

Gaining A Social License to Mine*

Richard B. Shepard, Ph.D.[†]

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Abstract

Having a so-called “social license to operate” a mine is an emerging concept within the hard rock mining community. As an abstract idea it has no consensus on definition or application. But, there is a lot of thought given to the concept. This white paper summarizes some of the work being done internationally to create a suitable framework for crafting such a license and having it provide the certainty and consistency desired by the mining industry, as well as presenting a pragmatic definition and robust approach to the problem. Our goal is to define a process that produces project- and location-specific results that capture local values and beliefs quantitatively. The results will be technically sound and legally defensible.

Introduction

The range of perspectives from which this abstract concept is being examined is very broad, and the focus can be narrow because each view point has a specific vested interest. For example, the environmental NGOs like to present it as having the local community give its consent to a project before the mine can be permitted or developed. This white paper will present evidence that this latter perspective is as much a myth as the so-called *Precautionary Principle*.

Over the past decade, mining projects on several

continents have been delayed or stopped because of strong local opposition. Both major and mid-size mining companies have been affected by these situations, and the realization that they need to be prevented rather than fought when they occur has taken solid root in our industry. However, how best to obtain the requisite social license is still a developing issue.

Definition

There are several definitions of “social license to operate,” but they are primarily variations on the theme of “acquiring free, prior and informed consent from indigenous peoples, and local communities through mutual agreements”¹. Many companies have tried to gain such informed consent, only to fail for various reasons. There is no reason to believe that this situation will change, so we need to find an alternative, practical, acceptable definition. We propose the definition of “social license” to be a *comprehensive and thoroughly documented process to have local stakeholders and other vested interests identify their values and beliefs as they participate in scoping the environmental impact assessment of the proposed project and in identifying alternative Plans of Operations for the project*. Notice that this does not stipulate the community, stakeholders, and other groups approve of and support the project. Such universal acceptance is virtually impossible, and not required in any other aspect of our economic, social, or political lives.

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[†]President, Applied Ecosystem Services, Inc.; Troutdale, OR

¹Salim, E. 2003. Striking a Better Balance: The World Bank and Extractive Industries: 1:1—92.

The agency responsible for permitting a mine is implementing resource allocation policy set by elected politicians. These policies are decided on federal and state/provincial levels and describe the conditions that must be met for permit issuance. Usually the policy directs the regulator to identify the operational alternative that has the lowest negative – and highest positive – impacts on the economic, natural, and societal environments. In those infrequent cases where even the lowest negative impacts can be documented as unacceptably high by defined criteria, then approval to mine is not granted. In the US, the National Environmental Policy Act (NEPA) directs that environmental impact statements (EIS) be used to make informed decisions in an open and transparent process that includes comprehensive public participation and input. It is within this process that an operating company can gain its social license to mine.

Approaches

Situational Analysis

Adele E. Clarke wrote a book called, “Situational Analysis: Grounded Theory After The Postmodern Turn”² that seems to be the basis for this concept. This sociological book presents

“an innovative approach to grounded theory useful in a wide array of qualitative research projects. Extending Anselm’s ecological social worlds/arenas/discourses framework, situational analysis offers researchers three kinds of maps that place emphasis on the range of differences rather than commonalities, as found via the traditional grounded theory approach:

“* Situational maps lay out the major human, nonhuman, discursive, and material elements in the research situation of

concern and provoke analysis of relations among them

“* Social worlds/arenas maps lay out the collective actors and their arenas of commitment, framing mesolevel interpretations of the situation

“* Positional maps examine the major positions taken (and not taken) in the discourses

“Using extensive examples, author Adele E. Clarke covers why and how to do these maps with traditional qualitative data such as interviews and ethnographic materials. The book then follows in Foucault’s footsteps, offering ambitious chapters on mapping and analyzing discourse materials that are narrative, visual, and historical. Situational analysis helps researchers examine variations, differences, silences in data, conditionality, and complexity. It is also very useful for multi-site research projects, which are increasingly common not only in the social sciences but also in the humanities and related professional fields. Situational Analysis can be used in a wide array of research projects that draw on interview, ethnographic, historical, visual, and other discursive materials including multi-site research. It is a perfect supplement to any graduate-level qualitative research course, and will also support professional researchers and consultants from diverse backgrounds pursuing qualitative projects. Through this book, grounded theory has been thoroughly remodeled. Pulling together diverse traditions in social theory and providing a coherent methodological translation for them, this renovation is both scholarly and practical.”

Notice the emphasis on qualitative analysis. This does not appear to be a sufficiently solid approach to gaining universal acceptance of a proposed mining project.

²Published in 2005 by Sage Publications, Inc., Thousand Oaks, CA.

PEST Analysis

A PEST analysis is an analysis of the external macro-environment that affects all companies. P.E.S.T. is an acronym for the *Political, Economic, Social, and Technological* factors of the external macro-environment. Such external factors usually are beyond the company's control and sometimes present themselves as threats. For this reason, some say that "pest" is an appropriate term for these factors. However, changes in the external environment also create new opportunities and the letters sometimes are rearranged to construct the more optimistic term of STEP analysis.

Many macro-environmental factors are country-specific and a PEST analysis will need to be performed for all countries of interest. There are many identified factors in each category; the number of macro-environmental factors is virtually unlimited. In practice, the company must prioritize and monitor those factors that influence its industry. Even so, it may be difficult to forecast future trends with an acceptable level of accuracy. In this regard, the firm may turn to scenario planning techniques to deal with high levels of uncertainty in important macro-environmental variables. In other words, this analysis is also subjective and impossible to defend as technically sound and rational.

SWOT Analysis

SWOT analysis is a simple framework for generating strategic alternatives from a situation analysis. It is applicable to either the corporate level or the business unit level and frequently appears in marketing plans. SWOT stands for *Strengths, Weaknesses, Opportunities, and Threats*. The SWOT framework was described in the late 1960's by Edmund P. Learned, C. Roland Christiansen, Kenneth Andrews, and William D. Guth in "Business Policy, Text and Cases"³. The General Electric Growth Council used this form of analysis in the 1980's. Because it concentrates on the issues that potentially have the most impact, the SWOT analysis is useful when a very limited amount of time is available to address a complex strategic situation.

³Homewood, IL: Irwin, 1969

While perhaps useful for reducing a large quantity of situational factors into a more manageable format, the SWOT framework has a tendency to oversimplify the situation by classifying the firm's environmental factors into categories in which they may not always fit. The classification of some factors as strengths or weaknesses, or as opportunities or threats is somewhat arbitrary. For example, a particular company culture can be either a strength or a weakness. A technological change can be either a threat or an opportunity. Perhaps what is more important than the superficial classification of these factors is the firm's awareness of them and its development of a strategic plan to use them to its advantage.

The fatal flaw in SWOT Analysis as a tool in gaining a social license to mine is that it is purely subjective. Any conclusions can be challenged as arbitrary and capricious, and there is no objective defense to that challenge.

Situational Analysis Summary

In addition to the subjectivity and qualitative nature of situational, PEST, and SWOT analyses, the overarching shortcoming is that they are conducted internal to the mining company. While data are collected from indigenous peoples, stakeholders, other agencies, environmental NGOs, and other identified groups and individuals, it is the staff and management of the company that slice and dice the input and interprets them for signs of future cooperation. No matter how careful and complete the interpretation, it is still that of the mineral or energy company and its consultants.

Another potential problem of this type of approach is the risk of presuming we know what the local populations want; after all, we know what we would want if we were in their situation. So we offer to build schools, medical clinics, Starbucks outlets, or other offers that are based on our perspectives. Our assumptions may be totally incorrect. Much better to ask the participants to directly contribute their thoughts, values, and beliefs to scope the assessment and evaluation of the proposed project.

Participatory Scoping

The most logical approach to gaining the so-called social license to mine is by soliciting input from the widest spectrum of stakeholder and public interests as possible, and doing this at the earliest stages of project planning and environmental assessment.

There are three important aspects to maximizing your chances of success in gaining a social license to mine using the participatory scoping approach:

- Identifying alternative Plans of Operation.
- Separating “environment” into discrete categories of economic, natural, and social systems.
- Quantifying values and beliefs to identify the relative importance of assessment components within each environment category.

Alternative Plans of Operations

How alternatives have been handled in EISs is one of the three major issues on which decisions are appealed or legally challenged. Some industry and federal regulatory agency managers recognize this is a serious problem and are open to a different approach. Participatory scoping is such an approach. It offers two distinct benefits over how Plans of Operation and NEPA compliance have been integrated: input and consideration by stakeholders and others participating in the scoping process, and legally defensibility based on objective decision criteria.

When an ore body is identified as an economically feasible project, there are multiple ways in which the project can be developed and operated. Company geologists, engineers, and metallurgists (as well as external consultants) consider the potential approaches until they agree on a preferred alternative. This Plan of Operations is then submitted to the lead regulatory agency and is presented to cooperating agencies and the public at meetings. Too often, feedback from the agency and public meetings requires changes in the plan and re-evaluation of the potential environmental impacts. This cycle increases the costs and time required to move the project from concept to revenue producing status.

It places additional burdens on operating company staff and executives as well as on regulatory and resource agency staff.

While company experts and consultants consider factors that may affect the operation of the mine as they evaluate alternative plans, there may well be concerns and components of which they are unaware. This is often why revisions are necessary. If, instead, the potential alternative operational plans are presented to cooperating agencies, other stakeholders, and the public as part of the environmental assessment, then all can be considered using the most important components of the economic, natural, and societal environments. Additional approaches may be identified during these meetings and can be considered on the same basis as the ones developed by the project proponent. The results are comprehensive and save time and money as they need be done only once.

There is another aspect of alternative considerations that is too frequently inadequately considered: the No Action alternative. It is common to read a short paragraph for this alternative that states nothing will change if the project is not permitted. This is not true because it is based on false assumptions.

The first false assumption is that environments (economic, natural, and societal) are static when they are actually dynamic. In many environmental impact assessments it is the natural environment that is what people think will remain the same over time. However, this is never the case. The cheatgrass that is overwhelming millions of hectares of high desert and grasslands in the western US degrades grazing values for wildlife and livestock, and it allows more frequent and more severe wildfires than do native plants. The development, operations, and reclamation of mine sites can have highly positive impacts on the vegetation and wildfire regimes compared to the No Action alternative. The same is true for forested lands that have built up large fuel volumes in the understory because of naive fire suppression practices over decades. Clearing underbrush, creating firebreaks by developing surface and underground mines with their supporting road, rail, and power networks can all have short- and long-term benefits to the vegetation and the wildlife that

depend on it for cover and food.

Environmental Categories

When agencies, tribes, NGOs, and individuals comment on a proposed mining project, each has a specific definition of “environment” which frame the comments. As a result, what appears to be controversy at a public meeting may well be people expressing concerns about different environments. An environmental NGO may be referring to plants or animals in the natural environments while a local tribe may be expressing concern about their cultural environment and local residents refer to the economic environment. These perspectives cannot be compared among themselves, for each is different.

By separating the concept of “environment” into the categories of economic, natural, and social (in alphabetical order), we are able to compare like things. The components of the economic environment might include jobs, infrastructure, housing, tax base, traffic volume, roads, medical care, and sustainability; natural environment components could be habitats, wetlands, hydrology, air quality, water quality, slope stability, ground water, and endangered species; and the societal environment may include aesthetics, noise, recreation, quality of life, health effects, environmental justice, cultural heritage, and urban growth. This covers a lot of vested interests and allows for a more robust and comprehensive consideration of environmental components.

Quantifying Values and Beliefs

The most important consideration in gaining a social license to operate a mine is accounting for everyone’s values and beliefs regarding what components in each environmental category are important. Each interest group, and individuals within each group, assign a different degree of importance to each environmental component. Accommodating the divergent values and beliefs equally, considering them all when making a decision, and doing so in a way that is technically sound and legally defensible yields the

social license that governments, agencies, and companies need to proceed with developing and operating the mine in an environmentally responsible way.

The specific details on how to quantify the relative weights of importance for components in each environmental category are in my book, *Quantifying Environmental Impact Assessments Using Fuzzy Logic*⁴. The process has everyone participating in the project scoping compare the relative importance of components, two-by-two. We commonly make such value judgments in many aspects of our lives, and in this case we apply a standard scale of 1–9 that translates words (“slightly,” “moderately,” “substantially”) with numbers. These numbers are then averaged for each pair-wise comparison, placed in a symmetrical (square) matrix, and the principal descriptive vector (the *Eigenvector*) is calculated for each category. This vector represents the relative importance of each component to everyone who expressed a preference.

Benefits of The Participatory Approach

No resource allocation decision is made with complete concurrence by all stakeholders and other public interests. Such unanimity is impossible to achieve in a participatory democracy, and is not necessary to make an informed decision. Therefore, it is reasonable, rational, and politically acceptable to encourage the broadest possible inputs of values and beliefs, then make a decision that considers them all, but does not meet everyone’s expectations.

We elect political leaders by voting, not by having everyone agree on the choice. Business decisions are made by the appropriate manager or executive (preferably after input by others), not by having everyone at every level agree on what to do. Similarly, the lead regulatory agency is mandated to be the federal land manager and responsible for deci-

⁴Published 2005, Springer-Verlag, New York; ISBN: 0-387-24398-4.

sions on land use allocations based on guidelines in law and regulations. The participatory approach to gaining the so-called social license to mine includes a spectrum of values and beliefs, each considered equal to the others, and summarized in a mathematically rigorous way to define not only what is most important, but just how important it is.

Asking people what is important to them also eliminates guessing incorrectly at what they might want as “payment” for acquiescing to the mine. The values and beliefs they share also provide highly valuable insight into what would constitute sustainability for them; that is, what the mining company should strive to provide them so there is life after mining. While the potential range of desires may be very large, in many such situations (that is, asking people what would make them satisfied in the long term) the answer turns out to be simpler and less costly than we initially assumed.

Quantifying values and beliefs provides a much stronger basis for decisions than does any procedure that leaves the final interpretation to subjective analysis.