

## **History of the Nevada Bureau of Mines and Geology**

The following chapter by Joseph V. Tingley was published in:

Socolow, A.A., ed., 1988, The state geological surveys - A history:  
Association of American State Geologists, 499 p.

Since 1987, Directors and Acting Directors have been:

James L. Hendrix, 1987-88, Acting Director

Harold F. Bonham, Jr., 1993-95, Acting Director

Jonathan G. Price, 1988-1993, and 1995-2012, Director and  
State Geologist

James Faulds, 2012-present, Director and State Geologist

## NEVADA

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Reno, NV 89557-0088. Phone 702-784-6691.

### HISTORICAL SEQUENCE, NAMES AND TITLES OF ORGANIZATIONAL DIRECTORS AND DATES SERVED:

**State Geologist, 1865**

Position not filled

**State Mineralogist, 1866-78**

Richard H. Stretch, 1866

A. F. White, 1867-70

H. R. Whitehill, 1871-78

**State Analytical Laboratory, 1895-1985**

Directors:

Robert D. Jackson, 1895-1899

Charles P. Brown, 1899

George J. Young, 1900-14

Francis Church Lincoln, 1914-24

Walter S. Palmer, 1924-51

Vernon E. Scheid, 1951-72

John H. Schilling, 1973-85

**Nevada Bureau of Mines, 1929-71**

Directors:

John A. Fulton, 1929-39

Jay A. Carpenter, 1939-51

Vernon E. Scheid, 1951-71

**Nevada Bureau of Mines and Geology, 1971- present**

Directors:

Vernon E. Scheid, 1971-72

John H. Schilling, 1972-87

### THE NEVADA BUREAU OF MINES AND GEOLOGY

By Joseph V. Tingley

#### THE BACKGROUND YEARS: 1865-1929

On March 20, 1865, during its first session, the Nevada Legislature created the position of state geologist; an act was passed that provided for appointment by the Board of Regents of a State Geologist of Nevada who,

... shall proceed to make a preliminary and superficial geological survey of the mineral regions of the state, ... and to prepare a map, marked and colored in such a manner as to indicate the general geological

divisions, as developed in the country examined.

Not more than 8 months were to be occupied in this task, and the grand sum of \$6,000 was appropriated to defray expenses. Even with these formidable conditions there were applicants for the job, but the regents deemed it "inexpedient" to make the appointment and the position was not filled.

The following year, during the second session of the legislature, an act was passed which created the office of State Mineralogist. The State Mineralogist was to serve under the Board of Regents and was, among other things, to be superintendent of a state mining school; to visit and examine

mineral properties within the state; to collect, mark, and catalog mineral specimens; to devise the course of studies at the mining school; to teach at the school; and to collect information concerning the different modes of working mines and reducing ores. In addition, he was to establish and supervise an assaying facility at the mining school which would, at a fee which covered only costs, analyze ores delivered thereto. Professor Richard H. Stretch was appointed State Mineralogist in the spring of 1866 and immediately set forth to accomplish the tasks requested by the Legislature. As State Mineralogist serving under the Board of Regents, Stretch also became the first employee of the University of Nevada. By the time he filed his first report to the Regents in December 1866, he had compiled the first comprehensive accounting of activity in the nearly 150 mining districts in the state. In addition to comments on mines and mining operations, Stretch's report also noted that the Legislature had failed to appropriate funds with which to pay him. Stretch did not serve another term and was succeeded by A. F. White in 1867. White, a Presbyterian minister, was State Superintendent of Public Instruction and a member of the Board of Regents. In his first annual report, White also remarked that no provision had been made for payment of his salary or expenses and,

To discharge the duties legally required of me as State Mineralogist, I have therefore economized as best I could; have advanced my own funds at a heavy personal sacrifice; and have labored under many disadvantages.

In the spring of 1868 White joined with the party of Clarence King of the U.S. Geological Survey who was then engaged in work on the Nevada portion of his survey of the Fortieth Parallel. King provided White with field support; White gave his services as a mineralogist to the party and was

thereby able to continue his coverage of mining activity in the state.

In 1869, the position of State Mineralogist was removed from the control of the Board of Regents and was made an elective office; White was appointed to continue in the position until the general elections of 1870. H. R. Whitehill was elected to the position and took office in January 1871. Whitehill held the job until 1878 when the office was abolished by the Legislature. The reports of the State Mineralogist, issued biennially during the 12-year life of the office, are in some cases the only surviving records of many mining operations in remote parts of the state.



Robert D. Jackson, first Director of the State Analytical Laboratory, 1895-99. Source: Mackay School of Mines archives.

In 1888, a School of Mining was formally organized at the new Reno campus of the University of Nevada with Robert D. Jackson as its first Director. In 1895 the Nevada legislature charged the University with the responsibility of providing an assay service for citizens of the state and the

Mining Analytical Laboratory was established. As the first public service division of the University, the laboratory was the organizational predecessor of the Nevada Bureau of Mines and Geology.

Jackson, in his capacity as head of the School of Mines, also became Director of the Mining Analytical Laboratory. Jackson, a respected mining engineer and educator, occupies a somewhat unique place in the history of the university. Like many mining professors, both past and present, he carried on a flourishing consulting practice in addition to his teaching duties. His outside commitments, however, took more of his time than the regents felt was proper. In 1899, when Jackson offered his resignation because of a perceived affront from the regents, it was quickly and eagerly accepted. Jackson was very popular among the

students and, when news of his departure spread, a demonstration was held on campus and the students marched through Reno in protest; Jackson inadvertently was the cause of the first student "riot" on the University of Nevada campus.

It was the duty of the Mining Analytical Laboratory to analyze, free of charge, all samples of minerals and ores submitted to it; all that was required was that the submitters be United States citizens and that the samples be from locations within Nevada. The laboratory was, however, expressly forbidden to make assays for gold or silver--the fire-assayer's lobby was apparently quite strong in the Nevada Legislature in 1895! The State Analytical Laboratory shared space with the School of Mines, and in 1895, both organizations were housed in the Hatch Building on the Reno campus.



Hatch Building, first school of mines building on the University of Nevada-Reno campus. The State Analytical Laboratory was located in this building from 1895 until shortly after 1900. Source: UNR archives.

This building, also known as the School of Mines Building, was located on the west side of the central campus area approximately on the site of the present Clark Administration Building. Shortly after the turn of the century, the school of mines expanded into a second building, the former Agricultural Experiment Station, on the southeast side of the campus. This building, later known as the Physics Building, was in the area now occupied by the Mackay Science Building. In 1905 an annex was constructed on the east side of this building to house the mining laboratories. This annex became the second home of the State Analytical Laboratory until 1908 when it, along with the rest of the school of mines, moved into the new Mackay School of Mines building.

Following Jackson's resignation in 1899, Charles P. Brown became the

second Director of both the School of Mines and of the Mining Analytical Laboratory. Brown, formerly a professor of mathematics and metallurgy at the University, died of typhoid fever a few months after his appointment. George J. Young was appointed Director of the mining school and of the state laboratory in 1900. Young had graduated from the University of California in 1899 and, in contrast to Jackson, was almost totally lacking in mining industry experience. He, again in contrast to Jackson, devoted his entire time and efforts to the school and soon earned the respect of the faculty and of the state's mining fraternity. In 1904, the School of Mines offered its first publication; Vol. 1, No. 1, *Bulletin of the Department of Geology and Mining*, by John A. Reid, described building stones in Nevada. Director Young authored the next three



The Agricultural Extension Building, located on the present site of the Mackay Science Building, was the second home of the State Analytical Laboratory. The laboratory facilities were moved into this building shortly after the turn of the century and were located in the low wing extending from the east side of the older two-story structure. Source: Nevada Historical Society.

bulletins. These works, issued in 1909, 1911, and 1912, described the ventilating systems in the Comstock mines, fires in metaliferous mines, and slime filtration.



George J. Young, Director of the State Analytical Laboratory, 1900-14. Source: Mackay School of Mines archives.

## THE MACKAY SCHOOL OF MINES

In 1906, an event that was to be a major turning-point for Nevada's mining school came about; Clarence H. Mackay and his mother, Marie Louise Mackay, widow of the late Comstock mining magnate, John W. Mackay, donated funds to build a school of mines building on the University of Nevada campus. This building, along with other financial gifts from the Mackay family, established the school--renamed the Mackay School of Mines--as one of the major mining schools in the United States. The new mines building was erected at the north end of what later became the central quadrangle of the Reno campus. The Mackay family retained the noted architect Stanford White to design the structure and a

statue of John W. Mackay was set in front. The statue, created by Gutzon Borglum, still serves as the focal point of the University of Nevada's Reno campus.

George Young continued as head of the school and thereby became the first Director of the Mackay School of Mines under its new name. In 1914 Young was replaced by Francis Church Lincoln who served as Director of the Mackay School of Mines and of the State Mining Analytical Laboratory until 1923. Lincoln was keenly interested in Nevada mining history and, during his tenure, amassed a great deal of information on the geology, past production, and mining history of Nevada's mining districts. Published privately in 1923 as *Mining Districts and Mineral Resources of Nevada*, his work became the standard reference on mining districts of the state. It has been republished twice, the last time in 1982, and remains a prime historical reference on Nevada mining districts.

## JOHN A. FULTON AND THE NEVADA BUREAU OF MINES: 1929

In 1924, Lincoln was succeeded as Director by John A. Fulton, setting the stage for another turning point in the history of the school and for the official formation of the State Bureau of Mines. Fulton, an 1898 graduate of the Nevada mining school, returned to Reno early in 1924 after some 25 years engaged in the practice of mining engineering at gold camps around the western United States. At the insistence of Emmet Boyle, former Nevada governor and also a mining engineering graduate of the Nevada School of Mines, Fulton was asked to accept the directorship of the school. He accepted the position on December 1, 1924, and embarked upon a program to strengthen both the student enrollment and the reputation of the school. Walter S. Palmer was given the position of Director of the State



The Mackay School of Mines Building as it appeared shortly after its completion in 1908. The State Analytical Laboratory was housed in this building from 1908 until 1962; the Nevada Bureau of Mines was located in the building from 1929 until 1955. Source: Mackay School of Mines archives.

Analytical Laboratory; the first person to hold that position who was not also the Director of the School of Mines. A 1905 graduate of the University of Nevada, Palmer received a mining engineering degree from Columbia University and returned to Nevada in 1910 as professor of metallurgy. In his years of service with the state laboratory he gained a reputation for his uncanny ability to call the location of samples submitted for assay, almost to the exact outcrop, just by looking at a hand specimen.

In 1929, under Fulton's directorship, the Nevada Bureau of Mines was formed as the second public service division of the University of Nevada. Fulton took personal credit for initiating legislation which led to the formation of the Bureau. In a letter to the President of the University in 1939, Fulton stated:

The mining states of the West all have a Bureau of Mines . . . The services performed by these Bureaus are of great value to the mining industry and inasmuch as mining is the paramount industry in Nevada, it seemed to me important to have such an agency here . . . I therefore, after discussing the matter with the President [of the university], had a bill introduced in the 34th legislature in 1929 establishing a Bureau of Mines. . .

Assembly Bill No. 83, approved March 29, 1929, brought the Nevada Bureau of Mines into existence. It was to be under the direction of the Board of Regents of the University and "a competent mining engineer" was to be appointed director. Clearly spelled out in the bill were objectives that Director Fulton must have had in mind. The first listed was:

To, by questionnaire or otherwise, conduct a thorough mineral survey of the state and to catalog each and every mineral deposit and occurrence, both metallic and nonmetallic of whatsoever nature . . . , and to serve as a bureau of information and exchange on Nevada mining.



Francis Church Lincoln, Director of the Analytical Laboratory, 1914-24. Source: Mackay School of Mines archives.



John A. Fulton, first Director, Nevada Bureau of Mines, 1929-39. Source: Mackay School of Mines archives.

This still remains as one of the prime functions of the organization. Another section, although much further down the page, stated that:

It shall be illegal for the director or any attaché of the bureau of mines to receive a commission or to act as agent or broker of, or for any purchaser, owner, or his or their agents of a mining property, or to act in any other than a wholly impartial way while so employed.

The Nevada Bureau of Mines was now set in a form that would carry it through the depression, a world war, and up to its next major transition. The Bureau and the Mining Analytical Laboratory, both public service organizations, along with the teaching departments, made up the Mackay School of Mines. The Bureau and the School were headed by Director Fulton; the Analytical Laboratory continued with Walter Palmer as its Director. Lines between the three segments of the school were not clearly drawn. All faculty of the school were considered to be staff of the bureau and of the lab; neither the bureau nor the laboratory had staff members solely their own.

Nevada's fight for an allocation of Boulder Dam power was started by Governor Balzar's administration about the time that the Nevada Bureau of Mines was established. The Colorado River Commission had no reliable data on the mineral resources of southern Nevada. At their request Fulton detailed Jay Carpenter, professor of mining engineering, to make a mineral survey of southern Nevada. Carpenter's work, published as the first official Bulletin of the Nevada State Bureau of Mines, Vol. 1, No. 1, Nov. 1929, formed the basis of a report subsequently given to the Secretary of the Interior by G. W. Malone. Malone, then Secretary of the Colorado River Commission and later U. S. Senator from Nevada, credited the Bureau report with results that touch us today:

... without the help of the Mackay School of Mines staff, whether it was called the

Bureau of Mines or the Mackay School of Mines, it would have been very doubtful whether I could have made the proper showing on such short notice before the Secretary of Interior, which in my opinion was absolutely necessary to secure a proper allocation of power to the state of Nevada.

Nevada received a firm power allocation and, in Director Fulton's words:

... the results we aided in obtaining justified the creation of the Bureau of Mines even if nothing else had been accomplished.

It was also during Fulton's term that the Bureau began its ventures into the publishing of timely information on the geology and mineral resources of the state. In the 10-year period between 1928 and 1938 the Bureau published 26 bulletins. The authors included Bureau personnel but many bulletins were written by geologists with the U.S. Geological Survey or with universities (such as Stanford) who were working on projects within Nevada. Each bulletin usually contained a short but complete coverage of a specific mine, mining district, or perhaps a commodity in a small portion of the state. The first two of the Fulton-era publications were issued as University of Nevada Bulletins; the third, Carpenter's mineral resource study of southern Nevada, was Vol. 1, No. 1, Bulletin of Nevada State Bureau of Mines and Mackay School of Mines; the next group of 23 bulletins combined the two organizational titles and came out as University of Nevada Bulletins, Bulletins of Nevada State Bureau of Mines and Mackay School of Mines.

### THE CARPENTER YEARS

John Fulton died in 1939 and Jay A. Carpenter was appointed Director of both the School of Mines and the Nevada Bureau of Mines. Carpenter was a 1907 graduate of the School of Mines. He remained to teach at the school between 1908 and 1910, then left to work in the mines in Tonopah, Belmont, and other Nevada camps

before returning to the University as professor of mining in 1926. Under Carpenter, the Bureau of Mines and the Analytical Laboratory continued to operate much as they had during the Fulton years; Carpenter was Director of the Nevada Bureau of Mines, Walter Palmer continued as Director of the Analytical Laboratory, and the staffs of all three divisions of the School of Mines remained largely indistinguishable.



Jay A. Carpenter, Director, Nevada Bureau of Mines, 1939-51. Source: Mackay School of Mines archives.

In 1948, the Nevada Bureau of Mines acquired its first two staff members, who were not also teaching faculty of the School of Mines, when Victor Kral and Fred L. Humphrey joined the Bureau as field engineers. Earlier, Director Carpenter had made a practice of hiring short-term, or even part-time, staff members to accomplish specific projects.

With the acquisition of its own staff, office space became a problem. The Mining Analytical Laboratory shared quarters on the second floor of the mines building with the school faculty. Space

for the new Bureau staff was found in a corner of the unfinished basement along with "overflow" publications from the Mines Library.

The Bureau of Mines continued to publish on Nevada geology and, on May 1, 1939, its publications series suffered yet another name change; bulletins were thereafter issued as University of Nevada Bulletins with the designation: "Geology and Mining Series No. --". The series numbers were consecutive, starting with the first publication in 1904, and cut across all of the various bulletin names. Bureau publications continued to stress mining district descriptions and local geology, and in 1947, the first county-scale bulletin was produced. When Carpenter directed that work be started on county studies in 1945, he intended them to be supplements to Lincoln's 1923 publication and, in line with Lincoln's work, the first few stressed mineral resources rather than general geology. The first counties chosen for study were those that had not been covered in an earlier county-study program carried out in Nevada by the U.S. Bureau of Mines (USBM). The USBM work by W. O. Vanderberg in the 1930's resulted in published reconnaissance studies of mining districts in seven of Nevada's counties. The first Nevada Bureau of Mines publication in Carpenter's new county series, Geology and Mining Series No. 46, described the mineral resources of Douglas, Ormsby, and Washoe Counties; the second, Geology and Mining Series No. 49 covered Storey and Lyon Counties; and the third, Geology and Mining Series No. 50, was Nye County alone. These counties, eventually restudied in greater detail and described in later publications, were the first of a series of bulletins which described geology and mineral resources of each of the state's seventeen counties. The last, Bulletin 101, *Geology of Elko County*, was released in 1987.

## VERNON E. SCHEID, "THE DEAN"

Following the end of World War II, Director Carpenter found himself at the head of a venerable but definitely aging institution. Most of his faculty had been at the school since at least the early 1920's. Walter Palmer, Director of the Analytical Laboratory, began his service in 1910 and Carpenter himself began teaching at the school in 1926. Faced with an increasing student enrollment brought on largely by returning servicemen, a limited budget, and a faculty that essentially had not been enlarged since the Depression, Carpenter and the school's alumni set in motion measures which led to the elevation of the Mackay School of Mines to college status. The timing of this move was rather good since, at this time, two of the University regents were mining engineering graduates of the School of Mines.



Vernon E. Scheid, first dean, Mackay School of Mines and director of the Nevada Bureau of Mines and State Analytical Laboratory, 1951-72. Source: Mrs. Vernon Scheid.

In 1951 the mining school, while retaining the name Mackay School of

Mines, became a full-fledged college within the University. Jay Carpenter retired as Director of both the School of Mines and the Bureau of Mines and was replaced by Vernon E. Scheid, the first Dean of the College of Mines. Walter Palmer also retired this same year as Director of the State Analytical Laboratory. Scheid, in addition to being Dean of the College of Mines, was appointed Director of the Nevada Bureau of Mines and Director of the State Analytical Laboratory thereby becoming the first person to hold the position as the head of all three divisions of the school. Dr. Scheid was also the first "academic" geologist to head the mining school. He held a Ph.D. from Johns Hopkins University and, prior to arriving at the Mackay School of Mines, had taught geology at the University of Idaho. Scheid first concentrated his efforts on the school and the task of accomplishing the transformation from an undergraduate-oriented hard-rock mining school to a modern college of mines with a strong graduate program. He also, however, began to build up the Bureau of Mines staff and, by 1959, had increased the staff from 2 to 8 members.

With the larger staff the need for separate Bureau quarters became apparent. In 1921, the U.S. Bureau of Mines had established a research station on the University campus housed in a small building immediately to the rear of the Mackay School of Mines building. By the early 1950's the U.S. Bureau of Mines found that they had outgrown the 1921 accommodations and moved to new quarters to the north of the campus. As the U.S. Bureau staff moved out of the old building, the Nevada Bureau staff moved in, and in 1955, the Nevada Bureau of Mines had its first official headquarters.

The building was in sad repair, the roof leaked, paint hung in curling strips from the ceilings, and later, it was found that some of the old chemical

laboratories were contaminated with radon. They were stripped of furnishings and made "safe" for occupancy. It was, however, home for the bureau for 8 years. During this time, the Analytical Laboratory continued to occupy quarters on the second floor of the School of Mines Building.

In 1953 the last of the University of Nevada Bulletins, Geology and Mining Series, was issued; No. 51, *The History of Fifty Years Mining at Tonopah*, authored by Jay Carpenter and completed 2 years after his retirement, became the last of this series. Beginning in 1957 publications of the Nevada Bureau of Mines were issued under the Bureau's name--not as publications of the University of Nevada. Bulletins were issued in numerical sequence with the old Geology and Mining Series; the first issued therefore became Nevada Bureau of Mines Bulletin 52. Rising printing costs brought about a new publication series in 1961. Issued as "reports," the new series was designed to present information on more limited topics, to be more timely in releasing information, and to be less formal in presentation than were the bulletins. In 1962 a "map" series was added to the Bureau's publications. The map series was at first dominated by commodity location maps--15 separate commodity maps were issued during the first year of the series--but other maps showing power and transportation facilities, metal mining districts, land status, status of geologic mapping, and earthquake epicenters were also issued, and in 1967, the first of a series of 2°-sheet-scale gravity maps was released.

### THE MODERN BUREAU

By 1960, the activities of the Nevada Bureau of Mines had expanded to the point that a full-time administrator was needed and Dr. S. E. Jerome was brought in as Associate Director. Dean Scheid, retaining the title of Director, continued to guide the



The old U.S. Bureau of Mines Experiment Station, now the Physical Plant Building, was occupied by the Nevada Bureau of Mines between 1955 and 1962. Source: UNR archives.

major policies of the Bureau. The new Associate Director, however, handled all other administration. Scheid also continued as Director of the State Analytical Laboratory. Dr. Jerome received his Ph.D. from the University of Utah and had worked in mineral exploration throughout most of the western United States before joining the Nevada Bureau of Mines.

In 1963, the Bureau moved into offices in the new Scrugham Engineering-Mines Building constructed directly east of the old Mackay School of Mines Building. Dean Scheid, through persistent negotiations with Nevada legislators, had managed to have an entire wing of the new building earmarked for the use of the Nevada Bureau of Mines and the State Analytical Laboratory. The Bureau in 1987 occupies most of the four floors of the mines wing of this building.



Scrugham Engineering-Mines Building. The Nevada Bureau of Mines and the State Analytical Laboratory moved into the western wing of this building in 1962. At the present time, the combined Nevada Bureau of Mines and Geology and the mining laboratory occupy the first, third, fourth, and most of the second floors of the mines wing of this building; the remainder of the building houses the College of Engineering. Source: Larry Jacox.

Jerome left the Bureau of Mines in 1965, returning to industry where he became head of mineral exploration for

the Kerr-McGee Corp. Robert C. Horton followed Jerome and became the second Associate Director of the Bureau; Horton, a 1949 graduate of the Mackay School of Mines, had joined the Bureau as a mining engineer in 1956. Horton was born in Tonopah and came from a Nevada mining family. His father had mined in Diamondfield and Goldfield and, in 1927, his older brother had made discoveries on the father's claims southwest of Tonopah that resulted in one of Nevada's last boom gold camps--Weepah. Horton served as Associate Director for only 2 years, leaving in 1967 to pursue private interests. In 1981, he was appointed Director of the U.S. Bureau of Mines by President Reagan and served in that capacity until 1987.

Arthur Baker, III, replaced Horton as Associate Director of the Nevada Bureau of Mines and held the position until 1972. Baker, with a Ph.D. in geology from Stanford University, had worked in mineral exploration for many years and, prior to joining the Bureau, had operated his own consulting practice out of Bishop, California.

In 1971, during Baker's tenure as Associate Director, the state legislature modified the objectives of the Bureau, making changes which signified the changing image of the organization. The name was expanded from Nevada Bureau of Mines to Nevada Bureau of Mines and Geology, and the qualifications for director were changed from "competent mining engineer" to "competent scientist or engineer." Two other sections of the assembly bill outlining these changes carried more importance than did the name changes. The Director of the Bureau, with only the Governor's approval, was authorized to enter directly into agreements with the U.S. Geological Survey for cooperative work; funds for the state portion of this venture would be through direct legislative apportionment. The resulting

cooperative program with the U.S. Geological Survey has assisted topographic mapping in Nevada, contributed to water resources studies, and furthered the research efforts of both agencies in the fields of general geology and mineral resources. Authorization was also given to the bureau, subject to regents approval, to allow publication sales money to be retained as a printing and distribution fund. This latter point has allowed the Bureau great flexibility in its publication efforts.

Vernon Scheid retired as Dean of the Mackay School of Mines in 1972, vacating as well the positions of Director of the Nevada Bureau of Mines and Director of the State Analytical Laboratory. Arthur Baker moved into the position of Acting Dean in 1972, and in 1973, became the second dean of the Mackay School of Mines.

John H. Schilling replaced Baker as Associate Director of the Nevada Bureau of Mines in 1972. When Baker assumed the Dean's position in 1973, Schilling was appointed Director of both of the school's public service divisions, the first Director to hold both of these positions who was not also the head of the School of Mines. John Schilling reported to the Dean, but he operated the Bureau and Laboratory as units quite separate from the school's teaching division. John Schilling joined the Nevada Bureau of Mines in 1960. He was previously with the New Mexico Bureau of Mines and had done extensive work on the mineral deposits, especially molybdenum, of that state. During Schilling's time of service, the Nevada Bureau evolved into its present form. The staff expanded to over 20 professional and support personnel. Public information services increased to a point where information files now occupy a good portion of one entire floor of the building, and the Bureau has computer ties with geologic data bases of the U.S. Geological Survey, the U.S.



John H. Schilling, Director of the Nevada Bureau of Mines and Geology, 1972-87, and of the State Analytical Laboratory, 1972-85. Source: John Schilling.

Bureau of Mines, and others. One of John Schilling's special interests was a strong publications program, and during his time as Director, the Nevada Bureau of Mines and Geology maintained a high profile among other state bureaus with the quality and quantity of its publications. In 1973 a new "urban map" series was issued. Maps in this series cover such things as geologic hazards, land use, vegetation, and hydrology and are of special use to land-use planners in urban areas. A "special report" series was started in 1975. Publications in this series include general interest subjects such as a rockhound's map of the state, a treatise on Nevada's weather and climate, mining claim procedures in the state, and a bibliography on geology and mineral resources of Nevada. In 1979, the Bureau began a system of releasing

information as open-file documents, a procedure that allows research results to be quickly made available for public use. With these additions the Bureau now publishes information in six formats; bulletins, reports, special publications, maps, urban series maps, and open-file reports. Several of each category are now issued each year and selected publications are reprinted as they are sold out.

In 1985 another major organizational change came about within the School of Mines. The State Analytical Laboratory, after 90 years of service, was abolished by the state legislature and its functions, personnel, and equipment were transferred to the Bureau of Mines and Geology. Although always used to some extent by the prospectors of the state to assay their ore samples, the Laboratory's public service function had been declining for many years. In 1981, the practice of providing free sample analysis had been stopped and fees thereafter charged, although minimal, had caused a further decline in use. With its functions transferred to the Bureau, the laboratory still provides mineral identification and ore sample analysis for prospectors, but its main service is now research and support for the Bureau of Mines and Geology.

In May 1987, after 27 years with the Nevada Bureau of Mines and Geology--the last 14 of these as its Director--John Schilling left the service of the Bureau. Upon Schilling's departure James V. Taranik, then Dean of the Mackay School of Mines, assumed the position of Acting Director of the Bureau. Larry J. Garside was appointed Acting Associate Director. Garside received his graduate degree in geology from the Mackay School of Mines in 1968 and joined the bureau staff that same year. He had held positions with the Bureau as geologist, energy resources geologist, deputy to the director for research, and, at the time he was appointed Acting

Associate Director, was serving as Chief Geologist.

In July 1987 Taranik, who had replaced Arthur Baker as Dean of the Mackay School of Mines some 3 years earlier, resigned to assume the presidency of Desert Research Institute, another branch of the University of Nevada. James L. Hendrix, head of the Department of Chemical and Metallurgical Engineering within the Mackay School of Mines, will serve as Acting Dean of the school until a permanent dean can be selected in 1988. Hendrix also assumed the Acting Director's position while Garside continued to serve as Acting Associate Director and will hold the position until a permanent director is selected in 1988.

#### **FINALLY, A STATE GEOLOGIST**

The title "State Geologist" returned to use in Nevada in 1981 when it was assumed by John Schilling. Schilling was active in the Association of State Geologists and, since the Director of the Nevada Bureau of Mines and Geology essentially functioned as a State Geologist, he began to use "State Geologist" as part of his title in June 1981. The University regents, perhaps drawing upon authority granted to them by the legislature in 1865\*, recognize the use of this title and when a new head of the Nevada Bureau of Mines and Geology is selected in 1988 the position will be described as Director/State Geologist, Nevada Bureau of Mines and Geology.

\*The act providing for the appointment of a state geologist by the board of regents, passed by the legislature in 1865, was apparently never repealed--the office was never filled until assumed by John Schilling in 1981. In reality, however, the 1865 statute is interpreted to have created the position of state geologist only to do a certain task which was to last no longer than 8 months--at the end of the 8-month job the position would have passed out of existence. Even though the job was never filled, it must have expired since the first compilation of Nevada statutes in 1873 makes no reference to the position of state geologist.

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