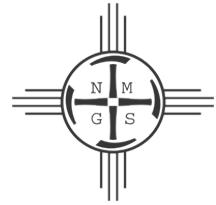


# New Mexico Geological Society

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## ***The past, present, and future of the geological profession: Part I, History of the New Mexico Geological Society***

T. F. Stipp  
1955, pp. 177-182. <https://doi.org/10.56577/FFC-6.177b>

in:

*South-Central New Mexico*, Fitzsimmons, J. P.; [ed.], New Mexico Geological Society 6<sup>th</sup> Annual Fall Field Conference Guidebook, 193 p. <https://doi.org/10.56577/FFC-6>

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*This is one of many related papers that were included in the 1955 NMGS Fall Field Conference Guidebook.*

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Every fall since 1950, the New Mexico Geological Society (NMGS) has held an annual [Fall Field Conference](#) that explores some region of New Mexico (or surrounding states). Always well attended, these conferences provide a guidebook to participants. Besides detailed road logs, the guidebooks contain many well written, edited, and peer-reviewed geoscience papers. These books have set the national standard for geologic guidebooks and are an essential geologic reference for anyone working in or around New Mexico.

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## HISTORY OF THE ROSWELL GEOLOGICAL

By H. H. Krusekopf, Jr.  
*Pubco Development, Inc.*

The Roswell Geological Society was formed on May 20, 1950 when seventeen geologists met for dinner and an organizational meeting. R. E. Murphy was elected first president. This was at a time when Roswell was beginning to grow in importance as a center for exploration people of the oil industry. The geologists present at that time felt the need for a group to discuss mutual problems of exploration in the Permian Basin. The object of the Roswell Geological Society is best stated in the Constitution: "The object of the Society shall be to provide for discussion of subjects and problems coming within the scope of the technical branches of the oil industry

and to provide fellowship within the membership."

This objective has been well carried out over the years by a well balanced series of programs. Uranium and academic type programs as well as oil have been discussed. The Society has also sponsored six field conferences in southeastern New Mexico besides acting as co-sponsor for this trip. Membership has grown to 187 members and one honorary member. Wallace Pratt of Carlsbad was elected an honorary member in 1951.

Dinner meetings are held on the last Thursday of each month in Roswell. All geologists and friends are invited to attend.

## THE PAST, PRESENT, AND FUTURE OF THE GEOLOGICAL PROFESSION

PART I HISTORY OF THE NEW MEXICO GEOLOGICAL SOCIETY  
PART II OF GEOLOGY, GEOLOGISTS, AND THE GEOLOGICAL PROFESSION

*The President's address at the Ninth Annual Meeting  
of the New Mexico Geological Society  
Gallup, New Mexico  
May 13-15, 1955  
By T. F. Stipp*

### INTRODUCTION

The executive committee has decreed that at this meeting the retiring president shall deliver an address. Presumably this action was to provide him with an opportunity to announce some momentous discovery in geology, to express his opinions regarding the activities of the Society, or simply to blow off accumulated pressure.

I have no important discovery to announce, or no new theory to propound, consequently I shall limit myself in the first part of this address to a brief review of the history, organization and aims of the Society—this primarily for the newer members and those who may contemplate membership—to mention some of the accomplishments and problems of the

Society, and to speculate on the possible future of the Society and how it may be of the greatest benefit to its members and to the public. In the second part of this address I propose to unburden myself of some long repressed ideas regarding geology, geologists, and the geological profession.

PART I HISTORY OF THE NEW MEXICO GEOLOGICAL SOCIETY

### THE PAST

On April 12, 1947 a group of some 40 or 50 geologists, representing all branches of the profession, met at the University of New Mexico at Albuquerque and organized the Geological Society of New Mexico. The meeting was called by Doctor Vincent Kelley and his associates for the purpose of founding

## NEW MEXICO GEOLOGICAL SOCIETY • SIXTH FIELD CONFERENCE • SOUTH-CENTRAL NEW MEXICO

an organization which would represent the geologists of the State regardless of their individual interests. A successful meeting was held, several geologists of note addressed the audience, and Vincent Kelley was elected President. The principal speakers, C. E. Dobbin, Edwin Eckel, Hugh Miser, and Harrison Schmitt were made honorary members of the Society. At this meeting a constitution was approved. Among other matters it stated that the purpose of the Society was to promote the science of geology and related subjects; and that in the election of officers the Society should take into account the wide range of interests of the active membership, namely in (1) the mining industry, (2) the petroleum industry, (3) federal surveys, (4) state surveys, and (5) the academic. It was evidently the intent that the Society should continually represent all branches of the geological profession, and that no one group should obtain complete control over the policies of the organization.

As a charter member, looking back over these years, I believe this intent has been faithfully carried out, certainly so far as was possible under the conditions under which the Society has operated. Upon review of the programs of the annual meetings I find that they have been broad in scope and have represented a considerable variety of subjects. I find that of the eight presidents, one represented the mining industry, two the petroleum industry, two the Federal Survey, one the State Survey, and two the academic.

Since the founding of the Society annual meetings have been held at Albuquerque (1948, 1949, 1950, 1951, 1954), Socorro (1952), and Roswell, (1953). Gallup was selected for this meeting for the reason that it seemed desirable to bring the geologists of the State to a region where both the mining and the petroleum and gas industries are experiencing great activity.

The annual meetings have been well attended, programs representing the whole field of geology have been presented and well received. Membership in the Society has grown to approximately 240. Successive presidents since Vincent Kelley (1947-1948) have been:

Robert E. Murphy, 1948-1949  
Stuart A. Northrop, 1949-1950  
Harrison Schmitt, 1950-1951  
Charles B. Read, 1951-1952  
William B. Hoover, 1952-1953  
John E. Allen 1953-1954

Since the first meeting in 1947, the Society has conferred honorary membership upon E. Russell Lloyd (1954.) We are pleased that we were able to

do this before his death a month or two ago.

As the years moved on since the founding of the Society it was realized that the original constitution needed revising to cover its somewhat extended aims and interests, and accordingly a new constitution effective, January 1, 1954, was adopted. The new constitution is somewhat more specific in its wording regarding membership, meetings, elections, and other matters. Among other things it provides that the name of the Society shall be the New Mexico Geological Society instead of the Geological Society of New Mexico, as it was originally called.

Perhaps the outstanding activity of the Society in recent years is the annual three-day field conference. Decision to hold such conferences originated in the 1950 annual meeting when at the suggestion of Caswell Silver the Society voted to hold a field conference in the San Juan Basin. Accordingly, the first field conference was held in October of that year on the east and north sides of the Basin. In 1951 the conference covered the south and west sides of the San Juan Basin; in 1952 the Rio Grande Valley; in 1953 southwestern New Mexico; and in 1954 southeastern New Mexico.

These field conferences have been very successful. They have now covered the larger part of the State with road logs and descriptive geological articles. Sale of the guidebooks has brought money into the treasury and has provided funds, part of which has been awarded as prize money or assistantships to outstanding or needy students of geology in New Mexico.

Some mention might be made here of the difficulties under which the New Mexico Geological Society has operated. New Mexico is a large state, the members of the Society are widely scattered, and their activities and interests are diverse. We as members all have our work to do, our livings to make, and our first allegiance must of necessity be to our employers. We can give only limited time to any outside activity. Under these conditions the difficulties of transacting the Society's business are sometimes acute. It is seldom possible to assemble all members of the executive committee, and at the annual meetings or field conferences the membership is not in the mood for transacting extensive business. Much of the business must be handled by mail, telephone, telegraph, or personal interview involving travel. Nevertheless, a great deal has been accomplished in the eight years of the Society and I believe the members may well be proud of its record. However, in view of the difficulties under which we operate, we must guard ourselves against the undertaking of projects which we may be unable to complete.

## THE FUTURE

None of us can, of course, forecast the future with precision; nevertheless, we can at least express our hopes as to what the future may bring to the Society.

It is my personal hope that as long as there are geologists in New Mexico there will be a Society to represent them, a place to exchange geologic information, and a place to enjoy that good fellowship that exists wherever geologists assemble.

It is my hope and belief, and I believe of the other officers and membership of the Society, (1) that it will continue to represent in membership all branches of the profession; (2) that such representation will be reflected in the technical sessions of the annual meetings by broad and varied programs; (3) that the annual field conference will continue to be held, and that the road logs will eventually cover all the important roads of New Mexico; (4) that it will so conduct its business that each year funds from the Treasury will be available for needy students; and (5) finally that the membership will recognize its responsibilities as a scientific society to the general public, and be prepared to advise and make recommendations as a group when legislation affecting our natural resources is proposed, or when measures are adopted by legislative bodies to control or regulate the practice of the geological or engineering profession.

These last statements I wish to emphasize. In the past, control and regulation of our natural resources have often been in the hands of uninformed men. Technical men have remained silent when they should have been outspoken. Let us as geologists and technical men recognize our obligations and prepare to meet them whenever the occasion appears appropriate.

Undoubtedly we shall see in the future proposed legislation further affecting our water, our oil and gas, or our mineral wealth in general. Certainly, as technical men, we must have some opinion as to whether proposed legislation is good or bad. What we can not accomplish individually we may be able to accomplish as a group. Speaking for and in behalf of the executive committee of the year now ending, I recommend that the next administration of the Society consider these matters and, if possible, determine means whereby the Society can better serve its members and the people of New Mexico.

The activities of the year now ending will be reported in the business meeting by the Secretary and Treasurer.

## PART II OF GEOLOGY, GEOLOGISTS, AND THE GEOLOGIC PROFESSION

This part of my address has to do with geology, geologists, and the geological profession.

I am not sure that my choice of subject was wise, and possibly my views may seem extreme to some of you. Others may find my statements sleep inducing.

It is now 33 years since I completed my undergraduate work in geology. Some of our younger members would probably consider this as the Precambrian age of the geological profession. Since that time I have been concerned with geology in some form. I have lived through the ups and downs of the geological profession for that period, and I have seen many changes in geologic thinking, geological education, and the practice of the geological profession. My words are addressed mainly to the younger geologists of our time with the hope that in these days of specialization what I say may encourage them to broad thinking in geology and to a broad application of the science.

The university I attended gave sound basic training, both theoretical and practical, to its students of geology. It recognized the fact that most or all of its students who graduated in this science expected to use it as a means of making a living. Opportunities for graduate studies were offered, but it encouraged the geological graduate to work in industry or for a state or federal survey for a year or more before returning for research and an advanced degree. The theory was that in that time the student could better determine where his best interests and ability might lie. Thus specialization was deferred until the graduate years. It was believed that before a student could become a mining geologist, a petroleum geologist, a research man, or a teacher of geology he must first become a GEOLOGIST and be able to handle any of the lower bracket jobs in geology which might come his way. In general I believe the idea is sound. However, we must recognize the fact that once a student leaves college circumstances may prevent his return; also what may be good for one is not necessarily good for another. Even so, if he has been broadly trained and has developed wide interests his education will not cease, and he will develop whatever specialty that holds his interest.

Thus I strongly favor broad basic training for all students of geology. We have seen field geologists deficient in paleontology, mineralogy, or petrography; paleontologists deficient in structural geology, and in recent years, especially in petroleum geology, young men either uninterested or imperfectly trained in practical field geology.

Certainly these men are handicapped. It is of course not possible for any geologist to be proficient in all branches of geology, but he should at least have enough basic understanding of its various branches to know when he needs advice or help. Deep drilling in the basin areas has brought about the refinement of the methods of subsurface geology, but in many cases subsurface problems can be better solved by careful examination and correlation of rock outcrops with formations in the subsurface. I would suggest that the subsurface geologist and the laboratory worker take for his text as the partial solution of his problems, the verse from the 121st Psalm, "I will lift up mine eyes unto the hills, from whence cometh my help," and go to the hills and observe and record.

Let me then emphasize the need for students of geology, in fact all geologists, to acquire and maintain a wide interest in all things geological. The true geologist should have some interest in and be able to see beauty in the landscape, however barren, the rock outcrop, the mineral specimen, the well-preserved fossil, and the optical interference figure; and should see some relationship of these things to that branch of geology in which he works or specializes. There is in the Bulletin of the American Association of Petroleum Geologists for May, 1945, a brief article by Wallace E. Pratt, a man who has achieved eminence in the geological profession, and who is, by our good fortune, a member of this Society. I recommend the reading or rereading of this article by all geologists. Its title is "Geology Is a Way of Life." Pratt quotes from the verse by Robert Frost the following lines:

"My objective in living is to unite

My avocation with my vocation

As my two eyes make one in sight."

and goes on to show that the man who obtains the greatest satisfaction from geology as a profession is the man who has developed his interest in the science to the point where he lives geology, or, in fact, makes it a way of life.

I have occasionally noted a tendency upon the part of some geologists to consider their profession as something to occupy their time between the hours of eight a.m. and five p.m.-holidays, Saturdays, Sundays, vacations, and coffee-time excepted. Recreation is desirable, but I wonder what satisfaction the profession can bring them. Certainly they are not making geology a way of life. However, there are those who, no matter how minor their positions may be, are reading, studying, making field trips, collecting specimens, attending conventions, and serving on committees. They are displaying a real interest in geology and its practice; they are indeed making

geology a way of life, and it is to *them* that we look for future leadership in the geological profession.

I have already mentioned the advantages of broad basic training and wide interests in geology. Let me pursue the subject a bit further, and mention also the need for mental alertness, and the ability to adopt new methods and concepts. During the 33 years that I have been concerned with geology my activities of necessity have ranged from the purely scientific to the purely economic. I have seen great changes in geological methods and in geological thought. Specifically I might mention some of the changes that have taken place in petroleum geology.

Petroleum geology has increased greatly in stature over the years. I can remember when the ability of a geologist was measured by the length of his beard, and when some of the more pedantic professors of the old school considered the geologist who became connected with the petroleum industry as fit material for the professional wastebasket in which to relegate all students who did not appear suitable material for teaching, for research, for the state or federal surveys, or even for mining geologists. I can also remember when a vice-president of one of the major oil companies was reported to have said, "When the geologist enters the oil industry, I go out."

The fact that petroleum geologists have proved their worth is evidenced by the extensive staffs which the oil and gas operators now maintain. It is of course true that a great deal of oil has been discovered by random drilling, but I believe a fair estimate would credit the geologist and his close relation, the geophysicist, with discovery of the larger proportion.

According to computations, all of the oil produced in the United States from the beginning of the industry to the end of 1954 amounts to 1.91 cubic miles, and all of the oil produced in the world to the same date amounts to 3.21 cubic miles. If we consider the world's remaining reserves as equal to the world's production to date, a not unreasonable figure, the total is 6.42 for all oil, produced and unproduced, in the world today. When we consider the vast number of cubic miles of sedimentary rocks in the earth's crust, estimated by L. G. Weeks to be approximately 2 million cubic miles for the United States alone, we realize that oil is the veritable needle in the haystack, and it seems surprising that, diffused as it is, so much has been found.

In 1922, when I began my first work in geology, petroleum geologists were exploring for anticlines and domes; a faulted structure was considered unfavorable, and the term "stratigraphic trap" was uncommon or unheard of. Regional mapping was

left to the state or federal surveys or other institutions, and the broader phases of stratigraphic geology were neglected. Aerial maps were not available. Micropaleontology, sedimentary petrography, electrical logging and geophysics had not yet appeared. Some geologists were doing the work of petroleum engineers, of which there were few. Core-barrels were just coming into use. The deepest wells were only 5,000 or 6,000 feet deep. As late as 1930 many geologists believed that oil could not exist at 10,000 feet and wrote scholarly articles to prove it. We now know better.

As new tools and methods came into the industry, geologists learned to use them and even to improve them. They were required to keep up with and ahead of the times; if they did not do so they were forced into the background. Some of the new methods were in fact devised by geologists.

Geological methods and tools are improving and will continue to improve. Nevertheless, we still see mistakes made; often they are the result of failure to collect and correlate all the evidence. We still see the effects of prejudice and the reluctance to discard outmoded concepts. In particular, we would like to see a better understanding reached between geologists and geophysicists. Both are students of earth science and each can help the other.

Much progress has been made; more needs to be made. As oil fields and mines become more difficult to find, a high order of geologic thought becomes necessary. Therefore, let us continue to broaden our thinking, and be on the alert for improvements in the method of oil and mineral finding. We should not be like the jellyfish and grasp any idea which drifts our way; nor like the barnacle, and fasten onto an idea and hold on to it till death; but more like the free-swimming fish which circulates about, picking, choosing, and rejecting.

Perhaps I should not venture into the field of mining geology; however, I know that the knowledge of the origin and occurrence of metallic and non-metallic mineral deposits has steadily increased, and the technique of ore-finding has improved. I believe that there is, and will be, a need for more research in the geology of mineral deposits, more exchange of information between mining companies, and a greater application of core-drilling, geophysics, and geochemistry. The mining geologists have apparently suffered from the lack of stability of the mineral industry, and I believe that such stability must be attained before the mining geologists can give their best services to the industry. Without a stabilized mineral industry our national defense is endangered.

As to engineering geology, remarkable progress has been made during the last 30 years; doubtless more is to come and the future of engineering geology should be assured. Possibly the greatest achievement of engineering geology is to have convinced, or at least partly convinced, the engineers that whatever rock excavation, or the use of rock materials, is involved, geology can play a useful, if not vital, part. Perhaps the greatest impetus to engineering geology was given by the St. Francis dam disaster in California in 1928. This dam, built without geological advice, and on an unstable foundation, failed with great loss of life and property. Since that time no important dam has been built without geological investigation of the site, and geology is being employed to a greater extent in foundation work, tunneling, river and harbor improvements, and excavation work of various kinds. The future will see more of this work and the future of the engineering geologist would seem to be evident. In this connection, let it be remembered that geological engineering calls for the highest type of applied geology and that mistakes can be costly in life or property. This is a point to be remembered.

I might mention those geologists who occupy a border zone between the academic and the industry employed geologist. I refer to those geologists who work for state or federal surveys. As government has expanded, so has their number. Sometimes it seems that the woods are full of them. It is their province to do a type of work which the educators have not time to do and industry can not afford to do. Much of their work is research, much is highly practical. They furnish some of the information that goes in to the geological lecture or the new text-book; they likewise furnish information which may lead to a mining discovery, to oil or gas development, or to an evaluation of our water resources. They provide information for mineral development of state or federal land. They are leaders in the conservation of mineral resources. Some of their findings are published; some are not. The state and federal surveys serve as training schools for some geologists who eventually find their way into industry, research, or teaching. In general the geologists employed by these organizations are less highly paid than those who serve in industry. For the geologist who is willing to take love of his work as a part of his compensation, public employment may offer an attractive career; otherwise, it may serve as a training school.

I can not complete this address without some mention of one branch of the geologic profession in which great responsibility reposes and which calls

for ability of a higher order. I refer to the professorial staff of the geology departments of the colleges and universities.

The teachers of geology face a difficult assignment. Directing the activities of the younger generation always presents problems. In addition to teaching they are required to keep up with geological science, and do their research and writing. They have the responsibility of taking the raw material and converting it into capable geologists. The future of geologic science lies to a large extent in *their* hands. In general my opinion is that they have done well. In some cases they might have done better.

The sincere student looks to his professors with high regard and trust; they must not fail him; but if they find that he is unfitted for a career in geology, it is their duty to direct his activities into other channels without wounding him mentally beyond repair.

We have all been students and we have all had our preferences among the professors who have lectured to us, at us, and over us. We carry a warm spot in our memories for the professor with an understanding heart who has encouraged us and helped us when the going was rough. For many of us it is the memory and inspiration of these kindly teachers that has made our profession still seem worthwhile in times of stress and disappointment.

In summing up my statements I might say that it is perhaps presumptuous of me in view of my very modest accomplishments to air my opinions as I have done today. My main purpose has been to encourage the students and the younger geologists

with some optimistic forecasts for their future and to encourage them to obtain the broadest possible basic training, to keep a broad and open mind, to eliminate geological prejudice, and to remain alert to the progress of the science and the opportunities that may be offered them — in short, to make geology a way of life.

As science progresses, geology advances, new views are opened up to geologists, and new opportunities will appear, thus:

"All ore is only rock until we learn  
To use it. Coal is stone that we can burn,  
And iron just a lump of rusty clay  
Until a furnace smelts the dross away.

We search for gold — yet we are often blind  
To hidden values of another kind.  
In seeking quartz flecked thru with yellow grains  
We fail to notice richer, rarer veins.

These were "just rocks"-pitchblende and carnotite  
Before men learned their vast atomic might.  
Then they were ores, sought first for radium  
But hunted now for their uranium.

Who now can say what other "worthless" stone  
May prove a source of treasure yet unknown?  
Value remains imprisoned in the rock  
Till wisdom find the key and tries the lock." \*

\*From the poem "Value Unknown"

by Gene Lindberg