

The Story of Moving Mountain: An Historic Gas Seepage and Mass Wasting Event*

Paul Oldaker¹

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Abstract

In 1881, the construction of the narrow gauge railroad to Durango, Colorado uncovered thick coal seams in an area which came to be known as Carbon Junction and Carbon Mountain. These seams were later classified as part of the Fruitland Formation. In 1888, Professor Arthur Lakes of the Colorado School of Mines observed gas seeps associated with these coal seams in the same area. In June 1932, the entire town of Durango was rocked by an unknown nighttime explosion. In the morning no cause or damage could be found. In December 1932, explosions rocked the town and the north side of Carbon Mountain where landslides to the north are observed. Newspaper headlines said that the mountain is moving south of Durango and this feature's name was shortened to "Moving Mountain." Many theories have been put forward regarding the nature and cause of the movement. The explosions continued until as late as March 1933. The town tried to advertise it as a tourist attraction. The north "landslides" ejected coal into Tortilla Flats (now Bodo Park). At least one person was taken for a ride down these landslides. The east landslide developed along strike toward the east and the Animas River. No north landslides have occurred since 1933.

The east landslides continue to the present time with large events occurring in the 1950's and 1980's. Gas seepage in the area continues to be observed to the present day. The author's theory is that an outcrop coal fire intersected gas seepage resulting in explosions which ejected coal from steeply dipping beds causing structural failure parallel to strike. There is no question that Fruitland coal outcrops have had historic gas seepage events prior to oil and gas production activities in the San Juan Basin.

References

Colton, R.B., J.A. Holligan, L.W. Anderson and P.E. Patterson, 1975, Preliminary map of landslide deposits, Durango 1° x 2° Quadrangle, Colorado: U.S. Geological Survey Map MF-703.

Dunrud, C.R., and Osterwald, F.W., 1980, Effects of coal mine subsidence in the Sheridan, Wyoming area: U.S. Geological Survey Professional Paper 1164, 49 p.

Kirkham R.M. and A.K. Navarre, 2003, Geologic map of the Basin Mountain Quadrangle, La Plata County, Colorado, Colorado Geological Survey, Open-File Report 0F 1—4, 42 p.

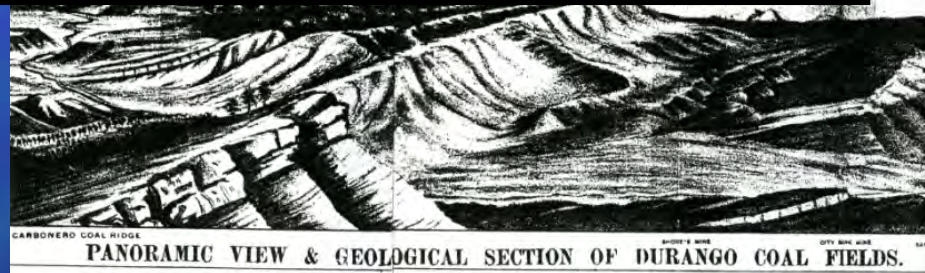
Sherrill, Robert, 1974, Mass wasting and the Carbon Mountain slide of 1932: Senior Thesis (Independent Study 499 c), Fort Lewis College.

Vanderwilt, J., 1934, A recent rockslide near Durango, in La Plata County, Colorado: *Journal of Geology*, v. 42, p. 1263-173.

Zapp, A.D., 1949, Geology and coal resources of the Durango area, La Plata and Montezuma counties, Colorado: U.S. Geological Survey Oil and Gas Investigations Preliminary Map (OM) 109.

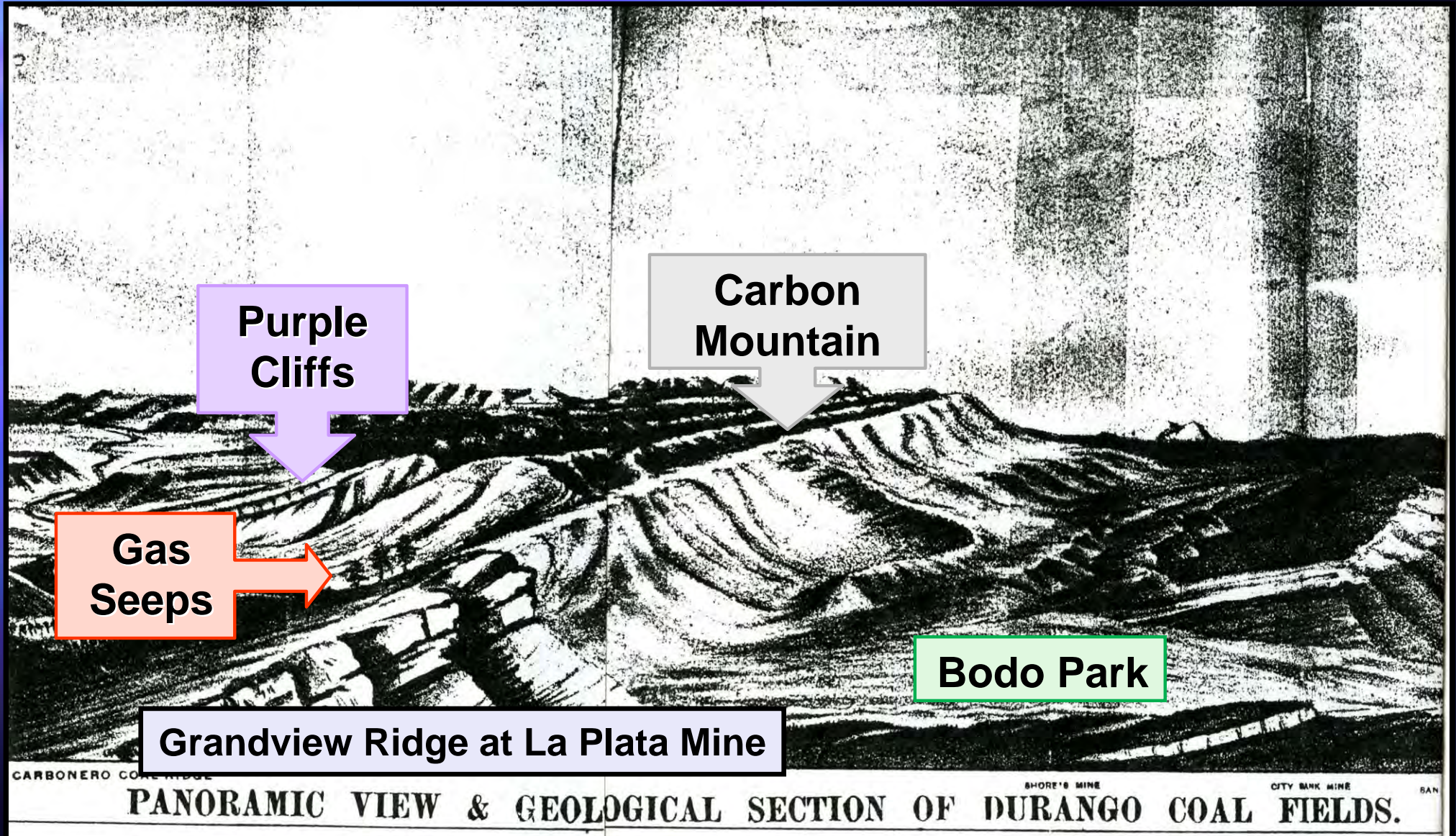
AAPG RMS

The Story of Moving Mountain: An Historic Gas Seepage and Mass Wasting Event.

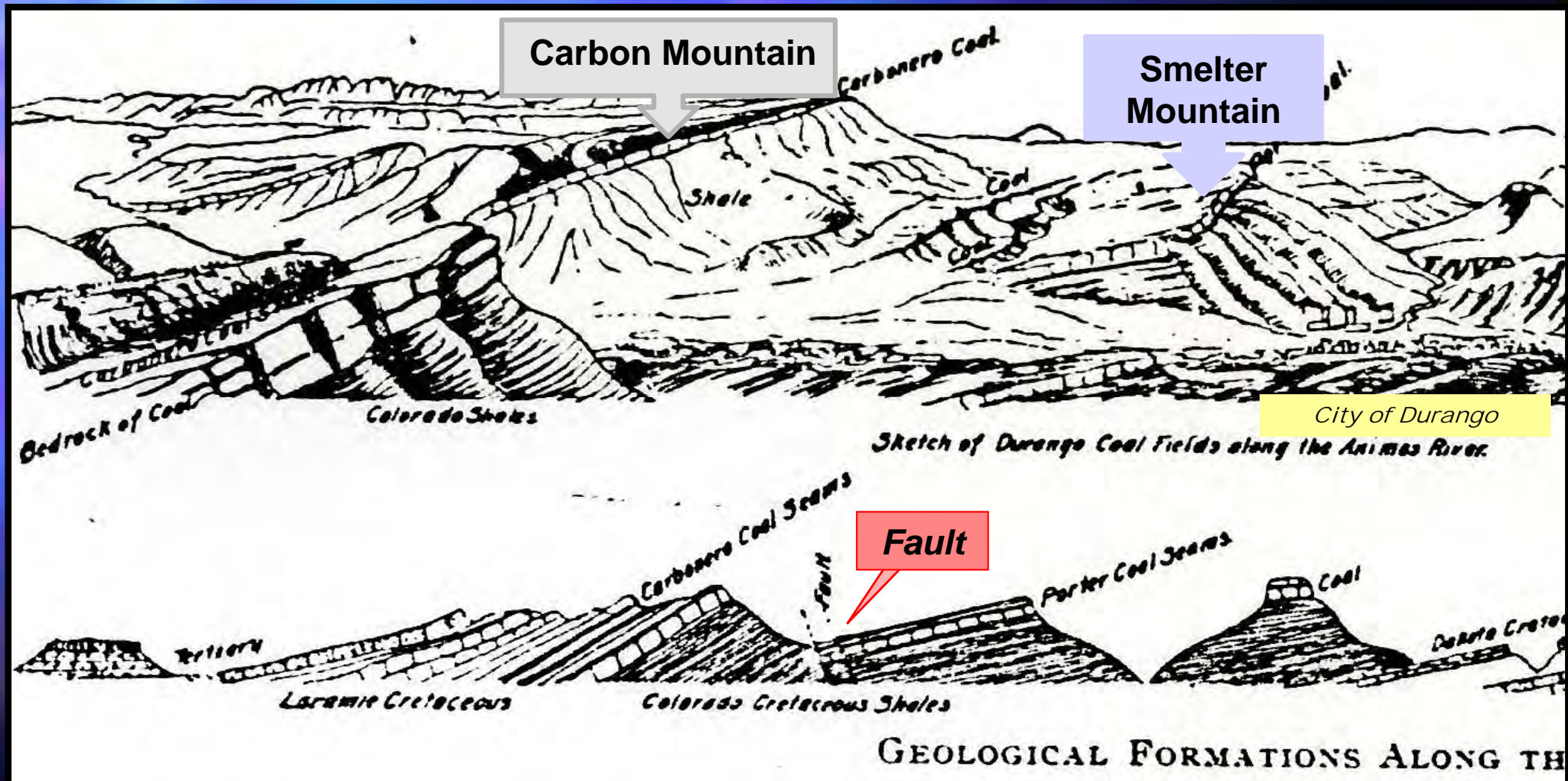


Presented by: Mr. Paul Oldaker
Graphic Arts by: Mr. Chris Chavez

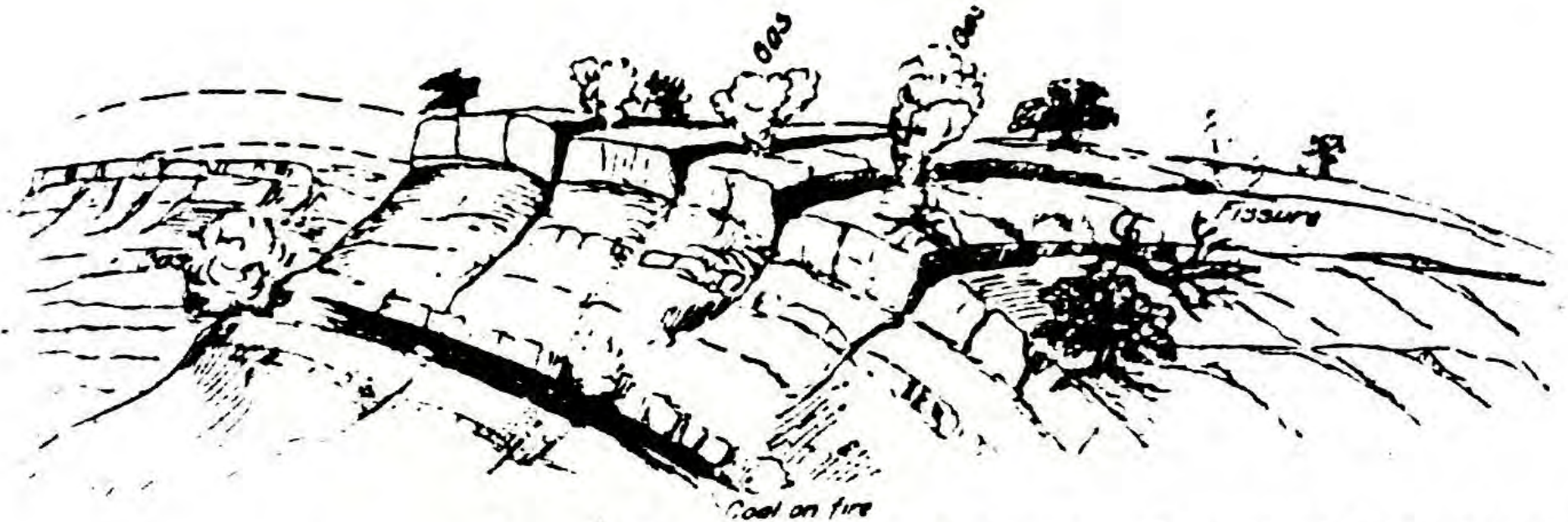
13-16 June, 2010 • Durango, Colorado, USA



1889 Carbon Mountain, Colorado, USA, Colorado School of Mines, Geology of Colorado Coalfields, Prof. Arthur Lakes

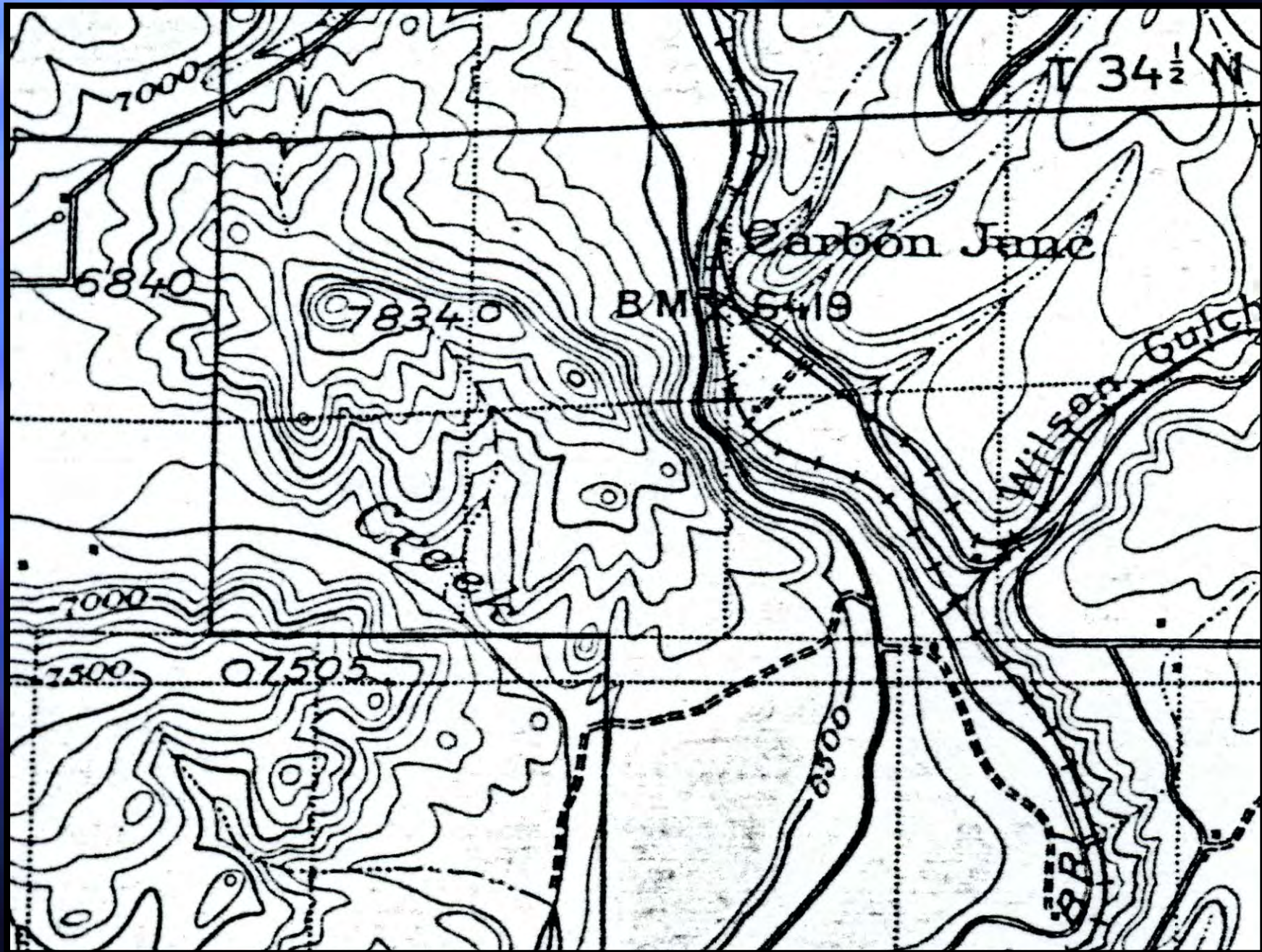


1902 Durango, Colorado, USA, Geology Along the Animas River, Mines & Minerals, Prof. Arthur Lakes



ANTICLINAL HOGBACK, NEAR WESTWATER, SHOWING FISSURES FORMED BY
BURNING OUT OF COAL SEAM BELOW.

1902 Westwater, New Mexico, USA,
Prospecting for Oil, Mines & Minerals, Prof. Arthur Lakes



1932

June 8

9:30 pm

1932 June 9, Durango,
Colorado, USA, Durango
Herald Democrat

Police Investigation- outside city

- Airplane
- Heavy charge
- Shook round house & court house
- Windows & doors rattled
- Abandoned coal mine
- Railroad right of way
- Quarries, Gravel Pits
- Boilers
- Not Mother Nature or
- Oil & Gas Industry

IN THE HANDS OF GOVERNOR ROOSEVELT today.

A new charge among those already made, is that nearly 1 million dollars which was mysteriously stolen by Sherwood in bank and savings accounts, was in reality Walker's and that Walker should be released.

IN GAYL DENIES GOVERNMENT WILL RESTORE MONARCHY

Baron Wilhelm Von Gayl, brother of the interior in the Von cabinet, today made a peremptory declaration of his loyalty to the Hohenzollerns in a speech before the federal council.

COMMITTEE APPROVES EAT DISTRIBUTION

Washington, June 9. (UP)—The agricultural committee today voted favorably a joint resolution introduced by Senator McNary, republican of Oregon, which would allow 50 million additional bushels of board wheat available to the cross for the relief of disaster.

SE OFFER TO ROM CAPITOL

men already camped home. Though Washington the 6,000 veterans with comrades en route to the capital.

OF AVIATRIX FOUND IN ALGERIA

Algeria, June 9. (UP)—A woman, later from was found on the aviation today. Her death is a mystery. There is some suspicion that have been murdered.

arriving accompanied by two attorneys. The search for Fleisher, who is known as the head of the purple gang, Detroit terrorist, had continued for several months and extended through the United States and Mexico and Canada.

Three former members of the purple gang are serving life sentences for the Collingwood slayings in which three men met death as the outcome of a beer feud.

Fleisher is reported to have been in the Sourland mountains region in New Jersey when the Lindbergh baby was stolen. Later he was reported to be in California and Mexico.

Government agents also have been looking for him.

Trenton, N. J., June 9. (UP)—A mystery blast, at 9:20 Wednesday night, shook houses in Durango, Col. Norman Schwartzkopf said today that he has telegraphed Detroit police for permission to have his men question Harry Fleisher, reputed gangster, in connection with the Lindbergh kidnapping and murder case.

SEARCH STARTED FOR SHERIFF G. R. CURTIS TODAY

Ordway, Colo., June 9. (AP)—Parties were organized today to search for Gomer R. Curtis, sheriff, who has been missing since June 3, when he left home, telling his wife that if "anything happens to me, nobody can say you haven't been a good wife."

H. H. Brooks, deputy district attorney, said he doesn't believe Sheriff Curtis has met with foul play, but is hunting for Robert Smith, who robbed him and chained him to an automobile recently.

TWO CENT TAX ON EACH CHECK ISSUED

Washington, June 9. (UP)—The 2-cent tax on bank checks imposed by the new revenue bill will be collected by banks with the least possible inconvenience to customers, officials of the bureau of internal revenue said today.

The banks will pay the government 2 cents on each check drawn by its depositors during the month, deducting the tax from the customers' balance.

GRAIN MARKET

Chicago, June 9. (AP)—Wheat 49 1/2; oats 28 1/2; corn 18 1/2.

METAL MARKET

Denver, June 9. (UP)—Lead 53; silver 27 1/2; copper 55; zinc 28 1/2.

MYSTERY BLAST SHAKES HOUSES IN THIS CITY

New York, June 9. (UP)—Calvin Coolidge has an article in the July Cosmopolitan which will be published tomorrow, dealing with war debts, but without mention of prohibition, according to John Randolph Hearst, vice president of the International Magazine company.

CONVALLY WILL NOMINATE GARNER

Washington, June 9. (UP)—Representative Rayburn, democrat of Texas, and unofficial manager of Speaker Garner's campaign for the presidency, announced today that Senator Connally, democrat of Texas, would nominate Garner at the democratic national convention.

POLICE GUARD SURRIER AFTER KIDNAP THREAT

Hollywood, Calif., June 9. (UP)—Roy Surrier, wealthy Hollywood business man, was under police guard today after apparently authentic reports that eastern gangsters who had successfully kidnaped two other men and netted \$12,000 ransom, had marked Surrier as their third victim, with \$100,000 ransom as their goal. Three known gangsters were the object of an intensive police search.

A motion picture director was the first victim, according to police reports and the second was a well-known Hollywood business man.

THREE KILLED AND IN FIGHT WITH DESP

San Francisco, June 9. (UP)—A cornered and desperate burglar, after his companion had been persons before he was brought down, killed three men and made sure that they were expected to live. John A. Merwin-Reardon, an officer, a stander was killed. Andrew Bellan and Glenn Johnson, the 2nd man, The two robbers came to San Francisco.

97 JUNE 1932 DURANGO HERALD DEMOCRAT

DURANGO HERALD-DEMOCRAT

Vol. 47—No. 299

Durango, Colorado

Wednesday, December 21, 1932

Severe Temblor Shakes West

DETECTIVE IS SLAIN IN LOS ANGELES, CAL.

Los Angeles, Dec. 21. (AP)—While police sought Andrew Nathan Holman, 35-year-old former convict, with orders to shoot to kill, detectives attempted to link him with a series of robberies here. He is being hunted as the slayer of Detective Loutergang Paul Lee, formerly of Denver, and a brother of Cliff Lee, former major league ball player. Lee was beaten to the draw Monday night by Holman as he questioned another suspect. He died yesterday.

START PROBE OF EXPLOSION IN COAL MINE

Walsenburg, Colo., Dec. 21. (AP)—State and federal officers today started an explosion in the Calumet No. 1 mine, 15 miles north of here, in which Roy Mitchell, the father of four children, was killed and Tom Smoky seriously injured. The blast occurred with 60 men in the mine but rock dust prevented as many as 100 from escaping. Several officials said Smoky could not be reached.

SHOCKS FELT FROM WEST COAST AS FAR EAST AS WYOMING; QUAKE DEEPLY CENTERED IN THE EARTH

Dr. Albert Newlin, Director of Santa Clara University Observatory Believes Earthquake Was Along the Old Hayward Fault, Which Is Becoming Active After Several Years of Quiet

San Francisco, Dec. 21. (AP)—A "great tremor" of unusual intensity shook the west last night, sending citizens in many communities of a half dozen states rushing from the shaking buildings. It rocked the western coast of any quake in 10 years, being felt from the west coast of the United States to the University of Washington and many points in the Pacific Northwest. The shock broke the north of the section of the Hayward fault at Regis College, Denver. An electric clock at 11:15 a. m. followed the quake in many places. It started at 10:25 a. m. on Nov. 10 at 10:25 p. m. last night, first time, and rocked San Francisco a few minutes later.

Sacramento crowds rushed from theaters and hotels. Doctor Albert Newlin, director of the Santa Clara University Observatory, told the United Press that he believed it was along the old Hayward fault, which is becoming active after several years of quiet.

The quakes were centered in Nevada, where some buildings were shattered. Clocks stopped in the area from Salt Lake to Fresno and tremors were felt at Rawlins, Wyoming, and as far south as Needles, California.

CASPER MAN UNABLE TO EXPLAIN HOW HE WENT TO COAST CITY

Los Angeles, Dec. 21. (AP)—O. L. Henshaw, of Casper, Wyoming, was in Los Angeles today, at odds as to how he got there. He could not

Robbers Loot Courthouse Safe

GIRL'S FEVER PUZZLES DOCTORS



Doctors were puzzled when the fever of Alice Tolan, 20-year-old Mexican girl, rose to a temperature of 104 degrees during her illness from a brain tumor in Los Angeles. Miss Tolan is shown with her nurse. (Associated Press Photo.)

BANDITS SECURE MACHINE GUNS IN FROM THE VAULTS

Lisbon, Ohio, Dec. 21. (AP)—Robbers blasted and wrecked two safes in the Columbiana county court house and escaped with \$512 and sub-machine guns while residents were rushing to a fire in a barn at the edge of the city.

Sheriff W. J. Barlow said that there were no clues but the use of nitroglycerine indicated that it was a professional job. The blasts were set off while the fire siren was blowing. It is believed that the burglars set the fire.

VOTE TO OUST REP. McFADDEN AS SECRETARY

Washington, Dec. 21. (AP)—A Pennsylvania republican of the house delegation today voted to oust Representative McFadden as secretary of the delegation because of his attacks on President Hoover. The immediate cause of the action was his recent and unsuccessful attempt to impeach the president, after which the delegation requested his resignation. He failed to comply.

COLLIER BEER BILL IS PASSED BY THE HOUSE TODAY, McFADDEN

DURANGO HERALD-DEMOCRAT

Vol. 47—No. 300

Durango, Colorado

Thursday, December 22, 1932

Beer Bill Faces Prospect of Veto

Mountain Moving South of Durango

SLIDES ARE RUNNING DAILY DOWN MOUNTAIN SIDE AND ARE RAPIDLY EXTENDING ALONG THE FAULT LINE

The big mountain, just west of Carbon Junction, about three miles south of Durango, has faulted, and thousands upon thousands of tons of earth and rock are slowly, but apparently steadily moving eastward toward the floor of the valley.

The fault, which can be definitely traced, reaches from a point near the floor of the valley, to the top of the mountain, running in a north-westerly direction. Just how deep the action continues into the bowels of the earth cannot be determined; but shortly after noon today the rumblings and grating of the slowly moving mass could be clearly heard by the writer, at a distance approximately three-quarters of a mile, despite the fact there was no indication of surface action at the time.

EIG SLIDES ARE RUNNING DAILY

A number of days ago two small land slides were noticed on the mountain, near the top; and each day since these slides have grown in size until now there is but one huge slide; and persons who have been watching the mountain closely declare the slide now runs sometimes twice daily.

People who have been where they could see the slide run, declare there seems to be an "explosion" of some kind followed a few seconds later by the slide, and several have declared they could see smoke following the slide.

The faulting of the mountain has loosened the formation near the top, where large cracks run in a series of lines through the rock and in the place thousands of

SILVER OUTLOOK IS BRIGHTER DECLARES SALT LAKE CITY MAN

Salt Lake City, Dec. 22. (UP)—Frank B. Cook, of Salt Lake, a member of the international silver commission, returned here today with a statement that the cause of silver was flourishing in the east, though nothing tangible could be expected from this congress.

He said that sentiment was growing and that silver, as a foundation for conservative money inflation, was growing.

ROBBERIES ESCAPE WITH BIG PAYROLL

Goldsboro, N.C., Dec. 22. (UP)—Four robbers shot and seriously

ROOSEVELT DECLINES TO ACCEPT ANY JOINT RESPONSIBILITY FOR APPOINTMENT DEBT COMMISSION

Washington, Dec. 22. (AP)—President-elect Roosevelt, in correspondence made public today in the White House, declined to "accept any joint responsibility" in the appointment of a commission to explore the war debt and other international problems, telling President Hoover, in effect, that he wished to wait and after he takes office on March fourth.

The exchange, between the president-elect and his successor-to-be, consisted of lengthy telegrams to which the president-elect attached a "definitive" statement. "Governor Roosevelt considers that it is unwise for him to accept any suggestion of joint responsibility for the foreign debt problems outlined in my recent message to congress. I will respect his wishes."

From authoritative sources it was learned that the president will refrain from appointing a debt commission proposed by him in his message to congress last Monday. He was described as feeling that without the support of the president-elect a commission could not properly be formed to carry on after March fourth.

Washington, Dec. 22. (UP)—President Hoover today decided to drop all war debt questions for the rest of his administration, after making public a series of telegrams. Hoover today

AUTHORITATIVE POLLS INDICATE SENATE WILL PASS THE MEASURE

Washington, Dec. 22. (UP)—A presidential veto appeared today to be the one real obstacle in the way of a swift modification of national prohibition. Authoritative polls indicated that the senate would follow the house, which, with unprecedented speed and decisiveness, passed the Culler bill authorizing 3.2 beer.

It was not authoritatively denied that information has reached congress that Hoover will not sign any beer bill.

Washington, Dec. 22. (AP)—The democratic 32 percent beer bill, which rode through the house on a wave of a 60 vote majority, came against two new hurdles today, the senate and presidential approval. Prompt consideration was promised in the senate, probably in mid-January, after there has been a vote on prohibition repeal, but democratic leaders were not voicing the optimistic predictions which preceded the house vote yesterday.

Congressman Taylor, democrat of Colorado, voted for the bill yesterday. The three Colorado lame ducks voted against it.

Carter, of Wyoming, voted for the bill.

BONCOUR CABINET BIDS FOR SUPPORT OF THE DEPUTIES

Paris, Dec. 22. (UP)—Joseph Boncour, new cabinet made up of

RAIL WORKERS TO CONTINUE 10 PCT. CUT

Chicago, Dec. 22. (AP)—One million railway workers, through their 1,500 representatives, agreed today to continue to accept pay checks, from which ten per cent had been sliced, for another nine months; when the current agreement expires on January 31, they will have felt the pay cut for a year.

The decision, assuring the employment of a huge saving in operating costs until next November, was reached shortly after midnight. The last 14 hours witnessed continuous conferences as union leaders sought a common ground on which the men and their employers could stand. They found it in a compromise proposal made by the roads, but the large and powerful Brotherhood of Locomotive

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Fault from valley NW to top

Big slides, explosions, smoke, thousands upon thousands of tons

Rumblings and gratings

near the top; and each day since these slides have grown in size until now there is but one huge slide; and persons who have been watching the mountain closely declare the slide now runs sometimes twice daily.

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1932 December 22, Durango, Colorado, USA,
Durango Herald Democrat

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THE MOVING MOUNTAIN

By FLORINDO GIRARDI.

After reading the article about the mountain which has faulted just south of Durango, I find that I am able to add a few more interesting facts about the strange phenomenon. The mountain where the slides are running is approximately one-fourth of a mile west of where we live. I have been in a position to watch the mountain for the last nineteen years. In 1918 in the spring of that year a small slide appeared just south of the present one; that was in action for a number of weeks and then closed.

This year, in June, the new slide started to run just north of the old one. It was soon after the "mystery explosion" which revived the old slide and also started a number of others.

The "mystery explosion" which rocked most of the city of Durango was not felt by any of our family. If the explosion had originated at the point where the slides are running we would have certainly felt it; but I will state that the slide started soon after the explosion.

As far as we know, we have seen no smoke following the slides. However before there was any snow on the ground, large clouds of dust could be seen after each slide; but after the snow, no such "smoke" can be seen. There are no mines under the mountain which makes it impossible to cave in from old tunnels. There is a mine, however, a quarter of a mile south of the mountain, but under a different mountain.

It is true that rumblings occur just before each slide, which strengthens the theory that the slides are caused by gas eruptions beneath the depths of the fault; due to the huge coal deposits. Black dirt may be seen all along the path of the slide.

When the slide first started to run in June, it ran once or twice a day. But in the last month it has run day and night. Since the snow has fallen it has run almost steadily, increasing in intervals and intensity each day. In the last week there has been a continuation of one slide after another, as high as a dozen times within an hour. Thousands of tons of earth and rocks have been moved to the bottom of the mountain in the last week.

Just after the explosion huge blocks of earth and rocks can be seen moving down the mountain, with such force that it can be heard a long distance. The noise has awakened us

many times. In the last two days the slides and explosions have been almost steady.

Last night it was steady after 7:00 o'clock; at this rate it will not be long before the greater part of the mountain will be moved to the floor of the valley.

The site of the phenomenon can be readily reached by individuals, or by automobiles. The mountain is about two and a half miles south of Durango, west of the Animas river, and not on the east side as believed by many. It can also be seen by people on Main avenue at the corner of

the Graden store, by the naked eye or better with field glasses. Only the beginning of the slide can be seen from this point. It is a phenomenon which every one should see.

Rent that spare room with a want-ad in the Herald-Democrat.

VICKS COUGH DROP

All you've hoped for in a Cough Drop—medicated with ingredients of

VICKS
VAPORUS

Big Christmas Party TRIMBLE SPRINGS

SUNDAY NIGHT, DECEMBER 25

Plenty Good Music — Lots of Fun

EVERYONE INVITED

Fun Starts at 9:00 o'Clock P. M.

**FOR FINE
TEXTURE IN
YOUR CAKES**

KC use the
double tested
double action
**BAKING
POWDER**

**SAME PRICE
today
AS 42 YEARS AGO**
25 ounces for 25¢

Friday, December 23, 1932

Estate



better, has of the as Mrs. Alice death the intricately (see Photo)

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Big C TRIM SUNDAY

Plant

Fun

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Mrs. Bowen suffered a broken pelvis - rescue workers managed to dig their way out but were unable to bring out reported good. Eleanor Horney, 7, the bodies of the two men they their niece received slight injuries. found.

WELL KNOWN GEOLOGIST GIVES INTERESTING FACTS RELATIVE TO PHENOMENON NEAR DURANGO

(By F. D. Aller)

The unusual spectacle of the landslide taking place south of Durango offers an exceptional opportunity for studying geological phenomenon, contour changes and the action of natural forces.

The conditions which make possible a slide of this magnitude, are exceptional and none of the articles appearing in the press have brought out these conditions nor have made mention of the unusually steep inclination of the rock strata which permitted one strata to slide on that underneath.

In order to get a clear perspective of the geological formation of "Moving Mountain," the most favorable view is obtained from the highway on the eastern side of the Animas River and from half a mile to two miles south of Carbon Junction. Looking across the river toward the west, one sees the parallel strata joints emerging from the river bed some three quarters of a mile south of "Moving Mountain." Following these up the river one can see the beautiful purple cliffs of the "Ojo Alamo," or Upper Laramie Formation. So far the strata has an upward inclination of nine degrees from the horizontal, which is about the average inclination or dip of the strata of the district and prevails up the Animas Canon, in the rocks sloping toward the La Plata Moun-

(Continued on Page 2)

EARTHQUAKES TAKE MANY LIVES IN THE STATE OF JALISCO

Mexico City, Dec. 29. (LP)—A Guadalajara dispatch today reported unconfirmed rumors that there were "innumerable victims" in a series of earthquakes starting December 19, which almost destroyed the village of Matlan in the state of Jalisco.

GRAIN MARKET

Chicago, Dec. 29. (AP)—Wheat, 12 7-8; corn, 22; oats, 15 1-8.

Para, Brazil War forces in nations were day on the bloody conflict session of Let rounded by a

Half a dozen sels have arrived forces gathered fantry, war ve being held in fifth Brazilian to Leticia.

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THE MOVING MOUNTAIN

By FLORINDO CIRARDI.

After reading the article about mountain which has faulted south of Durango, I find that I am able to add a few more interesting facts about the strange phenomenon.

The mountain where the slides running is approximately one-fifth of a mile west of where we live. It has been in a position to watch the mountain for the last nineteen years. In 1918 in the spring of that year a small slide appeared just south of present one; that was in action a number of weeks and then closed.

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As far as we know, we have seen no smoke following the slides. It never before there was any snow on the ground, large clouds of dust could be seen after each slide; but after the snow, no such "smoke" can be seen. There are no mines under the mountain which makes it impossible to have it from old tunnels. There is a mine, however, a quarter of a mile south of the mountain, but under different mountain.

It is true that rumblings occur before each slide, which strengthen the theory that the slides are caused by gas eruptions beneath the depth of the fault; due to the huge deposits. Black dirt may be seen along the path of the slide.

When the slide first started to run in June, it ran once or twice a day. But in the last month it has run day and night. Since the snow has fallen it has run almost steadily, increasing in intervals and intensity each day. In the last week there has been continuation of one slide after another, as high as a dozen times with an hour. Thousands of tons of earth and rocks have been moved to the bottom of the mountain in the last week.

Just after the explosion hundreds of blocks of earth and rocks can be seen moving down the mountain, with such force that it can be heard a long distance. The noise has awakened

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Durango Mountain

Mrs. Bowen suffered a broken pelvis—rescue workers managed to dig their way out but were unable to bring out reported good. Eleanor Horney, 7, the bodies of the two men they their niece received slight injuries. found.

WELL KNOWN GEOLOGIST GIVES INTERESTING FACTS RELATIVE TO PHENOMENON NEAR DURANGO

(By F. D. Aller)

The unusual spectacle of the landslide taking place south of Durango offers an exceptional opportunity for studying geological phenomenon, contour changes and the action of natural forces.

The conditions which make possible a slide of this magnitude, are exceptional and none of the articles appearing in the press have brought out these conditions nor have made mention of the unusually steep inclination of the rock strata which permitted one strata to slide on that underneath.

In order to get a clear perspective of the geological formation of "Moving Mountain," the most favorable view is obtained from the highway on the eastern side of the Animas River and from half a mile to two miles south of Carbon Junction. Looking across the river toward the west, one sees the parallel strata joints emerging from the river bed some three quarters of a mile south of "Moving Mountain." Following these up the river one can see the beautiful purple cliffs of the "Ojo Alamo," or Upper Laramie Formation. So far the strata has an upward inclination of nine degrees from the horizontal, which is about the average inclination or dip of the strata of the district and prevails up the Animas Canon, in the rocks sloping toward the La Plata Moun-

(Continued on Page 2)

EARTHQUAKES TAKE MANY LIVES IN THE STATE OF JALISCO

Mexico City, Dec. 29. (LP)—A Guadalajara dispatch today reported unconfirmed rumors that there were "innumerable victims" in a series of earthquakes starting December 19, which almost destroyed the village of Matlan in the state of Jalisco.

GRAIN MARKET

Chicago, Dec. 29. (AP)—Wheat, 12 7-8; corn, 22; oats, 15 1-8.

Para, Brazil War forces in nations were day on the bloody conflict session of Let rounded by a Half a dozen sels have arri forces gathered fantry, war ve being held in fifth Brazilian to Leticia. The trouble forces drove of Leticia and 74

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YOUNG GEOLOGIST ATTRIBUTES MOVING MOUNTAIN PHENOMENON TO OLD BURNING COAL VEINS

(By J. H. Wigglesworth)

The interest aroused by the so-called "Moving Mountain" south of Durango suggests that a further opinion as to the cause may not be amiss.

On the twenty-fourth of December I visited the slide, going at that time to a point near the foot. The theory of a burning coal seam as a cause presented itself, and the next day, Francis Will, Curtis Johnson, and myself made an extended investigation, taking numerous pictures and covering most of the territory where movement has taken place. To my knowledge the

three of us are of the few who have actually climbed to the point of origin. This fact, coupled with a knowledge of geology, has prompted me to write this explanation.

Investigation disclosed two coal seams, surmounted by a sandstone cap that forms the crest of the long, sloping ridge to the east of the slide proper. The old coal workings where this ridge meets the river are further evidence of the presence of coal. A great deal of shale was found, unmistakably burned to a red or yellow color. It has been suggested that such burned shale is the result of volcanic action, but the absence of any igneous rock, together with the fact that shale so heated commonly becomes slate, points to some other source for the heat. Many who have witnessed the phenomenon have noticed the vapor on the crest of the slide. A distinct sulfurous odor was noticed at the time of the investigation. This may be accounted for if

burned coal seam as the cause:

1. A general slumping of the crest of the hill—not a sharp, clearly defined fault.
2. The known presence of two coal seams in the underlying strata.
3. The presence of burned shale in the immediate area.
4. The sulfurous odor and the emanation of steam from the crevices in the rock.

Many may ask why, if there is coal burning underneath, is there no smoke or appreciable heat. I worked for several days in an area in northern Colorado under which a coal bed was on fire, and the only surface evidence there was vapor from the cracks and the burned appearance of the sandstone.

While it is manifestly dangerous to hazard an opinion as to the future conduct of nature, it is my belief

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curdloads of livestock began to march across the judging arenas; the sales begin Tuesday. The feeder cattle auction will be on Thursday.

Friday, I

ery Company, were burned and the stocks ruined. Only the outside walls of the buildings remained standing. The loss was estimated at \$100,000.

ACTION IN CARBON MOUNTAIN INCREASES SUNDAY FOLLOWING SERIES OF DEEP EXPLOSIONS

Activity in Carbon mountain, three miles south of Durango, increased to a marked extent Sunday evening, following three explosions, which persons who were near the mountain stated shook the ground over a wide area. A number of persons who were on the highway on the east side of the river, directly across from the mountain, stated they felt the road shake following each detonation.

Slides appeared along the entire north face of the mountain following the third explosion, and a deep rumbling could be heard as millions of tons of debris moved down the "southeast slope of the mountain."

It is believed by those who have been studying the phenomenon in Carbon mountain, that the explosions are caused by gas pockets, presumably ignited by burning coal veins.

The entire mass of broken rock and crumbled sedimentary deposit on the southeast slope, has moved between 40 and 50 feet during the past week, and the slides are eating away the mountain south of the "fault" line where the action split the formation several weeks ago. Indications are that the action will increase, and probably will continue for a long time.

Charles Ernst established a hot-dog and coffee stand near the base of the mountain, Saturday for the convenience of tired visitors returning from a climb over the slide area.

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COLLIER BILL

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DECLARE BILL IS UNFAIR TO EX-SOLDIERS

Washington, Jan. 16. (UP)—The American Legion today attacked as "infamous" a recommendation of the national economy league that the veterans be required to prove their service connection beyond a doubt before disability compensation of disease would be allowed.

Captain Watson Miller, chairman of the Legion's national rehabilitation committee, told a congressional committee that such provisions would result in many hardships to veterans.

1918 First Slide

Current slides began in June after the mystery blast

Smoke or no smoke, dust, gas, steam

Snow melts, other mountains covered with snow

Criss cross cracking pattern

Rock is hurled across river

Huge boulders crush trees

Whole face was dripping boulders

No old mines near slides.

Old mine near base, named as McCloskey West, water flow to Animas River was sulphurous and could be ignited

Formation names

Explosions in gas pockets by burning coal veins

Volcano

Noted Archeologist checks for meteor impact

1932 December 23-31, Durango, Colorado, USA,
Durango Herald Democrat and Durango News

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1932, 1933 December-March, Durango Herald Democrat,
Durango News, Bayfield Blade

December 30, 1932

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Representative
Childress Is
Ready.

Dr. T. E. Childress, representative by democracy last Denver where he met to mill in the sessions of the legislature. He is "Man of the day" morning and by Mrs. Childress. They will make capital city until the morning of the 19th. Mr. and Mrs. Childress and son, the four sons where from the 19th. Mr. and Mrs. Childress and son, the four sons where from the 19th. Mr. and Mrs. Childress and son, the four sons where from the 19th.

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'HOOVER' SLIDE ON OLD DEMOCRAT MOUNTAIN SPEWING DIRTS, ROCKS.

Democrat mountain is slipping and sliding, grunting and wheezing with renewed activity. The whole southern section of the faulty incline is settling and may start rolling at any time. The Hoover "slip" on the northern face of the hill, where hundreds of thousands of tons of dirt and boulders have broken away and rolled down onto the mesa narrowly missed claiming two human victims during the week. E. K. Edwards, newsreel cameraman, here to photograph the action of our national attention compeller, set his camera up at the foot of the slide and was grinding away when a boulder weighing several hundred tons

precipitated him down the declivity. He rolled for some distance before gaining his feet. With boulders, disturbed by his fall, rolling around him, he sprang to his feet and outraced them, gaining safety a white-faced youth, shaken and trembling. A large crowd witnessed his narrow escape from the rolling death.

Day and night now the jagged, thundering rocks are streaking down the lacerated cliffs to go bounding across the floor of the mesa.

At dawn you hear the rumble of the mountain and the crack and strain of thundering rocks. At noon you hear the grumble and

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 A coal vein, apexing at the top
 of the mountain, traverses the dis-
 turbed portion and disappears. For
 several hundred feet this vein has
 been exposed by the action. To the
 southward is an abandoned coal
 mine, with miles of underground
 workings. The tunnels are gas
 filled and caving, according to in-
 vestigators.
 Several years ago prohibition
 agents discovered a "moonshine"
 plant in this old mine. The opera-
 tor of the plant was captured after
 it was discovered that he used a
 canvas boat to cross a small but
 deep lake formed at one of the un-
 derground stations, to gain access
 to his still.

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 cast an eerie light over the wildly
 tumbling mass, unreal, preposter-
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 head became murky with blackish
 dust as over the rocky, jutting
 surface of the mountain top there
 came a change—a strange meta-
 morphis—with the jagged rocks on
 top breaking loose and hurling
 themselves outward and downward
 amid noise that only bounding,
 crashing boulders can make—great
 rocks weighing hundreds of pounds
 plunging down thru space. Plung-
 ing from right overhead. The eye
 could follow their hurtling course,
 but standing in front of them
 made the blood cold and the heart
 thunder."
 The mountain, three miles south
 of Durango, may be active for
 year. As yet it has done NO and
 CAN DO NO damage to Durango
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December 30, 1932

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Mountain Slides Are Worrying "Leggers"

Hundreds of people have been attracted to the Carbon Junction vicinity four miles south of Durango where a mountain seemingly is being reduced to a mole hill, if reports trickling in are true:

Emmett Hott says the boulders and slices of the mountain west of the Animas River opposite Carbon Junction are still rolling down at regular intervals!

Bill Bryan, the portly and good-natured general merchant here is authority for the story that the Second and Third Avenue bootleggeresses in the Animas River part of Durango are now keeping their supply of hooch out of their basements and prefer taking a chance with federal officers, being of the belief that the mountain slides will eventually dam the Animas River and dilute their contraband if it is left in the cellars: "We are afraid the back water from the Animas River will absolutely ruin our business: one of the high-heeled damsels with lock-stitch silk stockings showing and then a hard-boiled guy who had been refused a drink in her place came back at her with—"What does it matter if a dozen or two of you River Rats are put out of business, there are plenty more bootleggeresses up around the city hall and the county courthouse!"

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CARBON MOUNTAIN GIVEN PUBLICITY THRUOUT EUROPE

Carbon Mountain, Durango's reaming mountain, is getting wide publicity for Durango and the San Juan Basin in foreign countries, as well as in every section of the United States, and since Carbon decided to "lift its face and change its complexion" millions of persons have learned where and what the Scenic San Juan Basin, Nature's finest art gallery, really is, who never before were aware that such a place was in existence.

The following interesting letter relative to Carbon Mountain was received by Miss Betty Berri, of Durango, from Frederick D. Grape, cousin of Mrs. Berri, written from Eden Hotel Paradiso, Isola Di Capri, Anacapri, Italy:

"Beloved Betty: (At Durango, Colorado, if there is any such place by the time this gets to where it is, or used to be, since the last we heard it was slipping right off the map).

"Your letter of January 22 is being put ahead of some that came in last Christmas, partly because you answered so promptly, and partly because I would like you to get it before you have all gone ker-check over the edge of the canon, or wherever it is into which, according to the utterly unreliable "Paris Herald", the town of Durango, Colo., U. S. A. is rapidly sliding.

"I appreciate very much your kind invitation to come to Durango—but—is there any Durango to come to? I'd hardly like to travel all that distance and then find just a hole in the ground, with a sign stuck up "THIS IS WHERE DURANGO

over 110 feet deep in the g between Carbon Mountain mountain just south of it, is eastward down the gulch to Animas river.

FOUR GIRLS WHO STARTED TO SE WORLD, CAI

Four school girls of the side section, disgruntled over matters, decided to see the and with this avowed intent the Sunnyside school Monday, and started hiking, with quique or California as the nation—they just hadn't definitely.

School children who had formed of the departure of the set of feminine wanderers, the teacher, and she in turned the Sheriff's office and strict, attorney's office, who Assistant District Attorney son Hatfield and Undersheriff Handley started post haste to the girls to their respective

Upon arriving at the school officers learned that the girls started hiking "west" without supplies of any kind, a properly clad for such a year

Picking up the trail the soon reached a point where could see the girls crossing the mas river on a horse which borrowed.

Hatfield and Handley soon took the truant lassies and them to their respective where with much penitence stated their intention of ref from further exploration ven

Detroit's branch handles



1932, 1933 December-March, Durango Herald Democrat, Durango News, Bayfield Blade

DURANGO HERALD-DEMOCRAT

Vol. 48—No. 6

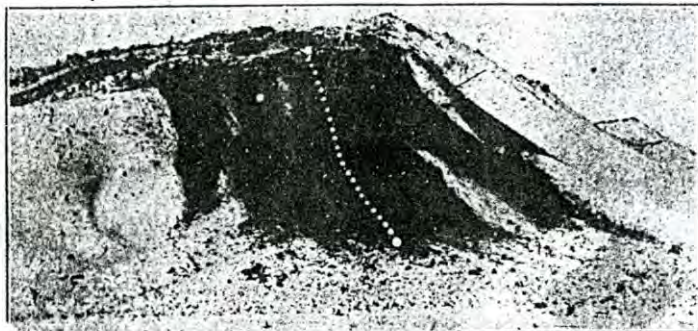
Durango, Colorado

State Historical and Natural
History Society

Monday, January 9, 1933

Durango Man Escapes Serious Injury When Carried Down Mountain on Slide

DOTTED LINE SHOWS WHERE CONWAY CAME DOWN



Between fifty and one hundred people stood spell bound Sunday afternoon as they watched Ed Conway, son of Mr. and Mrs. Tom Conway, of North Durango miraculously escape death or serious injury as he came down the north side of Carbon mountain with big rocks tumbling all around him.

While between fifty and one hundred persons watched spell bound Sunday afternoon, Ed Conway, 22-year-old son of Mr. and Mrs. Tom Conway, of North Durango, miraculously escaped death or serious injury, as he came tumbling down the north face of Carbon mountain, three miles south of this city, with big boulders and tons of earth moving all around him. The only injury received by Conway was a cut on his right hand.

A number of people who were on the mountain at the time the accident happened, stated that Conway, who was standing on the north edge of the mountain, lost his footing when the ground crumbled beneath him, and slipped over the ledge and onto the incline where the avalanche has been running for several weeks. After rolling for about a hundred feet Conway succeeded in getting onto his feet and ran most of the remainder of the distance down the slope with the slide roaring around him.

Now, the young man succeeded in making the descent without being

SAYS FREE LOVE NEST WAS CAUSE OF MAN'S DEATH

Chicago, Jan. 9. (AP)—Attorney James Burke today told police investigating the slaying of Edwin Schildhauer, bandmaster, that his widow has decided to reveal that

2 BLINDMEN BATTLE OVER WOMAN'S LOVE

Oakland, Jan. 9. (UP)—As a result of a furious battle between two blindmen, friends of long standing, over the affections of a woman, Joseph Parker, 45, was near death from knife wounds and Manual Lincoln, 38, was held in jail.

The battle occurred at the home of Mrs. Elena Aguilar, the woman in the case.

ADDITIONAL MYSTERY BECLOUDS CASE OF HARRY STANLEY TODAY

State Senate Gets Into Action

FATHER SLAYS SON IN QUARREL OVER A DIME IN MISSOURI

Bowling Green, Mo., Jan. 9. (UP)—A coroner's hearing today revealed that an argument over ten cents led to the slaying of William Clemens, 20, a fisherman, by his father, Orville, 44.

The son owed his father \$1.10 but paid him only a dollar. The elder Clemens became enraged, got a revolver, grabbed the youth by the shoulder, placed the gun against his body and fired.

LONGMONT YOUTH IS DROWNED UNDER ICE

Boulder, Colo., Jan. 9. (AP)—Ralph Johnson, 17, of Longmont, Colorado, a sophomore in high school, was drowned last night when he fell in a lake near the Johnson farm. Everett, a brother, 15, jumped through a hole in the ice and tried to rescue him but failed. Neighboring farmers recovered the body.

HOUSE BATTLES OVER PATRONAGE IN EXECUTIVE SESSION, TODAY

Denver, Jan. 9. (UP)—While the house battled over patronage in an executive session behind closed doors, the senate got into action for the first time in this session.

Lee Knouse, of Montrose, introduced senate bills creating state bonding agencies for the state, county, municipal and school district treasurers.

Ollie Bannister, democrat of Grand Junction, proposed to reduce the state treasurers bond one third to \$500,000.

The Knous-Bannister measures are intended to overcome the difficulties of State Treasurer-elect Bedford, who thus far has been unable to obtain a bond due to a technicality of commercial bonding companies policies.

The senate referred to Governor Adams the interim appointment of Thomas Lytle, of Montrose, to the state board of immigration and to the state affairs committee.

LOWLANDS FLOODED IN THE NORTHWEST

Seattle, Wn., Jan. 9. (AP)—Rampaging rivers, fed by heavy rains and melting snows, flooded the lowlands of Washington today, marooning families, washing away railroad bridges, inundating highways and disrupting railroad schedules.

White water poured over its dykes, flooding hundreds of acres of rich bottom lands south of Seattle. Two

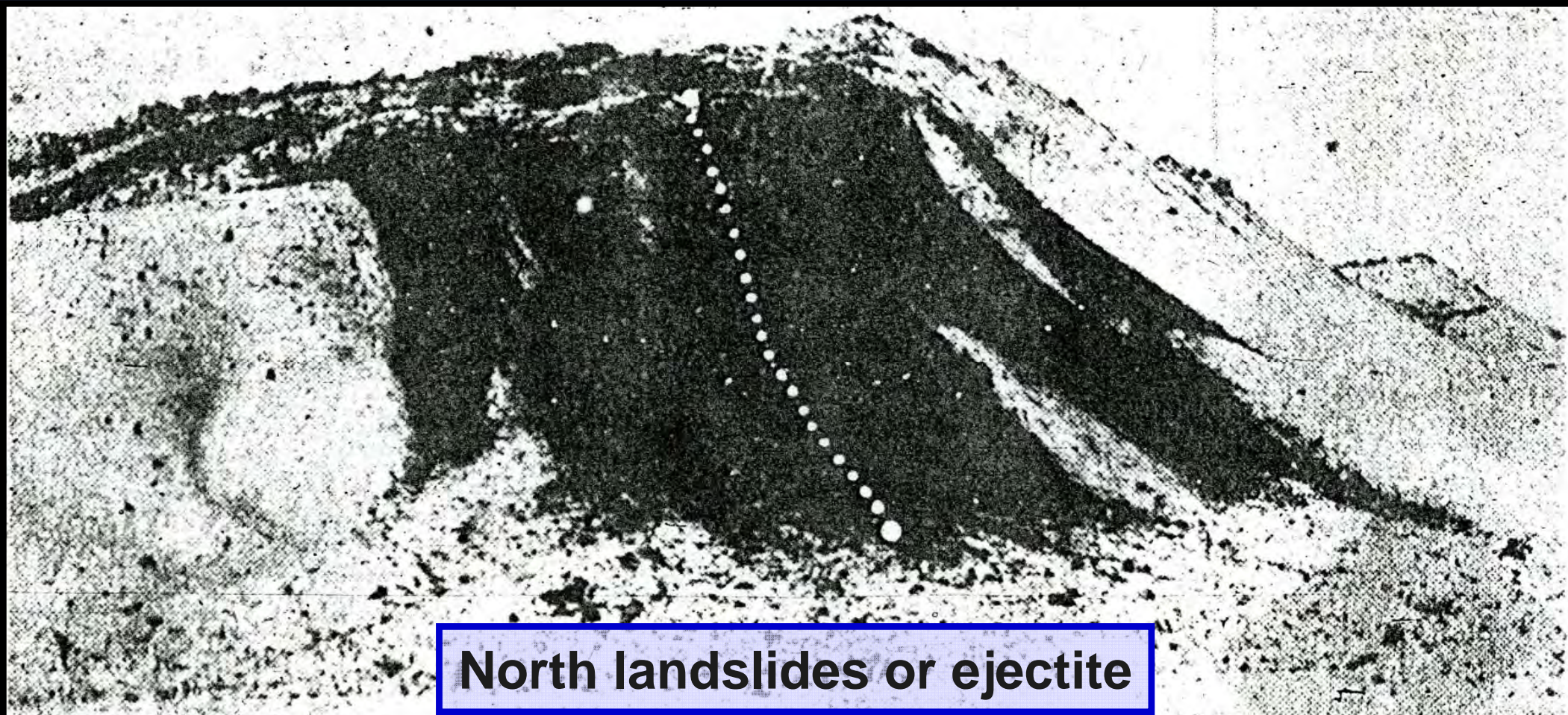
SIXTEEN DEAD IN RIOTS OVER SPAIN, TODAY

Madrid, Jan. 9. (AP)—A wave of extremist unrest swept through the young republic of Spain and left a toll of sixteen killed and a larger number wounded today, while an estimated number was under arrest.

Striking suddenly, without warning different extremist organizations started operating under a coordinate command. The attacks occurred mainly in industrial centers Sunday.

All armed forces were called out to subdue the rebellion. Scores of extremists and communists were jailed.

WILL ROGERS FAILS TO WISECRACK HIS



North landslides or ejectite

1933 January 9, Durango, Colorado, USA
Durango Herald Democrat

1933 January 13
Durango,
Colorado, USA,
Durango News



East and north landslides

Popular Mechanics Magazine

REGISTERED IN U. S. PATENT OFFICE

WRITTEN SO YOU CAN UNDERSTAND IT

Vol. 60

JULY, 1933

No. 1

Automatic SKIPPERS *of the* SKYWAYS



The Human Pilot and the Automatic Pilot; the Robot Pilot Can Fly the Ship on a Predetermined Course and Manipulates the Controls with a Touch More Sensitive Than Any Human Pilot

TS twin supercharged engines opening in a crescendo of power, a sleek metal monoplane speeds along the airport runway and climbs into the blue. In the pilot's compartment, forward of the ten-passenger cabin, the chief pilot manipulates the controls until the altimeter registers 500

feet. Then he turns a dial, pulls a lever and lets a little metal box fly the plane.

Hands and feet off the controls, the pilot and copilot settle back to study the up-to-the-minute weather maps and reports. Both men are for the moment wholly indifferent to the two-score instruments and

1933 July,
Popular
Mechanics,
Colorado's
Runaway
Mountain



Colorado's Runaway Mountain

A NATURAL phenomenon in the form of a disintegrating mountain near Durango in southwestern Colorado is perplexing scientists and appalling local inhabitants. For several months this huge mass of rock and earth, apparently loosened by some mysterious, subterranean disturbance, has been crunching and grinding its way down the slopes of Carbon mountain toward the Animas river.

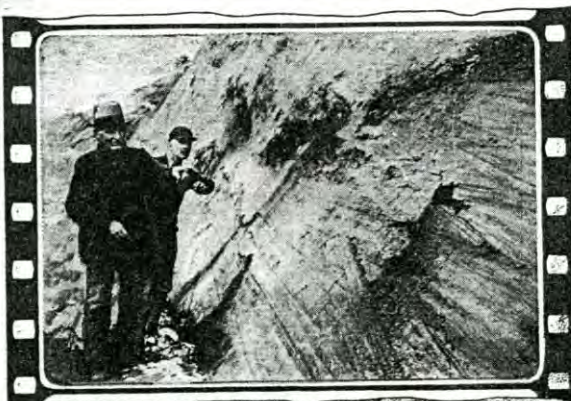
Accompanied by volcanolike explosions deep underground, giving off dense clouds of black dust or smoke and pervaded by a strong odor of gas fumes, this immense slide is unlike any other such earth movement known to scientists who have visited it. If it continues its present rate of progress, the material eventually will dam up Animas river, so it becomes both a scientific problem and a local crisis.

The region southeast of Du-



Top, Investigators Standing on the Surface of the Slide on Carbon Mountain; Below, Approaching the Moving Mountain Which Threatens to Block a River

1933 July,
Popular
Mechanics,
Colorado's
Runaway
Mountain



Two Views of the Fault, the Top One Showing the Mirrorlike Foot Wall Which Has Been Polished Like Glass



this mountain to a depth of about 100 feet, a width of a quarter mile, and extending the entire length of the slope, or a little more than a mile, began sliding. With slight interruptions from time to time the action has continued. The ravine between Carbon mountain and its next neighbor has been filled with rock and debris to a depth of 300 feet. Under im-

mense pressure from above, this material has moved down that ravine toward the Animas river until less than 500 feet of unobstructed distance remains between the oncoming slide and the bed of the stream below it.

The apex of what was Carbon mountain in descending the slope naturally caught behind the jutting features of the old fault and was sent hurtling in deafening avalanches down the north face of the mountain more than 1,000 feet into the valley. The main body of the slide has traveled approximately half a mile, and the whole mass has been churned and ground into an indiscriminate mixture of boulders, dirt, clay, trees and brush.

Last March visitors reported a great explosion deep under the mountain and a dense cloud of black dust or smoke emitted from the upper portion of the slide. Gas fumes were sensed several miles away.

Colorado Mountain

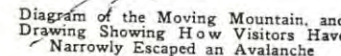
A NATURAL

of a dis- Durango in sc- plexing scient- habitants. For mass of rock- ened by some disturbance, h- ing and grind- the slopes of C- toward the A-

Accompanie- explosions de- giving off dens- dust or smoke- a strong odor- this immense s- other such ea- known to scie- visited it. If present rate- material event- up Animas river- both a scientific- local crisis.

The region s-

1933 July, Popular Mechanics, Colorado's Runaway Mountain



An interesting feature of the slide is the foot wall of the new movement, subjected to such great pressure that the clay and rock were polished smooth. The material of the slope separated into grotesque

One sightseer advanced too near the rim of a crumbling mass and was carried with it more than 1,000 feet below. He managed to keep abreast the racing rocks and suffered only minor scratches. There has not been an hour in the past few months when the crackle of plunging boulders and the booming of the breaking strata could not be heard by residents of Durango, three miles away. Recently a crevice appeared in a sister peak, and it is feared the second mountain is beginning to disintegrate.

Oldaker 2010

1933 July, Popular Mechanics, Colorado's Runaway Mountain

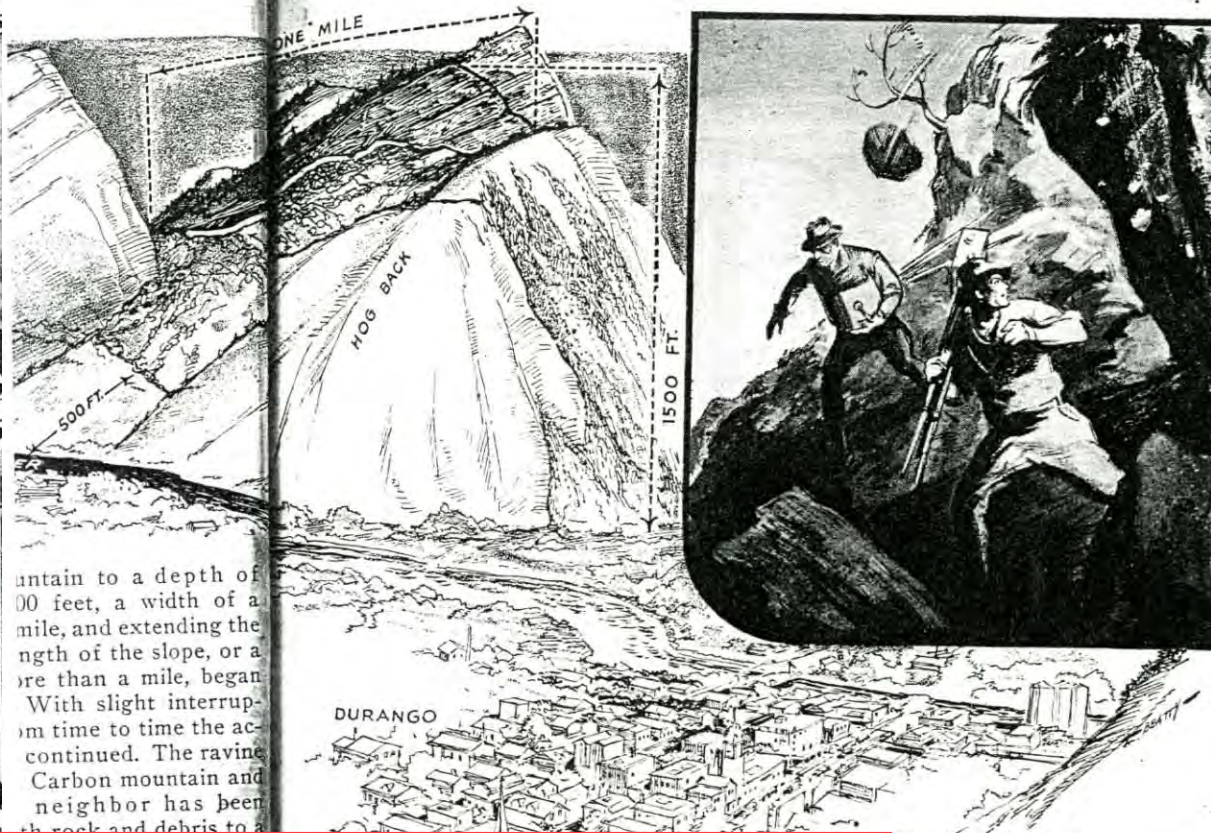


Diagram of the Moving Mountain, and Drawing Showing How Visitors Have Narrowly Escaped an Avalanche

**March 1933, big explosion
with black dust or smoke
from upper portion**

Gas sensed for miles

Plans for tunnel for Animas River

Altered map

the mountain moved. Huge solid rock stand out like houses times a lone tree on top. Ob- venture onto the slide see and ng sights and sounds. Sections d tumble over as one watches, ried rocks and trees snap or foot.

One sightseer advanced too near the rim of a crumbling mass and was carried with it more than 1,000 feet below. He managed to keep abreast the racing rocks and suffered only minor scratches. There has

months of Du- rangers, three miles away. Recently a crevice appeared in a sister peak, and it is feared the second mountain is beginning to disintegrate.

- North landslides minimized
- East landslide due to gravity
- 30 to 35 feet/day
- No coal fire
- “Explosions” were just sounds of the landslide



FIG. 1.—Rockslide on Carbon Mountain—right. Animas River in foreground and Parker Mountain in center. The dotted line is along the top and the hachures are along the lower edge of the main area of the slide. 1, Lewis shale; 2, Pictured Cliffs sandstone; 3, Fruitland formation; 4, Kirtland formation with sandstone member forming Parker Mountain; and 5, McDermott formation.

1934 July, Durango, Colorado, USA, A Recent Landslide Near Durango
The Journal of Geology V42, Mr. J. Vanderwilt (USGS)



FIG. 2.—Close-up view of rockslide with Carbon Mountain on left. The main area of the rockslide lies between the scarp on the left and the white slopes of Pictured Cliffs sandstone on the right. The dashed line shows the original position of the fracture when first observed. The lower end of the slide appears in the foreground.

1934 July, Durango, Colorado, USA, A Recent Landslide Near Durango
The Journal of Geology V42, Mr. J. Vanderwilt (USGS)

Will Rogers and Wiley Post Call In Durango

World Famous Humorist and Birdman With Latter's Wife Spend Saturday Night in the Basin's Metropolis

Among the most distinguished visitors to ever come to our city were those entertained Saturday evening in Durango as they dropped unexpectedly from the air to pay a friendly call and rest for their Sunday flight back to Los Angeles. They were Will Rogers, noted screen comedian and columnist, and Mr and Mrs Wiley Post—one of the world's most outstanding aviators and his wife.

The flight of the famous duo and Post's wife is destined to remain one of the inexplicable things that the renowned do, for they have just been touring about portions of the southwest, without either destination or apparent purpose. The papers of the nation called it a fishing trip, but when questioned on this score here, Will was prompt to respond that he "didn't give a hoot about fishing—never had, and never would," so that blew the fishing trip angle into the air, making the tour answer to no description other than a little pleasure jaunt. Among other of the sage remarks made by the gum-chewing, former rope-spinning favorite was,

Free Trial Guarantee

Select Your Car . . . Use It Three Days . . . If Not Satisfied — Bring It Back

60 Day Written Guarantee

1934 V-8 Sedan, beauty. \$575

1931 Chevrolet Coach. Completely reconditioned \$250

1929 De Soto Sedan Motor overhauled \$225

1930 Buick Coupe. A-1 \$260

Bit o' Pep at SB---NEV

Improvement of NEWS Makes Five Even testing in A

"You ought to put a few sticks of dynamite under your moving mountain once in a while to keep it on the move."

The trio had come here from Trinidad, after a phone inquiry on the availability of aviation gasoline. They had been in Albuquerque, and later at a Vermijo, N M resort ranch. Post set his new big red Lockheed plane down on Durango's municipal airport about 6 o'clock Saturday evening, and immediately after eating, went up to supervise the refueling of Winnie Mae's successor, in which he proposes a flight to Moscow as soon as he obtains his passport.

Rogers, in his gracious and homely manner, entertained a huge crowd in front of the Strater hotel, with his wit and humor, gaining the good graces of our very much younger set by means of handshakes and the generous distribution of dimes.

The entire party retired at about 9 Saturday evening, and left at about 9 Sunday morning, flying over Mesa Verde park, before winging back to California.

Will's copyrighted feature that was read Monday morning by thousands of daily paper subscribers over the entire nation, had the following to say:

"Durango, Colo.—Towns are like people they are proud of what they have. Trinidad, Colo with enough coal to melt the North Pole down till it runs.

"Then Wiley hit a bee-line over the tops of the mountains to Durango. A beautiful little city, out of the way and glad of it. Gold, silver and Mesa Verde cliff dwellings ruins, where civilization flourished before it started to go backwards.

"Wiley is flying over Bryce Canon, Zion Canon, over, down and thru the Grand Canon, Hoover Dam's new lake.

"No wonder American people are filling road, trains and air. There is so much to see. What we lack in reading we make up in looking. Yours,

WILL ROGERS."

Lightning Strikes Street

The old softball league has taken on an entirely different complexion for the second half, and it begins to look as if the younger boys in American league would put up one of the best shows the remainder of the season that Durango has witnessed, for three of the teams that were formerly considered quite weak, have snapped of it to such an extent that the dope pot is put in jeopardy every Monday, Tuesday, Wednesday, Thursday night, and the Con and Bit O' Pep—first half league—are daily being threatened.

Altho the Spanish-American and Bayfield have been unable to win a game, everytime they get out on the field they put up a wonderful show, and the improvement of the S A club has been the subject of much discussion. Among teams advancing the most, is NEWS crew, who played off American league tie for second place, with the Conoco too late to be reported last night. The Bit O' Pep lead the fast league, with Lions heading the Nats, each having a three-win, no-loss record.

Games played since our last issue, and results, are as follows:

Thursday	
Bit O' Pep	7 Lions
Conoco	8 Elks
Monday	
NEWS	4 Legion
Bayfield	3 Elks

Tuesday	
Conoco	6 Lions
S A Club	5 Colombo

Wednesday	
Bit O' Pep	6 Rotary
Bayfield	5 Colombo

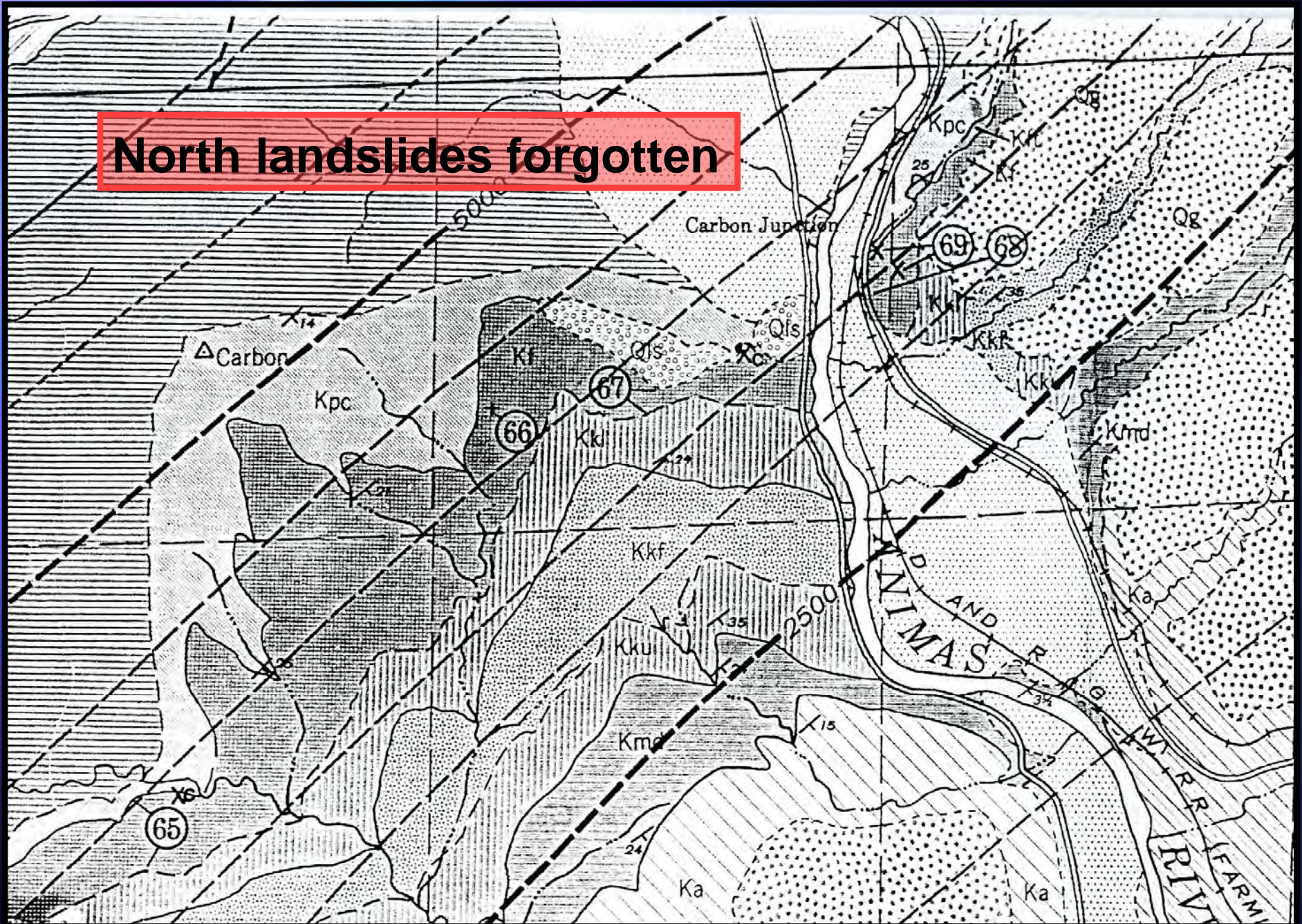
Yesterday evening the NEWS Conoco and Elks-Rotary clashes attracted large crowds. The program for the balance of the season and half follows:

Monday, August 5	
Lions-Legion	
Bayfield-S A Club	
Tuesday, August 6	
Bit O' Pep-NEWS	
Rotary-Lions	
Wednesday, August 7	
Colombo-Legion	
Conoco-Bayfield	

1935 August 9 Durango, Colorado, USA, Durango News

"You ought to put a few sticks of dynamite under your moving mountain once in a while to keep it on the move"

North landslides forgotten



1949 Geologic Map of the Eastern Part of the Durango Quadrangle,
USDOI Geological Survey OM-109, A.D.Zapp

The 'Why' of the 'Moving Mountain'

One of the mountains on which Basinites depend for their tourist attractions has caused Durangans a certain amount of worry in recent years.

It is Carbon mountain, better known as Moving Mountain, west of highway 160 and the Animas river about five miles south of Durango.

The mountain first moved in 1932, when a large chunk of its underminings slid into the river. The overlying mass piled up on top of it, moving a few yards closer to the river.

The mountain has moved slightly every few years since then, but geologists have assured Durangans there is little danger of the mountain damming the river and flooding the town.

What happens is this, the geologists say:

The mountain consists of an up-ended layer of limestone on top of which lies a bed of shale, which makes up the mass of the mountain. As the river cut away part of the limestone the shale slid along the slope towards the river. The action is lubricated by water from the river seeping in between the limestone and shale layers.

1955 May, Durango,
Colorado, USA,
Durango Herald News

The 'Why' of the 'Moving

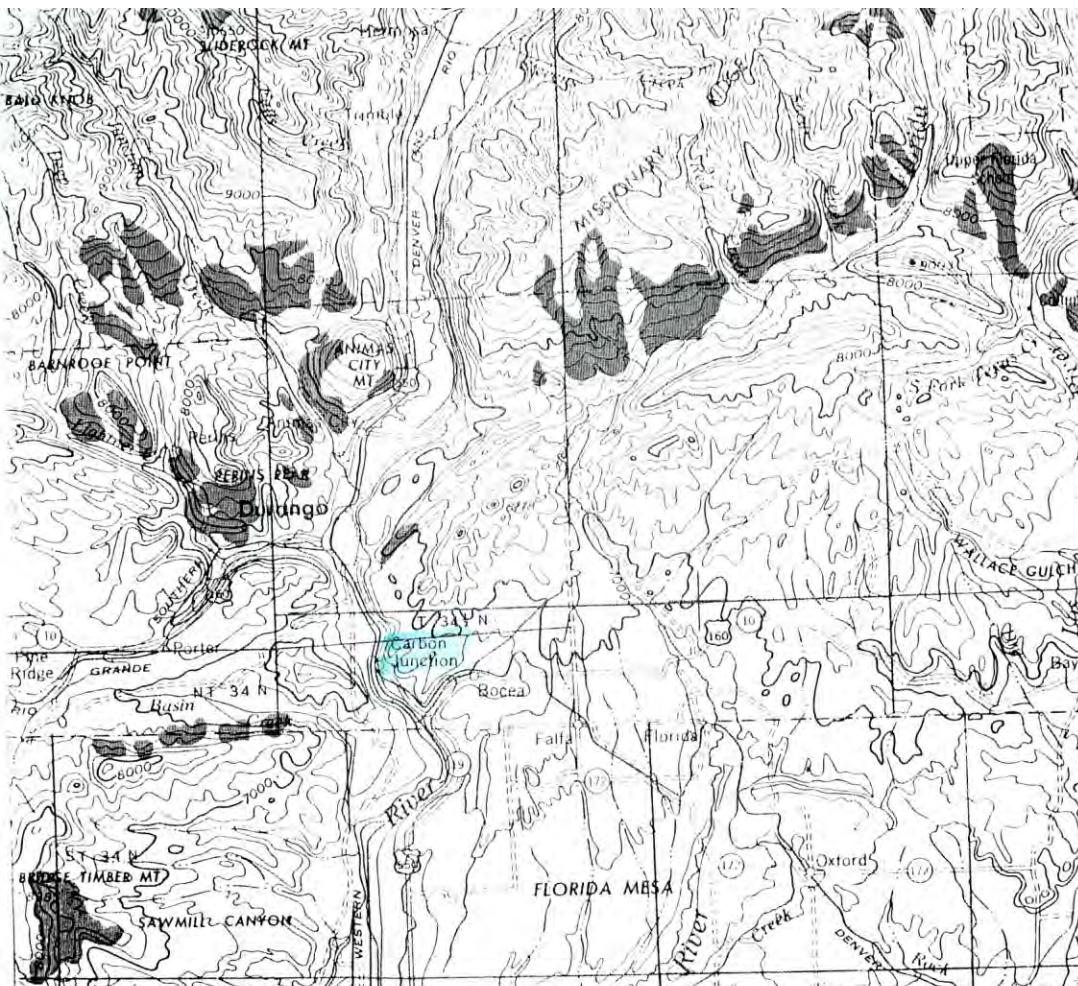
1955 May, Durango,
Colorado, USA,
Durango Herald News

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makes up the
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of the limestone the shale slid
along the slope towards the river.
The action is lubricated by water
from the river seeping in between
the limestone and shale layers.

1950's movement is remembered, but when?



(A-) for mechanics of report
and research
(B-) for geology and
independent work

For Paul

Final Grade B+

MASS WASTING AND THE CARBON MOUNTAIN SLIDE OF 1932

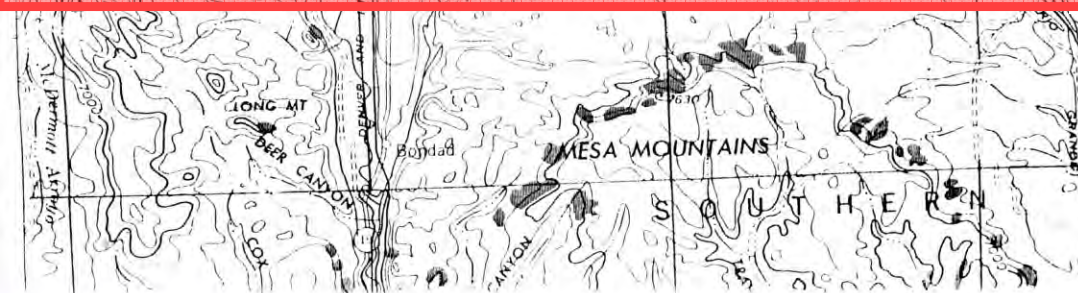
by
Robert Sherrill

Independent Study 499 c

Mr. Blair

April 23, 1974

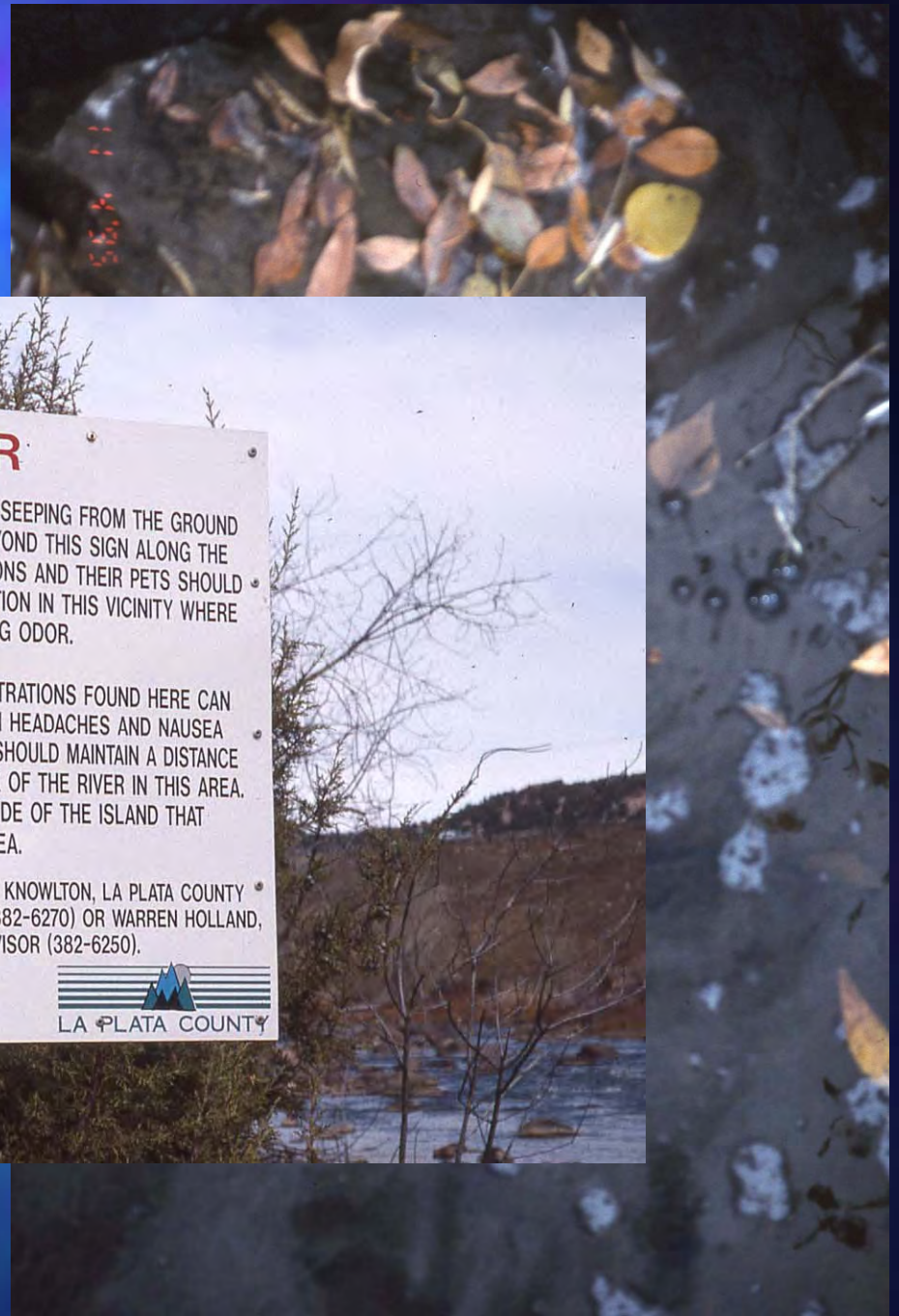
North and east landslides forgotten?



1974 April 23, Fort Lewis College, Senior Thesis of Mr. Robert Sherrill
1975 USDOI Geological Survey MF-703, Colton et al.



1995 November, 1998 February, Animas River/Carbon Junction Gas Seeps, Author's Collection



DANGER

HARMFUL LEVELS OF HYDROGEN SULFIDE ARE SEEPING FROM THE GROUND IN THIS AREA. THE HIGHEST LEVELS ARE BEYOND THIS SIGN ALONG THE WEST BANK OF THE ANIMAS RIVER. ALL PERSONS AND THEIR PETS SHOULD AVOID OR QUICKLY PASS THROUGH ANY LOCATION IN THIS VICINITY WHERE YOU SMELL A ROTTEN EGG ODOR.

HYDROGEN SULFIDE AT THE HIGHEST CONCENTRATIONS FOUND HERE CAN CAUSE EYE AND LUNG IRRITATION ALONG WITH HEADACHES AND NAUSEA EVEN WITH BRIEF EXPOSURE. THEREFORE YOU SHOULD MAINTAIN A DISTANCE OF AT LEAST FIFTY FEET FROM THE WEST BANK OF THE RIVER IN THIS AREA. RAFTERS SHOULD TRANSIT ON THE EAST SIDE OF THE ISLAND THAT ADJOINS THE SEEP AREA.

FOR ADDITIONAL INFORMATION, CONTACT BUTCH KNOWLTON, LA PLATA COUNTY DIRECTOR OF EMERGENCY PREPAREDNESS (970-382-6270) OR WARREN HOLLAND, LA PLATA COUNTY TECHNICAL ADVISOR (382-6250).

LA PLATA COUNTY

1995 November, 1998 February, Animas River/Carbon Junction Gas Seeps, Author's Collection



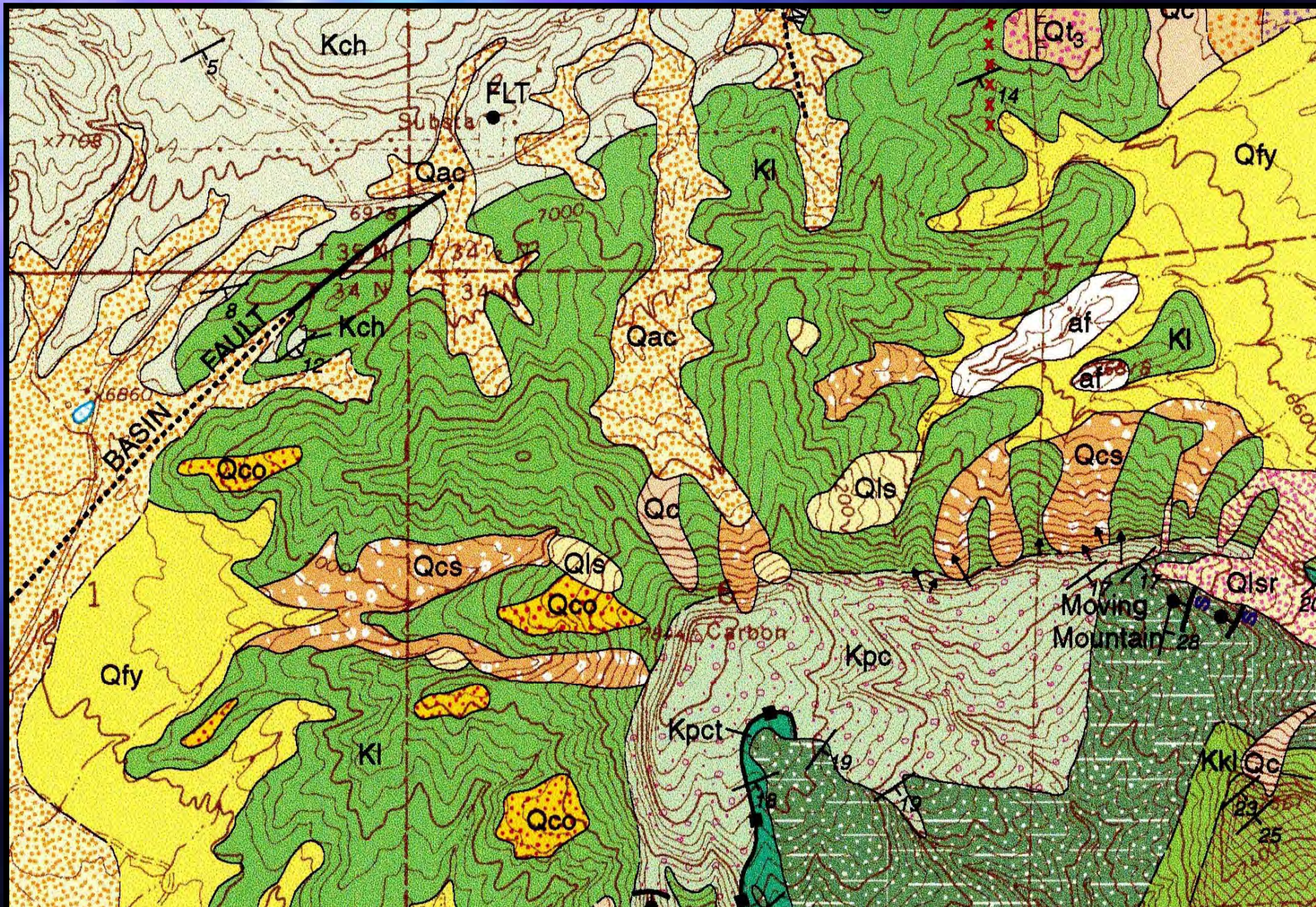
1980's & 90's

**Author observes and smells
gas seeps on Animas River**

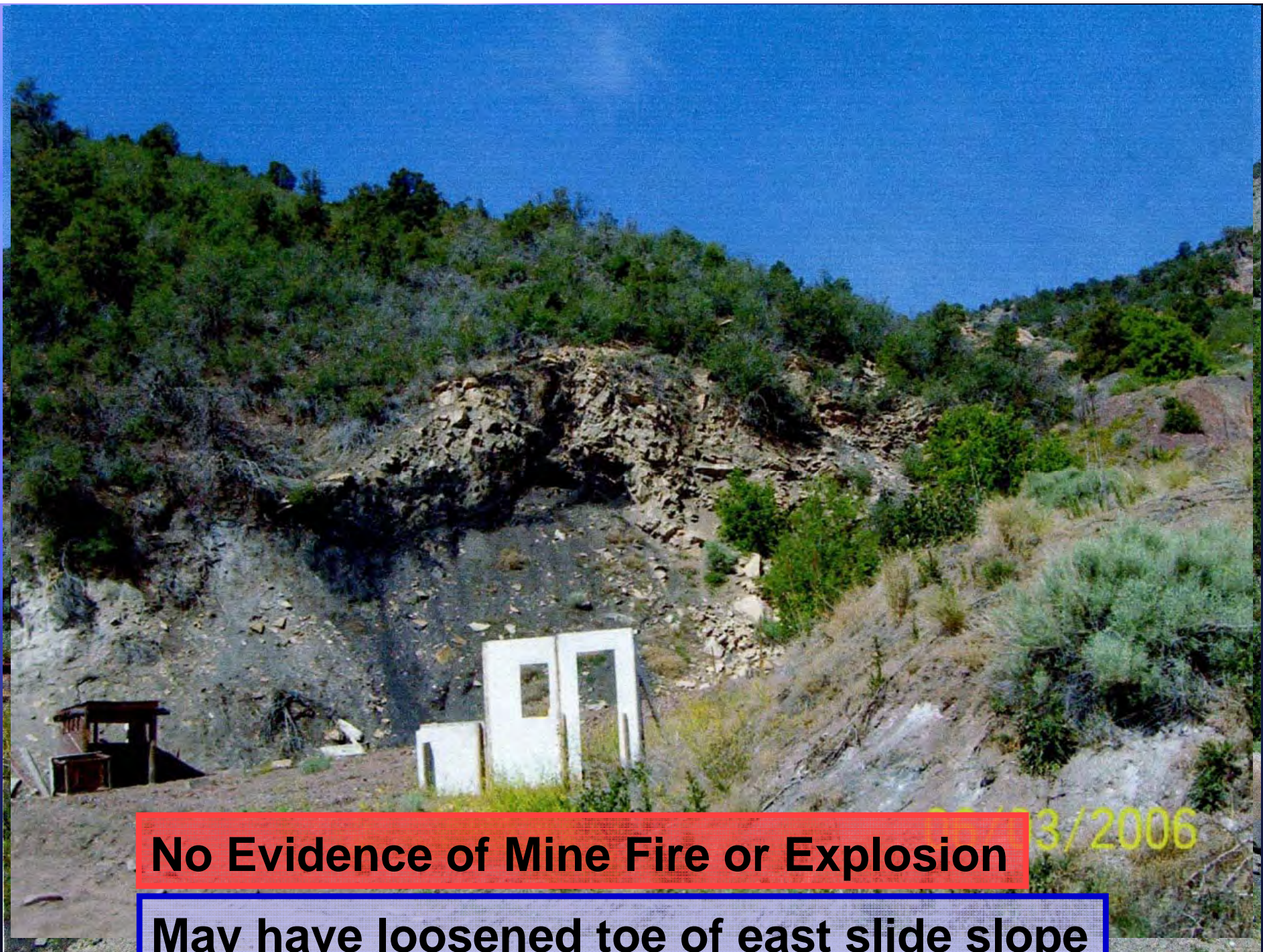
**Coal Bed Methane begins,
"New" Fruitland Seepage,
Then "Worse than before"
COGCC Soil Probes Find
Methane**

**Mr. Bob Lauth remembered
Moving Mountain**

**1995 November, 1998 February, Animas River/Carbon Junction Gas
Seeps, Author's Collection**



2003 Geologic Map of Basin Mountain Quadrangle, Colorado
Geological Survey OF 1-4, Kirkham & Navarre



No Evidence of Mine Fire or Explosion

May have loosened toe of east slide slope

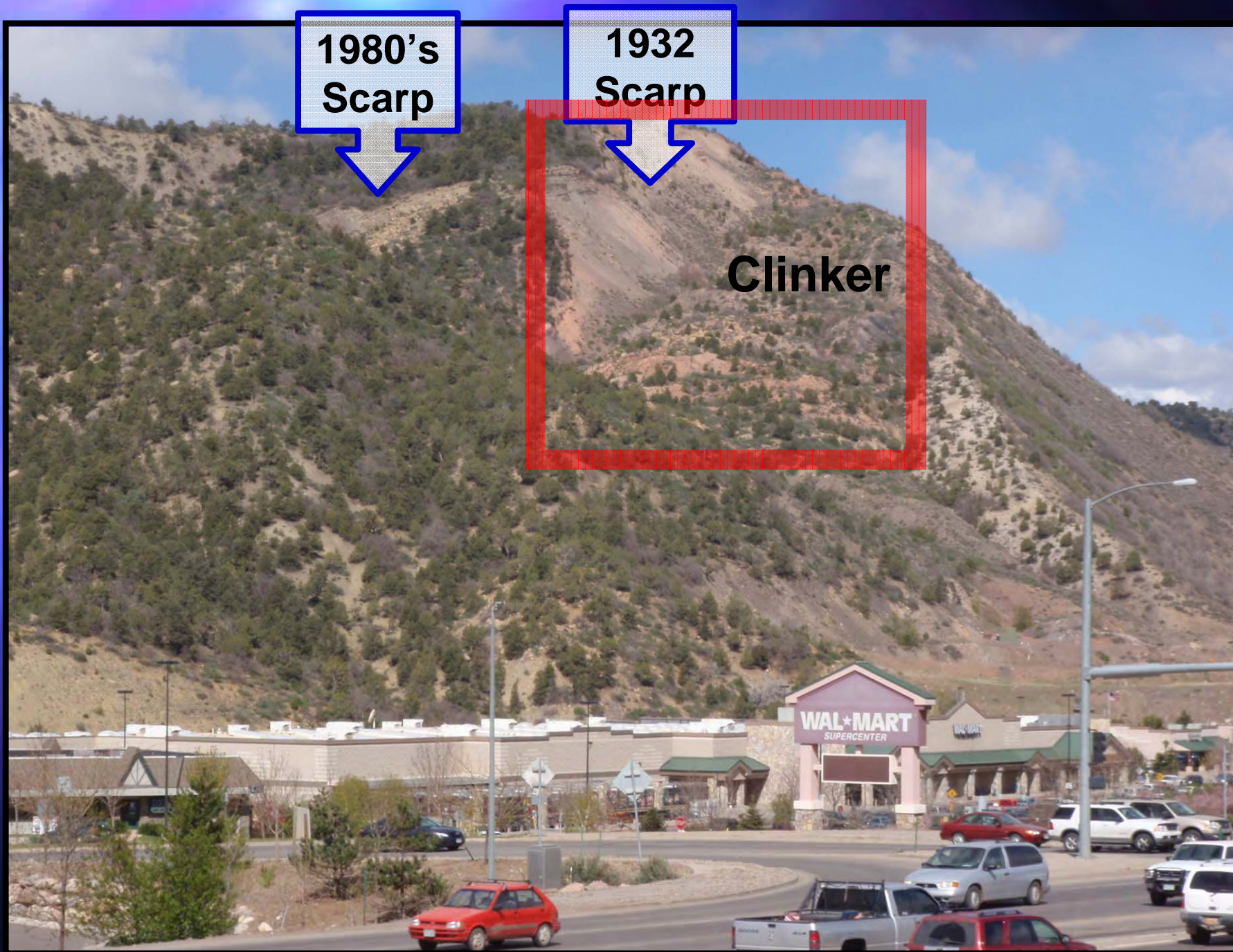
2006 June 3 Durango, Colorado, USA, La Plata County Courtesy of Mr. Walt Walker



No Evidence of Mine Fire or Explosion

May have loosened toe of east slide slope

2006 June 3 Durango, Colorado, USA, La Plata County Courtesy of Mr. Walt Walker



2010 April 30 Durango, Colorado, USA, Authors Collection,
Prof. Robb Blair, Personal Communication



1980 Sheridan, Wyoming, USA, Burning Coal Mine, Coal Mine Subsidence, USDOI Geological Survey PP-1164, C.R. Dunrud & F.W. Osterwald Oldaker 2010



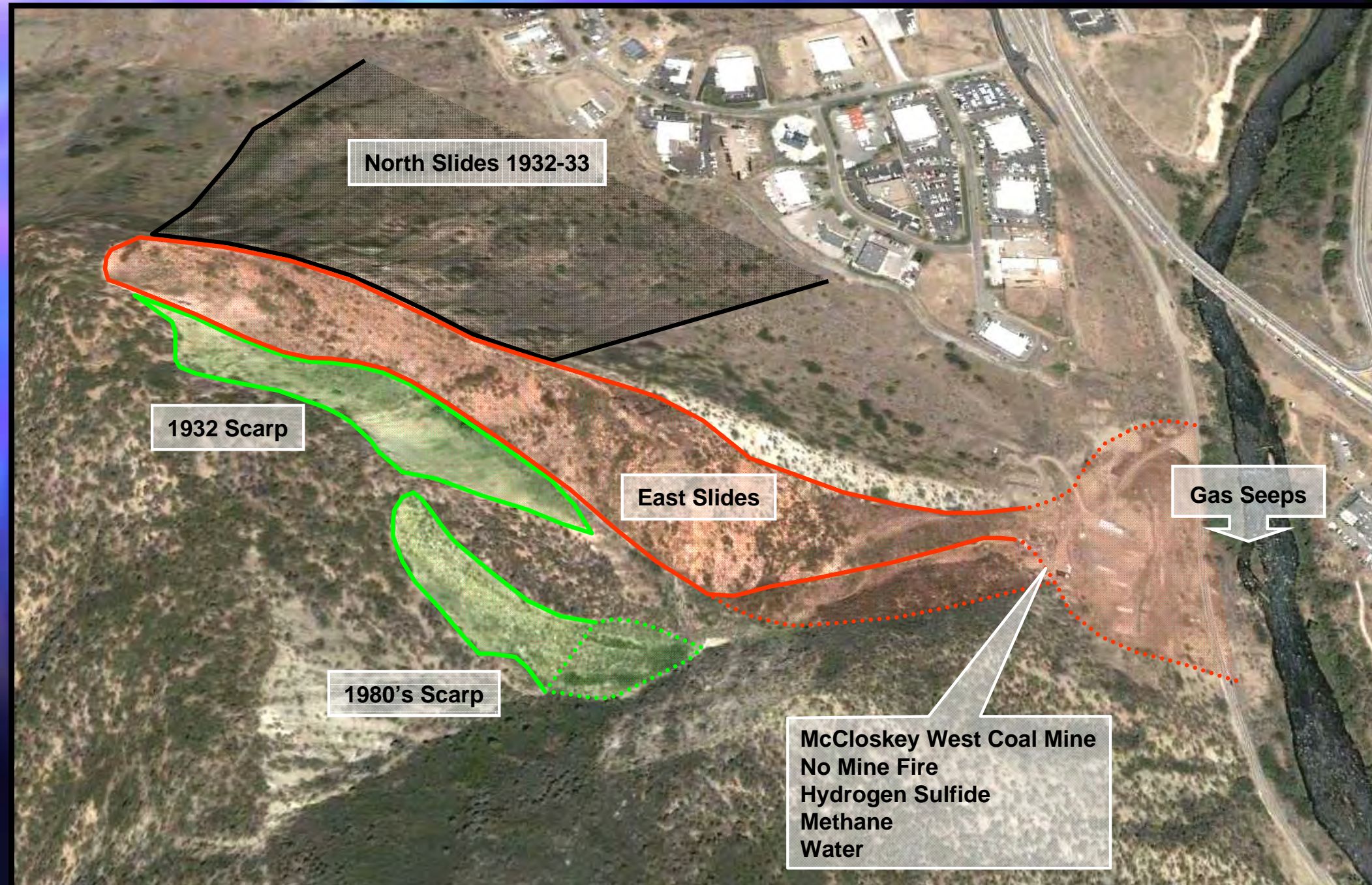
1980 Sheridan, Wyoming, USA, Burning Coal Mine, Coal Mine Subsidence, USDOI Geological Survey PP-1164, C.R. Dunrud & F.W. Osterwald Oldaker 2010



1999 February, Newcastle, Colorado, USA, Author's Collection



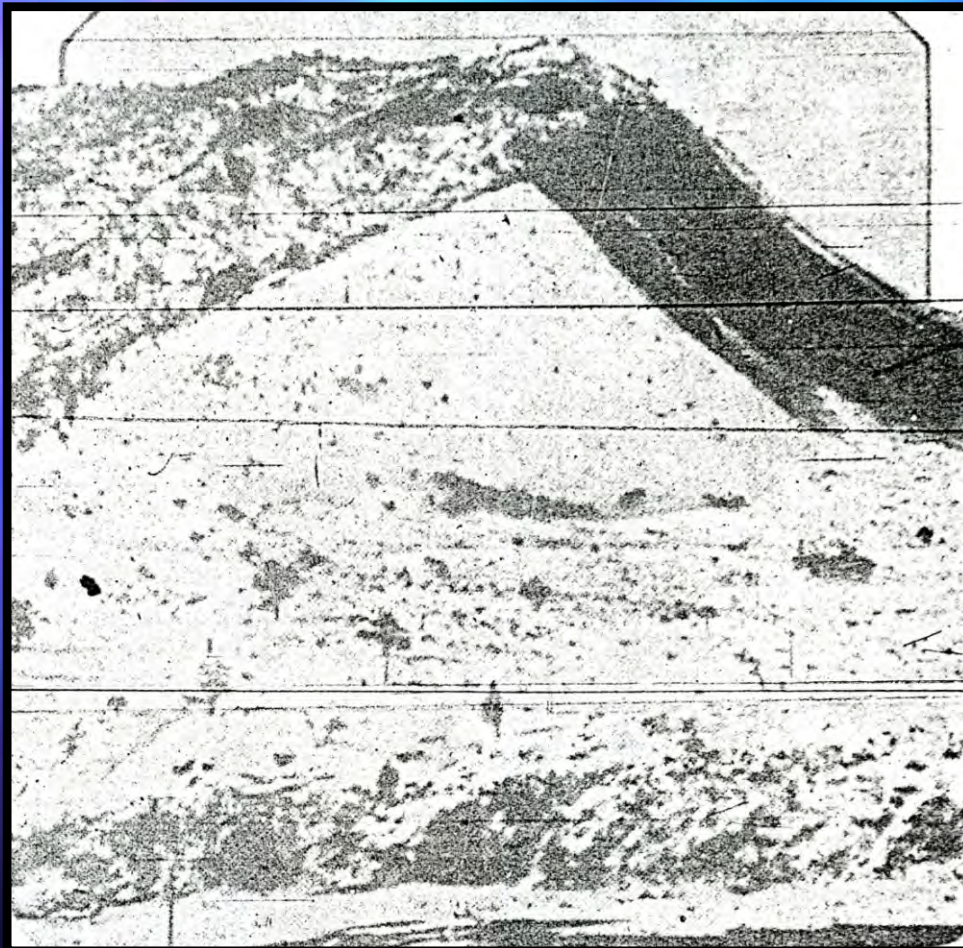
1999 February, Newcastle, Colorado, USA, Author's Collection



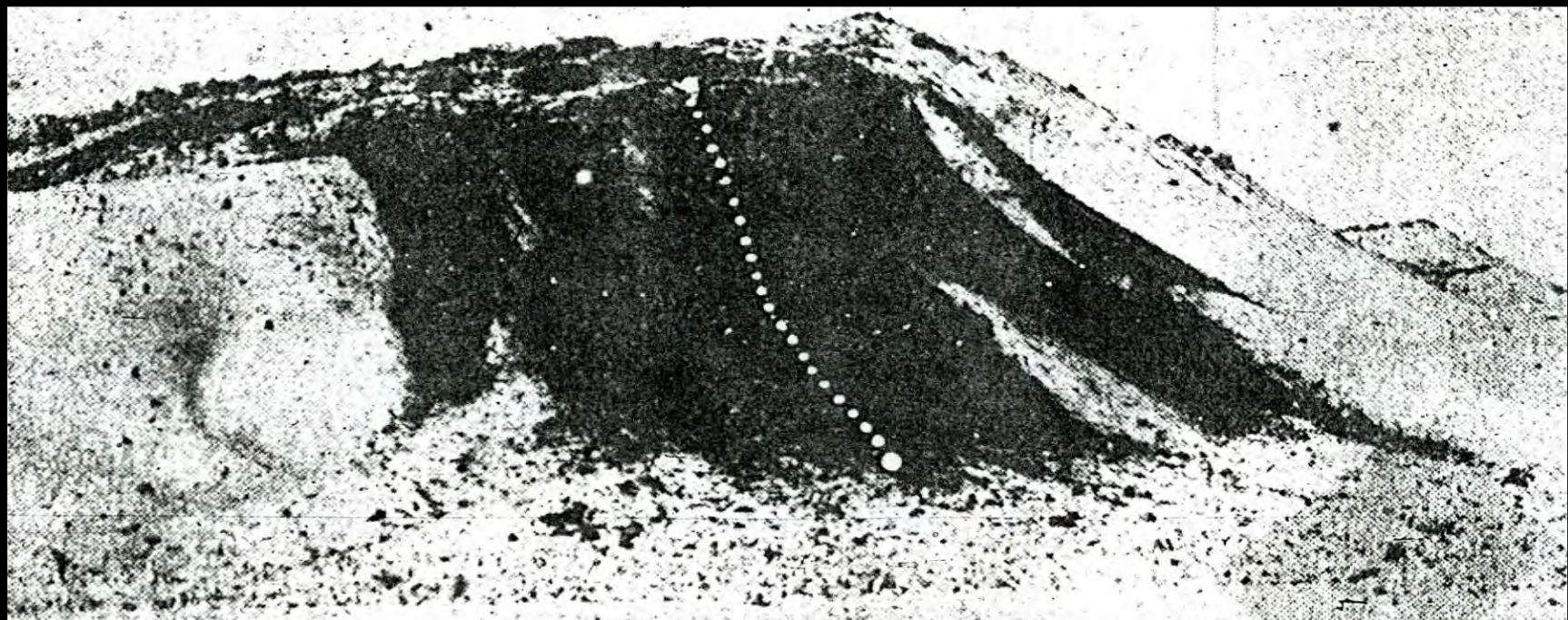


1934 Vanderwilt

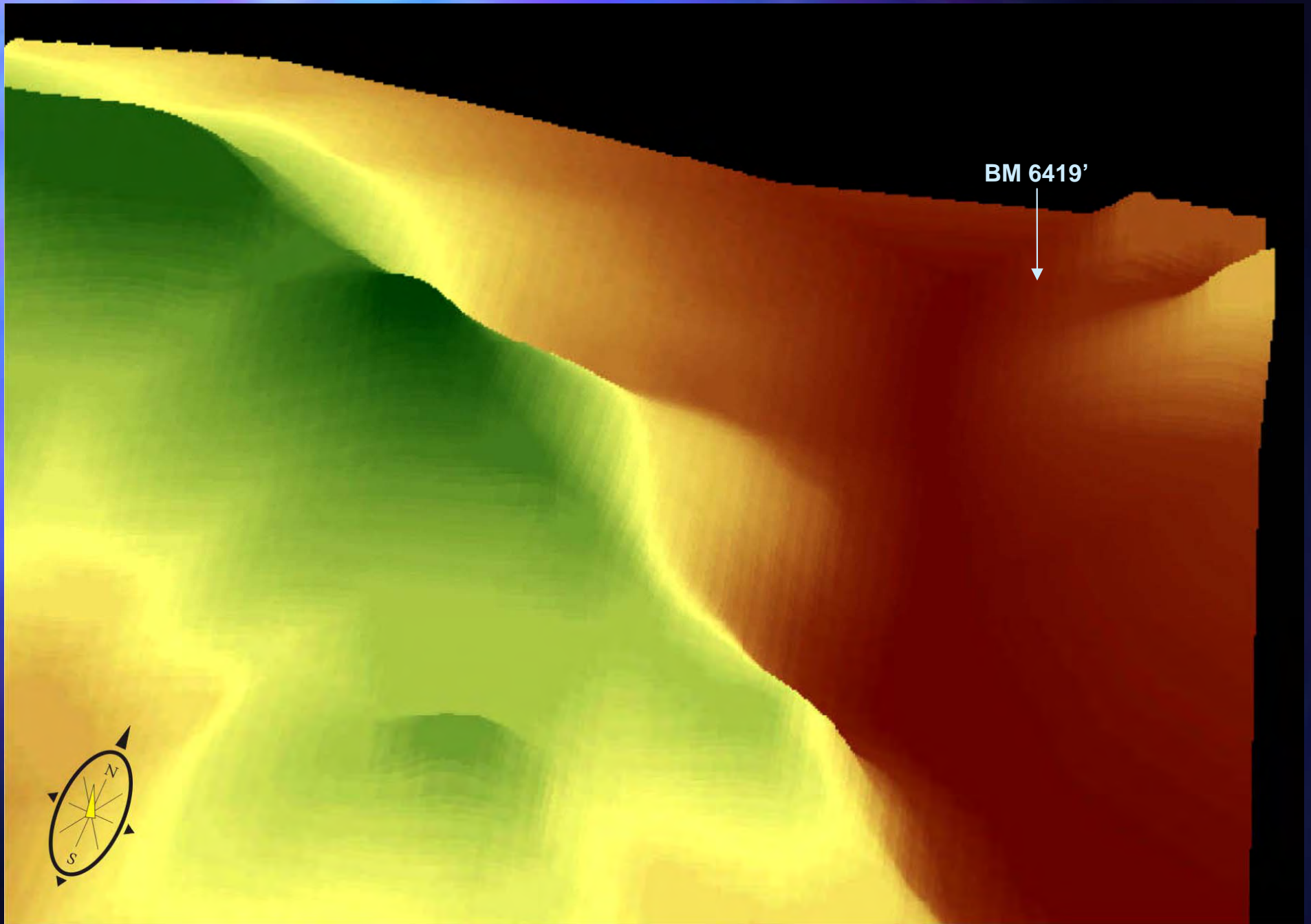
2010 April 30 Durango, Colorado, USA, Author's Collection



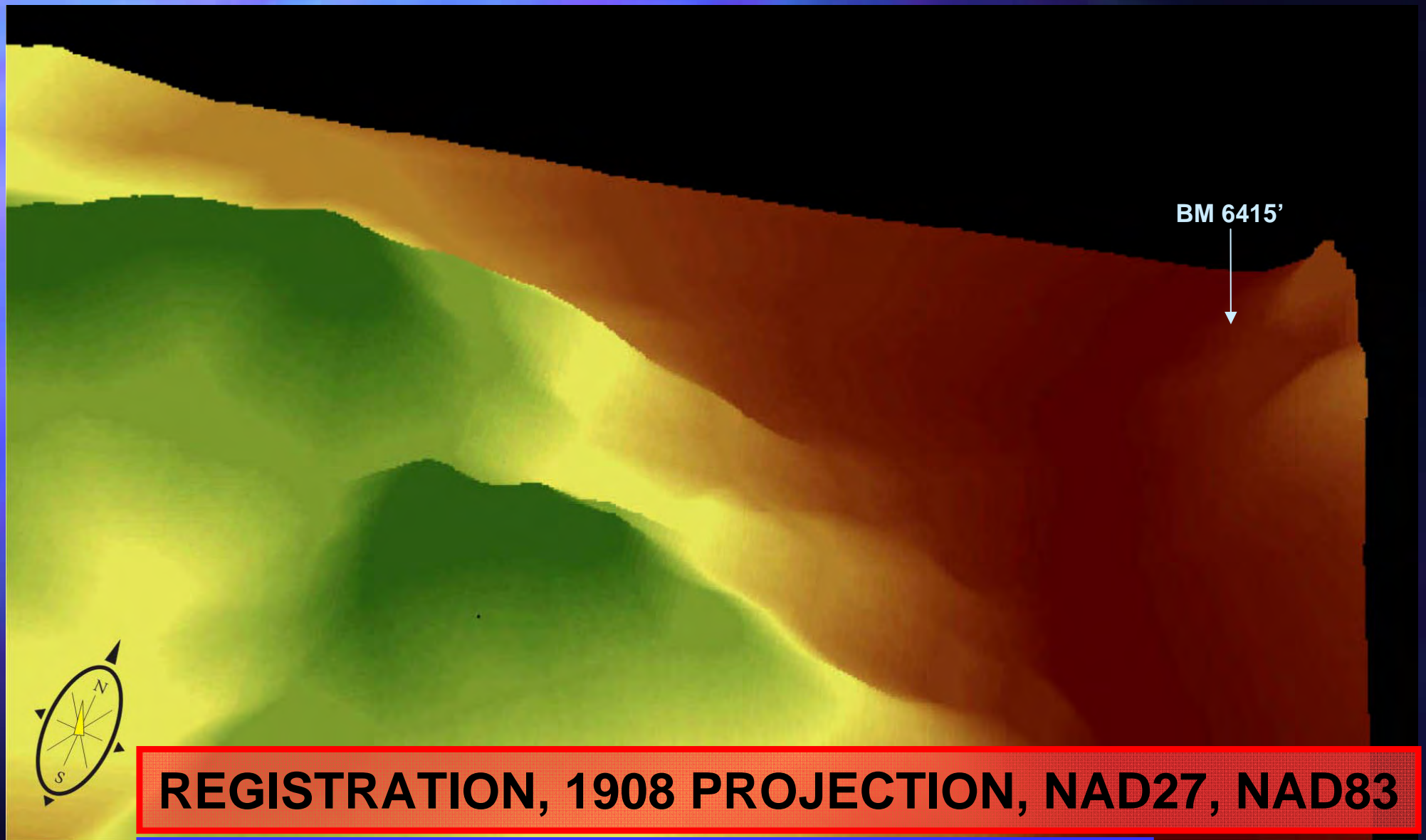
1933 January 13 Durango News
2010 April 30 Authors Collection



1933 January 9, Durango Herald Democrat
2010 April 30, Author's Collection



**1908 Ignacio Quad, Colorado, USA, USDOI Geological Survey
3D Digital Elevation Model, Looking NNW, Author's Work**



REGISTRATION, 1908 PROJECTION, NAD27, NAD83

VOLUME MOVED CAN BE CALCULATED

**2010 DEM Dataset, Colorado, USA, USDOI Geological Survey
3D Digital Elevation Model, Looking NNW, Author's Work**

CONCLUSIONS

- **Something big occurred and maybe continuing. Fruitland outcrop has been and is active. Current seepage is “worse”?**
- **Outcrop coal fire. Ignition unknown. Location suggests lightning.**
- **Methane seepage observed since 1889.**
- **Explosions, methane or steam or both?**
- **Author’s Hypothesis- Natural outcrop coal fire encountered natural methane seepage.**
- **What would hype and spin be if it had occurred in 1992 instead of 1932?**