd year				3rd year				4th year				5th year				
3month period		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	**Total**
Field mapping	Geologist		100hours=R20000																			20 000
Field outcrop sample analysis	Analysis of 20 samples					20hours lab analyst=R1000																1000
Literature survey	Geologist							50 hours=R10 000														10 000
Auger Drilling	Geologist					350 holes@R15 per hole and 3L per hole @cost of R20/L=R26 250																26 250
Rehabilitation	Close down holes					350 holes @3.8m3 to be rehabilitated @R10 per m3=R13 300																13 300
Drilling and sampling	Drilling contractor									25 sections @ 44m per section=1100m @R583/m and 3L/m diesel @R20/L <=> R707 300				25 sections @ 44m per section=1100m @R583/m and 3L/m diesel @R20/L <=> R707 300				10 sections @ 44m per section=440m @R583/m and 3L/m diesel @R20/L <=> R282 920				1 697 520
Rehabilitation	Close down holes									250 holes@12m3 to be rehabilitated @R10 per m3= R30 000				250 holes@12m3 to be rehabilitated @R10 per m3= R30 000				100 holes@12m3 to be rehabilitated @R10 per m3= R12 000				72 000
Sample analysis	analysis of 400 samples																	400 samples = R14 800				14 800
Reserve/resource modeling																						
DMRE fees		-				-				-				-				-				
Total		20000				50 550				737 300				737 300				309 720				R 1 854 870

10 FINANCIAL ABILITY TO GIVE EFFECT TO THE PROSPECTING WORK PROGRAMME

10.1 The amount required to finance the Prospecting Work Programme. (State the amount required to complete the work)

During the prospecting work 350 holes will be done with the direct push auger and 600 percussion drill holes. This corresponds respectively to 1330m3 and 7200m3 which in total gives us around 8530m3 of material which will be temporarily removed per drill and borehole site and immediately replaced after sampling.

Operational costs:
For the direct push auger drill, the rate is R15/hole and 3L/hole at R20/L, so for 350 boreholes the total cost will be R 26 250,00.

For percussion drilling, at a rate of R583/m and 3L/m (R20/L) of Diesel per meter (on average we do 12m/hole) for 600 drill holes it is foreseen that the operational amount required to finance this project is approximately R 4 629 600.00

Rehabilitation costs:
At a rate if R10/cubic metre to rehabilitate it is foreseen that the rehabilitation amount required to finance this project is approximately R 85 300.00.

10.2 Detail regarding the financing arrangements
(Elaborate on the financing arrangements, in terms of where the finance will be sourced, extent to which the financing has been finalized and on the level of certainty that such financing can be secured.)

All exploration will be financed in-house as part of working capital. No capital investment is envisaged / planned.

10.3 Confirmation of supporting evidence appended
(Attach evidence of available funding and or financing arrangements such as balance sheets, agreements with financial institutions, underwriting agreements, etc. and specifically confirm in this regard what documentation has been attached as appendices).

Refer to 10.2 above

11 Confirmation of the availability of funds to implement the proposed project.

Refer to 10.2 above

12 I herewith confirm that I have budgeted and financially provided for the total budget as identified in Regulation 7(1)(k).

Confirmed (Mark with an X)	**X**

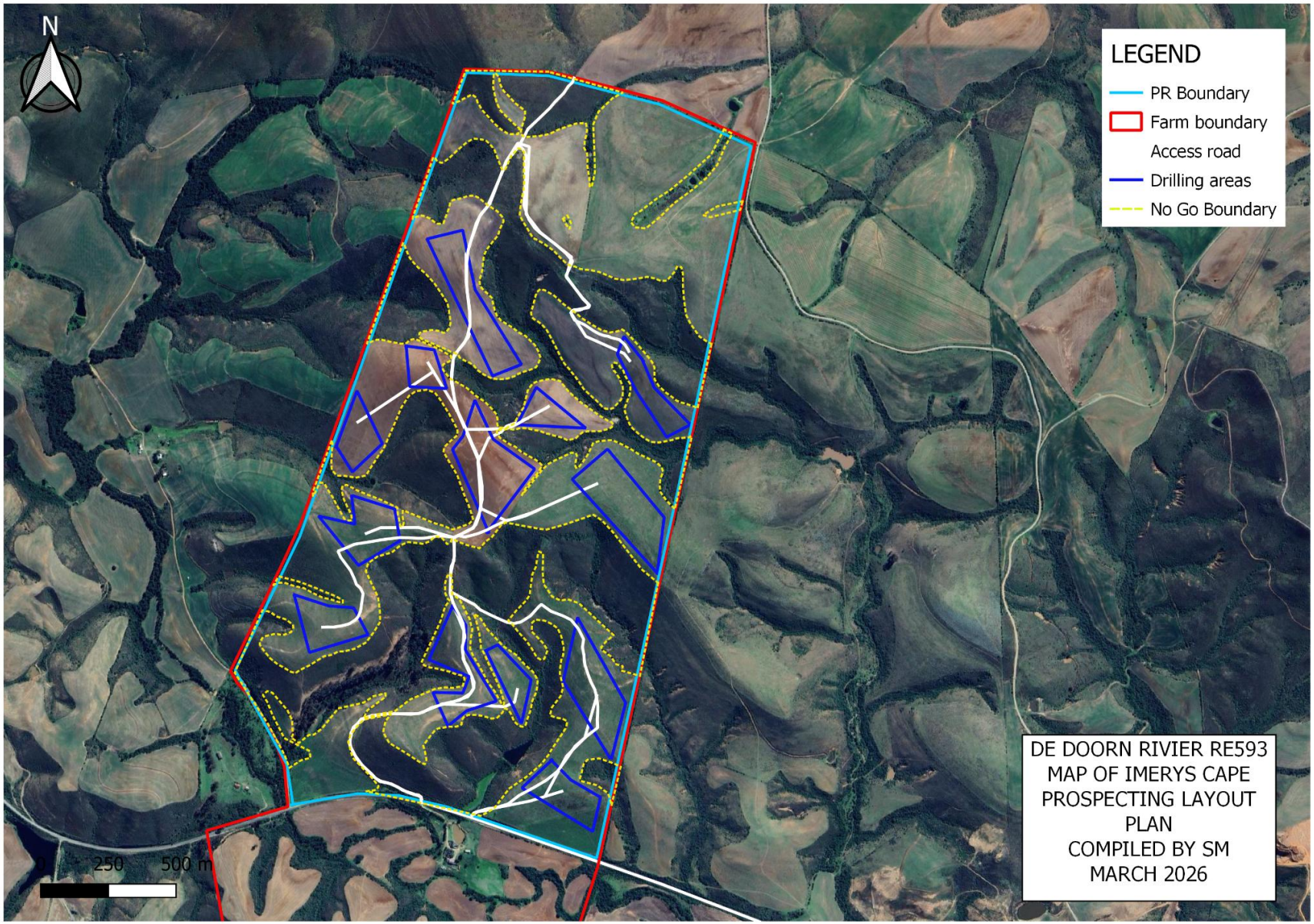
13 REGULATION 7(1) (m): UNDERTAKING, SIGNED BY THE APPLICANT, TO ADHERE TO THE PROPOSALS AS SET OUT IN THE PROSPECTING WORK PROGRAMME

Table 9: Applicant Confirmation

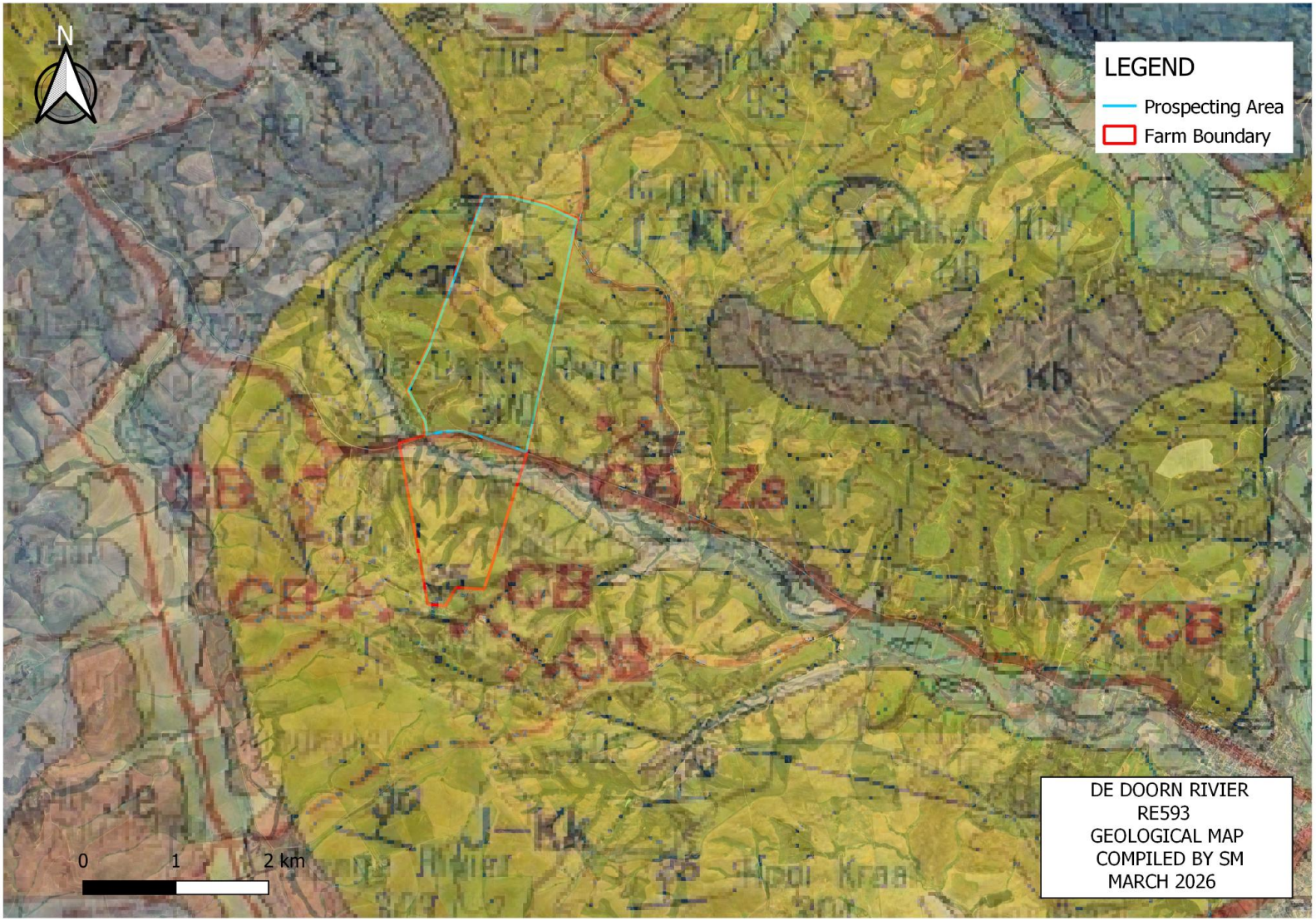
Herewith I, the person whose name and identity number is stated below, confirm that I am the Applicant or the person authorised to act as representative of the Applicant in terms of the resolution submitted with the application, and undertake to implement this prospecting work programme and adhere to the proposals set out herein.	
Full Names and Surname	XOLISA MVIMJELWA : 
Identity Number	6907055952089

END

PWP APPENDIX A: Regulation 2(2) Layout Map



PWP APPENDIX B: Geological Map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LEGEND
Prospecting Area
Farm Boundary
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1
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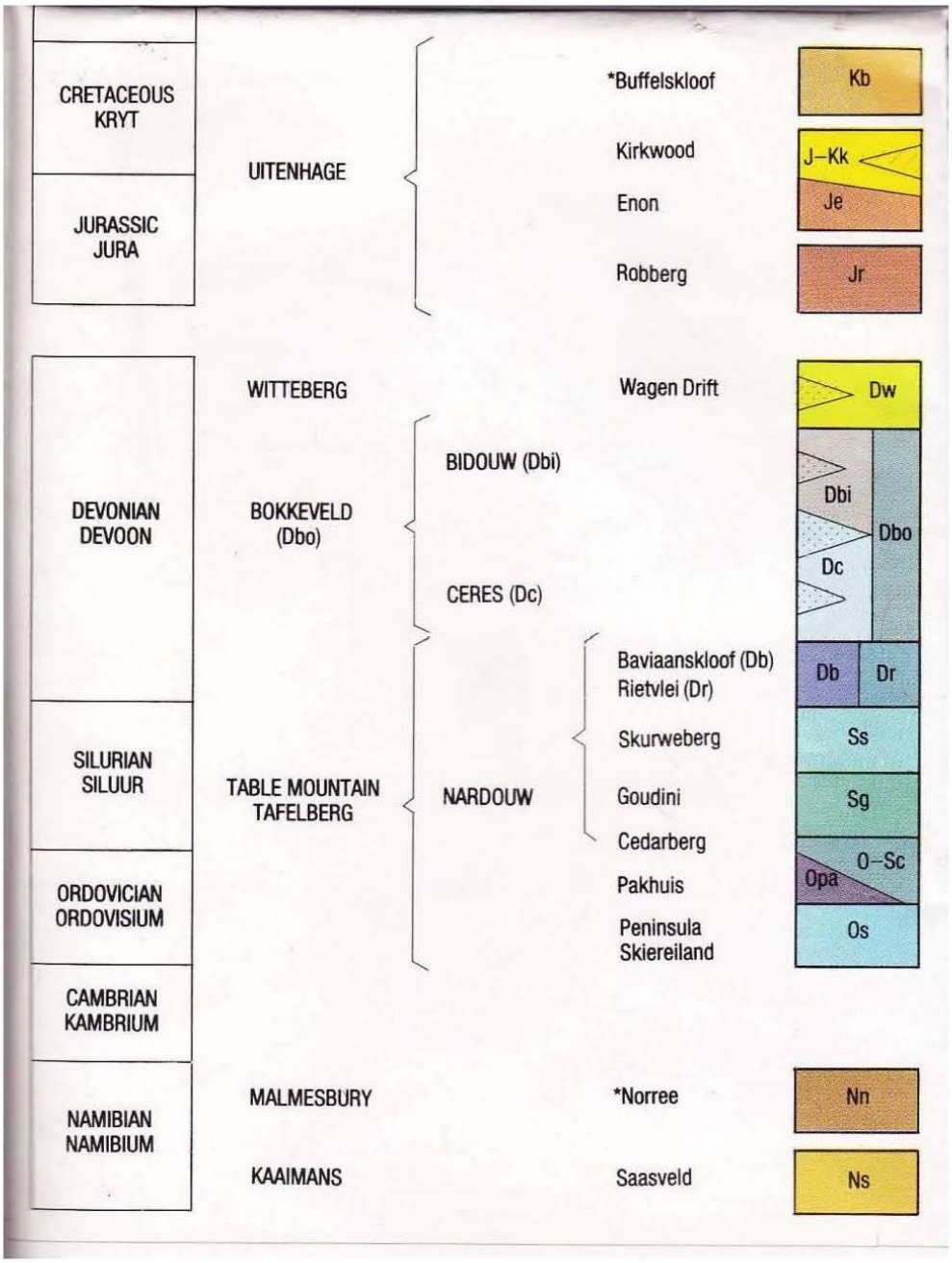
DE DOORN RIVIER
RE593
GEOLOGICAL MAP
COMPILED BY SM
MARCH 2026


CRETACEOUS
KRYT
JURASSIC
JURA
UITENHAGE
*Buffelskloof
Kirkwood
Enon
Robberg
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DEVONIAN
DEVOON
SILURIAN
SILUUR
ORDOVICIAN
ORDOVISIUM
CAMBRIAN
KAMBRIUM
WITTEBERG
BOKKEVELD
(Dbo)
BIDOUW (Dbi)
CERES (Dc)
TABLE MOUNTAIN
TAFELBERG
NARDOUW
Wagen Drift
Baviaanskloof (Db)
Rietvlei (Dr)
Skurweberg
Goudini
Cedarberg
Pakhuis
Peninsula
Skiereiland
Dw
Dbi
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KAAIMANS
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Saasveld
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PWP APPENDIX C: Geologist CV

CURRICULUM VITAE
OF
SIYANDA MABASO

Gender: Male
Race: African
ID No. 9609165735084

mobile: 0722319884
e-mail: siyanda4.sm@gmail.com

PROFILE

I am an ambitious, problem solving and enthusiastic individual. I am currently a Site Geologist at Imerys refractory minerals (Cape Bentonite). I Completed my Bsc(Hons) Geology in 2017 at the University of Cape Town.

EDUCATIONAL QUALIFICATIONS

TERTIARY

2018	Project Management course	University of Stellenbosch
2017	Bachelor of Science (Honours) in Geology	University of Cape Town
2014-2016	Bachelor of Science in Geology and Chemistry	University of Cape Town

SECONDARY EDUCATION

School attended	: Emhlwaneni High School
Highest grade passed	: Grade 12
Year	: 2013
Subjects passed	: IsiZulu Home Language, English First Additional language, Afrikaans Second additional language, Mathematics, Life Orientation, Life Sciences, Physical Sciences and Geography

WORK EXPERIENCE

Currently- **Site Geologist** at Imerys Cape Bentonite
October 2020-June 2022: **Geology Intern** at Imerys Cape Bentonite.
April 2019- October 2020: **Analytical Chemistry Intern** at Tronox Namakwa Sands
2016: **College House Residence Subwarden**- Ensure the provision of an efficient and professional after hours and weekend service for residents and assist with the monitoring of services to the residence and its related impact on student residence life.
2015: **Student front desk assistant**- Managing access control in the residence and administration of new students.

KNOWLEDGE, SKILLS AND COMPETENCIES

- **Geology Skills:** Exploration Management, Environmental Management, QGIS&SURPAC software, Grade Control Management, Permitting Management, Data Management, Propose and prepare CAPEX applications
- **Analytical Chemistry skills:** Analytical method development and calibration, Validation of Analytical methods, Preparation of controls for Analytical methods, Knowledge of Oxsas software, Sample preparation, Sample analysis, Reporting of results and Grain counting
- **Computer skills:** experienced in using Microsoft excel, Microsoft word, Microsoft PowerPoint, internet, email, and Windows 8 and 10.
- **Teamwork:** I have worked in groups a number of times successfully and as a result my communication, speaking and leadership skills have improved.
- **Driving skills:** I currently hold a code 8 drivers licence.
- **Communication skills:**

Languages	**Communicate**	**Read**	**Write**
English	Excellent	Excellent	Excellent
IsiZulu(mother tongue)	Excellent	Excellent	Excellent
IsiXhosa	Good	Good	Good
Sepedi	Understand	Average	Average
Afrikaans	Average		

ACHIEVEMENTS

-Awarded by the Mayor of Ladysmith for being one of the top achievers at Uthukela District by obtaining 8 symbol A's in my Matric results in 2013.
-Awarded a gap funding by NSFAS to study at UCT.
-Awarded a certificate of achievement for being the College House Super Strikas (soccer team) most committed player in 2014.

HOBBIES AND INTERESTS

Reading, chess, soccer, gym, leadership and people

REFERENCES

Mr Ross Lewis
Resource Geology and Permitting Manager at Imerys
083 576 9057
E-mail: ross.lewis@imerys.com

Mrs. Joy Julie
Mentor, Chemist at Tronox Namakwa Sands Mine Lab
Cell: 073 9185 925
E-mail: joy.julie@tronox.com

PWP APPENDIX D: Laboratoty Analyst CV

NOKULUNGA LYDIA ZONDO

LABORATORY & DISPATCH SUPERVISOR

36 Pentz Street, Heidelberg (WC) ~ (+27) 81 729 9300 ~ lungizondo@yahoo.com

PROFILE

I'm an experienced and self-motivated Laboratory and Dispatch bringing forth valuable industry experience and a passion for the laboratory management. Results oriented with a proven track record of working collaboratively with various departments team members to achieve goals.

SKILLS

Excellent Leadership

Teamwork and collaboration

Conflict management skills

Excellent verbal and written communication skills

Troubleshooting

WORK EXPERIENCE

Laboratory & Dispatch Supervisor @ Imerys (2022 > current)

- Conducted investigations, as a result of non-conformance in certain areas such as methods of sampling, analytical techniques, analytical discrepancies.
- Created and updated lab working procedures and quality documents and followed up of their precise implementation.
- Generated COA's for Olifantsfontein Mine, Local and Export market customers.
- Ensured that the laboratory is producing accurate and timeous information for the purpose of plant control and quality assurance.
- Supervised and planned shift laboratory and dispatch staff.
- Ensured that the laboratory and the loading warehouse 5S standards are well maintained.
- Ensured that the lab equipment and plant scales are calibrated.

Laboratory Team Leader @ Illovo Sugar (2018 > 2021)

- Successfully implemented the NIRS testing method and reporting of sucrose based results of raw sugar production intermediate streams and its' by-products. Validated and interpreted results for both internal and external testing.
- Created weekly and monthly production reports and presented the results to management and external stakeholders.
- Conducted investigations, as a result of on non-conformance in certain areas such as methods of sampling, analytical techniques, analytical discrepancies.
- Elaborated and managed the lab budget, purchase of consumables and equipment, enhancement of cost efficiency.
- Created and updated lab working procedures and quality documents and followed up of their precise implementation.
- Supervised and planned shift laboratory staff.
- Organized the workload and efficiently planned the analyses.

Laboratory Administrator @ UCL (2012 > 2018)

- Liaised with Agriculture Services, Production Department and other Technical personnel to ensure all stakeholders are informed of problems encountered with cane quality / sampling frequency from the previous day.
- Ensured that cane sampling frequency targets are met by identifying the reasons for non-testing and reporting back to the relevant personnel so that corrective action may be taken (this applies to individual growers, as well as holistically).
- Audited quality / sampling frequency of all cane tested in the laboratory from the daily, weekly and monthly statistics reports.
- Created weekly and monthly production reports and presented the results to management and external stakeholders.
- Generated Sugar Sales COA's for Noodsberg Illovo Sugar Mill and Local market customers.
- Supervised and planned shift laboratory staff.

ATTRIBUTES

- Highly motivated
- Career Driven
- Hard working
- Positive Attitude
- Reliable & Flexible

Laboratory Analyst @ Illovo Sugar (2010 > 2012)

- Ensured that the laboratory is producing accurate and timeous information for the purpose of factory control and quality assurance.
- Created weekly and monthly production reports and presented the results to management and external stakeholders.
- Operated, calibrated and verified various laboratory instruments.
- Contributed on Eston mill labs' 1st place inter-laboratory proficiency scheme.

Quality Coordinator @ FAL (2006 > 2009)

- Ensured that QMS requirements are established and maintained according to ISO 9000:2001, ISO 14001 and TS16949 standards.
- Coordinated and facilitated the running of the quality department including the scheduling of internal and external process and systems audits.
- Conducted quality inspections of both raw material and final products.
- Reported on the performance of the QMS and EMS to top management for review and continuous improvement.

Laboratory Analyst @ Illovo Sugar (2004 > 2006)

- Ensured that the laboratory is producing accurate and timeous information for the purpose of factory control and quality assurance.
- Operated, calibrated and verified various laboratory instruments.
- Contributed on Eston mill lab 1st place inter-laboratory proficiency scheme.

Lab Technician Trainee @ Umgeni Water (2002 > 2003)

- Operated, calibrated and verified various laboratory instruments.
- Awarded distinction pass on the water purification project which was to fulfill the requirements of the National Diploma.

EDUCATION

National Diploma in Analytical Chemistry (1999 > 2001)

Analytical Chemistry 1, 2, 3 & 4, Chemistry 1, Physical Chemistry 2 &3, Maths 1 & 2, Organic Chemistry 2&3, Inorganic Chemistry 2 & 3, Physical Science 1 & 2, Experiential Learning, Computer Skills 1, Communication Skill 1, Chemical Quality Assurance

B-Tech in Quality Management (Incomplete)

Quality Management Systems, Continual Quality Improvement, Quality Auditing Techniques IV,

National Certificate in Total Quality Management

An Overview of TQM and the Creation and Maintenance of Quality Culture, Developing the TQM System & the Tools and Techniques for the Continuous Improvement, The Implementation Of TQM, Integrated SHEQ Management Based on ISO and OSHAS System Standards.

Certificate in New Managers Development (2017)

Operations Management, Financial Management, Personal Mastery