

## 4.0 Planning Needs

In its early stages, exploration generally has a low environmental and socioeconomic impact. Consequently, the need for rehabilitation is modest and it is possible to take the steps to remediate a disturbance quickly. As more detailed exploration proceeds, the impacts increase correspondingly, as do the requirements for effective mitigation.

EES encourages a proactive way of looking at the issue of environmental impact - to avoid it in the first instance wherever possible. This proactive approach also encourages taking into account the total cost of a program, rather than just the direct cost of carrying out a particular activity.

Proper planning and consideration may result in new and improved approaches. Asking whether a program will have more or less impact on the natural and social environment may lead to a decision to use different, perhaps newer, technology to achieve the same aim.

This section, which is abbreviated from the [Management Essentials](#) portion of the **EES Fundamental** section of the EES Web site e-toolkit, provides the explorationist with guidelines on how to prepare, conduct, and complete exploration activities with minimal environmental and socioeconomic impact. Refer to the more detailed treatment of these topics under [Management Essentials](#) in the **EES Fundamentals** section of the EES Web site.

### 4.1 Basic Elements

In the planning stages, before initiating any exploration program, it is important to consider a number of factors. The topics itemized below are fundamental to the design of any exploration program and it is important that they be addressed properly.

#### 4.1.1 Exploration Code of Conduct

An explorationist must earn a "social license to operate" in any area where mine development is being considered. Steps to obtain that license, by focusing upon proper conduct, start at the outset of exploration activities in the area.

Proper conduct consists of:

- Addressing environmental and socioeconomic challenges
- Understanding and dealing with the concerns of local communities
- Complying with the relevant mining legislation, and accepting and discharging corporate responsibility

When entering an area for the purpose of mineral exploration, there are two challenges to face, beyond those of the exploration process itself. These challenges are environmental and socioeconomic in nature.

It is important that exploration crews in the field ensure that:

- Both the technical and socioeconomic issues are dealt with in as rigorous and careful a manner as possible, so as to minimize adverse impact upon the local area, its residents, and also the company that they work for

- They recognize the need to "tread lightly" in any area, and from the outset are receptive and sensitive to local concerns

Local communities are often concerned about an exploration program in their vicinity because of concerns that the program will cause damage to their land. It is important that a company demonstrates by its conduct not only that the initial impact will be minimized, but also that any land that is impacted will be remediated or reclaimed effectively. Failure to adhere to a proper code of conduct will not only damage the company or entity responsible for it, but will also adversely affect the mining industry as a whole.

Mining Acts and other legislation generally confer rights of ownership or access to mineral lands. However, local communities have the right to be properly informed about exploration activities in their area. Land ownership can be a complicated issue in some parts of the world, especially in areas where Aboriginal people and communal land are involved.

#### **4.1.2 Planning**

When contemplating a program of exploration work, it is necessary to plan from the beginning to recognize the actual and potential impacts of the programs. This requires a change in mindset from "How do we mitigate the impact of the program as we carry it out?" to one of "How do we pre-plan our program to have the least adverse impact upon its surroundings?"

It is important to take into account the total costs of an exploration program, including the costs required to:

- Conduct the exploration, whether trenching, drilling or soil sampling
- Remediate or reclaim any environmental impact
- Satisfy the concerns of local communities

There will inevitably be conflict at times between the needs of the exploration program and the requirements of environmental stewardship. It is important to ensure that:

- Exploration imperatives do not ride roughshod over environmental issues
- Environmental professionals are involved in the design of any program at an early stage, so that their input can be considered
- Baseline studies are always conducted prior to any major disturbance of the natural surroundings

#### **4.1.3 Due Diligence**

When acquiring a mineral property (or any interest therein), a company assumes the responsibility to become knowledgeable about and financially responsible for, what is acquired. If an acquired property has environmental contamination, there may well be liability for the cost to reclaim the site to an acceptable level, even if the company was not aware of the problem.

In order to protect the company's interests, therefore, it is essential to determine the characteristics of the property of interest prior to purchase or other involvement, and exercise due diligence. Due diligence can be fulfilled by a detailed data review carried out to establish the environmental, and if appropriate, the socioeconomic risks attached to the property.

By obtaining a good understanding of environmental and socioeconomic issues in any potential target property, a company can better prioritize exploration targets and property purchases, and help protect itself against future environmental liabilities. A review of the existing condition of the

property and its history will also help to prioritize exploration targets and minimize future expenditures for historic damages. This is particularly important at brownfield sites (properties that were previously developed or explored) that are being considered for exploration purposes.

In remote wilderness areas with no previous exploration activity, it is highly unlikely that there would be any reclamation liability on any property acquired. In fact, the natural condition provides a baseline against which any future development and subsequent reclamation can be modeled. In such cases however, it is important that environmental baseline studies be initiated prior to extensive activities on the site. This will provide support for any reclamation work to be done.

At all other properties, including sites previously explored, there is the potential that past or current activities may require reclamation and impose an environmental or socioeconomic liability on the property. Any such liability may be transferred to the company, should it choose to acquire the property.

#### **4.1.4 Legislation and Permitting**

There is such a variety and range of legislation around the world, and it changes so frequently, that EES has made no attempt to list or catalogue any of it. Where there is unclear, poor, or no legislation, one might want to apply the practices used in developed countries (e.g., those of Canada or Australia).

Before commencing exploration, it is important to:

- Become familiar with the relevant and applicable legislation
- Ensure that all permits required are obtained in a timely manner

Permits are usually required for exploration itself (e.g., access to the land) and other related activities (e.g., camp construction, drilling) and these must be obtained in a timely manner before the project is undertaken.

These permits may also include:

- Plans for closure
- Removal of equipment and buildings used in the program

In general, the “bush rule” applies: take out what is brought in, unless there are very good reasons (e.g., future use) for not doing so.

Some countries (e.g., Australia) may require, as a condition for issue of a permit, a statement that an anthropological study has been completed with the local Aboriginal group, to identify any cultural or religious sites. In exploration for some commodities, permits may be required for export of samples for analysis or processing.

#### **4.2 Operational Aspects**

As the exploration program proceeds, there are several issues that are necessary to take into account. The manner in which these are incorporated will affect the conduct of the program; the exploration team should understand the importance of these issues.

#### **4.2.1 Community Relations**

Community relations in the mining and exploration industry have evolved from simply consulting with an affected community, to active engagement with the community to resolve issues. An engaged community role reduces the risk of conflict around mineral exploration projects through:

- Effective interaction with the community
- Establishment of a proper dialogue that can lead to an informed "social license to operate"

Exploration programs must not simply be "imposed" upon local communities. For exploration programs to be successful, they must be integrated with the local community as far as possible.

When the local community experiences tangible benefits, the residents will be more likely to understand, and therefore support, the longer-term benefits of a project.

It is very important for an explorationist, as an individual or a company, to spend enough time to understand the real local issues. The initial contact with local communities must be well thought out. For example, this contact might involve a trusted associate or intermediary within regional government introducing the exploration team to the local decision-makers. If field crews are wandering all over an area collecting soil samples, or flying an airborne survey, they may cause just as many local problems as a drill campaign. Therefore, dialogue should be commenced very early on in the exploration program.

It is critical to develop trust on both sides of the discussion, which may be a relatively slow process. This Community Relations section is a condensation of the much more thorough treatment of the subject presented in the section entitled Community Engagement. A review of that section will provide more detailed guidance on this important topic.

#### **4.2.2 Contractor Selection and Management**

Companies now routinely engage contractors and subcontractors to carry out much of the specialized exploration work. Even geological mapping and sampling may be contracted out to consultants with specific experience.

If contractors adversely affect either the environment or local community relations, the company employing them is liable.

It is important to:

- Pay the same careful attention to the selection and management of contractors and subcontractors as to company employees.
- Ensure that contractors adhere to the same code of conduct as company employees. Consider including contractor employees in any environmental, community relations, or health and safety training programs that are implemented.

#### **4.2.3 Health and Safety**

Provide a safe workplace for employees, and ensure that all employees are aware of health and safety risks. This is particularly important in the exploration stage of work, since personnel are often operating in difficult conditions and may be quite remote from medical help.

Many companies have produced a "Health and Safety Manual" or similar document, which is required reading for all exploration crews. EES has not attempted to duplicate the issues dealt with in Health and Safety Manuals.

It is important to provide the company's Health and Safety Manuals, as well as instruction and planning, to employees and field crews, to ensure that they follow the policies and procedures in those manuals. It is also important to require contractors and subcontractors to adhere to these policies.

There should be visible commitment by the most senior executives of the company to good practice through word and deed.

#### **4.2.4 Wildlife**

The scope of Health and Safety also covers the protection of personnel from wildlife, as well as the protection of wildlife. All field personnel should ensure that they:

- Are educated about the potential of wildlife to affect, and be affected by, exploration activities in any particular area
- Have access to local specific knowledge of the dangers where appropriate

There may also be requirements in permits or licenses to report wildlife encounter incidents to the appropriate authorities, and to abide by their instructions.

As a general rule, the killing of large wildlife (e.g., bears) is prohibited as part of local legislation or permitting, unless the appropriate authorities give specific permission. Hunting by exploration crews should be prohibited, and fishing is strictly regulated in most jurisdictions.

Government representatives may seek access to the exploration project from time to time. Such inspections will determine whether or not the program is abiding by the requirements of its permits.

### **4.3 Policies and Reporting**

Whenever carrying out an exploration program, appropriate policies and reporting procedures should be in place. This section outlines the critical elements involved.

#### **4.3.1 Fire Prevention, Policy, and Response**

Permits required for the work to proceed may prescribe the response to fire hazards in the exploration area. In addition, the following precautionary measures are necessary:

- Firefighting equipment in camps must meet local regulations.
- Properly functioning fire extinguishers, sand pails, etc., must be present in a camp.
- Fire drills should be carried out periodically.
- Everyone in a camp must be aware of the location of extinguishers and firefighting equipment. Permits for camp construction may specify the layout of the buildings and tents to meet fire requirements, and the camp design must take these into account. The use of open fires should be avoided, except for garbage disposal purposes if allowed by local regulations, and then only in a proper pit or container.

#### **4.3.2 Training**

There is little use in having policies and practices set out in company manuals or written policy, if they are not implemented. Employee training programs should be run in the field and performance should be monitored, to ensure that employees perform according to company policies.

Contractors may have their own policies and procedures. It is the company's responsibility to ensure that they are equivalent to, or better than, corporate policies and procedures.

#### **4.3.3 Reviews and Audits**

When carrying out exploration, it is important that a company performs its own assessments of employees' environmental performance. Periodically review policies, to ensure that the work is consistent with current practice.

#### **4.3.4 Record Keeping**

Accurate and thorough record keeping is an essential part of exploration. Record keeping includes both written records (most efficiently done with checklist forms) and digital photographs. Wherever possible, photographs of drill sites and other areas of environmental or social impact should be taken before and after the exploration program so that the location is clear. The date feature of the camera should be activated.

Also, it is important to keep proper records of environmental "incidents", such as spills or excessive erosion that may require reclamation, or any event that requires notification of the relevant authorities.

#### **4.3.5 Reporting**

The demand for external reporting is growing. Nowadays shareholders require "all the information, all the time". Although major companies are accustomed to issuing environmental or sustainability reports, junior companies generally are not. It is important that smaller companies include a section on their environmental performance in their annual reports.

Many companies are now emphasizing their performance, even from the earliest stages of the exploration process. Ensure that employers, governments, and communities are informed in a timely fashion of any event that is, or has the potential to become, a crisis (e.g., a fire or spill). A crisis is an event that has the potential for severe impact of a financial, health, property, or environmental nature. It is necessary to have policies and reporting guidelines in place to handle crisis situations.

The guiding principle of responsible exploration is transparency. A project environmental report should be completed at the conclusion of any exploration program. The company should be prepared to file it with the relevant authorities, either separately or as part of a standard project drilling report. In this fashion, the information will be accessible to other stakeholders.