

technical report of mineral cadastre system

prepared by: dr. safiur-rahman & anwar shamim

Mineral Cadastre System

2014

Table of Contents

1. [List of Tables 7](#_Toc388208698)
2. [Introduction 11](#_Toc388208699)

[1.1. Preface 11](#_Toc388208700)

1. [System Requirements 13](#_Toc388208701)

[2.1. Business Requirements 13](#_Toc388208704)

[2.1.1. Inspection Department 13](#_Toc388208705)

[2.1.2. Commissionerate Department 14](#_Toc388208706)

[2.1.3. Exploration Department 15](#_Toc388208707)

[2.1.4. Licencing Department 16](#_Toc388208708)

[2.2. Functional Requirements 19](#_Toc388208709)

[2.2.1. Licensing Module 19](#_Toc388208710)

[2.2.2. Inspection Module 24](#_Toc388208711)

[2.2.3. Commissionerate Module 31](#_Toc388208712)

[2.2.4. Exploration Module 34](#_Toc388208713)

Table of Figures

[Figure 1: Workflow of Activities at Inspection Department 14](#_Toc388208716)

[Figure 2: Workflow of Activities at Commissionerate Department 16](#_Toc388208717)

[Figure 3: Workflow of Activities at Exploration Department 17](#_Toc388208718)

[Figure 4: Workflow of Activities at Licencing Department 18](#_Toc388208719)

# List of Tables

[Table 1: Licencing Module – Application Form 19](#_Toc388208729)

[Table 2: Licencing Module - PL Application Form 19](#_Toc388208730)

[Table 3: Licencing Module - ML Application Form 20](#_Toc388208731)

[Table 4: Licencing Module - Exploration Licence Application Form 21](#_Toc388208732)

[Table 5: Licencing Module - Reconnaissance License Application Form 22](#_Toc388208733)

[Table 6: Licencing Module - Allotment Letter Form 23](#_Toc388208734)

[Table 7: Licencing Module - Production Form 23](#_Toc388208735)

[Table 8: Inspection Module - Management Form 24](#_Toc388208736)

[Table 9: Inspection Module - Mines Registration Form 25](#_Toc388208737)

[Table 10: Inspection Module - Commencement Notice Form 25](#_Toc388208738)

[Table 11: Inspection Module - Worker Details Form 26](#_Toc388208739)

[Table 12: Inspection Module - Accident Details Form 26](#_Toc388208740)

[Table 13: Inspection Module - Death Details Form 27](#_Toc388208741)

[Table 14: Inspection Module - Inspection Details Form 28](#_Toc388208742)

[Table 15: Inspection Module - Inspection Training Setup Form 28](#_Toc388208743)

[Table 16: Inspection Module - Training Application Form 29](#_Toc388208744)

[Table 17: Inspection Module - Training Certificate Form 29](#_Toc388208745)

[Table 18: Inspection Module - Exam Setup Form 30](#_Toc388208746)

[Table 19: Inspection Module - Exam Certificate Form 30](#_Toc388208747)

[Table 20: Inspection Module - Exam Application Form 30](#_Toc388208748)

[Table 21: Commissionerate Module - Applying for Tender after Auction 31](#_Toc388208749)

[Table 22: Commissionerate Module - Generating CESS letter to the Mine Owner 31](#_Toc388208750)

[Table 23: Commissionerate Module - Monthly CESS Collection Form 32](#_Toc388208751)

[Table 24: Commissionerate Module - Scholarship Apply Form 32](#_Toc388208752)

[Table 25: Commissionerate Module - Applying for Marriage Grant Form 33](#_Toc388208753)

[Table 26: Commissionerate Module - Request for Welfare Scheme Form 33](#_Toc388208754)

[Table 27: Commissionerate Module - Scheme Request Survey Form 33](#_Toc388208755)

[Table 28: Commissionerate Module - The Scheme Cost Estimation Form 34](#_Toc388208756)

[Table 29: Commissionerate Module - Scheme work status Form 34](#_Toc388208757)

[Table 30: Exploration Module - Minerals Details Setup Form 35](#_Toc388208758)

[Table 31: Exploration Module - Minerals Details Form 35](#_Toc388208759)

[Table 32: Exploration Module - Minerals Deposits Form 35](#_Toc388208760)

[Table 33: Exploration Module - Aricle Definition Form 35](#_Toc388208761)

[Table 34: Exploration Module - Issue/Return Form 36](#_Toc388208762)

[Table 35: Exploration Module - Projects details Form 36](#_Toc388208763)

[Table 36: Exploration Module - MTL Details Form 37](#_Toc388208764)

Review History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Introduction

## Preface

Mining Industry of Pakistan produces stones and gems which in turn are exported to generate high revenues for the Country; these minerals include Lime Stone, Coal, Chromite, Marble, Manganese, Fluorite and many others.

The Mining Industry mainly deals with minerals exploration and development and carries out different activities like geological mapping, geological investigation, drilling and reserve estimation. Mineral concession is another function of the department which includes grant of prospecting and mining licenses, and collection of royalty. Rescue operations and inspection of mines etc.

# System Requirements



## Business Requirements

Directorate General of Mines and Minerals comprises of the following departments;

* Licencing Department
* Inspection Department
* Commissionerate Department
* Exploration Department

### Inspection Department

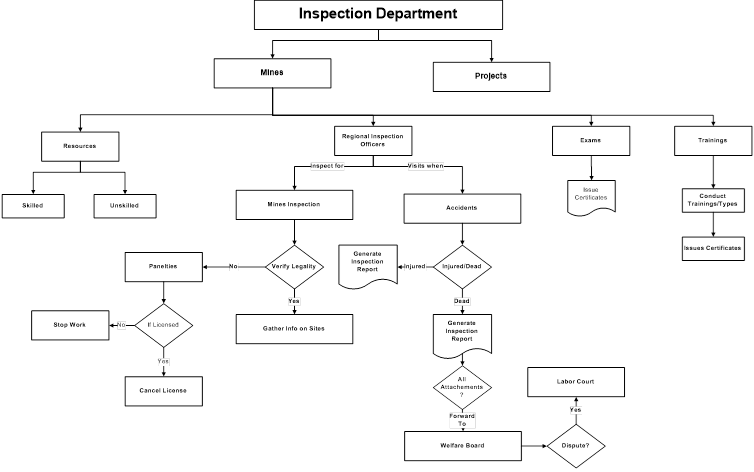
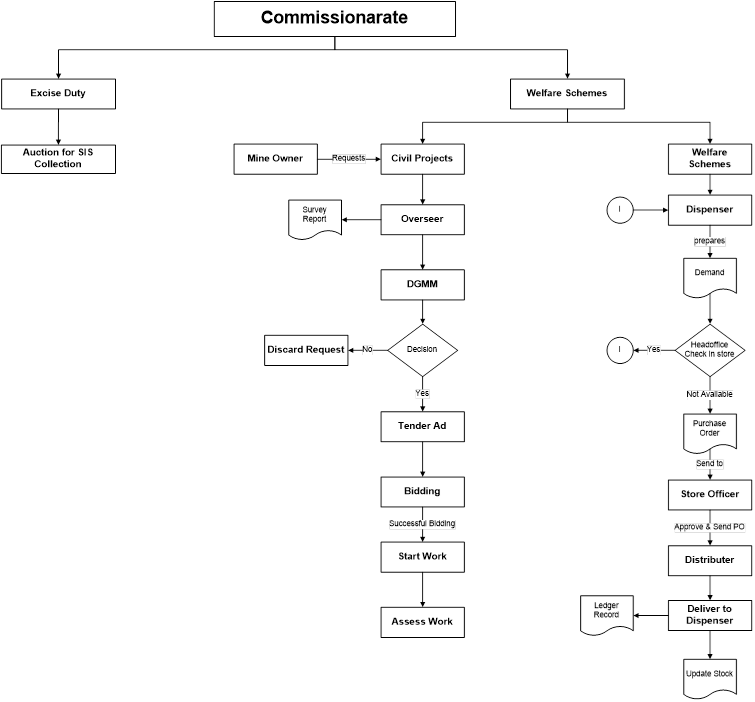


Figure 1: Workflow of Activities at Inspection Department

* Chief Inspector is the Head of the Inspection Department.
* Inspection Department deals with Mines and Manages Projects.
* Inspection Department is responsible for checking the Skilled/Unskilled Resource working at the Mines.
* Inspection Department conducts trainings for Mine Workers and Issues certificates.
* Mine’s Regional Inspectors Report activities to Chief Inspectors.
* Regional Inspectors look for Illegal Mining, verify license of the mines and check for their legality.
* If the mines are found illegal or their license is expired the Mining work is stopped and the license is ceased.
* Regional Inspectors visit to the accident sites within 24 Hrs. once they are reported.
* Regional Inspector Generates the Inspection report from the accident site.
* Attaches all the necessary documents and sends it over to the welfare board where the case is heard and decisions are made.
* After the decision is made, the Decision copy is brought to the Inspector and DGMM and Chief Inspector are also notified.
* Inspection department is also responsible for conducting exams of the available resources, and training of the unskilled Human resource or advance trainings of the skilled workers.
* After the exams and trainings are conducted, certificates are issued by the Inspection department to the successful candidates.
* Inspection department keeps a check on the number of skilled and unskilled workers working in each mine under their jurisdiction.

### Commissionerate Department

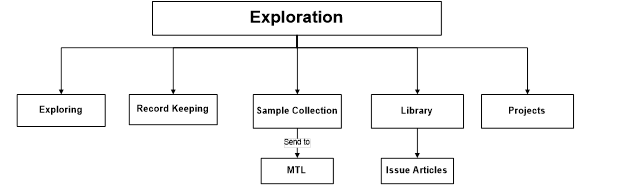
* Commissionerate holds three sub-departments which deal with Welfare, Excise Duty and Welfare.
* Mine Owners Request Commissionerate for facilities at the mines, these facilities can be water supply, first ad, mini-hospital, Barracks etc.
* Commissionerate sends a survey team to see if there is actually the need or not.
* Once the survey is done, and they team finds the need, the need is forwarded to DGMM for approval.
* In other cases the request is discarded.
* If DGMM disapproves the request is discarded.
* If DGMM approves the request then the Tender Ad is posted in the newspapers or announced.
* After successful bidding, work is started then the survey team assesses the work.
* Welfare schemes also include having a field dispensary at the Mining Site so that the first aid can be provided at any level and minor injuries are dealt with.
* There is a dispenser present at each of these dispensaries, who also reports to Regional office when the deficiency of a specific medicine occurs with Demand Draft.
* Once the request is heard at the Head office via Regional office, here at the Head office the store Officer checks for the availability of medicine.
* If the medicine is found in the store, it is dispatched to the specific mine, and when there is no Medicine, then Store Officer’s assistant makes a Purchase order and sends to Store Officer.

Figure 2: Workflow of Activities at Commissionerate Department

* After Purchase order is received, it is approved, and the Purchase order is sent to the authorized/contracted medicine distributor.
* The Medicine distributor delivers the stock against the purchase order generated by the store officer assistant to the Store Officer’s assistant.
* Office assistant, updates the ledger record, and updates the stock and sends to Regional office, which in turn sends it to the Specific Mine.

### Exploration Department

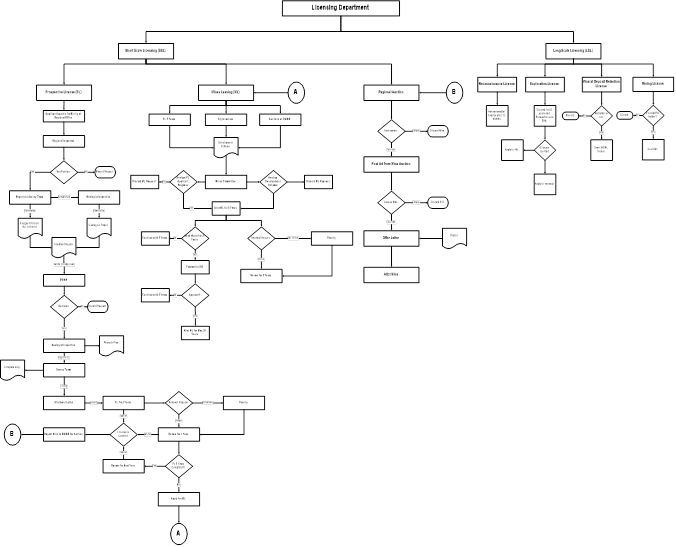
* Exploration department deals with Exploration for new mines and minerals.
* Provide geological mapping of mineral resources
* Record the co-ordinates of mineral locations
* Compile and generate data on minerals to asses and demonstrate mineral potential of the province
* Promote minerals exploration in private sector

Figure 3: Workflow of Activities at Exploration Department

* It keeps the records of the surveys and the Exploration processes. When where they initiated when they ended, all relevant details are maintained
* Details of different minerals explored in different areas will be stored along with resource quantity, grade quality (how good or pure the mineral is)
* During the Exploration, collected samples are sent to MTL where they are tested results are kept.
* Exploration department also deals with a small Library which has journals and articles.
* Like all other departments exploration departments also maintains pools of projects, which details will be maintained, like the budget assigned, activities completed, starting and ending date etc.

### Licencing Department

* Licensing Department mainly deals with two broad categories of licensing i.e. Short Scale Licensing (SSL) and Large Scale Licensing (LSL). Which further contains different categories and they have separate issuance and renewal procedures.
* SSL contains Perspective license (PL), Mines License (ML) and also Auction is conducted at head office for a mine that license has been cancelled for any reason or the duration of license have come to an end. In any case Regional office will inform the head office for that mine for the auction to takes place.
* Anyone can apply for PL at regional M&M offices.
* After the application is received the Regional Inspector visits the Mine and verifies availability.
* If the site is not verified, the request is discarded.
* Upon the verification of the site’s availability, Survey team is called which makes a rough map of the intended site, and forwards their report to the Geological Team.

Figure 4: Workflow of Activities at Licencing Department

* Geological Survey is carried by the Geological team and a combined report of Survey and Geological team is sent to DGMM for the approval of the License.
* If DGMM disapproves, the request is discarded.
* Once the DGMM approves the application, the Geologist Team is assigned to make a Pharoah Plan, Survey team makes a full plan and map.
* These plans along with the allotment letter are given to the Applicant and the Applicant is legalized to start mining.
* The first time Allotment is for two years, than the license is renewed each year until five years of the PL are reached.
* If the renewal process is taken in-time, no penalties are made, but in-case of late renewals penalties is charged.
* When the PL reaches the five years mark, then the Mine Owner cannot apply for PL renewal but Mine owner will have to escalate to ML, the Mine Owner has to apply for ML to continue mining.
* ML can be provided to Huge Companies, After Auctions, and to the Mine Owners whose PL has reached 5 Years Mark.
* All of these have to submit a Development Scheme.
* This Development Scheme is then analyzed by the mining committee.
* If the Committee approves the scheme the request is forwarded to the DGMM for approval.
* If DGMM approves, PL is allotted. Maximum allotment Period of ML is 30 years.
* If DGMM rejects the request, the Applicant has the right to go seek the Secretary of DGMM for approval disapproval. Same process repeats here. But if request is rejected Applicant cannot have mine.
* ML is also renewed after 5 years.
* Renewal requests are accepted 1 year before reaching the 5 years mark.
* If the renewal request does not come in-time, penalties are undertaken.
* Once the Mine License gets expired or someone leaves the Mine, the mine gets free for mining.
* At the Head office of M&M Auctions of such mines is carried out.
* Before putting them to auction, assessment of the free mine is carried out.
* This assessment is for to check if the mine can be brought back to work or not.
* If the assessment is a success, Ads are posted and auction is made.
* Otherwise the Mine is discarded and closed.
* Bids are received under the Auctioned mine.
* Bids are assessed by the Mine Committee.
* The successful bidder gets the allotment letter and ML and they start off mining on the allotted mine.
* The other broad category of license under licensing department is of Large Scale License (LSL) which further contains 04 different types of licenses (Reconnaissance License, Exploration License, Mineral Deposit Retention License, Mining License), for each of them there are separate terms and conditions. There are certain rules that have to be followed in case a mine owner opts for any other license under LSL.
* Reconnaissance License (RL) is a non-renewable license which is granted for an area of 1000 sq.km, and is only applicable for 12 Months. However licensee /owner have the right for applying to ML for the 10% of area that the owner had during RL. Licensing authority will take decision within 120 days after the application is submitted.
* Exploration License is granted for 03 years for an area not exceeding than 200 sq.km, and renewal is only applicable for the 50% area under EL. The owner has also the option to apply for Mining License (ML).
* Mineral Deposit Retention License (MDRL), only EL license holder has the right to apply to MDRL license.
* After application the authority has the right to accept or reject the request of the applicants.
* Mining Lease (ML), only the holder of EL or MDRL can apply for mining lease for a maximum of 250 sq. km area that he has within the EL or MDRL.
* The authority will take the decision based on the application submitted by the applicant.
* The ML can be renewed for a maximum of 10 years or the life time of mine whichever is lesser in given circumstances.

## Functional Requirements

The MIS system will comprises of the following main and sub-modules. Details of each module along with their forms are explained below in a tabular form.

* Setup and Configuration
* Inspection Module
* Commissionerate Module
* Licensing Module
* Exploration Module

### Licensing Module

Following activities will be performed within inspection module:

Table 1: Licencing Module – Application Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.1-License Application Form** | **Description** |
| This form is used to record the information of applicants applying for mine license. |
| Request No | Auto generated request no |
| Request By | Name of applicant’s will be saved using this field |
| Category Type | Type of License in which applicant is interested |
| Request For | Mineral ID/code for which mine owner is registering |
| Mineral Type | Type of mineral, as license can only be allocated to 01 mineral at a time |
| Total Area | Estimate of total area in which mining would be done |
| Points | Co-ordinates of the area will be recorded using this field |
| Eastern | Eastern co-ordinates |
| North | Northern co-ordinates |

Table 2: Licencing Module - PL Application Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.2-PL Application Form** | **Description** |
| This form will be used to store the information of applicants applying for perspective license (PL) |
| License Date | Date on which application is registered for PL license |
| Total Area | Estimate of total area in which mining would be done |
| Applicant type ID | Application can be submitted by individual, company or partner |
| Business Name | Owner existing business detail will be stored in this field |
| Business Place | Location of business |
| Capital | Current amount for existing business |
| **5.2.1-PL Details** | |
| Applicant Name | Name of applicant will stored using this field |
| Father name | Father name of applicant |
| Country | Country |
| CNIC | CNIC of the applicant will be stored using this field |
| Address | Address of applicants |
| Contact | Contact number of applicants |
| **5.2.2-PL Shareholder Details** | |
| Applicant Name | If there are multiple stakeholder then their name should be recorded using this field |
| Father Name | Father name of applicant will be stored |
| CNIC | CNIC of multiple stakeholders will be saved using this field |
| Address | Address of shareholder |
| **5.2.3-PL Fee Details** | |
| Amount | Amount deposited for registration of PL license |
| Challan No |  |
| Date | Date |
| Bank | Bank name |
| Signature ID | Authorized signature of receiving person |

Table 3: Licencing Module - ML Application Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.3-ML License Application Form** | **Description** |
| This form will be used to store the information of applicants applying for Mining Lease License. All the details will be recorded using this form. |
| Lease Date | Date on which application is registered for ML license |
| Mineral | Mineral for which license will be acquired |
| Total Area | Estimation of area where mining will be performed |
| Applicant Type | Individual/Company/Partner |
| Technical Advisor | Name of technical advisor |
| Business Name | Current business of mine owner or applicant |
| Business Place | Location of current business |
| Capital | Total amount for current business |
| Brief History | Previous business history detail |
| Attachments |  |
| Remarks |  |
| **1.3.1-ML License Details** | |
| Applicant Name | Name of applicant will stored using this field |
| Father name | Father name of applicant |
| Country | Country of the applicant |
| CNIC | CNIC of the applicant will be stored using this field |
| Address | Address of applicants |
| Contact | Contact number of applicants |
| **1.3.2-ML Shareholder Details** | |
| Applicant Name | If there are multiple stakeholder then their name should be recorded using this field |
| Father Name | Father name of applicant will be stored |
| CNIC | CNIC of multiple stakeholders will be saved using this field |
| Address | Address of shareholder |
| Contact | Contact number of shareholder |
| Shareholder Amount | Total amount or amount allocated for partnership |
| **1.3.3-ML Fee Details** | |
| Amount | Amount deposited for registration of ML license |
| Challan No |  |
| Date |  |
| Bank | Bank name |
| Signature ID | Authorized signature of receiving person |

Table 4: Licencing Module - Exploration Licence Application Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.4-Exploration License Application Form** | **Description** |
| This form will be used to store the information of applicants applying for Exploration License. All the details will be recorded using this form. |
| Apply Date | Date on which application is registered for Exploration license |
| Mineral Name | Mineral for which license will be acquired |
| Total Area | Estimation of area where mining will be performed |
| Applicant Type | Individual/Company/Partner |
| Technical Advisor | Name of technical advisor |
| Business Name | Current business of mine owner or applicant |
| Business Place | Location of current business |
| Capital | Total amount for current business |
| Brief History | Previous business history detail |
| Attachments | Attachments checklist |
| Remarks | Remarks (optional) |
| Work Program |  |
| Geological Description | Geological details of location |
| Location | Name of location |
| **1.4.1-EL License Details** | |
| Applicant Name | Name of applicant will stored using this field |
| Father name | Father name of applicant |
| Country | Country of the applicant |
| CNIC | CNIC of the applicant will be stored using this field |
| Occupation | Occupation of applicant |
| Address | Address of applicants |
| City | City of applicant |
| Contact | Contact number of applicants |
| **1.4.2-EL Shareholder Details** | |
| Applicant Name | If there are multiple stakeholder then their name should be recorded using this field |
| Father Name | Father name of applicant will be stored |
| Country | Country name of partners |
| CNIC | CNIC of multiple stakeholders will be saved using this field |
| Occupation | Shareholder occupation details |
| Address | Address of shareholder |
| City | City of shareholder |
| Contact | Contact number of shareholder |
| Shareholder Amount | Total amount or amount allocated for partnership |
| **1.4.3-EL Fee Details** | |
| Amount | Amount deposited for registration of ML license |
| Challan No |  |
| Date |  |
| Bank Name |  |

Table 5: Licencing Module - Reconnaissance License Application Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.5-Reconnaissance License Application Form** | **Description** |
| This form will be used to store the information of applicants applying for reconnaissance License. All the details will be recorded using this form. |
| Apply Date | Date on which application is registered for Exploration license |
| Mineral Name | Mineral for which license will be acquired |
| Total Area | Estimation of area where mining will be performed |
| Applicant Type | Individual/Company/Partner |
| Technical Advisor | Name of technical advisor |
| Business Name | Current business of mine owner or applicant |
| Business Place | Location of current business |
| Capital | Total amount for current business |
| Brief History | Previous business history detail |
| Attachments |  |
| Remarks |  |
| Work Program |  |
| Geological Description | Geological details of location |
| Location | Name of location |
| **1.1.1-RL Details** | |
| Applicant Name | Name of applicant will stored using this field |
| Father name | Father name of applicant |
| Country | Country of the applicant |
| CNIC | CNIC of the applicant will be stored using this field |
| Occupation | Occupation of applicant |
| Address | Address of applicants |
| City | City of applicant |
| Contact | Contact number of applicants |
| **1.1.2-RL Shareholder Details** | |
| Applicant Name | If there are multiple stakeholder then their name should be recorded using this field |
| Father Name | Father name of applicant will be stored |
| Country | Country name of partners |
| CNIC | CNIC of multiple stakeholders will be saved using this field |
| Occupation | Shareholder occupation details |
| Address | Address of shareholder |
| City | City of shareholder |
| Contact | Contact number of shareholder |
| Shareholder Amount | Total amount or amount allocated for partnership |
| **1.1.3-RL Fee Details** | |
| Amount | Amount deposited for registration of ML license |
| Challan No |  |
| Date |  |
| Bank Name |  |

Table 6: Licencing Module - Allotment Letter Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.6-Allotment Letter Form** | **Description** |
| Once the license is approved to any owner, allotment letter is issued to him. All the details will be stored using this form. |
| Allotment No | Allotment No |
| Reference No | Reference for PL/ML/EL |
| Allotment Date | Date of allotment |
| Mineral | Mineral for which allotment letter is issued |
| Auction Date | Auction detail by which applicant registered |
| Business Name | Current business of mine owner or applicant |
| Business Nature | Previous Business nature |
| Business Place | Location of current business |
| Capital | Total amount for current business |
| Total Area | Area for which allotment letter is issued |
| Attachments |  |
| Location | Location of mines |
| **1.6.1-Allotment Details** | |
| Details | Allotment letter details |
| Fee | Fee for allotment letter |

Table 7: Licencing Module - Production Form

|  |  |
| --- | --- |
| **1-Licensing Module** | |
| **1.7-Production Form** | **Description** |
| Regional offices share the production details of each mine working in any region. This form will be used by regional office to submit productivity details. |
| Production No | Allotment No |
| Allotment No | Reference for PL/ML/EL |
| Mineral | Mineral wise production details will be recorded using this field |
| Work Order | Reference of work order |
| Work Order Date | Work order date |
| Production Date | Production date |
| Location | Location of mine |
| **1.7.1-Production Details** | |
| Production Month | Month for which production details will be shared with head office |
| Opening Balance |  |
| Raising | Production raise if any |
| By Rail | Production by rail |
| By Road | Production by road |
| Production Assessment | Assessment details |
| Initial |  |
| Remarks |  |

### Inspection Module

Following activities will be performed within inspection module:

Table 8: Inspection Module - Management Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.1-Manager Form** | **Description** |
| The purpose of this form is to record all details relevant to manager of the mine, his personal and contact details; experience, age, previous employment and qualification along with other details will be recorded. |
| Permit No | When mine allotment is done, permit no will be issued to the owner. |
| Applicant Name | Name of manager will be recorded in this field. |
| Age | Age of Mines Manager |
| Postal Address | Postal Address of Mines Manager |
| \*Colliery Name | Need to be asked from Client, Name of Colliery |
| Name of Owner | This field will be used to store the name of mine owner. |
| Address of Owner | Address of Mines Owner |
| Certificate No | Sardaar Certificate No/ this certificate is issued to the manager if he has passed the exam. |
| Date of Exam | Date and description of the type of exam will be stored using this field. |
| Last-Employer Name | This field will be used to record the manager previous employment details. |
| Last-Mine Name | Last mine name of the manager worked in. |
| Last-Mine Year | The year in which the manager has worked in previous mine. |
| Qualification | Qualification of Mine Manager |
| Residential Address | Manager residential address will be saved in this field |
| Distance From Mine | Distance of Manager Residential Address from Mines |
| Mines Fee | Fee to be paid for getting Permits |
| Receipt | Attachment for Proof |
| Attachment | List of attachment to be checked or selected with submitting this form. |
| Date and Signature | Date and Signature of Applicant |
| **1.1.1-Manager Details** | |
| Permit No | Permit No |
| Worker Name | Supervisor name |
| Qualification | Qualification of supervisor |
| No of Worker | Number of workers working under supervisor |

Table 9: Inspection Module - Mines Registration Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.2-Mines Registration Form** | **Description** |
| The details of mine owner, mineral, number and details of available resources with the type of skill set that they have will be recorded using this form. |
| Registration No | Registration number issued to the mine owner |
| Owner NIC | Mine owner CNIC will be saved using this field |
| Owner Contact | Mine owner contact number will be saved using this field |
| Owner Name | Mine owner name will be saved using this field |
| Postal Address | Mine owner postal address will be saved using this field |
| Mineral Name | The details of minerals for which the owner is registering will be saved using this field. |
| Mines Address | Address of the mine where it is located will be stored using this field. |
| Mines Manager | Mines manager name will be saved using this field. |
| Regulation | Metalliferious Mines Regulation/Coal Mine |
| Financial Administration | Regulation Reference to be defined |
| List Supervisory | Complete list of mine supervisor’s will be stored using this form |
| No Persons | Total number of employees in a mine will be stored using this field. |
| Type Skill | Skilled/Un skilled |
| Explosive Name | Explosives used during mining will be recorded using this field. |
| Name Short Firer | Person assigned a duty of fire extinguisher in case |
| Underground Work | To be defined Mineral |
| Challan No | Treasury Challan No |
| Challan Fee | Treasury Challan fee |
| Challan Date | Date of Challan |
| Deposited In | Bank name where fee is deposited |
| Registration Date | Mine registration date |
| Attachments |  |

Table 10: Inspection Module - Commencement Notice Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.3-Commencement Notice Form** | **Description** |
| Notifications are issued to the mine owner for starting work after license has issued to them. All issued notifications will be stored using this form |
| Notice No | Notice number that will be used as reference |
| Name Mine | Mine name |
| Mine Address | Mine Address |
| Owner Name | Mine owner name |
| Owner Address | Mine owner address |
| Manager Name | Manager name |
| Date of Commencement | Date of Commencement |
| Date and Signature | Date and Signature of Applicant |

Table 11: Inspection Module - Worker Details Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.4-Worker Details Form** | **Description** |
| The details of workers will be saved using this form, this will covers all details relevant to workers working in a mine. |
| Worker No | Worker Number |
| Worker NIC | Worker CNIC No |
| Worker Contact | Worker Contact No |
| Worker Name | Name of Worker |
| DOB | Date of Birth |
| Father Name | Father Name of Worker |
| Designation | Designation ID |
| Home Address | Home Address of Mine Worker |
| Employee Type | Type ID Permanent or Temporary |
| Basic Pay | Basic Pay of Worker |
| Skill Type | Skilled/Unskilled/Sami Skilled |
| Joining Date | Joining Date of Worker |
| Employee Status | Current Status of Customer/ Terminated or Working |
| Shift Time | Shift Time of Worker |
| EOBI | Status Paid/Not Paid |
| Picture | Picture of Worker |
| Termination Date | Date of Termination |
| **1.4.1-Worker Details** | |
| Worker Number | Worker number assigned to them |
| Name | Worker Name |
| DOB | Worker DOB |
| Relationship |  |
| Marital Status | Married/Unmarried |

Table 12: Inspection Module - Accident Details Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.1-Accident Details Form** | **Description** |
| This form will be used to record the details of any accident that took place within a mine. |
| Accident No | Accident no generated which will be used as a reference |
| Date Accident | Accident Date |
| Place Death | Place of death |
| Nature Accident | Nature of Accident |
| Accident Type | Code Minor /Major |
| Inspection By | Name of inspection officer will be stored using this field |
| Inspection Date | Inspection Date |
| Sketch Attachment | Image /Scan of Sketch to be attached with application |
| Remarks | Remarks |
| Name Mine | Mine name where accident took place |
| Mine Address | Mine address |
| Owner Name | Mine owner name |
| Owner Address | Mine owner address |
| Manager Name | Mine manager name |
| Worker Name | Worker name which face accident |
| Worker NIC | Worker NIC |
| Worker Contact | Worker contact |
| Attachment | Attachment for Proof and Witness |

Table 13: Inspection Module - Death Details Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.6 Death Details Form** | **Description** |
| This will be used for recording death applications. |
| Application No | Using to Assign Permit No to the Mines Manager |
| Application Date | Application Date |
| Name Mine | Mine name where accident took place |
| Mine Address | Mine address |
| Owner Name | Mine owner name |
| Owner Address | Mine owner address |
| Manager Name | Mine manager name |
| Worker Number | Worker number which was assigned to him by system for a specific mine |
| Worker Name | Worker NIC |
| DOB | Worker DOB |
| Father Name | Worker Father name |
| Designation | Worker designation |
| Home Address | Worker home address |
| Employee Type | Worker type |
| Type Skill | Worker sill set |
| Worker NIC | Worker NIC |
| Worker Contact | Worker contact |
| Employee Status | Current Status of Customer/ Terminated or Working |
| Date Accident | Accident Date |
| Date Death | Date of Death |
| Next Kin | Next to Kin Name |
| No Of Children | No Of Children’s |
| Next Kin NIC | NIC of Next Kin |
| Work Period | Working Period in the current job on the basis of Joining date |
| Nature Accident | Nature of Accident |
| Inspection By | Inspected By |
| Inspection Date | Date of Inspection |
| Accident ID | Accident Performa |
| Remarks | If any |
| Attachment | Attachment for Proof |

Table 14: Inspection Module - Inspection Details Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.7-Inspection Details Form** | **Description** |
| Inspection officer mine visit details will be recorded using this form, production, workers and earning details will be stored. |
| Inspection No | For each visit system will automatically generate a number, which can also be used as reference |
| Inspection Date | Date of visit |
| Name Mine | Mine Name |
| Mine Address | Mine address |
| Owner Name | Mine owner name |
| Owner Address | Owner address |
| Manager Name | Mine manager name |
| Attained By | The person who receive or attain inspector |
| Monthly Production | To get Monthly Production from Royalty Section |
| Pre Year Production | Previous Year Production |
| Inspection By | Inspected By |
| No Workers | From Workers of Mines |
| Average Earning | From Workers of Mines |
| Parts Inspected | Manual Entry |
| Remarks | If any |
| Attachment | Attachment for Proof |
| Violation Deducted | Manual Entry |

Table 15: Inspection Module - Inspection Training Setup Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.8-Inspection Training Setup Form** | **Description** |
| Details of training that will be conducted in head office will be stored using this form, all regional office will be notified once new training is arranged |
| Training No | Automatically generated by system for each training conducted |
| From Date | Starting date of training |
| To Date | Ending date of training |
| Venue | Place where training will be held |
| Training Name | Training Name |
| Attachment | Attachment for Proof |
| Trainer Name | Name of trainer |
| Time | Starting time of training |
| Topics | Topics on which training will be conducted |

Table 16: Inspection Module - Training Application Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.9-Training Application Form** | **Description** |
| This form will be used to record the applicants details interested in participating in a training organized by head office. |
| Application Date | Application Date |
| Training | Training Name |
| Worker Number | Worker number generated by system |
| Worker Name | Worker Name |
| Father Name | Worker Father Name |
| Address | Worker Address |
| Age | Worker Age |
| NIC | Worker CNIC |
| Contact No | Worker Contact No |
| Designation | Worker Designation |
| Picture | Worker Picture |
| Name Mine | Mine Name |
| Mine Address | Mine address |
| Owner Name | Mine owner name |
| Owner Address | Mine owner address under which worker is employed |
| Certificate No | Certificate No |
| Last Employed | Worker details of last employment |
| Is Attained | To store whether worker has previously attended a training or not |
| Attachment | Attachment for Proof |

Table 17: Inspection Module - Training Certificate Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.10-Training Certificate Form** | **Description** |
| After attending a training or exam, certificates will be generated using this form. |
| Certificate No | Using to Assign Permit No to the Mines Manager |
| Application ID | Application Date |
| Worker Name | Name of worker |
| Father Name | Father Name of worker |
| Address | Address of worker |
| Age | Age of worker |
| NIC | NIC of worker |
| Contact No | Contact No of worker |
| Designation | Designation of worker |
| Picture | Picture of worker |
| Is Issued | training attained or not |
| Issue-Date | Certificate issue date |
| Attachment | Attachment for Proof |

Table 18: Inspection Module - Exam Setup Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.11-Exam Setup Form** | **Description** |
| Details of examination that will be held in head office will be stored using this form. |
| Exam No | Using to Assign Permit No to the Mines Manager |
| Exam Date | Date of exam |
| Exam Center | Name of examination center |
| Training Name | Examination for a training type |
| Attachment | Attachment for Proof |
| Time | Starting time of examination |
| Course Name | Course Name |

Table 19: Inspection Module - Exam Certificate Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.12-Exam Certificate Form** | **Description** |
| Main Purpose of this Form is to issue different certificates to the Candidates who have been able to pass the exams and attended the trainings. |
| Certificate No | Unique certificate number will be assigned to each new issued certificate. |
| Worker Name | Worker Name will be taken down for record |
| Father Name | His Father’s name |
| Address | Address of the Worker |
| Age | His age, all this data will be available in the HR section/Administration |
| NIC | His NIC Number will be taken down for the record. |
| Contact No | Contact number of the Employee who attended the training. |
| Designation | Current designation of the Employee/Worker attending the training. |
| Picture | One picture of the worker attending the training will be attached for the record. |
| Is Issued | training attained or not |
| Issue Date | The date when the certificate is issued. |
| Attachment | Attachment for Proof |

Table 20: Inspection Module - Exam Application Form

|  |  |
| --- | --- |
| **2-Inspection Module** | |
| **1.13-Exam Application Form** | **Description** |
| Before the exams are conducted, first applications of the Applicants/Test Candidates are received and examined, and approved/disapproved |
| Application No | Once the applicant has applied, an application number will be assigned to his apply for the test. |
| Application Date | On which date the specific application was received will be taken down |
| Worker Name | Worker Name will be taken down for record |
| Age | His age, all this data will be available in the HR section/Administration |
| NIC | His NIC Number will be taken down for the record. |
| Contact No | Contact number of the Employee who attended the training. |
| Picture | One picture of the worker attending the training will be attached for the record. |
| Name Mine | Name of the Mine where the worker works |
| Mine Address | Address of that mine |
| Owner Name | Mine owner name |
| Owner Address | Owner address |
| Last Employed | Entry |
| Is Present | Training attained or not |
| Marks Obtained | Obtained Marks |
| Attachment | Attachment for Proof Like NOC |

### Commissionerate Module

Following activities will be performed within inspection module:

Table 21: Commissionerate Module - Applying for Tender after Auction

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.1-Applying for Tender after Auction** | **Description** |
| When the advertisement for auction is made, the respective tenders will be submitted here with brief details. |
| Tender No | Number of the specific tender received under an auction. |
| Mine Name | Who is the miner applying for auction? |
| Mine Location | Where is the mine, coordinates and maps are saved. |
| Mine Address | Exact address of the mine |
| Name Bidder | Person bidding for the auction |
| Bid Amount | What is the amount of bidding? |
| Earnest Money | % |
| Bank | Eye-Sight and Hearing |
| Deposit No | Owner Name (Multiple) |
| Amount | Bidding amount |
| Contact No | Number of the bidder |
| CNIC No | CNIC of the bidder |
| Attachment | Attachment for Proof |
| Is Approved | For Approving Purpose |
| Date and Signature | Date of submission and credentials of the Bidder |

Table 22: Commissionerate Module - Generating CESS letter to the Mine Owner

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.2-Generating CESS letter to the Mine Owner** | **Description** |
| This form will take in information and will generate the CESS letter to the Mine Owner |
| Offer No | CESS Offer number will be generated automatically. |
| To | Who will be receiving this letter |
| Owner NIC | CNIC of the |
| Owner Contact | Contact No |
| Owner Name | Name of Cess Owner |
| Postal Address | Postal Address of Owner |
| Mineral Name | Mineral Name |
| Name of Owner | Name of Mines Owner |
| Issue Date | Date of Offer Letter |
| Mines Address | Address of Mines Owner |
| Attachment | Attachment for Proof |

Table 23: Commissionerate Module - Monthly CESS Collection Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.3-Monthly CESS Collection Form** | **Description** |
| Here in this form, CESS amount for a specific mine will be entered. |
| Cess No | Under which specific CESS the royalty is received. |
| Name Mine | Name of the Mine |
| Mine Address | Form will have Mine Address field |
| Owner Name | Cess Owner Name |
| Owner Address | Owner Address |
| Mineral Name | Mineral name |
| Collection Month | Which month’s royalty is received? |
| Amount | How much is the received amount? |
| Challan No |  |

Table 24: Commissionerate Module - Scholarship Apply Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.4-Scholarship Apply Form** | **Description** |
| Scholarship form will be filled and submitted to the welfare. |
| Scholarship No | Apply number of the scholarship |
| Worker NIC | Worker CNIC |
| Worker Contact | Contact No |
| Worker Name | Name of Worker |
| Date of Birth | Date of Birth |
| Home Address | Home Address of Mine Worker |
| Employee Type | What is the type of the worker |
| Basic Pay | Basic Pay of Worker |
| Type Skill | Skill ID Skilled/Unskilled/Sami Skilled |
| Date Joining | Joining Date of the worker |
| Employee Status | Current Status of Customer/ Terminated or Working |
| Application Date | When did the Worker apply |
| Course Name | What course is the student attending |
| Duration | What is the duration of the course |
| Bank Name | Code Configuration |
| Attachments | Attachment for Proof |

Table 25: Commissionerate Module - Applying for Marriage Grant Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.1-Applying for Marriage Grant Form** | **Description** |
| This form will take in the data from the Marriage Grant Application of the worker and store in the MIS. |
| Grant No | Worker Number |
| Worker NIC | CNIC No |
| Worker Contact | Contact No |
| Worker Name | Name of Worker |
| Date of Birth | Date of Birth |
| Home Address | Home Address of Mine Worker |
| Employee Type | Is the employee/worker temporary/permanent |
| Basic Pay | Basic Pay of the Worker is taken down |
| Type Skill | Skill ID Skilled/Unskilled/Sami Skilled |
| Date Joining | Joining Date of Worker |
| Employee Status | Current Status of Customer/ Terminated or Working |
| Application Date | When was the application received |
| Marriage date | When is the Marriage going to take place |
| Bank Name | Code Configuration |
| Attachments | Attachment for Proof |

Table 26: Commissionerate Module - Request for Welfare Scheme Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.6-Request for Welfare Scheme Form** | **Description** |
| This form will mainly be entering the welfare scheme requests generated by the mine owners for the welfare of the Workers of the Mine. |
| Request No | Each request noted down will have a unique number assigned to it. |
| Request Date | When was the scheme request made? |
| Name Mine | Name of the Mine |
| Mine Address | Address of the Mine |
| Owner Name | Mine Owner name |
| Owner Address | Owner Address |
| Request For | Request Statement |
| Inspection By | Which Inspector Inspected? |
| Inspection Date | When was the Inspection taken place? |
| Accident ID | Accident Performa |
| Remarks | If any |
| Attachment | Attachment for Proof |

Table 27: Commissionerate Module - Scheme Request Survey Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.7-Scheme Request Survey Form** | **Description** |
| Once the application for Welfare scheme is received, Welfare Sections sends a team for to conduct a survey and to assess the needs of the scheme. |
| Survey No | A unique survey number will be assigned to the Survey team’s survey |
| Survey Date | When was the survey conducted |
| Name Mine | Name of the Mine |
| Mine Address | Address of the Mine |
| Owner Name | Mine Owner Name |
| Owner Address | Mine Owner Address |
| Request For | What services were applied for? |
| Survey By | Who was the head of the Survey team? |
| Remarks | If any |
| Attachment | Attachment for Proof |

Table 28: Commissionerate Module - The Scheme Cost Estimation Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.8-The Scheme Cost Estimation Form** | **Description** |
| The survey team use this form to register the estimate of work requested by mine owner for a new facility. |
| Estimation No | Each estimate will be assigned a unique Number |
| Survey Date | When was the survey taken place? |
| Name Mine | Name of the Mine |
| Mine Address | Address of the Mine |
| Owner Name | Mine Owner |
| Owner Address | Owner Address |
| Request For | What was the Request for? |
| Survey By | Head of Survey Team |
| Estimation Amount | Estimated amount in figures. |
| Attachment | Attachment for Proof |

Table 29: Commissionerate Module - Scheme work status Form

|  |  |
| --- | --- |
| **3-Commissionerate** | |
| **2.9-Scheme work status Form** | **Description** |
| Once the scheme is approved and the work is started on it, their progress will be tracked by using this form. |
| Progress No | Using to Assign Permit No to the Mines Manager |
| Scheme Start Date | When is the scheme initiated |
| Scheme End Date | Estimated end date |
| Status | Current status of the scheme |
| Attachment | Attachment for Proof |
| From Date | Work actual start date |
| End Date | Actual end date of the scheme once completed |
| Release Amount | Amount allocated for a scheme |
| Status | Scheme status completed or pending etc. |

### Exploration Module

Following activities will be performed within inspection module:

Table 30: Exploration Module - Minerals Details Setup Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.1-Minerals Details Setup Form** | **Description** |
| This form will be used to setup new minerals parameters along with their details |
| Mineral no | It will automatically generated and assigned to the mine manager |
| Mineral name | Name of the mineral |
| Mineral short name | Short name of the mineral |
| Mineral category | Dropdown for selecting appropriate category for a mineral |
| Mineral type | Dropdown for selecting mineral type |
| Mineral unit |  |
| Mineral formula | Chemical formula of mineral |
| Group | Precious metal etc |
| isActive | Used to store the status where the mineral is assigned to someone or not |

Table 31: Exploration Module - Minerals Details Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.2-Minerals Details Form** | **Description** |
| This form will be used to record the information of different mineral belts |
| Location Name | Location where the mineral is explored |
| Mineral Details | Mineral details will be extracted from database using this field |
| Mineral Name | Mineral name |
| Mineral type | A dropdown menu to select type from |
| Group | Precious metal etc |
| Area | Total area of the mineral |

Table 32: Exploration Module - Minerals Deposits Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.3-Minerals Deposits Form** | **Description** |
| This form will be used to store the information regarding the quantity of available mineral, along with it’s quality detail. |
| Belt details | This will be used to extract details of belt along with minerals from database |
| Mineral details | Mineral details will be extracted using this field |
| Quantity | Available resource quantity |
| Grade | To store the details of the presence of different mineral in specific area there percentage etc |
| Status | To store whether or not this mineral has been assigned |
| Total area | Details of total area covered |

Table 33: Exploration Module - Aricle Definition Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.4-Aricle Definition Form** | **Description** |
| This form will be used to store the information of different articles and books being issued and returned |
| Article no | Assigned automatically by a system when article is issued |
| ISBN | ISBN of an article or book |
| Article title | Title of an article |
| Remarks | Remarks (if any) |
| Author | Author detail of book or article |
| Publisher | Publisher of the book or article |

Table 34: Exploration Module - Issue/Return Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.5-Issue/Return Form** | **Description** |
| This form will be used to record the details of books/articles issued to the employees, all the details will be saved |
| Employee Details | Extracted from database against a unique number |
| Employee name | Employee name |
| Issue date | Issue date of the book/article |
| Article details | Article details will be extracted from database using this field |
| Quantity | Quantity issued to specific employees |
| Status | Returned or not |
| Return date | Return date |

Table 35: Exploration Module - Projects details Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.6-Projects details Form** | **Description** |
| Different projects details will be stored using this form, it cover complete details like project phase, budget assigned, sponsor details, start and end date, and status details |
| Project no | Generated automatically whenever new project is initiated |
| Project name | Project name |
| Start date | Starting date of the project |
| End date | Ending date of the project |
| Project sponsor | Project sponsor details |
| Project director | Project director details |
| Project description | Brief details of projects will be saved here |
| Status | In progress, or completed |
| **6.6.1-Phase Details** | |
| Phase name | Phase details will be saved using this field |
| Start date | Start date of current phase |
| End date | End date of current phase |
| Status | Current phase completed or not |
| **6.6.2-Tasks Details** | |
| Phase details | Details will be extracted from database |
| Task no | Generated automatically |
| Task name | Task name of specific phase |
| Start date | Starting date of task |
| End date | Ending date of specific task |
| Status | Completed or in progress |

Table 36: Exploration Module - MTL Details Form

|  |  |
| --- | --- |
| **4-Exploration Module** | |
| **6.7-MTL Details Form** | **Description** |
| This form will be used to store the information regarding different minerals sent to the laboratory and their results |
| Sample no | Sample no generated automatically |
| Sample name | Sample name |
| Sampling date | Date on which sample was collected |
| Location details | Details of location from where sample was collected |
| Fee details |  |
| **6.7.1-Tasks Details** | |
| Result details | Details of result will be saved using this field |
| Sample no | Sample generated by the system will be referenced |
| Mineral details | Mineral details |
| Quantity | Quantity details of sample collected |
| Quality | Quality of sample |