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OGS begins series on its history

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OKLAHOMA GEOLOGICAL SURVEY

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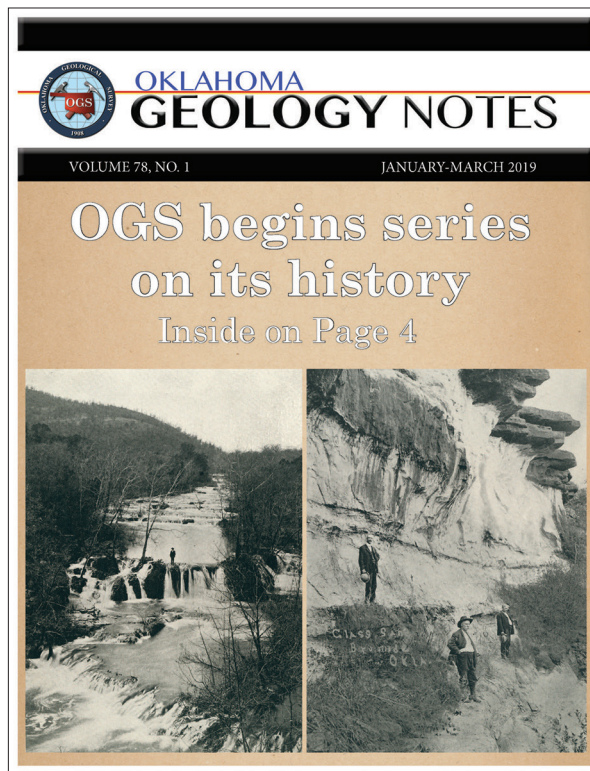
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The Oklahoma Geological Survey is a state agency for research and public service, mandated in the State Constitution to study Oklahoma's land, water, mineral and energy resources and to promote wise use and sound environmental practices.

IN THIS ISSUE

OGS begins series on its history.
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Both photos on the cover are from OGS Bulletin No. 3, published in 1910. The photo on the left was taken at Travertine Falls on Honey creek, East Timbered Hills, seven miles southwest of Davis. The photo on the right was taken on a bank of the Simpson glass sand, Delaware creek, four miles west of Bromide. No information was provided about individuals appearing in the photos.

Dear readers,

Typically, in this space of the Oklahoma Geology Notes we run the Director's Column. Dr. Jeremy Boak retired at the beginning of this year, and at the time of this writing, the OGS does not have a director. We would like to thank Dr. Boak for his years of service, and we wish him the best of luck.

We have begun a nationwide search for his replacement. This sort of complex search can take quite some time, and the time line is unclear about when a replacement will be named. We assure you, though, that once a new director is in place, we will announce it in this publication, likely in this very space.

As we focus on this important aspect of our future, in the Oklahoma Geology Notes we are turning our attention to our past. This issue marks the first of several that will focus on OGS history. This, no doubt, enables us to understand how we ended up where we are, and hopefully, benefits us in making decisions about our future.

Kind Regards,

Ted Satterfield
OGS Editor

OGS begins series on its history

By

Ted Satterfield

Editor, Oklahoma Geological Survey

In 1983, during the Oklahoma Geological Survey's 75th anniversary, Elizabeth Hamm published OGS Special Publication 83-2 on the history of the OGS, but our history has not been updated since. I read Mrs. Hamm's historical account when I first started at the OGS, and I loved reading about the interesting formation of the survey and the highs and lows the Survey had encountered since 1908.

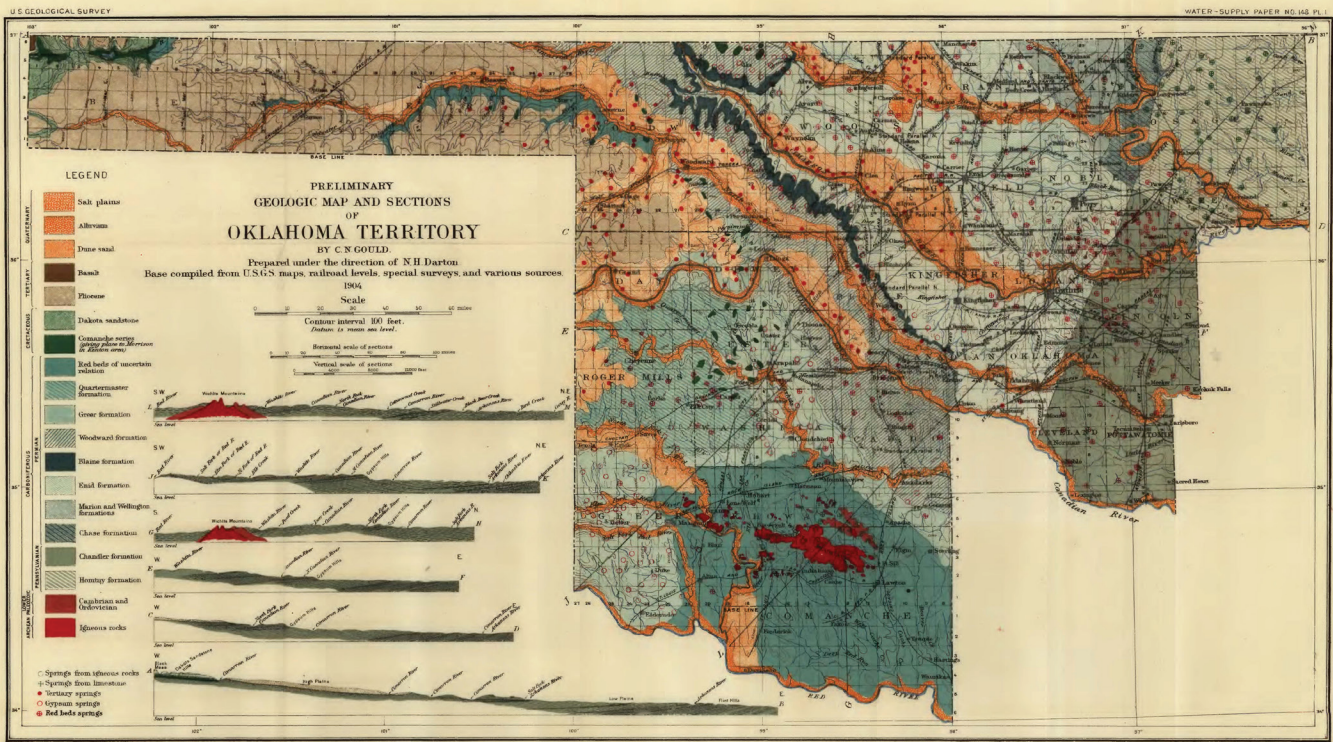
During my four years with the OGS, I've been asked on multiple occasions whether I'd be interested in working on a piece that would fill in the history since 1983, and for my first few years, I had little interest. In part because I lacked the historical perspective on the Survey, but also, it didn't strike me as the most exciting project.

Rather, I've decided to embark on a journey to not only fill in the gap since 1983, but to start from the beginning and expand into areas that weren't addressed in Mrs. Hamm's publication.

Brittany Pritchett's 2017 article (V. 76, No. 2) first got me interested in the years that lead up to the formation of the Oklahoma Territorial Survey. The recent Supreme Court case involving the nations that composed Indian Territory also peaked my interest, especially since I grew up in what would have been the Choctaw Nation. The more I dig, the more I feel ought to be told about the history of OGS, the territorial survey, as well as the various expeditions and industries that thrived in Indian Territory beginning many years before statehood.

But my opinion on this project has evolved.

These areas include Lieutenant Whipple



This map was created by OGS' first director, Charles Gould, before Oklahoma statehood. It was published in the USGS publication "Geology and Water Resources of Oklahoma," Water-Supply and Irrigation Paper No. 148. Former OGS geologist Brittany Pritchett wrote about the origins of this map in the Oklahoma Geology Notes in 2017. It can be found by following this link: <http://ogs.ou.edu/docs/geologynotes/GN-V76N2.pdf>.

and Captain Marcy's respective expeditions in the 1850s, a faux hunting trip that led to the developments of coal mining in the Choctaw Nation, and the high-profile fights over gold mining in the Wichita Mountains, involving the Father of Oklahoma Geology, Charles Gould.

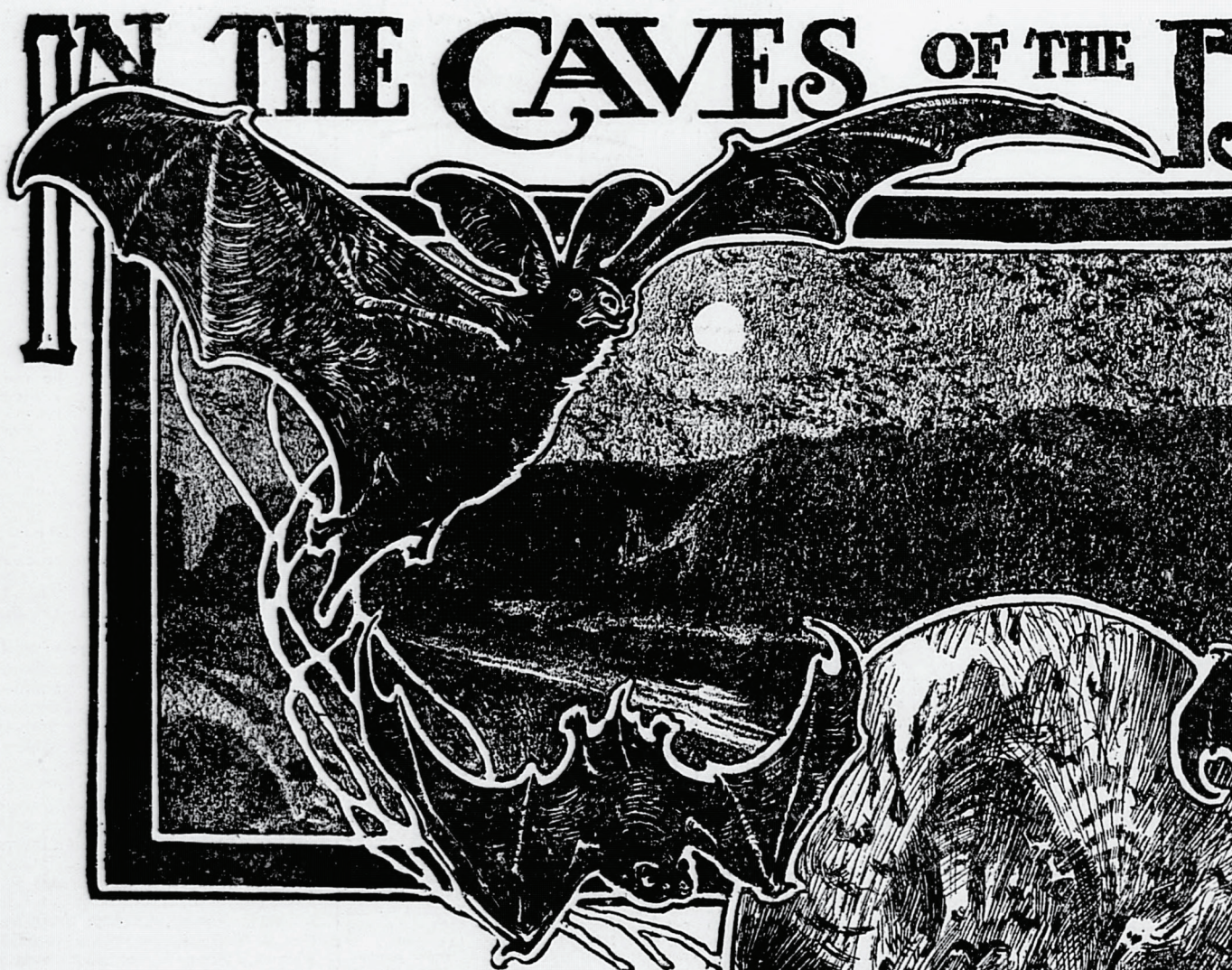
The plan is to complete this history through a series of installments in the Oklahoma Geology Notes and once the installments are complete, compile them into a special publication tracking all the way to recent history.

I would like to extend an invitation to anyone who might be interested in assisting me with this research. Those who have historical materials they'd like to share for this project are welcome, as well as anyone who would be interested in meeting to discuss OGS history. The best way to contact me is through my OU email: tgsatterfield@ou.edu.

The installments will begin in the next issue, but in this issue I'd like to share a few items I've gathered over the last few months. I've been digging into newspaper archives for information about OGS history, and I've run across multiple articles that I thought were worth sharing. Some might be helpful in telling the story of OGS history, and others not so much, but are still worth sharing.

Some of the most interesting newspaper clippings I've come across are almost unreadable as the paper has aged, and wouldn't be appropriate for printing in this publication. I will however include text of some of these in upcoming issues.

The following section will only include the newspaper clippings, along with a few notes about the time and date of the publication.



Like a story of wonderland is the tale of caves told by members of the Oklahoma Geological Survey, which has penetrated into the wild lands not long delivered from the sway of the Indian tribes. Immense caverns extending beneath level valley lands, in whose weird depths are sheltered millions of bats, are among the wonders they have recorded.

Hints of strange things to be found in the western part of the new Territory have come at times to those who have been acquainted with the Indians. But the red men were jealous guardians of their lands while they held them, and few, except those who were members of the tribes by blood or marriage, were permitted to venture into the hill country.

Rumors of immense mineral deposits, of strange waters and of curious fantasies of nature led to the organization of an expedition, led by Doctor A. H. Van Vleet, and its explorations, just reported to the State authorities, have given new interest to what was believed to be merely another prairie territory.

It was in the valley of Salt Creek that Doctor Van Vleet found the phenomena that interested him most. A few of those who had rushed into the Territory when it was

opened have found their way to the valley, and there are some farms and ranches on what is practically a broad plain.

Apparently the valley stretches unbroken for miles, with no hint of any wonder of nature concealed within it. But one who attempts to ride across it, as members of the survey party did, will find his way barred in almost the center by a great chasm, from 200 to 400 feet deep, whose sides are formed of great bluffs of red clay and rock and gypsum.

In the bottom of this flows Salt Creek. It well deserves its name, for its waters have a strong flavor of brine. It is a small stream in summer, and in winter, but in the spring, when the floods come, it sweeps over the bottom of the canon and becomes almost a river.

The gorge it has formed gives abundant evidence of its past power. Hundreds of years ago it found its channel through the valley and cut a deep way for itself through the red clay on the surface. Its progress downward was stayed by a ledge of rock on which the clay had formed, but this, too, yielded to the wash of the waters, and then the stream found a yielding substance almost as soft as the clay.

Underneath the rocks was a great deposit of gypsum, extending for miles. Through this in flood after flood the waters of the stream cut, until at length they found a bed



This article appeared in The St. Louis Republic on Sunday, August 26 1900. No byline is provided, but a similar story (with different artwork) showed up in a San Francisco newspaper around the same time, which likely means it was written by a news wire service. Dr. A. H. Van Vleet was the territorial geologist from 1898 until statehood in 1907.

BATS

REMARKABLE DISCOVERY. IN OKLAHOMA BY A GEOLOGICAL SURVEY PARTY.



more solid than that above, on a great floor-way of rock.

If the waters could not go deeper, however, they could go sideways through the gypsum, and this they did. Floods that came down in the years eddied against the side walls and tore out new places for themselves. Gradually the gypsum was worn away until the creek had made for itself fantastic channels in darkness far outside its bed.

The waters fairly sported in this work. When they cut away the supports of masses of gypsum these fell below, only to be washed away or to form pillars in passages around which the waters might swirl. Towers and minarets of curious design were left on the walls of the gorge, making it beautiful as well as wonderful.

Doctor Van Vleet's party explored these caves so far as they could. In some places the entrances were so low that it was difficult to crawl into them, but once inside great chambers opened up and the torches used by the party could not give a view of the roof. Sometimes the course of a cavern could be followed for miles along the creek, with large and small openings giving opportunity to see the wonders within.

But exploration of their depth was found impossible. When the party ventured into any of these caverns with torches they disturbed inhabitants that had never before had such visitations and resented it. Great swarms of bats, winged and furry things, swooped down from the roofs and in from the passages into which the light pene-

trated, flew around the explorers' heads and even dashed blindly into the flame of the torches.

The men were compelled to fight fiercely against the horde of small things. They were worsted, too, in the fight, for the best they could do was to stand their ground. If they attempted to venture into the passages they could see opening further along they would awaken new hordes of the winged things and their foes would be multiplied twofold and sometimes tenfold.

They were fairly stifled by the onslaught. Their torches were several times extinguished and they had to grope their way to the light, and they feared to venture into the depths of the caves lest they should be left without means to guide them back into the stream.

Doctor Van Vleet was greatly impressed by this spectacle of millions of the winged ones settling at defiance the efforts of his party, and he made a study of the bats. He remained several nights in the canyon to observe what they would do. While daylight lasted there were no signs of life in the depths of the gorge. It was only when one flared a torch against the fantastic sides and roofs of the caves that there was any indication of the life that lay in the canyon.

But when the first signs of darkness came, then the canyon showed its people. With the shadows would come solitary bats winging out of the caverns, like scouts in the fore of an army. They would wheel up among the rocks and down again, weirdly

circling, as though not yet certain of the course they would take or of the light to guide them.

As the shadow deepened others would join these first few adventurers, and the gorge would become all alive with the silent things that swept around and never seemed to alight. Then, as darkness came, the great army of bats would begin their swift flight out from the depths in which they had hidden themselves.

In great clouds they would appear. Thousands on thousands would emerge from every opening in the canyon. Thicker and thicker they would grow in the air above, until it seemed to the watchers below that a great cloud had settled over the canyon. It could be seen that they were leaving for the plains above, to take a long flight in search of food, but the number in the gorge would not seem to grow less.

Minute after minute the black things would continue to come out of the dark opening in the cliffs, not checking, but all the while wheeling upward, until one might doubt whether all this life was real and believe the furry things were passing and re-passing through some subterranean way, like the soldiers in a stage army.

For more than half an hour each night Doctor Van Vleet and his party saw this army of little things pass out, and, being scientific men, they tried to compute what the number must be. They stopped when they came to the millions, for they agreed that the number could be nothing less.

When the sky began to show light again the winged things would come back. First there would be the few scouts, the ones that dreaded the light most, and that delved into the cave depths to find security. Then would come the vanguard, and then the great body, a cloud again, hastening as the first rays of the sun shot across the plain to find their places before they were blinded by the orb that furnishes life and light to other things.

When daylight came in full the gorge would be still again, and the vision of the bat army seemed to those who had observed it as more like a visit to fairyland than a real sight in the days of the material life.

There were other wonders, too, to be found in the canyon of Salt Creek. From out of the ledges on the side would spurt clear springs of water that had found a course through the rocks and the gypsum until they could gain freedom in the creek bed. The water was clear and inviting to those who were thirsty and could find nothing but the salt waters of the creek. But those who drink it regret, for it is the "gyp" water, which brings woe.

From other ledges of sandstone come other springs of water, pure and sparkling. The suffering traveler who essays to quench his thirst in these finds only more thirst, for from somewhere they bring the brine that flows through the creek.

Where Salt Creek leaves the hills and bluffs rise almost 300 feet above the creek bed, and at the top the two massive ledges of gypsum are scarcely a quarter of a mile apart. Some person has stretched a stout wire from ledge to ledge, on which a framework running on a pulley supports a swing.

Starting from one bank, the swing, with its occupant, is whirled downward across the canyon almost a quarter of a mile, and then as far upward toward the opposite ledge as its momentum will carry it; then back toward the starting point, and back and forth, back and forth, each trip shorter, until it comes to rest, suspended above the middle of the canyon, fifteen feet from the ground.

GEOLOGICAL SURVEY TO BE ESTABLISHED

DELEGATE CAUDILL, OF HOBART,
SUBMITS NECESSARY CONSTI-
TUTIONAL PROVISION.

Special to The Oklahoman.

Guthrie, Okla., Dec. 18.—Delegate Caudill, of Hobart, chairman of the standing committee on geological survey, reported to the convention this morning, submitting a provision for the constitution, which establishes a state geological and economic survey, which shall be under the control of a commission, to be provided by the legislative assembly, to consist of three members to be appointed by the governor.

This commission shall have charge of the survey and shall appoint as state geologist, a geologist of established reputation. The survey shall have for its object an examination of the geological formation of the state, with special reference to building stone, ore, soils, road metal, coal, oil, gas and other mineral substances. There shall be prepared and published from time to time such reports as the commission may deem expedient, and it is provided that the first legislature shall make provision to carry into effect these constitutional clauses.

In presenting the report Delegate Caudill explained that the committee had held weekly meetings, and had heard addresses from the topographer of the United States geological survey department and of Oklahoma, and from the geologist of the Oklahoma State university and others interested in the work.

GOULD RETURNS FROM ARBUCKLES.

Prof. Charles N. Gould, head of the department of geology at the state university, and party of twenty geology students, returned Saturday from a three days camping trip in the Arbuckles. Camp was made at convenient points, the boys walking over the hills studying the geology of the region. The Arbuckles contain a number of formations not exposed in any other part of Oklahoma and many rare fossils are found in large quantities.

Prof. Gould is contemplating establishing a four-week's summer school of geology in the hills near Dougherty in the heart of the mountains next year. With such surroundings a course in geology would be very profitable and extremely interesting.

ON THE LEFT: Most newspapers were too focused on other aspects of the Oklahoma Constitutional Convention to highlight the plans to form the geological survey, but the Daily Oklahoman did run this one news brief concerning the survey on page 2 of their December 19, 1906 issue. ABOVE: Before and shortly after statehood, news outlets frequently ran articles about survey trips throughout the state, like this one that ran in The Guthrie Leader on May 28, 1907. NEXT PAGE: When Charles Gould was named the Survey's first director after statehood, the Daily Oklahoman ran it on their front page on July 26, 1908.

ACTUAL WORK ON SURVEY BEGINS

PROF. GOULD IN CHARGE OF
SEVEN DIVISIONS.

TO MAKE OFFICIAL REPORT

Recent Legislature Set Aside \$15,-
000 to Carry on the Work—The
Half of Oklahoma's Wealth
Has Not Been Told.

Actual work has begun on the geological survey of the state, authorized by an act of the recent legislature.

Seven parties, under the direction of Prof. Charles N. Gould, head of the department of Geology of the state university at Norman, are now in the field and will make a complete survey of the state for an official and authentic report of the many resources of Oklahoma.

Just before the close the legislature made an appropriation of \$15,000 with which to carry on the work of this survey. It is believed that this will be of great benefit to the new commonwealth as heretofore no true report of the wonderful resources of the Gem of the Southwest has ever been made. The newspapers have had much to say of Oklahoma's great wealth in agricultural and mineral lands, but the great asphaltum and gypsum beds as well as the beautiful granite mountains in the southwestern part of the state and the marble and soft building stone deposits have not received their proportion of publicity. When the report of this survey is made and sent out with the approval of the state government it will open the eyes of the whole Union and Oklahoma will stand out in grand relief among the other states in the matter of natural wealth.

GEOLOGICAL SURVEY

Is Begun—Will Report On Mineral Wealth of The New State

In the last few moments of the legislature a bill was passed in both houses known as geological survey bill, and with it an appropriation of \$15,000 with which to work. The governor of the state, the superintendent of public instruction and the president of the state university were appointed to attend to election of a head for the state geological survey, and last week Charles Newton Gould was chosen director. The last week Prof. Gould has been very active in choosing his helpers, and now he has twelve men in the field investigating the mineral resources of the new state.

The survey will have seven parties in the field all summer and part of next winter. Briefly, the work of the parties in the field will be to investigate the location and accessibility of the various building stones of the state, including limestone, marble, sandstone, granite, gabbro, gypsum, dolomite and porphyry, with pressure test to determine the adaptability of this stone for the construction of public buildings; investigate the location and availability of all stone, clay and other materials of the state suitable for the construction of roads, with ample tests to determine the relative value of the different materials, etc.

GREAT CONFIDENCE IN STATE'S FUTURE

Gould Says Oklahoma Has More
Material For Manufacturers
Than Other States

In twenty years from now, when Oklahoma is working up her own raw material into manufactured articles for the consumption of her people and her farmers have a good home market for farm products, we will look back with wonder and disgust at the year 1908, when we were obliged to send all our farm produce abroad and import our manufactured articles.

One reason why we have manufactured so little in the past is that so few people knew where there was anything to manufacture. The Oklahoma Geological Survey has men at work on the problem, and reports soon to be published will show that Oklahoma has vast undeveloped resources of many kinds of valuable minerals. Prof Gould, the director of the survey, is very sanguine regarding Oklahoma's future as a manufacturing state. He believes that this state has raw material for the manufacture of a larger amount of valuable articles than any other state in the Union.

EASTERN PORTION HAS ADVANTAGE

East and West Sides of State Are
Dependent on Each Other
Says Hutchinson

Norman, Okla., Jan. 1—"The eastern and western parts of Oklahoma depend upon each other for developement" said Mr. L. L. Hutchinson, assistant director of the Oklahoma geological survey in an interview today, "Of course at the present time the west is the more dependant. The west depends upon the east for fuel to develop its vast deposits of gypsum, salt, clay and shale, while in a few years the eastern part should get her supply of wall plaster and salt from the west. The western part of the state should also develop the brick and tile industry to a great extent provided only that fuel from the eastern part of the state can be had there at a reasonable price. Besides fuel the eastern part of Oklahoma has the raw materials to manufacture inexhaustable supplies of Portland cement, brick tile, glass and lime.

"I know of no reason why the two sections of Oklahoma should not supply each other and keep the money in the state that is now being sent to other states for these products."

On the previous page, the article to the left ran in The Weekly Chieftain (Vinita, OK) on August 7, 1908. The next article on that page ran in the Chickasha Daily Express on Wednesday, August 12, 1908. The above-left article appeared in the Vinita Daily Chieftain on September 10, 1908. The article on the above-right appeared in the Vinita Daily Chieftain on January 1, 1909.

Ain't It Awful Professor?

* * * * *

* An earthquake, perhaps greater *
 * in area and more destructive in its *
 * effects than that which recently *
 * visited Italy, is predicted for por- *
 * tions of Oklahoma, Arkansas and *
 * Texas, by Prof. Charles N. Gould, *
 * a member of the faculty of the *
 * state university, and director of *
 * the state geological survey. The *
 * towns of Tishomingo, Atoka, Den- *
 * ison, Waco, Texarkana, Little Rock *
 * and Hot Springs, he says, will be *
 * in the immediate path of the earth- *
 * quake. *

* "Oklahoma has the horror in *
 * store for it," Prof. Gould says. *
 * "When it will come nobody knows. *
 * It may be tomorrow, it may not be *
 * for a thousand years, but it will *
 * come." *

* * * * *

MINERALS FROM OKLAHOMA.

Petroleum Will Be Chief Feature of Exhibit Here in December.

Norman, Okla., Nov. 20.—Charles N. Gould, director of the Oklahoma geological survey, is preparing an exhibit of mineral specimens to be shipped to Washington for the sessions of the forthcoming Southern Commercial Congress.

Mr. Gould in this exhibit, has given special attention to petroleum and allied products, because no more remarkable growth in oil production has taken place in any other portion of the country than in Oklahoma. In 1891 the State produced 30 barrels. In 1908 it produced 45,798,765 barrels, the greatest quantity of oil produced in that year by any single State of the Union.

OKLAHOMA DISPLAY GEOLOGICAL SURVEY.

Exhibit of Mineral Products, Chiefly Petroleum, for Southern Commercial Congress.

Norman, Oklahoma, Nov. 17.—Charles N. Gould, director of the Oklahoma Geological Survey, is preparing an exhibit of mineral specimens to be shipped immediately to Washington for the sessions of the Southern Commercial Congress to be held December 6th and 7th. Mr. Gould has in this exhibit, given special attention to petroleum and allied products, because no more remarkable growth in oil production has taken place in any other portion of the country than in Oklahoma. In 1891 the state produced 30 barrels. In 1908 it produced 45,798,765 barrels, the greatest quantity of oil produced in that year by any single state of the Union.

OKLAHOMA CLAYS STAND TEST

Norman, Okla., Aug. 17.—L. C. Snider, chemist of the Oklahoma geological survey, has returned from Pittsburg, Pa., where he has been engaged for the past five months testing Oklahoma clays in the government testing laboratories at that place. For the past two years, Doctor C. N. Gould, director of the survey and professor of geology at the State university, has been endeavoring to find out what Oklahoma has in high grade clay and shale. At the present time three-fourths of the brick and all of the tile and pottery used in Oklahoma comes from outside of the state. Last year Oklahoma sent more than a million dollars to Kansas for pressed brick, and other clay products, and it will be Professor Gould's endeavor, by finding high grade clay in this state, to stop the stream of money which is now going to other states.

Last year an effort was made to have a large number of clay samples shipped to Pittsburg and several hundred letters were written to the owners of brick plants and clay deposits over the state in the endeavor to have a sufficient number of samples sent to Pittsburg. Mr. Snider was there

three months but only 25 samples came. Some fairly good clays were found but it was believed that more extensive investigations should be carried on. During the winter Mr. Snider wrote several hundred more letters to interested parties in all sections of Oklahoma and as a result something like 75 samples were sent to Pittsburg. These have been tested in the government testing plant at that place.

The tests of the last two years have demonstrated that Oklahoma possesses a large amount of high grade clay suitable for the manufacture of pressed brick and a great variety of clay products. This, of course, means that, as soon as these industries are developed, Oklahoma can retain at home all the money now being sent out of the state for these things.

Peaches for the permanent exhibition in the offices of the department of agriculture came in today from J. H. Meyer of Chandler, who has 1,000 trees. His peaches are the largest and best in the state and are marketed at a high price.

On the previous page, the article on the left appeared at the top of the front page of the Chickasha Daily Express on January 7, 1909. The article on the top-right on the previous page ran in The Washington Herald (Washington, D.C.) on November 21, 1909. The article on the bottom-right is from the Brownsville Daily Herald (Brownsville, TX) on Wednesday, November 17, 1909. The above article appeared in the Guthrie Daily Leader on August 17, 1910.

State Museum of Geology.

In compliance with a clause in the law instituting the Oklahoma geological survey, a permanent state museum of geology has been established at Norman. A portion of the building devoted to the offices of the survey has been temporarily fitted up to house the exhibits until a more suitable structure can be secured. Large glass-enclosed tables have been installed over the floor area, and the walls covered with rows of spacious shelves in order to display the exhibits to their best advantage. Everything in the museum will be of Oklahoma origin. Collection of minerals, fossils, building stones, clays and clay products, natural curios, cement series, sample of crude and refined oils, chemical waters and other things of geological nature will be shown. Every specimen will be plainly labeled with its name and the locality from which it was taken. It was said that the mineral exhibit at the state fair last year was the most complete and varied of any collection ever gotten together by one state at one time. The new museum will be an exact reproduction of that exhibit on a smaller but more detailed plan.

The above article appeared in The Daily Ardmoreite on Tuesday, April 25, 1911. The article to the right ran in the Weekly Chieftain (Vinita, OK) on October 20, 1911. On the next page, the article on the left appeared in The Daily Ardmoreite on May 18, 1913. The article to the right on the next page ran in the The South Bend News-Times on Thursday, July 15, 1915.

NEW GEOLOGY PROFESSOR HAS ASSUMED DUTIES

Norman, Okla., Oct. 14.—D. W. Ohern, professor of geology of the state university here, who was recently appointed director of the Oklahoma geological survey, has already assumed his duties. The new director announces that the policy of the survey will be substantially the same as that adopted by Dr. Gould who recently resigned the directorship. "There are just two tasks before the survey," said Mr. Ohern to a reporter today. "The first is the careful study of the vast mineral wealth of the state and the second is to make the public acquainted with the results. Field investigations are being pushed as rapidly as possible and we hope to have reports on our lead and zinc, our oil and glass sand ready soon."

Mr. Ohern expressed himself as highly pleased with the support the people of the state have given to the work. The hearty co-operation of the survey commission especially pleases the survey staff here. This kind of co-operation, Dr. Ohern says, is the sort that is appreciated by those engaged in the work.

Asked what estimate he put on the mineral resources of the state the director said: "Few people realize what a vast store we have. The expressions of surprise from visitors at the state fair when shown the exhibits of oil, coal, asphalt, marble, granite, building stone, cement, gypsum, and a score of other things were very significant. The people at large do not know what we have, but one who has studied the several parts of the state is strongly convinced of the enormity of our mineral wealth."

GEOLOGIST GOULD ON STATE'S WEALTH

TELLS OF HIDDEN MINERAL
RICHNESS AND SOUTHWEST-
ERN OIL FIELDS.

One of the most promising oil developed in Stephens county to be developed in Stephens county and the section adjoining it, according to Dr. Charles N. Gould, former state geologist, who delivered an address at the monthly dinner of the Brotherhood of St. Paul's cathedral, Thursday night.

This territory, Dr. Gould asserts, logically belongs to Oklahoma City, as the northeastern fields belong to Tulsa, and costly mistake is sure to be made if home capitalists do not step in and take the lead in its development. He called attention to the fact that the strongest gas well for its depth in the world has just been located in Stephens county, and insists that this offers a golden opportunity for the construction of a municipal pipe line that will supply 3-cent gas for manufacturing purposes.

The subject of the address was the mineral resources of the state of Oklahoma and Dr. Gould made it intensely interesting and educative. Various mineral sections of the state were outlined on a map. For instance, he said that the gypsum deposits of Oklahoma, if loaded on cars, would make up a train long enough to reach twelve times around the earth at the equator. "There is enough," he said, "to keep 100 mills running full time for 24,000 years."

NEEDLESS WASTE IN OIL DRILLING

Geological Survey Explains
Where Oil is Likely to
be Found.

By Victor Elliott.

WASHINGTON, July 15.—A needless waste of capital in drilling for oil is avoided by a guide recently issued by the United States Geological survey telling prospectors where to drill for oil and where not to drill. The guide covers chiefly Cotton and Jefferson counties, Oklahoma.

Carroll H. Segemann, of the survey, gives the results of an investigation made in these counties in cooperation with the Oklahoma geological survey. The statement contains valuable suggestions to the oil prospector for operating in untried territory and puts into the hands of the scientists a mass of valuable geological observations on the Permian "Red Beds" gathered during a study of the territory.

The region in question embraces about 270 square miles in southern Oklahoma, bounded on the south by Red river and on the north and east by the branch of the Chicago, Rock Island and Pacific railway which passes through Temple, Hastings, Maurika, Sugden and Ryan. It was examined by Mr. Wegemann during the summer and autumn of 1913.

It is pointed out by the geological survey that it does not promise that oil or gas will be found at any point in this unexplored area, as only the drill can answer this question. The occurrence of oil, it is stated, is controlled by several factors, some of which cannot be detected at the surface of the ground. Proved oil fields lie on all sides of this territory and in the area examined the same formation is present at the surface as that through which the good producing wells nearby have been drilled.

The report of the survey is devoted to a discussion of the possibilities of finding oil and gas in the area and indicates the most favorable localities for drilling wells as shown by the surface information.

The survey suggests that money put into drilling a dry hole in an undeveloped area is lost almost as completely as if it were burned.

WILL INSTALL SEISMOGRAPH

By United Press.

Norman, Okla., March 28.—When the new geology building at the university is erected a foundation for a seismograph, a delicate instrument that detects earthquakes and registers all surface and most subterranean disturbances, will be laid, so that when the instrument is purchased it can be installed without additional trouble or expense. This is but one of the far reaching plans being considered by those in charge of construction of the geology building.

Particular attention will be paid to laboratories for students working for advanced degrees. Every effort will be exerted to make the post-graduate work just as attractive as the undergraduate work at present. Private laboratories for research work will be provided.

OKLAHOMA STATE GEOLOGIST LOOKING OVER THIS SECTION

C. W. Shannon, Director of the State Geological Survey of Oklahoma was a Liberal visitor this morning. He was accompanied by his family.

Mr. Shannon is a geologist and said that he was looking over the territory with a view to extending the Liberal field into Oklahoma.

Mr Shannon was informed that he would have all the help he desired in this matter, as Liberal is not jealous and would like to see Beaver and Texas counties full of flowing wells.

The article on the left was published in the Chickasha Daily Express on March 28, 1917.

The above article is from The Liberal Democrat (Liberal, KS) on Thursday August 12, 1920.

About the Author

Ted Satterfield became the OGS Editor in August 2015. A native Oklahoman, Ted has a diverse professional background. After receiving his master's in the Gaylord College at OU, he spent two years as a newspaper editor before switching to an academic career. For six years he was a mass communication faculty member at Northwestern Oklahoma State University, where he taught Intro to Mass communication, Photography, News Editing, and Media Convergence. He also acted as advisor to the student-media website. Ted is also an accomplished screenwriter and director, winning numerous awards, including the best short screenplay at the 2012 deadCENTER Film Festival. He and his wife, Melanie, co-wrote the stage play "Alcoholidays," which was produced in Oklahoma City in 2013, and ran through December 2015 at the Oklahoma City Civic Center. Ted is an active member of the Association of Earth Science Editors.



In Memorium

Robert W. Allen was born on April 16, 1923. He was the second of three sons of Dr. and Mrs. Edward P. Allen of Oklahoma City. His older brother, Phil, is deceased and brother Paul lives in Oklahoma City.

In 1941, he graduated from Classen High School in Oklahoma City and in September of that year, Bob was one of two from Oklahoma to attend VMI, Virginia Military Institute.

On December 8, 1941 he enlisted in the Reserve Corps of the U.S. Army Active Combat Battalion. He was first assigned to the University of Pennsylvania and was then assigned to the 138th Engineer Combat Battalion. They crossed the Rhine and went into Central Germany.

After being discharged in 1946, he attended the University of Oklahoma and received his BS Degree in both Zoology and

Geology. He was a member of Beta Theta Pi fraternity. On August 21, 1948, he married Barbara Smith of Oklahoma City. They had three children, Katherine Carr, Robert W. Allen Jr., both of Ardmore OK, and Diane Fuller of Apple Valley, California. There are six grandchildren, four great granddaughters and one great grandson. Bob lost Barbara

on January 24, 2007. He later married Francis (Fran) Graffham on November 7, 2010. He is survived by his wife, Fran, and his children, grandchildren, and great-grandchildren.

From 1949 until 1954, Bob worked as a geologist for the Globe Oil and Refining Company in Oklahoma City. In 1954, the family moved to Ardmore where he became Division Geologist for Southern Oklahoma for Continental Oil. In 1962, he opened his office in Ardmore as an independent consulting Petroleum Geologist.

Over his long career, Bob received numerous awards: In 1988 he became the 17th Honorary Life Member of the Ardmore Geological Society, an affiliate of the AAPG that has been active in Ardmore since 1921.



Robert W. (Bob) Allen

In 1997, the Mid-Continent section of AAPG gave Bob the Certificate of Merit Award for 55 years of membership. In 2003 Bob received the "Rotarian of the Year" award from the Ardmore Rotary Club.

In 2005, The Mid-Continent section of AAPG awarded him the Robey H. Clark Award. and in 2010, the AAPG Special Award was presented to him at the National Meeting in New Orleans. He has also been named an Oklahoma Legend by the Oklahoma Geological Foundation, and has received the Distinguished Service Award from the Mewbourne College of Earth and Energy at the University of Oklahoma.

Bob served as an officer on many boards including the First Presbyterian Church of Ardmore, the Ardmore Higher Education Center, The Southern Oklahoma Blood Institute and the Alumni Advisory Council for the School of Geology and Geophysics at the University of Oklahoma.

Bob Allen adored the Arbuckle Mountains. He also would rather lead a good field trip than almost anything except drilling a new well. An authority on the Arbuckle Mountains, Bob loved to teach field geology to anyone willing to listen, and over about a span of 40 years, he led hundreds of field trips for audiences ranging from scout troops to AAPG past-presidents. One of the highlights of his field-tripping experiences was the day we took Jim Gibbs, Marlan Downey, and John Lorentz to the Lazy S Ranch north of Ardmore.

For 25 years, Bob led Halliburton's new classes of engineers into the Arbuckle Mountains. For 9 hours Bob would take them to the Basal Oil Creek and Woodford Formations, a "dead" Viola quarry, a "live" quarry in the West Spring Creek Formation worked by Martin-Marietta, the Washita Valley fault, Turner Falls, angular unconformities, and the Goddard Youth Camp Museum south of Sulphur, Oklahoma.

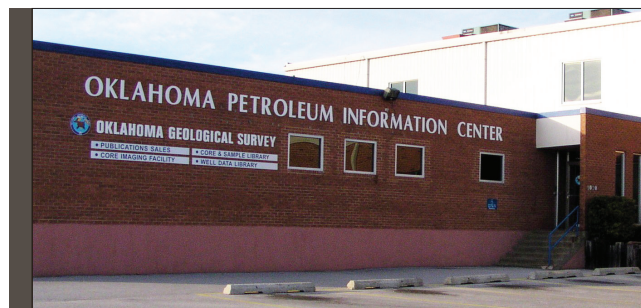
At this museum, Bob would show the class his *magnum opus* – his diorama depicting a cross section beneath the East Davis Oil Field. Bob loved to teach people "what is beneath your feet" and was in the process of writing a monograph on the subject at the time of his death on April 29, 2019..

The Summer, 2018, issue of the *Sooner Magazine*, published by the University of Oklahoma, featured Bob in an article titled "Technology Rebel and Early-day Wildcatter Stands on Solid Ground." This statement accurately summarizes his long and illustrious scientific career, as his favorite quote was "You have to look at the rocks to know where you're drilling."

The quintessential petroleum geologist and educator, he will be missed by many.



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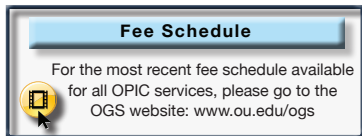
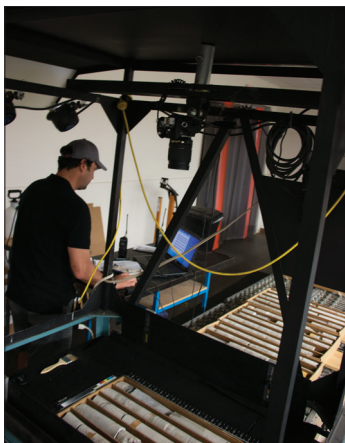
The Oklahoma Geological Survey's Oklahoma Petroleum Information Center (OPIC) is a 192,916 square-foot facility that houses approximately 500,000 boxes of core and cuttings from Oklahoma and elsewhere; an extensive repository of Oklahoma petroleum data; and the Geological Survey's publication sales office.

The OPIC facility is open Monday through Friday from 8AM to 5PM.

Core and Sample Facility

As Oklahoma seeks to maximize the recovery of oil and gas from new, existing, and shut-in wells, these data resources play an ever more important role.

In addition to being a valuable source of information for hydrocarbon exploration and production activities, OPIC's collections are used in many other ways. In particular, the use and



appreciation of these materials is increasing because they are a major resource for groundwater studies, land-use change analyses, CO₂ sequestration research, archaeological investigation, and environmental studies.

Well Data Library

The OGS Well Data Library is the State's official repository for full-scale (5 inches to 100 feet) paper logs from more than 450,000 wells, with new logs added daily. In addition to hard copy logs, a backup collection of logs is available on microfiche as well.

Also in the collection are 126,000 strip logs dating from the 1890s which have been recently digitized. In addition, the library maintains a hard copy of 1002A completion reports from 1904 to the 1990s; multiple sets of scout tickets; completion cards for Oklahoma wells; and hard copies of



aerial photos dating from 1934-1986 that are filed by county, township and range.

Publication Sales Office

The OGS Publication Sales Office is also located at OPIC. There you can purchase any USGS 7.5 minute quadrangle map of the state, a variety of other USGS maps and all inprint maps and publications produced by the OGS, representing nearly a century's worth of research and mapping.

OGS publications are used by hikers, campers, hunters, school and scout groups, those who enjoy outdoor activities. We have a resource room especially for K-12 teachers, which provides free access to rocks, minerals, fossils, and curricula for classroom use. OPIC is a resource for public officials planning highways and facilities, as well as those engaged in urban planning, water development, alternative energy, and other projects for economic development and civic improvement.



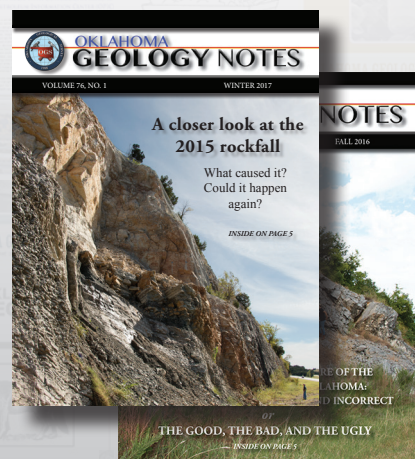
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Looking Down the Road

Coming up next in *The Oklahoma Geology Notes*

OGS History Installment No. 1

Before the OGS was founded, there was an Oklahoma Territorial Survey. Before that, there was a variety of expeditions, settlements, and a variety of other efforts to understand the geological composition of Oklahoma Territory, Indian Territory, and No Man's Land. In the next issue of the Oklahoma Geology Notes, we'll take a look at these developments.

