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# *The San Juan Basin--Episodes and aspirations*

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# THE SAN JUAN BASIN: EPISODES AND ASPIRATIONS

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## INTRODUCTION

The San Juan Basin has seen three periods of increased activity in the development of oil and gas. New discoveries in the fall of 1921 that lasted through 1925 sparked the first boom. The second boom was the result of the completion of the El Paso Natural Gas line to California; it was extended by the completion of the Pacific Northwest Pipeline to Washington and Oregon, and further extended by the simultaneous discovery of the Bisti, Horseshoe, Verde, Gallegos and other Gallup pools. The second boom lasted from 1951 through 1959. The third boom is just starting and is the result of increased gas prices and the Blanco-Mesaverde infill drilling program. The life of this boom will depend on governmental controls over the price of gas, the inflation rate of well costs, and environmental requirements. New discoveries in deeper horizons will hopefully make the third boom the largest and longest.

Prior to the first boom a good deal of exploration was done, mostly by local promotional groups: (1) The Durango Syndicate drilled a well on the Weinig farm near Durango in 1890; (2) Farmington businessmen drilled the Blake Well near the present Farmington hospital in 1901; (3) Farmington Oil and Gas Company drilled a well near the San Juan-Animas River junction in 1906; (4) Jerry Ferris found oil at Seven Lakes, but not in commercial quantities, in 1911 (fig. 1); (5) San Juan Basin Oil Company drilled two Meadow wells near the present site of the New Mexico Public Service power plant in 1912-13; (6) Mesa Verde Oil Company drilled two wells near Flora Vista in 1918-19; and (7) the T. E. Williams Syndicate drilled the deepest test to date (3,900 ft) 5 miles northwest of Aztec during 1920-21. All of these wells found small shows of oil and considerable gas flows, but none were successfully completed.

### The First Boom

In the early part of 1921, a company was organized which was known as the Aztec Oil Syndicate. They evidently had little money, but they borrowed a rig from the Mesa Verde Oil Company and spudded a well just south of Aztec. The drillers donated their time, or took stock instead of cash, and apparently the townspeople took dinner out to them quite often. The well was started in August and on October 21, 1921, the well blew in making a large amount of gas from a depth of about 1,000 feet in the Farmington Sandstone. Estimates of the amount of gas it was making vary up to 10 million cubic feet. A newspaper story said it could be heard blowing in Bloomfield and 10 miles down the river toward Farmington, so undoubtedly it was an impressive flow of gas (fig. 2).

Plans were immediately made to pipe gas from the well into Aztec; this required about two miles of pipeline. By December the line was completed, and for the first time natural gas in New Mexico was actually sold for hard cash. The gas system was naturally rather primitive as no pressure regulators were installed. During the winter and into the following spring, several homes burned in Aztec. This happened because the pressure on the gas line and in the homes was regulated only by how much gas was being used by everyone connected at a given time. A number of people would go to a church social; some would turn the fire off, and some would only turn it down. The reduced flow would cause the pressure to rise, and the fires which had been turned down would become larger than the fire boxes and, as a result, homes burned.

At the same time that the Aztec well was being drilled, Midwest Oil was drilling a well at Lite dome 5 miles west of La Plata, New Mexico. Midwest furnished the rig, bailer and tools, and coal to fire the boiler. L. E. Teague and his partner furnished all the labor and drilled the well for three dollars per foot. The well was started in the summer of 1921. When they reached a depth of 2,325 feet in the Dakota Sandstone, they encountered a gas flow of 7 million cubic feet per day. It was decided to run 121/2 inch casing to case off the flow. They had about 1,300 feet of casing in the hole when they shut down to eat breakfast, but in some way the well caught fire.

The Midwest and Aztec wells were drilled in during the same week in October 1921. Because of the Midwest fire, the Aztec well was completed first and thus gained the distinction of being the first commercial gas discovery in the State of New Mexico. Midwest drilled a second well to replace the well that caught fire; it was completed in the spring of 1922.

Producers and Refiners Corporation drilled a well offsetting these two wells in 1923. The well came in on April 25, 1923, making 70 million cubic feet of gas per day from a depth of 2,385 feet. The Farmington paper carried an account of the event. It stated that the gas blew the tools out of the hole when it came in; the tools weighed 10 tons, went 125 feet into the air, and then fell back through the rig floor! The well was successfully completed and is still producing.

Mr. Teague moved his rig from Ute dome to the Hogback, 20 miles west of Farmington, where he had a contract to drill another well for Midwest. This was in the summer of 1922. On September 25, at a depth of 796 feet in the Dakota Sandstone, the well came in, flowing 75 barrels of oil per day. This was the first commercial oil well in the State of New Mexico. This significant oil discovery, together with the large gas wells that had been completed, brought on the basin's first oil and gas boom.

The strike at Hogback stirred wide interest in the San Juan Basin, and in 1923 the first Navajo lease sale was held in Santa Fe. There had been some exploration on Navajo lands prior to this, but it was evidently done on negotiated leases. While in Santa Fe on railroad business one night, S. C. Munoz, an avid poker player, was drawn into a game. During table small talk, an old friend, H. G. Hagerman, commissioner to the Navajo Tribe, persuaded Munoz to spend the next day attending an auction offering leases on Tocito, Table Mesa, Rattlesnake, Beautiful Mountain and Hogback areas. It was the first time Navajo lands had been offeitd for lease. "Just for fun," Munoz went along to the sale of October 15, 1923, and listened while other parcels were auctioned. According to the story, the lease at Rattlesnake had been put up twice without a bid. On the

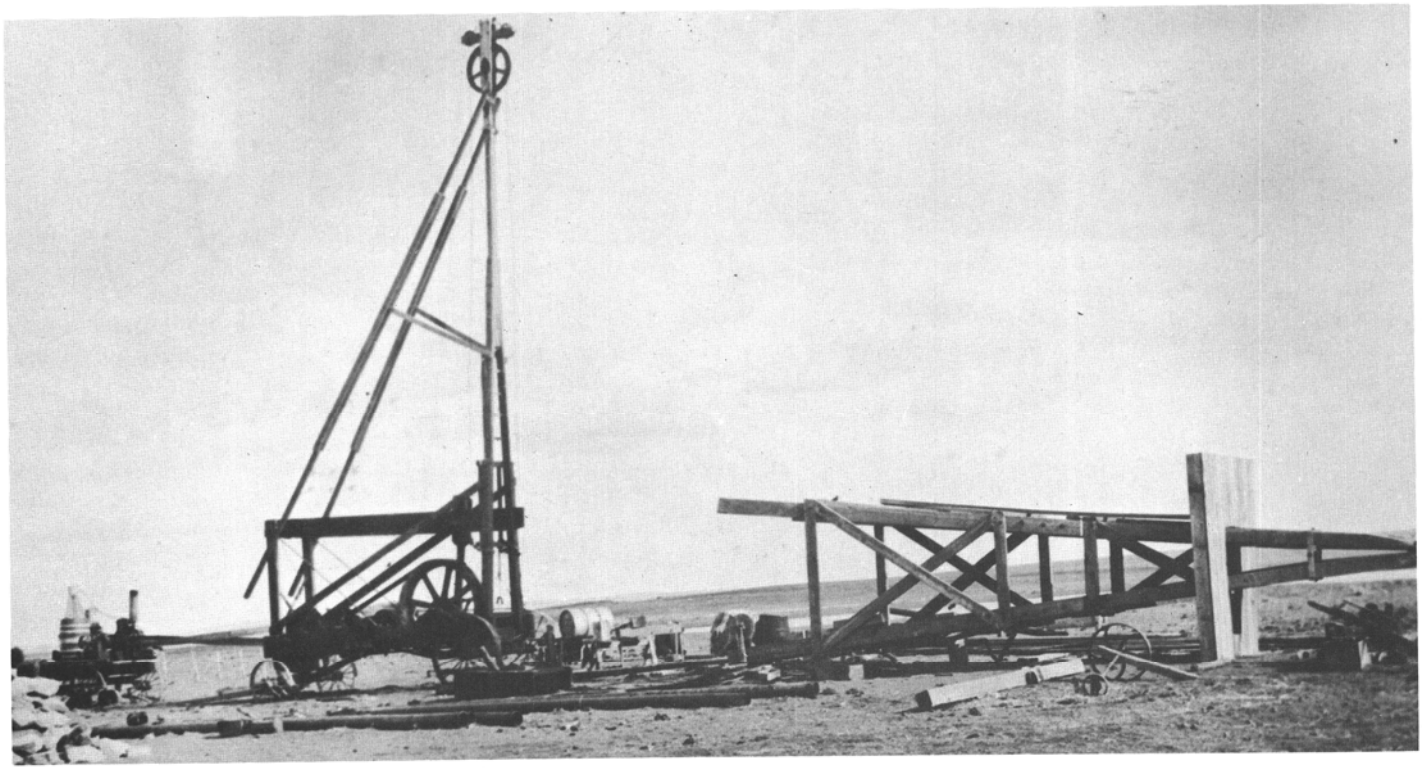


*Figure 1. Ferris-Brock Discovery well at Seven Lakes. (Photo taken April 19, 1912, by Thomas M. Galey, son of Samuel Galey, a principal in Guffey & Galey, who, together with Anthony F. Lucas, discovered the famous Spindletop well at Beaumont, Texas, in 1901.)*

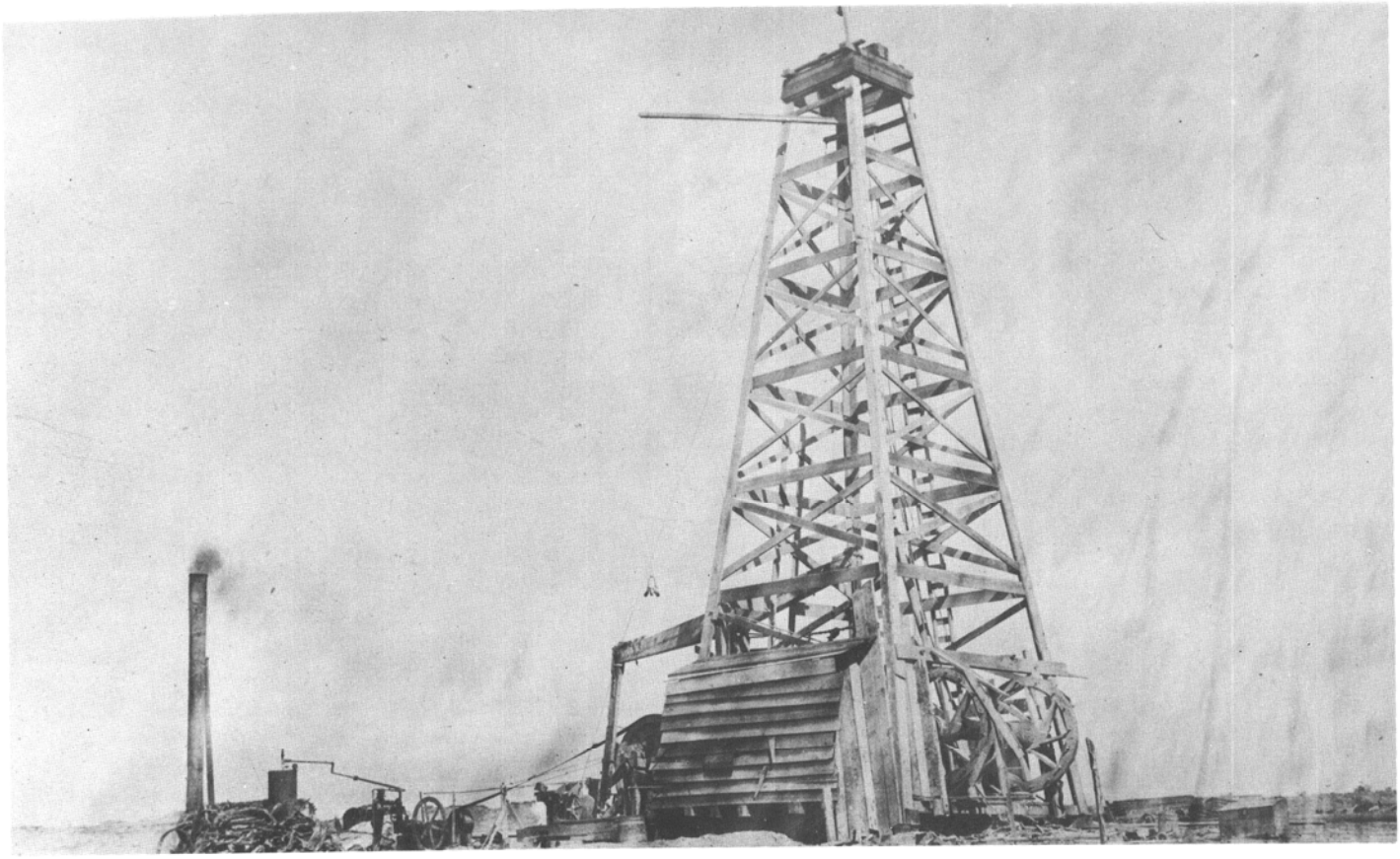


*Figure 2. An early McKinley County wildcat. Note woodpile used for firing the boiler. (Photo taken April 14, 1912, by Thomas M. Galey.)*

third time around, Munoz put in a bid for $1,000. He was awarded the lease covering 4,000 acres. Munoz employed a New York geologist to select the location for the test well. The discovery well was completed for 10 BOPD on February 27, 1924. The Rattlesnake oil was higher than 60-degree API gravity and had the highest gravity for crude oil that had ever been discovered. The second well made over 300 BOPD and the #5 well made 1,500 BOPD. Munoz drilled a total of nine wells on the Rattlesnake structure. Toward the end of 1924 he sold Continental Oil Company 51 percent of the property for a reported one million dollars. This sale made S. C. Munoz the first man in New Mexico to become a millionaire as the result of oil and gas production.

During the years from 1924 to 1928, more or less continuous drilling activity was carried on in the basin and several important discoveries were made. In 1924 the Gypsy Oil Company, which became very active in the area, drilled the discovery well at Barker dome, which came in making 10 million cubic feet per day. It caused no great stir at that time as there was no market, and the well was plugged and abandoned. However, the information that gas was there was important, as this, with other discoveries, kept the plays moving toward the day when major markets would be developed.

During 1925 high-gravity oil was discovered at Table Mesa in the Dakota Sandstone. In 1926, 30-degree gravity crude was discovered in the Gallup Formation at Hospah, and the Hospah pool has produced continuously since that time.

Another gas pool was discovered in 1926, which was to have an illustrious history beginning 25 years later. The discovery well was the Huntington Park Oil Company Goede #1 in sec. 29, T. 30 N., R. 9 W., a few miles north of Blanco. This was the first well completed in the Blanco-Mesaverde pool. Twelve miles of 4-inch line was laid from this well to Aztec in 1929 to replenish Aztec's gas supply.

In 1927 a group of men in Wink, Texas, formed an organization that was later expanded into the Southern Union Gas Company. A drilling subsidiary of Southern Union, The Congress Oil Company, drilled the Congress # Well in 1927, which was the discovery well in the Kutz Pictured Cliffs pool. More importantly, Southern Union started laying plans for developing a gas market for the area, so that gas discoveries would mean money return.

In 1928 an event occurred which is also interesting in passing. Paul Kaiser signed a contract to furnish gas to El Paso, Texas, from Jal, New Mexico, and thus was born the El Paso Natural Gas Company.

In 1929 oil was discovered in the Pennsylvanian at Rattlesnake by Continental Oil Company. Bill Pearson, who now lives in Farmington, furnished some detailed information on that strike. Bill lived at Rattlesnake from 1925 to 1956 and was the driller on the discovery well at Table Mesa as well as on the Pennsylvanian discovery at Rattlesnake. As the well was to be a deep venture for those days, they started drilling a 20-inch hole (fig. 3). When this large hole penetrated the Dakota Sandstone at about 900 feet, the well unloaded and started flowing about 3,000 barrels of oil per day. They finally managed to case off the flow and drilled on to the Pennsylvanian, where 5-inch casing was set at about 6,700 feet. They drilled out under the 5-inch casing and encountered salt water, which was a big disappointment. Bill was drilling on morning tour when the well started flowing salt water about 4:00 A.M. Suddenly, it also started flowing oil, and by daylight it was

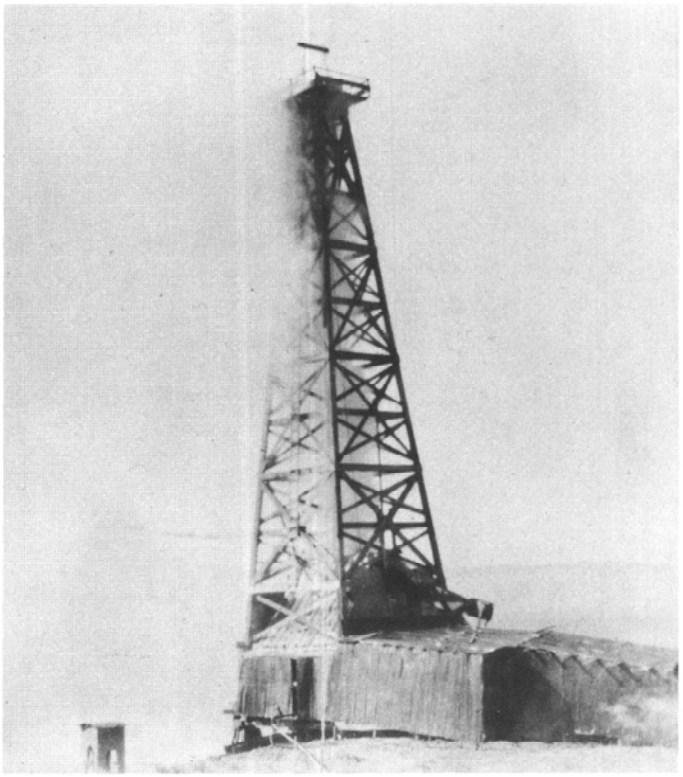


*Figure 3. Continental Oil Company Rattlesnake #17 after drilling 20-inch hole into Dakota Sandstone, 1929. The well is reportedly flowing 3,000 barrels of high-gravity oil per day.*

flowing oil at the rate of 1,200 barrels per day and salt water at the rate of 1,400 barrels per day. They did not have a wellhead available to control that kind of flow, so a wellhead had to be ordered. When the head arrived two weeks later, the difficult part of the operation began, and the description of how it was done testifies to the toughness of oilfield hands in those days. In order to install the wellhead, it was necessary first to use a hack saw to cut off the casing and cut threads on the casing. This was done and the wellhead was installed while the well was flowing at the rate of 2,600 barrels of oil and water per day. It must have been a messy operation.

Although this was a significant discovery at the time and doubtlessly helped generate interest in oil prospects in the basin, production difficulties caused by the large amount of water produced with the oil prevented the Pennsylvanian well from becoming a commercial venture.

By 1929 several operators had developed enough gas in the Fulcher-Kutz pool and at the Ute dome for the Southern Union Gas Company to bid for a franchise in Farmington, Santa Fe and Albuquerque. A gas line was built into Farmington in the fall of 1929. The Farmington paper reported that Southern Union Gas Company had offered free gas to all residences and business houses, except restaurants, until October 1, 1930, as an inducement to secure the franchise. A line was also laid from Ute dome to Durango, Colorado, that year.

In October of 1929, Southern Union began negotiations with officials of Santa Fe and Albuquerque for franchises in those cities. In their testimony they related that they had a gas supply of 200,000 MFC, with prospects for much additional gas to be discovered (fig. 4). They also emphasized that San

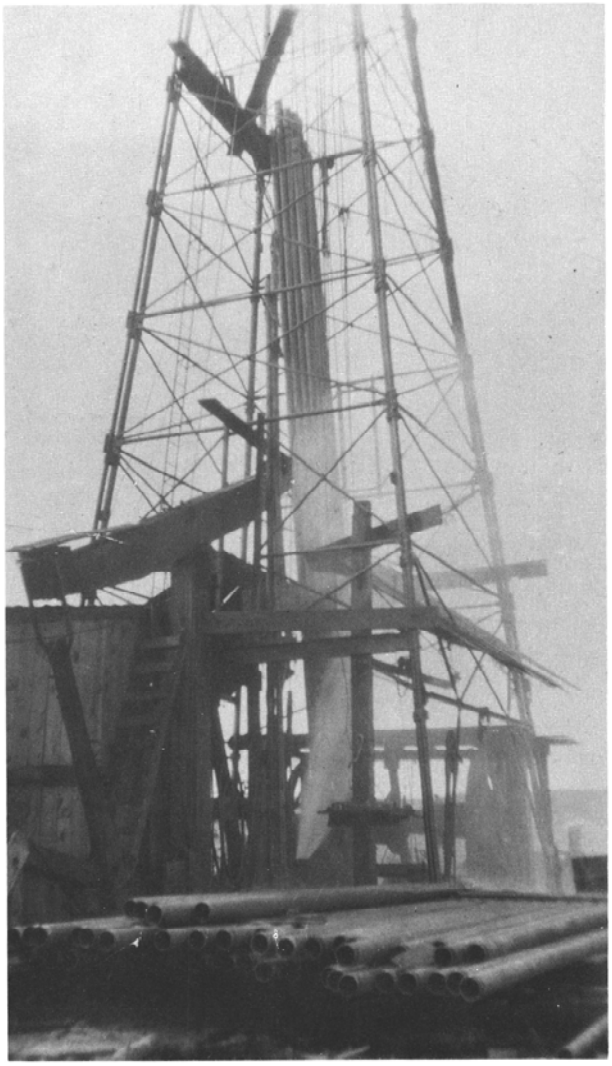


*Figure 4. Early Mesaverde well near Blanco, Union Oil Mining Company Pine #2, 1929.*

Juan Basin gas was "sweet" gas and was much superior to sulphur gas produced in southeastern New Mexico.

In February 1930, franchises were granted in both Santa Fe and Albuquerque, and construction began immediately on a line to Albuquerque. This was a 12-inch line part of the way and a 10-inch line the remainder of the way. The line was completed in October of 1930 and provided the first real market for basin gas reserves.

By early 1931, the depression had hit the oil industry. It slowed development during the next several years.

The Aztec Independent Review reported that five refineries were operating in the area in January 1933. These were the Conoco refinery at Farmington, which handled Dakota oil from Rattlesnake, Table Mesa and Hogback; the Basin refinery at Aztec; and the Hare, Aerex and Cross refineries at Bloomfield, which handled high-gravity Farmington crude oil. With the exception of the Conoco refinery, none were very large, but they all added to the economy of the area.

Drilling activity was minimal during the years from 1929 to 1934, with the exception of some gas development and small oil strikes in the Farmington Sandstone, such as the Oswell strike south of Aztec in 1932. The Oswell pool was larger than most Farmington pools and provided oil for the Basin refinery which was built at the site. In 1934 the small Red Mountain-Mesaverde pool was discovered 15 miles northwest of Hospah in McKinley County.

In 1942 Continental Oil Company drilled another deep test at Rattlesnake and discovered a helium-producing zone in the Pennsylvanian. Several other wells were drilled in this area, and a contract was let by the government in 1943 for the construction of a helium extraction plant at Shiprock. As helium was important to the war effort, the plant was rushed to completion. During the first year about 150 men worked on the plant, and during the last six months the payroll reached 600. About 50 houses were also built to provide living quarters for workers. A pipeline was constructed between Shiprock and Gallup for transportation of the helium to the railroad. This plant continued to operate into the late 1950's, when the helium supply dwindled and other more efficient plants in areas of better supply forced the closing.

In 1943 Carrol & Cornell began an eight-well program in the Fulcher basin Pictured Cliffs gas pool, developing more gas for Southern Union Pipeline. Exploration departments for many of the major oil companies also started surveying the basin in the 1940's, and several seismograph surveys were conducted over wide areas of the basin.

Southern Union secured leases on Barker dome and drilled their Barker #1 Well not far from the Gypsy Oil Company well of 1924, completing it January 30, 1942, in the Dakota Sandstone, for an IP of 7,650 MCF. The first Paradox test on the Barker dome was the Barker #9, completed by Southern Union March 18, 1945, for an I P of 42,000 MCF.

On January 31, 1947, an editorial on oil exploration stated that an off-the-reservation oil boom was expected. Pooling of interests by the big oil companies in the Kutz Canyon deep test would start if off, if they struck a big producer, but it would have to be more than a rumor. Southern Union was encountering big flows of gas in the wells they were drilling. Oil scouts were pointing out that there was oil in abundance somewhere in the basin and that this might be the year when it would be found in great commercial quantities. In February 1947, 16 major oil companies were making a scientific study and Farmington residents were reminded that the oil development program was "hotter 'n a firecracker." On April 18, 1947, Southern Union brought in another giant gasser measuring 74,800 MCF on Little Barker Creek. It was shut down until needed for production. Only one of the deep tests was larger than this one. It was the #19 well, with a production of 120,000 MCF daily (fig. 5). The five deep test producers had a potential production of 500,000 MCF daily.

Byrd Frost reached TD in the Dakota Sandstone on the English deep test at Kutz Canyon during 1947, but the well was a questionable producer. A short time later, Three States Natural Gas Company completed the Hargrove #1 Well for an IP of 1,500 MCF, and this became the discovery well in the basin Dakota pool.

The first talk of a pipeline to Phoenix, Tucson and California began during the spring of 1947.

On July 4, 1947, an article taken from the *Oil News,* appearing in the *Farmington Times Hustler,* was entitled "A

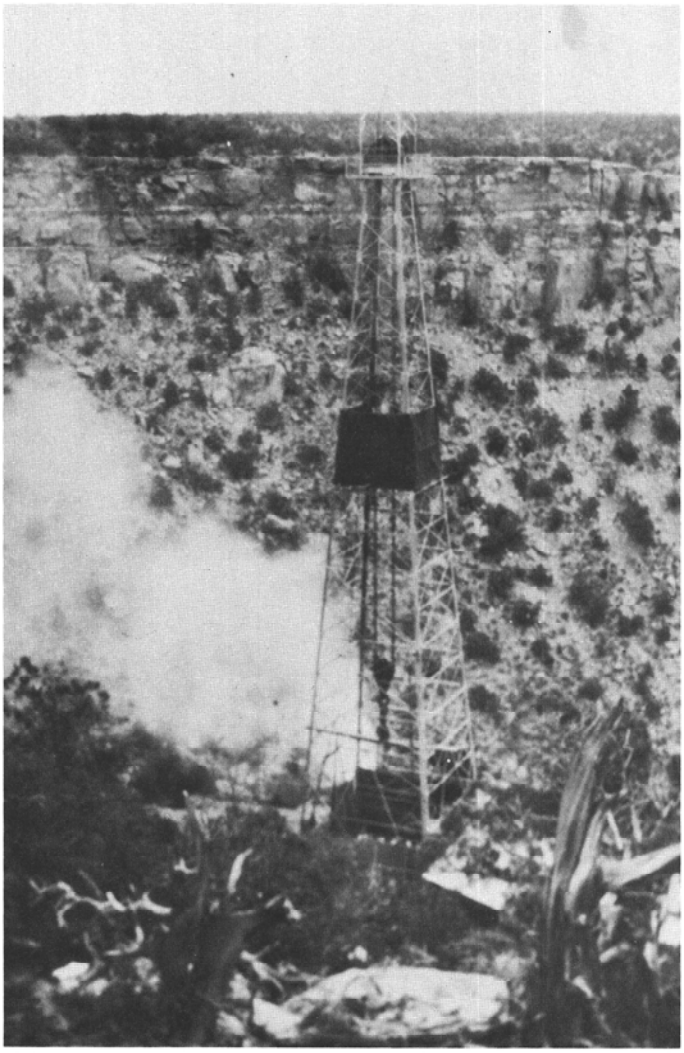


*Figure 5. Drill-stem test being taken on Barker dome #19, 1947. Note heavy flow of gas reportedly making 120,000 MCF.*

Battle of Giants for Field Control Rages in San Juan County." The article stated that two cliques or factions of major oil companies were opposing each other, backed by billions of dollars which was spent like water to block off hundreds of thousands of acres. Experienced oil men say there never was an oil play like it anywhere in the United States. Thousands of acres were picked up for as little as 25 cents an acre and resold for $2 an acre or more.

In October 1947, the British American Oil Company abandoned their deep test well at the Hogback after drilling to 6,000 feet. The driller had completed his contract and moved out. This well cost the company about VA-million.

In January 1949, the pipeline talk aroused considerable interest and comment. Colonel Harold D. Byrd of the firm of Byrd-Frost Inc. announced that his company planned to drill 15 wells near Dove Creek in Colorado and to construct a pipeline to San Francisco by way of Salt Lake City, Utah. Then in early February it was announced from Washington, D.C. that El Paso Natural Gas Company was building a pipeline to southern California and the Los Angeles area. Three companies, El Paso, San Juan Pipeline and Pacific Gas and Electric, would participate in building portions of the new system to deliver 400,000 MCF of gas daily to the San Francisco Bay area.

A week later the Attorney General of Colorado, John W. Metzger, censured the attempt of California to drain fuel from Colorado and the basin, and announced that he would challenge the endeavor. He labeled it a "secretive attempt" by California interests to take San Juan Basin gas to the west coast. An editorial appearing at the same time stated that New Mexico officials were concerned that such a pipeline would in the future jeopardize the atomic energy operations at Los Alamos, New Mexico, which was an increasingly great consumer of natural gas.

About the first of March 1949, the Federal Power Commission did give El Paso Natural Gas Company permission to build their line from the Permian Basin in Texas and New Mexico to the Colorado River at an estimated cost of $52,456,032. But the FPC did not act on the related application by San Juan Pipeline Company, a subsidiary of El Paso Natural Gas Company, to build a pipeline from Farmington to Topock, Arizona.

On March 3, 1949, The Atomic Energy Commission announced their plans to build a pipeline from a point about 25 miles south of Bloomfield to Los Alamos, about 30 miles northeast of Santa Fe. The gas would be purchased from Southern Union Gas Company; the line was to be completed before winter.

During the spring of 1949, oil and gas development showed some activity. Delhi Oil Corporation brought in a new Blanco gasser at 19,450 MCF daily. A new experiment was tried by shooting the tight gas sands with 400 quarts olnitroglycerine. This method was used on a number of other wells in that region and found to work (fig. 6).

On May 9, 1949, Southern Union started operation of its new $700,000 butane and gasoline plant in Kutz Canyon near Bloomfield. The same month, Southern Union also took over the Aztec Natural Gas Company franchise at Aztec. The town had experienced a shortage of gas occasionally; they felt that Southern Union could offer them more gas and better service.

Early in June 1949, Paul Kayser, president of El Paso Natural Gas Company, testified that the San Juan gas was sufficient for 25 years. He also testified that his company had made contracts to carry 165,000 MCF of gas from the San Juan Basin daily for a 20-year period if the line was approved.

In July, the Federal Power Commission vetoed the first application for the pipeline, and the State Land Commissioner, Guy Shepherd, sharply criticized the decision. The FPC had not seen fit to authorize the first real opportunity that the San Juan area had ever had to market gas.

During the last part of 1949, there were claims and counterclaims regarding the advisability of building the pipeline and the reserves to be found there, but no definite hearing or authorization came for the building of the pipeline. It seemed that both sides of the dispute had more or less declared a truce while they gathered more evidence for the next round with the FPC.

During the "lull" following the denial of the permit for the pipeline, an editorial by Orval Ricketts perhaps expresses the view of most of the folks in San Juan County:

*"The backlog of potential development in San Juan County has been for years the possibility of reclaiming huge areas of virgin grass lands to producing farms by means of irrigation projects. Blessed with a trinity of natural resources, fertile soil*

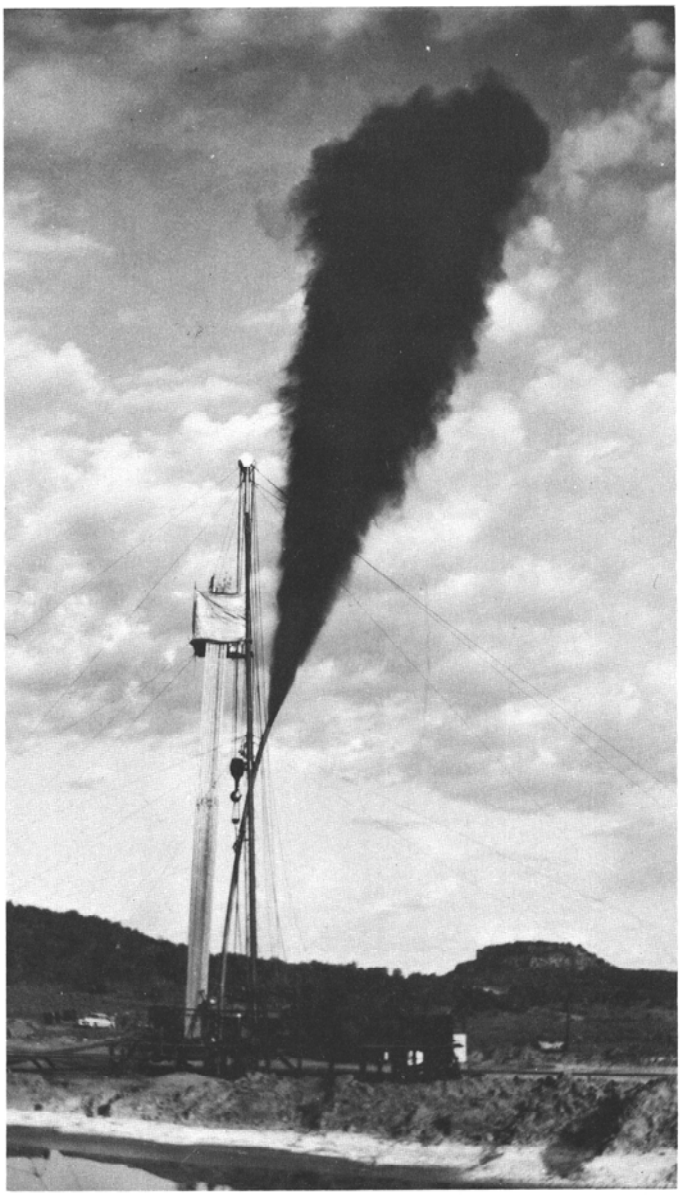


*Figure 6. Stimulating Mesaverde Formation by shooting it with 1,680 quarts of solidified nitroglycerine, Schwerdtfeger #1. El Paso Natural Gas Company, May 29, 1952.*

*and salubrious climate, the Sunny San ,Juan has, since the white man was first permitted to file on land back on July 4, 1876, been a dream land of future development."*

In late December 1949 proponents of the pipeline began to unlimber their great guns and lay down a barrage of propaganda in preparation for the second round of their fight before the Federal Power Commission, scheduled to begin on January 4, 1950.

On December 17, at Santa Fe, the Oil Conservation Commission announced that they were backing the proposed San Juan-California pipeline, though not necessarily El Paso Natural Gas Company's application. The executive secretary, R. R. Spurrier, emphasized that the Federal Power Commission has asked the state to intervene in the case to calculate the San Juan reserves and aid in the final FPC decision. He said that the state was asked because the FPC thought that they would be an impartial, unbiased source of information. Spurrier explained that the Commission had been attacked from one source for catering to the interests of a large corporation. That was not the Commission's policy, he argued; the OCC would back anyone able and willing to build such a line. Spurrier said, -"Our policy is to see a market developed for our raw materials and at the same time assure New Mexico all the gas for any market that may be developed or now exists, not for 25 or 50 years but as long as gas is a source of fuel or energy." He said that the Commission had sent maps of the gas pools, charts and figures to substantiate its claim that the gas pipeline should be built.

Southern Union opposed the El Paso application. Two days after the hearing opened before the FPC in Washington, Senator Chavez came out with a contradictory statement that he had information showing that the gas reserves in the basin might last only 71/2 years if the gas were removed at the requested rate.

The Delhi Oil Corporation sold their interests in a number of large producing gas wells in the county, and a new wildcat gasser was brought in at Largo, which might boost the chances of F PC approval.

## The Second Boom

In February 1950, the Federal Power Commission issued a temporary permit to El Paso Natural Gas Company to lay a transmission line from the San Juan Basin to the California border. The final permit was issued July 14, 1950, and gas started moving through the line during late summer of 1951. The FPC approval was the result of a long hard-fought battle; Farmington and the San Juan Basin changed drastically and would never be the same again. Where Southern Union Gas Company had been the leading oil and gas operator during the 1930's and 1940's, El Paso immediately became the most active company and the leader of development in the basin during the fifties and sixties. Drilling increased very rapidly because of the additional demand for gas, and boom number two was on its way.

The majority of the San Juan Pictured Cliffs pools were discovered between 1950 and 1954. The more notable pools are as listed in Table 1.

Starting in 1950, Ray Fish and Fish Engineering combined with Phillips Petroleum Company, who had acquired 130,000 acres of leases mostly on the east side of the basin and made application to the FPC to lay a pipeline from the San Juan Basin to Washington and Oregon. Phillips started an intensive drilling program in late 1952 in an attempt to establish sufficient reserves to obtain approval. El Paso Natural Gas Company opposed the application vigorously. After 12 months of continuous hearings, with the presentation of 28,000 pages of testimony and some 650 exhibits, Pacific Northwest Pipeline Corporation was finally awarded FPC approval to construct the line in May 1954. Financing the project required another year, and it was not until May 1955 that construction began. Pacific at the same time formed a local staff and put 15 rigs to work. Boom number two was intensified.

Hydraulic fracturing, at first with diesel oil and a short time later with sand and water, was used successfully to stimulate wells in the San Juan Basin; and by mid-1955 it had completely replaced the use of solidified nitroglycerine as a means of stimulating gas wells.

Gas prorationing in the San Juan Basin went into effect March 1, 1955. Emphasis was now placed on well performance

*Table 1. San Juan Pictured Cliffs Pools*

| Pool | Date Discovery Well Completed | Operator | Well |
|---|---|---|---|
| West Kutz | 5-18-50 | J. D. Hancock | Edgar #1 |
| South Blanco | 6-19-51 | Lowry et al | Federal B #1 |
| East Blanco | 2-13-52 | El Paso Natural Gas Company | San Juan 30-4 #1 |
| Blanco | 4-14-52 | El Paso Natural Gas Company | Mansfield Goede #1 |
| Ballard | 12-11-53 | Woodriver Oil & Refining | Greer #1 |
| Tapacito | 4-19-54 | Southern Union Gas Company | Jicarilla A #2 |

rather than acreage, and high deliverability potentials became increasingly important.

October 1955 was the month for major oil discoveries in the San Juan Basin. The El Paso Kelly State #1 discovered the Bisti oil field on October 7, 1955; the well had an IP of 180 BOPD. On October 20, 1955, Claude Carroll's Ute #1 Well came in making 190 BOPD; this was the discovery well in the Verde-Gallup field.

The height of the drilling boom during 1956 and 1957 was increased by the discovery of the Horseshoe-Gallup pool. Arizona Exploration drilled the discovery well, the Horseshoe Canyon B #1, which had an IP of 120 BOPD at a depth of only 1,780 feet; this really caused a flurry of activity.

By 1958 a merger between Pacific Northwest Pipeline and El Paso was being discussed, which was consummated January 1, 1960. The merger left the San Juan Basin with only one viable gas purchaser. Proration of gas wells became more acute, and the oil pools that had been discovered in the middle fifties were all developed. All of this resulted in a severe slowdown in the drilling of wells in the San Juan Basin. The most active drilling of this period was the development of the Dakota Sandstone that occurred principally between 1959 and 1965. One important discovery was the Amoco Navajo N #1 in Tocito dome, which was completed March 31, 1963, as a gas well with an IP of 10,558 MCF daily. The drilling pace was increased when the Lone Pine-Dakota pool was discovered by Tenneco's Don-ne-pah #1, completed at 516 BOPD in June 1970. This discovery caused a considerable amount of drilling on the Chaco slope during the next few years.

## The Third Boom

The Securities and Exchange Commission challenged the merger of El Paso and Pacific Northwest, and the challenge was in and out of courts for a period of 14 years. Finally, the courts ordered El Paso to divest itself of the Pacific Northwest properties. Effective February 1, 1974, Northwest Pipeline Corporation received El Paso's Northwest Division assets, reserves and pipeline facilities and immediately began operation.

El Paso Natural Gas Company made application to the New Mexico Oil Conservation Commission to change the spacing pattern in the Blanco-Mesaverde pool. El Paso needed to increase the gas deliverability from the San Juan Basin and believed that infill drilling would add to the producible reserves in the pool.

There was some opposition to El Paso's proposal at the hearing, but Blanco-Mesaverde infill drilling was approved in November 1974, and in early 1975 the companies that objected to the application were the first to drill infill wells.

Having an additional gas purchaser in the San Juan Basin created more demand for gas. Simultaneously, a shortage of energy in the nation, together with greatly increased gas prices and the infill drilling program, resulted in the beginning of the third boom period in the oil and gas history of the San Juan Basin. [Editor's note: for more on the major gas producing fields of the San Juan Basin see Fassett (1973).]

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