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THE MINING ACT

(No. 12 of 2016)

THE MINING (WORK PROGRAMMES AND EXPLORATION
REPORTS) GUIDELINES, 2017.

ARRANGEMENT OF GUIDELINES

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SCHEDULES

THE MINING ACT

(No. 12 of 2016)

IN EXERCISE of the powers conferred by section 221 (1) of the Mining Act, 2016, the Cabinet Secretary makes the following Guidelines:—

THE MINING (WORK PROGRAMMES AND EXPLORATION
REPORTS) GUIDELINES, 2017.

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|--|------------------------|
| 1. These Guidelines may be cited as the Mining (Work Programmes and Exploration Reports) Guidelines, 2017. | Citation. |
| 2. In these Guidelines, unless the context otherwise requires — | Interpretation. |
| “Act” means the Mining Act, 2016; | No. 12 of 2016. |
| “applicant” means a person who applies for a reconnaissance licence, prospecting permit, prospecting licence or retention licence; and | |
| “holder” means a person who has been granted a reconnaissance licence prospecting permit, prospecting licence or retention licence. | |
| 3. These Guidelines — | Purpose of Guidelines. |
| (a) provide guidance to applicants for, and holders of, reconnaissance licences, prospecting licences, prospecting permits and retention licences on how to prepare work programmes and exploration reports; and | |
| (b) are to assist the Director of Geological Surveys to review work programmes and exploration reports that shall be submitted by applicants for or holders of mineral rights. | |

4. (1) An applicant or holder shall submit online, a work programme that describes the activities that the applicant or holder proposes to carry out in the licence or permit area. Work programmes.
- (2) The work programme is required —
- (a) to accompany a new application for a reconnaissance licence, prospecting permit, prospecting licence or retention licence ; or
- (b) when a renewal is sought.
- (3) A work programme shall provide a detailed plan for the duration for which the licence or permit is sought and outline the details of the activities and expenditure commitments for each year of the term of the licence or permit.
- (4) The work programme shall contain information commensurate with the type of licence or permit and the stage of exploration reached to enable the Director of Geological Surveys to decide whether the proposed work is appropriate and adequate.
- (5) A work programme submitted in support of a new application will be assessed in relation to the known geology and mineralisation in the area.
- (6) The proposed work programme shall take into account all available geological maps and reports including geological surveys and previous company exploration reports, where these are available.
- (7) The proposed expenditure set out in the work programme is required to be commensurate with what at the time is known of the geology and mineralisation of the area.
- (8) A check list for preparing a work programme is set out in the First Schedule.
- (9) Notwithstanding subparagraph (3), the holder of a permit or licence shall submit an updated work programme and expenditure commitment for the following year at the end of each year of the term.
- (10) The updated programme shall summarise the results of the work done and describe how the proposed work builds upon this knowledge.
- (11) The expenditure commitments for the subsequent years are subject to the minimum incremental requirements.
- (12) The updated work programme shall accompany the annual report.
- (13) The process of submitting a work programme for an application for a renewal of a permit or licence shall be similar to that provided for new applications.
5. (1) The holder shall submit to the Director of Geological Surveys an exploration report — Exploration reports.
- (a) on all activities being carried out under a permit or licence on a quarterly, bi-annual and annual basis;

(b) in support of an application for a renewal and when an area is surrendered.

(2) Every exploration report shall be made and signed by a qualified geologist recognised by the Geologists Registration Board of Kenya who is actively involved in carrying out the work programme.

(3) The lead geologist shall ensure that the exploration report complies with the relevant professional and international standards expected of a scientific or engineering report.

(4) The checklist for exploration reports are as prescribed in the Second, Third, Fourth and Fifth Schedules.

(5) Notwithstanding sub paragraph (4), an exploration report may include any other relevant information.

(6) The Sixth and Seventh Schedules provide for airborne surveys and a list of allowable expenses respectively.

(7) An exploration report shall relate to an individual licence, even where a holder has carried out parallel or associated programmes in two or more licence or permit areas.

6. (1) Exploration reports shall remain confidential during the term of the permit or licence. Confidentiality.

(2) Upon termination of the permit or licence, exploration reports become the property of the State and shall form part of the geological database of Kenya.

(3) Subject to sub paragraph (1), the public may access any information contained in an exploration report upon the payment of a prescribed fee.

7. (1) A statement of expenditure incurred in carrying out the approved work programme shall accompany each annual report. Expenditure statements

(2) A statement of expenditure shall be submitted separately and not bound into the exploration report.

(3) A separate expenditure statement is required for each and every permit or licence.

(4) Only the expenses set out in the Seventh Schedule are allowable.

FIRST SCHEDULE

Checklist for preparing Work Program

par 4(9)

1. Company Name
2. Permit or Licence Number
3. Licence Type
4. Area
5. Locality (County)
6. Report Type
7. Author

8. Position of Author
9. Period of Report
10. Number of employees –
 - (a) Expatriates;
 - (b) Kenyans.
11. Description of work done e.g. area covered by geological mapping, area covered by geochemical sampling (total samples), number of drill holes, total depth in meters
12. Additional supporting documents
13. If annual report, upload the report
14. Expenditure for the quarter

SECOND SCHEDULE

Checklist for Annual Report

(par 5(4))

1. Overview

Title, date and authors: The report cover and/or inner page should include a suitable title and other information including: area name; county in which licence or permit is located; licence or permit number; name of licence or permit holder; name of operator (if different to holder); report type (e.g. Annual, Final);author(s);reporting period; and date of report. It may be helpful to add a company report reference number.

Position, name and signature of author.

2. Contents

A contents page giving a breakdown, section by section, including appendices, together with page numbers. It should list tables, figures and maps including any loose maps contained in a sleeve at the back of the report or in a separate volume. Where a report comprises more than a single volume, each volume should be numbered and sub-titled. Each should have its own contents page which should additionally refer to the other volumes.

3. Executive summary

The report should contain a summary (abstract) of the work carried out and the results obtained aimed at the competent, non-specialist. The executive summary would not normally exceed three pages. Where there is more than one volume, the executive summary to the main volume should cover all reports.

4. Introduction

General background to project.

5. Geological setting

This section should provide an overview of the geology based on previous work by the Geological Survey, the licence or permit holder or others. It would normally include an outline of the stratigraphy, structure, known mineralisation, and prospectivity of the area. The topography and physiology should be briefly described. (Note: It is not

necessary to repeat all of this information in the second and subsequent years of the licence or permit, although a short summary might be helpful).

6. Previous exploration

Where previous prospecting has been carried out over all or part of the area (or in areas of comparable geology nearby), the report should summarise this work (and quote references). In the second and subsequent years, only the previous work done by the current holder is necessary. Where this is a final report, that is the licence or permit is being surrendered, this section must provide a summary of the work carried out since the licence or permit was first granted.

7. Strategy

Briefly describe the target mineralisation and the exploration strategy.

Logistics: Equipment employed, staff involved (expatriate and local), access and dealings with land owners or lawful occupiers should be summarised.

The following is a checklist of possible items to be included: the list is neither prescriptive nor exhaustive. In general, an annual reports should mirror the contents of the approved work programme.

A. Regional Exploration:

Remote sensing (interpretation of aerial photographs, satellite imagery and other imagery) and airborne geophysics such as aeromagnetic or radiometric survey). Whereas airborne surveys require a separate report, the main results and conclusions should be summarised here.

Geochemical sampling including geochemical analyses, subdivided into:

- rock samples
- streams sediments (including panned concentrates)
- soils
- laboratory used, analytical techniques, standards, quality control

(NB: The geochemical results and their interpretation should be summarised in the main text together with maps or plots, but full analytical data might be better placed in appendices. A copy of the original analysis sheet from the laboratory should be included).

Geological mapping (include a copy of each resulting map at the original scale)

Summary and conclusions; implications for further work

B. Preliminary follow-up work.

Stream sediment sampling (including panned concentrates)

Soil sampling

Surface rock (and mineral) sampling

Pitting and trenching

Note: Each of the above should include a summary of the results of mineralogical testing and geochemical analysis. The full analytical data with locational information and maps should be provided in appendices)

Shallow drilling or augering or diamond drilling, plus analytical results

Ground geophysical surveys (e.g. IP; resistivity; EM) – full data and interpretation

Semi-detailed geological mapping (maps at original scale to be provided)

Geochemical sampling including geochemical analyses (refer to A. above for details)

Summary and conclusions; implications for further work

C. Detailed follow-up work. (If more than one prospect has been investigated, each should be described in a separate section)

Systematic, close-spaced geochemical (sub)soil sampling

Pitting and trenching

Shallow drilling or augering

Diamond drilling

Petrographic studies and ore mineralogy

(NB: Each of the above should include a summary of mineralogical testing and geochemical analysis (refer to First Schedule for details). The full data with locational information should be provided in appendices)

Down-hole geophysical logs

Surface and subsurface geological mapping (maps at original scale to be included)

Geological modelling

Preliminary economic evaluation

Synopsis and conclusions, and outline of next stages

D. Summary and conclusions. This should include conclusions regarding the potential of economic mineralisation and a forward look covering the remaining term of the licence.

Appendices

A separate appendix should be provided for each dataset acquired and referred to in the main text. The data may include (but is not limited to): geochemical stream sediment, soil and rock samples; drilling logs (qualitative, mineralogical, grade, geophysical); and geophysical datasets. The data should be tabulated form.

For ground geochemical surveys: a description of the methods used; material sampled (drainage, soil, trench, float, drill hole); collection or screening techniques; sample preparation methodology; mesh size-fraction used for analysis; 'orientation' survey results; analysis technique(s); analytical equipment used; name of accredited laboratory; sample control procedures (e.g. randomisation, international standards); and statistical treatment of data. Printouts of the original analysis sheets from the laboratory should be included. Sample locations and traverses must be identified by coordinates and illustrated on appropriate scale maps. The analytical data should be presented as maps or cross sections in raw or processed (e.g. contoured) form.

For geophysical surveys: a description of the methodology including make, model and specification of each instrument used, components measured and units of measurement, units in which results presented, array arrangement, correction (e.g. diurnal variations). Locations, traverses and arrays must be identified by coordinates and illustrated on appropriate scale maps.

For drilling: grid coordinates; dip and azimuth; type of drill, core diameter (or hole diameter in case of chippings); collar elevation ASL; results of dip test and down hole surveys; name of drilling company; printouts of the results of *in situ* geophysical or geochemical downhole logs; interpretation logs; legible copies of physical core logs including petrographic or mineralogical tests signed by logger; core storage locations;

For petrological, petro-graphical, mineralogical and metallurgical studies: sample preparation methods; descriptions and results of tests and assays; sample location coordinates and plots.

For airborne surveys a *separate* report is required – refer to Annex F for further details of what must be submitted.

All maps, plans, figures, sections, logs, diagrams, graphs, photographs must be clearly labelled and consecutively numbered. A4 size illustrations should be bound with the text. Maps and plans should be drafted to standard scales (e.g. 1:500, 1:1,000, 1:25,000; 1: 50,000) with a scale bar in metric units, a north reference (grid, true or magnetic), date and author. Maps should include coordinates referenced to the official map of Kenya.

A copy of the approved work programme for the reported period should be included as reference.

List of all digital data provided including details of data formats.

References

Attach work programme for next year

THIRD SCHEDULE

(par 5(4))

Checklist for Retention Report

1. Overview

Title, date and authors: The report cover and inner page shall include a suitable title and other information including: area name; county in which licence or permit located; prospecting licence number; name of holder; name of operator (if different to holder); report type (Retention); author; reporting period; and date of report. It may be also helpful to add a company report reference number.

Position, name and signature of author.

2. Contents

A contents page giving a breakdown section by section, including appendices, together with page numbers. It should list tables, figures and maps including any loose maps contained in a sleeve at the back of the report or in a separate volume. Where a report comprises more than a single volume, each volume should be numbered, and subtitled. Each should have its own contents page which should additionally refer to the other volumes.

3. Executive summary

The report should contain a summary (abstract) of the work carried out and the results obtained aimed at the competent, non-specialist. The executive summary would not normally exceed one to two pages. Where there is more than one volume, the executive summary to the main volume should cover all reports.

Main text (the content will relate directly to the agreed work programme focusing on the specific activities that prevent the holder from immediately applying for a mining licence).

4. Introduction

General background to project.

5. Previous exploration

The report should summarise the previous exploration or feasibility work and describe the specific issues preventing the deposit being developed at the present time.

6. Strategy

Describe the activities aimed at alleviating the identified issues.

7. Logistics

Equipment employed, staff involved (foreign and local), access and dealings with land owners or lawful occupiers should be summarised.

The following are examples of possible work areas (Note: the list is indicative, not exhaustive)

A. Geological. (If more than one prospect has been investigated, each should be described in a separate section).

Pitting and trenching

Diamond drilling

Underground development

Ore mineralogy, metallurgical testing and smelting

Geophysical and geochemical surveys

Orebody modelling

B. Engineering or technical

Transport or access

Power or water

Infrastructure

Communications

C. Economic

Market prices

Finance

Business development model

D. Summary and conclusions.

This must include a clear statement as to when the licence holder will be in a position to apply for a mining licence, or what needs to change in order for this to happen.

Appendices

A separate appendix should be provided for each dataset acquired and described in the main text.

All maps, plans, sections, logs, and locational information not previously submitted.

A copy of the approved work programme for the reported period should be included as reference.

List of all new digital data separately provided including details of data formats.

References

Attach work programme for the next year of current term or for any renewal applied for

FOURTH SCHEDULE

(par 5(4))

Checklist for Surrender Report

1. Overview

Title, date and authors: The report cover or inner page should include a suitable title and other information including: licence or permit area name; county in which licence or permit located; licence or permit number; name of licence or permit holder; name of operator (if different to holder); report type (e.g. annual, final, surrender); author; reporting period; and date of report. It may be also helpful to add a company report reference number.

Position, name and signature of author.

2. Contents

A contents page giving a breakdown section by section, including appendices, together with page numbers. It should list tables, figures and maps including any loose maps contained in a sleeve at the back of the report or in a separate volume. Where a report comprises more than a single volume, each volume should be numbered, and sub-titled. Each should have its own contents page which should additionally refer to the other volumes.

3. Executive summary

The report should include a summary (abstract) of the work done and the results obtained aimed at the competent, non-specialist.

Main text (the content will depend on the stage of exploration reached in the area being surrendered)

4. Introduction

General background to project.

Geological setting: Overview of the geology, including an outline of the stratigraphy, structure, and potential for mineralisation. The topography and physiology should be briefly described.

Exploration strategy

Briefly describe the target mineralisation and the exploration strategy.

A. Regional Exploration:

Remote sensing (interpretation of aerial photographs, satellite imagery and other imagery) and airborne geophysics such as aeromagnetic or radiometric survey.

Geochemical sampling including geochemical analyses subdivided into:

- rock samples
- streams sediments (including panned concentrates)
- soils

(Note: The geochemical results and their interpretation should be summarised in the main text together with maps or plots, but full analytical data may be better provided in appendices)

Geological mapping (include a copy of each resulting map at the original scale)

Summary and conclusions; implications for further work.

B. Preliminary follow-up work.

Stream sediment sampling (including panned concentrates)

Soil sampling

Surface rock (and mineral) sampling

Pitting and trenching

(NB: Each of the above should include a summary of the results of mineralogical testing and geochemical analysis. The full analytical data with locational information and maps should be provided in appendices)

Shallow drilling or augering or diamond drilling plus analytical results

Ground geophysical surveys – full data and interpretation

Semi-detailed geological mapping (maps at original scale to be provided)

Summary and conclusions; implications for further work.

C. Detailed follow-up work. (If more than one prospect has been investigated, each should be described in a separate section)

Systematic, close-spaced geochemical (sub) soil sampling

Pitting and trenching

Shallow drilling or augering

Diamond drilling

Petrographic studies and ore mineralogy

(NB: Each of the above should include a summary of mineralogical testing and geochemical analysis. The full data with locational information should be provided in appendices)

Down-hole geophysical logs

Surface and subsurface geological mapping (maps at original scale to be included)

Geological modelling

Preliminary economic evaluation

Synopsis and conclusions, and outline of next stages

5. Summary and conclusions.

Appendices (Also refer to information provided for Annual reports)

Appendices should reproduce original information and data for the surrendered ground, extracted from past annual reports: e.g. geochemical stream sediment, soil and rock samples; drilling logs (qualitative, mineralogical, grade, geophysical); and geophysical datasets. The information would normally be presented in tabular form as printouts of the data to be supplied in digital format.

Copies of earlier-submitted (or extracts thereof) maps, plans, sections, logs, and locational information at original scales.

List of all digital data provided including details of data formats.

References

FIFTH SCHEDULE

(par 5(4))

Checklist for Feasibility Study

NOTE: It is likely that the feasibility study will comprise a number of separate reports. In this case, the holder should provide a Summary Report drawing together the results and listing the separate volumes.

Title, date and authors: The report cover or inner page should include a suitable title and other information including: area name; county in which licence or permit located; licence number; name of licence holder; name of operator(s) (if different to holder); report type; author and contributors; and date of report. It may be also helpful to add a company report reference number.

Position, name and signature of lead author

Contents

Executive summary

Background

Mining history of area; land surface holding; access; stakeholders

Geology

Geological occurrence of mineral deposit; economic mineral(s), ore grade and reserves (proven, estimated and inferred) supported by detailed calculations and assumptions

Mining operations

Mining methods; mine plan; production planning; mining rate; processing plant and strategy; equipment; water and water management; stockpiling

Mine development

Mine development plans and timetable; construction and earth moving; tailings and tailings storage construction

Ore processing and concentration

Size; throughput or capacity; plant design; raw materials consumption (e.g. chemicals); refining; power requirements

Washing plant

Capacity; water supply and usage; tailings disposal

Infrastructure

Power or electricity usage and supply; administration and staff accommodation; community development; hospital; laboratories; workshops; transport (roads, railways, ports); mine support services

Power generation

Instrumentation and communications

Capital programme

General requirements; mine development costs and financing; capital; contingency and escalation; pre-production costs; cash flows;

Operating costs and economic model

Workforce (expert and unskilled); operating cost structure and breakdown; labour; materials; fuel; contracted services; consumables; administration; mining lease fees; surface rents; capital replacement and amortisation; contributions to development funds; royalty; tax; insurance; external costs;

Marketing

Mineral product(s); sales volumes; prices and market trends

Business model

Assumptions; demand and historical trends; price forecasts and volatility; economic model; net present value; cash-flow analysis; sensitivity analysis; economic benefits to Kenya; risk assessment.

Mine closure plan

Financial plan; timetable and implementation; restoration or rehabilitation of land; alternative uses of mined out ground; safety considerations; social impacts; plan to progressively introduce alternative livelihoods; removal of plant and machinery; alternative uses (conversion) of infrastructure; post-mining environmental monitoring of mine area (including tailings); contingencies.

Environment and social impact assessment

Full, expert assessment and modelling of effects of mining on the environment and social structures; hazard analysis; mitigation plan; monitoring programme

SIXTH SCHEDULE

(par 5(6))

Special Provisions for Airborne Surveys

- (a) Progress Reports: The holder of a mineral right who undertakes an airborne geophysical survey must submit a progress report not later than seven days after the end of each four week period. The report shall include:
- A narrative description of the progress achieved during the previous month and since the campaign commenced;
 - an index map (may be at small scale) showing flight lines and indicating line-kilometres flown; and
 - hardcopy plots of any processed or interpreted data, including cumulative plots of data collected since commencement.
- (b) Final Report: The report should follow the presentational format outlined for other types of technical report and provide full details of the survey including: type of survey; instrumentation; aircraft type; flight line intervals; ground speed; nominal flight height and ground clearance; dates of survey; weather conditions; and name of company. Flight index maps must show flight lines and tie lines. The report must list and describe the digital data and provide information regarding formats sufficient to enable the data to be read and processed using industry-standard software. The digital data (raw, processed and interpreted) must be provided separately in an industry-standard format together with full metadata. New aerial photography (acquired under special permission) must record full details of the survey including: aircraft; camera used; flight height; notional scale; overlap or sidelap; name of company; and flight index plan. A copy of the digital imagery must similarly be provided.

The following must be submitted upon completion of any airborne survey (remote sensing, geophysical or geochemical).

- A digital, read-only PDF copy of the report.
- A copy of all original or raw, processed and interpreted data (including maps or plot files), plus metadata, in an industry standard digital format (submitted online cadastre or delivered to the Director of Geological Surveys).
- Two bound copies of the report, delivered to the Mining Cadastre Office. This must include full-size hardcopy plots of each processed and interpreted dataset, together with flight plans.

SEVENTH SCHEDULE

(par 5(6))

Allowable Exploration Expenses

An itemised statement of expenditure necessarily incurred in carrying out the approved exploration work programme must accompany (but must be physically separate from) each exploration report. A detailed list of allowable expenses is provided in the Licensing Regulations. The following is a summary of the main categories of allowable expenditure incurred by the licence holder including any subcontractor or service provider, *which are directly related to the programme*:

- Field and laboratory exploration activities — all field costs incurred in carrying out the mineral exploration program relating to: literature research;

geological mapping; geochemical surveys; geophysical surveys; remote sensing or photo geology; sample collection; sample transport costs; laboratory analysis; petrological, petrographical and mineralogical studies; boundary, control and gridding surveys; data processing; boundary, control and gridding surveys; office costs related to laboratory analysis; data processing; document production, interpretation; assessment; and presentation of results.

- Drilling, excavation and pre-production costs — includes site preparation (construction and maintenance of access roads, drill sites, camp sites and water supply) and rehabilitation; drilling and completion costs (rigging-up, drilling, coring, fishing, casing, logging and other associated surveys, core analyses, rigging-down, consumable goods, hire of plant and equipment, repair and maintenance); trenching, stripping and pitting; shaft sinking and other underground excavations; bulk sampling; pilot and beneficiation studies; pre-feasibility and feasibility works including economic or marketing studies.
- Environmental activities – includes baseline studies; environmental and social or cultural impact assessments; rehabilitation and mine closure or rehabilitation studies; environmental management and rehabilitation; community consultation and outreach.
- Logistics — camp construction and operating costs (office and accommodation, .); transport or shipping (personnel, plant, equipment, samples for analysis, materials); salaries and wages (supervisory, technical and non-technical); insurance (equipment, personnel pertaining to operations on the licence); and report production costs (data processing, reproduction and presentation of results); sub-contractor costs; equipment hire charges.
- Depreciation or amortisation of all owned equipment used in the exploration: vehicles, machinery, equipment, drill, if not already included in the costs above. The full price of equipment intended to remain on site for future production work. Shared-use equipment shall only include apportioned costs according to actual usage.
- Administration – includes only the direct costs of running local office and local agent's charges. (Note: any in-country office and agent's expenses must be apportioned between concurrent projects); travel to or from Kenya by expatriate staff *directly involved* in programme; and other direct and *unavoidable costs* associated with the work programme.
- Compensation or payments – to land owners or lawful occupiers and communities.
- Training of Kenyan citizens including travel or accommodation.
- Miscellaneous – any other essential costs necessarily and unavoidably incurred in the course of the work programme.
- Excluded are overseas headquarters costs, overseas staff-related costs, financing costs, and any non-project-related travels.

Dated the 9th May, 2017.

DAN KAZUNGU,
Cabinet Secretary, Ministry of Mining.