

NEVADA BUREAU OF MINES AND GEOLOGY

NEVADA MINERAL AND ENERGY RESOURCE EXPLORATION SURVEY

2017/2018

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RELEASED APRIL 2019



University of Nevada, Reno



**NEVADA BUREAU OF MINES AND GEOLOGY
EXPLORATION SURVEY ES-2018**

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AND ENERGY RESOURCE
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*2017/2018***

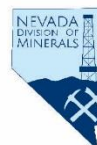
Michael W. Ressel

Released: April 2019

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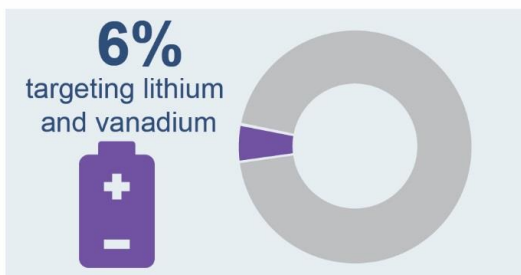
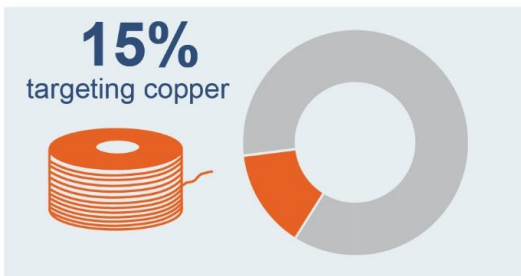
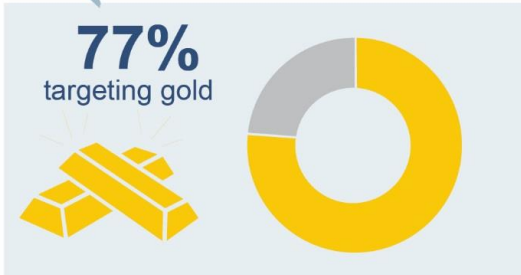


Nevada Exploration Trends

2018

\$461 Million

4.6% of the \$10.1B global minerals exploration expenditures

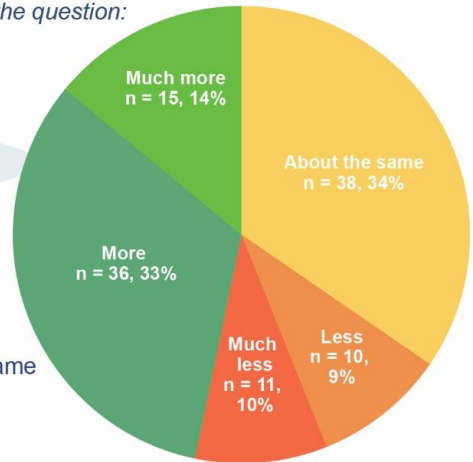


2019 Expenditures Outlook

Survey response* is provided to the question:
"Do you expect your company to spend more or less in 2019 on Nevada exploration?"

47%
indicated they will likely spend more in 2019

81%
expected to spend either the same or more in 2019



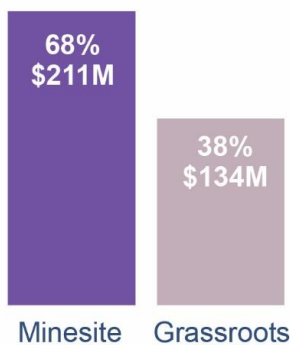
*110 respondents

HQ Location	US \$B	Change ¹
Nevada	0.46	+32%
U.S. ²	0.85	+34%
Global	10.1	+19%

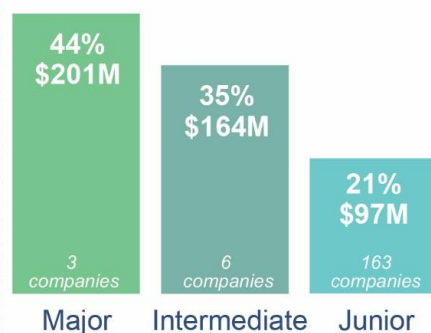
¹Change is versus 2017 budget; ²Including Nevada

#1 Fraser Institute in 2018 Global Investment Attractiveness

Grassroots lags late stage still (US\$M)



Distributed exploration expenditures (US\$M)



Nevada Mineral and Energy Resource Exploration Survey 2017/2018

Michael W. Ressel
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EXECUTIVE SUMMARY

The Nevada Bureau of Mines and Geology (NBMG) carried out its biennial online survey of companies exploring for new metal, industrial mineral, geothermal, and hydrocarbon resources in Nevada. The Nevada Commission on Mineral Resources and the Nevada Division of Minerals supported the survey. The impact of mineral and energy production from existing resources on the Nevada economy is well known. In terms of per annum value of minerals produced among states, Nevada consistently ranks first or second. However, the impacts of exploration activities in Nevada, which focus on discovering new resources for future mines and energy extraction, is poorly understood due to limited data. Despite a relative lack of economic data on exploration, Nevada consistently ranks among the world's top destinations for mineral exploration. In 2018, Nevada ranked first globally in the Fraser Institute's annual survey of mining companies for investment attractiveness, which assesses a jurisdiction's geologic potential for mineral discovery as well as how well its policies support exploration and mining activities.

Exploration activities are burdened with high risk, as substantial investments are not guaranteed to result in extractable resources. Indeed, only rarely do exploration programs result in successful resource extraction, and then only after many years of capital investment and development activities. Despite this, exploration success is imperative for the sustainability of natural resource industries in Nevada.

A goal of this survey was to gather data to better assess the impact of exploration on Nevada's economy. The survey's focus was to collect data on company expenditures in Nevada and the number of employees involved in exploration in 2017 and 2018. Expenditures were subdivided by various categories and participants were asked to rate the relative importance of external factors on their exploration programs. Companies surveyed included a mix of major and midsize miners and energy producers in addition to a much larger pool of junior explorers, the latter comprised of companies listed on Canadian, Australian, and U.S. exchanges as well as private companies.

The current survey requested participation from 315 companies presumed to explore for mineral and geothermal resources in the state. We obtained responses from 148 companies. Another 24 active companies were researched using public domain sources for their 2017 and 2018 Nevada expenditures, thus making 172 companies for which data on expenditures were obtained for the past two years. The number of companies surveyed has remained nearly constant since the first comprehensive survey was conducted in 2012, although the junior company names and commodities sought have substantially changed with every survey. Although not all companies responded to the 2019 survey, we consider that most of the active explorers in the state are herein represented and that the survey represents an accurate, albeit minimum account, of Nevada exploration activities during 2017 and 2018.

The survey results verify that Nevada exploration expenditures increased dramatically in 2018 compared to the three-year period ending in 2017. The sharp increase in exploration spending in 2018 of 31% was accompanied by an increase of 21% in exploration employment. Spending and employment increases suggest that the severe commodities down-cycle experienced from 2012 through 2017 is reversing as companies big and small invest more into exploration in order to ensure future reserves. Major findings of the 2019 survey include the following:

- A minimum of \$461.0 million went toward minerals and energy resources exploration in the Silver State in 2018, dramatically up 31.3% from 2017's \$351.2 million. Exploration spending in Nevada over the last seven years mimics global trends, although the 2018 percentage increase in Nevada was significantly more than the global increase of 20% in exploration budgets as reported by S&P Global Market Intelligence.
- About 77% of reported expenditures in 2018 went toward precious metals exploration. The remainder was divided among base metals (15.1%), energy metals including lithium and vanadium (5.1%), geothermal energy (2.7%), and less than 1% each for petroleum and industrial minerals.
- Building from 2018's increased spending, 81% of companies plan to spend about the same or more in 2019. Only 19% of respondents indicated they will spend less in 2019 than 2018.

- Surveyed companies directly employed 784 people in 2018, up 21% from the 648 reported employees in 2015 but still substantially down from the 1,040 employees reported for 2011.
- Categorized expenditures for 2018 based on estimates supplied by 86 respondents are as follows:
 - On a cumulative cash basis, respondents indicated that 61% of their 2018 expenditures went toward resource expansions and 39% toward grassroots exploration.
 - On a similar cash basis, respondents indicated that about 66% was spent on actual exploration including drilling, 15.1% on land, 7.3% on permitting costs, 8.4% on corporate costs, and 2.9% on other expenses.
- Respondents cited most the following positive factors that support their exploration efforts in Nevada: favorable geology, the potential for new discovery, and the ability to access public lands. The time and/or cost to permit were the most impactful negative factors.

INTRODUCTION

During January 2019, the Nevada Bureau of Mines and Geology (NBMG) conducted the Nevada Exploration Survey to document minerals and energy exploration activities for 2017 and 2018, the 20th such survey completed. As in previous years, the purpose of this survey was to assess the current and projected levels of exploration activity and to determine factors influencing these levels. The rationale for conducting this survey is to provide information to elected officials, government agencies, private companies, and citizens in general, so that they better understand the impact of exploration on the Nevada economy and the factors that influence exploration. The last NBMG-administered surveys used data from 2015 and 2016 (Ressel and Davis, 2017) and 2011 (Muntean et al., 2013), and prior to this, surveys were conducted by the Nevada Division of Minerals (NDOM). Partial support for this survey was provided by the Nevada Commission on Mineral Resources.

SURVEY METHODOLOGY

The 2019 exploration survey was administered online; it is included here in the Appendix and is referenced online at <https://goo.gl/forms/duGYtbSuNovc5z3J2>. Information requested included 1) company exploration expenditures in Nevada for 2017 and 2018 (for example, total dollars spent and spending categorized using common industry metrics), 2) the number of people companies directly employed during this two-year period, 3) the type of exploration being conducted, either grass roots or resource expansions, and 4) the relative impacts, both positive and negative, of several factors that influence exploration in Nevada including geology, discovery potential, commodity prices, access to public lands, the time and cost of permitting, and uncertainty over U.S. mining laws.

NBMG compiled a current list of companies and email addresses from a number of sources that included previous contact lists, professional organization directories, corporate financial archives, and company websites. Email addresses were validated, then requests were sent to 315 companies considered active or recently active in exploration in the Silver State. Of these, 295 were successfully transmitted. Two additional e-mail invitations were sent subsequent to the first. NBMG received 125 online surveys over the four weeks that the survey was conducted, and another 23 responded via e-mail or phone call. To more accurately assess exploration expenditures in Nevada during 2017 and 2018, research on 24 non-reporting companies was conducted using information in corporate financial filings. Thus, information on Nevada expenditures was obtained for 172 companies. This combined expenditure information was used in subsequent analysis. The response rate for the survey was 50.2%, and the combined survey with researched companies includes data for about 58% of companies that conducted exploration in Nevada over the past seven years. Based on activities data from company press releases and other sources (e.g., the NBMG Mineral Industry report, Muntean et al., 2017), we estimate that the large majority of currently active explorers are represented in this survey.

The total number of companies assessed between this survey and one conducted in 2016 (Ressel and Davis, 2017) is similar, although the current survey included more respondents (148 versus 109) and therefore correspondingly fewer researched companies. The higher number of companies responding to the 2018 survey reflects, in part, more robust industry economic conditions than in 2016.

Table 1. Summary of data acquisition

Activity	Dates
Compiled a list of 315 companies operating or recently operating in Nevada	November–December 2018
Sent e-mails to 315 companies; 295 transmitted	December 2018–January 2019
Received responses from 148 companies	December 2018–January 2019
Researched expenditures in public domain for 24 non-reporting companies	January 2019
Assessed a total of 172 companies	January–February 2019

TRENDS IN NEVADA EXPLORATION: 2011 THROUGH 2018 SURVEY YEARS

Major differences in expenditures and employment are recorded by the present 2018/2017 survey versus surveys conducted in 2016 and 2012. These differences are illustrated in figure 1. Exploration expenditures in Nevada rose in 2018 by 41.9% from a low in 2016. The largest yearly gain over the past four years came in 2018 when the year-over-year increase was 31.3%. However, despite recent improvements, 2018 spending remained 31.6% off the peak

exploration spending in 2011. Increase in Nevada exploration expenditures in 2018 mimics the global rise in exploration spending during the same period (figure 2) and is further supported by modest increases in average metal prices since 2015 (figure 3). Exploration for the energy metals, lithium and vanadium, remained strong through 2018, comprising about 3% to 6% of total expenditures since 2015. Spending for geothermal energy remained fairly steady since 2015, capturing 3% to 5% of total exploration spending, but down significantly from 2011 levels. Base metals exploration increased significantly in 2017 and 2018, fueled mainly by renewed development activities at the Pumpkin Hollow copper project near Yerington.

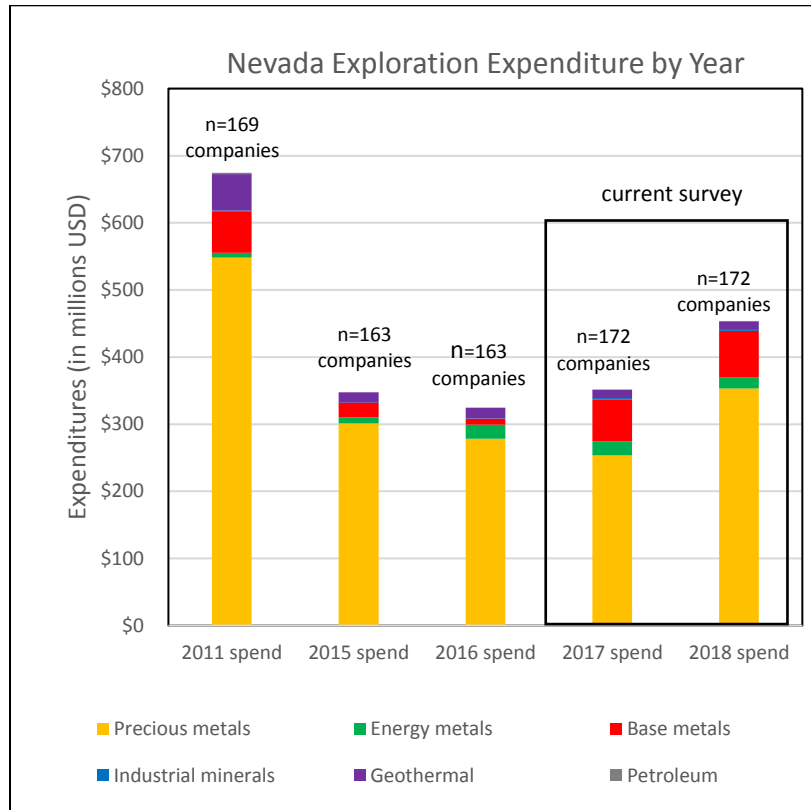


Figure 1. Minimum Nevada exploration expenditures in 2011, and 2015 through 2018.

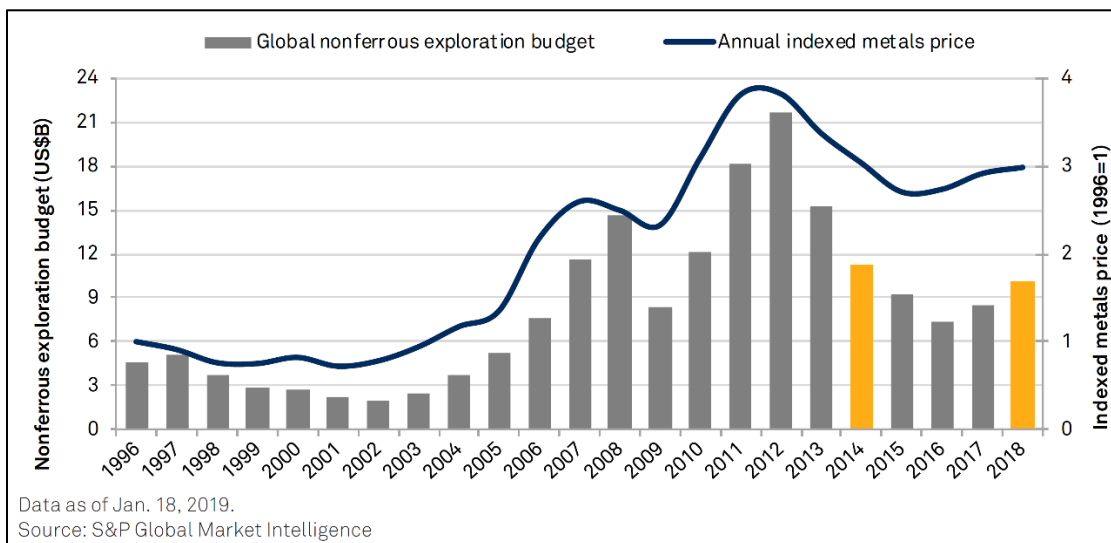


Figure 2. Global nonferrous exploration budgets through 2018 showing trends similar to Nevada since 2011. Global spending remains down relative to 2014 levels.

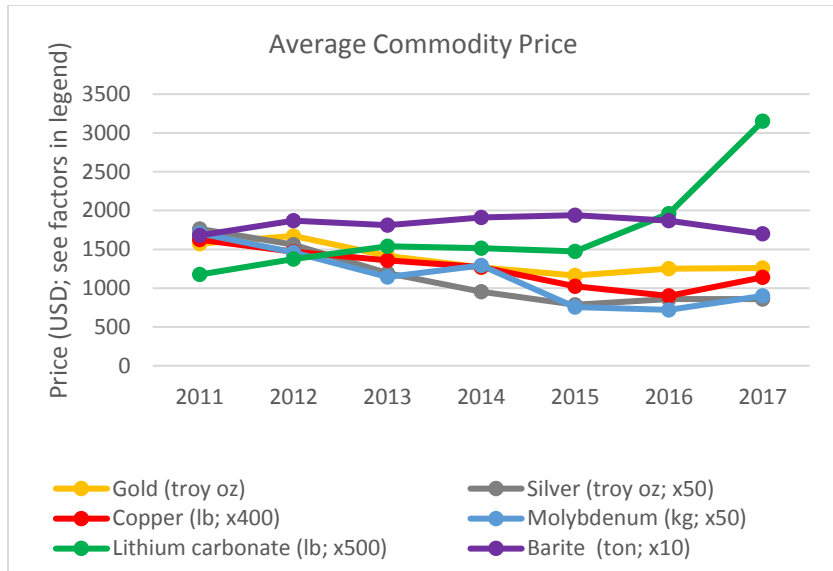


Figure 3. Price trend chart for selected commodities since 2011 using multiplication factors as indicated for graphing purposes. Prices are from the USGS Minerals Commodities Summaries, 2018.

Survey results indicate a 21% increase in exploration employment between 2017 and 2018. However, the increase in employment last year was preceded by lackluster employment from 2015 through 2017 (figure 4); 2017 employment saw its lowest level in several years at 644. The Nevada exploration employment picture is bimodally distributed with most jobs coming from either a few large companies employing more than 20 in exploration or many smaller companies who employ <5 (figure 5).

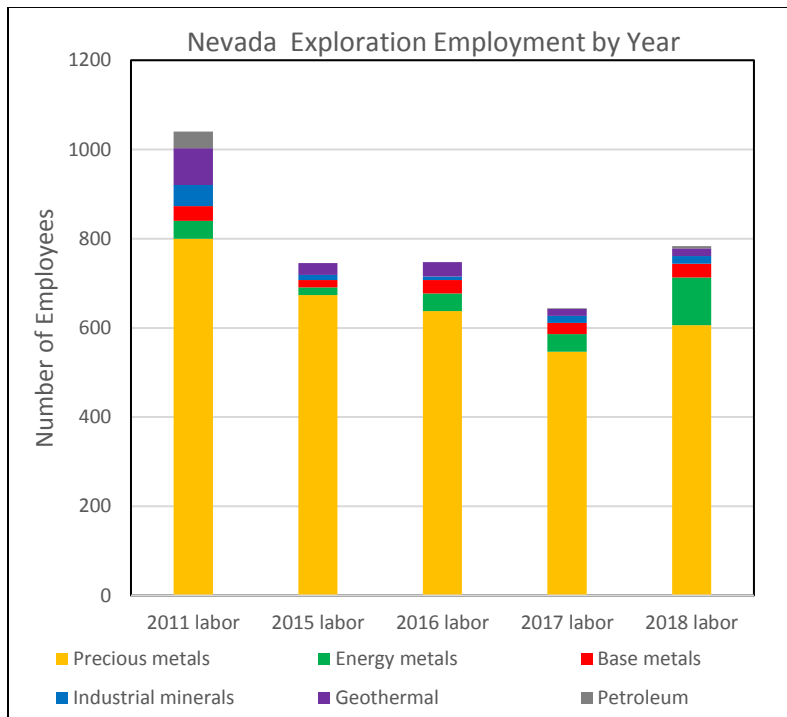


Figure 4. Surveyed number of workers employed by sector in Nevada exploration in 2011, and 2015 through 2018. Number is for direct employment only and does not include third-party contract employees. The bulk of employment represents geoscientists, geotechnicians, and support staff working for exploration companies.

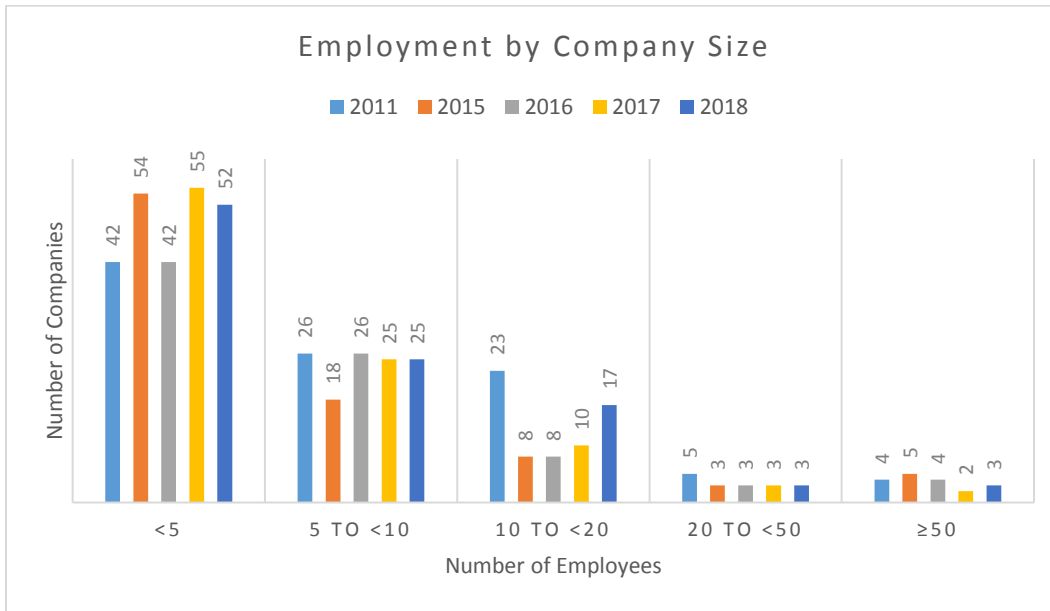


Figure 5. Graph of companies surveyed in 2011, and 2015 through 2018 versus categorized number of employees. Employment is for direct hires only and does not include third-party contract employees.

2017 EXPENDITURES AND EMPLOYEES

The 2017 expenditures on Nevada exploration totaled \$351.2 million (figures 6 and 7; table 2). This represents a minimum estimate based on data from 172 companies that indicated some level of exploration activities in Nevada. The mean expenditure was \$2.79 million, and the median was \$0.4 million. The mean was skewed by the top seven companies, which had relatively large exploration and mine development budgets (>\$10 million each). Approximately 75% of expenditures (\$253.6 million) in 2017 were from companies exploring for precious metals. Seven companies (5 for precious metals, 1 for base metals, 1 geothermal) contributed about \$245 million or 70% of the total reported expenditures for 2017. The five largest precious metal companies contributed about 71% of the total spent on gold exploration. Exploration for base metals (especially copper but also zinc) contributed \$62.9 million or 17.9% of total expenditures, a major increase from 2016 and largely reflecting development associated with the Pumpkin Hollow deposit. Exploration for energy metals (lithium and vanadium) garnered 5.9% of expenditures (\$20.8 million), geothermal energy contributed 3.5% (\$12.6 million), and industrial minerals comprised \$1.5 million or 0.4% of total expenditures in 2017. Total exploration expenditures reported for 2017 record a 47.9% decrease from 2011, when Nevada logged a record expenditure of \$674.7 million from 169 reporting companies (figure 1).

Nevada explorers who responded to this survey recorded 644 employees in 2017 (figure 8), the lowest number in the five years of data between 2011 and 2018. The number of employees is substantially underestimated, because this information could not be obtained from companies that did not respond to the survey, including two active mining companies and most industrial mineral producers. In addition, the number of employees reported here represents only those directly hired by exploration companies (for example, geologists, consultants, other professional staff, technicians) and not those who work as clients from third-party companies who provide necessary services such as assaying, drilling, sampling, claim staking, geochemical and geophysical surveying, resource assessment, legal consultation, permitting, GIS services, and environmental consultation. Still, the low employment in 2017 suggests that employers were cautious in hiring and possibly not replacing those leaving the exploration workforce despite a slight increase in total expenditures from 2016. The mean number of employees per reporting company in 2015 was 7, and the median was 3.

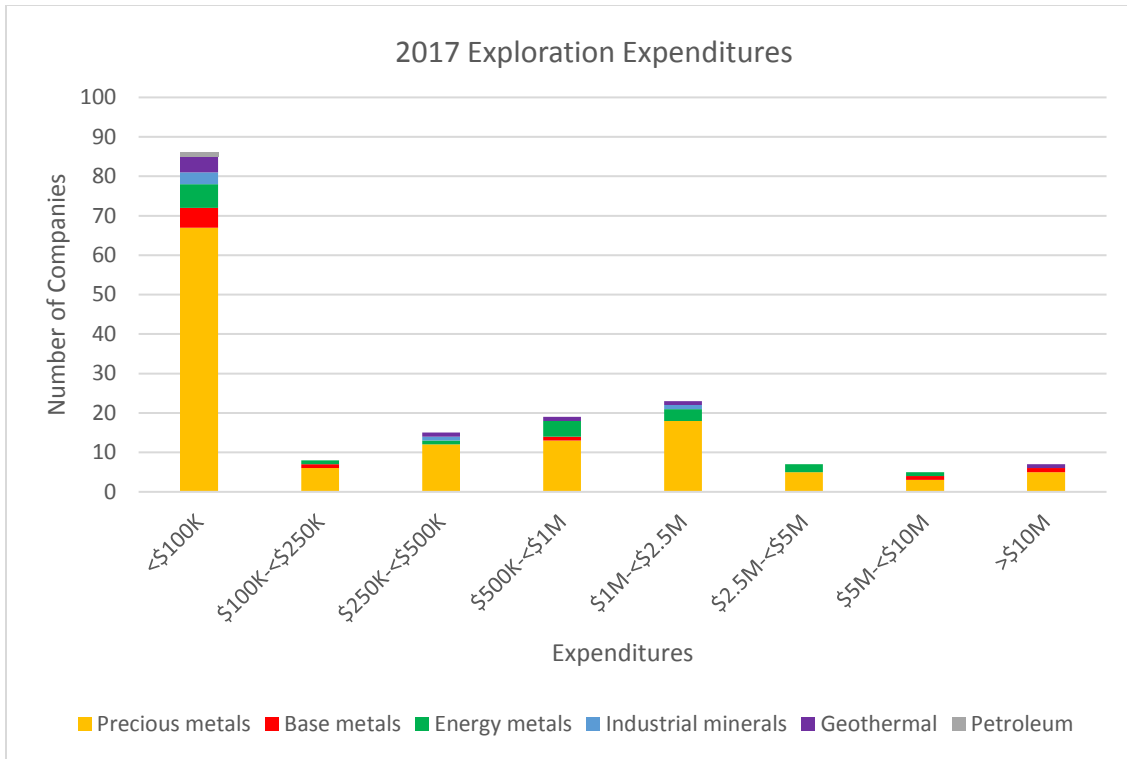


Figure 6. Total exploration-related expenditures in 2017 by expenditure category. Bins represent cumulative expenditures by individual companies.

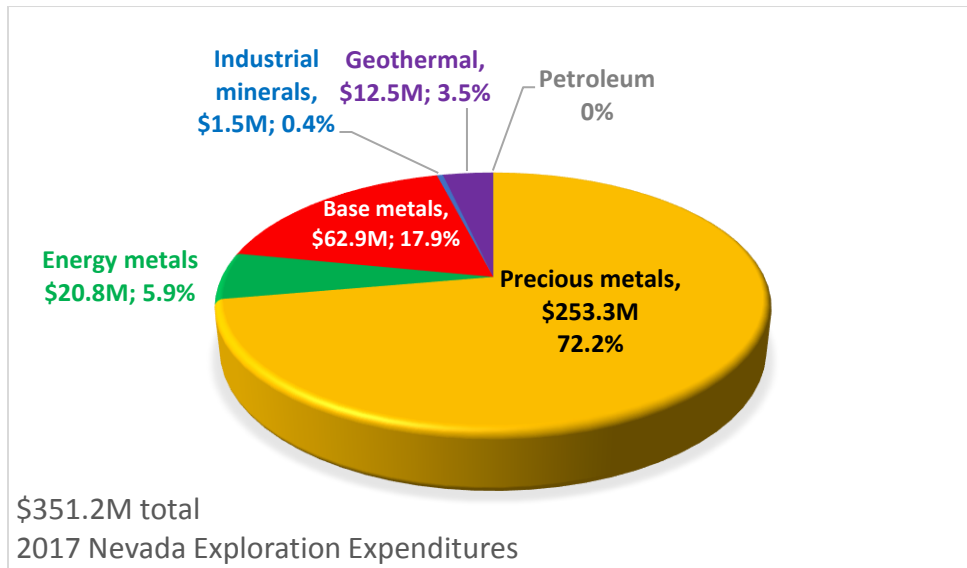


Figure 7. Total reported exploration expenditures in 2017 by commodity type.

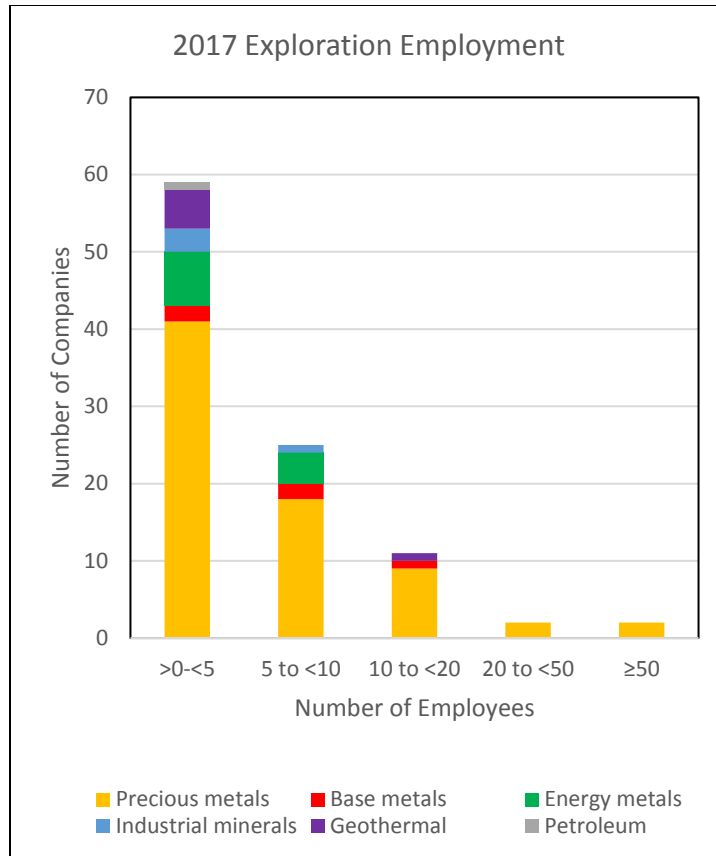


Figure 8. Employees involved in exploration-related activities in 2017 based on 99 companies. Includes part- and full-time employment but not third-party contract employees. Total reported employment in 2017 was 644.

2018 EXPENDITURES AND EMPLOYEES

The continued downturn in nearly all commodity prices since late 2012 showed significant signs of reversal beginning in 2018. Companies sampled reported total expenditures of \$461.0 million in 2018 (figures 9 and 10), up 31.3% from 2017 but still down about 32% from peak exploration expenditures of \$674.4 million recorded in 2011 for the state. The recent percentage increases in Nevada exploration expenditures for 2018 exceeded those experienced worldwide (table 2) as reported by S&P Global Market Intelligence (2018; 2019) in their annual summary of global exploration activity, which shows a global increase of about 20.2% in exploration spending. Nevada’s reported 2018 expenditure, which is a minimum estimate, represents approximately 57% of the total U.S. nonfuel exploration expenditures in 2018 as reported by S&P Global Market Intelligence (Golubova, 2018).

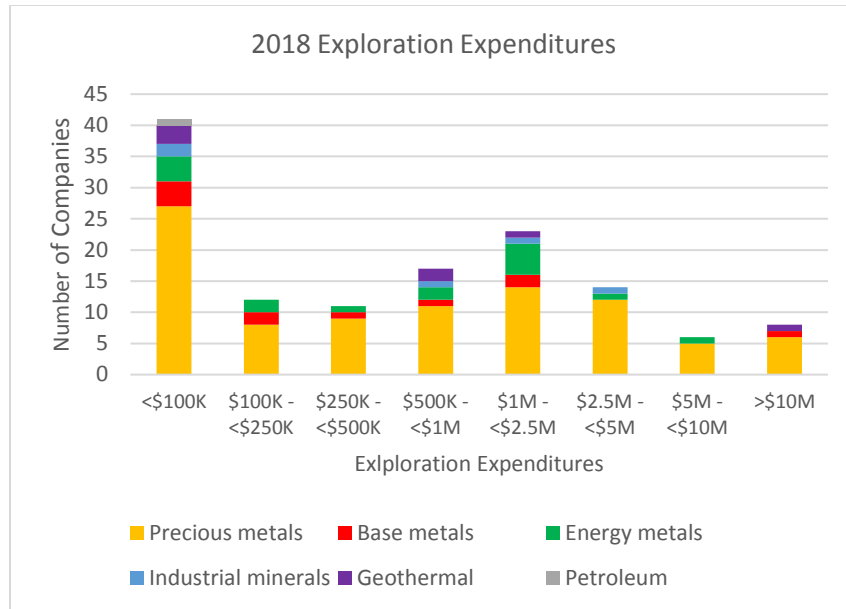


Figure 9. Total expenditures in 2018 by expenditure category. Dollar amounts represent cumulative expenditures by category.

Table 2. Summary of exploration expenditures and employees 2017 and 2018

2017 Nevada reported expenditures:	\$351.2 million (n = 172; 54% of U.S. total)
2017 U.S. total exploration budget:	\$647 million
2017 Nevada reported employees:	644
2018 Nevada reported expenditures:	\$461.0 million (n = 172; 54% of U.S. total)
2018 U.S. reported expenditures:	\$852 million*
2018 Nevada reported employees:	784
Increase in Nevada expenditures: 2017 to 2018:	31.3%
Global increase (year-over-year 2017 to 2018)*:	18.8%

*S&P Global Market Intelligence World Exploration Trends, 2017, 2018, and 2019

Gold exploration continued to command most of the reported expenditures in Nevada in 2018 (figure 10), capturing 77% (\$353.3 million) of \$461.0 million total. Two primarily gold-producing companies contributed nearly \$183 million or, nearly 40% of total 2018 expenditures, and about 52% of expenditures among precious-metal explorers. As the price of lithium began to rise in 2016, a boom in lithium exploration resulted in 2.3 times more expenditure in 2016 than 2015. The upswing in lithium exploration continues, and 2018 spending of \$23.7 million was up 13% from 2017 spending of \$20.7 million despite a decrease in the lithium price. Compared to 2017, expenditures for base metals in 2018 rose 10% to \$69.8 million, or 15.1% of total 2018 expenditures.

Nevada explorers who responded to this survey recorded 784 employees in 2018 (figure 11), up nearly 22% from 2017 (figure 3). The mean number of employees per company in 2018 was 7.8 and the median, 4. The increase in employment corroborated by a large increase in spending suggests a broader recovery affecting most sectors of Nevada's commodities industries.

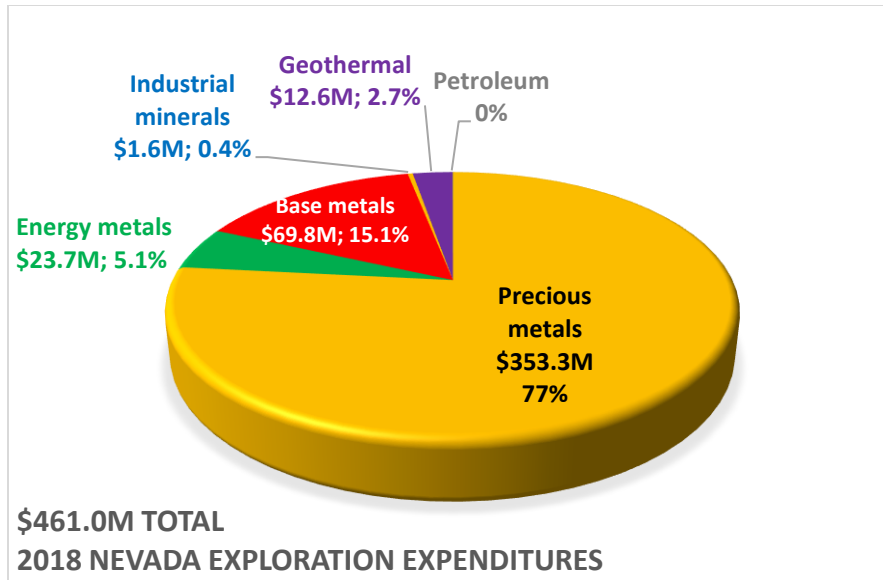


Figure 10. Total reported exploration expenditures in 2018 by commodity type.

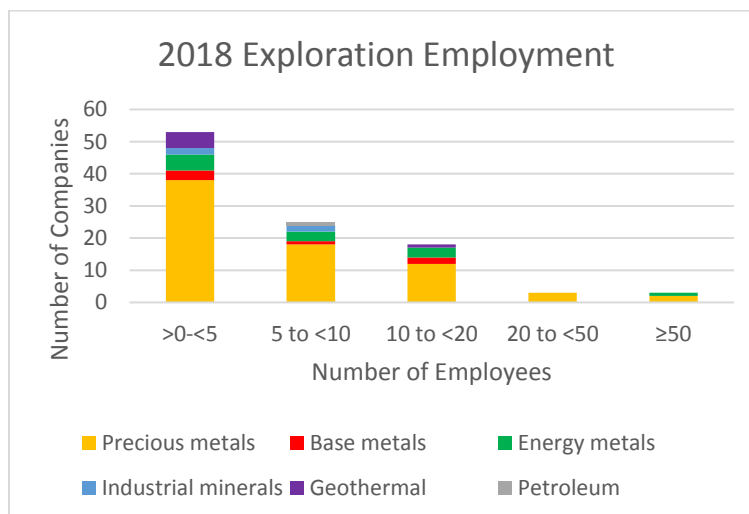


Figure 11. Employees involved in exploration in 2018 based on 98 survey respondents. Includes part- and full-time employment but not third-party contract employees. Total reported employment in 2018 was 784.

2019 OUTLOOK

Because this survey was conducted late in 2018, no attempt was made to collect specific data on companies' forecast budgets for 2019. However, companies were asked whether they expected to spend more, less, or about the same as 2018 (figure 12). Of 111 respondents to this question, 47% indicated they will spend more in 2019, including 14% who responded that they will be spending much more than in 2018. In addition, 34% of respondents indicated that their exploration spending would be about the same as 2019. Thus, 81% of respondents expected to spend either about the same or more in 2019 than in 2018. The large increase in exploration spending in 2018 coupled with expectations of higher 2019 spending are positive factors that may be indicative of economic recovery in the minerals industry.

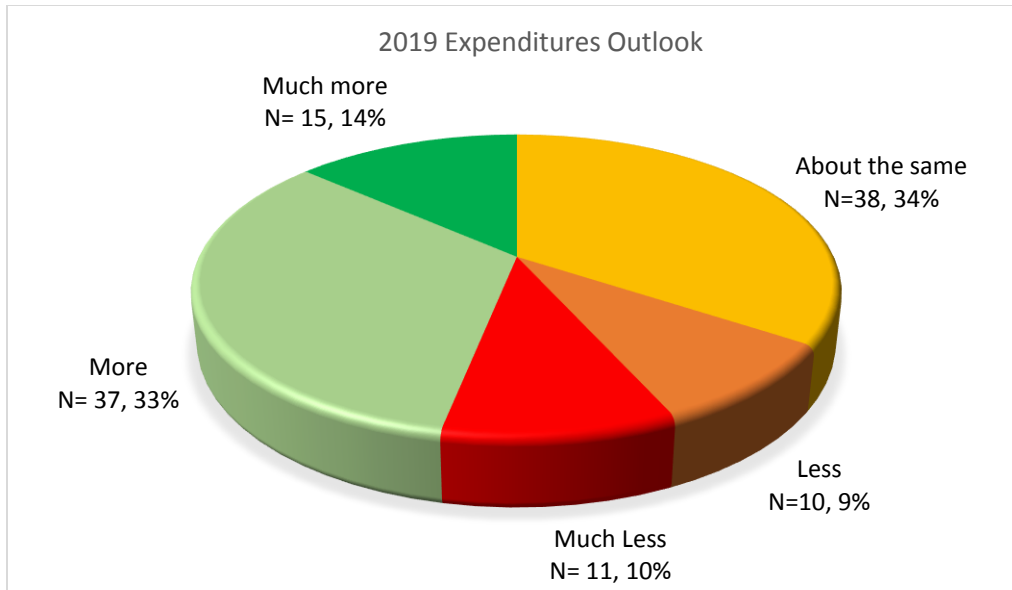


Figure 12. Chart of exploration outlook for 2019. Survey response is provided to the question, “Do you expect your company to spend more or less in 2019 on Nevada exploration?” Near half of respondents indicated their companies will likely spend more in 2019, and an overwhelming majority of respondents (81%) indicated they will spend either the same or more in 2019.

EXPENDITURES BY CATEGORY

For the survey, companies were requested to breakdown their total 2018 exploration expenditures among the following categories: 1) actual exploration—including drilling, geology, geochemistry, and geophysics, 2) land costs, including claim staking, maintenance fees, and lease payments, 3) permitting and compliance—including environmental studies, bonding, and reclamation, 4) corporate overhead costs—including overhead, legal expenses, and taxes, and 5) other costs. Eighty-seven companies responded. The weighted averages from actual spending that the reporting companies provided were 66.8% that went toward actual exploration costs, 15.4% to land costs, 7.2% to permitting and compliance, 8.4% to corporate overhead costs, and 2.2% to other costs. Percentages were similarly distributed between companies that spent more than \$5 million in 2018 versus those that spent less.

EXPANSION VERSUS GRASSROOTS EXPLORATION

When asked to estimate the percentage of 2018 expenditures on exploration aimed at expanding existing mines or resources versus grassroots exploration away from known mines and other known resources, 89 companies responded. The average weighted percentages based on the categorized expenditures of 110 respondents were 62% for near-mine or in-mine expansions and 38% for grassroots exploration. Larger companies with production and larger exploration budgets tend to spend a larger percentage of funds on expansions of existing mines and other resources, whereas those companies lacking production tend to have smaller expenditures derived from sources other than cash flow from operations and consequently, spend a majority percentage on grassroots exploration. About \$62.5 million (13.8% of the total 2018 expenditures) was spent by companies whose budgets consisted of 50% or more grassroots exploration. Of this, 98%, or \$58.5 million went toward grassroots exploration.

FACTORS THAT IMPACT EXPLORATION

The survey asked companies to rate on a scale from 1 to 5 how seven factors impact their exploration, a “1” representing low impact and a “5”, high impact (figure 13). The averages for the 83 companies that responded were 4.3 for favorable geology in Nevada, 4.0 for the potential for new discoveries in Nevada, 3.7 for access to public lands

in Nevada, 3.5 for time and cost required for permitting, 3.2 for current or projected commodity prices, 3.0 for mining claim or lease fees for public lands, and 2.8 for uncertainty over possible reforms to U.S. mining laws.

High ratings for Nevada’s geology and the potential for new discoveries obviously contribute greatly toward companies choosing to explore in the Silver State. Other ratings are more ambiguous in terms of their positive or negative perception among explorers. In particular, access to public land and reform of the U.S. Mining Law are more difficult issues to gauge, as only proposed changes to these are viewed by explorers negatively, whereas most explorers regard public lands and the U.S. Mining Law as important factors leading to Nevada’s top ranking among places to explore in the U.S. To help clarify, respondents were further questioned to identify those factors that negatively impacted their ability to explore in Nevada. Three factors identified as having a pronounced negative impact on exploration include excessive time and/or cost of permitting exploration projects (33 responses), diminished access to public lands and proposed land withdrawals due to sage grouse habitat and military needs (12 responses), and the high cost of mining claim fees (8 responses). Other negative impacts include uncertainty over the mining law (6 responses), restrictive environmental regulations (3 responses), and difficulty securing water permits (3 responses). Three geothermal companies cited low commodity prices (i.e., electric contracts) as a negative factor in their business in 2018. One commenter cited the non-public nature of most exploration data as a drawback to effective exploration.

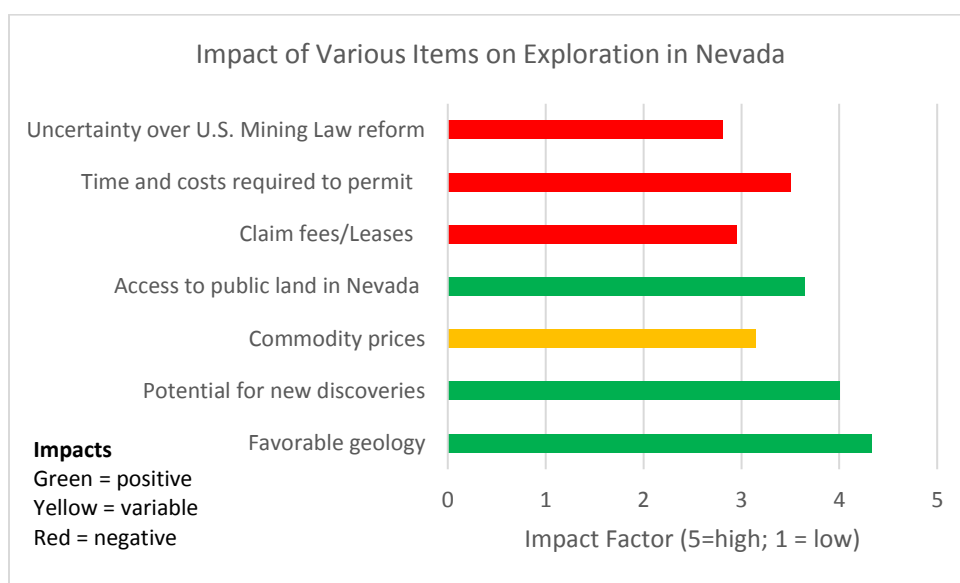


Figure 13. Impact of factors that impact exploration for minerals and energy in Nevada. A “5” score represents the highest impact, “1” represents lowest impact. Number of respondents: 85.

CONCLUSIONS

Exploration is the first step and an integral part of natural resources development and extraction but is poorly quantified in terms of its overall economic impact. Exploration represents the initial high-risk investment used to locate, define, and quantify new mineral and energy resources. Most exploration activities are unsuccessful in locating economic resources for a number of reasons that may include insufficient concentrations or volumes of the commodity sought, fluctuating market conditions, complex processing, difficult ground conditions, regulatory and permitting hurdles, and difficulties in securing funding, among many other potential constraints. Through the exploration process, new resources replace those resources depleted through extraction.

Nevada commonly leads the U.S. in production of non-fuel mineral commodities. In 2017, Nevada produced \$8.49 billion worth of minerals, which constituted about 11.3% of the value of all mineral products produced in the U.S. (Muntean et al., 2019; Perry and Visser, 2018; U.S. Geological Survey, 2018; Wilburn and Karl, 2018). About 84% of the value of Nevada’s 2017 mineral production came from gold (Perry and Visser, 2018; Muntean et al., 2019). Other important mineral commodities produced in Nevada include silver, copper, barite, diatomite, gypsum, limestone, magnesite, and lithium. In addition, Nevada is second in the U.S. in geothermal energy production. In part because of Nevada’s leading role among mineral-producing jurisdictions, it also ranks highly among those companies

exploring for new resources. In 2018, Nevada ranked first in the world in the Fraser Institute's survey of mining companies for investment attractiveness (Stedman and Green, 2019), and the state consistently ranks in the top 5. The Fraser survey ranking is based on a region's overall mineral potential and its support of mining and exploration through policies and regulations.

The 2019 Nevada exploration survey was designed to help quantify the economic impacts associated with mineral and energy exploration in Nevada. The major downturn in commodity prices experienced between 2012 and 2017 showed significant signs of easing in 2018 as exploration spending, particularly for metals, increased by 31% from 2017. The increase in exploration expenditures was accompanied by a 21% rise over the same period in exploration employment. Global exploration budgets also increased ~20% in 2018 (Kitco News, November 27, 2018; S&P Global Market Intelligence, 2019), although not as much as in Nevada. Sustained exploration during the current upswing in 2018 and the difficult times from 2012–2017 reflects favorably on Nevada's prospective geology and its business climate, as well as the access afforded by its vast federally managed public lands. These factors are important in attracting and retaining exploration companies in Nevada.

ACKNOWLEDGMENTS

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APPENDIX

**Nevada Division of Minerals
Nevada Bureau of Mines and Geology
2019 Minerals Exploration Survey**

Company Name: _____

Contact Person: _____

Email: _____ **Phone:** _____

The first two questions are critical. Please answer the rest if you can.

1. What were your company's exploration expenditures in Nevada in 2017 and in 2018?

2017 exploration expenditures in Nevada: \$ _____

2018 exploration expenditures in Nevada: \$ _____

2. How many people did your company employ in exploration in Nevada in 2017 and in 2018? Include geologists and support staff, both company employees and individual contractors and consultants.

2017 number of employees involved in Nevada exploration: _____

2018 number of employees involved in Nevada exploration: _____

3. If you can, please ESTIMATE the percentage of your company's total Nevada expenditures in 2018 that went toward the following categories, including salaries and benefits.

Actual exploration (drilling, geology, geochemistry, geophysics, etc.): _____%

Land holding costs (claims staking and maintenance, lease payments, etc.): _____%

Permitting and compliance (environmental studies, bonding, reclamation, etc.): _____%

Corporate costs (overhead, legal, taxes, etc.): _____%

Other (please specify _____): _____%

4. Please ESTIMATE the percentage of your Nevada 2018 exploration expenditures dedicated to expansion around existing operations and to grassroots efforts.

Expansions: _____%

Grassroots exploration: _____%

5. Pertaining to Nevada, please rate how the following factors impact your exploration activity, with 1 being insignificant and 5 being very significant.

Favorable geology:	1	2	3	4	5
Potential for new discoveries:	1	2	3	4	5
Commodity prices:	1	2	3	4	5
Access to public land in Nevada:	1	2	3	4	5
Claim/lease fees:	1	2	3	4	5
Time and costs required to permit:	1	2	3	4	5
Uncertainty over U.S. Mining Law reform:	1	2	3	4	5
Other (please specify): _____	1	2	3	4	5

6. Which, if any, of the factors in item 5 above negatively impact Nevada’s attractiveness for exploration relative to other regions in which your company explores?

7. Compared to 2017, do you expect your company to spend more or less in 2018 on Nevada exploration?

Much more More About the same Less Much Less

Thank you. All individual responses will be held confidential.

Questions or comments? Please call Mike Ressel at (775) 682-7844, or e-mail to: mressel@unr.edu

