The “M” on Socorro Peak has served as a lasting symbol of New Mexico Tech, and the community of Socorro, for nearly 100 years. Without the “M,” our beloved mountain would seem naked. Who first put the “M” upon Socorro Peak? When and how did they do it? One might even wonder why?

To answer these questions, it is my pleasure to introduce the author of this month’s history article, Robert Eveleth. Eveleth has been associated with New Mexico Tech, the former School of Mines, since 1963, the Bureau of Geology since 1977, and has been researching the “M” on the mountain for much of that time. The rare photographs he has found and the following story of the “M” is an invaluable contribution to Socorro's fascinating history. – Paul Harden

MINES, MINERALS AND MIDNIGHT OIL

By Robert Eveleth

“The M...poised high above all it surveys...noting every event that takes place from Registration until Commencement, 49ers, victories, defeats, exams, Christmas Holidays...it ever remains as a symbol of student activities and the high standards of the engineering profession” (Porphyry, Golden Anniversary Edition, 1939).

Introduction

New Mexico’s centennial (January 6, 2012) is just around the corner and I suspect, even predict, it will be a time when many of our citizens re-examine the events of 100 years ago in an effort to more fully appreciate what, who, and where we are today. Many critical events occurred in Socorro’s history at that time but the details are, sadly, all but lost to us. The loss is due to an inexplicable void in preserved issues of Socorro’s longest-surviving newspaper: the Socorro Chieftain, now El Defensor Chieftain. Between January 1911 and December 1915 a mere 32 newspapers, or 12% of the total, are extant.

Critical events of that period include New Mexico finally achieving statehood, the passing of the pioneer “founding father” of the Magdalena Mining District Col. John S. Hutchason, the tragic death of one of Socorro’s favorite “sons,” Capt. Michael Cooney, while on a prospecting trip into the mountains southwest of Mogollon, the awarding of the School of Mines very first honorary doctorate to Cony T. Brown, depending on the source, in either 1913 or 1914, the very-near demise of the School of Mines “killed by repeated doses of ‘peanut politics’ administered by the first governor of the State of New Mexico,” and the survey and construction of the School’s mountaintop “M” mascot on Socorro Peak.

While the ‘peanut politics’ episode remains a mystery, the author has thoroughly researched the others and all will eventually be revealed. However, since the “M” has been in the news of late now seems to be an excellent time to bring its early history into the light of day and relate a few anecdotal stories along the way.

Socorro Peak’s “M”

Many have certainly heard the old cliché “what’s in a name?” but for our purposes it might be more appropriate to ask “what’s in a letter?” Plenty, as it turns out, especially if that letter happens to be an “M” and that “M” happens to decorate the east-facing slope of Socorro Peak.

The author became closely acquainted with that “M” for the first time nearly fifty years ago as one of a rare group of NMIMT students – no more than ten that year – who arrived in Socorro in...
September 1963 – not by the more traditional bus, but over the rails of the Atchison, Topeka, & Santa Fe’s Rio Grande Division in the self-contained diesel passenger consist lovingly called the “Doodlebug” by Socorrosans. Upperclassman Leroy Eide was assigned to meet our entourage at the depot and at the first opportunity I innocently asked Mr. Eide (since he was the first “upperclassman” I’d met) what the “M” stood for? His reply: “Mines, Minerals, and Midnight Oil, and you will burn much of the latter to become proficient in the former.”

For a fleeting moment I thought “how long has it been here….and who undertook to put it there? Quickly, however, I was forced to put such thoughts to rest – at least for a time – so as to focus upon the daunting task of mastering the mines and minerals. The thoughts returned a little over six months later.

**St. Pat’s and the “M”**

“Initiation” for the newly arrived freshman took place during the annual Spring academic holiday known as St. Patrick’s Day and “M” day had been associated with that event since 1958. For the author that day began Saturday March 14, 1964 at 5 am when he and his freshman colleagues were rounded up to carry a “flagpole”(actually a telephone pole made from a giant sequoia) from the Socorro Plaza to the tug-of-war pit previously excavated on the Tech ball field.

From there the intrepid trailblazers faced the arduous climb to the top of Socorro Peak. Those of us who “made” it were rewarded with a gourmet lunch consisting of a potted meat sandwich and Kool-Aid and then on to the task of giving the M its annual facelift.

One fails to appreciate the immensity of this gigantic piece of artwork until he is standing directly upon it. As the author contemplated the M’s meets and bounds, little did he know – and would not know for another 23 years at which time it was too late to talk to any of them – that the very men who placed it here a half century ago would visit Socorro within a year (more on that later)! The entire scenario did serve to bring back those vexing questions: how long has it been there and who undertook to put it there?

The answer to the first is simple if you are willing to accept the approximate date of “about 1910” stated by Paige Christensen in the School’s history, itself simply a repeat of Father Stanley’s
“School tradition has it that the M was first made in 1910.” Or perhaps you are more inclined toward the 1913 date published in the School of Mines official newspaper The Gold Pan? The earlier date has been repeated so often it is now almost “writ in stone.” Nevertheless, and through no fault of the chroniclers (because the facts are nearly impossible to ferret out) it and the later date are equally incorrect and it is now time to re-engrave the stone. Moreover the answer to “who” is as nebulous as “when” and it too was very nearly lost to the mists of time.

The astute reader at this point is probably wondering “how could the New Mexico School of Mines/Institute of Mining and Technology, in a mere 50 years, lose the history of its oldest and most visible icon?” Consider Louis Gottschalk’s maxim: “Only a part of what was observed in the past was remembered by those who observed it; only a part of what was remembered was recorded; only a part of what has survived has survived; only a part of what has survived has come to the historian’s attention; only a part of what has their attention is credible; only a part of what is credible has been grasped; and only a part of what has been grasped can be expounded or narrated by the historian.”

Simply stated all obvious first-hand accounts recorded at the time have not, apparently, survived the ravages of time. Without further fanfare let’s get right to the task at hand and resurrect the date, or at least the time period, when the “M” first appeared and pay our respects to those rugged New Mexico School of Mines students of so long ago.

“M” Day Is Horace Lyons Day

“The NM School of Mines Class of 1914 surveyed and built the ‘M’ on Socorro Peak,” according to Dr. Antonio Abeyta, but some 50 years would pass before the Institute of Mining & Technology was reminded of the fact and then promptly forgot it again. For 1965 was the year the Class of 1914 gathered in Socorro for their one and only reunion. All four members were present: Dr. Antonio Abeyta, Phillip. A. Campredon, Frank J. Maloit, and Martin J. O’Boyle. Each reminisced freely about their college days but it was Dr. Abeyta who provided critical details regarding the “M” on Socorro Peak: “the class of 1914 set the precedent of having the freshman paint it...Burros were used to carry the lime to the “M”...The day the freshman paint the “M” ought to be called Horace Lyons Day at New Mexico Institute of Mining and Technology for it was Horace Lyons of the class of 1913 who put across the idea.”

Horace T. Lyons hailed from El Paso, Texas and enrolled as a freshman at NMSM in 1908 in the days before Socorro Peak was adorned with its giant tattoo. During his NMSM years he became aware of two other “M’s” associated with western US mining schools: the Colorado School of Mines “M” on Mt. Zion near Golden, CO., completed there by the students on or about May 15, 1908, and a similar one on Big Butte at the Montana School of Mines (now Montana Tech) completed.
by the students on May 20, 1910. Lyons reasoned that if other prestigious mining schools in the Rocky Mountains were bequeathed with such mascots, why then should not the most prestigious mining school in the southwest have one as well?

And, of course, New Mexico’s “M” must be even larger than its counterparts. Lyons eventually found a kindred spirit in classmate Frank Maloit. The latter, from Elmhurst, Ill., entered NMSM in 1911. Lyons earned his Engineer of Mines degree in 1913 and Maloit graduated a year later. Maloit began his long career with the New Jersey Zinc Co. in the Magdalena and Hanover, New Mexico mining camps and frequently returned to Socorro to visit his (and every other School of Miner’s) mentor C. T. Brown.

Lyons, then, conceived and conveyed the idea but the task of actually surveying and laying out the “M” fell upon the shoulders of the most accomplished surveyor in the group: Frank J. Maloit. Maloit was already well-experienced, having been previously employed by the Western Electric Co. and had completed his first year of undergraduate work at the Armour Institute of Technology (now Illinois Tech) in Chicago before entering NMSM in his sophomore year. His crew consisted of classmates Campredon and O’Boyle and most likely a third person identified only as “Shoemaker,” the latter possibly a temporary student who was usually the fourth member of Maloit’s 1911-1912 survey parties.

A Fine Collection of “M”s

Keep in mind that Rome wasn’t built in a day and neither was the “M” on Socorro Peak. For comparison Montana Tech’s “M,” which graces the face of 6310-ft “Big Butte,” is smaller than ours—about 90 x 90 ft. Colorado’s “M” is closer at 104 x 107 feet. Socorro Peak’s “M,” for the record, is roughly 150 feet in height and 100-110 feet in width (depending upon where one measures it). The lines of the “M” are roughly 30 feet in width. If anyone is aware of another that is larger, higher in elevation, or more remote, please so indicate—otherwise ours appears to be the “Monarch of Mountaintop Mascots!”

Three hardy engineering students completed the Montana survey in March 1910 and over the following two months the letter was laid out, faced with rhyolite, and finally received a coat of whitewash on May 20th. Socorro Peak is higher in elevation than Big Butte and far less accessible. On the other hand Socorro’s “M” did not require any kind of rock facing but it is reasonable to assume a similar amount of time—roughly 2-3 months—was required to complete the task from start to finish. The final touch occurred when Maloit and others, enlisted the help of the freshman to apply the first coat of whitewash.

In 1987, the author interviewed Frank Maloit’s son Robert, who also provided a copy of the 1965 Chieftain Reunion article. He unhesitatingly stated that his father surveyed the “M”—drum roll please—in fall 1911. Herewith the “traditional date of 1910” can be eliminated since, as noted above, Maloit, the surveyor, did not enroll at NMSM until 1911.

Maloit’s “fall 1911” time-frame is confirmed by handwritten notes of James Avery Smith who indicated that the “M” was “laid out with a Brunton compass and a steel tape between 1911 and 1912 and he provided two burros to haul the first loads of lime and water in 1912.” This was exactly when the lime would have been needed if the survey was initiated late in 1911 and a necessary ingredient, snow, would likely been available to augment what little water was hauled by the burros. Note too that such a time span from November 1911 through January 1912 conforms to that required to complete Montana Tech’s “M.” Another interesting point of comparison is the span of dates in Maloit’s personal field notebook of transit surveys covered 10/14/1911—5/11/1912.

Few have given the logistics of the actual layout much thought. Various locations were likely considered for best visibility and the slope of the peak played a critical role in the design, shape and dimensions of the letter itself. The letter must...
‘look’ like an M from a great distance and retain its proportions and perspective throughout a wide field of view. Since the slope of the peak is about 60 degrees, the height of the letter must be greater than its width to maintain the appearance of a roughly equal height to width ratio when viewed from Socorro. In that regard, Maloit and crew succeeded admirably but some think the letter is a little askew.

The topic came up at a most usual place and time – the dedication of Maloit Park at Minturn near Gilman, CO in 1959, the planning and execution for which Frank Maloit was heavily involved: “Another extracurricular activity still shines from near the top of a tall mountain overlooking Socorro. It is a large, painted, block letter 'M.' It is reputed to have been surveyed and staked out by an undergraduate by the name of Maloit. A quiet controversy usually springs up upon viewing it whether or not the letter is straight. The school says it stands for ‘Mines’ if the letter IS straight, but if it is NOT straight then it stands for ‘Maloit.’ Each of you can be his own judge upon viewing it. My observation is that it is just as straight as most of the underground mine survey connections by the engineers serving under Maloit. They had better be straight.”

Maintenance

The “M” received its first coat of whitewash in 1912 according to Dr. Abeyta. Given the very nature of the water-born “paint” it quickly became apparent that regular maintenance would be required. NMSM President Fayette Jones proposed in 1916 that two days be set aside for the event, but the interference of a World War and the resulting lack of students delayed the second whitewashing until 1919.

The NMSM newsletter, The Gold Pan, preserved the history as follows: “A tradition established in 1919 commands us to go forth to the Mountain at least once (author’s emphasis) every school year and give the huge “M” its annual coat of slaked lime. The school schedule has a day set aside for this purpose but the actual painting is seldom done on the official date. Snowfall in Socorro is thin and erratic and we must have snow. Nearly three thousand feet in vertical distance and five miles by the long, long trail...is a bit too much even for husky miners to pack the necessary water.”

A 1922 Socorro Chieftain article explained how the students relied upon burros to haul lime and water through the year 1921: “The school emblem...received its annual coat of whitewash at the hands of the Freshmen Friday. The recent snow storm made this possible as the water for the whitewash is made by melting snow. In the past the emblem received its annual ‘bath’ at a much earlier date as the water was packed up the...cliffs by burros. When the water was packed up the mountain it took two to three days to get things in readiness....by starting very early in the morning when there is snow...this task can be completed in one day.” The students were relieved they no longer had to deal with the long burro trail and the “new” practice of scheduling “M” day immediately following the first significant snowfall held, with but one exception, for the next fifteen years.

The “at least once” comment refers to the fact the “M” has twice received two annual coats. The Gold Pan newsletter reported the first occurred in 1926 when “M” day was called after a heavy snowfall on January 5th. Another big snow came along on December 21 and the process was repeated. According to Franklin T. “Casey” Davis, a second dual-whitewashing occurred in 1937 which also “was the last year in which the “M” was whitewashed in the older, traditional manner” of waiting for snow to provide the water. Davis recalled “the snow fell early in the year and the students dutifully climbed Socorro Peak and painted the “M.” But by late 1937 it was decided to
make “M” day a regularly scheduled event assigned on a particular day.

Thus, the “M” was whitewashed twice during 1937 – once early in the year by the traditional method, and again late in the year by the newer method where the students rode in a bus to the mouth of Blue Canyon.

The freshmen and sophomores then hiked up the mountain together, carrying water and lime. A 1937 issue of The Gold Pan spoke only of the latter: “The M once more has had its annual fresh coat of paint applied to it by the freshmen November 18...no snow was required as water and lime were transported on the backs of the students. The previous day found the Sophs scouring the town for empty gallon cans. Eighty-five of these were filled with water and sealed.”

The single exception noted above occurred in 1934 when not a flake of snow fell into early spring. Regardless, the Student Council declared “M” day for March 27, the sole purpose being not to re-paint but to re-survey. The Gold Pan reported, “The previous monuments marking the boundaries of the letter had become pretty much lost, resulting in the letter’s presenting a rather un-symmetrical appearance...The [freshmen’s] cargo...this year consisted of surveying equipment, a good supply of iron pipes for stakes...the letter was carefully surveyed, all important points marked with pipe stakes extending four feet above the ground, so as to be found easily when snow overlies the letter. Next year’s coat of paint should result in a very presentable M.”

Despite the ‘best laid schemes of mice and men,’ packing water up the mountain must have once again proven “a bit too much even for husky miners” and “M” day resumed its dependence, at least in part, upon snow fall by around 1945. No concise date could be found but this likely remained standard procedure until water, and some lime, could be transported up the mountain on four-wheel drive road vehicles.

Eventually, possibly beginning with the St. Pat’s affiliation, a contest evolved in which the first person, and more recently the “team” to arrive at the summit, with their sack of lime, is awarded a cash prize. The winners of the ten-dollar prize (and I’ll bet they wouldn’t do it today for a hundred times that amount) in 1966 were Charley Mandeville and Ed “Dagwood” Mueller. But the record for getting a sack of lime to the summit solo and in the shortest time must certainly go to Vladimir Ispolatov (PhD Geochem’01) who allegedly started running at the base and didn’t stop until topping the peak – a good half hour before anyone was expecting him! The lime carrying contest continues through the present.

Miners and “Kalso-miners”

Whitewashing (kalsomining) the “M” was never an easy job or a simple undertaking and, as
related by Dr. Abeyta “it about killed some of [the freshmen].” Constantly seeking ways and means to simplify the task, the 1949 students tried “spraying” the “M” with the old-style pressurized insecticide canisters. The idea apparently proved unsuccessful and was abandoned. Most freshmen are likely in full agreement with the anonymous student who exclaimed “They don’t really expect us to climb that damned thing, do they?”

The following narrative of the event by Robert Harcus’ is illuminating: “For the past several days we’ve really had the snowfall. Six inches covered the countryside one day and on the next we finally held “M” day. It was quite a time as we have about forty freshmen now. I went along just for the laughs and to take pictures...We started out hiking the three miles across the snow covered mesa, through waist high sage toward the base of Socorro Peak. After nearly an hour of traveling we began the long arduous ascent through snow varying from our ankles to our knees. The scenery was really worth hiking to see...

“The trees and bushes were heavily laden with their snow burden and even these three foot shrubs seemed to look down upon us as we crawled by on our hands and knees. The going was very rough as on the steep slopes we spent most of our time slipping and sliding backward. It was a very hot climb and I was forced to carry my fur coat under my arm as excess baggage, however when we finally reached the summit and sat down to eat our lunches we almost froze in the icy gale which whistled around us.

After lunch we set up a snow [melting] unit consisting of a large can and a fire. After all of the freshmen reached the top we built the fire [and] got all of the 500 lbs of lime ready to mix into whitewash. Then upon the command “snow!” they formed a snow brigade, directing the snow into the large can. In other cans they mixed the whitewash taking care to slop it all over everybody, and these [cans] were carried to points on the ‘M’ where the painters armed with brooms painted the snow covered boulders with the hot lime...

“We spent about three hours on the summit and then after the job was done we sent a boulder thundering down through the snow to clear a trail for us...We left a sack burning in a can of coal oil as a beacon on the top of the mountain and it burned far into the night, appearing only as a mere twinkle from a great distance.”

After the ordeal, few if any still believed the “M” was a symbol for Mines: “Not so,” Harcus continued, “It stands for “miserable – which is another way of saying freshman. The “M” is a large letter, 110 x 150 feet and from the city of Socorro, which it dominates, the “M” looks smooth and seems to recline on a gentle slope. But the “M” is not smooth; neither does it recline: it HANGS!”

To freshmen of the New Mexico School of Mines falls the annual privilege of giving the “M” its schoolboy complexion. The powder they use is lime. The lotion they slosh on is water. To give the lines of the “M” crispness and sharp definition, the freshmen carefully edge them with a mascara of worn-out engine oil. All these cosmetics are applied vigorously with brooms. The result is splendid and is guaranteed for one year.

“The story...begins in the chill hours of dawn on 'M' day in the early months of each school year...and [it] discloses why 'M' “M”eans “M”uch “M”ore than “M”ines,” described The Gold Pan newsletter, “At the trail’s beginning at the base of Socorro mountain are bags of lime and tanks of water. At an elevation of 4600 feet the bags of lime weigh fifty pounds each; at 7000 feet, owing to local peculiarities of altitude and terrain, the bags weigh a ton. The ascent (translation: a rotten hard struggle upward) begins at a confident pace and ends in a dogged crawl...”

“Know something? When the 'M' was planned and built, all lime and water was carried to the
peak by burros. The School o’ Miners were men in those far gone days [but] they weren’t jackasses.”

**Memorable Events - Monumental Pranks**

The “M” has a long history of nighttime illumination – far longer than currently appreciated. The author clearly recalls the first time – using modern wiring and incandescent lights – occurred during 49’ers in 1968. But was that the first? Not by a long shot. In fact the “M” was first illuminated much farther back in time – and not in a manner one might think – than the oldest of old-timers recently interviewed could recall.

The New Mexico School of Mines went all out for its Golden 50th Anniversary commencement exercises on May 19, 1939. Special effects weighed heavily on the minds of the planners and the school set up an aircraft spotlight on campus whose brilliant beam penetrated the pitch-blackness of the New Mexico night until it fell upon the mascot on Socorro Peak. The “M’s” first nighttime illumination thus occurred over 71 years ago – another “fact” totally lost to us today as no surviving Socorro Chieftains or Gold Pans cover the event.

The antics and pranks pulled by the students over the years, if gathered in a single compilation, would be sufficient to fill a small book. Since space and time forbid such extravagance the record will necessarily be truncated. Socorro’s “M” has never been successfully molested due primarily to its remoteness and inaccessibility, although it came close on one occasion and not by pranksters from another university. It seems that a “wayward” group of Mines’ students paused for a rest about 400 yards below the M. One of the group suddenly exclaimed “Say, we’ve the lime and water. Let’s paint our own little “M” right here.”

Most fortunately for the sake of tradition a comely co-ed happened by at the critical moment “and shamed them from making the sacrilegious reproduction.”

The School of Mines’ students did however wreak havoc with other university letters: “It is a custom of long standing for rival schools to change the lettering of each other’s symbols, an event which takes place in the dead of night, usually after a successful athletic event. In 1947 a group of Mines students repainted the “U” of the University of New Mexico at Albuquerque into an “M,” and on another occasion the “T” at New Mexico State Teacher’s College (now known as WNMU) at Silver City was changed into an “M.”

According to The Gold Pan, the Miners did it again the following year in 1948: “During State Fair Week and for the second time within a year, the people of Albuquerque awoke one morning to view the enigma of an “M” occupying the position where the University “U” normally graces one of the foothills east of the city. Speculation as to the possible implications of the miracle led some to search the scriptures for supernatural explanations of the phenomenon. Old timers, wise in the recollection and experience of less ordered times, glanced casually at the new aspect of the landscape and were heard to mumble petulantly something about ‘inmates breaking out of that Socorro asylum again.”

When NMSM’s college rivals discovered they could not molest Socorro Peak’s “M” they found other ways to extract their retaliatory pound of flesh. One result was Socorro’s students waking one morning to find their precious Desert Maiden statue sporting a new wardrobe composed of black tar and feathers.

**“M” for all Ages**

The “M” will soon be 100 years of age in 2012 and it is incumbent upon us, the successors-in-fact to the School of Mines, to assure its health and longevity. We again should acknowledge a debt of gratitude not only to the NMSM Classes of 1913-14...
– Lyons, Smith, Abeyta, O’Boyle, Campredon, and especially Frank Maloit – for bequeathing us with this gift for the ages, but also to the Institute Administration for doing the best it can in the face of waning enthusiasm, for without their perseverance and dedication to the task we might not have that “M” on Socorro Peak today.

“M” day, once firmly associated with an annual campus event, has of late been an intermittent and less formal affair since the retirement of St. Pat’s in 1985. Prior to St. Pat’s it was associated with 49ers and it is gratifying to note the latter tradition has been revived in recent years. This is certainly a step in the right direction because, denied annual maintenance, both the appearance and brilliance of the letter has suffered.

Moreover, the re-association with 49ers is an indication to every entering freshman that they are expected (though not required) to participate in “M” day. This goes a long way toward instilling a sense of school spirit and loyalty to the Alma Mater: the “M” is now a part of them and vice-versa.

The use of slaked lime for painting was discontinued because it was deemed too toxic, but apparently not too toxic for the students of 1945 who “took care to slop it all over everybody” as Harcus recalled. Powdered limestone or marble is used today but it is an inferior substitute and cannot bond with the substrate. When whitewash reacts with carbon dioxide in the atmosphere it forms a hard, durable coating of calcium carbonate.

Ladies and gentlemen, the engineers, geologists, and scientists from New Mexico Tech will likely work with substances much more dangerous than calcium hydroxide and Portland cement throughout their careers. The “toxicity” problem is easily overcome with the use of gloves and goggles so perhaps the use of whitewash should be reconsidered.

We have seen that the “M” means many things to many people but additional synonyms continue to arise. According to Dr. Richard Chamberlin “M means not Mines, Minerals, and Midnight Oil but Miocene -- because that’s the age of the rocks it’s painted upon!” Hmmm...he must be a geologist! Perhaps with the advantage of 20-20 hindsight we can add a final one: Millennia. I think we can all live with that!
All photos are author's collection unless otherwise noted.

Some of the references used in this article:
Numerous issues of El Defensor Chieftain; “College on the Rio Grande: The Story of a Small School” by Paige Christiansen; “Socorro, The Oasis” by Father Stanley (and marginal notes of Avery J. Smith); personal survey book of Frank Maloit, 1912; numerous issues of New Mexico Tech year books, The Gold Pan student newsletters, Alumni Bulletins, and other publications; and interviews, research and field work by the author. The author is also indebted to many friends, colleagues, and others, with a special thanks to Robert Maloit, Avery J. Smith and Willie Emillio for preserving some of the only known photos used in this article.