MINERAL RIGHTS MAPPING AND MANAGEMENT USING ArcGIS Online EMBEDDED IN FLEXiCADASTRE

BY

ABIUD NYABUNGA CARTOGRAPHER/GIS TECHNOLOGIST

MINISTRY OF MINING

GIS for Mining Seminar: Prospecting, Exploration & Extraction
PRESENTATION OUTLINE

1. Introduction to Flexicadastre
2. The Public Mining Cadastre Map
3. How to register on the OMC Portal
4. How to make an application for a licence

For further inquiry, email queries@mining.go.ke
1. INTRODUCTION TO FLEXICADASTRE

- FlexiCadastre is the enterprise scale land management solution adopted by leading mining companies and governments worldwide.

- It uses a workflow-centric and spatially enabled approach to provide a scalable, enterprise ready and integrated solution to drive the efficient administration of mineral rights and contracts across multiple global jurisdictions.
Section 191 (1) of The Mining Act, 2016

• There shall be established and maintained an up to date computerized mining cadastre and registry system, including a register of mineral rights.

Section 192 (3) of The Mining Act, 2016

• The computerized mining cadastre and registry system shall include an online transactional facility to enable applications for granting and renewal of mineral rights to be submitted online.
• Using a web portal for data management and reporting, advanced task management, configurable business logic and best breed of Esri GIS technologies, FlexiCadastre has become the world leader in mineral rights and agreements management solutions.
Using a web portal for data management and reporting, advanced task management, configurable business logic and best breed of Esri GIS technologies, FlexiCadastre has become the world leader in mineral rights and agreements management solutions.
• Licenses are the central object in FlexiCadastre representing the mineral tenement and all associated requirements / obligations. Linked to the license housed in other FlexiCadastre objects as shown below.
- **Kenya was the First Country to go online (February 2015)**

  - **Mining Cadastre Systems**
    - Processes designed in accordance with the Laws and Regulations
    - Provides tools to accurately capture cadastre data
    - Validates license overlaps on application
    - Reduces possible conflicts with licenses and restricted areas
    - Notifies up and coming renewals and expiries
    - Ensures full data auditing

  - **Results in GOOD DATA MANAGEMENT**
  - **Results in GOOD DATA QUALITY**
  - **ALLOWS FOR THE PUBLISHING OF ACCURATE DATA ONLINE**

- **21 Countries are now using flexicadastre**
Where do minerals occur in Kenya?
Which Areas have been licensed?
Which Areas have been applied for licenses?
IS THERE AVAILABLE AREA TO PROSPECT?
Welcome to Kenya’s Mining Cadastre Portal

The goal of this Mining Cadastre Portal is to provide an electronic platform for all stakeholders in the mining sector in Kenya to engage directly with the Ministry of Mining.

Before using the Mining Cadastre Portal, you must first Register for access.

Existing mineral rights holders

- If you already hold mineral rights, or have a pending application for them, download and complete the MCP01 Registration Form and submit it, along with supporting documents, to the Mining Cadastre Office, Works Building, Nairobi.

Prospective rights applicants

- If you don’t already hold mineral rights in Kenya, use the Self Registration online form to submit your particulars and supporting documents through the portal.

To find out more

- Click the Registration Details link to find out more about getting access to use the Mining Cadastre Portal.

NEWS: Online Payments via Mobile Money (M-Pesa, etc) and Credit/Debit Cards are now supported in the portal.
3. PORTAL USER REGISTRATION

Register for Portal Access

I currently hold licences

1. Applications for existing licence and applications to register for access to the Mining Cadastre Portal must be presented in person by the individual who wishes to use the portal. The application must consist of:
   1. A completed registration form MCP01
   2. Proof of identity
   3. If an employee or agent, an original Letter of Authority signed by a company director authorising the individual to act on behalf of the company or person.
2. Once the Ministry of Mining has processed the application, a user profile will be created in the Mining Cadastre Portal and an email sent to the user's registered email address with a link to set a password for the first time.

Download registration form

I wish to make licence applications (and do not hold any licences)

1. Individuals or companies who do not already have licences or applications may register online for access to the Mining Cadastre Portal. The application must be accompanied by the following documents, in digital form, which will be uploaded on the self-registration page:
   1. Proof of identity
   2. If an employee or agent, a Letter of Authority signed by a company director authorising the individual to act on behalf of the company or person.
2. A user profile will be automatically created in the Mining Cadastre Portal and an email sent to the user's registered email address with a link to set a password for the first time.
3. The Ministry of Mining will then verify the submitted documents and application, and if no problems are detected, an email will be sent to the applicant confirming their successful registration.

Register for this account

Terms of Use Summary

This Mining Cadastre Portal is provided as a public service by the Ministry of Mining of the Republic of Kenya.

By accessing this system you hereby agree to the Terms and Conditions of the Mining Cadastre Portal.

Access to this Mining Cadastre Portal by any person other than an authorized individual or an authorized agent for a company is strictly prohibited and may result in legal action against such person.

The Mining Cadastre Portal and all of the information it contains are provided “as is” without warranty of any kind, whether express or implied. All implied warranties, including without limitation, implied warranties of merchantability, fitness for a particular purpose are hereby disclaimed.
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The Mining Cadastre Portal and all of the information it contains are provided “as is” without warranty of any kind, whether express or implied. All implied warranties, including, without limitation, implied warranties of merchantability, fitness for a particular purpose, and non-infringement, are hereby expressly disclaimed.

Under no circumstances will the Kenyan Ministry of Mining or any of its Suppliers be liable to any person or business entity for any direct, indirect, incidental, consequential, or other damages based on any use of the Mining Cadastre Portal or any other website to which this site is linked, including, without limitation, any lost profits, business interruption, or loss of programs or information, even if the Kenyan Ministry of Mining or any of its Suppliers has been specifically advised of the possibility of such damages.
Ministry of Mining
Mining Cadastre Portal

Your Details

General  Contact  Address

Physical Address
Line 1: 
Line 2: 
Province/County/State: 
Postal Code: 
Country: 

Postal Address

☑ Same as Physical

Register on Behalf of...

☑ The user in his/her personal capacity
Supporting Documents:  Upload Documents *

☑ A company as agent or employee
Supporting Documents:  Upload Documents *

☑ On behalf of another person as agent or employee
Supporting Documents:  Upload Documents *

Terms and Conditions

☐ By checking this checkbox, you agree to the Terms of Use and Privacy Policy of this website.
REGISTRATION ON BEHALF OF AN ORGANIZATION OR AN INDIVIDUAL

### Supporting Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>Uploaded Filename</th>
<th>Action</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal: Registration - Company Authorisation Letter *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
<tr>
<td>Portal: Registration - Personal Identification *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
<tr>
<td>Portal: Registration - Company Registration Certificate *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
</tbody>
</table>

OK

### Supporting Documents

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</tr>
</thead>
<tbody>
<tr>
<td>Portal: Registration - Personal Identification *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
<tr>
<td>Portal: Registration - Identification of Person Represented *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
<tr>
<td>Portal: Registration - Authorisation Letter of Person Represented *</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
</tbody>
</table>

OK
CHECK TERMS AND CONDITIONS THEN
CLICK "REGISTER" TO SUBMIT.

Your Details

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Address</strong></td>
<td></td>
</tr>
<tr>
<td>Line 1:</td>
<td></td>
</tr>
<tr>
<td>Line 2:</td>
<td></td>
</tr>
<tr>
<td>Province/County/State:</td>
<td></td>
</tr>
<tr>
<td>Postal Code:</td>
<td></td>
</tr>
<tr>
<td>Country:</td>
<td></td>
</tr>
</tbody>
</table>

**Postal Address**
- Same as Physical

Register on Behalf of...
- The user in his/her personal capacity
  - Supporting Documents: Upload Documents
- A company as agent or employee
  - Supporting Documents: Upload Documents
- On behalf of another person as agent or employee
  - Supporting Documents: Upload Documents

Terms and Conditions
- By checking this checkbox, you agree to the Terms of Use and Privacy Policy of this website.
Once your Account is active you can log in to make application or manage your licence portfolio. “Email, Password, & Secondary Authentication” credentials.
4. APPLYING FOR NEW LICENCE

<table>
<thead>
<tr>
<th>Application Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner: <strong>XYZ LTD</strong></td>
</tr>
<tr>
<td>Type: <strong>Exclusive Prospecting Licence (EPL)</strong></td>
</tr>
<tr>
<td>Coordinates: Enter Coordinates GCS_WGS84</td>
</tr>
<tr>
<td>Commodities: Select Commodities</td>
</tr>
<tr>
<td>Supporting Documents: Upload Documents</td>
</tr>
</tbody>
</table>

Application Instructions:
This online application is made in terms of the Mining Act of 1940 and Gazette Notice No. 507 of 2015.

To successfully submit your tenement application, you will follow these steps:

**Prepare your application**
1. Select the license type
2. Choose commodities
3. Upload the required documents
4. Enter or upload the coordinates for the area for which you are applying

**Validate your application**
1. Click the Continue button to validate that all required documents have been attached and that your requested area is acceptable.
2. If there are problems with the requested area, you will need to modify the coordinates before continuing.
3. The final, acceptable coordinates will be displayed for your confirmation before the application is created.

**Pay application fee**
1. Once the application is created, you will be taken to the payment screen, where you can choose your method of payment.
2. Cancelling your payment does not cancel the application itself. You can return later to submit your payment.
3. Your application fee applies to this submission only and is non-refundable. Should you be requested to resubmit any documentation, you will need to pay the application fee again, in full.

Your application is not considered complete, and the requested area is not reserved, until the application fee is successfully paid.
Choose Type of Licence from “Type” drop down, and select the minerals “commodities.” Click on “Enter Coordinates” to input the Area over which you want to prospect/mine.
- Type Coordinates manually option

Coordinate input method
- Type coordinates manually
- Interactive block selection
- CSV file upload

License Coordinates
Coordinate System: GCS_WGS84

Latitude
- 

Longitude
- 

DMS
- 

OK  Cancel
Interactive block selection option

Instructions

Please select the blocks for the license for which you are applying using one of the following methods:

1. Select with Polygon
   - Draw a polygon on the map that covers the area that you want to apply for
   - Follow the instructions next to the pointer on the map
   - Complete the polygon by double clicking on the last point
   - All the [X] second blocks that overlap with the polygon that you’ve drawn will automatically be selected for you

2. Select Blocks
   - Zoom in to the ground to the area where you want to apply for
   - Click the "Select Blocks" button to enable block selection
   - Select the "Add" or "Remove" mode
   - Click on blocks to select or deselect the blocks

When you are done, click the OK button to continue with the application process
Click the Cancel button to cancel any changes and return to the application process
CSV file upload option

Import coordinates from CSV file

Please upload a CSV file containing the coordinates for your license with the following format:

- Use a , (comma) as the delimiter
- The file should contain the following fields:
  - ORDER - The coordinate number starting at 1
  - LAT_DEG - The Latitude degrees, which should be a whole number between 0 and 180
  - LAT_MIN - The Latitude minutes, which should be a whole number between 0 and 59
  - LAT_SEC - The Latitude seconds, which should be a decimal number with 2 decimal places between 0 and 59.99
  - NS - N for North and S for South
  - LON_DEG - The Longitude degrees, which should be a whole number between 0 and 180
  - LON_MIN - The Longitude minutes, which should be a whole number between 0 and 59
  - LON_SEC - The Longitude seconds, which should be a decimal number with 2 decimal places between 0 and 59.99 (Use , as the decimal separator)
  - EW - E for East and W for West
- The first row should contain the field names
- The coordinates should be in the GCS_WGS84 coordinate system

<table>
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<tr>
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<tbody>
<tr>
<td>CSV File</td>
<td></td>
<td>Upload</td>
<td></td>
</tr>
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</table>
The resulting plot and its coordinates. Clicking “OK” will trigger the checking of your application draft.
It will give the results after checking

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<tr>
<td>Coordinates:</td>
</tr>
<tr>
<td>Change Coordinates</td>
</tr>
<tr>
<td>The Shape does not conform to Grid</td>
</tr>
<tr>
<td>The Shape overlaps a restricted area (Parks / Forests / Reserved Area/Water Bodies) (Turbo): Clip Shape</td>
</tr>
<tr>
<td>Commodities:</td>
</tr>
<tr>
<td>Select Commodities  *</td>
</tr>
<tr>
<td>Specify at least one commodity.</td>
</tr>
<tr>
<td>Supporting Documents:</td>
</tr>
<tr>
<td>Upload Documents *</td>
</tr>
<tr>
<td>Required documents missing:</td>
</tr>
<tr>
<td>Valid Prospecting Right</td>
</tr>
<tr>
<td>Valid Tax Compliance certificate from KRA</td>
</tr>
<tr>
<td>Detailed proposed exploration program showing work to be undertaken each year and expenditure proposal</td>
</tr>
<tr>
<td>Statement of technical capability</td>
</tr>
<tr>
<td>Statement of financial capability</td>
</tr>
<tr>
<td>Name and qualifications of program supervisor</td>
</tr>
</tbody>
</table>
Click on “Change Coordinates” re enter and click “ok”
It will give the results after re-checking

The Shape overlaps a restricted area (Parks / Forests /)

Invalid License Coordinates

Your coordinates overlap with existing licenses
• If you believe that the detected overlaps are incorrect, you may click Continue to submit your application anyway, and have the overlaps evaluated by the Ministry
• Click Clip & Review to automatically clip areas overlapping with existing licenses. You will be given an opportunity to review the clipped coordinates before submitting
• Click Cancel to go back and change your coordinates

Continue  Clip & Review  Cancel

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>00° 38' 00&quot; N</td>
<td>35° 05' 30&quot; E</td>
</tr>
<tr>
<td>00° 38' 00&quot; N</td>
<td>35° 06' 45&quot; E</td>
</tr>
<tr>
<td>00° 37' 45&quot; N</td>
<td>35° 06' 45&quot; E</td>
</tr>
<tr>
<td>00° 37' 45&quot; N</td>
<td>35° 07' 00&quot; E</td>
</tr>
<tr>
<td>00° 37' 30&quot; N</td>
<td>35° 07' 00&quot; E</td>
</tr>
<tr>
<td>00° 37' 30&quot; N</td>
<td>35° 07' 15&quot; E</td>
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not all coordinates displayed View all
Click on “Change Coordinates” re-enter and click “ok”

It will give the results after re-checking.
Click on “Change Coordinates” re enter and click “ok”
It will give the results after re-checking
After Validation the draft is ready. Choose to create application and generate application fee invoice which can be paid through credit/debit card or prepaid.

After making payment and is verified, the application appears on public map (Area secured)
In Conclusion,

GIS professional plays a crucial role in providing products, services and solutions that enable Managers, Directors, Boards, Policy Makers, Trainers and Citizens to Make Informed Decisions.
KENYA MINING FORUM

28 – 29 September 2016
CROWNE PLAZA, NAIROBI, KENYA.

Establishing a world class Mining hub in Kenya.