TURNING EXPLORATION (R&D) INTO A SUSTAINABLE BUSINESS MODEL

by

James Livingstone Buskard

Bachelor Environmental Studies, University of Waterloo 2003

PROJECT SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS OF THE DEGREE OF

MASTER OF BUSINESS ADMINISTRATION

In the EMBA Program of the
Faculty of Business Administration

SIMON FRASER UNIVERSITY

Spring 2012

Approval

Name: James Livingstone Buskard

Degree: Master of Business Administration

Title of Project: TURNING EXPLORATION (R&D) INTO A SUSTAINABLE BUSINESS MODEL

Supervisory Committee:

_____

Dr. Andrew von Nordenflycht
Senior Supervisor
Associate Professor, Strategy

_____

Dr. Neil R. Abramson
Second Reader
Associate Professor, Strategy

Date Approved: _____

Abstract

Nevada Exploration Inc. ("NGE") is a public exploration company that has developed new technology to identify gold exploration projects in Nevada's valleys where the bedrock is covered. Covered bedrock settings challenge conventional exploration tools and NGE's technology represents a significant improvement; however, because the technology is still new, NGE has had a hard time attracting buyers for its projects. Instead, NGE has advanced its exploration targets in house, which has proven costly and dilutive to shareholders.

This paper examines how NGE creates value to focus NGE's efforts on activities that maximize the likelihood and degree to which its shareholders participate in a gold discovery. This paper concludes the best way for NGE to create value is to limit its activities to the early project generation stages of the industry value chain where it can leverage its technology to identify new projects better and cheaper than its rivals.

Keywords: gold exploration; hydrogeochemistry; Nevada exploration; grass-roots exploration; generative exploration.

Acknowledgements

I would like to thank those that have supported and encouraged me in the completion of both this project and the EMBA program. I would like to extend particular thanks to my teammates in Team Links, to my professors and project advisors, to my colleagues Wade and Ken, and to my family and friends: you have been generous and gracious, and I will always be grateful for the strong foundation you have provided me.

Many heads are always better than one.

Table of Contents

List of Figures

List of Tables

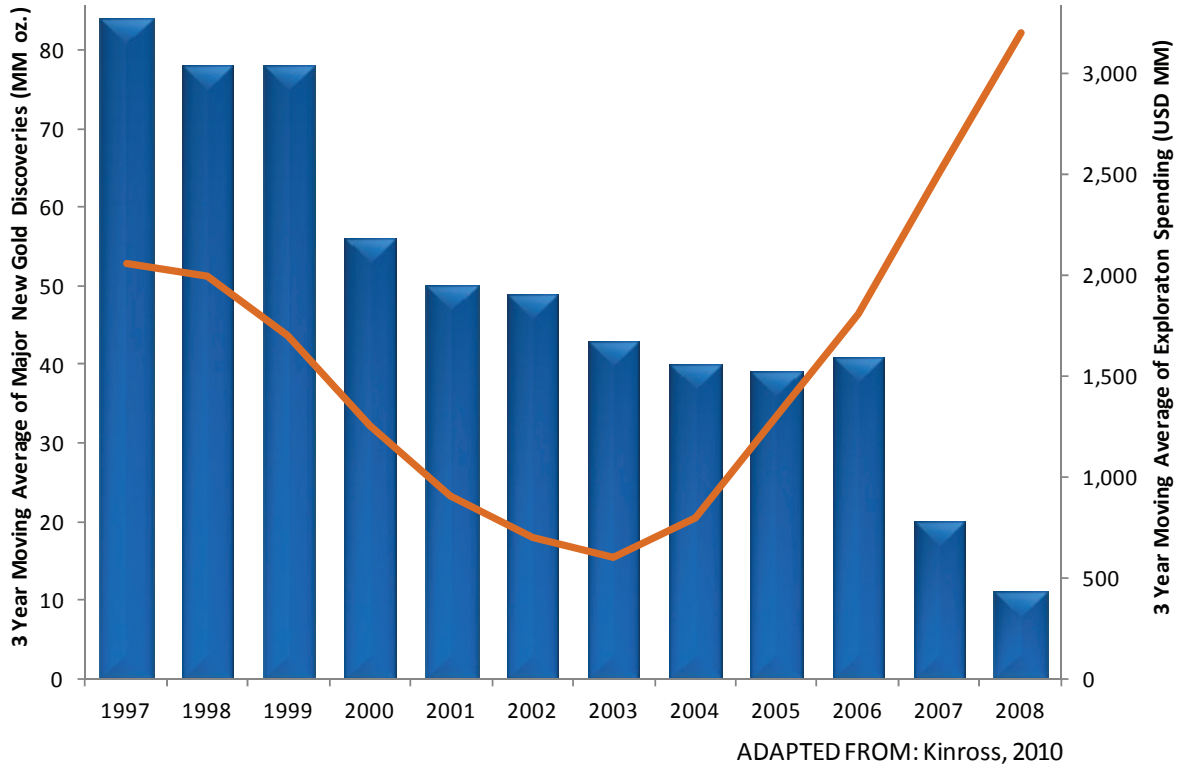
Glossary

Earn-In Metrics	Buyer-seller transactions in the exploration industry typically take the form of joint ventures or options whereby buyers earn ownership interests in sellers' projects by making payments to the sellers and by investing money into the projects over a defined period.
Geochemistry	A branch of geology that examines the chemical constituents of samples (often rocks, but includes other media as well) to establish the presence of minerals.
Geophysics	A branch of geology that uses remote sensors to acquire information about the electromagnetic, gravity, and other non-chemical properties of rocks with the goal of identifying relationships between favourable geology (e.g. gold mineralization), which is relatively difficult and expensive to establish, and patterns recognizable in the geophysical data, which is relatively easy and cheap to acquire.
Grassroots Exploration	Exploration focused on finding new prospects in new areas, as opposed to limiting exploration activities in and around known areas of mineralization, which is alternatively referred to as brown field exploration.
Hydrogeochemistry	Hydrogeochemistry is a sub-discipline of geochemistry focused on looking at the chemical constituents of a water sample. In this context, hydrogeochemistry exploration refers to collecting samples of groundwater and analysing them to establish the concentrations of various elements important for gold exploration within the water samples.
Junior Exploration Company	Loosely defined term generally taken to mean a small public exploration company, with a market capitalization of less than $100M and no mining assets at or nearing production.
Mid-Cap Exploration/Mining Company	Another loosely defined term used to describe medium sized exploration or mining companies with market capitalizations from between $100M to $1B, and with at least one mining asset at or nearing production.

1: Introduction

Humanity has a love affair with gold. From the crusades and armadas of ancient times, to the more recent Californian and Yukon gold rushes, our quest for this elusive element has defined much of our history. Pundits offer differing but equally compelling arguments as to whether or not gold has any intrinsic value, but none can dispute that there continues to be a healthy demand from buyers willing to exchange dollars, pounds, and other currencies for gold. With strong demand from buyers, explorers have considerable incentive to search for more gold, and with historically high gold prices, the last few years have seen a dramatic increase in exploration spending around the world. Surprisingly, however, despite the fact that explorers are spending more money today than ever before to search for new gold deposits, the worldwide rate of new gold discoveries continues to fall from its now decade old peak with no end in sight, as shown in Figure 1 (Metals Economic Group, 2011; and Kinross, 2010). Why is more money, being spent by more explorers, not translating into more discoveries?

Figure 1: Worldwide Rates of Discovery vs. Exploration Expenditures



At the most basic level, gold is not a commonly occurring mineral – it is hard to find. Over time, new tools have certainly arrived to help geologists improve the odds of making a discovery, and with the arrival of each new tool, explorers have been able to search in new settings that challenged their previous tools. As with the advent of any new technology, however, explorers eventually exhaust the low hanging fruit brought into reach by each new exploration tool, and then discovery rates fall while they wait again until the next new technology arrives to facilitate the next wave of discoveries. Unfortunately, for several reasons mainly related to a lack of R&D spending during a prolonged period of depressed gold prices and industry cost cutting in the 1980's and 1990's, the last few decades have seen few improvements to the tools available to explorers. Consequently, today's explorers continue to use the same conventional toolbox, limiting their focus and directing their resources to the same already heavily explored settings.

The time is clearly ripe for the exploration industry to devote resources and attention towards developing and applying new exploration techniques to explore in new settings, but the challenge is considerable. Whereas in the past explorers contributed in small ways to the advancement of their field on an ongoing basis, their abrupt and prolonged lack of investment in researching new exploration techniques during much of the last few decades has halted the momentum for innovation. After decades of applying the same techniques to the same settings, explorers have effectively picked the field bare. Consequently, explorers are no longer simply looking for the next incremental advance in exploration technology, they are now waiting for a conceptual leap forward. Unfortunately, today's explorers are largely prevented from investing the significant resources required to take such a leap by the implicit restrictions placed on their activities by the junior public markets that fund them.

Worldwide, exploration is predominantly conducted by small, publicly traded exploration companies ("juniors") funded by speculative equity investors. The history of this funding arrangement dates back more than 100 years ago to the gold and other resource booms that brought immigrants to young, resource rich countries like Canada and Australia. Miners and loggers needed capital to exploit their mineral and timber claims. Soon small stock exchanges began to spring up wherever there was resource activity, and with dreams of getting rich quickly, investors jumped at the chance to speculate on the next big find.

Today, Canada's economy remains resource driven, and Canada's investment community has come of age alongside its resource industry. Canada has grown to become an international leader in mining: Canadian geologist and engineers actively participate in all levels of mining and exploration in every mining jurisdiction; Canadian regulators work with developing countries to

draft new mining legislation; and Canadian investors, now very familiar and comfortable with the potential risks and rewards of investing in resource plays, provide the largest source of mining and exploration capital. As a result, the Toronto Stock Exchange ("TSX") has become the dominant mining exchange worldwide with listings from 58% of the world's public mining companies (TSX Inc., 2012). In terms of raising capital to explore or mine, 90% of all mining equity financings worldwide in 2011 were completed on the TSX, totalling approximately 40% of the total mining equity capital raised (TSX Inc., 2012). Moving forward, there is no reason to expect this situation to change – in 2011, the TSX continued to lead as the number one venue for new mining sector listings and the number one market for new mining financings globally (TSX Inc., 2012).

There are simply no other sources of investment capital for the mining industry that can compete with Canada's equity markets in terms of their understanding of mining activities, their appetite for risk, or their liquidity, but as this paper goes on to describe, operating as a public company in this context presents considerable challenges to issuers, particularly to the small junior explorers. With well entrenched markets, institutions, and investors continuing to fund the mining industry, this paper does not propose alternative funding sources, rather it acknowledges the constraints inherent in being publicly traded and looks for strategies to operate within this context. More specifically, this paper looks at operating strategies within the exploration segment of the mining industry and considers the specific challenges that being public presents to junior explorers.

With more than 1,600 public exploration and mining companies listed on the TSX (TSX Inc., 2012), the investors that provide the high risk capital that fund this industry have innumerable opportunities to invest in and are presented with a fire hose of "this week's big story". With such a large pool of companies, there is always a "better deal" and accordingly, investors' attentions spans are short. To remain interested in a company, investors almost demand results yesterday, but unfortunately, the gold exploration industry is characterized by long project lifecycles – it takes an average of 10 years to go from a discovery drill hole to the initial start up of a mine (Schodde, 2011). To reconcile this disparity in investor expectations and project lifecycles, explorers bias their project selection criteria to projects that can provide short term news, not to those that truly offer discovery upside. This selection process is referred to as "mining for news releases" and commonly results in explorers choosing to invest resources in projects that are long in the tooth, offering little exploration upside, but exhibiting small known quantities of gold, rather than investing in earlier stage projects that have seen less work, but that

could actually result in a major new discovery. This approach to exploration may satisfy investors' demands for short term positive news flow (as an explorer spends money to again confirm an already well document small occurrences of gold), but investor resources expended in this manner have not discovered significant new ounces of gold, and thus have created little new value.

A second implication of conducting exploration as a public company is that the regulatory, compliance, and operating conditions for public companies are both burdensome and expensive. The fees associated with and the time required to deal with stock exchanges, lawyers, accountants, auditors, annual general meetings, and other obligations needed to satisfy the regulatory requirements placed on public companies is staggering. At the very minimum, a public issuer on the Toronto Venture Exchange ("TSX.V"), the Toronto Stock Exchange's junior market, can expect to pay $300,000 per year to maintain its public listing. For a typical small exploration company with an annual budget of between $1,000,000 and $2,000,000, by the time it adds rent, salaries, and G&A on top of its PubCo overhead, its fixed costs become so high that there is often precious little left to be invested "in the ground". Consequently, funding exploration within a public vehicle considerably inflates the true cost of exploration and is thus grossly inefficient.

A final implication of funding exploration within a public vehicle is that investors are forever being diluted. Traditional exploration does not generate revenue. An explorer's ultimate pay cheque is tied to making a discovery, which is usually a long way out, if at all (most often the case). In the meantime, every dollar an explorer spends comes from issuing additional shares; and when you combine the long exploration lifecycle with the high fixed costs of being an exploration company, explorers need to issue shares often. At the end, the question is always: what percentage of an ultimate discovery will investors get to participate in? Investors' fear of dilution over time further reinforces their desire to see short term results, which in turn further strengthens explorers' selection bias towards projects that can deliver short term results over projects that can actually deliver new discoveries.

Nevada Exploration Inc. ("NGE"), the subject of this paper, is an exploration company that has recognized the need and opportunity to develop a new approach to finding gold deposits; but to be successful, NGE too must overcome the challenges of receiving its funding from the junior equity markets. The purpose of this paper is to explore how NGE can address investors' short investment timelines, mitigate the high overhead costs of being a public company, and minimize shareholder dilution to be able to keep moving forward when the traditional payouts are

so far down the line. In other words, how can NGE surmount the challenges of trying to discover a new gold deposit, which is both a risky and lengthy endeavour, as well as the challenges inherent with being a public company, to allow its shareholders to participate in a meaningful way in the upside of a discovery? Most simply, this paper asks whether gold exploration can be a sustainable business.

To answer these questions, this paper examines where value is created within the Nevada gold exploration business and where it is captured. This examination focuses on the industry's structure and value chain, specifically looking at the market for exploration projects, and how buyers value different types of projects. Against this industry analysis framework, this paper considers how NGE can align the attributes of its products (exploration properties) with the demands of the industry, and how NGE can best focus the scope of its operations on specific portions of the exploration industry value chain to increase shareholder value.

In terms of the structure for this paper, the analysis begins in the next section with a description of NGE and its value proposition. The third section describes the exploration industry, establishing the external context that NGE operates within, and specifically highlighting NGE's strengths and weaknesses relative to its peers as well as the opportunities and threats for the industry as a whole. The fourth section considers two strategic alternatives to better position NGE's for success, and the fifth section evaluates NGE's ability to implement each of the two alternatives. The sixth and final section delivers a recommendation of which alternative NGE should implement to achieve its goals, to take advantage of its strengths and opportunities, and to mitigate its weaknesses and threats.

2: NGE's Current Position

2.1 Company Overview

NGE is a junior exploration company that is in the business of generating new gold exploration projects in Nevada. NGE's business model is to use its competitive advantages (proprietary technology and management expertise) to sell high quality exploration projects to other exploration companies and mining companies looking to advance gold projects in Nevada.

Nevada's geology is composed of alternating mountain ranges and valleys. Approximately half of Nevada's bedrock is visible in its exposed mountain ranges, while the other half remains hidden beneath its valleys (see Figure 2). Nevada produces more gold per unit area than any other jurisdiction in the world (see Figure 3), but Nevada's dense concentration of

Figure 2: Map of Nevada illustrating that half of Nevada's bedrock sits hidden beneath Nevada's valleys (Source: Author).

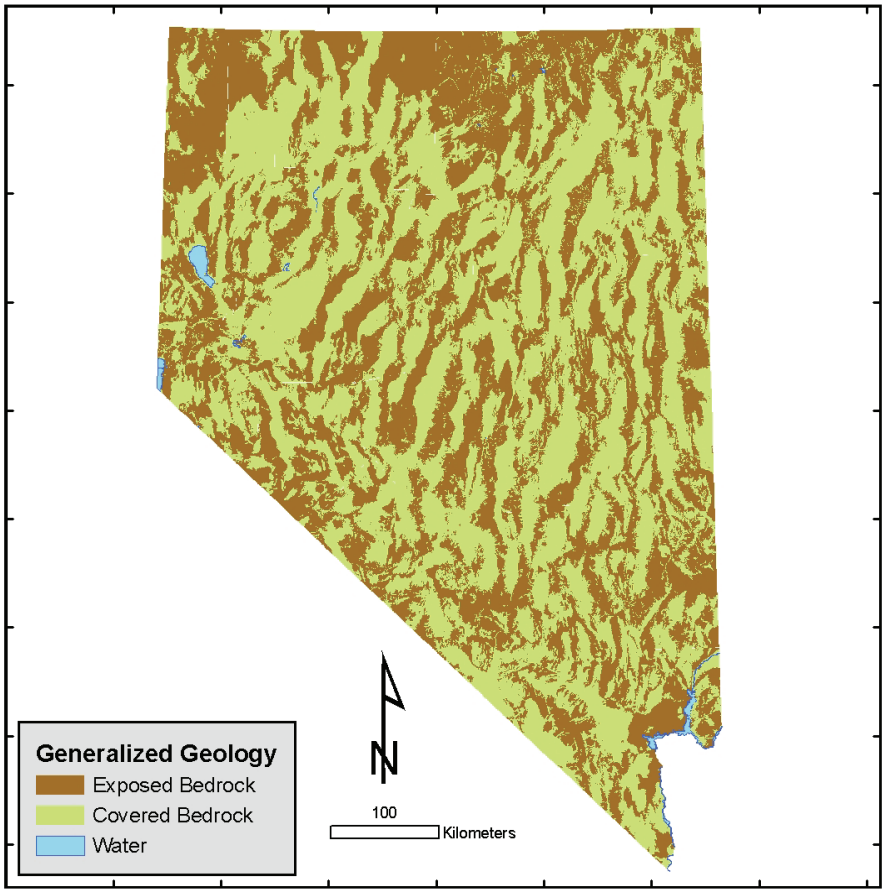
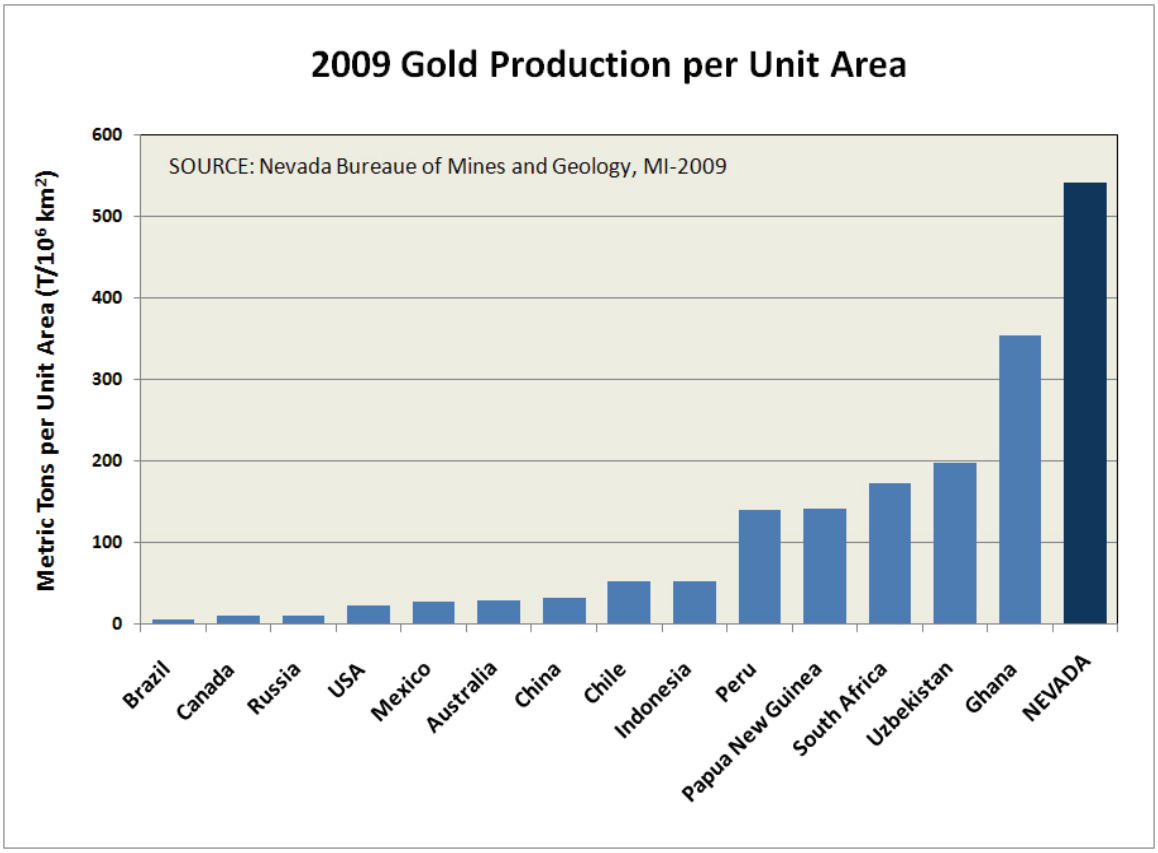


Figure 3: 2009 Gold Production by Major Jurisdiction per Unit Area



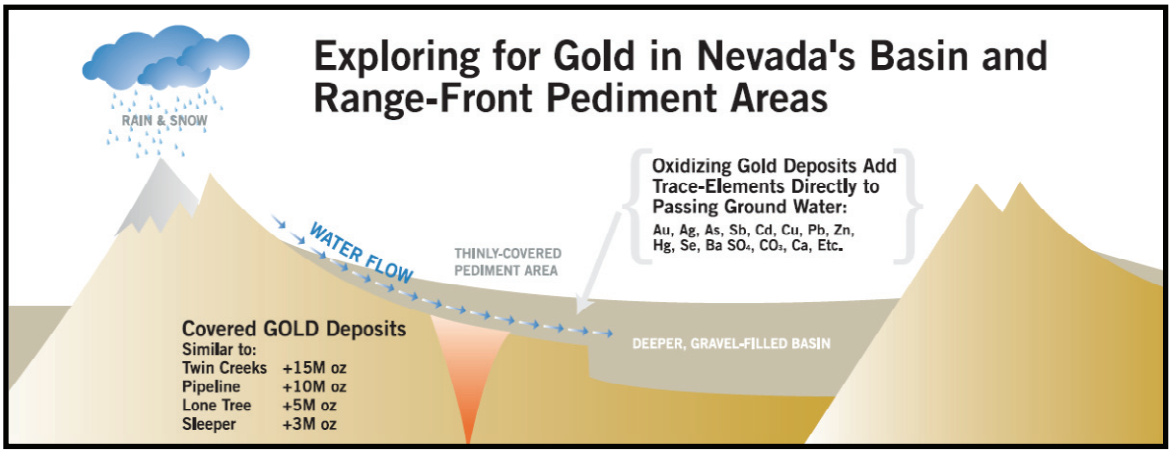
gold deposits came long before Nevada was broken up into the present day arrangement of mountains and valleys. As a result, geologists agree there should be just as much gold in the bedrock hidden beneath Nevada's valleys as in the bedrock exposed in its mountains. Unfortunately, conventional exploration techniques only work well where bedrock is exposed and visible. Without an effective tool to see through the valley cover, exploration in Nevada has been predominantly limited to the exposed mountain ranges, and the vast majority of Nevada's gold deposits have been found in exposed settings. While explorers have developed several indirect methods to explore in covered bedrock setting, mostly using sensors at the surface or mounted on aircraft to provide indirect, relative patterns about bedrock composition, they provide no information about the actual geochemistry of the bedrock, which is the most important factor when exploring (e.g. nice patterns but is there any gold?). Because conventional exploration methods do not work well where bedrock is covered, half of Nevada (the jurisdiction containing the world's densest concentration of gold deposits) effectively remains unexplored.

Recognizing this significant opportunity, NGE's founders, Wade Hodges (President & CEO), eventually joined by Ken Tullar (COO) and James Buskard (VP), have developed new

technology specifically to search for gold in the bedrock beneath Nevada's valleys. NGE's exploration program is based upon a concept that was originally championed by Mr. Hodges more than 10 years ago: the concept that groundwater chemistry ("hydrogeochemistry"), an up until to now relatively ignored geological sampling medium, could provide important clues to the presence and location of gold mineralization in covered bedrock settings. The concept is simple: water is the "universal solvent", and as groundwater flows below the surface, it picks up a unique chemical signature from the bedrock it encounters (see Figure 4). Accordingly, when groundwater flows near a gold deposit, it acquires a measurable and recognizable hydrogeochemistry gold signature that can be followed back to its source. It is analogous to 21st century gold panning, in this case however, the machines are no longer a gold pan and a human eye, the machine is the latest in mass spectrometry lab analysis equipment that effectively reduce the detection threshold from visible sized flakes down to parts per trillion. Hydrogeochemistry is the first exploration medium that can provide direct information about the geochemistry of covered bedrock, and NGE is the first group to invest the resources needed to harness the power of hydrogeochemistry to explore for gold in Nevada. NGE's hydrogeochemistry technology provides NGE a clear advantage to identify new high quality gold exploration targets in covered settings where the opportunity is huge but its peers are challenged.

The timing of NGE's efforts to develop new technology to search for gold in covered areas ("blind deposits") is important. While Nevada is a world class gold producing region, its exposed mountain ranges – where the bedrock is exposed and visible, and where conventional exploration technology works well – have been exhaustively explored for 150 years by several generations of prospectors. Continued efforts to find new gold deposits in these same exposed ranges are resulting in ever diminishing returns in terms of new discoveries. In spite of this

Figure 4: NGE's Hydrogeochemistry Exploration Concept (Source: Nevada Exploration Inc., 2012)



reality, with historically high gold prices, Nevada's explorers continue to try to apply the same conventional tools to the same exposed bedrock settings because they do not have tools to effectively search elsewhere. Demonstrating this point, since 2000, annual exploration expenditures in Nevada have increased by 100%, and the number of active mining claims in the State has increased by 50%; yet the rate of new ounces found per year continues to fall (Nevada Bureau of Mines and Geology,2010). The time has come for explorers to invest their resources into advancing covered targets in the bedrock beneath Nevada's valleys, but the industry has been waiting for a technology that can cost effectively reduce these large covered areas to discrete, high quality, exploration projects. NGE developed its industry leading hydrogeochemistry exploration technology specifically to address this problem, and for the last several years, NGE has been working to find ways to capitalize on its first mover advantage.

NGE's technology is exciting, and Mr. Hodges, NGE's CEO is a well respected Nevada geologist with many major discoveries to his name. In the heady markets of 2006 and 2007, this combination proved attractive to investors, and NGE successfully raised more than $10M, and enjoyed a lofty share price that peaked at $1.25 in late 2007. During this time, NGE used its resources to acquire a portfolio of nine new properties covering "blind" targets identified by its technology, establish an 8,000 sq ft exploration office in Reno, NV, and build an exploration and support team that grew to 13 persons. NGE's plan was to advance its portfolio of projects in-house through the early stages of exploration, including early stage drilling, with the objective of making an at least technically interesting, if not market moving, discovery to demonstrate the validity of its hydrogeochemistry exploration technology. At that point, NGE would then limit its activities to generative work, identifying new projects using its technology, and leave the later conventional exploration phases for its buyers (usually joint venture partners agreeing to bear the costs of further exploration in exchange for an ownership interest) to complete, and focus its efforts on target generation where NGE has a unique competitive advantage.

This was the plan, but exploration is inherently risky with many variables outside of the explorer's control. Industry wide delays in permitting, drilling, and other stages of exploration during an exploration boom in 2007 and early 2008, along with the normal challenges of looking for a "needle in a haystack", meant that NGE's efforts took longer and cost more than expected. Despite the overruns, by mid-2008, NGE was able to demonstrate that its hydrogeochemistry exploration program was working, with encouraging drill results from its Fletcher Junction Project, an otherwise blind target that had been identified solely by NGE's technology. Essentially, NGE had proven that it was able to use its technology to identify a high quality

(albeit still very early stage) exploration target in a covered bedrock setting – the same type and quality of target that would have attracted significant attention and resources decades earlier had it been exposed in the mountains. While this was a screaming technical success for NGE, and perhaps had it been a year earlier would have excited the stock market, by this time, the markets were plunging and NGE's access to capital dried up.

By the end of 2008, NGE's share price had collapsed from its peak of $1.25 to $0.03, and NGE's cash reserves were running low. Unfortunately, because NGE had acquired such a large portfolio of projects, it was still responsible for significant annual land holding costs of close to $400,000. Without cash reserves to fall back on, NGE needed to complete equity financings at low prices, diluting its founders and investors, to hold on to its projects with the hope that times would improve. In the years since the market correction, NGE's share price has appreciated only slightly, but NGE has remained determined to maintain its large land position. To do so, NGE has issued more than 50 million new shares, mainly at between $0.05 and $0.08 per share, effectively doubling its total number of shares outstanding. During this time, NGE has mainly been in survival mode. NGE's core management team, still Messrs. Hodges, Tullar, and Buskard, laid off all staff, terminated most of its professional services providers and stopped collecting salaries to reduce the company's expenses, and sold equipment, sublet a portion of NGE's office, and completed consulting work to generate cash. Despite these survival tactics designed to reduce NGE's burn rate, simply being public meant that NGE continued to have considerable filing and disclosure obligations, as well as rather complicated cross border tax and accounting issues to manage. With limited resources, NGE's management had no choice but to learn how to take on many of these tasks themselves.

Unlike many of its peers in its junior exploration cohort that were forced to close their doors during these challenging times, NGE survived and its management found the money needed to maintain most of its large property portfolio. In the last 18 months, the equity market's interest in, and the availability of capital to conduct exploration has returned, but as explained in the introductory section, the market continues to overweight its focus towards established projects rather than on early stage projects. In this environment, with a portfolio of early stage projects, NGE must carefully consider how to best position itself to move closer towards its goal of creating shareholder value by participating in a new gold discovery.

2.2 Current Strategic Position

NGE's technology allows it to identify new exploration projects better and cheaper than its peers, providing NGE with the competitive advantage of being both lower cost and higher value at the initial target generation stage; however, target generation is only the first of many stages in an exploration project lifecycle and explorers have not traditionally been able to sell such early stage projects for meaningful prices. While NGE purports to having better early stage targets, because its technology is so new and relatively unknown within the industry, simply having an early stage exploration project defined by hydrogeochemistry, without additional positive confirmation from more familiar, later stage, conventional exploration tools, has been insufficient to attract buyers. With no market for NGE's early stage projects, NGE has been forced to advance its projects through the more expensive, later stages of exploration in-house in order to demonstrate the value of NGE's projects and attract partners.

Unfortunately, by moving the projects it has identified using its technology forward through the next phases of project development using conventional exploration tools, NGE's dominant functional activities have resolved into the same as those of its peers. Effectively, NGE has been diluting its competitive advantage in the early stages of target generation by competing directly with its peers in the later stages of exploration. Despite NGE's exciting technology, by employing this strategy NGE has not successfully found a way to leverage its technology to realize a sustainable competitive advantage.

2.3 Current Performance

As described in the Company Overview sub-section above, after a decade spent developing its new hydrogeochemistry exploration technology and advancing the projects that its technology had identified, by mid-2008, NGE was finally able to demonstrate encouraging exploration results from the conventional exploration it had completed on its projects to establish the value of its generative technology. While these results were very much technical in nature and not of the sort to excite the stock market, they have provided the proof of concept NGE needed to convince the technical teams of potential buyers that NGE's projects were worthy of consideration. With these encouraging technical results, NGE has been able to complete two property deals, one with Northgate Minerals Corp (now AuRico Gold Inc.) and the other with International Enexco Ltd., where the two companies paid NGE to enter into option agreements that allowed them to earn into NGE projects by completing considerable work commitments and making cash payments to NGE. In both cases, the companies agreed to prices considerably

higher than those seen across the rest of the industry, and these two deals have demonstrated that there is at least some demand for NGE's hydrogeochemistry projects.

More recently, in addition to looking to find buyers for NGE's projects, NGE has also been looking to find other ways to leverage its technology. In July 2011, NGE concluded a deal with McEwen Mining Inc. ("McEwen"), a well-respected mid-cap exploration company, whereby McEwen has engaged NGE to identify new exploration targets using NGE's hydrogeochemistry exploration technology on a very large land position where McEwen already owns the mineral rights. McEwen has invested many tens of millions of dollars into this land with little to show its investors in return in terms of additional new ounces of gold. McEwen believes NGE's technology could provide the key to finding new ounces on its land and in exchange for NGE's services, McEwen is paying NGE a service fee and granting NGE a royalty on any new gold deposits found because of NGE's work. This deal structure represents a radical departure from traditional structures where companies pay to earn into and participate in the projects of other companies – in this case, NGE is being paid to participate in McEwen's project. With this deal, NGE is effectively leveraging its intellectual property to expose its shareholders to the upside of McEwen's large project, as well as to generate revenue to offset NGE's overhead. Strategically, NGE is creating shareholder value without using up its limited cash resources.

Based on the encouraging results of NGE's work under the first deal with McEwen, in March 2012, McEwen and NGE entered into a second agreement to identify new gold projects in a separate, new, large (250 km^2), highly prospective, but covered area of interest ("AOI") in north central Nevada using NGE's hydrogeochemistry technology. Under the agreement, McEwen has engaged NGE to complete a hydrogeochemistry survey across the AOI to delineate new prospective gold targets in exchange for a service fee. Each project that McEwen acquires within the AOI triggers additional payments to NGE, and NGE receives a 30% carried interest in each project until the project is deemed economically feasible (e.g. McEwen is responsible for all project costs until the completion of a positive economic feasibility study, often costing upwards of $10-20M), after which time NGE must start to fund its share of project expenditures at what has now been established as an economically feasible project (i.e. low risk). With this second deal, NGE has further demonstrated that it can leverage its investment in hydrogeochemistry to not only lead the exploration and participate in the upside of this important part of Nevada, but to also generate revenue. Once again, NGE has found a way to position itself to allow its shareholders to participate in the upside of exploration without spending, in fact while generating, cash.

2.4 Current Issues and Problems

Despite the increased credibility and exposure NGE has received from the third party validation implicit in having completed deals on favourable terms at two of its properties and in establishing its relationship with McEwen, the overall rate at which NGE has been able to direct and attract resources to its projects has been slow. NGE still needs approximately $1.5M per year to meet its fixed costs, and even more if it plans to complete work to advance its own projects further. To date, this money has primarily come from equity financings, and in the last 36 months NGE has increased its share capital by 85%. With only limited resources being directed to NGE's projects, NGE's shareholders have had few opportunities to get lucky, and as their ownership interests have been diluted, so has their upside.

Looking more closely at the last 12 months, NGE has started to realize some revenue from its deals with McEwen, as well as from other smaller consulting contracts, but the cash provided by these activities has only covered approximately 40% of NGE's overhead during this period – NGE has needed to cover the remaining 60% from the proceeds of equity financings. Ultimately, NGE needs to accelerate the pace of exploration at projects where NGE has an ownership interest. It is plainly obvious that as soon as high grade gold mineralization is discovered in a drill hole located on an NGE hydrogeochemistry target, then the demand for NGE's projects and technology will increase dramatically. The question remains, however, how can NGE increase the odds that one of its projects reaches this milestone, while also retaining a meaningful piece of the upside and without excessively diluting its shareholders?

At the end of the day, exploration is a risky business and a numbers game – the surest way to improve odds of being successful in exploration is to increase the number of bets on the table. For NGE to be successful, it needs to find ways to direct more resources to more of its projects more quickly, while also balancing dilution at the company level (equity financings), as well as at the project level (deal structures). With this in mind, the remainder of this paper considers how NGE can best position itself to capitalize on its technology and provide shareholders with greatest return on their investment.

3: External Analysis

While NGE's hydrogeochemistry exploration technology represents a compelling advantage and opportunity for NGE to create significant shareholder value, NGE has yet to find a way to monetize its technology or provide its shareholders with meaningful opportunities to participate in the upside of a new discovery. To consider how NGE can better attract the resources it needs to advance its technology and projects, this section analyzes the industry context within which NGE operates, the opportunities and threats that it presents, and NGE's strengths and weaknesses relative to its peers.

3.1 Industry Overview

3.1.1 Industry Definition: Gold Exploration in Nevada

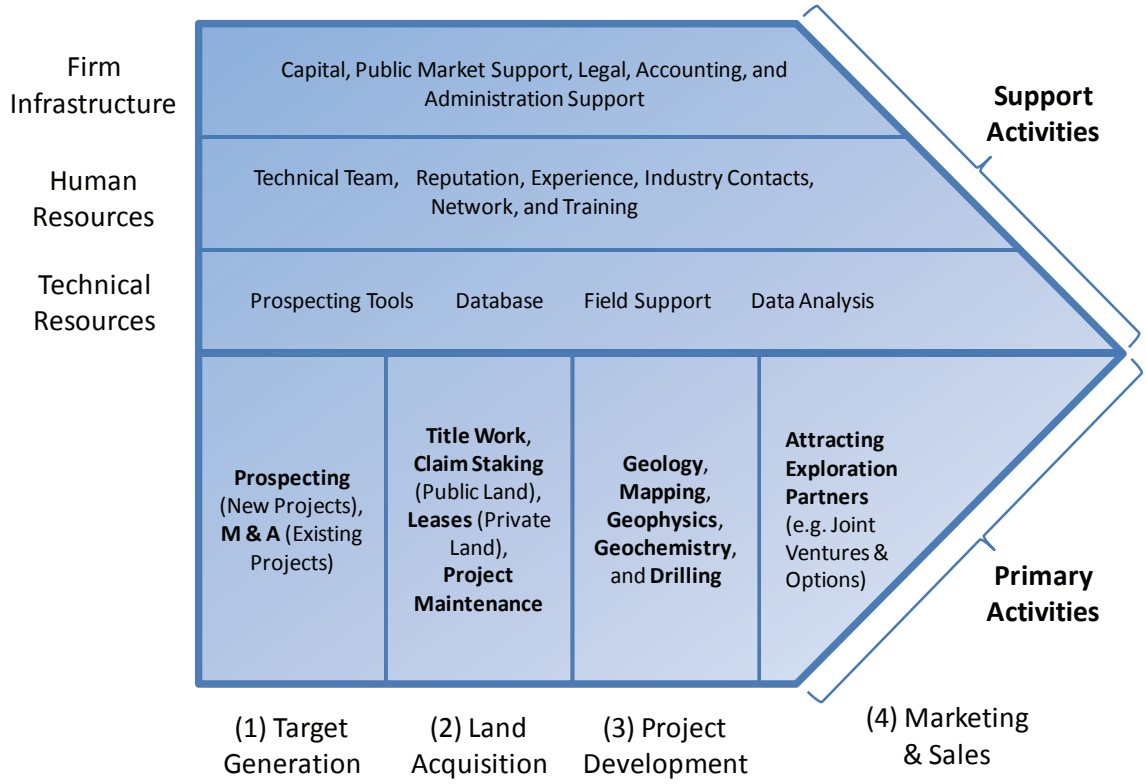
The mining industry as a whole has two distinct sub-industries, exploration (prospecting) and production (mining). Exploration is a high risk/high reward, R&D type of business characterized by science, creativity, and persistence; whereas production is an earth moving business driven by efficiency and focused on cost leadership. Beyond the separation between exploration and production, the mining industry is also separated by different commodities. Each major commodity group has unique geological properties important for both exploration and mining, and the resulting operational strategies differ markedly between companies focused on different commodities. A final logical division of the mining industry is among geopolitical borders. The differences in legal, permitting, operating, human resources, security, and other environmental factors between different mining jurisdictions are so drastic, and the resulting effects on the economics of operations so significant, that operating strategies vary considerably around the world, even amongst similar projects being advanced by the same operator.

To account for the significant differences in operating environments and functional activities between the many segments of the mining industry, and to complete a meaningful analysis of the specific portion of the mining industry that NGE operates in, this paper defines NGE's industry as the gold exploration business in Nevada. Accordingly, this paper considers NGE's competitors to be companies involved in the same activity (exploration), focused on the same commodity (gold), and operating in the same jurisdiction (Nevada).

3.1.2 Industry Value Chain

To establish the framework for this external analysis, and later to consider whether NGE should focus its activities on certain areas within the value chain, it is important to review the major activities involved in gold exploration in Nevada, and to consider how they each contribute to a company's value proposition. As illustrated in Figure 5, the industry is comprised of four major functional activities: (1) identifying new exploration targets; (2) acquiring the mineral rights covering targets to establish projects; (3) advancing projects to first confirm that they have experienced the geologic processes required to deposit gold and then to establish that they could contain economic quantities of gold; and (4) attracting buyers (usually joint venture partners) to take over projects and fund the later more expensive stages of exploration and development. Explorers support these four primary activities with three major types of resources: company resources; human resources; and technical resources. Nevada's gold explorers focus their resources and leverage their strengths in different primary and secondary activities within this value chain in an attempt to establish and maintain competitive advantage and to present unique value propositions to potential buyers.

Figure 5: Value Chain of a Nevada Gold Exploration Company (adapted from Ghemawatt & Rivkin, 2010)



The first stage in the Nevada gold exploration industry value chain is generating new targets and opportunities, either through boots on the ground prospecting, known as grass roots exploration, or by reviewing existing, but usually stalled, projects owned by other companies. The second stage in the Nevada gold exploration industry value chain is acquiring an ownership interest in the mineral rights covering the targets identified in stage one. The US Government owns the mineral rights across approximately 90% of Nevada, and private individuals own most of the remaining 10%. To acquire an ownership interest in mineral rights owned by private individuals, explorers complete title reviews to establish ownership and then attempt to negotiate deals with the owners – usually these take the form of mineral leases or option agreements. To acquire an ownership interest in the mineral rights owned by the federal government, explorers stake claims. If one explorer has already staked a target that a second explorer is interested in acquiring, the second explorer completes a process similar to when the mineral rights covering a target are owned by a private individual, they verify ownership and negotiate a deal.

The third stage of the industry value chain is project development. This is the stage where explorers invest resources into an exploration project to acquire additional geologic information with the objective of increasing the project's value by finding evidence to further confirm the potential, and increase the odds of the project containing an economic gold deposit. This project development stage is by far the most expensive and time consuming stage of the industry value chain, and it is useful to review the lifecycle of an exploration project within this stage. Explorers begin at each project by applying less expensive project scale tools that deliver high-level information about a project, such as geochemical surveys ($30K - $150K) and geophysical surveys ($50K - $250K). When presented with encouraging results using the less expensive tools, explorers continue to apply more focused and more expensive tools until they end up using the most focused and most expensive exploration tool: a drill rig. Explorers' drilling strategies mirror how they use the earlier tools: they start with wide spaced drilling to confirm the larger geologic concepts ($500K - $1.5M) and with encouraging results, slowly tighten their net with ever more expensive, tighter spaced drill holes until they have clearly delineated the extent and composition of a new economic resource ($2M - $20M).

The fourth and final stage of the Nevada gold exploration industry value chain is marketing and sales, and it encompasses the activities surrounding selling projects and harvesting the value explorers create in stages one to three. Unlike more traditional buyer-seller transactions, exploration industry transactions typically take the form of option or joint venture agreements whereby a buyer earns an ownership interest in a seller's project through payments to

the seller and by investing money into the project over a defined period. This type of deal structure allows buyers to test projects prior to delivering full payment, but the final purchase price is accordingly higher because logically if the buyer chooses to complete the sale after testing the project, the project will have been proven to be more valuable. How much a buyer pays for a project is defined by the deal earn-in metrics, which could include annual cash option payments, work commitments, advanced royalty payments, and many other types of consideration. The more burdensome the earn-in (i.e., the price), the greater the ownership interest the buyer expects to receive after completing the earn-in.

Throughout the industry value chain, in both the primary functional activities and the support activities, there are key stakeholders that facilitate, support, and challenge the industry participants. The following sections consider the rolls and relative importance of these stakeholders, starting in the following sub-section with competitors.

3.2 Competitors

This paper considers NGE's competitors to be other Nevada focused gold exploration companies looking to advance their projects by attracting partners through options, joint ventures, and other agreements. There are currently approximately 50 companies operating in this space using this business model (Nevada Bureau of Mines and Geology, 2010). There are no clear industry leaders, and with little concentration, there is little interdependence between competitors, which leaves competitors in this industry to compete both on price and differentiation.

When competing on price, competitors modify the earn-in terms for their projects, such as the cash payments and work commitments, as well as offer to give up different amounts of ownership interest. As more fully described in Section 3.7.2, when competing on differentiation, competitors look to present projects that are low risk, offer blue sky, and are supported by good geologists. To establish their positions to compete on price and differentiation, explorers must make choices about how they identify and acquire projects; what types of projects they advance; how and how far they advance projects before selling them; and what sorts of deal terms they present to buyers. The following subsections introduce each decision and highlight the tradeoffs inherent with each.

3.2.1 Identifying and Acquiring Projects

In terms of strategy, the first major decisions competitors in this industry have to make relate to how they identify and acquire projects: are they going to identify new projects (grass

roots exploration), or evaluate existing projects. Whereas grass roots exploration involves going out into new areas and using new tools to recognize patterns and clues suggesting mineralization that others have either missed or been unable to see, evaluating existing projects involves reviewing historic work to identify existing opportunities that may be undervalued. In Nevada, grass roots exploration is the more challenging method of identifying new projects because for more than 150 years generations of prospectors have intensively explored much of the State. As a result, new targets can generally now only be found by looking in new, more challenging (thus as yet unexplored) settings, or by developing and applying new, more expensive (thus as yet unapplied) exploration techniques. In contrast, reviewing existing properties is a comparably cheaper, faster, and easier method of identifying new opportunities, and has become the strategy employed by almost all of Nevada's explorers.

The costs associated with identifying worthy exploration projects, however, make up only the first type of costs when assembling a portfolio of exploration projects; the second type of costs are the costs to acquire the projects. Staking new claims is not only the cheapest means to acquire mineral rights, it also results in the cheapest annual holding costs. Deals with private owners or other existing claim holders are more expensive, with higher payments both upon signing and annual renewal. Because companies employing grass roots target identification strategies to identify opportunities often generate targets where others are unlikely to have already staked claims, these companies subsequently enjoy the cost advantages of lower land acquisition and holding costs.

The costs associated with identifying a new target are an important component when evaluating an explorer's effectiveness in assembling a project portfolio, but the evaluation must also consider how much new value the explorer creates in the process. A target's value is based upon its potential to become a new gold deposit. An explorer that chooses to review existing projects as a means of identifying new targets creates relatively little new value at this stage – the likelihood that a project will become an economic gold deposit does not increase significantly simply because another explorer has laid eyes upon it. On the other hand, an explorer that is able to identify new grass roots targets by investing resources to search in new areas or develop new techniques can create considerable new value by demonstrating that a previously unvalued piece of ground has the potential to contain a new discovery. The takeaway here is that the amount of net new value a company creates when adding a new project to its portfolio is a function of: (a) how much it cost the company to identify and acquire the project, and (b) whether or not a company has increased the likelihood that the project could become an economic gold discovery.

Beyond the cost considerations, when choosing between generative versus acquisition strategies, explorers also take into consideration the risk profiles of projects each strategy delivers. Existing projects generally have seen at least some (and in many cases considerable) work from the previous owners and operators. This provides a new explorer with baseline information to estimate the likelihood of encountering further encouraging results, as well as a starting point from which to direct the next phases of work; and together, these reduce the risk of the explorer not being able to deliver encouraging results to its investors. A new project identified through grass roots exploration, on the other hand, comes with little or no historic data. At these projects, explorers start blind and invest the early dollars to complete the first phases of work in areas that have seen no exploration. For explorers these are always the riskiest dollars because similar to playing a new game of battleship, there are few game pieces on the board from which to base the early moves.

While grassroots projects may be more risky, they offer explorers significant upside in return. Projects that have already seen considerable work from other explorers, but have not yet produced sufficient results to sustain the previous explorers' interests, are less likely to contain large deposits (otherwise the previous explorers would have found them). These projects may still contain smaller deposits, but because of the large capitalization costs to build a mine, the economics of smaller deposits are less attractive, which reduces the upside of finding such a deposit. Without past work to restrict the size of a potential discovery, grass roots exploration projects present explorers with more blue sky.

Clearly there are tradeoffs between conducting grass roots exploration to identify and acquire new targets versus reviewing existing projects for opportunities. Grass roots exploration may be more expensive during the target identification stages, as well as more risky, but in return explorers benefit from lower acquisition costs, have the opportunity to add value earlier in the project lifecycle, and enjoy bigger upsides. On the other hand, companies that focus more on acquiring existing projects benefit from lower costs during target identification, and generally have a better chance of delivering at least some positive news to shareholders (lower risk), but ultimately, they must also accept higher acquisition costs, less value added during the early stages, and reduced upsides. Table 1 below summarizes the tradeoffs explorers face when employing the two different strategies for assembling a portfolio of exploration projects.

Table 1: The tradeoffs inherent in different target identification and acquisition strategies.

	Grass Roots Exploration	Acquire Existing Projects
Identification Costs	High Cost	Low Cost
Acquisition Costs	Low Cost	High Cost
Value Added	High Value Added	Low Value Added
Risk	High Risk	Low Risk
Upside	Bigger Upside	Smaller Upside

3.2.2 Advancing Projects

Once an explorer has identified and acquired a project, the second major strategic decision an explorer must make is how and how far to advance the project. While investing additional resources to complete the next phases of work at an exploration project may add new information, reduce its riskiness, and increase its value if the results are encouraging, in general, the additional value created per additional exploration dollar spent decreases as a project becomes less risky and advances further along the exploration lifecycle. For an extreme example, consider the later stage, densely spaced drilling necessary to advance a project from an initial discovery drill hole through to a detailed economic feasibility study. This low risk drilling represents by far the most expensive phase of the exploration lifecycle, but adds relatively little new value per exploration dollar spent at a project where the presence of gold mineralization has already been established. In contrast, when an explorer invests a comparatively small amount of money into a new target and generates encouraging results the explorer creates considerable value per dollar spent by establishing the potential upside of the new target that was previously considered worthless. In this case, the explorer is rightfully rewarded with a higher return on investing the first high risk dollars into a project.

Recognizing the balance between how explorers create value within the exploration lifecycle and project risk is important because explorers aim to sell their projects at the point where they can maximize the value they receive from their buyers per dollar they have invested themselves. Some exploration companies are managed by more risk adverse geologists, perhaps

with more mine-focused operational experience, and these types of companies will often choose to focus their resources at projects where they can participate in the more expensive, but lower risk, later stages of exploration. Other more risk tolerant exploration companies, perhaps with more experience and expertise in traditional exploration, are generally more comfortable advancing earlier stage projects. Instead, they focus on adding value in the early stages of exploration and then look to sell their projects to bigger companies to complete the later, more expensive stages of exploration and development. The tradeoffs inherent in participating in earlier stage projects are that while they are higher risk, they also present opportunities to create more value for less money. The tradeoffs present in advancing projects through to the later stages of exploration are that while these projects are far less risky, late stage exploration is very expensive and the new value created per dollar spent is generally lower.

3.2.3 Selling Projects

After deciding how and how far to advance a project, the final strategic decision facing an explorer is how to structure a sale of the project. Buyers and sellers negotiate the amount and timing of different earn-in metrics, with clear tradeoffs between the seller either receiving higher payments during the earn-in period (front loaded) or retaining more ownership after the buyer has completed the earn-in (back loaded). To illustrate, consider an explorer that is comfortable with the industry's long timelines and believes strongly in the merits of its project. This seller would be more inclined to accept lower early payments to retain a higher ultimate ownership in the project; however in this case, the seller must be prepared to find alternative sources of income to satisfy its near term cash needs. The takeaway here is that selling exploration projects is a dynamic process and sellers employ different harvesting strategies depending on their preference towards either accepting smaller but surer payouts in the beginning or larger but less certain payouts in the end.

3.2.4 Summary

Considered in its entirety, operating within the Nevada gold exploration industry represents a careful balancing act where explorers employ different strategies to identify, acquire, advance, and sell projects in an attempt to maximize the value they capture per dollar they invest. Largely, explorers apply some form of the standard industry strategy: acquire higher risk projects for lower prices, invest resources to reduce the risk of the projects, and then sell the projects to buyers with lower risk tolerances but higher willingness to pay for front loaded deal terms to

allow explorers to recoup and capitalize on their investments as soon as possible. An explorer's position sometimes changes when presented with extraordinary results at a project, but in general, most explorers employ some variation of the standard industry strategy based on the skill sets of their people and the resources they have available.

In terms of NGE's strategy, NGE has worked hard to develop a technology that gives it an advantage in the project generation stages of exploration and thus has chosen to focus its efforts on identifying and acquiring new, grass roots exploration projects. However, because buyers have not yet shown a high willingness to pay for NGE's hydrogeochemistry targets that have not seen additional conventional exploration, NGE is still faced with needing to invest resources to advance its projects through the early and sometimes mid-stages of exploration. When it comes time to sell its projects, because NGE believes strongly in the quality of its targets, NGE is more interested in backend loaded deal terms that maximize NGE's ultimate ownership interests in the projects.

3.3 Customers

Potential option and joint venture partners (buyers) look to generate returns for their own shareholders by acquiring exploration projects relatively cheaply and turning them into viable, economic mining operations. In most cases, these companies have invested considerable resources to assemble the equipment, personnel, and expertise needed to operate later stage projects, and now need new exploration projects as inputs. Potential buyers for Nevada gold exploration properties are often mining companies, but they also sometimes take the form of other exploration companies looking to increase their property portfolio.

There are two dominant gold mining companies in Nevada: Newmont Mining Corporation and Barrick Gold Corporation. While together Newmont and Barrick are responsible for approximately 89% of Nevada's current annual gold production (Nevada Bureau of Mines and Geology, 2010), there are many smaller companies looking to increase their Nevada operations, as well as companies looking to enter Nevada from other jurisdictions. As a result, there are actually a large number of potential partners, and so with little buyer concentration, buyers' ability to squeeze lower prices or increased value from exploration companies is somewhat limited. In addition, because many of the players in this industry are public companies, deal metrics are often publicly disclosed, so there is a large amount of information available about recently completed deals for both buyers and sellers to review.

Because sellers usually retain a minority ownership interest in the projects they sell, sellers recognize that their upside remains tied to the success of their projects. Accordingly, sellers see value in finding good homes for their projects with well funded and technically capable companies likely to advance their projects in a sensible and timely fashion. As result, higher quality partners negotiate better terms from sellers.

Larger mining company management teams predominantly consist of engineers, accountants, and lawyers who together foster a mentality and culture that is not fast enough, creative enough, or flexible enough to operate in the dynamic and challenging exploration industry. The few exploration geologists that mining companies do employ are most often tasked with brown field exploration, looking for new ore within the perimeter of existing mines' fences. Because they lack the personnel, expertise, and culture to do effective early stage exploration, there is limited risk at this time that mining companies will attempt to backward integrate into the exploration business.

3.3.1 Market Size

The larger mining industry consists of hundreds of international players constantly evaluating opportunities around the world, and as a result, compelling gold projects in any jurisdiction quickly attract many interested potential buyers. The rise in gold prices during the last decade has translated into increased demand for gold projects, but M&A activity within the mining industry during the same time has somewhat decreased the number of potential buyers.

Globally, the average cost to produce an ounce of gold is estimated to be $620, and with gold prices above $1,500 per ounce, the difference between the price of gold and the costs of production has reached record levels (Virtual Metals & Haliburton, 2011). Based on the author's discussions with colleagues and other industry insiders at two major mining industry conferences held in Vancouver and Toronto in early 2012, the author expects gold prices to remain above the average cost of production for Nevada's gold miners for the near future. With the economics of gold mining expected to remain favourable, the demand for new Nevada gold projects should remain strong.

3.3.2 Customer Segments

There are three key customer segments for NGE's gold exploration projects: (1) exploration companies already active in Nevada; (2) mining companies already active in Nevada;

and (3) mining and exploration companies not yet active in Nevada but interested in entering Nevada.

Exploration companies already active in Nevada need to be sure that they are directing resources at projects and activities that create value, not just consume resources. Prudent explorers ignore sunk costs in their current property portfolios and only invest resources in projects that have the highest likelihood of success. Such prudence is not common, but there are companies comfortable doing deals to earn into other exploration companies' projects if they offer opportunities for bigger risk adjusted returns on exploration dollars.

Mining companies already active in Nevada have the capital infrastructure and expertise to extract gold from the ground profitably, but they rarely have the technical expertise or people to conduct effective exploration. As a result, Nevada's miners rely on exploration companies to provide the inputs (later stage exploration projects) to feed their mining operations.

Mining and exploration companies not yet active in Nevada often desire to enter Nevada because of its favourable geology and stable political operating environment. New entrants to Nevada are generally unfamiliar with Nevada's geology, land title, environmental permitting, contractors, and other important aspects of operating in Nevada, and thus have additional needs for help in these areas.

3.3.3 Relative Size and Growth of Segments

As stated above, with the gold price expected to stay above the average cost of production in Nevada, the overall market for Nevada gold exploration projects is expected to remain strong. Amongst each segment, the segment least likely to show a strong increase in demand for projects is the segment consisting of exploration companies already active in Nevada. While these companies have the skills and knowledge to better understand the properties of their peers, the number of companies open to the possibility of directing resources towards another company's projects rather than their own is not expected to rise. The market segment most likely to grow is the segment comprised of companies not yet active in Nevada. As discussed in more detail in a later section titled "Substitutes", several other major mining jurisdictions are becoming less attractive for exploration and mining companies to invest their resources into, and as a result, it is likely that they will direct more resources towards Nevada. The size of the third segment, mining companies already active in Nevada, is unlikely to change in the short term because the high capital requirements to build mines limit entry into the industry.

3.3.4 Customer Preference

3.3.4.1 Quality of Geological Team

Exploration is as much an art as it is a science. Good exploration geologists creatively use combinations of available tools to see things that others cannot by applying the context and framework they have acquired through their professional experience. Geologists that understand how different exploration tools complement each other can derive benefits greater than the sum of their parts, and geologists that have seen many different deposits in many different settings can recognize subtle patterns that hold the keys to making new discoveries in new places.

While a geologist's experience and past performance may not be perfect indicators of her future performance given the large element of chance involved in exploration, the value of a geologist's opinions and recommendations are often measured by her reputation and past successes. While imperfect, these measures are often extended to evaluate the quality of an exploration project that a geologist is selling.

Buyers then place further weight on the reputation and experience of the selling geologists as an indication of how well the projects have been prepared for additional work and the value of the support and dialogue that buyers can expect from the sellers while completing earn-ins.

A final reason why buyers place such importance on the quality and trustworthiness of a seller's technical team is because the industry and its investors have had bad experiences in the past with questionable ethics and blatant stock promotion within the junior exploration industry.

3.3.4.2 Perceived Riskiness of Project

As repeated throughout this paper, gold exploration is an inherently risky business – only a small fraction of projects ever generate economic profits (NGE's management estimates that on average, after each of the approximately five exploration stages needed to advance an early stage exploration project into an economic resource, an explorer obtains sufficient results to continue to the next stage only 10% of time, cumulatively yielding a 1:10,000 chance from the outset). Buyers are generally willing to pay more, through more expensive earn-in metrics, for projects where they perceive the risks of failure to be lower. Projects that have been mined in the past, that are located near known resources (referred to as "closeology"), and that have already seen considerable exploration work with encouraging results are all considered to have a higher likelihood of eventually providing an economic discovery and thus command higher prices.

In addition to being considered less risky, later stage, more advanced projects offer exploration partners another benefit: a higher likelihood of near term positive news releases. As discussed in the Introduction, the reality of the exploration industry is that it is primarily funded by speculative equity investors looking for short term gains. Accordingly, buyers have a short period to demonstrate positive results before they lose the interest and attention of the market. This drive for short-term news creates an adverse selection bias whereby good but earlier stage projects are passed over in favour of good news release generators, typified by the phrase "mining for news releases".

3.3.4.3 Perceived Upside

Because exploration is so risky, buyers demand significant upside in order to be interested in a given project, and the higher the potential upside, the higher their willingness to pay. The basic element buyers consider when evaluating a project's upside is how much more gold could there be? Is the target open (unbounded) in all directions (i.e. not confined to a small area by past densely spaced dead drill holes); is it open at depth (i.e. has not yet seen deep drill holes to establish the bottom limit of the mineralized zone); and has it been evaluated with the latest exploration geologic models and technologies (i.e. still a chance to find something bigger and better)?

Targets on projects that have already seen considerable amounts of drilling but haven't been classified as economically viable are most often considered to be "what you see is what you get". These types of projects do not present much in the way of upside and thus generate a lower willingness to pay from exploration partners. On the other hand, new targets that have so far only seen a couple of successful drill holes and remain unbounded by past drilling present "Blue Sky" potential and generate higher willingness to pay from buyers.

3.3.4.4 Simple Deal Structures

Buyers of exploration projects place considerable value on delaying payment for as long as possible so as to learn as much about a project as possible before parting with their resources. Deal structures that are back loaded (less onerous up front, but then more onerous towards the end) usually translate into higher total purchase prices because purchasers are willing to accept this increase in price to reduce their overall risk. Furthermore, buyers prefer straightforward deal structures that provide clear paths to earning into controlling ownership positions (>50%), that fairly allocate the risks of environmental liabilities, and that generally provide for clear decision

points where minority partners are forced to make decisions to fund their participation or become diluted.

3.3.5 Preferences by Segment

Of the four preferences listed above, exploration companies already active in Nevada are most concerned with finding projects that they deem to be lower risk (e.g. projects located nearby known deposits or projects that have seen significant work completed to date). Because they need to satisfy their shareholders desire for immediate results, explorers in this segment are willing to accept projects with less upside if they perceive them to provide a greater likelihood of near term news. Explorers in this segment also value easy early earn-in requirements, and in return accept lower final ownership interests, so that they can preserve their limited cash for as long as possible while evaluating a project.

Opposite to the exploration companies, mining companies already active in Nevada place a much higher value on a project's potential upside than they do on whether others consider a project to be riskier or whether the project can deliver good news to its investors. This market segment is most concerned with finding feeder stock for its mining operations, not catering to the whims of speculative investors.

Similar to the Nevada miners, the customer segment comprised of mining and exploration companies not yet active in Nevada also places a high value on a project's upside in order to justify the expense of setting up operations in a new jurisdiction. These buyers also, however, place value on projects they considered to be less risky because they are generally not as familiar with Nevada geology and are keen to demonstrate positive results to their stakeholders at home in the near term. As this segment is less familiar with Nevada geology, these companies may look to sellers to provide considerable input on their activities post-sale, and as a result may place a higher value on purchasing projects from exploration companies with high quality geological teams.

Table 2 below summarizes the relative strength of the willingness to pay drivers described here by customer segment. In NGE's case, buyers perceive its projects to be high risk, but they also perceive its projects to offer considerable upside, as well as consider NGE's technical team to be of high quality. Based on Table 2, NGE's value proposition aligns best with New Entrants and second best with Current Nevada Miners. The fact that both property deals NGE has completed to date on its own properties have been with buyers from the New Entrants segment supports this analysis.

Table 2: Willingness to pay drivers by customer segment

Selection Criteria	Current Nevada Explorer	Current Nevada Miner	New Entrant to Nevada
QUALITY OF GEOLOGICAL TEAM Past Successes? Reputation? Training?	Medium WTP Factor	Low WTP Factor	Important WTP Factor
PERCEIVED RISKINESS OF PROJECTS Proximetry to Known Resources? Source of News Release? Results to Date? Past Producer?	Important WTP Factor	Low WTP Factor	Medium WTP Factor
PERCEIVED UPSIDE Room to Expand (i.e. not drilled out)? Blue Sky?	Medium WTP Factor	Important WTP Factor	Important WTP Factor
SIMPLE DEAL STRUCTURE Simple? Fair? Front- or Back-end Loaded?	Important WTP Factor	Medium WTP Factor	Medium WTP Factor

3.4 Suppliers

In terms of inputs for Nevada's gold exploration companies, their initial input is land. As discussed in Section 3.1.2, approximately 90% of Nevada is owned by the US Federal Government. The procedures and costs for staking and maintaining mining claims to secure mineral rights on federal land have been established by legislation and are not up for negotiation or interpretation. Accordingly, as a supplier, the US Bureau of Land Management, the government agency responsible for administering the filing and recording of mining claims, has no power to increase prices. Once a claimant has secured the mineral rights on federal land by staking mining claims, the claimant is free to sell, lease, or otherwise transfer its interest in the claims to another party, as is also the case when mineral rights are held privately. In either case, the prices for selling mineral rights is agreed to by the buyer and seller at a level based upon the prospectiveness of ground. The more evidence to suggest that a project might contain gold mineralization, the higher the seller's power to realize higher prices.

Beyond land inputs, explorers also need geologists to run their exploration programs, drillers to collect samples, labs to analyze the samples, and consultants to facilitate other steps in the process. For the most part, there are a large number of suppliers offering relatively similar, high quality, and in some cases standardized, products and services to the exploration industry. This has normally translated into low switching costs and is reflected in similar prices amongst suppliers regardless of the purchaser (e.g. low differentiation + low concentration = low supplier bargaining power).

Most suppliers have chosen to be a supplier to the exploration business as opposed to an exploration company because they value the security in getting paid whether or not a project contains mineralization or not. In general, there is little threat of forward or backward integration with suppliers in this industry because of their low risk tolerance.

3.5 Investors and Public Markets

The Introduction laid out the challenges that junior exploration companies face as a result of being funding by speculative investors, namely that the long exploration project lifecycles are incongruent with investors short investment timelines, the high fixed costs associated with being public considerably increase the true cost of exploration, and the reliance on equity financings to fund exploration leads to ongoing dilution for shareholders. Unfortunately for speculative investors, exploration remains a numbers game, and to be successful, investors must have the patience and fortitude to allow a company to test many projects before losing confidence in its management team or strategy. All too often, however, investors are unable to grasp this reality, and instead place unrealistic expectations, and in many cases hinge the future of entire companies, on the results at their first or second projects. As a result, explorers find it difficult to secure long term funding continuity to support their activities, and many are left asking themselves if their companies are still going to be around long enough to enjoy the value created by their work when a discovery payout could be several years away. Overall, the challenges inherent in funding exploration in a public vehicle make it difficult for explorers to focus on strategies that actually maximize the likelihood of making a discovery, as in the case of NGE. The result is that Nevada's explorers focus more trying to survive than on making a discovery. Unfortunately, at this time there is no better alternative source of investors with the capital and risk tolerance to provide the high risk dollars needed to fund junior exploration companies.

3.6 Five Forces: Likely Changes

The sub-sections above detail the current operating environment and the stakeholders for Nevada's gold explorers. This sub-section highlights what is changing within this environment and how these changes could affect NGE and its competitors.

3.6.1 Rivalry

As noted at the beginning of section 3.2, NGE has approximately 50 peers actively exploring in Nevada. There is little concentration amongst Nevada's gold explorers and rivalry is not usually strong between them; in fact, the industry has set up professional associations specifically to provide forums for Nevada's explorers to meet and share insights. Despite this camaraderie, Nevada's explorers do compete for inputs, and when the level of exploration activity in Nevada is high, during boom times when access to capital becomes easier, Nevada's gold explorers compete fiercely for drill rigs, geologist, and analytical labs. The amount of capital being raised for junior exploration projects has been increasing steadily over the last 18 months, and so explorers should expect the competition for inputs to increase. In terms of rivalry, other than increased competition for inputs, there are no major changes expected in the number of rivals, the degree of concentration, or how rivals position themselves to complete.

3.6.2 Threat of Entry

Compared to other segments of the mining industry, gold exploration companies in Nevada face few firm capital requirements (staking claims isn't in and of itself expensive) and there are no hard and fast barriers to prevent new entrants; however, new entrants are limited by other soft barriers such as economies of scale, learning curves, and access to resources.

Scale is an important barrier because exploration involves many stages that present opportunities for projects to be delayed or even derailed. Companies that only have one or two projects often find that they end up in positions where they are unable to work on any of their projects as they wait for problems to be ironed out. To be successful, new entrants must do more than identify and acquire a single property of interest, they must quickly assemble an entire portfolio of projects and this presents a barrier to entry, particularly to those with limited financial resources or that are new to Nevada with limited knowledge of available projects.

Another challenge for new entrants is the learning curve of operating in a new jurisdiction. Mining claims in the US are governed under a mining law that dates back to 1892.

The procedures and requirements under this law are antiquated and differ markedly from more modern practices employed in the rest of the world. The subtleties and implications of operating under this legislation are complicated and successful navigation (to ensure clear title to projects) requires experience and creates a considerable ongoing filing burden. Similarly, the permitting process to operate in Nevada is also complicated, involving many government agencies and much ambiguity. To obtain operating permits in a timely fashion, applicants require a clear understanding of what is required by the regulators (which is rarely documented formally), as well as relationships with the decision makers in the various offices. While these bureaucratic types of challenges are not unique to Nevada, the idiosyncrasies of operating in Nevada effectively create a second barrier to entry for new entrants.

The final barrier to entry for new entrants is access to inputs – namely geologists, drillers, consultants, and analytical lab capacity. New entrants often have a hard time finding qualified geologist to run their exploration programs, drillers to collect samples, labs to analyze samples, and consultants keep the process moving smoothly. These are all necessary inputs in exploration and the challenge in securing these inputs effectively slows new entrants from entering the Nevada gold exploration industry.

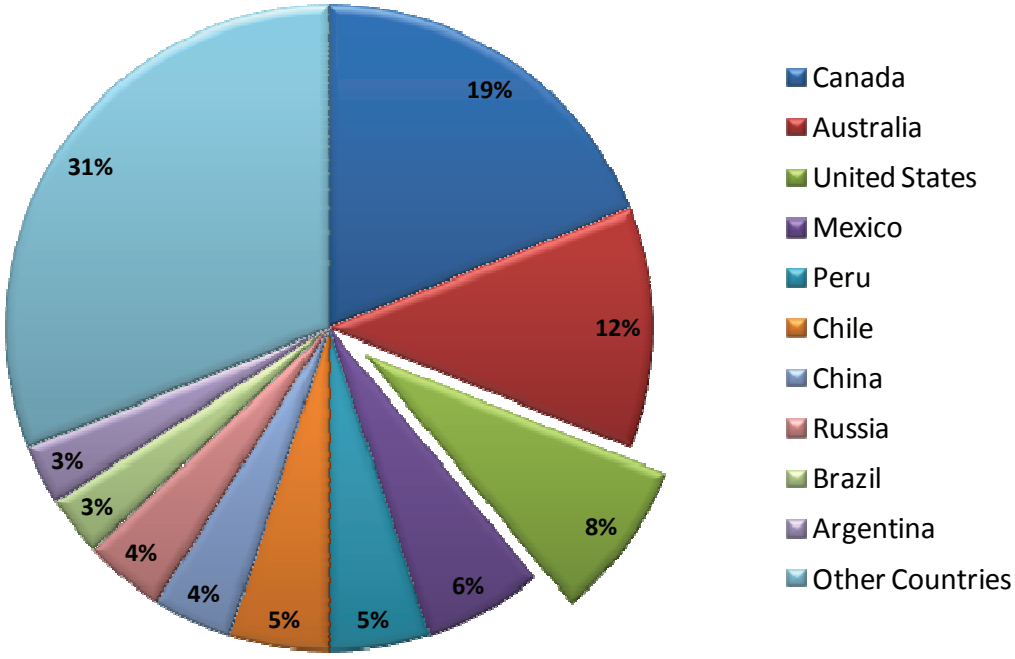
These barriers to entry are not likely to diminish in strength in the near term.

3.6.3 Substitutes

The biggest substitutes for new Nevada gold projects are gold projects in other jurisdictions. While Nevada is a particularly good mining jurisdiction, both in terms of operating conditions (safety, politics, and availability of inputs) and in terms of potential (highest concentration of gold deposits in the world), there are many other jurisdictions where buyers can look to purchase gold exploration projects (see Figure 6). As a result, Nevada's gold explorers compete with explorers from other jurisdictions for investors, inputs (geologists, drillers, etc.), and buyers.

Pursuing gold projects in other jurisdictions that have seen less historical exploration and mining activity can be attractive because there may be opportunities to apply older conventional exploration tools with higher rates of success; however, not all mining jurisdictions are equally attractive in terms of their political and legal operating environments, and these risks must be weighed against the attractiveness of the opportunities. In the past two years, more than a handful of governments have seized assets or revoked operating permits for foreign mining companies, and there are plenty examples of local residents preventing mines from operating even after they

Figure 6: 2010 Budgeted Exploration Expenditures for Top Ten Countries



ADAPTED FROM: Metals Economic Group, 2011

had previously been supportive of the mines. Building a mine is capital intensive – mine capitalization expenditures regularly exceed $1B. Growing political uncertainty in other mining jurisdictions makes Nevada more attractive to mining companies, thus reducing the threat from substitutes and increasing the demand for Nevada gold exploration properties. While Nevada specific data is not available yet, this trend may already be visible with recent data showing that in 2010, the planned exploration spending for the US as a whole, of which Nevada exploration expenditures make up the largest share, experienced the largest year on year increase of any jurisdiction at 74% (MEG, 2011).

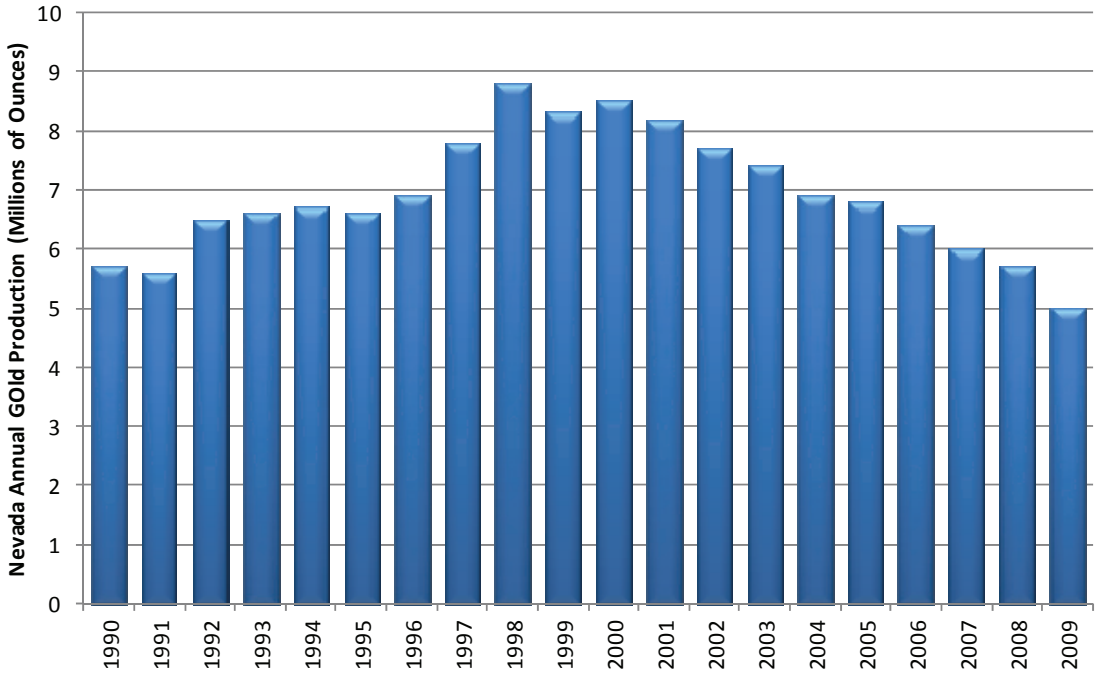
3.6.4 Buyers

As discussed in Section 3.3, the mining industry is global in geographic scope and quality projects receive attention from many potential buyers. Buyers of Nevada gold projects generally fall into one of three segments: exploration companies already active in Nevada but looking for new projects; mining companies already active in Nevada looking for additional feeder stock for their existing mines; and (3) companies (both mining and exploration) that are not yet active in Nevada but would like to come to Nevada. While the general characteristics, size, number, and

preferences of these buyer segments are not expected to change in the near future, their overall demand for new projects is expected to rise.

Across the world, including Nevada, producers scaled back exploration expenditures, and ultimately their exploration departments, from the late 1980's until the early 2000's to cut costs in the face of low commodity prices (Metals Economics Group, 2011). Today we see the results of this lack of investment in exploration in the form of declining reserves, the mining of lower grades, and lower rates of discovery, which together are resulting in decreasing rates of production. The Metals Economic Group, an important source of mining industry research based in Canada, highlighted these concerns in *A Special Report from the Metals Economic Group for the PDAC International Convention* (2010): "...the proportional shift away from grassroots spending over the past cycle could put pressure on future production. With companies of all types focusing less on grass roots work, there is some concern that many companies, and even perhaps the industry in general, may be sacrificing long-term project pipelines in favour of short-term growth." Nevada is already suffering from such challenges – its gold production has decreased significantly from a high of 8.9 million ounces in 1998, down to only 5.0 million ounces in 2009 (see Figure 7), and Nevada's current gold reserves are only sufficient to sustain production at current levels for approximately 13 years (Nevada Bureau of Mines and Geology, 2010).

Figure 7: Nevada Annual Gold Production



ADAPTED FROM: Nevada Bureau of Mines and Geology, 2010

Realistically, because exploration projects have such long lifecycles (often 10 years or more from initial discovery to mining), the benefits of any new investment today will not be realized in the near term, and as a result, the shortage of new minable exploration projects is expected to get worse. In a November, 2011, presentation titled "Recent trends in gold discovery - are we finding enough?", delivered at the 2011 NewGenGold Conference held in Perth, Australia, Richard Schodde, Managing Director of MinEx Consulting and an Adjunct Professor at University of Western Australia, explained that: "Given the long delays between discovery and development, there is a real risk that the gold industry could face supply constraints in the short term."; and "To ensure no supply interruptions in the longer term the industry needs to be finding 2x as much gold as it mines."

With looming supply side issues worldwide, and continued strong demand from traditional gold buyers in countries such as India, as well as new demand from institutional buyers such as ETF's, many analysts agree that gold prices, the most important driver of exploration spending, and the prices of exploration projects will remain strong for the near to mid-term. Nevada's miners have billions of dollars tied up in mining infrastructure and their serious increasing need for new feeder stock presents a considerable and growing opportunity for Nevada's gold explorers.

In addition to the increased overall demand for exploration projects, another buyer side change that is starting to affect the market for Nevada gold exploration properties is a gradual shift in buyers' preferences away from projects that can simply produce news releases towards projects that provide discovery upside. Investors are slowly waking up to the reality that their investment dollars are not always directed to projects or activities that create value. For example, consider the case of a project where past work included a tightly spaced grid of drill holes that defined a small pocket of high-grade gold mineralization, but that limited its extent in all directions to a very small, uneconomic zone. Investing additional resources into such a project is very likely to be able to produce a news release claiming high grade gold in a new drill hole, but is almost guaranteed not to improve the project's economics. While such a project presents an attractive opportunity for a company "mining for news release", investing additional resources into the project is simply a waste of money for a company trying to create shareholder value by finding an economic gold deposit. Investors and the companies that they fund are getting smarter slowly, and this presents an opportunity for Nevada's gold explorers that are advancing new gold projects based on sound geology as opposed to just "closeology".

3.6.5 Suppliers

As noted in Section 3.4, suppliers to Nevada's gold exploration industry include geologists, drillers, laboratories, and consultants. With the current high commodity prices, there is increased demand for these inputs, and as a result, the availability of geologists and drillers in particular has become an issue for explorers, and both types of suppliers are gaining bargaining power. Drilling is by far the most expensive input in gold exploration in Nevada – not only because of high unit costs, but also because the cost associated with working with a bad driller that is unable to complete a drilling program to the planned depth can be astronomical in that this drilling is both expensive and provides little useful information. Because of the importance of working with good drillers, drilling suppliers enjoy even higher bargaining power during these times of increased exploration activity and exploration companies are likely to hold onto good drillers for as long as they can.

Looking forward, exploration geologists are going to become a scarce commodity. The low gold prices and resulting exploration cost cutting in the 1980's and 1990's forced an entire cohort of exploration geologists out the industry and severely limited the number of new geologists entering the field. With these two pressures on the ranks of exploration geologists, the industry is now facing a shortage of qualified people that is likely to get worse as more geologists retire.

3.6.6 Summary

To summarize this analysis, the anticipated changes in the five forces that affect the Nevada gold exploration industry will present explorers with the following threats and opportunities:

Opportunity: the lack of historic exploration investment has led to situation where producers are running out of inputs, thereby increasing the demand for exploration projects;

Opportunity: buyers are getting smarter and beginning to turn away from projects that can deliver news releases to projects that can deliver discovery upside, thus increasing the demand for projects that may be considered more risky, but that are characterized by good geology;

Opportunity: political unrest and uncertainty around the world continues to make Nevada a comparatively better place to invest in – this will increase the demand for Nevada properties;

Threat: with the expected increase in exploration activity in Nevada coming as a consequence of the opportunities listed above and a persistent high gold price, Nevada's explorers are likely to face increase competition to secure the inputs they need, such as drillers and geologists; and

Threat: in addition to the increased demand for geologists, the fact that the supply of qualified geologists is shrinking will make it even more difficult and costly for Nevada's explorers to find the people they need to advance their exploration projects.

3.7 Sources of Advantage

Whereas the first six subsections of this External Analysis section have examined the industry forces that affect Nevada's gold exploration industry, the following sub-sections consider the potential sources of cost and customer utility advantage that Nevada's explorers exploit to compete within the industry.

3.7.1 Cost Advantages

Because of the extreme variability in the size and nature of exploration projects, as well as in the methods explorers use to advance projects, it is difficult to compare absolute costs between projects to calculate a quantifiable metric to measure cost advantages at a project scale. At the industry scale, the cost to discover an ounce of gold is estimated at $30 (Schodde, 2011); however before a project has a been advanced to the point of having a defined mineral resource measured in ounces, several different explorers will have likely participated in and invested resources at the different stages of the project's advancement. This section examines the relative cost advantages that explorers look to take advantage of when advancing projects.

3.7.1.1 Managing Projects More Efficiently

How and how far a company advances its projects are by far the biggest cost drivers for an exploration company. There are reasons why buyers do not identify their own projects (e.g. lack of regional experience, exploration geologists, or appetite for risk), but an exploration company's job is to do more than simply present project ideas to potential buyers. Exploration companies need to add value to improve projects and the methods they choose to apply each have different costs.

Anybody with an unlimited budget can throw a kitchen sink worth of exploration tools at a project, but whether or not they add value to the project greater than the costs of using the tools is a different question. Knowing when to use what tools and knowing what incremental positive results justify additional expenditures defines the art of exploration. Companies that do a good job of managing a project's development and expenditures can tee up a project to sell to a buyer for a much lower cost and in a much shorter timeframe than companies that use their resources less effectively. As a result, how a company manages its projects can lead to major cost advantages over its competitors.

3.7.1.2 Identifying New Targets and Acquiring Projects for Less

The Competitors sub-section above explained the differences and tradeoffs between grass roots exploration and reviewing existing projects. Despite the fact that grass roots exploration is often the more expensive method of identifying new exploration targets, the targets it indentifies are often situated on ground that can be acquired for a relatively low cost. In general, the savings from the lower acquisition costs with grass roots exploration outweigh the associated increased target identification costs, and as a result, companies that have the capabilities to complete effective grass roots exploration enjoy a net relative cost advantage as they assemble their portfolios of exploration projects.

3.7.1.3 Advancing Multiple Projects at Once (Economies of Scale)

Beyond being expensive and risky, exploration is complicated. As summarized in *Section 3.1.2 Value Chain*, an exploration project's lifecycle includes four main functional activities: identifying a target, acquiring it, advancing it, and then selling it. Many of these activities involve working with third parties such as drillers, labs, consultants, and regulators, and because of the relationships and special soft skills needed to stick handle projects forward, many of which having nothing to do with geology, it becomes advantageous to leverage these skills, relationships, and interactions to advance more than one project at once. For example, if a company can line up more than one drilling project in row, they are much more likely to interest a good drilling company to work with them on favourable terms (better drillers for lower prices). Similarly, if a company demonstrates a history of being a reasonable and trustworthy participant in the permitting process, the company is likely to develop better relationships with regulators and in turn receive faster turnaround with future permit applications.

In addition to being able to leverage the benefits of a company's strengths and relationships over multiple projects, advancing a portfolio of projects also allows a company to amortize its high PubCo overhead costs across more than one project, which effectively reduces a company's true cost of exploration ([variable costs + fixed costs)] / variable costs). Because of the efficiencies of advancing several projects at once, companies that have larger portfolios of active projects enjoy economies of scale that provide a relative cost advantage over companies with fewer projects.

3.7.1.4 Summary

In summary, explorers work to exploit relative cost advantages in terms of how they identify, acquire, and advance their projects to maximize the value they create per dollar spent. Because advancing projects consumes the largest portion of an exploration company's budget, completing exploration stages efficiently and effectively represents the most important cost advantage for explorers trying to establish a sustainable competitive advantage. The second most important cost advantage for an explorer looking to advance a portfolio of exploration projects is being able to identify and acquire new projects for less than its competitors, and explorers able to conduct effective grass roots exploration enjoy this advantage. The final relative cost advantage is the economy of scale provided by advancing several projects simultaneously, which reduces explorers' true costs of exploration.

3.7.2 Customer Utility Advantages

3.7.2.1 High Quality Geological Team

Customers pay more for projects sold by good geologists. Accordingly, explorers go to great lengths to attract and retain well-respected geological teams, and are quick to highlight the past successes of the geological teams advancing their projects to realize higher willingness to pay from customers. Unfortunately, geologists are becoming a scarce commodity. Companies that recognize this challenge and plan for it through recruiting and internal training may be able to sustain this competitive advantage further into the future.

3.7.2.2 Lower Risk Projects

When looking to purchase a Nevada gold exploration property, buyers place considerable weight on a project's perceived riskiness and on whether or not the project can provide positive news releases in the near term. Buyers consider later stage projects that have seen considerable

work to date, that are located near to a known economic gold deposit, and that have produced gold in the past to be both less risky and more likely to produce good news. As a result, explorers with portfolios of later stage projects enjoy above average willingness to pay from their buyers.

3.7.2.3 Projects with Big Upside Potential

Buyers' biases towards projects perceived to be less risky competes directly against another of their criteria: that projects offer blue sky in terms of discovery potential. Buyers are not looking for a 10% rate of return on their exploration dollars, they are looking for a +10 times homerun. Older projects that have seen considerable work to date with only ambiguous results do not provide buyers with much blue sky (i.e. where do you hide a large deposit between all places they have already looked?). Because blue sky potential is an important criteria in buyers' decision processes, explorers with projects in their portfolios that haven't yet been drilled by several groups experience an increased willingness to pay from buyers.

3.7.2.4 Financial Position and Market Valuation

Exploration companies are very good at spending money, but they are not good at generating money through their operations. Cash is very much king, and companies that have strong balance sheets enjoy stronger negotiating positions with potential buyers because they have the flexibility to advance projects further and have less urgency to sell – this almost always translates into buyers having a higher willingness to pay. Having cash, being able to move a project forward independently, and not having the urgency to sell give exploration companies a competitive advantage, and companies that have the financial resources to be in these positions realize higher prices for their projects. Furthermore, companies with strong financial resources are less beholden to early cash payments when structuring deals and thus can accept deal terms that are more back loaded, which are more attractive to potential partners and command higher final purchase prices. Accordingly, explorers with strong financial positions enjoy a significant advantage in terms of realizing higher prices for their projects.

3.8 Relative Competitive Analysis

As in other industries, many of the competitive advantages seen in the exploration industry are mutually exclusive, and as described in Section 3.2, exploration companies face choices as to what combinations of advantages to pursue based on their resources, competencies,

and corporate strategies. For many companies these choices relate to the balance between cost and differentiation, but for some the choices also include alternative ways of differentiation.

Examining the differences between the costs to acquire different types of projects and the prices buyers are willing to pay for them illustrates the compromises inherent in pursuing different sources of advantage. Consider two different projects: the first is a new project identified and acquired as a result of grass roots exploration, and the second is an existing project that has seen some encouraging past results and has been purchased from another company. In the first case, an exploration company's cost to acquire the grass roots project is low, but because buyers perceive these types of projects to be riskier, they have a lower willingness to pay. In the second case, the exploration company's cost to acquire the more advanced project is higher, but this is matched with buyers having a higher willingness to pay because they consider the project to be less risky. This example demonstrates that companies must carefully consider how far to advance each exploration project, driving up its costs, in order to increase buyers' willingness to pay. These decisions involve tradeoffs and must consider a company's core competencies, but ultimately these form much of the basis for defining a company's strategy, and the distance a company can drive a wedge between its costs and its customers' willingness to pay is the ultimate measure of its strategy's merit.

NGE has approximately 50 direct competitors in the Nevada gold exploration industry (Nevada Bureau of Mines and Geology, 2010). To compare how NGE rates against its peers in terms of its cost and customer willingness to pay advantages, this paper presents three representative competitors, all focused on gold exploration in Nevada, none with producing gold mines, and all listed on the Toronto Venture Exchange: Gold Standard Ventures Corp., Rye Patch Gold Corp., and Columbus Gold Corp (see Table 3 below).

In terms of their strategic positioning, Gold Standard Ventures is focusing considerable resources at its most advanced project to move it through late stage exploration with the goal of eventually realizing a high sales price. Rye Patch Gold has acquired a portfolio of projects with small known, but not yet economic gold deposits, and is investing its resources at these projects in the hope that it can define larger zones of mineralization, thereby improve the economics of its projects to sell them for considerably higher prices than its costs to acquire and advance them. Columbus Gold has built a project portfolio mostly of existing, early stage projects and employs more of a low cost strategy, investing as little as possible in each project and looking to find buyers as soon as possible. To compare how well NGE and its three selected peers are able to

Table 3: NGE and three representative competitors

Company	Symbol TSV-V	Market Capitalization $M CAD	Number of Projects	Brief Overview of Strategy
Nevada Exploration Inc.	NGE	14	9	Grass roots project generator focused on early stages of project identification and development
Gold Standard Ventures Corp.	GV	108	6	Focusing resources on best project to advance it to later stages of development
Rye Patch Gold Corp.	RPM	85	7	Advancing cluster of small known but uneconomic deposits hoping to improve size and quality to meet economic threshold
Columbus Gold Corp.	CGT	54	+25	Generates new projects mainly by reviewing existing opportunities - looks to engage buyers soon so as not to invest much into each project

execute on their chosen strategies, the discussion that follows compares the four companies on their sources of advantage.

3.8.1 Relative Cost Advantages

3.8.1.1 Project Management Advantages

Columbus Gold invests the least amount of resources into its projects before selling them. While this is indeed a strategic choice, because of its strong technical team, they have proven that they are good at identifying what is missing in terms of a project's geologic model and then focusing on acquiring these missing ingredients to make the project more saleable. In terms of value created per exploration dollar spent, Columbus Gold enjoys the highest advantage in this category. In contrast, Gold Standard Ventures and Rye Patch Gold both invest considerable amounts of money in very conventional and predictable work programs to complete drilling at their already established zones of mineralization, and are creating relatively lower new value per exploration spent. NGE falls in the middle in this category because while its technology provides advantages in the early stages of exploration, allowing it to create considerable value per exploration dollar spent, NGE has needed to advance its projects further along the exploration cycle into more conventional phases of work that add less value per dollar spent.

3.8.1.2 Target Identification and Acquisition Advantages

Because of NGE's hydrogeochemistry technology, NGE is best able to identify and acquire new projects in new areas, on ground that is often available (not yet staked), which translates into lower acquisition costs. This strategy represents a significant cost advantage over NGE competitors' strategies of acquiring existing projects that other companies have already established and invested resources in.

3.8.1.3 Economies of Scale Advantages

NGE and its three selected competitors all have PubCo fixed costs that increase their total costs of exploration. However, while the four companies all have similar PubCo fixed costs, Columbus Gold, with more than 25 projects, enjoys the greatest economies of scale. Rye Patch Gold is investing considerable resources into many of its projects each year, so on a total-cost-per-dollar-in-the-ground basis, Rye Patch Gold also enjoys favourable economies of scale. NGE has seen the least amount of money invested in the least number of projects in the last couple of years, and Gold Standard Ventures has only seriously been advancing one project. As a result, NGE and Gold Standard Ventures have the lowest economies of scale based on their true costs of exploration.

Beyond reducing the cash costs of exploration, advancing a portfolio of projects also solidifies an explorer's working relationships with the other stakeholders in the industry. NGE, Rye Patch Gold, and Columbus Gold have all been active at a large number of projects in Nevada over the last handful of years and enjoy enviable connections within the industry, which lower their transaction costs of securing inputs, conducting exploration, and to some extent, attracting buyers. Together, these reduced transaction costs represent another economy of scale for the three companies.

3.8.2 Relative Customer Utility Advantages

3.8.2.1 Quality of Geological Team Advantages

Both NGE and Rye Patch Gold have strong, well regarded technical teams that offer buyers a high level of customer utility in terms of how well these sellers' projects have been prepared for additional work and the value of support and dialogue buyers can expect from these sellers while completing earn-ins. Columbus Gold has engaged an outside company, Cordex, founded by John Livermore run by Andy Wallace, two very well known Nevada geologists, to

operate its Nevada projects, which adds a strong degree of credibility to its projects and increases buyers' willingness to pay. Gold Standard Ventures does not have a weak technical team, but in terms of name recognition, its team is the least well known and thus adds little to buyers' willingness to pay.

3.8.2.2 Riskiness of Projects Advantages

From a buyer's perspective, NGE's projects are considered the most risky because they have seen the least amount of work to date and are not located adjacent to known deposits, and as a result, NGE's projects generate lower willingness to pay from buyers. Rye Patch Gold and Columbus Gold's project portfolios both contain targets that have seen considerable past exploration and thus buyers considered these projects to be less risky and exhibit a relatively higher willingness to pay. Gold Standard Ventures's Railroad Project is the most advanced project in any of the four companies' portfolios and seems to be the project most likely to become a new economic gold deposit at this time. Accordingly, the Railroad Project would currently generate the highest willingness to pay in this category of customer utility based on lowest perceived risk.

3.8.2.3 Potential Upside of Projects Advantages

Columbus Gold's project portfolio is predominantly comprised of older projects that have seen several different owners complete several different phases of exploration. With so much work completed, but no major discovery, Columbus Gold's portfolio offers the least amount of blue sky to buyers and consequently delivers the lowest customer utility in this category. Both Rye Patch Gold and Gold Standard Venture's projects have seen moderate levels of work to date, however they have been generating encouraging results and still offer buyers some blue sky potential. Because NGE's projects cover new targets that have yet to be confined by significant work to date, NGE's projects present the greatest discovery upside to prospective buyers.

3.8.2.4 Financial Resources Advantages

Gold Standard Ventures and Rye Patch Gold have the strongest balance sheets and are thus in the best negotiating positions to extract the highest prices for the projects when they are ready to sell them. Columbus Gold has moderate cash reserves and would still be in a strong negotiating position with little urgency to sell. NGE has the lowest cash position and is thus in

the worst relative position to negotiate higher prices for its projects because buyers may assume that NGE is desperate to conclude a deal.

3.8.3 Relative Ratings

Table 4 below summarizes the relative ratings for each of NGE and its peers on the seven types of advantages described above. The cumulative ratings for all four explorers break down into different combinations of two, two, and three, in terms of how their sources of advantage ratings fit into the three possible ratings (high, medium, or low). With none of the explorers possessing a dominant advantage, and with fairly even sets of advantages between them, the

Table 4: Relative Competitiveness Analysis of NGE and three competitors

	Nevada Exploration Inc.	Gold Standard Ventures Corp.	Rye Patch Gold Corp.	Columbus Gold Corp.
COST ADVANTAGES				
PROJECT MANAGEMENT **(High or Low Cost)** What Tools and Methods? New or Old Technology? Adding Data or Just Repackaging?	Medium Cost	High Cost	High Cost	Low Cost
TARGET IDENTIFICATION/ACQUISITON **(High or Low Cost)** New vs. Existing Projects? Using Relationships and Network?	Low Cost	Medium Cost	Medium Cost	Medium Cost
ECONOMIES OF SCALE **(High or Low Cost)** Amortize PubCo Overhead Broadly? Better Access to Consultants, Drillers, Labs? Familiarity with Regulators?	Medium Cost	High Cost	Low Cost	Low Cost
CUSTOMER UTILITY ADVANTAGES				
QUALITY OF GEOLOGICAL TEAM **(Higher Quality = Higher WTP)** Past Successes? Reputation? Training?	Medium WTP	Low WTP	Medium WTP	High WTP
RISKINESS OF PROJECTS **(Low Risk = Higher WTP)** Proximetry to Known Resources? Results to Date? Past Producer?	Low WTP	High WTP	Medium WTP	Medium WTP
POTENTIAL UPSIDE OF PROJECTS **(High Upside = Higher WTP)** Room to Expand (i.e. not drilled out)? Blue Sky?	High WTP	Medium WTP	Medium WTP	Low WTP
FINANCIAL RESOURCES* **(More Cash = Higher WTP)** Need to do the deal? Ability to move forward alone? * based on most recent financial statements	Low WTP $151K	Good $12.5M	Good $6.2M	Medium WTP $3.3M

success of NGE and its peers comes down to how effective their operational strategies can drive a wedge between their costs and the prices they sell their projects for, as well as to luck.

3.9 Summary & Conclusion

To review the take ways from the above analysis of NGE and the Nevada gold exploration industry, Table 5 highlights the threats and opportunities facing the industry and NGE's relative strengths and weaknesses within the industry in a SWOT diagram.

At the highest level, while the price of gold, and thus miners' incentive to produce gold, are likely to remain at historically high levels for the near to mid term, due to historic underinvestment in exploration, miners face a shortage of new projects to develop. This shortage of inputs for miners will increase demand for new exploration projects.

At the same time, explorers and investors are beginning to recognize that putting more money into the same old areas using the same old exploration tools is resulting in diminishing returns. As a result, they are slowly reversing their previous bias of funding projects more likely to produce news releases than new ounces, and are directing investment dollars towards projects that offer the real potential of containing new economic discoveries. Consensus is building

Table 5: SWOT Analysis of NGE and the Nevada gold exploration industry

Opportunities	Threats
(1) Increasing demand and higher prices at end of value chain - producers need new ounces (2) Decreasing threat of substitutes - other jurisditions getting more dangerous (3) Increasing demand for new, untested projects - market becoming more educated	(1) Disconnect between investors expectations and reality - exploration is risky and characterized by long project lifecycles, but market has short term view and overweights early results (2) Being public is expensive (3) Decreasing number of qualified geologists (4) Increasing competition for resources (drillers, etc.)
Strengths	**Weaknesses**
(1) Variable cost advantage during target generation stage- NGE's IP allows it to generate better new projects cheaper (2) Eenviable technical team adds more value throughout value chain	(1) Unproven projects - results in lower WTP (2) High Overhead - not amortizing PubCo expenses over many different exploration activities (3) Limited resources - harder to withstand bad tims or exploit opportunities (4) Dilution - funding is predominantly provided by equity financings

within the industry that the next wave of discoveries in Nevada will likely come from the underexplored bedrock hidden beneath the valleys. When combined with the political unrest in other mining jurisdictions, making Nevada a relatively more attractive place to operate, the demand for new Nevada gold exploration projects is expected to rise, presenting a considerable opportunity for its explorers, especially those able to generate high quality exploration projects in Nevada's covered valleys.

In spite of the compelling and growing opportunity, exploration in Nevada is still predominantly carried out by small public companies beholden to their shareholders and the speculative junior equity markets; and this presents some serious challenges. Exploration is difficult and risky – the likelihood that any given project will be successful is very low. The b way to mitigate exploration risk is to increase the sample size by advancing portfolios that include many projects; however, this represents a long term strategy that clashes with speculative investors' short term investment objectives. As a result, explorers have a short window in which to deliver results before their funding dries up, and when they do, the market places undue expectation and weight on their early results. In the mean time, being public comes with large overhead costs that significantly increase the true cost of exploration, and because explorers collect virtually no revenue they must fund their activities and overhead by issuing equity, which forever dilutes shareholders. Clearly, in an industry characterized by long project lifecycles and where companies must apply resources consistently over long time horizons to be successful, being public jeopardizes the success of explorers – it is expensive, it threatens their longevity to still be around at the end to enjoy benefits of discovery, and it dilutes shareholders' ultimate participating in a discovery.

Beyond the challenges of operating as a public company, Nevada's gold explorers also face challenges related to a growing shortage of skilled and experienced geologists, as well as growing supplier power for other exploration inputs due to increased demand. Despite the challenges of conducting exploration in Nevada, and those of funding exploration within a public vehicle, the opportunity in Nevada remains compelling and no other sources of funding are jumping at to opportunity to provide the high risk investment dollars the industry needs. So, with little expected to change in terms of the external structure of the industry, Nevada's gold explorers must consider their relative internal strengths and weaknesses to consider how best to compete within it.

Relative to its peers, NGE's biggest strength is its intellectual property. With its proprietary hydrogeochemistry exploration technology, NGE is able to identify new high quality

exploration projects in Nevada's covered valleys where the rest of the industry does not know where or how to begin, and relative to its peers, NGE's costs to identify and acquire these new targets are considerably lower. Furthermore, in contrast to the existing projects that its competitors generally acquire, NGE's projects have not already been "kicked around" by other groups and still offer buyers true blue sky – the opportunity to find something big that is not constrained by past "dead holes". Complementing its intellectual property, NGE's second major strength is its experienced, proven, and well respected technical team, and its relationships with the regulators, labs, drillers, lawyers, and other important players and stakeholders in Nevada's gold exploration industry. Because of these relationships, NGE enjoys preferential treatment from service providers in terms of pricing and availability, and clear and timely communication from regulators.

In terms of weaknesses, NGE's biggest weakness ties directly to its biggest strength, its technology. While NGE feels that the results of the work it has completed to date on its projects have demonstrated the value of targets identified by its hydrogeochemistry technology, NGE has had a hard time attracting buyers for its early stage projects. As a result, NGE has had to choose between: (a) accepting lower prices for its projects, or (b) increasing buyers' willingness to pay by investing additional resources to complete conventional exploration activities to confirm the projects are indeed prospective and deserved of further exploration investment from buyers. With the resources to do so in its earlier years, NGE chose the latter, and invested considerable resources into its projects.

More recently, however, NGE has not had the resources to advance its projects meaningfully in house, and this illustrates NGE's second biggest weakness. Without the cash to advance its projects further and unwilling to lower its prices, NGE has completed few deals on its projects. At the same time, however, NGE continues to face the high fixed costs of being a public company and maintaining an exploration office, but with such limited resources being directed towards NGE's properties, the true cost of the few activities NGE does complete ends up being significantly higher than its competitors'. Not only does this negate NGE's cost advantages in terms of applying its intellectual property to acquire projects cheaper, it also ends up being unnecessarily dilutive to NGE's shareholders as NGE prints shares at very low prices to cover its overhead.

So where does this leave NGE? NGE has developed a technology that allows it to find better new projects cheaper, but until NGE can point to a new gold discovery at a target that was identified using NGE's technology, NGE will continue to face challenges in terms of realizing

meaningful prices for targets that have been identified by hydrogeochemistry but have not seen additional conventional exploration work. The standard exploration strategy employed by a typical public exploration company is for it to raise a large amount of money, acquire a portfolio of projects, and then complete work on the projects in the hope of moving them forward from one exploration stage to the next by demonstrating positive results.

It is very important to note here that because detailed, project scale results at one project rarely provide information about the prospectiveness of projects in different locations, the downside of a company encountering negative results from any given project is limited. Investors and the market understand that the odds of a given project containing a gold deposit are very low, and do not generally further extrapolate that the rest of the company's projects are poor (many in the industry anecdotally peg the odds of a prospect becoming a mine at 1:10,000). However, in NGE's case, the downside risk of announcing negative results is much greater. Because NGE's projects are tied together by the fact that they were all identified using NGE's hydrogeochemistry technology, investors and the market are likely to extrapolate negative results at any of NGE's projects as negative value signals describing all of NGE's projects, and even worse, its technology.

NGE has never advertised its technology as a silver bullet guaranteed to point explorers to economic gold deposits wherever it is used. Rather, NGE believes that using hydrogeochemistry to reduce Nevada's otherwise unwieldy large, but highly prospective, covered valleys to discrete targets provides an important, and up until now missing step needed to overcome the prohibitive risk of exploring in these settings. To illustrate, consider NGE's technology improves the odds that a brand new, covered exploration project will contain gold mineralization (still very far from being an economic discovery) from 1:1,000 to 1:100. While in this case NGE unquestionably creates significant value by reducing the risk of investing in such a project by a factor of 10, investing resources in the project remains risky. To hope to succeed NGE still needs to be able to roll the dice 100 times, but how can NGE position itself to get 100 rolls of the dice when investors and the markets are likely to judge the merit of its program based on the results of only the first handful of rolls?

NGE's management, investors, and other stakeholders have competing ideas about how to position NGE to have the greatest odds of success. The next section introduces these positions and provides a framework to evaluate and compare their merits.

4: Strategic Alternatives

Invariably, when investors and market players, such as fund managers, newsletter writers, and stockbrokers, learn of NGE's hydrogeochemistry technology, their first reaction is: "This is very interesting, but show me where NGE's technology has led to a discovery?" Then, once they have had a moment to appreciate the full potential of the technology, they follow with: "Wow, all the company needs is one good drill hole and this stock will go to the moon!" With another moment to reflect, their final thought is almost always: "Why doesn't the company just raise a bunch of money and go out and drill its own projects to prove the technology!?" This reaction illustrates that the market continues to evaluate NGE's position through traditional lenses where exploration companies apply traditional business models, without considering the wider implications. Even if NGE does choose to dilute its shareholders and raise the resources required to drill its current nine projects, what happens to NGE and its technology if the drilling at these first nine projects fails to deliver encouraging results?

Regardless of the obvious downside risk of employing the standard industry strategy to advance NGE's new technology and projects, NGE's stakeholders, including its investors and the large investment managers that represent the keepers of additional financing, continue to pressure NGE to employ this strategy to raise the money needed to complete drilling programs at its existing nine projects. They argue that the proof of concept can only come with a drill hole into gold, and that because drilling is the cornerstone of the standard exploration business model, that focusing on drilling better aligns NGE's deliverables with the expectations and knowledge base of the market (e.g. "Don't keep talking to me about this water chemistry stuff, show me some drill results that I can understand!").

NGE's management is quick to point out that a proof of concept is tied to the expectations placed upon that concept. NGE's concept is that its technology can see through valley cover to identify previously hidden targets deserving of exploration – the same quality of target that had they been exposed above cover, would have already seen considerable investment. These targets still constitute risky early stage projects, but within an industry that is desperate for new exploration projects, by considerably reducing the risk of exploring in the underexplored covered half of Nevada, NGE is clearly creating value. From NGE's perspective, the fact that the otherwise blind, covered projects that NGE has identified with its technology have already shown

encouraging exploration results sufficient to interest buyers for both its projects and its services has already validated NGE's exploration technology and provided the proof of concept that NGE set out to prove. With this burden of proof behind it, NGE has begun to look for ways to leverage its technology to maximize the competitive advantage provided by it, and NGE's two deals with McEwen represent the first steps in that direction. Having achieved these milestones towards building a business that leverages its intellectual property rather than its bank account, NGE does not want to position itself and the expectations of the market such that the value and proof of its technology is measured solely by a drill hole in gold. By doing so, NGE would be gambling the future of the entire company and its technology on the results at a handful of projects. Instead, NGE, aspires to find ways to continue to leverage its technology and expertise to create and retain interests in as many different projects as possible to distribute exploration risk while still participating in the significant upside on a discovery.

Unfortunately, NGE's desired strategy represents a business model that is radically different from any other in the Nevada gold exploration industry. The success of this strategy relies on improved probabilities over long timelines, but numbers games are not sexy, making them a tough sell to the short term investors that fund this industry. While NGE is pushing to advance its technology within this new type of business model, many of its stakeholders would like NGE to take its chances applying a more traditional exploration company model. This choice between: (a) continuing to employ a traditional strategy of raising money, investing resources to advance its own projects, and hoping to get lucky, or (b) moving towards finding opportunities to leverage its technology and expertise to participate in more projects, perhaps with smaller ownership interests, but while investing less of its own resources, represents a major strategic dilemma for NGE.

Independent of outside pressures and management preferences, before NGE can decide which course to follow, and in order to justify its eventual decision, NGE must complete a systematic evaluation of its two choices. Progressing from the industry analysis above, this section considers which of the two strategic alternatives provides NGE with the better chance of achieving its goals given NGE's strengths and weaknesses and the threats and opportunities present across the industry.

4.1.1 Alternative 1: Continue with Standard Model

PRODUCT:

Mid stage gold exploration projects ready for and deserving of intensive drilling

BUSINESS MODEL:

NGE identifies and acquires new projects using its hydrogeochemistry exploration technology, and then advances the projects in house through both the early and middle phases of project development to provide buyers with turnkey, mid stage projects.

BUSINESS PLAN:

Scope

NGE competes in all aspects of the industry value chain: target identification, project acquisition, project development, and sales; with a particularly increased focus on project development, where NGE has traditionally not invested significant resources.

Competitive Advantage and Value Proposition

NGE's hydrogeochemistry exploration technology forms the basis for its competitive advantage, allowing it to identify high quality targets in new places, but NGE's value proposition is delivering projects where considerable work to date has established the justification for buyers to invest significant resources.

Mode of Action

Raise $15M through equity financing. Invest $1M -$2M in conventional project development activities on each of NGE's nine projects to complete the early to mid stage phases of exploration (geochemistry, geophysics, and drilling). Expect that the additional work at many of the projects will not provide sufficient encouragement to interest buyers, which will kill the projects, but use the increased level of activity to raise NGE's profile within the market and bet that one or more of the projects deliver sufficient encouragement to realize much higher willingness to pay from buyers.

4.1.2 Alternative 2: Focus on Generative Exploration

PRODUCT:

Early stage gold exploration targets and projects

BUSINESS MODEL:

NGE concentrates on deal structures that allow it to leverage its technology and technical team to create and earn ownership interests in new projects.

BUSINESS PLAN:

Scope

Focus on activities in the early, generative and pre-drilling development stages of the value chain; leave mid and later stages of exploration for buyers to complete.

Competitive Advantage and Value Proposition

By focusing on project generation, NGE's competitive advantage remains its hydrogeochemistry exploration technology. Compared to the previous alternative, however, NGE creates value here by leveraging its technological advantage in the early stages of exploration rather than by investing money and competing in the later, conventional stages of exploration.

Mode of Action

NGE uses its hydrogeochemistry exploration technology to generate new gold exploration targets for itself, in which case it acquires new projects, as well as for other companies, in which case it receives service fees and participation rights in any discoveries, as in its deal with McEwen. In an environment where buyers are warming to investing resources in exploring covered targets, NGE highlights that its recent deal with McEwen represents another validation of NGE's technology, and then captures buyers' gradual increases in willingness to pay to increase sales, while possibly also relinquishing price concession to speed up the selling cycle. Ultimately, NGE keeps costs low, generates revenue to offset its PubCo overhead, and focuses on the project generation part of the value chain where it can add the greatest value per dollar spent to acquire ownership interests in as many projects as possible.

4.2 Evaluation of Alternatives

4.2.1 Key Goals

To set the stage for evaluating these two alternatives, this section reviews NGE's goals and reasons for existence. NGE's founders created the company, and NGE's shareholders have funded the company, to accomplish four objectives:

(1) Find a large new gold discovery;

(2) Own, as a company, a significant portion of the discovery;

(3) Keep the number of NGE shares low to allow shareholders to meaningfully participate in the discovery; and

(4) Stay alive long enough to enjoy the benefits of the discovery.

Based upon the SWOT analysis in the previous section, this paper proposes the following seven criteria to evaluate and compare how the two strategic alternatives would position NGE to accomplish its four objectives.

To exploit industry opportunities and NGE strengths, how does each alternative:

(1) Leverage NGE's intellectual property;

(2) Capitalize on the industry's demand for new projects in new places; and

(3) Leverage NGE's technical team and their relationships?

To mitigate industry threats and NGE weaknesses, how does each alternative:

(4) Decrease the ratio of overhead to dollars in the ground;

(5) Distribute exploration risk across many projects;

(6) Reduce NGE's reliance on equity financings; and

(7) Provide cash reserves to protect against downturns?

4.2.2 Criteria Weightings

Leveraging IP – NGE's founders and investors have invested close to $15M over 10 years to develop NGE's hydrogeochemistry exploration technology. While sunk costs should not be considered here, NGE is an industry leader in hydrogeochemistry exploration and its intellectual property provides a significant advantage that differentiates the company from its

peers. Accordingly, the paper considers leveraging NGE's technology to be one of the most important criterion in this evaluation and assigns it a weight of 20 points out of a total of 100 points.

Capitalizing on demand for new projects – Nevada is increasingly becoming an attractive destination for worldwide exploration investment, and within Nevada, covered targets are likely to gradually attract a larger share of these dollars. Buyer preferences are shifting towards investing resources into new areas and this paper argues that positioning NGE to be able to acquire many new projects and offer buyers a large portfolio of new projects be an important consideration when evaluating the two alternatives and assigns this criterion a weight of 15 points.

Leveraging NGE's technical team and relationships – NGE's technical team has more than 60 years of combined experience in Nevada and is not only well respected, but well connected with industry stakeholders as well, providing NGE with lower transaction costs relative to its peers. This paper recommends that leveraging NGE's technical team to create value be a consideration when evaluating NGE's strategic alternatives and assigns this criterion a weight of 10 points.

Spreading exploration risk over many projects – Despite advances in exploration technology and efforts to focus exploration investment into better places, looking for gold will always involve considerable risk. Statistical probability and randomness theory are clear – the surest way to increase the odds in this type of endeavour is to increase n, the sample size. The odds of NGE successfully participating in a new discovery therefore depend inextricably on how many projects NGE has ownership interests in. Consequently, this paper considers spreading exploration risk amongst many projects to be an important criterion for evaluating NGE's two alternatives and assigns it a weight of 20 points.

Reducing ratio of overhead to real work – NGE's projects have seen little investment over the past couple years, and yet NGE's overhead costs have remained high. Increasing the rate of exploration investment on NGE's properties allows NGE to spread its fixed overhead costs over more dollars in the ground to reduce the true cost of exploration. This ratio of overhead to real work is a valuable metric to evaluate any exploration company's strategy, and in evaluating the two alternatives presented here, this paper assigns this criterion a weight of 15 points.

Reducing NGE's reliance on equity financings – NGE has funded its operations to date primarily through equity financings. Each time it issues shares, it dilutes its shareholders.

Finding ways to fund NGE's exploration activities without having to print shares ultimately allows its shareholders to enjoy a bigger piece of any discovery. This paper argues the evaluation of the two alternatives must consider each's ability to provide cash flow, lower costs, or provide other ways for NGE to reduce its reliance of equity financings and has assigned this criterion a weight of 15 points.

Providing cash reserves – In the past, NGE has been unable to maintain sufficient cash reserves to buffer cyclical downturns in the equity markets to ensure that it has the resources needed to meet its obligations without having to turn to issuing equity at inopportune times and low valuations. While NGE has survived these challenges, the consequences have included needing to lay off good people, losing projects, and diluting shareholders. To avoid facing these consequences again, this paper believes that the evaluation of NGE's strategic alternatives should consider to what degree they each protect NGE from having to repeat these hard lessons. This criterion has been assigned a weight of 5 points.

4.2.3 Assessment of Alternatives by Criterion

Leveraging IP: Applying the standard industry business model requires NGE to complete significant project development work and shifts NGE's functional activities away from target generation towards project development, reducing its ability to leverage the competitive advantages provided its hydrogeochemistry exploration technology (Standard Model Score: 5/10). Focusing on using its technology to indentify new projects and then letting buyers complete more of the project development work allows NGE to concentrate on creating value in the early stages of the industry value chain where it can leverage its technology advantage (Focus on Generative Exploration Score: 9/10).

Capitalizing on demand for new projects: The broad scope of activities that make up the standard industry business model are expensive in terms of time, money, and human resources, and limit the number of projects that NGE can advance at a time, and thereby limit NGE's ability to capitalize on buyers' increased demand for new projects (Standard Model Score: 6/10). Focusing on project generation, on other hand, is relatively inexpensive, and presents few limits on NGE's ability to identify and acquire many projects to meet the increased demand (Focus on Generative Exploration Score: 8/10).

Leveraging NGE's technical team and relationships: Whereas limiting NGE's activities to early stage, generative exploration allows NGE's management to leverage its experience and relationships on activities where it enjoys relative advantages over its peers (Focus on Generative

Exploration Score: 7/10); following the standard industry model and advancing NGE's projects through to later stage exploration spreads NGE management's time and attention across activities at which they may still be competent, but at which they do not hold a relative advantage over their peers (Standard Model Score: 5/10).

Spreading exploration risk over many projects: Focusing on identifying and acquiring new targets and selling early stage exploration projects to buyers creates a relatively fast production cycle, allowing NGE to get as many projects out the door as possible to then be advanced by as many different buyers as possible. With NGE retaining a minority ownership interest in each project, this strategy spreads exploration risk over many projects, thus providing NGE with many opportunities to get lucky (Focus on Generative Exploration Score: 9/10). Advancing projects in house, on the other hand, creates a much longer production cycle, which limits the number of projects NGE can participate in and reduces the odds of NGE participating in an discovery (Standard Model Score: 5/10).

Decreasing ratio of overhead to real work: Finding a way to increase exploration expenditures at its projects is the only way for NGE to meaningfully spread out its significant PubCo and other fixed costs to reduce the true cost of exploration. Advancing its projects through to advanced stage exploration in house guarantees significant investment in its projects, and amortizes its fixed costs across this significant project investment (Standard Model Score: 9/10). While this paper argues that resources spent in the early stages of exploration can add considerably more value per dollar spent, focusing on these cheaper, early stage activities result in a higher cost per dollar in the ground because every dollar of exploration must bear a proportionally larger share of the fixed costs (Focus on Generative Exploration Score: 4/10).

Reducing NGE's reliance on equity financings: Focusing on early stage exploration activities allows NGE to structure deals whereby NGE receives service and consulting fees for using its technology and other relative advantages to generate new targets on customers' land and to advise buyers of NGE projects how to advance them. Such fees provide revenue to offset NGE's fixed costs and reduce NGE's reliance on raising capital by issuing shares (Focus on Generative Exploration Score: 8/10). Directing its attention towards moving its own projects forward through to later stage exploration, however, not only requires a large equity financing to begin with, it also does not generate revenue, leaving NGE solely dependent on equity financings to fund its operations once its reserves run dry (Standard Model Score: 5/10).

Providing cash reserves: Completing the $15M financing necessary for NGE to advance its projects in house provides NGE with comfortable cash reserves to withstand near term

challenges in the equity markets (Standard Model Score: 8/10); tying its funding to property transactions and consulting fees, on the other hand, does not (Focus on Generative Exploration Score: 2/10).

4.2.4 Scoring

Table 6 below totals the scoring assessment of the two alternatives by criterion. When adjusted for the relative weighting of each criterion, Alternative Two, focusing on early stage exploration, scores the higher total with 740 points, and Alternative One, following the industry standard model advancing projects through to later stage exploration, scores the lower total with 590 points.

4.2.5 Realizing Goals

To conclude this evaluation of the merits of the two strategic alternatives, this paper complements the one-criterion-at-a-time based evaluation method used above with a higher level comparison of how well each alternative is likely to move NGE closer towards realizing the four stated objectives that define its reason for existence.

Maximizing the odds of NGE participating in a discovery at least one project is by far the most important goal for the company, without which NGE's existence has little purpose. Focusing on generative exploration is more likely to provide NGE with interests in more projects,

Table 6: Scoring summary for the two strategic alternatives based upon the relative weighting and scoring of the seven evaluation criteria.

		Continue with Standard Model		Focus on Generative Exploration	
Criteria	**Relative Weighting**	**Score**	**Weight x Score**	**Score**	**Weight x Score**
Exploit Opportunities & Strengths					
Leverage IP	20	5	100	9	180
Capitalize on demand for new projects	15	6	90	8	120
Leverage Technical Team & Relationships	10	5	50	7	70
Mitigate Threats & Weaknesses					
Spread out exploration risk over many projects	20	5	100	9	180
Decrease Ratio of Overhead/Project Work	15	9	135	4	60
Reduce reliance on equity financings	15	5	75	8	120
Provide cash cushion for security and opportunities	5	8	40	2	10
TOTAL	**100**	**590**		**740**	

thus is more likely to allow NGE's shareholders to participate in a discovery.

Maximizing the company's ownership interest in a project at the time of a discovery is the first variable in calculating how much of the discovery NGE's shareholders participate in. Buyers of early stage, high risk projects demand higher ownership interests leaving sellers with smaller retained interests. By adopting the standard industry strategy of advancing projects further in-house and selling later stage projects, NGE is likely to retain larger ownership interests in its projects.

Minimizing shareholder dilution is the second key variable in calculating how the upside of discovery on an NGE property is allocated amongst its shareholders. Focusing on generative exploration alternative is likely to result in NGE issuing fewer new shares and its current shareholders capturing a larger piece of the discovery pie.

NGE's ability to participate in a discovery at one of its projects is tied to its ability to still be a going concern at the time of discovery. By sticking to the standard industry strategy of advancing its projects through the early and mid stages of exploration, NGE will eventually spend whatever cash it raised to do so, and at that point, NGE's ability to raise further cash will depend on whether or not this last round of money generated encouraging results, the odds of which are low. If, on the other hand, NGE is able to leverage its technological and management strengths to focus on generative exploration deals that provide revenue to the point where NGE starts to generate positive cash flow, NGE can build a more sustainable business, which maximizes the likelihood that NGE will be around years from now to enjoy the fruits of its labour.

In reviewing the two alternatives in the context of which one is more likely to allow NGE to realize its goals, Alternative Two, focusing on generative exploration, presents the strongest case (see Table 7 below), consistent with the previous more specific, criteria based evaluation.

Table 7: A comparison of how likely each alternative will help NGE achieve its four objectives

		Continue with Standard Model		Focus on Generative Exploration	
Criteria	**Relative Weighting**	**Score**	**Weight x Score**	**Score**	**Weight x Score**
Achieving Goals					
Maximize odds of discovery at least one project	40	5	200	7	280
Maximize company ownership of project at discovery	20	7	140	3	60
Minimize shareholder dilution	20	4	80	6	120
Maximize staying power to enjoy discovery	20	5	100	8	160
TOTAL	**100**	**520**		**620**	

5: Feasibility Analysis

5.1 Alternative Feasibility Analysis

Whereas the previous section considered which of the two alternatives better positions NGE to achieve its objectives, this section examines whether NGE currently has or can realistically acquire the internal capabilities to implement them.

5.1.1 Alternative 1: Continue with Standard Model

In NGE's early days, it had no choice but to advance its projects through the early to mid stages of exploration to attract buyers. This period of NGE's development was characterized by easy access to resources and high outside pressure to deliver results quickly. During this time, NGE biased its operating strategy towards obtaining results as fast as possible, not as cheaply as possible. NGE established an 8,000 square foot exploration office, acquired heavy exploration equipment, hired office and field personnel, and invested +$6M into exploration activities on its projects. While NGE may have made some mistakes during this time, NGE did successfully obtain the encouraging geologic results it needed to demonstrate the technical validity of its technology, and in the process, acquired operational experience in the functional activities and requirements needed to advance exploration projects up to and including the early phases of drilling.

As NGE and its management have already advanced exploration projects in house, they have already acquired or built many of the capabilities needed to implement the first strategic alternative, which would continue to see NGE participate in a broad the scope of exploration activities. However, because these functional activities created significant challenges for NGE the first time, it is important to consider whether NGE is or can be better prepared to try again.

The biggest management related challenge preventing NGE from growing into a full spectrum exploration company again is its management's past negative experience of growing too big too fast, filling positions based on availability rather than suitability, and ending up with a collection of employees with attitude, lifestyle, health, inter-personal, family, and other issues, which affected the quality of the team's work. Today, NGE's management is reluctant to build another team out of fear of not having sufficient resources (time and money) to find, attract, and

keep quality people, and thus being doomed to relive its past bad experience. To get NGE's management team behind this alternative, it needs to be convinced that NGE has the resources to hire and retain good people for many years without losing them to better paying competitors.

From an organizational structure standpoint, all three members of NGE's management team weigh in and participate in major decisions. While sharing information and decision-making responsibilities proved to be an effective strategy as NGE was developing its technology, this structure is not the most efficient or appropriate while NGE increases the scope, scale, and pace of its functional activities. To be successful while broadening its activities, the members of NGE's management team need to become more specialized and autonomous. This will require the three managers to agree on, define, and respect each other's operational boundaries and responsibilities.

In terms of systems, NGE's greatest challenge has been managing its human resources systems. In the past, NGE's management has largely blindly handed these responsibilities, such as administering benefit programs, employee manuals, drug and alcohol policies, and hiring and firing procedures, to employees and consultants who claim competency, without following up or learning enough to confirm that NGE is in fact in compliance with the rules. This lack of understanding and oversight has proven costly for NGE, and now provides much of the basis for management's reluctance to grow again, but these challenges are not unique to NGE, nor insurmountable. To successfully implement the first alternative, NGE needs to engage competent human resources professionals to give NGE's management confidence that it has resources and capabilities to navigate the complicated and litigious regulatory environment when hiring and firing new employees as they build an effective team.

Culturally, NGE's management team (made up of its founders) has always exhibited entrepreneurial characteristics, which has been one of the keys to NGE's survival. NGE's dedicated management has often forgone salaries for months at a time, funded company operating expenses on personal credit cards, and laid professional reputations and relationships on the line to keep NGE moving forward. The key motivation driving their dedication has been their ownership position – management still collectively owns more than 20% of the company, which is unusually high amongst its peers. In the past, NGE's management has expected its employees to match their level of dedication and has been surprised and disappointed when employees have not. Employees that are not owners do not have the same incentives to work as hard as those that are, and when their employer's balance sheet shrinks, employees that are not owners are quick to leave for positions in more stable settings. To implement the first alternative, NGE needs to find

ways to grow while fostering a culture of dedication, and to retain employees when times are tough. To accomplish these objectives, NGE's management must embrace compensation strategies that provide employees with opportunities to become owners as well.

Continuing with the human resources theme that connects many of the gaps mentioned above, NGE's most glaring resource gap to effectively participate in a broad scope of exploration activities remains finding and attracting qualified people. Nevada exploration geologists are in high demand, but NGE's management team is well connected and with resources sufficient to offer competitive salaries, NGE can reasonably expect to build the team it needs to implement the first strategic alternative.

Table 8 below summarizes the gaps between NGE's current capabilities and those required to continue advancing its projects in house through to the early and mid stages of exploration to attract buyers. NGE is capable of filling all of the gaps identified, and as a result, this paper considers this first alternative to be a valid strategic alternative.

5.1.2 Alternative 2: Focus on Generative Exploration

As with the fist alternative, the second alternative, which focuses NGE's efforts on creating value in the early stages of exploration projects' lifecycles, encompasses functional activities that NGE has already become proficient at. This is not to say, however, that there is not

Table 8: Alternative One Gap Analysis

Component	Gaps	Gap Closing Analysis
Management Preference	Recent negative experience growing large & reluctant to do so again	Provide management resources and support to hire, train, and keep good employees
Organizational Structure	Too centralized	Differentiate roles - agree on, define, and respect operational boundaries and responsibilities
Organizational Systems	Human resources - policies, skills, and know-how	Engage competant HR consultant
Organizational Culture	Entreprenurial "do whatever it takes" culture is hard to instill in new employees	Provide employees with ownership and other options to participate in the upside of their work
Human Resources	Need More People	Leverage management's networks and pay competative salaries

room for improvement – there certainly is. NGE has not seen strong sales for its projects, and management needs to find ways to improve sales, but it is important to recognize that timing has also been a factor as well. The encouraging technical results from NGE's in house exploration program, which provided the proof of concept needed to validate NGE's hydrogeochemistry technology, arrived just as exploration funding dried up as part of the major market correction of 2008. NGE had to sit on its good news for two years and was then faced with trying to remind the market of its story after the original novelty of the concept had faded. NGE's story has not changed significantly since 2008, but the market for gold exploration projects in Nevada is now starting to become more interested in new targets in new places, which is exactly where NGE has positioned itself. Accordingly, much of NGE's strategy in 2008 remains appropriate today, and NGE faces relatively few gaps to implement the second alternative where it continues to leverage its hydrogeochemistry exploration technology to identify and acquire ownership interests in new exploration projects.

The most significant gap to bridge is NGE management's fear of standing still and becoming a slave to its unrelenting fixed costs, without making any forward progress. The key to breaking the cycle of inefficient exploration is to ensure that NGE completes measurable new work in each quarter to justify NGE's quarterly payroll, exploration office expenses, PubCo overhead, and other fixed costs. This rate of work, though, is largely going to depend on NGE's ability to attract buyers to fund exploration and pay NGE's fees, which ties directly back to sales. NGE's current team is technically proficient, but has had only limited success closing sales on NGE's projects. To attract and close more deals with prospective buyers, NGE should strengthen its Board of Directors by adding a new Director with successful sale experience that can work with NGE's management to help them attract more prospective buyers, improve sales pitches, and ultimately increase sales to the levels needed to support the business model proposed by this alternative.

Table 9 below summarizes the gaps between the capabilities needed to implement the second alternative, staying focused, and those that NGE currently possesses. NGE is capable of filling the two gaps identified, and as a result, this paper considers this second alternative to be a valid option for NGE.

Table 9: Alternative Two Gap Analysis

Component	Gaps	Gap Closing Analysis
Management Preference	Fear of not "doing anything"	Build and keep momentum by completing measurable exploration work each period
Management Experience	Limited sales experience	Strengthen the board to help work on pitches and bring in more prospective customers

5.2 Preferred Alternative

While Alternative Two, where NGE leverages its technology and focuses on generative exploration, presents the best match with NGE's entrepreneurial culture, as well as the fewest gaps for management to fill, NGE has the internal capabilities to execute either of the alternatives. Able to implement either, NGE's analysis must turn to focus on which alternative best addresses NGE's external operating environment. Returning to the SWOT based analysis in the previous section, focusing on generative exploration also provides NGE with the best chance of achieving its goal of providing shareholders with a meaningful opportunity to participate in the upside of a new discovery, and consequently, this paper presents Alternative Two as the preferred alternative.

6: Final Recommendation

As stated in the Introduction, the purpose of this paper is to consider whether NGE can satisfy investor needs, mitigate the high costs inherent with being public, and minimize shareholder dilution while still positioning the company to have a chance to participating in a new gold discovery when the traditional payouts come so far into the future. NGE has made a considerable investment to develop a competitive advantage to compete in this environment, but has so far been unable to attract sufficient resources to advance its projects. Can NGE attract the resources needed to move its projects forward, while also balancing dilution at the company and project level, as well as remain solvent long enough to enjoy the upside of a discovery?

The answer is yes, but the solution represents a change from the standard industry strategy of raising money, picking up a handful of projects, and drilling them in the hope of getting lucky. Rather than focusing on expensive, high-risk activities that dilute shareholders and rarely add value, the solution lies in finding ways create value without risking resources, and in fact, while possibly getting paid. To do so, this paper argues that companies need to focus on the part of the industry value chain where they can create the highest value per dollar spent.

In NGE's case, it has developed a competitive advantage in the early, project generation stages of the value chain. This is the stage in the industry value chain where NGE has the opportunity to leverage its strengths, and choosing to proceed further along the value chain dilutes this strength. Limiting its scope of activities to generating new projects focuses NGE's efforts to where NGE can add the highest value. At the same time, this strategy keeps NGE costs low, increases the number of projects that it retains an ownership interest in, and brings in outside revenue to offset the company's overhead, giving it the staying power it needs to participate in a discovery that may not come for years.

NGE has the capabilities to satisfy the technical requirements of the proposed strategy, but NGE's management team has yet to develop the sales and marketing prowess that will be required for NGE to be successful in attracting buyers. It does not matter how many new projects NGE identifies if NGE is unable to convince buyers to invest resources to move its projects forward. Sales remains NGE's biggest weakness and NGE must look to start filling this gap immediately. NGE's projects represent early stage technical concepts that require technical

explanations, and as such, it is appropriate that NGE's management team participate in the selling process; however, NGE's management needs to engage new resources to gather more leads, raise the company's profile in the industry, improve its marketing and sales material, and most importantly, strengthen management's deal closing skills. Once NGE can match its technical skill set with a selling process able to sell its projects and services, NGE will be well positioned to successfully execute the proposed alternative of being a focused project generator.

In closing, this paper argues that best way for NGE to achieve its goal of providing investors with opportunities to meaningfully participate in new discoveries is to focus on what NGE can do that its peers cannot: identifying new high quality gold exploration projects in Nevada's highly prospective, but underexplored valleys. The market conditions are changing to increase the demand for such projects, and NGE has capability to deliver them.

Reference List

Columbus Gold Corp. (2011). Consolidated Financial Statements September 30, 2011 (Canadian Dollars) Year End.

Ghemawatt, P. & Collis, D. (2010). In Mapping the Business Landscape, in Strategy and the Business Landscape (pp. 17 – 43). New Jersey: Pearson Education Inc.

Ghemawatt, P. & Rivkin, J. (2010). "Creating Competitive Advantage", in Mapping the Business Landscape, in Strategy and the Business Landscape (pp. 44 – 61). New Jersey: Pearson Education Inc.

Gold Standard Ventures Corp. (2011). Interim Consolidated Financial Statements (Unaudited) for the Three and Nine Months Ended September 30, 2011 Expressed in Canadian Dollars.

Kinross Gold Corporation. (2010). "Delivering Disciplined Growth", Scotia Capital Mining Conference, November 30, 2010, Toronto.

Metals Economic Group. (2011). World Exploration Trends 2011: A Special Report from the Metals Economic Group for the PDAC International Convention. Halifax: Author.

Nevada Bureau of Mines and Geology. (2009). Special Publication MI-2008: The Nevada Mineral Industry 2008. Reno, NV: Author.

Nevada Bureau of Mines and Geology. (2010). Special Publication MI-2009: The Nevada Mineral Industry 2009. Reno, NV: Author.

Nevada Exploration Inc. (2012). Company website, www.nevadaexploration.com/concept/, April, 2012.

Rye Patch Gold Corp. (2011). Condensed Consolidated Interim Financial Statements Nine Months Ended September 30, 2011.

Schodde, R. (2011). "Recent trends in gold discovery - are we finding enough?", 2011 NewGenGold Conference, 22 – 23 November, 2011, Perth.

TSX Inc. (2012). "A Capital Opportunity, Mining", Toronto Stock Exchange website presentation, www.tmx.com/en/pdf/Mining_Presentation.pdf , February, 2012.

Virtual Metals Research & Consulting Ltd., and Haliburton Mineral Services. (2011). ABN AMRO Gold Mine Cost Report Q1 2011. London: Author.