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**COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS**

**NEVADA ABANDONED
MINE LANDS REPORT
2008**



by
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September 2009

NEVADA COMMISSION ON MINERAL RESOURCES
Division of Minerals

The Nevada Division of Minerals, a part of the Commission on Mineral Resources, is responsible for administering programs and activities to promote, advance, and protect mining and the development and production of petroleum and geothermal resources in Nevada. The Division's mission is to conduct activities to further the responsible development and production of the State's mineral resources to benefit and promote the welfare of the people of Nevada. The seven-member Commission on Mineral Resources is a public body appointed by the Governor and directs mineral-related policy for the Division and advises the Governor and Legislature on matters relating to mineral resources. The Division focuses its efforts on three main areas: Industry relations and public affairs; regulation of oil, gas, and geothermal drilling activities and well operations; and abandoned mine lands.

The agency is involved in a wide array of activities relating to mineral development. Staff compiles annual data on all active mines in Nevada and maintains the State's mine registry. Information concerning mining operations and production is made available to the public through this yearly publication. Educational documents and materials concerning many aspects of the minerals industry are also produced. The Division participates in governmental activities affecting policies and laws concerning the minerals industry and resource development. The Division administers the State's reclamation bond pool.

The Division is responsible for permitting, inspecting, and monitoring all oil, gas, and geothermal drilling activities on both public and private lands in Nevada. Staff also monitors production of oil, gas, and geothermal resources to insure proper management and conservation. The Administrator is the Governor's Official Representative to the Interstate Oil and Gas Compact Commission.

The Division's abandoned mine lands program provides for public safety by identifying and ranking dangerous conditions at mines that are no longer operating, and by securing dangerous orphaned mine openings. The program continually urges the public to recognize and avoid hazardous abandoned mines.

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Executive Summary

The State of Nevada's Abandoned Mine Lands (AML) program entered its 23rd year in 2008. Key points for the program in 2008 include the following:

- One injury incident involving an adult male who fell down an inclined winze was reported to the Nevada Division of Minerals (NDOM) in August 2008. One reported fatality of a dog having fallen down a shaft in September. One fatality occurred when an adult male fell down a winze in October.
- The total number of AML hazards discovered and ranked since the beginning of the program reached 13,735 hazards. The total number of hazards currently recorded as secured reached 9,845.
- 1,054 hazards were discovered and ranked in 2008, a 1.6% decrease from 2007.
- 586 hazards were secured in 2008, a 2.3% decrease from 2007. Mining claimants and private property owners secured 298 hazards. 288 orphan hazards (hazards located on public land where no claimant or property owner exists) were secured by NDOM staff, contractors and volunteers, a decrease of 23.0% compared to 374 securings in 2007.
- Public awareness activities: 83 classroom presentations to approximately 2,500 students, 50 presentations at school functions outside the classroom to nearly 1,500 students. 35 presentations at other venues brought the "Stay Out and Stay Alive" message to over 9,000 additional adults and children. Students and teachers were given brochures, bumper stickers, magnets, "hard hat" stickers and pencils bearing the "Stay Out and Stay Alive" message. A total of over 78,400 AML brochures were distributed to every 4th and 8th grade student in the state and the "Stay Out and Stay Alive" video was sent to all new schools in the state.
- The Summer Intern Program included 8 students in 2008. The interns were all students from the Mackay School of Earth Sciences and Engineering, University of Nevada, Reno.
- The Clark County AML inventory project, funded under the Southern Nevada Public Lands Management Act (SNPLMA) Round 6, was completed by the Nevada Conservation Corps in June, 2008.
- 61 hazards were secured and 5 previously secured hazards were repaired by 16 Eagle Scout candidates in 2008. Since 1992, 94 Scout projects have been completed resulting in 488 secured orphan hazards and 60 repairs to existing fences.
- The Division met or surpassed both of the AML performance indicators approved by the State Legislature. Total secured hazards divided by total discovered hazards was 71.7% (70% required) and total public awareness presentations averaged 17.2 per staff member (12 required).
- Total dedicated funding for the AML program from mining claim filings, fees on permitted surface disturbance associated with new mining operations on public lands, and Bureau of Land Management (BLM) grants totaled \$371,705 in fiscal 2008, as compared with \$322,619 in fiscal 2007.

Program Background

Nevada's geology provides ideal conditions for the deposition of a large variety of valuable and useful minerals. These mineral deposits have attracted the attention of miners and prospectors for over 150 years. The hearty souls who searched across the state exploring for this vast mineral wealth left behind a legacy of shafts, adits, glory holes, stopes, mill sites and other features that are potentially dangerous to unwary or curious people and to wild and domestic animals. Over time, most of the mine openings have become unstable because of exposure to the elements and decay of support timbers. It is estimated that 200,000 to 300,000 of these mining-related features exist in the state. Of these, the Division estimates that 50,000 are significant hazards that require some type of securing. Appendix A lists the hazards discovered and hazards secured by the AML program from 1987 through 2008 and includes a map showing the location of hazards discovered and secured in 2008.

The State of Nevada AML program was created by the Nevada Legislature in 1987 in response to a number of incidents, both fatal and nonfatal, that had occurred in abandoned mine openings. Table 1 shows a 38-year history of reported incidents related to abandoned or idle mines. The legislation placed the program with the Division of Minerals and mandated two primary functions: 1) Investigation and inventory of mining-related openings and structures at mining sites that are currently idle or abandoned, and 2) Development and maintenance of an aggressive public awareness campaign to educate the public about dangerous conditions that exist as a result of historic mining activities. The primary Nevada Revised Statutes (NRS) governing the AML program can be found in Appendix B.

In 1989, the Nevada Legislature expanded the program to include the responsibility of securing hazardous conditions on open public lands where no claimant or property owner could be identified (so-called "orphan" mine openings). The legislation also provided an opportunity for companies, individuals, and civic groups to voluntarily assist the program in securing orphan mine openings under a designated Good Samaritan law (NRS 41.0331). See Appendix B.

The AML program is administered under Nevada Administrative Code (NAC) 513. The pertinent regulations can be found in Appendix C. Sections 513.320 through 513.360 provide for the openings or structures to be given a hazard ranking based on the location and type of feature. The regulations also require that land ownership status be conducted at the county courthouse to determine whether a current claimant or landowner is responsible for abating hazardous conditions on lands under their control.

The AML program is primarily funded by fees on mining claim filings. The county recorder collects the fees for the Division at the time the claims are filed. The program is also funded by a fee paid by mining companies or individuals for new operations or expansions occurring on public lands. In 1995, the Division entered into a cooperative agreement with the BLM. Under this agreement, which was renewed in 2005, the BLM has provided a yearly assistance grant to enhance and accelerate both field investigation activities and work performed by staff and volunteers to secure orphan hazards.

Table 1. Reported AML Incidents through 2008

Date	NEVADA DIVISION OF MINERALS Reported Abandoned Mine Lands Incidents	County
5/1971	Male juvenile (15) injured in fall down 200 ft. deep mine shaft on Duck Hill	Carson City
4/1975	Two male juveniles killed when motorcycles fall into mine shaft near Searchlight	Clark
12/1978	Juvenile killed in fall down mine shaft (Ninety-Nine Mine), body never recovered	Clark
4/1979	Two teenagers killed in fall down mine shaft (Oest Mine)	Lyon
2/1986	Young adult male (20) killed in fall down winze in adit	Lyon
5/1987	Female child (5) injured in fall down 35 ft. deep mine shaft	Washoe
9/1988	Body of elderly male found at bottom of mine shaft	Lyon
9/1989	Male adult seriously injured in fall down winze in mine near Henderson	Clark
3/1990	Male juvenile lost for 19 hours in mine shaft near Tonopah old Mizpah mine	Nye/Esmeralda
5/1990	Dog killed in mine shaft MGL Mine – Winn. Dry Lake	Humboldt
2/1991	Male adult (40) killed in fall down mine winze	Douglas
5/1991	Male juvenile (13) injured (minor) in fall down 20 ft. deep mine shaft	Washoe
12/1991	Male adult (44) killed in fall down mine winze	Lyon
9/1992	Female adult (28) injured (cuts and bruises) in fall down mine shaft Hot Springs Mtn.	Douglas
10/1992	Male adult (27) news reporter injured in dynamite blast in mine west of Winnemucca, NV	Humboldt
1/1993	Dog rescued from 25 ft. deep shaft	Humboldt
11/1993	Dog rescued from 30 ft. deep mine shaft near Iron Mtn. Estates	Storey
6/1995	Male adult (30) killed while scuba diving in mine shaft filled with water Per 6/5/1995, Winnemucca New Article, happened at the old Crown Copper UG Mine.	Humboldt
3/1996	Male adult (31) injured in fall down mine winze on west side of Las Vegas	Clark
9/1996	Two male adults (35) killed in mine adit near Virginia City by suffocation	Storey
10/1996	Male (16) killed in fall off ATV at American Flats millsite	Storey
4/1997	Two male adults (50's) injured in fall down hand dug well in town of Luning	Mineral
7/1998	Male adult (20's) slightly injured in fall down mine winze in Brougner Divide Mine near Tonopah, another adult male lost for 7 hours, total of 6 adult males in mine	Esmeralda
9/1998	Dog rescued from 20 ft. deep mine shaft	Douglas
10/1998	Two male adults seriously injured in fall down 50 ft. deep mine winze near Las Vegas	Clark
6/1999	Male juvenile (15) drowned swimming in open pit lake	Lander
10/1999	Female juvenile (11) killed in fall down 130 ft. deep mine shaft near Beatty	Nye
11/2000	Dog rescued from fall down 40 ft. mine shaft. Moderate injury to hip	Storey
12/2000	Dog rescued from fall down 60 ft. winze. Minor injury to hip	Pershing
7/2002	41 year-old male drowned swimming in open pit lake	Storey
10/2002	37 year-old CA male received severe injuries from fall down 25 ft. winze	Clark
1/2003	Dog fell down shaft	Humboldt
1/2003	62 year-old man received minor injuries from fall down 25 ft. winze (same as 10/2002)	Clark
4/2004	30 year-old man received moderate injuries from fall down 25 ft. winze near Las Vegas	Clark
5/2005	Woman of unknown age, received cuts and bruises from fall down a 35 ft. winze in Carson City	Carson
5/2006	Dog rescued from 22 foot-deep mine shaft	Washoe
5/2007	Adult male (mid-20's) injured in ~200' fall down inclined winze	Clark
5/2007	Adult male (63) suffered fatal injuries after rolling his Jeep into the Loring Pit, Virginia City	Storey
8/2008	Adult male (58) injured in 50' fall down inclined winze	Esmeralda
9/2008	Dog reportedly fell down 100' shaft, not recovered	Washoe
10/2008	Adult male (62) suffered fatal injuries after falling 60' down a winze	Lyon

In compliance with NRS 513.094.2, the Division notifies county commissions of hazardous conditions discovered in their counties, on an on-going basis by: 1) providing copies of notification letters sent to claimants requesting that hazardous conditions located on their claims or property be secured, and 2) providing documentation of orphan hazards identified and ranked within a week of determination of orphan status.

If a claimant fails to notify the Division of completion or of their intention to secure hazards within the timeframe specified in NAC 513.380, their file is turned over to the appropriate county commission per NRS 455.030 and 455.040. The county is authorized to take appropriate enforcement action, which may include warnings issued by the county sheriff, securing work performed under direction of the county at the owner's expense, and possible fines of up to \$250 per violation.

Abandoned Mine Incidents in 2008

There were three abandoned mine incidents reported in 2008. In August, an adult male was injured when he fell approximately 50 feet down an inclined winze while exploring an underground mine in Esmeralda County. In September, a report was received of a dog having fallen down a 100-foot mine shaft in Washoe County. In October, a 62-year old California man died while exploring an underground mine on private property in Lyon County. He suffered immediate and fatal injuries from a 60-foot fall, which occurred when timbers covering a winze broke under his weight.

Discovery and Securing

From the beginning of the AML program in 1987 through December 31, 2008, 13,735 hazards have been discovered and ranked and 9,845 hazards (claimed, owned, and orphans combined) are currently recorded as secured. Figure 1 is a graph of hazards discovered and ranked and hazards secured for 1987 through 2008. Table 2 is a county-by-county listing of hazards discovered and secured since the beginning of the program. The number of hazards secured represents 71.7% of all hazards discovered to date.

Of the 9,845 hazards currently secured, 759 (7.7%) are ranked high, 2,907 (29.5%) are ranked moderate, 4,576 (46.5%) are ranked low, and 1,603 (16.3%) are ranked minimal. Figure 2 is a pie chart showing the percentage distribution of secured mine openings by hazard rank.

Of the 9,845 secured hazards, 3,693 (37.5%) are orphans, ranked as follows: 156 (4.2%) high, 935 (25.3%) moderate, 1,807 (48.9%) low and 795 (21.5%) minimal. Figure 3 is a pie chart showing the percentage distribution of secured orphan mine openings by hazard rank. The difference between total securings and orphan securings is 6,152, which represent the very significant (62.5%) contribution to the program by the mining industry, claimants, and landowners.

The total number of hazards discovered and ranked during 2008 was 1,054 compared with 1,071 hazards discovered and ranked in 2007; a nominal decrease of 1.6%. Of the 1,054 hazards discovered, 154 were determined to be orphans, 68 were found on leased claims or private property, one was found on State-owned lands, and 831 required additional ownership research. Of the 1,054 hazards discovered in 2008, 46 (4.4%) were ranked high, 250 (23.7%) moderate, 529 (50.2%) low, and 229 (21.7%) minimal. Figure 4 is a pie chart showing the percentage distribution of hazards discovered in 2008 by hazard rank.

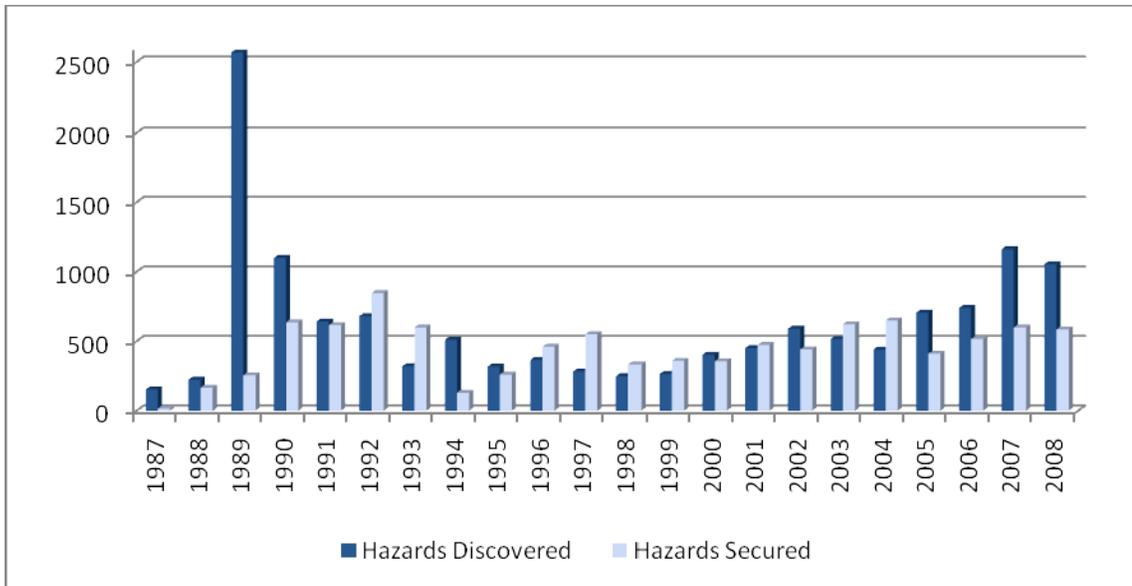


Figure 1. Hazards Discovered and Hazards Secured on an Annual Basis from 1987 to 2008

Table 2. County-by-County Hazards Discovered and Secured from 1987 through 2008.

COUNTY	HAZARDS DISCOVERED	HAZARDS SECURED
Carson City	74	72
Churchill	475	380
Clark	2,045	1,379
Douglas	178	139
Elko	383	296
Esmeralda	1,890	1,338
Eureka	672	583
Humboldt	597	467
Lander	446	315
Lincoln	599	473
Lyon	866	661
Mineral	1,165	1,027
Nye	1,715	1,101
Pershing	1,071	705
Storey	171	144
Washoe	378	340
White Pine	1,010	425
TOTAL	13,735	9,845

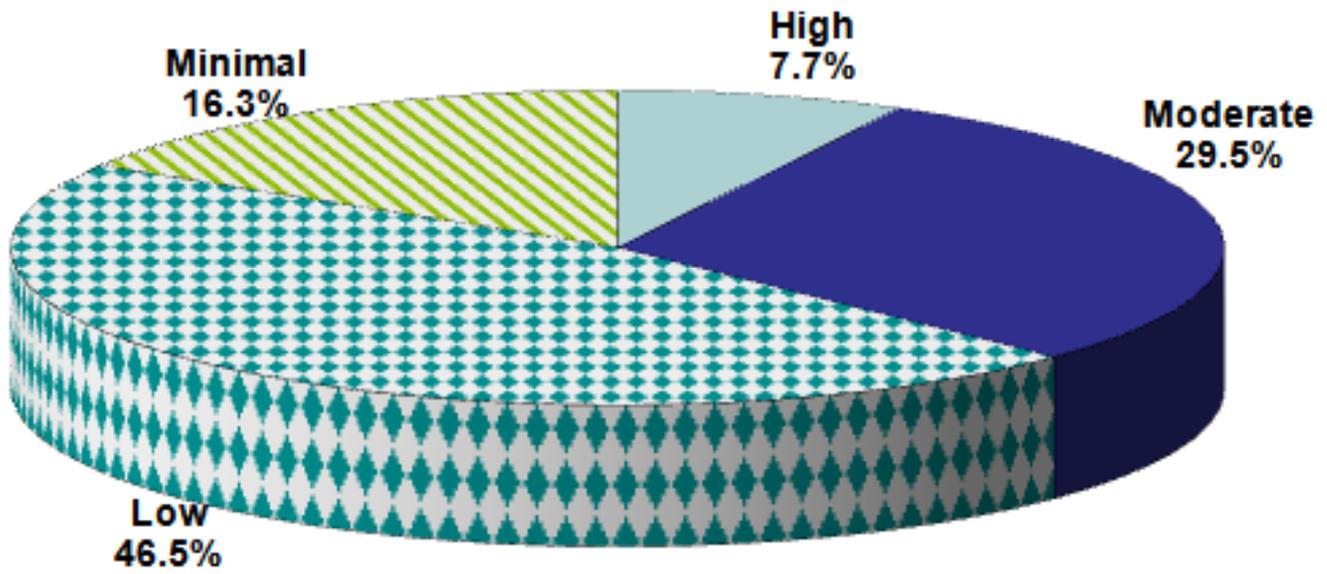


Figure 2. Distribution of Currently Secured Mine Openings by Hazard Rank
1987 through 2008.
Total: 9,845

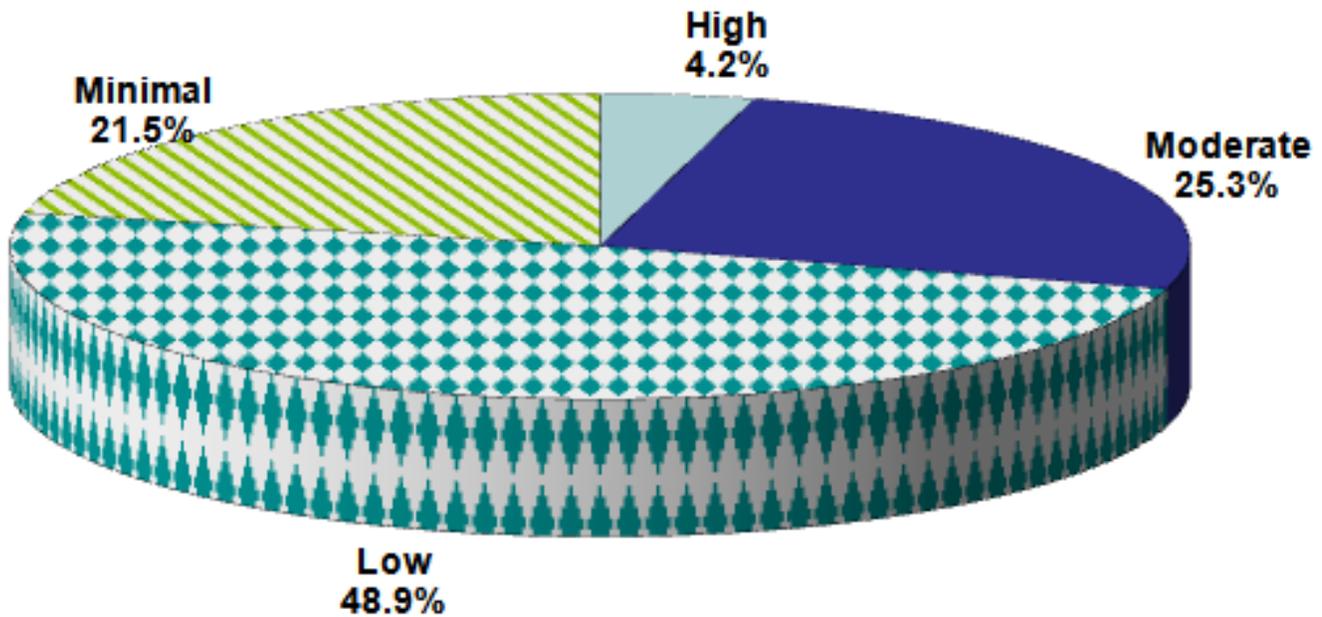


Figure 3. Distribution of Currently Secured Orphan Mine Openings by Hazard Rank
1987 through 2008
Total: 3,693

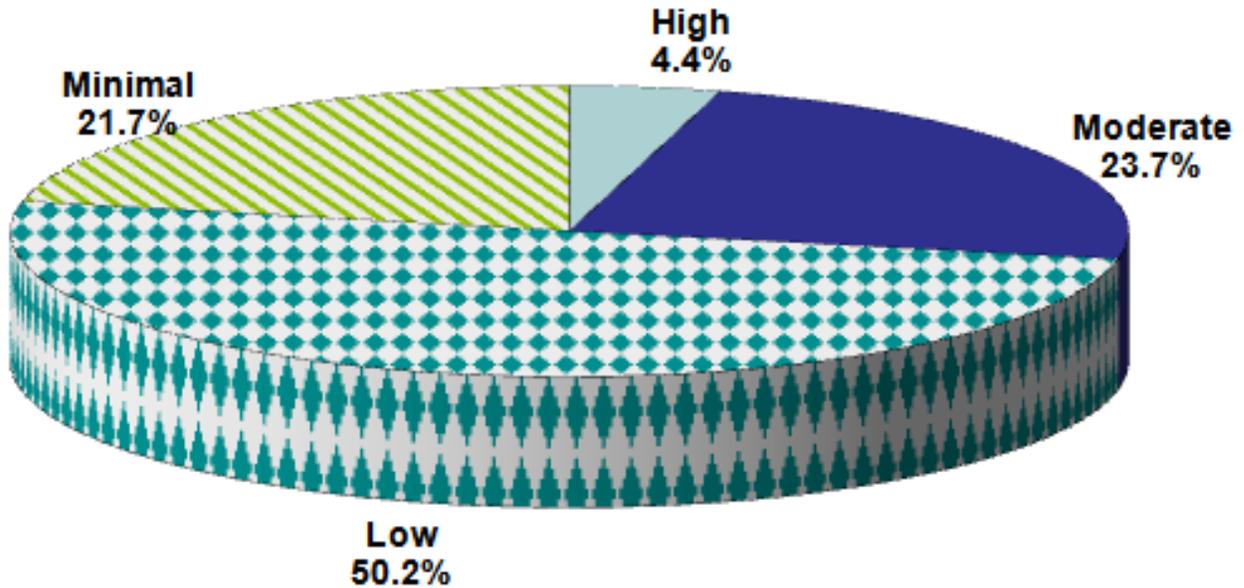


Figure 4. Distribution of Discoveries by Hazard Rank 2008
Total: 1,054

The total number of sites secured during 2008 was 586 compared to 600 in 2007, a 2.3% decrease. Of the 586, 166 were secured by NDOM staff and summer interns, 190 were secured (or discovered as secured) by claimants and owners of patented claims and private land, 79 were secured by volunteers and other Good Samaritans, 53 were secured by a contractor, 65 were secured by staff from the Bureau of Reclamation, 8 were found to be secured by natural effects (e.g. caving) and 25 were secured by U. S. Forest Service personnel. 288 of the hazards secured in 2008 were orphans. The orphan hazards represent 49.1% of 2008 securings. Orphan securing work during calendar year 2008 resulted in the abatement of eight hazards with a ranking of high (2.8%), 81 with a ranking of moderate (28.1%), 139 with a ranking of low (48.3%), and 60 with a ranking of minimal (20.8%). Figure 5 is a pie chart showing the percentage distribution of currently secured orphans by hazard rank in 2008.

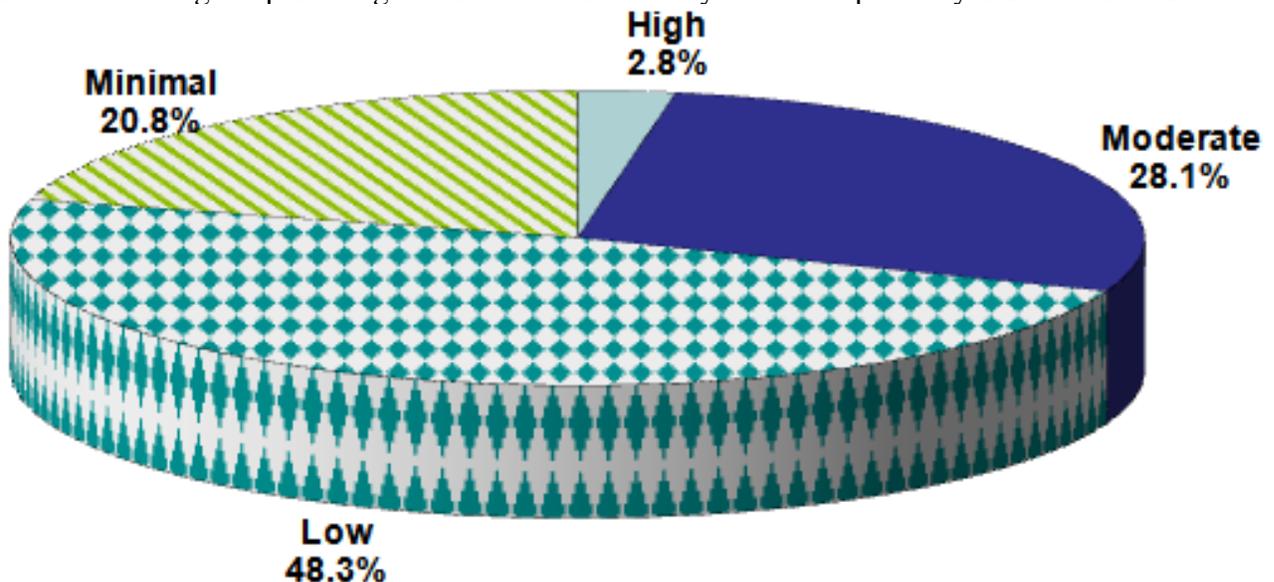


Figure 5. Distribution of Currently Secured Orphan Mine Openings by Hazard Rank 2008
Total: 288

Public Awareness

In the area of public awareness, the theme is “Stay Out and Stay Alive.” This message is carried to the public through several channels including; an 11-minute video of the same name which has been distributed to every school and library in Nevada, informational brochures, mini-unit curriculum guides targeting 4th and 8th grade students, TV and radio public service announcements, highway billboards and handouts that include bumper stickers, magnets and pencils. These materials reach tens of thousands of people every year.

In 2008, staff made 83 classroom presentations to approximately 2,500 students in Carson City, Churchill, Clark, Douglas, Lyon and Washoe Counties; letters of appreciation can be seen in Appendix E. Additional presentations involving large numbers of children included Capital City Farm Days at Fuji Park in Carson City – (staff made 50 short presentations to small groups of 1st through 3rd graders, teachers and parent helpers rotating through various displays – 1,500 attendees), see Figure 6. Students, teachers, and parent helpers were all given brochures, bumper stickers, magnets, “hard hat” stickers, and pencils to use and share with family members and friends. Sixteen additional presentations were made to the work crews as part of each of the Boy Scout Eagle Projects completed in 2008 (approximately 160 people).



Figure 6. NDOM Staff at Farm Days Outreach Event at Fuji Park, Carson City.

The “Stay Out and Stay Alive” message was spread to over 9,500 people through 23 other venues, including:

- Presentations made to teachers at the 19th Annual Las Vegas Earth Science Education Workshop in Las Vegas and the 24th Annual Northern Nevada Earth Science Education Workshop in Tonopah (total of 183 teachers), see Figure 7.
- Dayton Valley Days (100 attendees)
- Interaction with visitors to the agency display at the Elko Mining Expo, the National Mining Expo in Las Vegas and the Northwest Mining Association Annual Meeting (approximately 8,000 attendees)
- Presentation to the Mackay Club at the University of Nevada, Reno (32 attendees)
- Annual Mackay Days Celebration at University of Nevada, Reno (250 visitors)
- Washoe High School Science Field Trip to Twin Creeks Mine (40 attendees)
- Spring Mountain Ranch Pioneer Day – Clark County (150 attendees)
- National Association of Abandoned Mine Lands Program (NAAML) Conference – Durango, CO. (100 attendees)
- Vegas Valley 4-Wheelers Club – Las Vegas (45 attendees)
- Solitaires Senior Women’s Club – Las Vegas (40 attendees)
- Nevada State Science Teachers Association (NSSTA) Conference – Las Vegas (18 attendees)
- Las Ventanas Assisted Living Facility Lecture Series – Summerlin (28 attendees)
- McCaw School of Mines Teacher Tour In-Service - Henderson (62 attendees)
- Henderson National Trail Day Event – Henderson (250 attendees)
- Boy Scout Troop 430 – North Las Vegas (76 attendees)
- 2 “Hands-On History for Children” events – Old Mormon Fort State Park – Las Vegas (42 attendees)
- Festival in the Pines – Kyle Canyon Ski and Snowboard Resort, Clark County (100 attendees)
- Nye Gold Seekers – Pahrump, Nye County (50 attendees)
- Nevada BLM State Leadership Team meeting – Reno (30 attendees)
- Historic Fourth Ward School “Stay Out, Stay Alive” exhibit and holographic video (the only hologram in a Nevada museum) – Virginia City

Additionally in 2008, 78,413 brochures were mailed out during January and February to 4th and 8th grade students in Nevada public and private schools. 2,370 mini-unit curriculum guides were sent to all new schools and to all public or private schools that added additional 4th or 8th grade classes to their schedules.



Figure 7. Images from the 2008 Earth Science Education Workshops for Teachers in Las Vegas and Tononah

Permanent Closure Projects

The permanent closure of abandoned mine hazards may employ methods such as backfilling with available and suitable fill material, the construction of bat gates (for adits) or bat cupolas (for shafts), and the use of expansive polyurethane foam (PUF), or a combination of these methods. In 2008, 124 hazards were permanently secured on public lands in Nevada.

Bat Friendly Closure Projects

The Division works with several State and Federal agencies to identify adits and shafts which may be suitable for bat habitat and would benefit from bat-compatible closures such as bat gates and bat cupolas. Prior to any permanent closure, such as a backfill, pre-closure surveys are performed to confirm that the closure will not negatively impact significant biological habitat. These surveys are conducted by appropriately trained biologists working for one or more of our partnering agencies; Nevada Department of Wildlife, Nevada Natural Heritage Program, Bureau of Land Management, US Forest Service. In 2008, pre-closure surveys were conducted at more than 120 sites in Nevada.

Grants received by the Department of the Interior from land sales under Southern Nevada Public Land Management Act (SNPLMA) Rounds 4 and 5 were used to fund archaeological and biological surveys on 344 previously identified orphan abandoned mine hazards in Clark County. The hazards are

located on public lands managed by BLM, USFS and NPS. Survey work began in 2006 and was in-progress throughout 2008. Funding from a portion of these grants was earmarked for the construction of bat-compatible closures (e.g. bat gates, bat cupolas) on those hazards identified as containing potential or significant bat habitat. For those hazards having no apparent habitat or usage potential, funding was allocated for permanent closure including polyurethane foam (PUF) plug seals and backfilling.

Initial bat survey work was done in Clark County from 1999 to 2003 by Pat Brown and Bob Berry; Bat Conservation International; Dr. Rick Sherwin, Christopher Newport University, Newport News, Virginia; the Harry Reid Center for Environmental Studies at the University of Nevada, Las Vegas; and Christopher Ross of the BLM Nevada State Office. Staff from the US Army Corps of Engineers conducted surveys in 2006 and additional work was conducted in 2007 by Dr. Rick Sherwin and Christopher Ross. During 2007, 48 hazards were identified as suitable for bat compatible closure on BLM lands.

Construction work was contracted to the US Bureau of Reclamation (BOR), Boise, Idaho office. The project manager was A.J. Mitchell; construction foreman Steve Scrivner; construction crew: Kevin Colby, Rick Knott and Sam Thomas. During 2008, the BOR crew constructed 6 bat-friendly cupolas in Clark County, see Figure 8. The US Forest Service installed 15 gates or cupolas on public lands in Nye, Washoe and White Pine counties during 2008.

Backfill and PUF Closures

For those hazards determined to have no significant bat usage or habitat potential, backfill or PUF plug closures were employed. In 2008, a total of 76 hazards were backfilled and 27 were closed with PUF plugs in Nevada. Five hazards were backfilled and two were filled with PUF plugs in Washoe County by NDOM staff. Four hazards were backfilled and six closed with PUF plugs by the USFS in Washoe and White Pine counties. Volunteers from the Operating Engineers Local 3 Apprenticeship facility in Wadsworth backfilled 27 hazards on BLM-managed lands in Washoe County.

As part of the SNPLMA funded program, 59 hazardous mine openings were backfilled or PUF plugged on BLM-managed lands in Clark County, see Figure 8. Since Clark County is situated in the Mojave Desert geographic region, hazards located below the 5,000 foot elevation, and cleared for permanent closure, were also evaluated for desert tortoise. Tortoise survey work was conducted by Sheila Lehman and Erika Balderson of BEC Environmental, Inc. of Las Vegas, Nevada.

Of the 59 hard closures, the BOR crew secured 19 hazards using PUF plugs. The PUF was reinforced with rock and was covered with rock and soil to prevent exposure to fire and sunlight (ultraviolet radiation). The PUF was air-lifted by helicopter to a number of locations where steep terrain and cross-country travel restrictions prevented access by wheeled vehicles. The remaining forty hazards were backfilled with waste rock dump material so that no open spaces remained. The material was mounded over the opening to allow for settling. The backfill work was completed by the BOR crew with a D-6 dozer. During backfill operations, BEC Environmental, Inc. staff conducted on-site monitoring for desert tortoise. None were encountered during any of the backfill or PUF plug operations.



Figure 8. “Before” and “After” Images of Hazards Permanently Secured by the Bureau of Reclamation in Clark County.

Table 3 summarizes backfill projects from 1999 through 2008.

Table 3. Summary of Completed Backfill Projects – 1999-2008

1999	Total of 6 south of Henderson in Clark County (BLM)
2000	Total of 13 south and west of Henderson in Clark County (BLM)
2001	Total of 22 near Goodsprings in Clark County (BLM)
2002	Total of 21 near Goodsprings in Clark County (BLM) Total of 7 on Peavine Mountain, northwest of Reno, Washoe County (USFS)
2003	Total of 41 in the Searchlight and Nelson areas of Clark County (BLM)
2004	Total of 45 in Esmeralda and Nye Counties near Tonopah (BLM)
2005	Total of 55 , 37 in Beatty/Rhyolite, Nye County, 18 in Perry Canyon, Washoe County (BLM)
2006	Total of 53 , in Ray Camp north of Tonopah in Nye County (BLM)
2007	Total of 108 , in Douglas, Esmeralda and Washoe counties (BLM)
2008	Total of 93 in Clark and Washoe counties (BLM) Total of 10 in Nye, Washoe and White Pine counties (USFS)
	<u>GRAND TOTAL BLM THROUGH 2008 – 457</u>
	<u>GRAND TOTAL USES THROUGH 2008 – 17</u>

Summer Intern Program

The Division completed its eighth summer intern program in 2008. Eight students from the Mackay School of Earth Sciences and Engineering, University of Nevada, Reno were hired. The eight interns were Patricia Capistrant, Corbin Carlos, Jason Henderson, Barret Loehden, Luis Rodriguez, Greg Saunders, Trenton Sweeney and Rachel Wearne. The Division appreciates the great work they performed during the 14 weeks of the program, see Figure 9. This program helps to advance the AML program, and provides the students with valuable field experience in map reading, data collection, land status research, and geological investigation. Figure 10 is a chart illustrating the monthly hazard discovery, securing and orphan securing efforts made during 2008. It clearly shows the interns' presence during the May-August time frame had a marked positive impact on the program. Working in 11 counties, the interns secured 146 hazards, completed inspection/assessment/repair visits to 189 previously secured hazards, logged 654 new hazards and logged 3,820 non-hazards.



Figure 9. 2008 Summer Interns Performing Inventory and Securing Work Throughout Nevada.

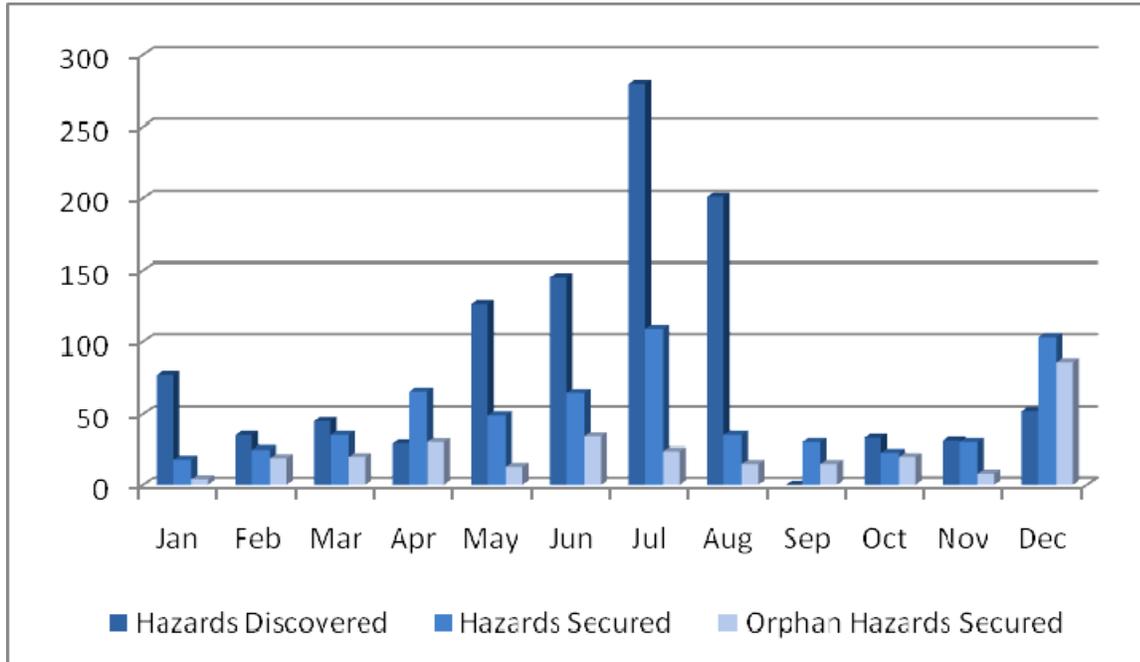


Figure 10. Hazards Discovered, Hazards Secured and Orphan Hazards Secured 2008

Contracted AML Work

In 2008, Geotemps, Inc. was awarded one \$50,000 contract to secure previously identified orphan hazards and to locate and log new hazards and non-hazards. Contractors John Morley and Ken Wilson secured 53 hazards, logged 106 new hazards and 480 non-hazards from late-September through December in Churchill, Esmeralda, Lyon, Nye, Washoe and White Pine counties. Similar to the summer interns' impact, the impressive contributions by the contractors to our AML program can also be seen in Figure 12.

In 2007, a program was initiated through the Bureau of Land Management to accelerate the AML inventory process in highly-populated Clark County. A grant was obtained through Round 6 of the Southern Nevada Public Lands Management Act (SNPLMA) for personnel and equipment to investigate and rank AML hazards and log non-hazards. The work was contracted to Great Basin Institute and their subsidiary Nevada Conservation Corps. Training of the four personnel was conducted by NDOM. Work began in October of 2007 and was completed in June of 2008. A total of 382 hazards were investigated and ranked, 197 in 2007 and 185 in 2008. A total of 2,351 non-hazards were visited and logged, 755 in 2007 and 1,596 in 2008.

Scout Projects

In 1992, a young Eagle Scout candidate presented NDOM with a proposal to secure mine openings for his Eagle Service project in Washoe County. This volunteer effort was very successful and has led to many other projects throughout Nevada. In 2008, 16 Eagle projects were completed in Clark,

Douglas, Pershing and Washoe Counties resulting in 61 mine openings secured and 5 repairs made to previously existing fences. Through 2008, 94 Scout projects (92 Eagle Scout and 2 Girl Scout) have been completed resulting in 488 orphan hazards secured and 60 previously secured hazards re-built or restored. Figure 11 shows several Eagle Scout projects in Nevada.

Appendix D lists the accomplishments of Scouts in the Nevada AML program.



**Figure 11. Boy Scout Eagle Service Projects (from top to bottom):
Jeff Mohlman with Bill Durbin (Clark County), Travis Peterson (Washoe County), Justin Wall and his formidable work crew (Clark County) and Eli Bagley and work crew (Washoe County).**

Performance Measures

The Legislature requires state agencies to have performance measures in place for all of their major programs. For the AML program the Division has two performance indicators: 1) maintain the number of secured hazardous mine openings to the number of hazardous mine openings identified, logged and ranked at a minimum of 70% (71.7% in 2008), and 2) maintain the number of public awareness and education presentations concerning the Nevada mineral industry and abandoned mines per staff member at a minimum of 12 per year (17.2 in 2008). The Division has consistently attained or surpassed these goals.

Funding

The Division's AML program is funded by three major revenue sources: 1) mining claim fees, 2) surface disturbance fees paid on new mining plans of operations on public lands, and 3) grants from the Bureau of Land Management. As of July 16, 2001, \$1.50 of every mining claim filing collected by the county on behalf of the Division is dedicated to the AML program (NAC 513.315). The Division collects a one-time fee of \$20 per acre for every acre of permitted disturbance associated with new mining operations on public lands. The Division has an assistance agreement with the Bureau of Land Management, which provides annual support for the AML program, depending on available funding. Table 4 shows the revenues received by the Division from these three revenue sources for the Nevada fiscal years 2002 through 2008.

Table 4. Revenue to the AML program for the fiscal years 2002 through 2008.

Year	BLM Grants	Mining Claim Fees	Disturbance Fee	Total
2002	\$60,000	\$140,856	\$37,440	\$238,296
2003	\$66,204	\$157,056	\$36,800	\$260,060
2004	\$60,000	\$210,596	\$95,940	\$366,536
2005	\$70,000	\$227,221	\$23,476	\$320,697
2006	\$60,000	\$249,763	\$36,824	\$346,587
2007	\$10,000	\$278,493	\$34,126	\$322,619
2008	\$50,000	\$317,625	\$4,080	\$371,705

AML revenue is used to pay salary expenses, travel expenses, the summer intern program, vehicle expenses, and field supplies such as fence posts, signs, and barbed wire. The revenue is also used to support the AML public awareness program through school presentations, video distributions, brochures, magnets, pencils, bumper and hard hat stickers, and other means of outreach.

Summary

The Nevada Division of Minerals Abandoned Mine Lands program continues to make good progress in the discovery and securing of abandoned mine hazards across Nevada. The total number of hazards discovered increased in 2008 and the number of securings completed in 2008 remained at a level well above the historical average. This is despite the fact that much of the remaining work is located in the more remote, less accessible areas of the state. The combined help of the Nevada mining industry, the federal land management agencies, the summer intern program, and many volunteers have greatly enhanced the efforts of the NDOM staff.

The public awareness program reached over 20,000 people directly in 2008 through personal interaction with students, teachers, parents and members of civic groups and organizations and the media. Thousands of other people may have been impacted through a “Stay Out and Stay Alive” public service announcement on television or reading an AML brochure brought home by a student.

Despite Nevada’s tremendous population growth and the growing number of visitors that recreate in Nevada, there has been no significant increase in the number of injuries or fatalities related to abandoned mine hazards. It is the sincere hope of the NDOM staff that the mine backfill efforts, fences, barricades and signs, and the awareness brought to people through the “Stay Out and Stay Alive” message are factors that contribute to keeping the incident rate as low as possible.

The Commission on Mineral Resources and the Nevada Division of Minerals will continue to aggressively support the AML program through fieldwork and public awareness because the only satisfactory number of abandoned mine injuries or fatalities is **ZERO!**

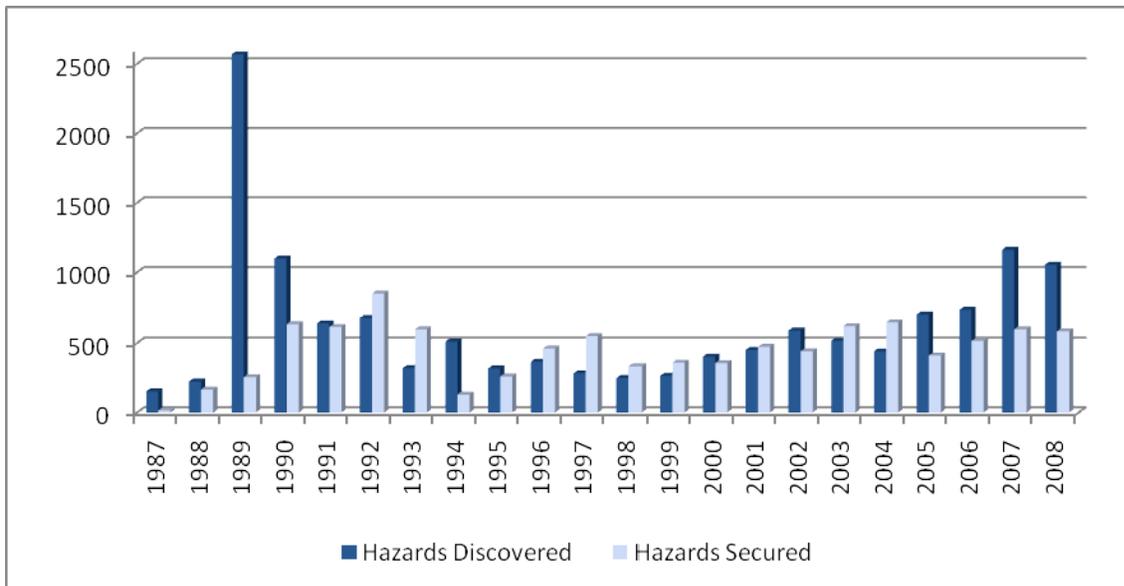
Acknowledgements

The authors would like to draw attention to, and gratefully acknowledge, the many efforts of those at the Division who provide integral support to the AML Program. Field Specialist, **George Bishop**, who manages all communication and equipment issues, whether it be related to office, field, personnel or vehicles. Administrative Assistant, **Linda Wells**, who works tirelessly to keep the AML database as up-to-date as possible and send out notification letters, while also addressing the many Human Resource issues that arise. Deputy Administrator, **Doug Driesner**, who manages all AML related contractual agreements and spearheads the summer intern interview and hiring process. Administrative Assistant, **Debbie Selig**, who manages the Las Vegas office, while providing invaluable computer hardware and software support to the Division. Program Officer, **Wanda Martin**, who manages all budget and accounting issues, including our numerous and varied Work Programs. Field/GIS Specialist, **Paul Buffington**, who enthusiastically tackles the many safety facets of our program, supervises the contractor and intern programs, and continues to maximize our field efficiency by integrating our AML efforts with the ever increasing capabilities of a geographic information system (GIS).

Appendix A

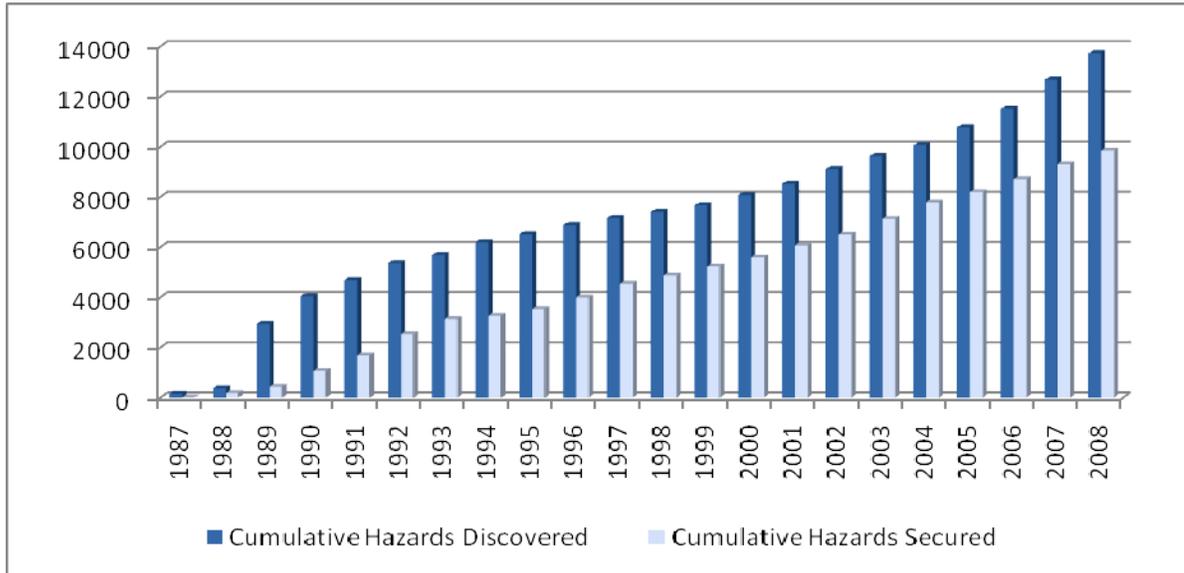
Hazards Discovered and Hazards Secured from 1987 through 2008.

	Hazards Discovered	Cumulative Hazards Discovered	Orphan Hazards Secured	Non-Orphan Hazards Secured	Hazards Secured	Cumulative Hazards Secured
1987	153	153	0	16	16	16
1988	223	376	13	153	166	182
1989	2568	2944	27	228	255	437
1990	1099	4043	91	545	636	1073
1991	642	4685	112	505	617	1690
1992	681	5366	41	807	848	2538
1993	319	5685	94	506	600	3138
1994	510	6195	22	108	130	3268
1995	318	6513	114	147	261	3529
1996	365	6878	185	277	462	3991
1997	282	7160	170	381	551	4542
1998	248	7408	93	240	333	4875
1999	265	7673	86	274	360	5235
2000	403	8076	213	144	357	5592
2001	451	8527	320	154	474	6066
2002	591	9118	307	135	442	6508
2003	516	9634	441	182	623	7131
2004	440	10074	389	262	651	7782
2005	706	10780	304	107	411	8193
2006	739	11519	217	299	516	8709
2007	1162	12681	374	226	600	9309
2008	1054	13735	288	298	586	9845

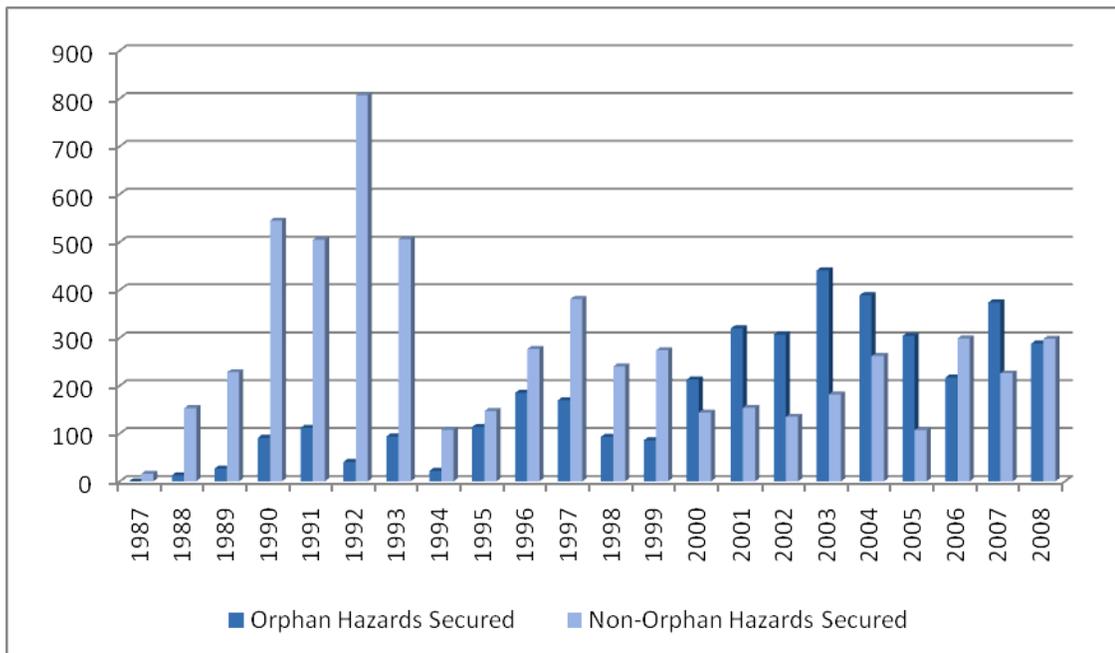


Hazards Discovered and Hazards Secured on an Annual Basis from 1987 to 2008

Appendix A (continued)



Cumulative Hazards Discovered and Secured on an Annual Basis 1987 through 2008



Orphan and Non-Orphan Hazards Secured on an Annual Basis 1987 through 2008

Appendix B. Nevada Revised Statutes (NRS) pertinent to the AML Program

NRS 455.030 Board of county commissioners to transmit information concerning dangerous condition at mine no longer operating to sheriff or constable; service of notice upon owner or responsible person.

1. If a board of county commissioners receives information from the division of minerals of the commission on mineral resources that there is in the county a dangerous condition that results from mining practices which took place at a mine that is no longer operating, if the information identifies a person responsible for the condition, the board shall transmit this information to the sheriff or the constable of the township where the condition exists.

2. Upon receipt of information pursuant to subsection 1 or upon the filing of the notice, as provided for in NRS 455.020, the sheriff or constable shall serve a notice, in the same manner and form as a summons, upon each person identified as owner or otherwise responsible.

[3:16:1866; B §§ 111; BH §§ 292; C §§ 273; RL §§ 3235; NCL §§ 5632]—(NRS A 1983, 905; 1987, 1869; 1993, 1625; 1999, 3624)

NRS 455.040 Contents of notice; judgment; criminal penalty.

1. The notice served pursuant to subsection 2 of NRS 455.030 must require the person or persons to appear before the justice of the peace of the township where the hole, excavation, shaft or other condition exists, or any municipal judge who may be acting in his place, at a time to be stated therein, not less than 3 days nor more than 10 days from the service of the notice, and show, to the satisfaction of the court, that the provisions of NRS 455.010 to 455.180, inclusive, or the standards established by the commission on mineral resources for the abatement of dangerous conditions have been complied with, or if he or they fail to appear, judgment will be entered against him or them for double the amount required to abate the condition.

2. All proceedings had therein must be as prescribed by law in civil cases.

3. Such persons, in addition to any judgment that may be rendered against them, are liable and subject to a fine not exceeding the sum of \$250 for each violation of the provisions of NRS 455.010 to 455.180, inclusive, which judgments and fines must be adjudged and collected as provided for by law.

[4:16:1866; B § 112; BH § 293; C § 274; RL § 3236; NCL § 5633]—(NRS A 1979, 1476; 1987, 1869; 1993, 881)

NRS 513.094 Additional fee; administrator to establish program to discover dangerous conditions of nonoperating mines; employment of qualified assistant; regulations.

1. An additional fee, in an amount established pursuant to subsection 4, is imposed upon all filings to which NRS 517.185 applies. Each county recorder shall collect and pay over the additional fee, and the additional fee must be deposited in the same manner as provided in that section.

2. The administrator shall, within the limits of the money provided by this fee, establish a program to discover dangerous conditions that result from mining practices which took place at a mine that is no longer operating, identify if feasible the owner or other person responsible for the condition, and rank the conditions found in descending order of danger. The administrator shall annually during the month of January, or more often if the danger discovered warrants, inform each board of county commissioners concerning the dangerous conditions found in the respective counties, including their degree of danger relative to one another and to those conditions found in the state as a whole. In addition, the administrator shall work to educate the public to recognize and avoid those hazards resulting from mining practices which took place at a mine that is no longer operating.

3. To carry out this program and these duties, the administrator shall employ a qualified assistant, who must be in the unclassified service of the state and whose position is in addition to the unclassified positions otherwise authorized in the division by statute.

4. The commission shall establish by regulation:

(a) The fee required pursuant to subsection 1, in an amount not to exceed \$4 per claim.

(b) Standards for determining the conditions created by the abandonment of a former mine or its associated works that constitute a danger to persons or animals and for determining the relative degree of danger. A condition whose existence violates a federal or state statute or regulation intended to protect public health or safety is a danger because of that violation.

(c) Standards for abating the kinds of dangers usually found, including, but not limited to, standards for excluding persons and animals from dangerous open excavations.

(Added to NRS by 1987, 1867; A 1993, 298, 1683; 1995, 579; 1999, 890, 3627; 2001, 66)

NRS 513.103 Account for the Division of Minerals: Creation; sources, lapse and use of money in Account.

1. The Account for the Division of Minerals is hereby created in the State General Fund.
2. The following special fees and money must be deposited in the Account:
 - (a) All fees collected pursuant to NRS 513.094, 517.185 and chapter 522 of NRS.
 - (b) All money collected pursuant to NRS 235.016.
 - (c) Any money received by the Division from a county pursuant to NRS 513.108.
 - (d) All fees collected pursuant to NRS 534A.080.
 - (e) Any money appropriated to the Division from the State General Fund.
3. No money except that appropriated from the State General Fund lapses to the State General Fund.
4. The money in the Account is appropriated to the Division. The money deposited in the Account pursuant to paragraph (a) of subsection 2, and the interest earned thereon, must be expended for the purposes of administering chapter 522 of NRS and the provisions of this chapter, except for NRS 513.108. The money deposited pursuant to paragraphs (b) and (c) of subsection 2, and the interest earned thereon, must be distributed to the counties pursuant to NRS 513.108, except that portion required to pay the cost of administering the provisions of that section. All interest earned on the Account must remain in the Account.

(Added to NRS by 1983, 2070; A 1985, 303; 1987, 1868; 1989, 141; 1991, 1779; 1993, 111, 1684; 1995, 509)

NRS 513.108 Abatement of dangerous condition of non-operating mines; reimbursement of Division.

1. The board of county commissioners in each county may apply to the Division for money to abate a dangerous condition resulting from mining practices which took place at a mine that is no longer operating.
2. The Division shall, within the limits of the money available pursuant to paragraphs (b) and (c) of subsection 2 of NRS 513.103, provide counties with money to abate such dangerous conditions based on the relative degree of danger of those conditions.
3. If a county which receives money from the Division subsequently receives monetary compensation from the mine owner or other person responsible for the existence of the dangerous condition, it shall reimburse the Division to the extent of the compensation received. Any money received by the Division pursuant to this subsection must be deposited in the Account for the Division of Minerals created pursuant to NRS 513.103.

(Added to NRS by 1989, 141; A 1991, 1780; 1993, 1684)

NRS 235.016 Royalties for medallions and bars; reports by Director; deposit of money collected.

1. The Director shall set and collect a royalty for the use of The Great Seal of the State of Nevada from the mint which produces the medallions or bars. The amount of the royalty must be:
 - (a) Based on the usual and customary fee charged as a commission by dealers of similar medallions or bars; and
 - (b) Adjusted at least once each year to ensure it is competitive with the usual and customary fee.
2. The Director shall report every 6 months to the Legislature, if it is in session, or to the Interim Finance Committee, if the Legislature is not in session. The report must contain:
 - (a) The amount of the royalties being charged; and
 - (b) The information used to determine the usual and customary fee charged by dealers.
3. The money collected pursuant to this section must be deposited in the Account for the Division of Minerals created pursuant to NRS 513.103.

(Added to NRS by 1989, 140; A 1991, 1758; 1993, 1537; 1999, 3620)

NRS 519A.250 Operator to provide division of minerals copy of filing of plan of operation or amended plan of operation; fee; refunds; use of money collected; division to file report with governor and legislature.

1. An operator who is required by federal law to file a plan of operation or an amended plan of operation with the United States Bureau of Land Management or the United States Forest Service for operations relating to mining or exploration on public land administered by a federal agency, shall, not later than 30 days after the approval of the plan or amended plan, provide the division of minerals of the commission on mineral resources with a copy of the filing and pay to the division of minerals a fee in an amount established pursuant to subsection 5 for each acre or part of an acre of land to be disturbed by mining included in the plan or incremental acres to be disturbed pursuant to an amended plan.
2. The division of minerals shall adopt by regulation a method of refunding a portion of the fee required by this section if a plan of operation is amended to reduce the number of acres or part of an acre to be disturbed pursuant to the amended plan. The refund must be based on the reduced number of acres or part of an acre to be disturbed.

3. All money received by the division of minerals pursuant to subsection 1 must be accounted for separately and used by the division of minerals to create and administer programs for:

(a) The abatement of hazardous conditions existing at abandoned mine sites which have been identified and ranked pursuant to the degree of hazard established by regulations adopted by the division of minerals; and

(b) The education of the members of the general public concerning the dangers of the hazardous conditions described in paragraph (a).

All interest and income earned on the money in the account, after deducting applicable charges, must be deposited in the account for the division of minerals created pursuant to NRS 513.103.

4. On or before February 1 of each odd-numbered year, the division of minerals shall file a report with the governor and the legislature describing its activities, total revenues and expenditures pursuant to this section.

5. The commission on mineral resources shall, by regulation, establish the fee required pursuant to subsection 1 in an amount not to exceed \$30 per acre.

(Added to NRS by 1989, 1286; A 1989, 2063; 1991, 1780; 1993, 210, 211, 1687; 1995, 511; 1999, 891, 3631; 2001, 66)

NRS 41.0331 Construction of fence or other safeguard around dangerous condition at abandoned mine. A person, the State of Nevada, any political subdivision of the state, any agency of the state or any agency of its political subdivisions is immune from civil liability for damages sustained as a result of any act or omission by him or it in constructing, or causing to be constructed, pursuant to standards prescribed by the commission on mineral resources, a fence or other safeguard around an excavation, shaft, hole or other dangerous condition at an abandoned mine for which the person, state, political subdivision or agency is not otherwise responsible.

(Added to NRS by 1989, 1556)

Appendix C. Nevada Administrative Code (NAC) pertinent to the AML Program

DANGEROUS CONDITIONS CREATED BY ABANDONMENT OF MINES

NAC 513.200 Definitions. (NRS 513.094) As used in NAC 513.200 to 513.390, inclusive, unless the context otherwise requires, the words and terms defined in NAC 513.205 to 513.290, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88; A by R069 -99, 8-19-99)

NAC 513.205 “Administrator” defined. “Administrator” means the administrator of the division.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88) (Substituted in revision for NAC 513.250)

NAC 513.210 “Animal” defined. “Animal” means any member of the bovine, equine, porcine or caprine species as well as dogs, cats or other animals under the restraint or control of a person.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.220 “Commission” defined. “Commission” means the commission on mineral resources.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.230 “Dangerous condition” defined. “Dangerous condition” means a condition resulting from mining practices which took place at a mine that is no longer operating or its associated works that could reasonably be expected to cause substantial physical harm to persons or animals.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.240 “Division” defined. “Division” means the division of minerals of the commission on mineral resources.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.260 “Fence” defined. “Fence” has the meaning ascribed to it in subsection 5 of NRS 207.200.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.270 “Owner” defined. “Owner” means the owner of real property who is shown to be the owner on records located in the courthouse of the county in which the real property is located.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.280 “Person” defined. “Person” means a natural person.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.290 “Responsible person” defined. “Responsible person” means the owner of a patented claim or the claimant of an unpatented claim.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.300 Scope. The provisions of NAC 513.200 to 513.390, inclusive, apply to all owners or other responsible persons for dangerous conditions on private or public land.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.310 Waiver of provisions. Upon the approval of the administrator, the division may grant a waiver from any provision of NAC 513.200 to 513.390, inclusive, if the waiver does not defeat the purpose of NRS 513.094.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.315 Additional fee. (NRS 513.094) The amount of the additional fee that is imposed on filings pursuant to subsection 1 of NRS 513.094 is \$1.50 per claim.

(Added to NAC by Commission on Mineral Resources by R069 -99, eff. 8-19-99; A by R080-1, eff. 1-16-2002)

NAC 513.320 Assignment of points to dangerous condition. The administrator or his representative shall assign a dangerous condition one to five points for the location of the condition and an additional one to five points for the degree of danger associated with the condition. The condition must then be ranked according to the total number of points for location and

degree of danger.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.330 Rating of location. The location of a dangerous condition must be rated in the following manner:

1. One point must be assigned to a dangerous condition located at least 5 miles from an occupied structure or a public road maintained by some governmental entity.
2. Two points must be assigned to a dangerous condition located between 1 and 5 miles from an occupied structure or a public road maintained by some governmental entity.
3. Three points must be assigned to a dangerous condition located $\frac{1}{2}$ to 1 mile, inclusive, from a town.
4. Four points must be assigned to a dangerous condition located not more than $\frac{1}{2}$ mile from a town or not more than 1 mile from an occupied structure or a public road maintained by some governmental entity.
5. Five points must be assigned to a dangerous condition located within a town or within 100 feet of an occupied structure or a public road maintained by some governmental entity.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.340 Rating of degree of danger. The degree of danger for a dangerous condition must be rated in the following manner:

1. One point must be assigned to a dangerous condition consisting of:
 - (a) A vertical or near vertical hole 8 to 20 feet, inclusive, in depth and highly visible upon approach;
 - (b) An inclined hole less than 50 feet deep from which a person could climb out;
 - (c) A horizontal hole with no associated stopes, winzes or raises; or
 - (d) A high wall of an open pit.
2. Two points must be assigned to a dangerous condition consisting of:
 - (a) A vertical or near vertical hole 8 to 20 feet, inclusive, in depth which is not visible upon approach;
 - (b) Any vertical or near vertical hole 20 to 50 feet, inclusive, in depth; or
 - (c) Any inclined hole greater than 50 feet deep from which a person could climb out with no associated stopes, winzes or raises.
3. Three points must be assigned to a dangerous condition consisting of:
 - (a) Any vertical or near vertical hole 50 to 100 feet, inclusive, in depth; or
 - (b) Any horizontal or inclined hole with associated stopes, winzes or raises with less than a 20 -foot vertical opening.
4. Four points must be assigned to a dangerous condition consisting of:
 - (a) Any vertical or near vertical hole which is at least 100 feet deep and visible upon approach; or
 - (b) Any horizontal or inclined hole with associated stopes, winzes or raises with a vertical opening greater than 20 feet.
5. Five points must be assigned to a dangerous condition consisting of any vertical or near vertical hole which is at least 100 feet deep and not visible upon approach.

The administrator or his representative may assign a higher degree of danger to a dangerous condition if other factors such as loose ground or the presence of water increase the danger, but the degree of danger for a single dangerous condition may not be scored higher than five points.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.350 Dangerous condition causing fatality or injury. Any dangerous condition that has been the cause of a documented fatality or injury must be ranked as a high hazard, regardless of its numerical score.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.360 Rating of dangerous condition. Dangerous conditions must be rated as follows:

1. A dangerous condition with a total number of 2 or 3 points is a minimal hazard;
2. A dangerous condition with a total number of 4 or 5 points is a low hazard;
3. A dangerous condition with a total number of 6 or 7 points is a moderate hazard; and
4. A dangerous condition with a total number of at least 8 points is a high hazard.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.370 Posting warning sign. A dangerous condition regardless of its ranking must be posted with an orange warning sign mounted on a post. The sign must be posted within 30 days after the responsible person is notified by the county sheriff of the existence of the condition.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.380 Period after notification to secure dangerous condition. Upon notification of the existence of a dangerous

condition, the responsible person shall:

1. Secure within 180 days a dangerous condition rated as a low hazard;
2. Secure within 120 days a dangerous condition rated as a moderate hazard; and
3. Secure within 60 days a dangerous condition rated as a high hazard, in the manner prescribed in NAC 513.390.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.390 Methods for securing dangerous condition. A dangerous condition must be secured by one or more of the following:

1. A barricade made of wood, metal or plastic, set in place in a solid manner with an orange warning sign attached.
2. A fence constructed to prevent a person or animal from accidentally exposing himself to the dangerous condition.
3. Permanently anchored seals constructed of material not subject to rapid decomposition and, if used to secure a vertical opening, strong enough to support the weight of any person or animal.
4. Backfilling so that no void spaces remain.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

FEE FOR FILING PLAN OF OPERATION

NAC 519A.634 Amount of fee. (NRS 519A.250) The amount of the fee that an operator must pay pursuant to subsection 1 of NRS 519A.250 is \$20 per acre or part of an acre.

(Added to NAC by Commission on Mineral Resources by R069 -99, eff. 8-19-99)

NAC 519A.635 Refund of portion of fees.

1. The division will refund to an operator a portion of the fees required by NRS 519A.250 according to the following schedule:

(a) For an amended plan:

(1) That reduces the number of acres or part of an acre to be disturbed from the original number of acres or part of an acre to be disturbed; and

(2) For which a fee has been paid to the division pursuant to NRS 519A.250, the refund is \$15 for each acre or part of an acre removed from planned disturbance by the amendment.

(b) For a plan, there is no refund.

(c) For a notice, there is no refund.

2. An operator who wishes to receive a refund must send to the administrator a written request and a copy of the approved amended plan showing the reduction in acreage. Within 20 business days after receiving a valid written request for a refund and a copy of the amended plan, the administrator or his designee will request that the state controller issue a check to the operator in an amount calculated pursuant to paragraph (a) of subsection 1.

3. As used in this section:

(a) "Notice" means a notice of intent to conduct activities that disturb the surface which is filed with the United States Bureau of Land Management or the United States Forest Service.

(b) "Operator" includes a person who is required by federal law to file a plan, an amended plan or a notice with the United States Bureau of Land Management or the United States Forest Service.

(Added to NAC by Department of Minerals, eff. 10-9-90; A by Comm'n on Mineral Resources by R080-1, 1-16-2002, R066-02, 8-23-2002)

Appendix D. Scout Projects

NEVADA SCOUT AML SECURING PROGRAM						THROUGH 12/31/2008
ORDER COMPLETED	NAME OF SCOUT	PROJECT DATE(S)	# SITES SECURED	# SITES REPAIRED	COUNTY	ID NUMBERS OF SECURED SITES
1	David Loring	Sept. 12 & 26, 1992	8	0	WASHOE	WA-10, 31, 32, 82, 109, 110, 112, 113
2	Tom Hawke	Oct. 24, 1992	5	0	WASHOE	WA-103, 143, 144, 145, 146
1992 TO DATE			13	0		
3	Chris Johnson	Sept. 4 & 11, 1993	5	0	WASHOE	WA-114, 116, 117, 118, 119
4	Eric Bowman	Oct. 3, 23, & 24, 1993	7	0	CARSON CITY	CC-13, 14, 27, 28, 31, 65, 69
1993 TO DATE			12	0		
5	Josh Johnson	Nov. 12, 1994	4	0	CLARK	CL-1407, 1408, 1409, 1425
1994 TO DATE			4	0		
6	Nate Burnett	Aug. 10, 1996	7	0	WASHOE	WA-210, 211, 220, 221, 227, 228, 232
7	Cory Miller	Dec. 14, 1996	6	0	WASHOE	WA-212, 222, 223, 224, 225, 226
1996 TO DATE			13	0		
8	Tony Kopp	Jan. 31, 1998	9	0	CLARK	CL-567, 940, 1338, 1339, 1340, 1341, 1342, 1343, 1386
9	Nathen Berger	July 18, 1998	4	0	CARSON CITY	CC-39, 40, 48, 49
10	Jason Smith	Aug. 22, 1998	6	0	DOUGLAS	DO-46, 47, 48, 50, 99, 100
11	Danny Miller	Oct. 24, 1998	3	0	WASHOE	WA-241, 253, 254
12	Logan Nordyke	Nov. 7 & Dec. 12, 1998	3	0	CARSON CITY	CC-52, 54, 61
1998 TO DATE			25	0		
13	James Smith	Jan. 17 & May 15, 1999	2	2	WASHOE	WA-49, 256 + repairs to 57, 58
14	Daniel Murrell	April 10, 1999	7	0	CLARK	CL-46, 47, 48, 49, 50, 51, 1434
15	Steven Scheetz	Sept. 25, 1999	6	0	DOUGLAS	DO-51, 52, 53, 54, 55, 131
1999 TO DATE			15	2		
16	Jason Hayes/Peter Peterson	Oct. 20 & 21, 2000	7	0	CLARK	CL-688, 689, 690, 691, 692, 693, 694
17	Glen Farnsworth	Dec. 1 & 2, 2000	7	0	WASHOE	WA-280, 281, 287, 288, 289, 295, 296
2000 TO DATE			14	0		
18	Richard Dwyer	Jan. 13 & 14, 2001	10	2	CLARK	CL-38, 39, 41, 42, 43, 58, 59, 708, 709, 1471 + repairs to 35, 36
19	Colby Cole	February 24, 2001	6	6	CLARK	CL-543, 544, 546, 547, 551, 1479 + repairs to 545, 548, 549, 550, 552, 553
20	Blake Kalmes	April 7, 2001	7	1	CLARK	CL-1464, 1465, 1466, 1467, 1469, 1470, 1480 + repairs to 1416
21	Shawn Holloman	July 14, 2001	6	0	LYON	LY- 322, 323, 324, 325, 326, 327
22	Travis Jarland	Aug. 11, 2001	5	0	LYON	LY-373, 592, 593, 594, 597
23	William Bunch	December 8, 2001	5	0	CLARK	CL-1331, 1332, 1333, 1334, 1335 - sites previously secured very poorly
2001 TO DATE			39	9		
24	Travis Cummins	Jan. 21, 2002	9	0	LYON	LY-279, 280, 299, 300, 301, 302, 679, 680, 681
25	Beau Kalmes	Feb. 9, 2002	7	0	CLARK	CL-1161, 1162, 1163, 1164, 1505, 1506, 1507
26	Thomas Schwedhelm	June 29, 2002	8	0	LYON	LY-234, 235, 236, 239, 240, 645, 659, 660
27	Ben Stanphill	Nov. 2, 2002	11	0	LYON	LY-227, 229, 230, 231, 232, 233, 707, 708, 709, 710, 711
2002 TO DATE			35	0		
28	Chris Mullins	Mar. 29, 2003	6	0	CLARK	CL-412, 413, 414, 415, 416, 417

NEVADA SCOUT AML SECURING PROGRAM						THROUGH 12/31/2008
ORDER COMPLETED	NAME OF SCOUT	PROJECT DATE(S)	# SITES SECURED	# SITES REPAIRED	COUNTY	ID NUMBERS OF SECURED SITES
29	Nathan Mayes	May 31, 2003	13	0	MINERAL	MI-396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 917
30	C.J. Gent	June 22, 2003	11	0	CHURCHILL	CH-409, 411, 412, 413, 414, 415, 416, 417, 418, 421, 422
31	Kye Stoker	June 28, 2003	5	0	CLARK	CL-1016, 1017, 1018, 1560, 1561
32	Daniel Miles	July 12, 2003	12	1	LYON	LY-687, 688, 689, 690, 691, 692, 693, 695, 696 (repair), 698, 699, 700, 701
33	Chris Rice	August 9, 2003	8	0	CHURCHILL	CH-280, 281, 282, 283, 284, 285, 286, 287
34	Chris Sipma	Sept. 6, 2003	6	2	LYON	LY-221, 222, 223, 224, 225, 226, repairs to LY-217, 218
2003 TO DATE			61	3		
35	Duncan Rickford	Jan. 10, 2004	5	0	CLARK	CL-866, 867, 868, 869, 870
36	Corey Sobrio	Mar. 20, 2004	10	0	LYON	LY-702, 703, 704, 705, 706, 751, 752, 753, 754, 769
37	Sean Hayes	Apr. 24, 2004	7	0	CLARK	CL-846, 847, 848, 849, 850, 851, 852 (USFS)
38	Chase Bodhaine	May 22, 2004	6	0	CLARK	CL-558, 559, 560, 562, 563, 564
39	John Hefner	Sept. 18, 2004	6	1	DOUGLAS	DO-130, 134, 135, 136, 150, 160, repairs to DO-132
40	Shane Donelson	Oct. 23, 2004	8	0	NYE	NY- 352, 353, 354, 355, 357, 358, 359, 360
41	Randy Sgamma	Nov. 12-13, 2004	5	3	CLARK	CL-908, 909, 912, 913, 915, repairs to CL-910, 911, 914
2004 TO DATE			47	4		
42	Kenny Booth	Jan. 2, 2005	7	0	NYE	NY-362, 363, 364, 365, 366, 367, 1020
43	John Gardner	April 30, 2005	5	0	CLARK	CL-242, 243, 244, 245, CL-1594
44	Isaiah Haywood	May 7, 2005	5	0	CLARK	CL-1235, 1236, 1237, 1238, 1239
45	Chip Holton	May 21, 2005	3	0	LYON	LY-731, 732, 735
46	McKay Miles	May 28, 2005	5	0	CLARK	CL-253, 254, 255, 256, 1595
47	Jennifer Giraud	September 24, 2005	4	0	ELKO	EL-249, 251, 252, 253
48	John Crepeau	October 29, 2005	4	0	CLARK	CL-257, 1597, 1598, 1599
49	Luke Smith	November 5, 2005	5	0	CLARK	CL-1603, 1604, 1610, 1614, 1615
50	Brad Peterson	November 19, 2005	7	0	LYON	LY-757, 758, 759, 760, 762, 763, 764
51	Steven Archer	November 19, 2005	5	1	CLARK	CL-983, 984, 985, 986, 1596, replaced old fence at CL-1454
52	Cameron Legere	Dec. 3, 2005	0	7	CLARK	repairs to CL-576, 577, 578, 580, 757, 758, 759 (USFS)
2005 TO DATE			50	8		
53	Weston Milne	January 7, 2006	5	0	CLARK	CL-1605, 1606, 1607, 1608, 1609
54	Tyson Parker	January 28, 2006	6	0	CLARK	CL-1492, 1493, 1494, 1623, 1624, 1625
55	Jacob Gibson	March 4, 2006	5	0	CLARK	CL-1495, 1496, 1497, 1498, 1626
56	Kyle LeFevre	April 22, 2006	5	0	CLARK	CL-1616, 1617, 1618, 1619, 1634
57	Stephen Erickson	May 6, 2006	4	1	CLARK	CL-596, 597, 598, 599, repairs to CL-1394
58	Mitch Benning	May 13, 2006	6	0	WASHOE	WA-104, 105, 106, 111, 112, 113
59	Jordan Wall	May 20, 2006	4	0	NYE	NY-372, 373, 374, 375 (USFS)
60	Derek Gibson	June 3, 2006	4	0	CLARK	CL-1629, 1630, 1631, 1632
61	Shane Sobrio	June 24, 2006	5	1	LYON	LY-379, 380, 381, 382, 383 (repair), 385
62	Matt Robinson	June 24, 2006	7	0	DOUGLAS	DO-153, 154, 155, 156, 157, 158, 159
63	Mitchell Walton	August 5, 2006	4	2	WASHOE	WA-96, 211, 259, 323, repairs to 212 and 258
64	Robbie Ayres	August 20, 2006	4	0	WASHOE	WA-74, 76, 77, 78

NEVADA SCOUT AML SECURING PROGRAM						THROUGH 12/31/2008
ORDER COMPLETED	NAME OF SCOUT	PROJECT DATE(S)	# SITES SECURED	# SITES REPAIRED	COUNTY	ID NUMBERS OF SECURED SITES
65	Andy Haskin	September 9, 2006	6	0	WASHOE	WA-79, 80, 82, 84, 85, 109
66	Paul Pearson	November 19, 2006	4	1	WASHOE	WA-6, 8, 61, 64, 65(repair)
67	Joshua O'Barr	December 2, 2006	4	0	CLARK	CL-106, 200, 930, 937
68	Kai Fisher	December 2, 2006	5	0	WASHOE	WA-325, 326, 327, 328, 330
2006 TO DATE			78	5		
69	Chris Chubb	April 21, 2007	0	4	CLARK	repairs to CL-1421, 1422, 1424, 1425
70	Taylor Smith	April 28, 2007	0	4	CLARK	repairs to CL-568, 569, 570, 571 (USFS)
71	Shane Palmer	May 12, 2007	5	0	CLARK	CL- 1555, 1556, 1557, 1558, 1559
72	Jared Cooper	May 19, 2007	0	5	CLARK	repairs to CL-765, 766, 1407, 1408, 1409
73	Jessica Shalita	May 20, 2007	0	3	CLARK	repairs to CL-866, 867, 1419
74	DJ Stanger	June 2, 2007	0	6	CLARK	repairs to CL-1464, 1465, 1466, 1469, 1470, 1480
75	Chris Eliason	June 16, 2007	5	0	NYE	NY-368, 369, 370, 371, 1022 (USFS)
76	Paul Herget	July 28, 2007	5	0	WASHOE	WA-355, 357, 358, 359, 360
77	Daniel Baird	Sept. 30, 2007	3	0	CLARK	CL-840, 841, 842
78	Austin Echler	December 16, 2007	3	2	CLARK	CL-946 and 947 re-secured, 1668, 1727, 1729
2007 TO DATE			21	24		
79	Jacob Trotter	January 5, 2008	4	0	CLARK	CL-800, 1652, 1653, 1654
80	Travis Peterson	January 26, 2008	4	0	WASHOE	WA-346, 347, 348, 349
81	Justin Graf	February 2, 2008	6	0	CLARK	CL-385, 386, 387, 388, 1635, 1636
82	Brian Cooper	February 16, 2008	2	0	CLARK	CL-1659, SE and E highwall portion of CL-1660 open pit fenced & posted
83	Zach Nielsen	February 23, 2008	4	0	CLARK	CL-1587, 1588, 1673, 1674
84	Jeff Mohlman	March 29, 2008	3	0	CLARK	CL-843, 844, 845
85	Casey Sylvester	March 29, 2008	10	0	PERSHING	PE-791, 793, 794, 795, 797, 797, 798, 799, 931, 941
86	Michael Erickson	April 12, 2008	3	0	CLARK	CL-1677, 1678, 1679
87	Michael Hartley	April 19, 2008	4	0	DOUGLAS	DO-166, 167, 168, 169
88	Kody Brian	April 26, 2008	4	0	CLARK	CL- 1621, 1689, 1691, 1756
89	Robert Marder	April 27, 2008	4	0	CLARK	CL-1628, 1681, 1685, 1687
90	Justin Wall	May 3, 2008	2	0	CLARK	CL-1658, portion of CL-1660
91	Dean Wilhite	May 4, 2008	4	0	WASHOE	WA-343, 344, 345, 350
92	Brennen Marshall	November 21, 2008	1	0	CLARK	CL-1721 (7 openings - room and pillar mine)
93	Doug Harris	December 13, 2008	1	5	CLARK	CL-1954, repairs to CL-53, 54, 55, 56, 57
94	Eli Bagley	December 13, 2008	5	0	WASHOE	WA-351, 352, 353, 368, 371
2008 TO DATE			61	5		
CURRENT GRAND TOTAL			488	60		
			SECURED	REPAIRED		

Appendix E. Letters of Appreciation



Dear Mr. Durbin
I really enjoyed that you taught us about mining. I was really cool when you showed us the rock with the ultraviolet light. I never knew that people used to brush their teeth with baking soda right out of the box. Your job is very cool. Thank you for the cool pencils and awesome rocks. I really liked the bumper sticker and magnet. I promise I would never go to any abandoned mines I'll stay out and stay alive.
Sincerely,
Leslie

- 4th graders at Hayden Elementary School, North Las Vegas

October 10 - 2008

Dear Algen and George,

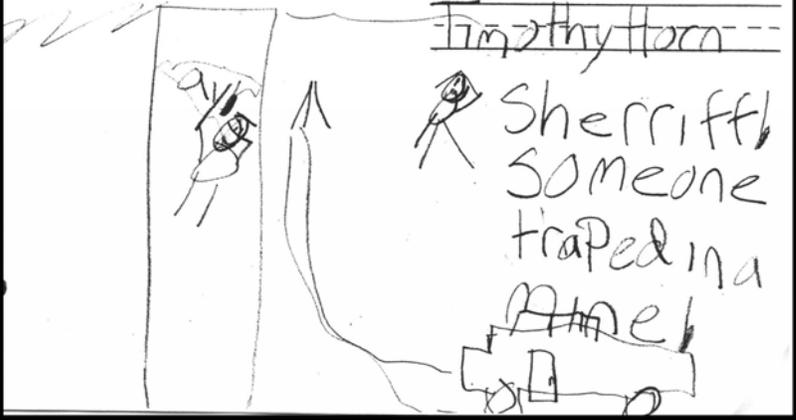
Thank you for showing
up cool rocks and telling us
about the rocks too.

Sincerely Chris

Dear Geologists

Thank you for teaching us about
if you see some one call
Sherriff Department. Thank you for
showing us "Stay out stay alive" and
the silver and gold coins.

Sincerely,
Timothy Horn



Sherriff/
Someone
traped in a
mine

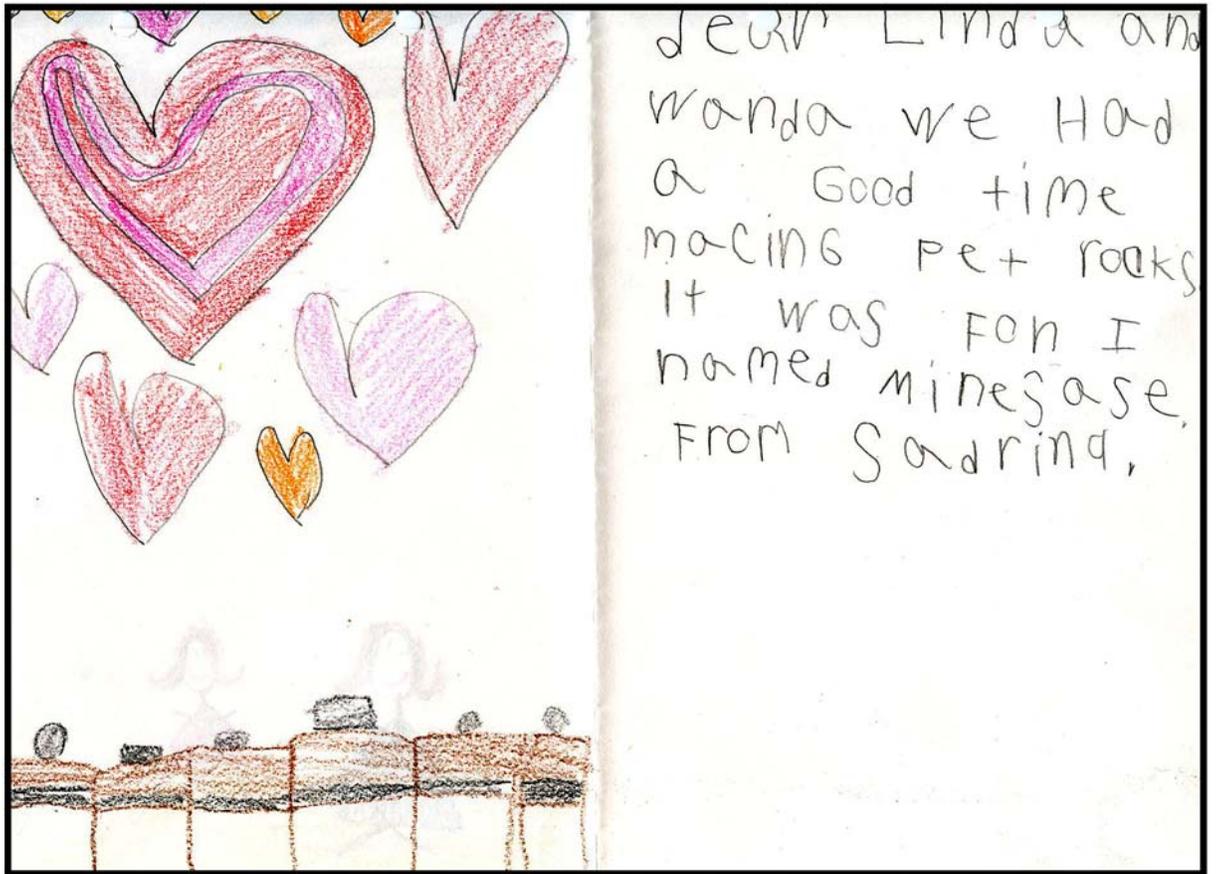
- 3rd graders at Bordewich-Bray Elementary School, Carson City

Dear Mr. Coyner,
I loved seeing and sitting
on the outcrop. My
favorite part was walking
there and back. Thank you
for telling us that tooth-
paste is made out of rocks.
Ha hahaha. I would love
to be a geologist!

Love,
Mackenzie



- 3rd graders at Jerry Whitehead Elementary School, Sparks



DEAR LINDA AND
WANDA WE HAD
A GOOD TIME
MAKING PET ROCKS
IT WAS FUN I
NAMED MINEGASE,
FROM SANDRINE,

- 2nd grader at Cottonwood Elementary School, Fernley

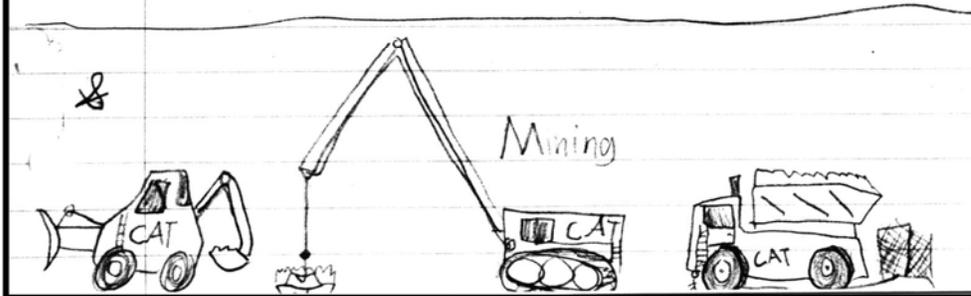
Dear Paul, Thank you
for visiting our class.
Paul. I enjoyed learning
about Gold and how
it is used.

Your friend,
Austin

- 5th grader at Mark Twain Elementary School, Carson City

Thanks for showing and teaching us
about rocks. I never found rocks
to be so interesting! Thanks for
the M&Ms® and stickers.
It was fun learning about
rocks. Thanks again!

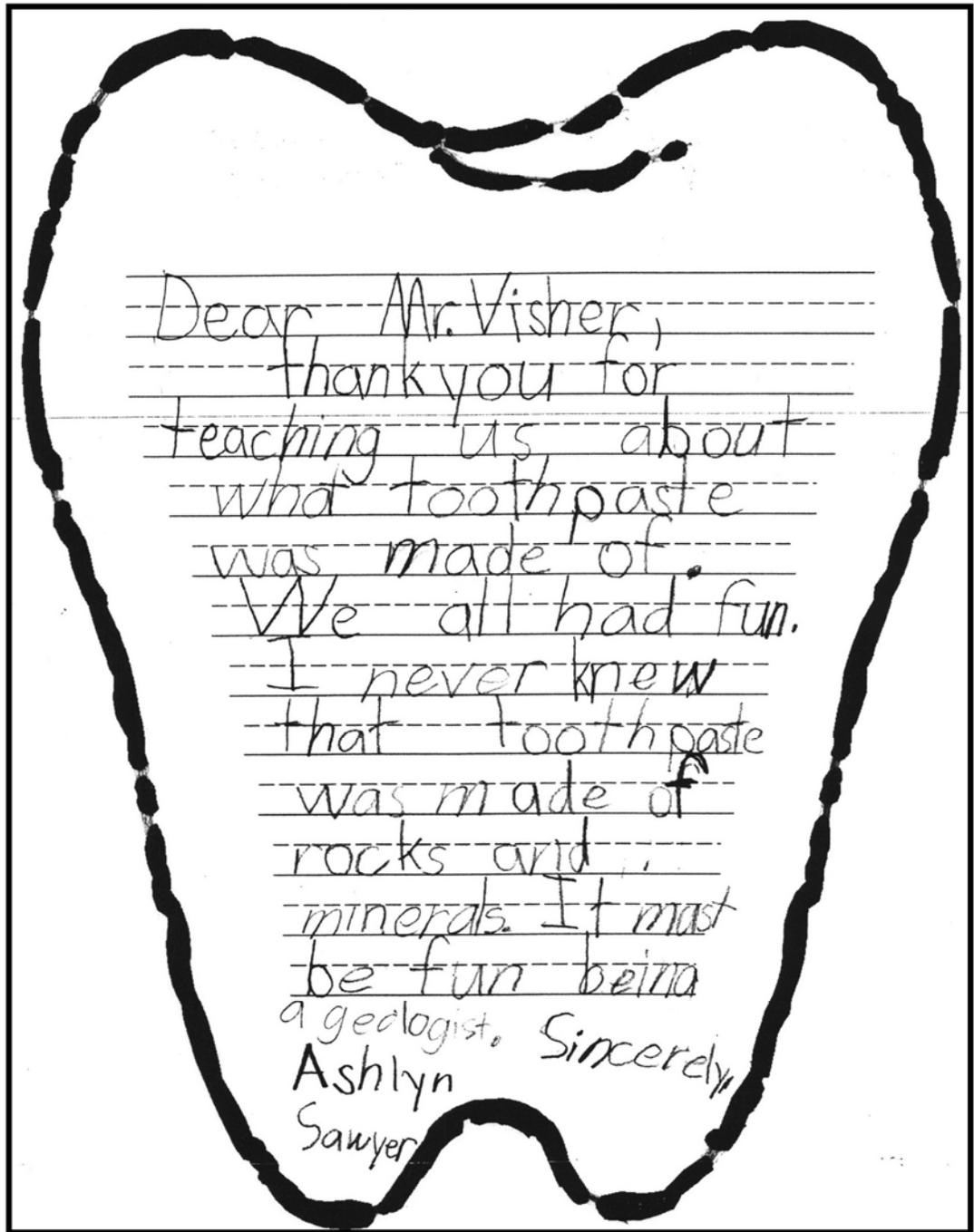
Sincerely,
Nathan Stucki



Thank you teaching us about
mining. I never knew what kinds
of rocks and minerals would be
in food, band-aids, and other things.
I liked holding them and looking
them. They were very interesting to
look and learn about them. Also,
thank you for the bumper sticker,
the sticker, the magnet, the pencil,
and the safety thing about the
dangers of mines.

Sincerely,
Derek Stuber

- 4th graders at Spanish Springs Elementary School, Sparks



- 2nd grader at Miguel Sepulveda Elementary School, Sparks