

COMMISSION MINUTES 8-17-01

10050 EUGENE # 200, EUGENE, OR 97401

MINUTES

August 26, 1964

Commissioners present:
Lynn Lockhart, Chairman
R. Keith Walden, Vice Chairman
Lucien B. Owens, Member
Orme Lewis, Member

Others present:
Senator Marshall Sims
John Bannister, Executive Secy
Robert P. Davidson
Henry Fullop
Roy Sharp
Jim Fulton
Alfred Morgan
Paul Brown
C.A. Martin, Jr.
Bill King
W.E. Cooper
Marjorie Rushton

Chairman Lynn Lockhart called the meeting to order at 9:05 a.m. in the conference room, Highway Department.

Motion was made and seconded that the minutes of the previous meeting of June 10, 1964 be approved as submitted.

Mr. Bannister called attention to the confidential report of August 19, 1964 mailed previously to each of the Commissioners concerning Ram Oil Company vs Mr. Roy Sharp, holder of the Sierra Bonita Ranch oil lease, and read Mr. Sharp's letter addressed to the Commission, in which Mr. Sharp contended that all rules and regulations had not been complied with, particularly as to Ram not using a blow-out preventer.

Mr. Bannister stated that Mr. Petty informed him that he had checked with Ram's Mr. Harden and had told Mr. Harden that a blow-out preventer was not needed and would not be required. Mr. Bannister further stated that this problem appeared to be a quarrel between two parties. Ram was current with the requirements of the Commission and not in violation of any rules and regulations; the ranch owner had no quarrel; and that every opportunity for Ram to perform should be granted.

Mr. Walden opined the Commission should not be involved in a lease dispute between these parties because the Commission is not a regulatory body in that sense; the operator was given permission by our geologist to operate without a blow-out preventer; and that the Commission should take no issue on this thing whatsoever.

It was directed that Mr. Bannister write the two parties accordingly.

Mr. Bannister indicated that Ram may request another extension and so far as he is concerned he intends to grant the extension and asked for comments from the Commissioners.

Mr. Owens stated that the Commission had no place in the quarrel, but that the Commission should go along with the Rules and Regulations.

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In response to the next call for business from the Chairman, Mr. Bannister suggested that the Kerr-McGee Application for Hearing, concerning the Navajo Springs Unit, be the next item of business.

Mr. Orme Lewis disqualified himself from this portion of the meeting.

Mr. Bannister presented as background the following: The Unit Hearing was held the last of May and the Commission granted the Unit June 10. On July 30 Eastern Petroleum presented evidence that the necessary parties, 63% of the royalty owners and working interest owners, had agreed and executed a unit agreement so the unit became effective July 31.

Kerr-McGee had been closed-in 60 days to allow the operator, Eastern, to get the signatures in. August 10, ten days after the Unit became effective, the suspend order on Kerr-McGee came to an end and Kerr-McGee was notified that they could produce the Barfoot, subject to the Unit Agreement.

On August 10 Eastern Petroleum held an operator committee meeting, which is the controlling committee under the Unit Agreement. As part of this they agreed to begin actual physical operation on August 21. In the interim they would be making their inventory so as to bring everyone into equal financial position.

Kerr-McGee wants to produce right away and requested Eastern to start the Barfoot. Eastern replied they would be glad to work out some system where they could produce on a day-to-day basis or month-to-month basis, subject of course to Unit Agreement.

Meantime Kerr-McGee has said Eastern will not produce and will not let them produce; so either make Eastern start producing, or let Kerr-McGee produce the Barfoot.

Mr. Bannister stated he believed the application improperly before the Commission and should not be heard; that the Commission has approved a unit plan whereby correlative rights are being protected and a procedure was set up for producing this unit. This is a matter that can be handled, and there are ways to handle, under the unit agreement. He did not think we should step in again as a judge of contention between two parties. The Commission's position is to see that the Unit Agreement and the Unit itself is protected.

Mr. Davidson, counsel for Eastern Petroleum, Unit Operator, opposed the granting of a hearing for the following reasons: The Commission lacked jurisdiction; the application failed to state a claim upon which the relief requested can be granted; and the application requested alternative relief by requesting permission to produce unlawfully in contravention of Section 27-534.

Mr. Davidson then detailed chronologically the steps taken by Eastern to get the Unit into operation. All unit members were present at the organization meeting August 10. Dr. Barfoot was represented by proxy by Kerr-McGee. Basic data, as required by the Agreement, such as title opinions, original leases and contracts, all production and well data, had been requested from all members but as yet Kerr-McGee had not complied. The Unit as such is run by an operating committee and by majority vote. This is application by dissatisfied minority interest owners and they have not made any request of the operating committee to study this problem.

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Mr. Davidson stated Eastern was perfectly willing to produce the same amount of gas that Kerr-McGee had previously nominated as unit production.

Chairman Lockhart queried as to whether the Barfoot well was running or shut-in. Mr. Davidson replied it was shut-in.

Mr. Henry Fullop, Eastern Petroleum, stated they had no intention of hurting Kerr-McGee, that Kerr-McGee could take their production in kind--this was the purpose of a unit.

Mr. Owens indicated that it seemed that what Kerr-McGee is asking is not in conformity with what the Commission did when it established a field-wide unitization with an operating committee to operate this unit, and that in actuality the basis on which the operator determines that any well will be operated within a unit is the basis on which that well must be operated. And to ask for a set-aside of one well, out of unit agreement, is in effect asking for repeal of the Commission authorization. They should be given a chance to operate and this application for set-aside be denied at this time.

He so moved, the motion was seconded and passed.

Meeting recessed at 10:00 a.m. to permit the conduct of the hearing between the Hopi Indians and Superior Oil Company.

Meeting reconvened at 11:40 a.m., with Mr. Lewis participating.

The proposed budget for 1965-66 was discussed. The increase in personnel and monies was justified by the anticipated increase in activity with Eastern and Arkansas-Louisiana and the work that must be done in connection with existing wells to bring them into line with the Regulations.

Senator Sims indicated it was his opinion that the budget application would be well received with the exception of a new employee, a "records clerk" at \$6,000.00. This was a rather high salary for a run-of-the-mill clerk. Further discussion decided that "administrative assistant" would be more properly descriptive of the position.

Mr. Bannister was directed to prepare the budget along this line and to verify percentages of increase or decrease.

Senator Sims suggested that to substantiate the request for capital outlay, a new auto, that invoices for repairs and maintenance on the old automobile be presented to the legislative committees.

Chairman Lockhart raised the question of hiring a new geologist. It was decided that Mr. Bannister should have 2 or 3 outstanding applicants present for interview at the September Commission meeting.

Mr. Lewis questioned the naming of a well. The well seemed to be different from the pattern or policy for naming wells. Mr. Bannister will scrutinize the naming of wells.

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Chairman Lockhart urged all Commissioners to attend the October 28 meeting with the Navajo Indians. Mr. Bannister will firm up the arrangements.

The matter of Arizona being represented at the hearing in Federal Court in Portland, Oregon, State of Montana vs Assiniboine Indians to compel the Indians to pool and space oil wells was discussed and it was agreed by the Commission that Arizona would not be represented at this hearing.

Mr. Bannister presented a list of people and/or firms who might be of interest to the Commissioners when they go around and contact people to poll their interests and intentions in Arizona.

It was decided that a record continue to be maintained of all telephone calls and visitors received in the office of the Oil & Gas Conservation Commission.

Meeting adjourned at 12:55 p.m.

D R A F T
MINUTES

State of Arizona
Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona
June 10, 1964.

COMMISSIONERS PRESENT:

Lynn Lockhart, Chairman
R. Keith Walden, Vice Chairman
Lucien B. Owens, Member

OTHERS PRESENT:

John Bannister, Executive Secretary
John K. Petty, Petroleum Geologist
Mike O'Donnell
Richard H. Whitney

COMMISSIONERS ABSENT:

Orme Lewis, Member

Chairman Lynn Lockhart called the meeting to order at 9:30 a.m. in the Hearing Room of the Commission.

Since the primary purpose of this meeting is to reach a decision in the matter of Eastern Petroleum Company's application for unitization of the Navajo Springs Unit which was heard before this Commission on May 27th, Commissioner Orme Lewis did not attend the meeting for the reason that he had disqualified himself from participation as a member of this Commission in any matter concerning the Navajo Springs area because of possible conflict of interest.

Upon motion duly made, and seconded, the minutes of the previous meeting were unanimously approved as submitted.

Mr. Bannister advised the Commissioners that it was his recommendation and Mr. Petty's that the Navajo Springs Unit be granted, that the participating factors as presented by Kerr-McGee Oil Industries, Inc. be used, and that the entire unit production be closed in for a period of sixty days in order to allow Eastern Petroleum to assume control and begin unitized production. He also recommended that the order provide that the unit would not be effective until such time as evidence has been submitted to this Commission that they had complied with the changes suggested in the Unit Agreement and until they provide evidence that sixty-three percent of the interest and royalty owners ratified the agreement.

After considerable discussion of the Navajo Springs Unit matter, motion was made by Commissioner R. Keith Walden that this Commission approve the granting of a fieldwide unitization of the Navajo Springs Helium Field as requested by Eastern Petroleum in the hearing of last month, and that in accordance with the recommendation of the staff of this office the Barfoot well be shut-in for a maximum period of sixty days. Motion was seconded by Commissioner Lucien B. Owens, unanimously approved, and so ordered.

Chairman Lynn Lockhart called upon Mr. John K. Petty to report any items of interest which he did, calling attention to the following activity at the present time: Pan American and Superior drilling in the Four Corners area, Tenneco beginning operations, and one Eastern Petroleum well active in Pinta Dome area just east of the Navajo Springs Field. He also reported that this Commission is receiving splendid cooperation from the people working the potash area in the St. Johns-Holbrook-Navajo area.

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The possibility of further exploration of the Kaibab area was discussed. Mr. Petty advised that he would make an effort to influence operators to go into that area.

Mike O'Donnell of the Arizona Oil Report brought up for discussion the matter of the rumors regarding the Harless operations in Yavapai County, and the matter was discussed.

The temporary employment of Mr. William Cooper was discussed.

Tentative date of the next Commission meeting was set for the fourth Wednesday of July.

Mr. Richard Whitney, attorney representing Kerr-McGee Oil Industries, Inc., arrived at this time and inquired whether unit had been approved. He was advised that he would be furnished with a copy of the order granting the unit at the conclusion of the meeting.

Upon Commissioner R. Keith Walden's motion to adjourn, seconded by Commissioner Lucien B. Owens, unanimously approved, meeting was adjourned at eleven-thirty.

JB:mkc

D R A F T
MINUTES
State of Arizona
Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona
May 27, 1964

COMMISSIONERS PRESENT:

Lynn Lockhart, Chairman
R. Keith Walden, Vice Chairman
Charles Kalil, M.D., Member
Lucien B. Owens, Member

OTHERS PRESENT:

John Bannister, Executive Secretary
John K. Petty, Petroleum Geologist

COMMISSIONER ABSENT:

Orme Lewis, Member

Chairman Lynn Lockhart called the meeting to order at 9:30 a.m. in the Conference Room adjoining the Auditorium of the State Highway Department at 206 South 17th Avenue, Phoenix, Arizona. It was noted that Commissioner Orme Lewis was not present because he had disqualified himself in the matter of Eastern Petroleum Company's application for unitization of the Navajo Springs Unit to be heard at 10 a.m. today. He had notified the Commission beforehand that unless his presence was required for a quorum at this portion of the Commission meeting preceding the hearing, he would not be present at all this morning.

Commissioner Lucien B. Owens' motion to accept the minutes of the previous meeting as prepared was seconded by Commissioner R. Keith Walden, unanimously approved, and so ordered.

The Commissioners then discussed the scheduling of a meeting to render the decision regarding the hearing to be conducted today immediately following this meeting. It was pointed out that since Commissioner Lynn Lockhart, Mr. John Bannister, and Mr. John Petty would be attending the Interstate Oil Compact Commission Meeting in Billings, Montana, June 22nd through 24th; it might be well to schedule the regular June Commission meeting for some date other than the usual meeting date of the fourth Wednesday of the month which would be June 24th. Since the Commissioners had no way of predicting whether time would allow them to reach a decision today in the matter to be heard, it was agreed that the Commissioners would meet June 10th in lieu of June 24th at which time they would handle regular Commission business and also render a decision if not done so today.

Commissioner Charles Kalil advised that the other Commissioners should make whatever plans they wished regarding the June meeting as he would be unable to attend since he had some previous plans which would prevent his being present at any Commission meeting in the near future. He advised that he was not certain that he would be able to remain throughout the proceedings today.

Commissioners Kalil, Owens and Walden advised they would be unable to attend the Billings Interstate Oil Compact Commission Meeting June 22nd through June 24th.

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It was pointed out that in connection with the hearing today, the interested parties are allowed ten days to offer additional material and the Commissioners are allowed thirty days in which to reach a decision.

Mr. Bannister reported the new Eastern permit No. 282 on the #30 Well, and also mentioned the conflict between Richard Harless and the Bureau of Land Management. Commissioner Kalil commended Mr. Bannister for his tact and diplomacy in the handling of Commission matters. Mr. Bannister reported briefly on the potash problem and advised that Mr. Petty has it pretty well solved by having obtained many samples, with many more samples available.

Mr. Petty then reported that on the field trip it was noticed that Eastern and Kerr-McGee wells were not marked, but that it appeared that some signs had been torn down since they had been put up. He also reported that Mr. Henry Fullop, President of Eastern Petroleum had advised him that he would repair the leaking well which is reported in Mr. Petty's written report.

Mr. Petty was asked to comment on the well abandoned in Kaibab Forest (Rip C. Underwood - Jacob Lake Unit Well #1-32, File #275) which he did stating that it had been drilled down to 3600 feet and logged to that depth and that they could not get logging tools down to the extra 268 feet. He also explained to the Commissioners the process of drilling with air and using foam.

Commissioner Walden reported on the problem encountered and solution of same in connection with a water well he had drilled at Sahuarita to 2,500 feet.

Commissioner Charles Kalil reported on an article in a recent issue of the Oil and Gas Journal dealing with the Secretary of Interior's proposed meeting with the big oil and pipeline people on May 26th, to consider somehow taking up the deposits that exist in the reservoirs, particularly in Southern California. He advised that whether the oil industry is seriously going to consider additional pipelines tapping the reserves of the mid-continental area or whether imports would be relaxed more to permit more foreign oil to come in would have a bearing on the attractiveness and desirability of exploration in the state of Arizona. He reported he had talked personally with Mr. Charles Anderson, Chairman of the Utah Oil and Gas Commission, in Miami a year and a half ago who told him how Utah had taken necessary precautions in reserving certain percentage of any pipeline traversing the state to the West Coast and that the New Mexico Oil Conservation Commission had advised him they were sorry that they had not put some reservations providing them with a priority of their production from pipelines in certain parts of that state. He expressed the opinion that it would behoove this Commission to very seriously consider approaching this problem in this coming session of the Legislature, whether it be through a statute which we have which can be enhanced under the jurisdiction of the Corporation Commission or the Oil and Gas Conservation Commission, whereby we here in this state would reserve a certain percentage of the capacity of any additional pipeline traversing

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this state if and when we have the production. He advised that it would be well to become informed on Utah's handling of the situation in their state, and that this matter should be considered seriously soon.

In response to Commissioner Kalil's above suggestion, Commissioner Walden made the motion that this Commission look into the matter of reserving a percentage for the transportation of Arizona production of future pipelines traversing the state of Arizona, with the intent of probing the possibility of sponsoring some legislation in this matter, and that Mr. John Bannister be delegated to visit the Oil and Gas Conservation Commission of the State of Utah at his convenience to investigate their handling of the situation in their state. Motion was seconded by Commissioner Kalil, unanimously approved, and so ordered.

Upon motion duly made, seconded, and unanimously approved, the meeting was adjourned at ten a.m., and the Commissioners proceeded to the Auditorium of the State Highway Department for the hearing of Case No. 15.

JB/mkc

Approved: June 10, 1964

D R A F T

Minutes

State of Arizona
Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona

April 22, 1964

COMMISSIONERS PRESENT:

Lynn Lockhart, Chairman
R. Keith Walden, Vice Chairman
Charles Kalil, M.D., Member
Orme Lewis, Member
Lucien B. Owens, Member

OTHERS PRESENT:

John Bannister, Executive Secretary
John K. Petty, Petroleum Geologist
Edward I. Kennedy, Assistant Attorney General
Silas C. (Buzz) Brown
Robert P. Davidson
Henry Fullop
James Fulton
Don Hornecker
Bill King
Tom Lenoir
Chuck Martin
Mike O'Donnell
Fritz Ryan
Loy Turbeville
J. H. Waterhouse

Chairman Lynn Lockhart called the meeting to order at 9:30 a.m. in the Hearing Room of the Commission. Mr. Lucien B. Owens was introduced as the newest member of the Commission, having been appointed by Governor Paul Fannin for term of office on April 1, 1964, to serve through December 31, 1968.

Mr. Robert P. Davidson, attorney representing Eastern Petroleum Company in their application for hearing before the Oil and Gas Conservation Commission in the matter of fieldwide unitization of the Navajo Springs unit, called attention to the fact that confusion exists in the statutes regarding the publication of notice of hearing and the scheduling of requested hearing, in that the law states that the Commission may hear the matter within ten days after publication; but that according to a study made by the Attorney General's office three or four years ago, the law states that where no specified number of times of publication is indicated, then it shall mean publication a certain number of days in a daily paper or once a week for four consecutive weeks in a weekly paper with not less than twenty days intervening. Mr. Edward I. Kennedy, counsel for the Commission furnished by the Attorney General's office, stated that he had studied the matter and came to the conclusion that the Commission has three alternatives regarding notice of hearing: notice by publication, notice by mail, or notice by personal service. He further stated that if the Commission elects to give notice by publication under the provisions of A.R.S. 39-204, they would be required to publish in a daily newspaper six consecutive times, or four consecutive times in a weekly newspaper. He also pointed out that the statute, A.R.S. 27-517B, which had required that the Commissioner designate an official newspaper is no longer effective; and suggested that the Commission rescind the December 16, 1963, adoption of the Arizona Weekly Gazette as the official publication of the Commission since it was not a requirement by law and would tend to limit the flexibility of the Commission.

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Mr. Davidson stated that Eastern Petroleum Company does want a hearing as soon as possible, but definitely in accordance with provisions of the statutes so that no one could oppose the outcome of the hearing on the grounds that the scheduling of the hearing was in conflict with the statutes and thus necessitate a rehearing at a later date. He suggested that this notice of hearing be handled through publication and the hearing scheduled after a minimum of twenty days had passed from the date of first publication.

Mr. John Bannister pointed out that if the motion adopting the Arizona Weekly Gazette were to be struck from the records of the minutes of the December 16, 1963, meeting, then a daily newspaper, The Arizona Republic, could be used for publication of the notice of hearing immediately and would satisfy the statutory requirements of a newspaper of general circulation in Maricopa County.

Commissioner R. Keith Walden made the motion that the Commission delete the designation from the December 16, 1963, minutes that the Arizona Weekly Gazette be adopted as the Commission's media of official publication. Motion was duly seconded, unanimously approved, and so ordered.

Chairman Lynn Lockhart announced that the hearing would be scheduled for May 27th at 10 a.m. at the State Highway Department Auditorium if this would be agreeable. It was generally agreed by those present, including Mr. Davidson and Mr. Fullop that that date would be satisfactory.

Commissioner Charles Kalil moved that the hearing requested by Eastern Petroleum Company before the Oil and Gas Conservation of The State of Arizona with reference to the compulsory fieldwide unitization of the Navajo Springs Unit be set for the next regular meeting date of the Commission, being the fourth Wednesday of May, May 27th, at the Highway Department Auditorium at 10 a.m. Motion was seconded by Commissioner R. Keith Walden, unanimously approved, and so ordered.

Mr. John Bannister was then directed to make arrangements to schedule the hearing accordingly.

Mr. Davidson then raised the question of whether the Commission would prefer that Eastern Petroleum Company prepare fully for the forthcoming hearing completely ignoring the evidence and testimony submitted at the previous hearing, Case No. 12 of October 23, 1963; or whether Eastern Petroleum Company should prepare only a simple presentation to cover the northern boundary since the denial of the previous application was based upon the fact that the northern boundary had not been delineated by actual drilling as required by law.

Eastern Petroleum Company was advised that unless substantial additional evidence is presented to the Commission to prove the existence of the northern boundary where it is purported to exist, with both geological information and information that has been developed from wells that have been drilled since the previous hearing to define that the faultline does exist, the Commission would not be able to grant the application at the forthcoming hearing. Eastern was further advised that the Commission would be willing to rely on the testimony of the previous hearing providing there is a showing that there has been no substantial change in the interim since the testimony was presented at the previous hearing. Eastern Petroleum Company agreed that any changes would be substantiated by evidence. Since all testimony should be subject to questioning and cross examination by all interested parties, the Commission agreed that even though the Commission would be willing to take notice of the technical data previously furnished and base its decision

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partially on that evidence in this forthcoming hearing, a stipulation would be necessary from Kerr-McGee Oil Industries, Inc. and Eastern Petroleum Company as the principal parties in this proceeding agreeing that certain evidence offered at the previous hearing which has not changed be accepted as evidence at the forthcoming hearing without again presenting such evidence and debating same.

Mr. Fritz Ryan asked whether his department, the State Land Department, on behalf of the State of Arizona's proprietary interest in Section 36 in the matter of the hearing scheduled for May 27th, would be required to hire expert witnesses and consultants to protect the State of Arizona's interest or if the State Land Department could simply accept the evidence presented by the other parties if it chose to adopt their position. He asked specifically if the State Land Department would be protected by the Oil and Gas Conservation Commission in whatever interest the State might have in Section 36 in a general unitization without having to drill a hole.

Mr. Ryan was advised that since the State Land Department has a proprietary interest in this matter, it would be best if the State made an official appearance, and as such would then be able to cross examine any witness and enter any evidence it might choose to present.

The Commission suggested that since no one knows definitely what evidence will be presented or questioned, in all fairness to everyone concerned, it would be wise for all interested parties to be as completely prepared as possible with complete evidence and witnesses available to substantiate or question any evidence presented at the May 27th hearing. It was agreed that if Kerr-McGee Oil Industries, Inc. and Eastern Petroleum Company reach an agreement to accept certain portions of the testimony given at the previous hearing, copy of such agreement would be furnished to the Commission and to the State Land Department as well.

The questions regarding the hearing scheduled for May 27th having been answered, the Commissioners proceeded with the agenda of the meeting.

Motion that the minutes of the previous meeting be accepted as prepared was duly made, seconded, unanimously approved, and so ordered.

Mr. Bannister added to the written report which had been presented to the Commissioners previous to the meeting by reporting that House Bill 345, abolishment of the Oil and Gas Commission, and House Bill 343, the bonus bill, are both dead issues.

Mr. John Petty then reviewed some of the highlights of his field trips which had been presented to the Commissioners in writing prior to the meeting, and also reported on the possibilities which exist in connection with the drilling of the new well in the Kaibab Forest area for which permit was just recently issued (Permit No. 275: Rip C. Underwood-Jacob Lake Unit Federal #1-32 in Section 32 - T39N - R2E, Coconino County).

Mr. Bannister then reviewed briefly for the Commissioners the trip he and Mr. Petty recently made to Santa Fe, New Mexico, to consult with the New Mexico Oil Conservation Commission regarding the handling of potash exploration, which trip was more fully detailed in his written report to the Commissioners.

Mr. Fritz Ryan stated the State Land Department's policy in connection with the potash exploration.

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Mr. Petty reported on the cooperation promised by the potash companies in furnishing to the Commission logs, plugging records, etc. After considerable discussion of the potash exploration, Mr. Petty answered Mr. J. H. Waterhouse's questions regarding the handling, distribution, and availability of sample cuttings.

The following motion was duly made, seconded, and unanimously approved:

The Commissioners have exercised their judgment in prescribing the forms currently used by the Oil and Gas Conservation Commission as set forth in our Rules and Regulations. The approval of information and authority granted by these forms is purely administrative in scope; therefore the Commissioners, a quorum being present, do authorize John Bannister as Executive Secretary to approve and execute all forms on behalf of the Commission.

Mr. Bannister reported that the Legislature has approved an appropriation to this Commission in the amount of \$50,535.00 for the 1964-65 fiscal year, which is a reduction of \$345.00 from the appropriation granted for the 1963-64 fiscal year.

He also reported that as requested by the Oil and Gas Association of Arizona, the Commission will furnish copies of the agendas of all Commission meetings to the Association so that all interested parties can be represented at the Commission meetings.

Mr. Bannister then explained the importance to the State of Arizona the case pending between the Montana Oil and Gas Conservation Commission and the Assiniboine and Sioux Tribes which was called to the attention of the Commission by the Rocky Mountain Oil and Gas Association's request to all members of the Interstate Oil Compact Commission for such aid as each member felt might be given to the State of Montana. This proceeding resulted when the Montana Oil and Gas Conservation Commission ordered the pooling of some Indian land, and the Indians through the Department of Interior attacked the order claiming that the State had no right to issue such an order on Indian land, and the matter is now being appealed with the basic question being whether or not a state does have certain rights over Indian lands within its jurisdiction. Mr. Bannister reported that a complete file has been requested from the State of Montana, which file will be turned over to the Attorney General's office for review to determine whether or not this Commission should support actively the State of Montana in the proceeding, after which the Commission will consider appropriate action.

Mr. Bannister also reported to the Commissioners that a series of questions have been directed to the Attorney General's office with regard to the forthcoming hearing with request for replies in ample time for review prior to the hearing.

Upon motion duly made, seconded and unanimously approved, meeting was adjourned at 11:45.

JB:mkc

D R A F T
MINUTES

State of Arizona
Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona
March 25, 1964

COMMISSIONERS PRESENT:

Lynn Lockhart, Chairman
R. Keith Walden, Vice Chairman
Charles Kalil, M.D., Member
Orme Lewis, Member

COMMISSIONER ABSENT:

Robert B. Heward, Member

OTHERS PRESENT:

John Bannister, Executive Secretary
John K. Petty, Petroleum Geologist
Mike O'Donnell
Loy Turbeville
J. H. Waterhouse
Charles Martin

Chairman Lynn Lockhart called the meeting to order at 9:30 a.m. in the Hearing Room of the Commission.

Commissioner R. Keith Walden's motion that the minutes of the preceeding meeting be accepted as prepared was seconded by Commissioner Charles Kalil, unanimously approved, and so ordered.

House Bill 343, providing for the payment of a reward, was discussed. Commissioner Charles Kalil reported that he is attempting to arrange a meeting with Representative Elmer T. Burson in an effort to further the progress of this bill. The statement was made that the bill probably could be improved upon; and should be actively promoted with the legislators immediately following the general election if not acted upon favorably during this session of the Legislature.

The Chairman called upon Mr. John Bannister, Executive Secretary for his report. Mr. Bannister had previously submitted a written report to the Commissioners; however at this time he reported that a very good working relationship has been established with the other employees of the Commission office, Mrs. Mary Cooper and Mr. John Petty, since his employment on March 1st, and that the Commissioners could expect to receive his full cooperation.

There followed a discussion of the potash exploration situation in the state, the major issue being the extent of the Commission's authority and power to obtain information from the companies engaged in such exploration and drilling. It was reported that an opinion on the subject had been requested from Mr. Edward I. Kennedy, Assistant Attorney General; but that opinion had not yet been received. During discussion of the New Mexico Oil Conservation Commission's regulations in this regard, it was reported that New Mexico requires that a permit to drill for oil or gas be obtained from any type of operator, regardless of the purpose of the drilling, if the drilling penetrates oil and gas bearing areas. Thus, in accordance with the rules applying to the permits, the operator is then required to submit all information required for the drilling of oil and gas wells; however they have not been entirely successful in receiving all the information desired even

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though their power in this regard has been tested and findings were that they definitely do have the right to demand information. It was reported that the various potash and mineral exploration companies' reluctance to furnish information regarding their drilling is an attempt to keep information from their competitors. Mr. John K. Petty, Petroleum Geologist, reported that he already has quite a number of samples from these potash holes, but that the information is being withheld, but that probably within a few months information would be available; and that quite a number of the exploration companies had committed themselves to furnishing whatever information will be requested by the Commission. The fact was pointed out that if any of these potash and mineral companies discover oil or gas, the Commission could then demand an application for a permit to drill; and that at present the Commission can demand cooperation from these exploration companies on its authority to protect the water bearing formations from contamination. Mr. Bannister and Mr. Petty were directed to present to the Commissioners at the next meeting their suggestions as to procedures to be followed in connection with the potash drilling, whether under the law or by arrangement with the various companies, so as to obtain as much information as possible with no discrimination.

The proposed drilling in the Kaibab Forest area was discussed.

Mr. Petty reported the latest information on the Ram well, 29 miles north of Willcox in the Sulphur Spring Valley which was that they plan to drill down to 1725-50 and hire a consultant to perform tests.

Mr. Mike O'Donnell stressed the importance of logs in revealing to drillers what formations they could expect to encounter in their operations based upon previous drilling in the area; thus enabling them to judge their costs. Also that as more logs are available, more information would be available for geologists to interpret for future drilling sites. The fact was brought out that our laws do not require that logs be run on all drilling operations, only that such logs as are run be submitted to the Commission, and that legislation would be required to force operators to run logs.

Mr. Petty and Mr. Bannister reported on their trip to the Montezuma area, Desert Drilling site near Dateland, and to the reclamation project which is being conducted south of Yuma near San Luis.

The situation in Morrow County, Ohio, was discussed briefly.

Upon motion duly made, seconded and unanimously approved, meeting was adjourned at 11:30, with the next meeting scheduled for the fourth Wednesday of April, the 22nd.

JB/mkc

D R A F T
Minutes

State of Arizona
Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona
February 18, 1964

COMMISSIONERS PRESENT:

R. Keith Walden, Chairman
Lynn Lockhart, Vice Chairman
Charles Kalil, M.D., Member
Orme Lewis, Member

COMMISSIONER ABSENT:

Robert B. Heward, Member

OTHERS PRESENT:

John K. Petty, Acting Executive
Secretary and Petroleum Geologist.
Edward I. Kennedy, Assistant Attorney
General.
Mike O'Donnell
James Pickett
Van Bennett
Chuck Martin (Present for portion of
meeting only.)

Chairman R. Keith Walden called the meeting to order at 9:15 a.m. in the Hearing Room of the Commission. He stated for the record that this meeting, even though it is not on the 4th Wednesday of the month, will serve as the regular meeting of the Commission for the month of February.

Commissioner Lynn Lockhart moved that the minutes for the December 16th meeting be accepted as recorded; motion seconded by Commissioner Charles Kalil; unanimously approved; so ordered.

Commissioner Charles Kalil moved and Commissioner Lynn Lockhart seconded the motion that the reports which had been mailed out by Mr. John K. Petty to the Commissioners from time to time be accepted as received. Unanimously approved; so ordered.

The Chairman then called upon Mr. Petty to report on the current status of the budget which had been submitted to the Legislature for the following fiscal year. Mr. Petty reported that no notice of a derogatory nature has been received; and that as far as is known, budget will be approved as submitted.

Motion was duly made, seconded and unanimously approved authorizing a twenty-five dollar per month increase in salary for Mrs. Mary Cooper, secretary-bookkeeper. So ordered.

The Chairman welcomed the members of the oil industry in Arizona who were in attendance and asked for any comments from them.

Mr. James Pickett stated his wish to follow up with the Commission the letter he had written the Commission regarding the bad publicity the oil industry in Arizona recently received in an ad placed by Merrill Lynch, Pierce, Fenner & Smith in the February 10th issue of

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Newsweek. He stated he wanted to bring this matter to the attention of the Commissioners in the event they would see fit to do something about it. He reported he has sent letters of protest to the local and national offices of Merrill Lynch, Pierce, Fenner & Smith, to the Arizona Development Board, the Governor of the State, congressmen, and senators in an effort to call this ad to the attention of as many people in positions of influence as possible and requesting their help.

Mr. Van Bennett reported that he has written a letter to Senator Barry Goldwater with copies to Governor Paul Fannin, Merrill Lynch, Pierce, Fenner and Smith, and some other individuals; and suggested the Commissioners write some sort of a letter stating that the ad was not fair to the oil and gas industry.

Mr. Mike O'Donnell of Arizona Oil Report reported that through his attorney, Mr. Davidson, he is asking for comparable full page ads in all four magazines in which the ad appeared, and an apology; to be followed by a law suit if they do not comply.

After considerable discussion of this matter, it was agreed that Mr. John K. Petty would write a tactful letter to be reviewed by and mailed over the signature of the Chairman to Merrill Lynch, Pierce, Fenner & Smith providing factual information regarding the oil and gas industry in Arizona as it was agreed by the Commissioners that this action would be more effective than a formal resolution of protest. It was agreed that copy of the letter would be furnished to Mr. O'Donnell.

Senate Bill 43, the \$250,000.00 reward bill, was then discussed. It was reported that the Senate had scheduled some action regarding this bill, but action was delayed because of some more urgent matters; and the exact present status of the bill is not known. The Commissioners agreed that it is a good bill and Commissioners Lynn Lockhart and Charles Kalil made plans to contact Senator Harold Giss to determine his reaction to this bill. Messrs. Van Bennett, Jim Pickett and Mike O'Donnell reported they haven't supported the bill because, in their opinion and the opinion of the Arizona Oil and Gas Association, the bill is too restrictive; and they suggested that if it were amended, and the words "federal or" deleted from the "Exclusions" section so that reward would be applicable to all lands except Indian lands, they would be more apt to support it.

Next was the matter of appointments to the various committees of the Interstate Oil Compact Commission for the coming year. After some discussion, Commissioner Lynn Lockhart made the motion that persons who had served on the committees last year be reappointed with the exception that the Regulatory Practices appointment be left open until such time as an executive secretary is hired for this Commission at which time he would be placed on that committee. Thus, the following reappointments were made: Legal Committee, Commissioner Orme Lewis; Public Lands Committee, Obed Lassen; Research Committee, John K. Petty; and Secondary Recovery and Pressure Maintenance, Commissioner Lynn Lockhart. The motion was seconded, unanimously approved and so ordered.

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Chairman R. Keith Walden announced that he has enjoyed serving as Chairman on this Commission and doing the work involved, but that he also has quite a few responsibilities in connection with the cotton industry which necessitate his devoting a very substantial amount of time outside of the state and outside of the country for another year. For that reason he asked that the Commissioners accept his resignation as Chairman of the Commission to be effective as of the end of today's meeting. Commissioner Lynn Lockhart moved that the resignation be accepted, reluctantly; seconded by Commissioner Orme Lewis; unanimously approved; so ordered.

Commissioner Orme Lewis' motion that Commissioner Lynn Lockhart, the Vice Chairman, be named Chairman of the Commission was seconded by Commissioner R. Keith Walden; unanimously approved and so ordered.

Commissioner Lynn Lockhart's motion that Commissioner R. Keith Walden be named Vice Chairman was seconded by Commissioner Orme Lewis, unanimously approved, and so ordered.

Mention was made of the fact that a vacancy exists on the Commission since Mr. Robert B. Heward's term expired December 31, 1963; and that the Governor's office would appreciate some suggestions to fill the vacancy, preferably a Democrat and preferably someone from the northern area.

The selection of an executive secretary for the Commission was discussed. Commissioner Lynn Lockhart reported the results of his investigation in Texas of Mr. Jack M. Little, Jr., an applicant for the position. On the basis of his findings he reported that he could not recommend Mr. Little for the position. Chairman R. Keith Walden was then asked if he could recommend someone from among the more than one-hundred twenty-seven applications which had been received.

Chairman R. Keith Walden said in part:

I am willing to recommend and recommend to you strongly John Bannister for a number of reasons. I may be wrong, but I would like to say this in front of you fellows here in the Oil and Gas Association and this industry. My concept of the function of this office is to be of service -- and I say that just as the implication is -- service -- to the oil and gas industry, and to regulate in accordance with law the activities of the oil industry when it becomes necessary to regulate it. That hasn't been very much of a job up to this time as you know. I don't find anything in the responsibilities imposed on this Commission or the authority granted to it in the statutes or in the regulations to go out and actively promote the oil and gas industry in this state. And because I feel that way, I think that's your job; and I don't think that we as public servants should be doing it. Because I feel that way, I feel that the kind of a personality this Commission should have in its executive secretary is one who will not compete with you fellows in attempting to promote, but merely be here to service your efforts and the efforts of other people engaged in this industry. This fellow Bannister is I think quiet, cautious,

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reserved, from everything that I have learned through much correspondence and many phone calls. I must have forty letters in his behalf here. I've talked with his employers personally; and his character, his ethics are certainly beyond reproach in my judgment from all the information I have; and I think something would have turned up as a flaw in all the information that I have if there were a flaw. He's not a promoter, but I think he will sit here and be of service and conduct himself in a quiet and dignified manner which is sort of in my analysis the kind of a job this should be. I think he will work well with John Petty who is our technical man in the field of geology, and I think we could have a great team here and be of real service to you fellows with John Bannister. Therefore I am going to recommend that we hire him. The reason that he is available to us now is that El Paso has got a real retrenchment program on and they're moving their land office out of El Paso, and he just wasn't far enough up the ladder to be included in the retrenchment program.

Mr. James Pickett also spoke in Mr. Bannister's behalf and recommended him very highly. Mr. Mike O'Donnell also reported that he has had many very complimentary recommendations of Mr. Bannister.

After some discussion, Commissioner Lynn Lockhart moved that Mr. John Bannister be employed as the Executive Secretary of the Commission effective March 1st. Seconded by Commissioner Orme Lewis; unanimously approved; so ordered.

Mr. John K. Petty was called upon to report on the potash exploration in the state and reported the following:

That there are about fifteen companies either exploring for potash in a drilling sort of way or exploring in an exploration sort of way in the Holbrook, Navajo, Springerville, Show Low, Snowflake area and slightly westward. They haven't started drilling yet as much as they will in another couple of months, but there are probably ten wells either being finished or started or drilling now; and there are about seven or eight rigs up there that are in motion.

That he has contacted these companies and asked them for the information which is ordinarily received from a regular drilling company exploring for oil or gas or helium; and that replies have been received from Kern County Land and American Metal Climax definitely stating that they will cooperate in every way and furnish copies of the logs and all the information that was requested in that letter sent to them, copies of which were furnished to the Commissioners. That before the list of information that the Commission would like to have was written, he had contacted seven of those potash exploration companies and they all were more than willing to cooperate; so it would appear that probably about ninety percent of the information asked for will be furnished to the Commission. Those companies were advised that it would be to their advantage to furnish the Commission with

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the requested information in the event that a water contamination problem should arise in the future.

A discussion followed during which Mr. Mike O'Donnell read an opinion of the Attorney General of Utah, dated January 22, 1964, prepared in response to a request from the Utah Oil and Gas Conservation Commission on the question of whether or not that commission could compel an operator or other responsible people to file a sonic log. The opinion was in the affirmative that the Commission has the power to compel an operator or other persons to file sonic logs on oil and gas wells drilled within the jurisdiction of the Commission and in effect the ruling covered all logs of whatsoever type are run. Mr. O'Donnell requested that a ruling be requested from the Arizona Attorney General's office on whether the Commission has the right to have these logs run.

The fact was brought out that permits to explore for minerals such as potash are granted through the State Land Department, and therefore the matter is not under the jurisdiction of this Commission. Also that a permit is not necessary to drill a well except a water well or an oil or gas well; and that there is no law that would require a permit to drill a well, if it could be called that, to determine if copper or gold or potash or some other mineral were present.

Mr. Edward I. Kennedy reported that this question had arisen before in conjunction with the northeastern section of the state when gas had been struck when purportedly drilling for something else in federal exploration; and that it had been discussed at that time with no conclusions other than that it would be a good idea to have some central agency to handle such matters.

It was also reported that at the present time there is legislation before the current legislature looking to drilling as a means of proving up on mineral plans and that this has been done for years as a matter of exploration but not as a matter of proving out, and that if it is allowed for proving out, that it would increase this question.

It was reported that the State of New Mexico presumes that if drilling is done through an oil and gas formation, the operator is drilling for oil and gas and a permit is required.

Discussion was initiated by Mr. Mike O'Donnell regarding the possibility that perhaps the Commission is not being furnished with all the information available regarding certain wells drilled which is a requirement of the Commission. It was determined that all our law requires is that those who are granted a permit to drill an oil or gas well in this state produce whatever information they assemble to this Commission six months after it is completed, but that the Commission does not have the power to force anyone to run a log on any well.

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Motion was duly made, seconded, unanimously approved, and so ordered that Mr. Edward I. Kennedy, Assistant Attorney General, furnish at the March Commission meeting an opinion of what the Commission's rights are in connection with demanding information from operators, both oil and gas as well as potash.

The last item of business was the appointment of a representative from Arizona to the Regulatory Practices Committee of the Interstate Oil Compact Commission. Commissioner Lynn Lockhart made the motion that since Mr. John Bannister has been selected as the executive secretary that he now also be appointed to serve on that committee. Motion was seconded by Commissioner Orme Lewis; unanimously approved; so ordered.

Upon motion duly made, seconded and unanimously approved; meeting was adjourned at eleven o'clock.

JKP
mkc

April 15, 1964

TO: The Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John Bannister, Executive Secretary

SUBJECT: Items of Interest Since the March 25th Meeting

SALES OF INDIAN ACREAGE

We have been advised of two sales of Indian acreage, the first of which will be held on April 23, 1964, at Window Rock, Arizona. At that time 98 tracts of land in San Juan County, New Mexico, totaling 112,351 acres and 142 tracts of land in Apache and Navajo Counties, Arizona, totaling 222,799 acres will be offered. The terms of this offer are the usual \$1.25 rental and the royalty has been set at 16-2/3 per cent.

On May 7, 1964, 9 tracts of acreage in Navajo County totaling 22,849 acres and 137 tracts in Apache County totaling 299,228 acres will be offered. The rental and royalty are the same as above.

The lands offered in both sales range from roughly T41N-R29E east and south encompassing T37N-R19E. The large amount of acreage being offered is an indication of the interest of major companies as well as independent operators in the state of Arizona as well as in the northeastern section. The trend of the Indian sales has been consistently extending westward.

NEW DRILLING PERMITS

The following permits have been issued since our last meeting:

Permit No. 273: Footage location changed. Eastern Petroleum Co., Eastern-Santa Fe Fee #34, 1897' S of NL; 1709' E of WL, Section 1-T19N-R27E, Apache County.

Permit No. 275: Rip C. Underwood, Rip C. Underwood-Jacob Lake Unit 1-32, Approximate C NE NE NE Section 32-T39N-R2E, Coconino County.

APPOINTMENT OF COMMISSIONER L. B. OWENS

The appointment of Mr. L. B. Owens as a Member of the Commission was made effective as of April 1, 1964, and was confirmed by the Senate on April 9th.

HOUSE BILL 343: Providing for the Payment of a Reward

This bill is out of the Tourist and Industry Development Committee, but is still in the Judiciary and Appropriations Committees.

HOUSE BILL 345: Abolishing the Oil and Gas Commission

This bill is still in all three of the committees to which it was originally assigned: the Judiciary, Appropriations, and Boards and Commissions.

EMERGENCY ORDERS REQUESTED BY EASTERN PETROLEUM COMPANY

The Commission has denied the issuance of two emergency orders, EO 1-64 and EO 2-64, requested by Eastern Petroleum to shut in production in the Navajo Springs area. Eastern was advised by letter dated April 14, 1964, that the Commission would not entertain further motions of this nature until such time as the hearing on the Navajo Springs Field was held and evidence, if any, warranting such action was presented.

EL PASO NATURAL GAS COMPANY

El Paso Natural Gas Company was ordered by the Supreme Court of the United States to divest itself of the Pacific Northwest Pipeline Company which it acquired through purchase in about 1957. You may recall that approval was first obtained by El Paso from the F.P.C. and upon their approval, the merger was accomplished. Antitrust proceedings were brought in about January, 1959, and have now culminated in the order to divest themselves of this holding. The property to be divested is valued at \$200 million and involves some 1400 miles of transmission lines.

El Paso Natural Gas Company has been ordered to refund a total of \$155 million on overcharges collected during the past 12 years and to reduce the income from existing contracts by approximately \$30 million per year. The majority of the \$155 million has now been returned to El Paso's customers. El Paso likewise is receiving refunds from suppliers from whom it has purchased. To date some \$4 million has been returned to them.

HUMBLE OIL COMPANY

The Department of Justice has filed suit under antitrust measures against Humble Oil Company to block Humble's plan to acquire Tidewater Oil Company's western operations. There is \$329 million involved in the deal.

HELIUM LIQUIFIER

A helium liquifier capable of producing some 26 gallons per hour of liquid helium at a temperature of minus 425 degrees has been put into operation at the Kerr-McGee Pinta Dome Plant. Apparently the first shipment of liquid helium was made late in March.

STATE OF NEW MEXICO'S HANDLING OF POTASH EXPLORATION AND DRILLING

Pursuant to instructions from the Commission, Mr. John Petty and I went to Santa Fe, New Mexico, and visited with the Oil and Gas Commission to seek information concerning their handling of the potash problem. The results as to this study were very disappointing in that the situation in New Mexico is the exact reverse of ours. There the potash lies above all producing oil and gas strata in the area in which it is located and the potash lessees are seeking ways to deter the oil and gas operators from drilling through their formations. However the trip was most beneficial to both Mr. Petty and myself in further establishing friendly relations between the two commissions and in the ideas and suggestions furnished to us by our more experienced sister state.

Items of Interest Since the March 25th Meeting

April 15, 1964
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ORDERS AND EMERGENCY ORDERS

I am attaching a copy of the proposed forms for the issuance of any order or emergency order made by the Commission. I will briefly discuss this matter during our meeting.

COMMISSION REQUIREMENTS

Further, please find enclosed a copy of my study concerning the questions:

1. If a well is drilled for oil, gas or helium, what can the Commission require be filed with it?
2. If an operator runs logs or secures other types of information not specifically required by the Commission, do we have the authority to see that such information is filed with the Commission?
3. If a hole is drilled for other than oil and gas purposes, what requirements and authority does the Commission have?

JB:mkc

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF ARIZONA

1 IN THE MATTER OF THE HEARING CALLED
2 BY THE OIL AND GAS CONSERVATION
3 COMMISSION OF THE STATE OF ARIZONA
4 FOR THE PURPOSE OF CONSIDERING:

CASE NO. _____

ORDER NO. _____

5 THE APPLICATION OF XX COMPANY FOR
6 AN ORDER TO CREATE A UNIT TO BE
7 KNOWN AS THE NAVAJO SPRINGS UNIT
8 IN APACHE COUNTY, ARIZONA.

ORDER OF THE COMMISSION

BY THE COMMISSION

9
10 This cause having come regularly on for hearing at 9:30
11 a.m. on April 22, 1964, at Phoenix, Arizona, before the OIL AND
12 GAS CONSERVATION COMMISSION of the STATE OF ARIZONA, hereinafter
13 referred to as the "COMMISSION".

14 Now, on this _____ day of April, 1964, the COMMISSION, a
15 quorum being present, having considered the testimony presented
16 and the exhibits received at said hearing, and being fully advised
17 in the premises, finds as follows,

FINDINGS:

18
19 (1) THAT due public notice having been given as required
20 by law, the COMMISSION has jurisdiction of the cause and the sub-
21 ject matter thereof.

22 (2)

23 (3)

24 IT IS THEREFORE ORDERED:

25 (a)

26 (b)

27 IT IS FURTHER ORDERED: (Date order to be effective).

28 DONE at Phoenix, Arizona, on the day and year hereinabove
29 designated.

30 OIL AND GAS CONSERVATION COMMISSION
31 STATE OF ARIZONA

32 (S E A L)

By _____
LYNN LOCKHART, CHAIRMAN

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BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF ARIZONA

THE APPLICATION OF XX COMPANY) CASE NO. _____
FOR AN EMERGENCY ORDER TO)
_____) EMERGENCY ORDER NO. _____

ORDER OF THE COMMISSION

BY THE COMMISSION

This cause was considered at 9:30 a.m. on April 22, 1964,
at Phoenix, Arizona, by the OIL AND GAS CONSERVATION COMMISSION of
the STATE OF ARIZONA, hereinafter referred to as the "COMMISSION".

The COMMISSION, a quorum being present or polled, having
considered the facts presented and being fully advised in the
premise, finds as follows,

FINDINGS:

(1) THAT COMMISSION has jurisdiction of the subject
matter thereof.

(2) THAT an emergency does exist and that due to the
nature of the emergency, no public notice is required by law.

(3)

IT IS THEREFORE ORDERED:

(a)

(b)

DONE at Phoenix, Arizona, on the day and year hereinabove
designated.

OIL AND GAS CONSERVATION COMMISSION
STATE OF ARIZONA

By _____
LYNN LOCKHART, CHAIRMAN

(S E A L)

April 22, 1964

TO: The Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Petroleum Geologist

SUBJECT: Continuation of April 15th Report of Geological Field Trips
Taken During the March 25 - April 22, 1964, Period.

FIELD TRIP #2, April 14, 1964

Purpose of trip being to pick up and deliver a load of sample cuttings to Farmington; to visit acquaintances to possibly stimulate more interest in petroleum and potash exploration in Arizona; to visit drilling wells, especially in the northern part of the state both northeastern and northwestern; to visit sites of old wells and drilling wells in Utah pertinent to Arizona.

April 14, 1964

I did not go by the Harless wells area near Sedona because he called me late Monday about some plans he was formulating so I believed I knew the status of those wells had not changed since my last report.

I turned south off Highway 66 and went to the Adamana area, but could see no rigs drilling for potash.

I took a set of Peak Petroleum well cuttings (Navajo County) to the cut for library purposes.

At Pinta Dome I loaded most of the Kerr-McGee Oil Industries Inc. #1 Barfoot State, but had to leave some cores until the Kerr-McGee man marks them properly. Duval furnished their #24, #15 and #14 from surface to total depth, all in Apache County.

Texaco is drilling a test in western San Juan County, New Mexico, just across the state line a few miles at the Tocito Structure. I could see the lights as I went along the Gallup-Shiprock road Tuesday night. They're tite on this well, but it is getting near the Pennsylvanian limes. The Devonian will be their objective.

April 15, 1964

I took the sample cuttings mentioned to the Four Corners Sample Cut Association at Farmington. While there the samples from the Occidental Petroleum #1 Texaco Navajo, Section 6-T40N-R27E, 1000 feet to 6790 feet, Apache County, were picked up for this Commission repository as well as that of the Museum of Northern Arizona. The Arizona Bureau of Mines has theirs sent direct to them from the cut at Farmington.

In a discussion with Texaco's district geologist, he indicated they wanted to explore for potash as well as petroleum on their huge leases in the southern Holbrook Salt Basin. He said others were exploring for potash on state leases in some of their blocks. He seemed to believe our procedure for obtaining information on the potash tests was what he would do if he had that problem. I believe they will begin exploration for potash by late fall of this year.

Continuation of April 1st Report of Geological Field Trips Taken During the March 25- April 22, 1964, Period.

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The Navajo Oil and Gas Supervisor said there were several seismic parties in their Reservations, and in all I think there are eleven working in the state. He and the Navajo Nation are very jubilant about recent and future lease sales. The Navajo Supervisor said several companies were doing surface geology with Brunton Compass for dip and strike determination to be followed up with magnetometer and gravity meter surveys. This is being done now in the Winslow - Holbrook - Keams Canyon area of the Navajo Reservation.

There are several potash rigs operating south of Navajo.

In Farmington Gardner Brothers Drilling Company (at one time had 19 rigs in operation), Aspen Drilling Company, Haynes V.T. Drilling Company are auctioning all their rigs off this week. Reports say they took bankruptcy. This is all a terrible story as it will necessitate many discoveries of new pools to ever stimulate the oil business to stage a comeback in the Southwest.

The Marathon Oil Company #1 Navajo Indian Reservation 1500 f S and 400 f E Lines Section 18 - T40N - R29E, 58 miles northeast of Kayenta in Apache County, 6135 foot Cambrian Test, on Toh-Atin Mesa, was visited and is certainly in a spectacular location near Black Rock Point on the northwest side of the Carrizos on the Toh-Atin structure. They are not tight on this well. This well was at a total depth of 2975 circulating, cleaning and preparing the hole for a drill stem test to test from 2965-75 the upper DeChelly sand formation of Permian age. It is 10 feet low structurally to the Atlantic Refining well drilled just north as a dry hole. The Marathon geologist did not have much hope of producing from the DeChelly but there is a possibility always in this area as there is oil production from the DeChelly or Coconino as we called it 25 miles north and helium production 120 miles south at Pinta Dome. Naturally, a test is certainly worth attempting.

The Socony Mobil Oil Company Inc. #1 Socony Mobil-Navajo Tribe-Tract, 2310 f W and 2310 f N Lines Section 28 - T39N - R25E, Apache County, Wildcat, 60 miles west of Shiprock, Pre-Cambrian Test, was visited just a very short distance northwest of Rock Point. Signs tell you to keep out and the site is fenced. This is a Pre-Cambrian Test to approximately 5650 feet. Indications were that they were about 5100 feet in depth. Mobil is very interested in drilling their leases in the Indian Reservation and I am trying to get them interested in other parts of Arizona.

This wildcat is being drilled on seismic shooting and as I was going back to the Navajo Trail northward, I met the Schlumberger logging truck going to the well. This may mean a test or a show.

The Texaco Inc. #1AG Navajo Tribe SE Section 16 - T41N - R25E, a 1963 Devonian discovery of the Walker Creek Field in Apache County, was pumping oil and their #2AG had some fittings on a head on it. This well will be checked again soon and if they are making a disposal well for salt water in the Chinle out of it, they will be shown the Commission forms and procedure.

The Texaco Inc. #1AK Navajo Tribe, 890 f N and 730 f E Lines, Section 6 - T40N - R25E, 8 miles southwest of Mexican Water, a proposed 6750 Cambrian Test in Apache County, was visited and the sign stating name and location was in order. This well has a sign a short distance away telling unauthorized

Continuation of April 1, 1964 Report of Geological Field Trips Taken During
the March 25 - April 22, 1964 Period.

April 22, 1964
Page Three

persons to stay away. This well is drilling or coring below 6450 feet and is of course a tight hole; so this drilling depth information should not go farther than the Commission. Texaco did not release it to me. This test is being drilled by Pico Drilling Company and has a 125 foot rig on it. I think they were coring because as I ate supper at a trading post with four Texaco men, some rig man came and said their pump pressure was up. Some other things led me to believe they were coring while I was at the drilling site.

The site of the Superior Oil Company #33-12 Navajo V, Section 12 - T39N - R23E, a 6530 foot Pre-Cambrian Test in Apache County, was visited after dark and the rig was laying down and the casing had a steel plate welded over it with some pipes laid over it. The blowout preventer was not there. This condition has existed for a while and no one can be sure if it's a dry hole or a shut in producer, as yet. We have a while longer to allow them to be tight with their completion without an extension. I think it's drilled to below 6000 feet.

The Texaco Inc. #1A1M Navajo Tribe, 660 f N & 1980 f W Lines Section 36 - T39N - R21E, Navajo County, just east of Dinnehotso, a 7500 foot Basement Test, was visited about 10 p.m. and I believe it's drilling at below 6800. This depth should not go beyond the Commission. It did not come from Texaco. This well has a sign on the road saying unauthorized personnel on site will be prosecuted. I stayed here an hour or so as I knew the geologist and needed to visit in a geologic way. This well is the rankest wildcat I visited and Arapahoe Drilling Company has a large rig on it with a 125 foot derrick.

The geologist said the main reason Texaco were being as tight as they were on the two wells in this area and the one at Tocito, just across the New Mexico line was that the other majors nearby were withholding the information from their wells; however this is a regular action in this type of situation.

Pohlman with the Navajos said the companies are withholding the well data from him and that he never did anything about getting it until the Navajos had to have it for evaluation of the adjacent acreage for a sale.

This Texaco well is just east of Kayenta in Navajo County. I believe they are very hopeful for it. Bud Gibson and Associates of Kayenta and Farmington are on the verge of beginning a \$600,000.00 motel-restaurant on the east side of the Navajo Trail at the junction of its eastern route to Farmington and northern route to Mexican Hat in Utah. This is just across the pavement and east of Kayenta.

A paved route has been built from the Navajo Trail highway between Mexican Water and Red Mesa which goes southward to intersect the Window Rock - Tuba City highway. I went on this to Rock Point and could have gone on south, and by making one right and one left turn on highways, gone to Holbrook without getting off pavement. This is the first paved route running north-south on the east side of Navajoland.

April 16, 1964, Thursday

The Rip Underwood #1-32 Jacob Lake Unit Federal located in NE Section 32 - T29N - R2E, a Tapeats Test of 5000 feet and 1½ miles northeast of Jacob Lake,

Continuation of April 15th Report of Geological Field Trips Taken During
the March 25 - April 22, 1964, Period.

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and that far off the paved highway in Coconino County, was visited. A small rig used to drill a 10 inch hole in a clearing large enough for a rotary and pits and motors, etc. to be located in. A cat was on site and nothing more.

The ground condition, while wet with melting snow and runoff, was nothing to impede any rig movement. The $1\frac{1}{2}$ miles of dirt road were wet but not impassable. A forest Service individual later told me it was 38 feet deep and the little rig they had could drill no deeper. They called this a water well to the forest people.

I told the Forest Service personnel the Commission's purpose and they seemed glad we would be there for some regulation. They seem anxious to cooperate with operators as well as we of the Commission, and all of them are hopeful the project will become an oil well. They do not always have this attitude in all the Forest Districts in this state, and in two other states I know of. Thus the conservationists, both forest and petroleum, are looking at this Jacob Lake project very hopefully.

I visited the site of the Roger Fields #1-X Federal, 330 f S and 320 f W Lines Section 17 - T38N - R7W, a wildcat drilled in 1958 to approximately 1800 feet (reported 1159 feet in Commission files) and was abandoned as a dry hole in Mohave County. It was dark when I arrived on the site but the marker was still up. I heard via the grapevine two or three months ago it was down. This well was plugged with U.S.G.S. supervision last year as Roger Fields was deceased with no organization left behind.

April 17, 1964, Friday

The Tenneco Oil #2 Upper Valley 730 f N and 760 f W Lines, NW NW Section 13 - T36S - R1E, Garfield County, Utah, around 50 miles north of the Arizona-Utah state line and only a few degrees west of due north from Page, Arizona, where the Glen Canyon Dam is situated. This well has an initial potential of 300 barrels of 27 degree gravity oil per day with only 4% water and 2% basic sediment. They plan to produce 250 barrels of oil per day. This well was spudded 8/30/63 with a Loffland Brothers rig. Production is from perforations in the Kaibab lime at 6630-6733. They reported a good show of oil in the Toroweap but came up hole in the Kaibab for completion. The mud expense was terrific on this project as many lost circulation zones were encountered. Formation tops are Straight Cliffs Sandstone of Upper Cretaceous Age on surface (per geologic map as Tenneco doesn't call it), Navajo 3140, Chinle 5220, Timpoweap 6555, Kaibab 6670, Toroweap 6954, Coconino 7315, Organ Rock 7345, Queantoweap 7600, Callville 8550, Molas 9205, Mississippian 9278. T.D. 9424; P.B. 6775; Casing 20" @ 54' w/75 sx, 9-5/8" @ 6565 w/200 sx, 7" @ 7503 w/85 sx. Elevation 7716 g.l.

This Tenneco area of exploration is located around 17 miles west of Escalante and $12\frac{1}{2}$ miles south of Highway 57. Most of the latter is Tenneco made road, but it is a good one.

The Tenneco Oil #3 Upper Valley, 732 f S and 2124 f W Lines (SE SW) Section 13 - T36S - R1E, elevation 7656 G.L., was visited and Loffland Brothers Drilling Company is rigging up their rotary which has a 125 foot derrick to drill Tenneco a 9450 Mississippian test. They are going to aerate their drilling mud with air and are building their plumbing accordingly making fittings to

Continuation of April 1st Report of Geological Field Trips Taken during
the March 25 - April 22, 1964, Period.

April 22, 1964
Page Five

use. They are studying the situation to overcome the expensive lost circulation problems encountered in their #2, the field opener. Aerating the drilling mud will produce a foamier mud when they need it to build a wall against lost circulation zones.

These people were very cordial and said they hoped to begin drilling this #3 well very soon. This well is just south of the Tenneco #2 in same section. The structure has a more or less north-south axis.

This Tenneco area is in the Kaparowits Basin which has been popular for oil and gas leasing for over ten years. Many companies have leases in the area and Tenneco's discovery will cause wells to be drilled for perhaps 50 miles south of the Arizona line.

The Kaibab lime, producing formation for the Tenneco Kaparowits Basin discovery is 6600 feet deep there and is found on the surface at the Arizona line and all through the Kaibab Forest to Flagstaff area. We hope it will produce near the surface in Arizona. Also that some of its oil will be entrapped in other formations.

Washington County, Utah

The McCulloch Oil #1 Gov't. Wolf, 90 f N & 3515 f W Lines (NW NE) Section 23 - T40S - R13W, a 5000 foot Cambrian Test which drilled to 7315, was spudded in 12/30/63 and completed as D & A February 29th of this year. Pease was the drilling contractor and this project was just east of Highway 15, a half mile north of Anderson Junction about 21 miles northeast of St. George near Toquerville.

This well location is 30 miles north of the Arizona line at Antelope Spring in the northwestern Arizona Strip Country. I will obtain more information on further McCulloch activity which will take place closer to the Arizona line.

This well was tight and the following information was not obtained from the operator: 10-3/4" casing set @ 373 w/165 sx, 9-5/8" @ 2996 w/75 sx. Elevation 3810 D.F. Formation tops: Mauv 3308, Bright Angel 4200, Tapeats 4400. There were three cores cut: Core #1, 3082-90 recovered 8 feet dolomite. Core #2, 7058-89 recovered 31 feet: 8 ft. shale, 23 ft. lime and dolomite-crinoidal lime, no porosity or oil stain, bottom 3 feet quartz sand. Core #3, 7256-7316, recovered 60 ft: 41 1/2 ft. limestone, micro crystalline, stylonitic, dark gray with brownish cast. Strong H2S odor on break throughout.

The following water flows were noted. At 410 feet the flow was 70 to 80 GPH with some dead oil stain, 1442 ft - 100 BWPH, 1671 ft - 300 BWPH, 1551 ft - 400 to 500 BWPH, 2222 ft - 400-450 BWPH, and at 2360 feet there were 400-450 barrels of water per hour flowing.

This area of Utah will be watched for significant developments as there are many possibilities existing there which will be of interest to Arizona.

JKP:mkc

32 x 1

April 22, 1964

TO: The Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Petroleum Geologist

SUBJECT: Well Reports and Additional Information Since March Meeting

APACHE COUNTY - Four Corners Area

1. Marathon Oil Co. #1 Marathon Oil Company Navajo Indian Reservation, Section 18 - T40N - R29E, drilling at below 3400 feet.
2. Socony-Mobil Oil Co., Inc. #1 Socony Mobil-Navajo, Section 28 - T39N - R25E, drilling at below 5300 feet. Tribe Tract #133
3. Texaco Inc. #2AG Navajo Tribe, Section 21 - T41N - R25E, completed as salt water disposal for #1AG, the Walker Creek Field opener.
4. Texaco Inc. #1AK Navajo Tribe, Section 6 - T40N - R25E, drilling and coring below 6550.
5. Superior Oil Co. #33-12 Navajo "V", Section 12 - T39N - R23E, shut in at around 6000 feet.

NAVAJO COUNTY - Four Corners Area

6. Texaco Inc. #1AM Navajo Tribe, Section 36 - T39N - R21E, drilling and coring below 6900.

APACHE COUNTY - Central Part

Potash exploration around Adamana area (west central part just south of Highway 66). Duval Corporation coring. Duval exploration southeast of Pinta Dome.

7. Eastern Petroleum #28 Santa Fe Fee, NW Section 3 - T20N - R27E, Pinta Dome drilling 1100 feet. Helium test drilling below 500 feet.

COCONINO COUNTY

8. Rip C. Underwood #1-32 Rip C. Underwood-Jacob Lake Unit, NE NE Section 32 - T39N - R2E, surface hole drilled to 38 feet. Waiting on rotary.

YAVAPAI COUNTY

9. Harless #27 Harless Federal, 600 f N and 900 f W Lines, Section 4 - T17N - R4E, fishing at 1320.

GRAHAM COUNTY

10. Ram Oil Company #1 Ram-Sierra Bonita Fee C SE SE Section 16 - T41N - R24E, drilling at 1796 feet.

MARICOPA COUNTY

11. Montezuma Oil and Gas Co. #1-A Federal, Section 30 - T2S - R9W, shut in at 452 feet.

Well Reports and Additional Information Since March Meeting

April 22, 1964
Page Two

April 8, 9, and 10 were spent in visiting the New Mexico Oil Conservation Commission to learn more about their manner of handling the potash and mineral exploration.

In southeastern New Mexico where their potash drilling and coring is taking place, the potash zone is above the oil and gas bearing horizons and the potash people are perturbed about the petroleum drilling on their leases and contaminating their potash zone. Just the reverse of the Arizona - Holbrook - Salt Basin situation.

I copied the well records of several wells drilled through the salt zone and found that they cased usually 1400-1450 feet of salt above the Yates oil pay.

Since I do know that many wells have been cored to below 1500 feet in the Grants uranium area of west central New Mexico and their well records have not been reported to state and federal agencies, I believe that this Commission by present methods will be more successful in ultimately obtaining needed information. I have additional assurance now from a mineral owner to obtain log copies of many of the tests.

In conclusion, I am glad to say that there is no indication that Duval, Kern County Land, Arkansas Louisiana, etc. will not deliver all the information on the potash tests.

I obtained $\frac{1}{2}$ " equals a mile scale sectionized maps of an area several miles into New Mexico contiguous to Arizona's eastern boundary from the New Mexico Highway Department. They make quadrangle maps in lieu of county maps. These maps fit together better than county maps.

April 15, 1964

TO: The Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Petroleum Geologist

SUBJECT: Geological Field Trips Taken During the March 25-April 22, 1964,
Period.

FIELD TRIP #1, April 2, 1964

Purpose of trip was to visit the Pinta Dome Helium area to verify that a pipeline had been laid, and to visit some well sites, and to partially prepare a load of well cuttings to be taken to the Four Corners Sample Cut later.

The Kerr-McGee Oil Industries' pipeline connecting their #1 Barfoot, a gas well in Section 32-T20N-R27E, has been installed and the valve on the Barfoot head is chained with a lock on it. The pipeline takes off as a four inch one in size and was run to a point 10 feet south of the northwest corner of the section (32). At this point the line graduates into a six inch line and continues due west 10 feet south of the north line of Section 31-T20N-R27E. Then at the point of junction with Section 36-T20N-R26E, this 6 inch line turns northwest for 6837.52 feet extending diagonally across Section 25 and into the northeast quarter of Section 26-T20N-R26E where it joins the Pinta Dome Helium pipeline to the plant which is a mile and a quarter north.

Thus, 16,040.54 feet of pipeline was run being just less than 3 miles. This line is ready to take helium from the Kerr-McGee Oil Industries #1 Barfoot State to the company's Navajo Plant for processing.

April 3, 1964

A potash test is being drilled by Duval Corporation in NE NE of Section 9-T19N-R27E. Duval's representatives were contacted and negotiations with them in regard to samples, logs, plugging and completion forms were furthered in regard to their drilling operations for potash. They seem as cooperative as before and soon I will collect the samples on more of their tests.

On many potash tests it seems they are just running logs (Gamma Ray-Neutron) on the salt section. This feature has prompted many to mention to this Commission about obtaining legislation to require anyone drilling through oil, gas and helium producing zones to run logs from surface to total depth. It is hoped the operators will do this.

Presently, I believe if we can obtain the samples as planned, it will be a step forward because interested companies and operators can employ geologists to describe the samples, interpret the formation tops, and indicate whether the sands are possibly water or gas producing on sample descriptions.

I visited the Navajo Helium Plant and have arranged for a load of well cuttings to be taken to the Four Corners Sample Cut at Farmington when I can.

Geological Field Trips Taken During the March 25-April 22, 1964 Period

April 15, 1964
Page Two

I tried to visit most of the Kerr-McGee personnel in the area and Mr. Bert Fielder, Superintendent for Kerr-McGee, is most accommodating and cordial about everything I ask about and all of them are very friendly at all times.

No Eastern people were in the area at the time of my visit. They also are very friendly and accommodating to me at all times.

JKP:mkc

TO: The Commissioners

April 15, 1964

FROM: John Bannister, Executive Secretary

RE: Pursuant to Instructions to me at the Regular Meeting on
March 25, 1964.

Gentlemen:

I was instructed at our last meeting to prepare a report on what action I felt that the Commission could take concerning the securing of information from the potash drilling. I have broken this report down into three sections as follows:

What can the Commission require for wells specifically drilled for oil, gas or helium.

Pursuant to Section 27-515, the Commission has been given authority over all persons and property necessary to enforce the rules and regulations contained in the statutes. Section 27-516.A. charges the Commission to make the necessary rules and regulations on such specific items as drilling, casing and plugging wells, preventing the escape of hydrocarbon from one formation to another, preventing the intrusion of water into the hydrocarbon formation, preventing the pollution of water, preventing the waste. Pursuant to these broad instructions, the Commission has established forms which show compliance with its rules and regulations. Accordingly for an announced oil, gas or helium well, we may and do require the following:

- (a) Organization Report (No form number).
- (b) Bond (No form number).
- (c) Application to Drill, Deepen or Plug Back (Form P-1).
- (d) Plat of well location (No fixed form).

Upon completion, the Commission requires:

(a) Well Completion Report (Form P-7) Note: This form calls for the reporting of all formation tops, and is our only specific required geological information. *30 days after completion*

(b) Copies of all logs run. Note: Operator is not required to run any logs; but if he does, a copy must be filed with the Commission. *6 mo. after completion*

If the well is a dry hole, we require: *Must plug is ~~case~~ operations for 60 days unless have written permission to TH*

(a) Application to Plug and Abandon (Form 15-A).

(b) Plugging Record (Form P15). *30 days after plugging*

If the well is a producer, the following forms are required:

(a) Request for Allowable. (For oil, Form P-6). (For gas, Form G-3).

To The Commissioners

April 15, 1964
Page Two

- P-9
1. GOR test
5 days after completion
and then return 30-60 days*
- (b) If a gas well, our Flow Test form (Form G-1).
 - (c) Production Report (Forms G-7, G-8).
 - (d) Certificate of Compliance (Form P-17).

Requirements in the event that an operator runs logs or secures other geological information which has not been specifically required by the Commission.

This information must be filed with the Commission. For authority I call your attention to A.R.S. Sec. 27-516.A.2. which requires reports showing the location of oil and gas wells and requires the filing of all logs and records within ninety days of completion of wells drilled for gas, helium and oil; Rule 119.A., Completion Report; and Rule 119.C. requiring copies of all electrical surveys, or logs, or radioactive surveys or logs except those obtained on purely stratigraphic tests to be filed with the Commission within thirty days. If requested by the person so filing the logs, Commission will keep the information confidential not to exceed six months from the date of filing. Should an electric or radioactive log not be run, then a driller's log must be run.

What may the Commission require if the well or hole is drilled for other than oil or gas purposes (POTASH).

Pursuant to A.R.S. Sec. 27-515. and A.R.S. Sec. 27-516., the Commission has been given full power and authority to enforce the direct charges made upon it and to make such necessary rules and regulations to insure this enforcement.

Pursuant to A.R.S. Sec. 27-516., the Commission is specifically charged to make rules to prevent (Sec.516.1.b.) intrusion of water into oil and gas formations; (Sec.516.1.c.) pollution of oil and gas by salt water; (Sec.516.4.) prevent water drowning a formation; (Sec.516.6.) prevent blow outs, cave in and seepage; (Sec.516.7.) prevent creation of fire hazards.

A.R.S. 27-501.20. defines a well as any hole drilled or spudded for the purpose and with the intention of penetrating an oil and gas bearing strata and producing oil and gas therefrom whether or not oil and gas is actually found.

A.R.S. 27.503.B. grants to the Commission under the direction to prevent waste the authority to make such inquiries as it deems necessary to see if waste does exist or is imminent including the power to collect data, make investigations, examine property, leases, books, records and logs, etc.

A.R.S. Sec. 27-515.A. specifically grants the Commission the jurisdiction and authority over all persons and property deemed necessary to enforce the provisions of these laws.

A.R.S. Sec. 27-516. has been above quoted.

To The Commissioners

April 15, 1964
Page Three

Pursuant to the statutes, the Commission has also passed as its own rule and regulation, Rule No. 203.A. which provides that any hole drilled for seismic core or other exploratory purposes that penetrates below a fresh water formation shall not be abandoned until the well is plugged in such a manner as to seal off all water bearing formations.

It is my thought that the only feasible way in which the Commission could approach the filing of information from the potash exploration holes would be under a loose definition of "well" as contained in A.R.S. Sec. 27-501.2. in that besides penetrating a formation to completely comply with the meaning of the word "well" there must be an intent to produce oil and gas. However I feel that argument could be presented that the mere penetration of an oil and gas strata would qualify under the meaning. If this is so, then each of the holes drilled for potash exploration would qualify as a well and would have to secure a permit and be fully subject to our rules and regulations. This is based upon the fact that the potash exploration wells do penetrate through the Coconino Sands formation which is a known oil and gas producing formation.

Our strongest approach to the problem would be under the charge of the Commission as to the protection of water encroaching into a water and gas formation (Coconino Sands) and the prevention of pollution to fresh water sources. The Commission has been given broad general powers and authority to enforce the matters with which it is charged and in order to properly insure protection of fresh water, it is my belief that we could require logs to be filed so that we may know where the fresh water is so that we may insure that fresh water and/or the Coconino Sands is properly protected.

March 25, 1964

TO: Commissioners of Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Petroleum Geologist

SUBJECT: Additional Field Trips

Field Trip #4

March 18, 1964

Purpose of trip was to visit well projects, and check on reported drilling south of Yuma near the Mexican-California border. Mr. John Bannister, Executive Secretary of the Commission, accompanied me on this trip which I found to be most pleasurable.

The Montezuma Oil and Gas Company #1-A Federal, Section 30-T2S-R9W, elevation 1223 feet, located 33 miles north of Sentinel and in the western part of Maricopa County, was visited and is shut in presently. This well was spudded in 7/28/63 and was drilled to 452 feet, which is present total depth. Operator reported someone dynamited his casing a month or so previously and damaged his operation considerably. Operator says he'll start drilling soon.

The Desert Drilling Company #1 State, Section 16-T7S-R13W, just northwest of Dateland, located in eastern Yuma County, was visited. Per previous report, the rig was moved away from project. The total depth is 6767 feet and all of the available samples have been turned into the Sample Cut and distributed. D. H. Roe and Keoghan let Pan American Petroleum have the samples to below 5000 feet before I was employed by the Commission. Upon request I received a sample log of the well to that depth described by Pan-Am geologists and they delivered the samples to the Four Corners Sample Cut at Farmington. These samples have many skips in them but I don't think anything really worthwhile has been lost as the alluvium is all sand and shale.

The lower samples were preserved fairly well and I turned them over to the Sample Cut.

In regard to future activity of this well, Mr. Weaver of Nashville, Tennessee, will very likely have a metal plate welded over the casing to prevent outside objects from entering the hole until later when I believe some of the owners will perhaps renew the operation and drill deeper. Several have indicated they'd like to. I think some time should be allowed on this project because of the extraordinary circumstances surrounding the cessation of operations.

March 19, 1964

The area south of Yuma to the Mexican border of San Luis was driven over and the exploration well originally drilled by Ross Drilling Company to 3000 feet in SE NW NW Section 35-T10S-R25W, Yuma County, was visited. This well was reported a few weeks ago to have had some oil shows between 2000 and 3000 feet. It was reported that Petroleum Company representatives visited the site. I asked a few companies and they were not aware that such a project existed.

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Additional Field Trips
Page Two

When the well site was visited, Mr. Omar Loeltz, a civil engineer for U.S.G.S. at Yuma said they were cleaning it out and would test for water and that this project's name was Lower Colorado River Project #17. He had seen no shows of oil. He said they'd drilled several water well projects in the area and would drill more. Number 17 had abundant good fresh water at 2000 and it continued fresh until almost 3000 feet where it became not so fresh. Number 17 is located 3 miles north of San Luis and nearly a mile west.

Lower Colorado River Project #10, a water well a few miles east of San Luis at 1200 feet pumped 2500 gallons of water for 24 hours and had a 17 foot draw down in that time.

We were told where to obtain information on the projects drilled in the area and it will be obtained. Some of it will be very useful.

The #17 was the only drilling operation noticed in the vicinity.

JKP:mkc

March 25, 1964

TO: Commissioners of Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Petroleum Geologist

SUBJECT: Late well reports and developments

P O T A S H

The potash exploration is increasing in that several new companies and individuals are inquiring for data in the Holbrook Salt Basin area. Since Duval Corporation, Kern County Land, and U. S. Borax have drilled several exploration projects, other mining companies and petroleum companies are becoming interested because they think potash deposits have been discovered by the active people. There are six rigs drilling potash exploration tests presently in the Navajo-Holbrook-St. Johns area.

Ben Messer, Manager for Duval, said last Friday that he'd^{not} heard of sulfur being discovered. A rumor that Duval had drilled into a sulfur deposit had drifted into this office, which could not be verified.

Several companies are very optimistic about the success of the potash exploration and others are skeptical. Some companies are studying other areas for potash in the state.

H E L I U M

In the Navajo Springs area Eastern Petroleum has reported that they'd like to hold information on their drilling for a short while longer and that they have increased the producers from six to possibly ten wells. Since they are still drilling, more can be hoped for.

A worthy new development in the Kerr-McGee Navajo Helium Plant operation is the processing of liquified helium. Kerr-McGee Oil Industries has added this feature to their plant and while they have not sold any to date, they hope to soon.

An approximately 500 liter vat (approximately 125 gallons) has been installed, and 100 liters of liquified helium can be produced per hour.

A few comments on liquid helium are:

1. The liquid helium weighs one pound per gallon.
2. The Pinta Dome gas will produce 40 liters of liquid helium per 1000 cubic feet of helium gas.
3. Usually the liquid helium shipping drums have a 100 liter capacity. One liter equals 1.0567 liquid quarts.

No liquified helium has been shipped or sold to date by Kerr-McGee as they say they have no market. All the above helium information is confidential to this Commission. They are still working on methods of processing, etc., and are experimenting on the whole project. This project is operating in the west end of the existing Navajo Helium Plant.

The liquid helium will be transformed into air on exposure faster than the eye can see.

March 25, 1964
Late well reports and developments
Page Two

P E T R O L E U M

New interest is evidenced in the Sonoita area in Pima County as several are studying the Mountain States acreage and adjacent areas for a drilling deal.

Ram Oil Company reports a show of oil in a sand at 1560 feet. This was not verified.

Much interest is displayed in the Kaibab area in northern Coconino County. Operators are calling in about areas in this part of the state and others including Pima and Cochise Counties as well. One Midland operator says he is moving out here to drill in the Kaibab area and other localities throughout the state. Many inquiries from outstanding interests have been received, one being the Chief Geologist of Ambassador Oil Company.

Yavapai County is the center of much interest in the area of the Harless wells just north of the highway between Cottonwood and Sedona. Talk of additional drilling several blocks there is noticed, but no actual trades to drill have been heard of.

In the Four Corners the Superior Oil Company #33-12 Navajo, Section 12-T39N-R23E, Apache County, is drilling and coring below 5000 feet on a projected 6530 foot Devonian test. This is a tight hole.

The Texaco Inc. #1 "AK" Navajo, Section 6-T40N-R25E, Apache County, is drilling below 3150 feet on a projected 6750 foot Devonian pay test.

The Texaco Inc. #2 "AG" Navajo Tribe, Section 21-T41N-R25E, Apache County, is at a T.D. of 6781 feet and is 1/2 mile south of the #1 "AG" which opened the Devonian producing Walker Creek Field last year. They perforated this at 6464-74, acidized, swabbed, recovering no petroleum. This interval was shut in for injectivity and later plugged back to 6432. Well was perforated at 6403-17 and acidized with 250 gallons of mud acid. Another injectivity test was run with no satisfactory results. Presently the well is shut in and will be used as a salt water disposal well disposing of salt water into the 6403-17 foot interval of perforations.

The Texaco Inc. #1 Navajo "AM", Section 36-T39N-R21E, Navajo County, is drilling below 3154 on a prospective 7300 Devonian test.

The Socony Mobil Oil Company Inc is reported to have spudded in on their "Tight" Devonian test, the #1 Socony Mobil-Navajo Tribe Tract #155, Section 28-T39N-R25E, Apache County. This project is 3 miles northwest of Rock Point Trading Post and 12 miles south of Texaco's Walker Creek Devonian Field.

The Marathon Oil Company #1 Marathon Oil Company - Navajo Indian Reservation, Section 18-T40N-R29E, Apache County, is a mile south of Mississippian production in the Toh-Atin or Dry Mesa Field. This well will be a Devonian Test and they are reported to have spudded in and are drilling ahead.

The Oil and Gas Journal came through with their promise of a few months ago to publish an Arizona geological petroleum article which would help the industry in this state. A copy of this article is attached.

jkp;mc

Explorers look to Black Mesa

ARIZONA'S Black Mesa basin appears on the verge of its long-predicted exploration explosion.

Oil and gas discoveries to the northeast in the adjacent Blanding basin and the dividing Tyende saddle area have honed an already-sharp operator interest in probing the deeper Black Mesa beds.

And now it appears that midbasin acreage denied to the industry for more than 35 years due to Indian ownership disputes is finally going to be thrown open for leasing this fall.

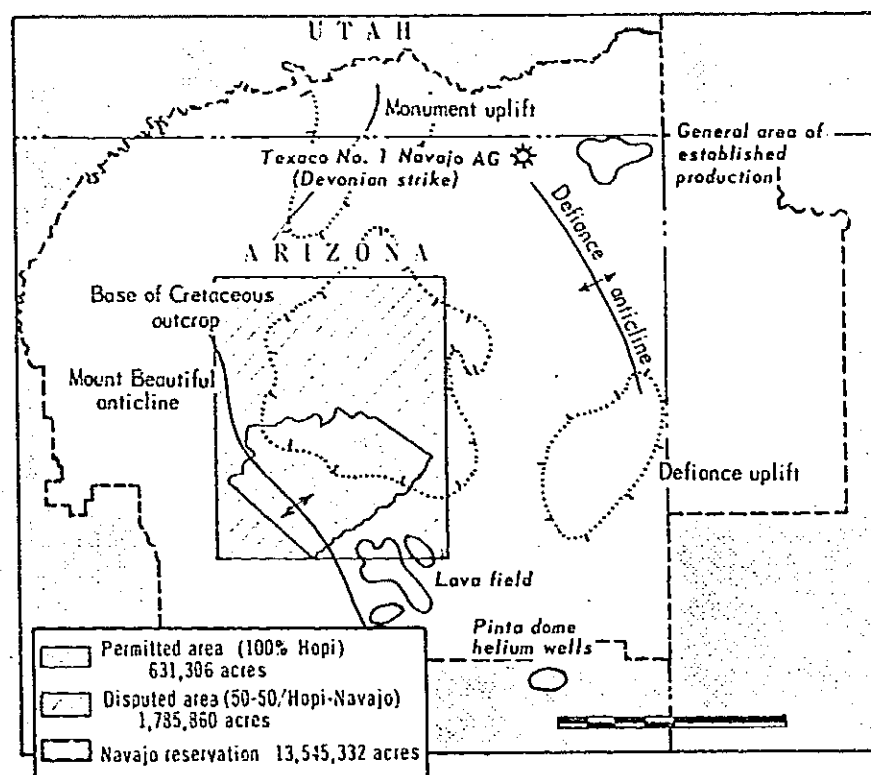
Lease bonuses for choice acreage around the rim of the basin have zoomed during the past few months. And the prices have become definitely dearer as the offered acreage edges nearer the basin proper.

Evidence of this pricing trend shows up very clearly in an analysis of the results of the latest auction of Navajo tribal lands. This was a three-part sale, with separate offerings in November 1963 and in January and February this year.

The November and January sales involved mostly acreage lying to the north and east of Township 39N-21E. Much of this land is in the same general area as Texaco Inc.'s important Devonian-McCracken oil strike at Walker Creek in May 1963. This well, the 1 Navajo-AG in 16-41N-25E, Apache County, completed for 182 bo/d from perforations at 6,370-84 ft. It triggered a flurry of other projects in the saddle area—none of which has scored as yet.

The November offering by the Navajos brought in bids on 35,115 acres of the 145,896-acre package and total bonuses of \$1,029,181. The highest per-acre bid was \$287 and the average figured out to \$29.31. Nothing very spectacular here.

The blocks offered in January proved more interesting, with operators snapping up 71,405 acres of the total 186,095. The average per-acre bonus climbed to \$46.39, thanks in part to a big \$960,179 bid for one 2,560-acre tract. Biggest per-acre bid was \$375.07. And the Navajos raked in a bonus total of more than \$3,300,000.



MIDBASIN ACREAGE denied to the industry for more than 35 years in Black Mesa basin will be thrown open for leasing this fall. Fig. 1.

BY ROBERT J. ENRIGHT
Southwest Editor

Most of these tracts were in the southern portion of the general area mentioned earlier—the bulk of them in an east-west stretch from 39N-27E through 21E.

Though operator interest was higher, prices paid at this sale—with one or two exceptions—weren't considered unreasonably steep.

Big money tabled. In February, the Navajos offered acreage still farther to the south and nearer yet to the deep portion of the basin—most of it lying in an east-west belt from 38N-27E through 20E.

And this time the lid really flew off.

Operators submitted high bonus bids totaling \$12,623,873.74 for 117,617 of the total 206,983 acres offered for lease. The average per-acre bid soared to \$107.33. And the highest single bonus was \$935/acre. Superior Oil Co. chalked this one with its \$2,384,250 bid for a

2,550-acre tract comprising sections 29, 30, 31, and 32 in 38N-21E.

Many of the majors were in this one competing for tracts. The list of high bidders includes: Pan American, Texaco, Cities Service, Sinclair, Kern County Land, Socony Mobil, California Co., Tenneco, Richfield, Pure, Tidewater, and Sun. It did not include such names as Humble, Gulf, and Shell.

Superior, however, dominated the February offering with an astonishing display of bidding pyrotechnics. Of the more than \$12,600,000 in total high bids, Superior accounted for more than \$9,000,000 in winning leases on 10 tracts comprising roughly 25,600 acres.

The company was high bidder on five of seven tracts going for more than \$500,000. Along with its gold-plated \$2,384,250 block, Superior paid:

- \$1,938,000 (\$710/acre) for sections 29, 30, 31, and 32 in 38N-27E.
- \$1,817,600 (\$710/acre) for sections 25, 26, 35, and 36 in 38N-20E.

a with great expectations

- \$1,574,400 (\$615/acre) for sections 27, 28, 33, and 34 in 38n-21e.

- \$572,400 (\$225/acre) for sections 5, 6, 7, and 8 in 38n-22e.

Mobil plunked down \$640,307.20 (\$350.12/acre) for sections 13, 14, 23, and 24 in 38n-23e. And Pan American and Sinclair won sections 17, 18, 19, and 20 in 38n-27e with a joint bid of \$522,135 (\$205/acre).

These sky's-the-limit bonuses present something of a misleading picture in that—by inflating averages—they make it appear all Black Mesa area leases are going for premium prices. And this isn't so.

Some tracts, even in the February portion of the sale, were bought for as little as \$1.25 an acre. Kern County Land picked up more than 5,000 acres at this price in winning tracts 197 and 198 in 38n-27e. And Richfield snapped up a 2,560-acre block immediately adjoining on the east the \$2,384,250 Superior tract for a mere \$8,012 (\$3.13/acre).

Furthermore, even on the big-money tracts, a lot of cash was left on the table in many cases.

Interest indicator? Despite these factors, the increasing attraction of deep-basin acreage seems clear enough.

And, if there's any sort of conclusion to be drawn from this, it is that there will be a fine scramble for leases located well out into the basin when they finally become available.

Operators' failure to drill in mid-basin is in no way a reflection of any reluctance.

Essentially, the entire basin has been denied to them because of a long drawn-out quarrel between the Navajo and Hopi Indian tribes over ownership of both surface and minerals.

This fuss was resolved in part by a district court decision in Prescott, Ariz., in Oct. 1960.

The court decision, later upheld by the U.S. Supreme Court, gave the Hopis clear title to surface and minerals over a 631,000-acre area in almost the exact middle of the basin in the Keams Canyon-Polacca-

Oraibi locale (See Fig. 1). The judgement was filed in Sept. 1962 and now is final.

It gave joint title to the two tribes to surface and minerals on a rectangular block of land surrounding the Hopi reservation and comprising 1,785,900 acres.

A tremendous 13,545,300-acre spread surrounding the so-called disputed area and bulging over into New Mexico and Utah belongs solely to the Navajos. And it is on these Navajo holdings to the northeast of the disputed territory where present leasing and drilling activity is concentrated.

The status now. It is the Hopi and jointly owned lands totaling nearly 2,500,000 acres, however, which cover the heart of the basin where the marine sediments are the thickest.

And now the industry is finally going to get a crack at exploring there.

The Hopis, at least, are getting ready to lease. The tribe recently issued its first exploration permit—

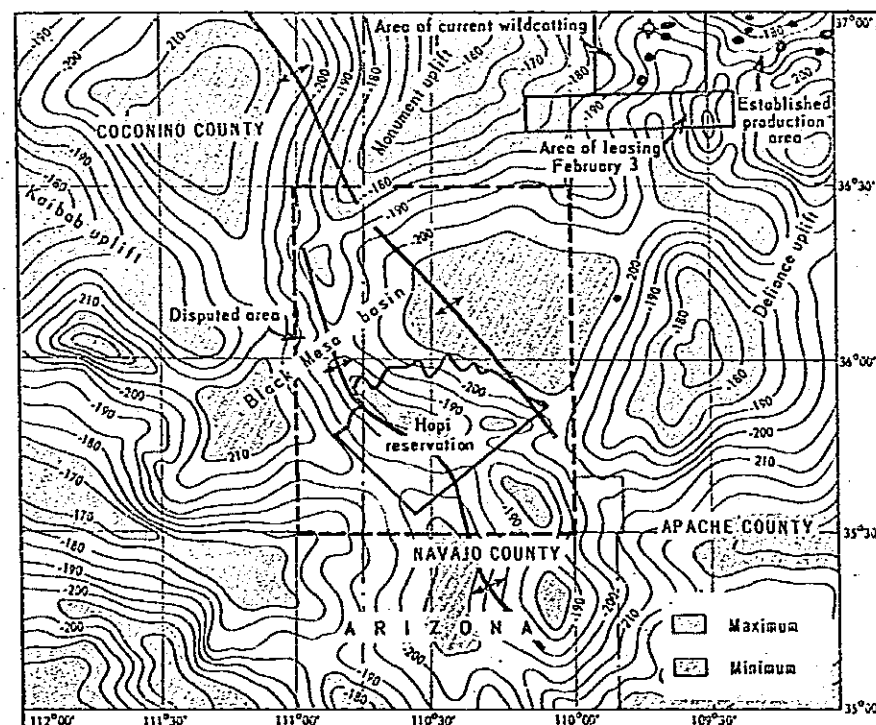
a non-exclusive license covering the entire reservation—to Exploration Surveys, Inc., Dallas. Exploration Surveys will do no leasing but will offer the detailed gravimetric survey data it gathers on a fee basis to operators.

The Hopi tribe will conduct its first lease sale in September. The leases will be offered on a cash-bonus basis and with a fixed 16 $\frac{2}{3}$ % royalty. Some will carry drilling clauses. And standard rental will be \$1.25/acre annually. Operators must nominate tracts on which they wish to bid by July 1. The Hopi Agency at Keams Canyon is issuing exploration permits and will conduct the sale.

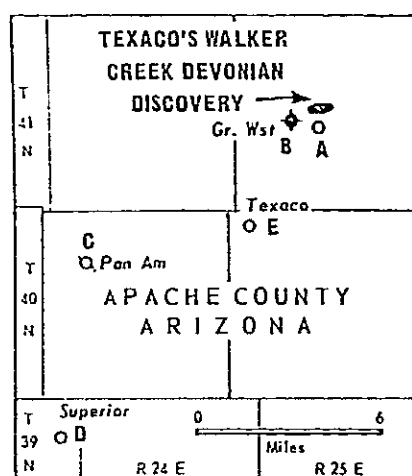
Disputed area still tight. There's no indication that the so-called disputed territory, however, will be opened to leasing in the near future.

Although the Hopis and Navajos have agreed to share mineral interests throughout this big expanse on a 50-50 basis, they are still embroiled in a bitter dispute over how to divide the surface.

Negotiations on this matter ap-



THERE COULD BE as much as 30,000 ft of marine sediments in the middle of Black Mesa basin. This gravity survey map by Exploration Surveys, Inc., reveals major structural features of northeastern Arizona. Fig. 2.



TEXACO INC. announced two new Arizona wildcats, one in Apache County, and the other in Navajo County. Other current tests are shown here. Fig. 4.

south and southwest on the basin rim.

Texaco was drilling below 6,200 ft early this month at its 2 Navajo A-G in 21-41n-25e in an attempt at confirming its Walker Creek Devonian discovery (A in Fig. 4.) Location is .5 mile south of the discovery well and roughly the same distance east of a Devonian duster (at B) plugged and abandoned at 7,099 ft last October in 20-41n-25e. The dry hole was a Great Western-Moncrief venture. It re-

ported these formation sample tops: Ismay 4,710 ft, Desert Creek 4,180 ft, Akah 4,925 ft, Barker Creek 5,050 ft, Molas 5,475 ft, Mississippian 5,640 ft, Ouray 6,010 ft, and Elbert 6,090 ft.

Roughly 8 miles southwest of Walker Creek in 8-40n-24e, (C in Fig. 4), Pan American was reported still at 6,417 ft in its 1 Navajo Q, a tight hole projected to 6,800 ft to the Precambrian. No information is being released.

And 7 miles farther to the south, Superior was reported drilling ahead in another tight hole at its 33-12 Navajo V in 12-39n-23e (D in Fig. 4). This test, a projected 6,530 ft Devonian probe, is closer to the basin proper than any previous hole in the saddle area. Superior, so far, isn't reporting even a current drilling depth.

At press time, Texaco announced two new Arizona wildcats, one in Apache County, and one remote driller in Navajo County. The 1 Navajo-AK will go down in 6-40n-25e, about 4½ miles southeast of Walker Creek (E in Fig. 4). In Navajo County, the 1 Navajo-AM will seek production 26 miles southwest of the field in 36-29n-21e.

What would happen if the Pan Am or Superior tests hit something good? Lease-acquisition folk may already may be shuddering at the thought.

East Texas' Nacogdoches gets three new tests

THREE shallow tests will be drilled in an old East Texas field. Transamerica Oil Co. of Houston will drill the wells to 1,000 ft and Queen City at Nacogdoches field, southeastern Nacogdoches County.

The 2 Angelina County Lumber Co. will be drilled 3½ miles southeast of Woden. The 3 well will be drilled 3 miles west-southwest of Chireno and northeast of "ancient" production. The 4 well will be drilled in Jesus Gomes Survey, A-227, 2 miles north-northwest of Etoile and 3 miles southeast of the old field's border.

Travis Peak gas. Elsewhere in East Texas, Socony Mobil Oil Co. Inc. completed 1 J. A. Neal in the

R. M. Marler Survey, A-272, 3½ miles northwest of Lassater in Lassater field, northwestern Marion County.

The well flowed 2,500 Mcfd plus 40 bbl condensate per million from perforations in Travis Peak at 7,825 to 7,916 ft.

Chappel lime pool opens in Wilbarger County, Tex.

Flowing Chappel Mississippian lime production was established at a new strike 1 mile southeast of Odell in Wilbarger County, North Texas.

Shell Oil Co. completed 1 C. Kester flowing 152 bo/d, 44° gravity, on 8/64-in. choke. The operator will also try for completion in the

Ellenburger at 6,644-84 ft. Location is in Section 2, Block 10, H&TC Survey, 1¼ miles northwest of Odell Ellenburger field.

Clear Fork discovery finalized in West Texas

Permian Clear Fork production was opened in a wildcat in southern Irion County, 15 miles southwest of Mertzen, West Texas.

T. W. Murray completed 1 H. M. Noelke "D" flowing 204 bo/d on 32/64-in. choke, 37° gravity. Pay is through perforations at 3,400-10 ft. Location is in Section 1, Washington County Railroad Survey, 1½ miles southeast of Branch Clear Fork field, separated by dry holes.

Gaines County hit. This West Texas county has a new Devonian oil discovery, 20 miles southeast of Seminole. John J. Eisner 1 Same-dan-McGuire flowed 517 bo/d, 36.4° gravity, on 20/64-in. choke from perforations at 12,569-77 ft. Location is in Labor 24, League 295, Reagan CSL Survey, 2¾ miles south of Birge Devonian field.

Dual gas discovery completed near Midland

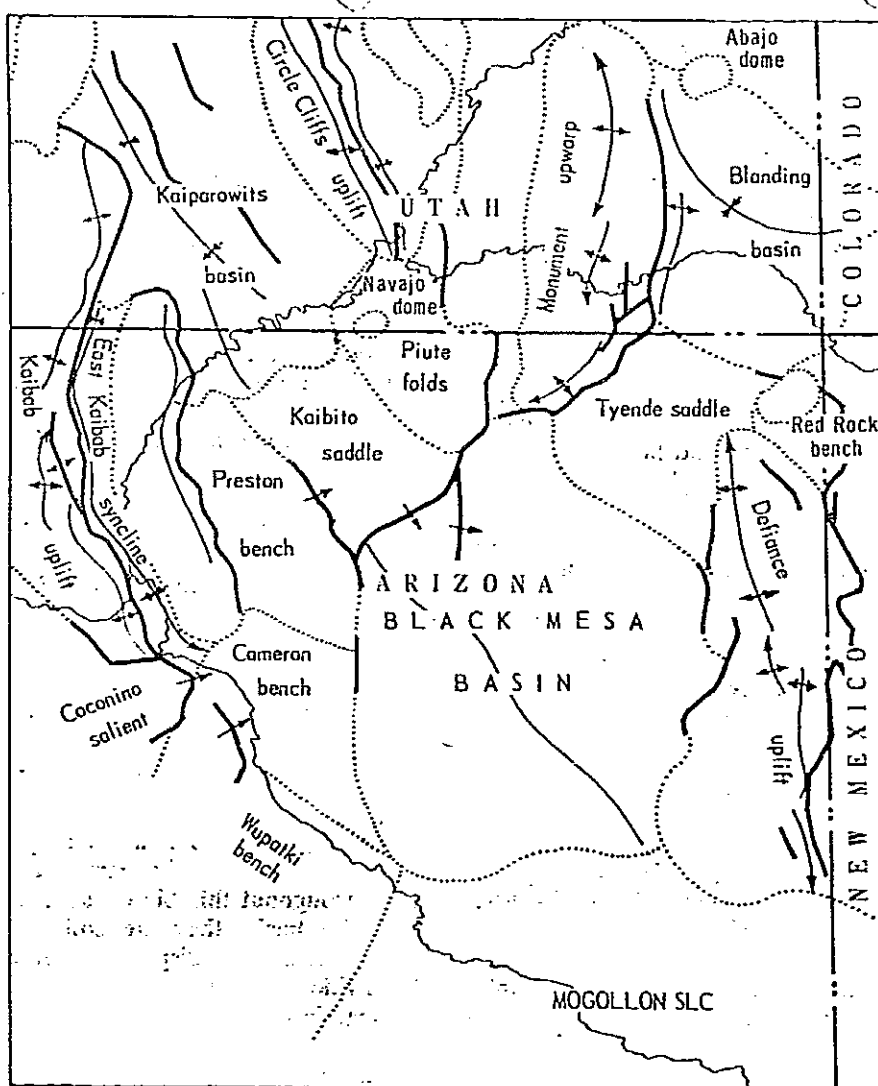
A dual Strawn Pennsylvanian and Devonian gas pool was discovered 2 miles northeast of the city of Midland, Midland County, West Texas.

Ashmun & Hilliard completed 1 Roy D. Jones flowing 3,085 Mcfd from Strawn perforations at 10,474-484 ft; flow from Devonian perforations at 11,665-80 ft was 1,100 Mcfd. Location is in Section 32, Block 38, T-1-S, T&P Survey, 3¾ miles northwest of Azalea field limits.

Remote discovery for North Texas area

Dual production is indicated at a wildcat in northwestern Wise County in North Texas. The well is in an area of no comparable production.

E. B. Fletcher 1 Huddleston, 1½ miles west of Park Springs, is testing in the upper Atoka Pennsylvanian. Flow was 8-9 bbl of oil per hour through perforations at 5,697-5,704 ft. Flow from lower Atoka at 5,727-30 and 5,737-79 ft was 143 bo/d on 12/64-in. choke, 41° gravity. Gas-oil ratio is 1,400:1.



MOST PUBLISHED DATA on the basin to date estimate depth to basement at a maximum of about 7,000 ft, but most think this a gross underestimate. Black Mesa has plenty of structure for the driller to test. Tectonic setting of the basin is shown here. Fig. 3.

pear deadlocked. And it's doubtful that the two tribes will agree to lease until the quarrel over division of the surface is settled.

A big unknown. Since there has been no drilling or seismic work in Black Mesa's big mid-section due to the Indian ownership question, little is known about depth of sediments, etc.

Most published material on the basin to date estimates depth to basement at a maximum of about 7,000 ft.

Some exploration experts, however, feel this is a gross underestimate. These sources contend that the basin beds thicken very rapidly coming off the Defiance uplift on the east and the Monument uplift on the north.

One large independent oil firm believes, based on some magnetics, that there could be as much as 30,000 ft of marine sediments in the middle of the basin.

Another student of this area, Maynard Jones of Exploration Surveys, thinks this may be an overestimate. Jones' calculations, based on regional gravity work performed by his firm (Fig. 2), place maximum sedimentary depth at no less than 10,000 ft, with 15,000 ft or more as "probable," and 20,000 ft as "possible."

Plenty of structure. Along with the Defiance and Monument uplifts (and the connecting Tyende saddle area), the principal tectonic features hemming in the basin include the southern end of the Circle Cliffs uplift on the northwest, the Echo

Cliffs and Kaibab uplifts on the west and the Mogollon slope on the south (Fig. 3).

On the northwest the Circle Cliffs uplift tails into the Piute folds. And the Echo Cliffs and Kaibab uplifts slump off onto the Preston, Cameron, and Wupatki benches. Together with the Kaibito saddle area which separates the Black Mesa on the northwest from the Kaiparowits basin, these benches ring the Black Mesa proper from the northwest all the way down the western rim.

The basin itself boasts a number of major anticlines and monoclines of great length. The big anticlinal features trend predominantly northwest to southeast. Two of the largest are the Oraibi or Mount Beautiful anticline and the big Cow Springs or Keams Canyon feature. Both of these are continuous nearly all the way across the basin and both cross the Hopi reservation.

Along with this principal northwest-southeast trend of folding, there is a secondary trend, apparently superimposed on the first, and running roughly at right angles to it (from northeast to southwest).

Drilling targets. Geologists studying the basin list many formations as good bets for developing commercial production.

Foremost, probably, are those already found productive by Texaco and others in the Tyende saddle area and the Blanding basin rim area. They include the Devonian and the Pennsylvanian generally, with the latter's Morrow, Des Moines, and Virgil zones eyed as hot prospects.

The Permian also is regarded as a good drilling target. And its attraction has been enhanced by Tenneco's prospective Permian-Kaibab dolomite-oil discovery in the neighboring Kaiparowits basin at its 2 Upper Valley Unit in 13-36s-1e, Garfield County, Utah (OGJ, March 2, p. 175).

The explorer's list of potentially productive beds also includes the Tertiary, Cretaceous, Jurassic, and Triassic (especially the Moenkopi and Chinle formations).

Drillers move south. Following along conventionally behind the leasing play in the Tyende saddle area, wildcatting is edging steadily

March 25, 1964

TO: The Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John Bannister, Executive Secretary

SUBJECT: H. B. 343, Introduced March 2, 1964

Upon the recommendation of the Tourist and Industry Development Committee Chairman Frank L. Crosby, on March 18th, H. B. 343 will be revised to read as follows, after which it will be submitted to the Appropriations and Judiciary Committees before action by the entire House:

Be it enacted by the Legislature of the State of Arizona:

Section 1. REWARD PAYMENT TO REGISTERED HOLDER OF PERMIT TO
DRILL TEST WELL FOR OIL AND GAS

The oil and gas conservation commission shall offer as an incentive for the first oil or hydrocarbon gas well brought in within the boundaries of the state of Arizona a reward of one hundred thousand dollars, to be used only for future exploration and development of oil or hydrocarbon gas in the state of Arizona, to be paid to the registered holder of a permit of the well. Said well to qualify must produce not less than fifty barrels of commercial oil or at least one million cubic feet of hydrocarbon gas every twenty-four hours pumping or flowing consecutively for a period of not less than ninety days.

Sec. 2. PROCEDURE FOR PAYMENT

The oil and gas conservation commission shall determine the registered permit holder who shall be qualified to receive the one hundred thousand dollar reward as prescribed by the terms of section 1 of this act, and prior to authorizing payment shall present the facts to the Governor, who, upon receipt of the certification of the well qualifying shall approve the same and authorize the payment of the reward.

Sec. 3. APPROPRIATION

The sum of one hundred thousand dollars is appropriated from the state general fund to the oil and gas conservation commission, to be available for the purposes of this act.

Sec. 4. EXPIRATION DATE

The terms of this act shall expire on July 1, 1966, and the appropriation authorized by this act is exempt from the provisions of Sec. 35-173 and 35-190, Arizona Revised Statutes, relating to quarterly allotments and lapsing of appropriations, except that the appropriation, if not expended for the purposes provided by this act, shall lapse on July 1, 1966.

Sec. 5. EXCLUSIONS

A. Helium gas is excluded from the provisions of this act since it has already been discovered in commercial quantities.

B. No reward shall be paid under the provisions of this act for any discovery of oil or hydrocarbon gas on Indian land.

March 18, 1964

TO: Commissioners of the Oil and Gas Conservation Commission
State of Arizona

FROM: John Bannister, Executive Secretary

SUBJECT: Items of Interest Since the February 18th Meeting

I assumed my duties as of March 1, 1964. I should like to take this opportunity to thank each of the Commissioners for my appointment and also to express my appreciation to Mrs. Mary Cooper and to Mr. John Petty for their helpful and friendly cooperation. I feel that a sound and reciprocal working basis has been established between the three of us which will result in a smoothly working organization.

We are presently setting up new office procedures with respect to permit handling, filing, etc.

NEW DRILLING PERMITS

Six drilling permits have been applied for since those reported at the last meeting: They are as follows:

Permit No. 269: Eastern Petroleum Co., Eastern-Santa Fe Fee #37, 1650' S of NL; 1650' E of WL, Section 34-T20N-R27E, Apache County.

Permit No. 270: Texaco Inc., Navajo Tribe "AM" #1, 660 FNL; 1980' FWL, Section 36-T39N-R21E, Navajo County.

Permit No. 271: Texaco Inc., Navajo Tribe "AK", 890' FNL; 730 FEL, Section 6-T40N-R25E, Apache County.

Permit No. 272: Socony Mobil Oil Co., Inc., Socony Mobil-Navajo Tribe-Tract 155 #1, 2310' E of W; 2310' S of N Lines, Section 28-T39N-R25E, Apache County.

Permit No. 273: Eastern Petroleum Co., Eastern-Santa Fe Fee #34, 1650' S of NL; 1650' W of EL, Section 1-T19N-R27E, Apache County.

Permit No. 274: Marathon Oil Company, Marathon Oil Co. - Navajo-Indian Reservation #1, 1500' FSL; 400' FEL, Section 18-T40N-R29E, Apache County.

HOUSE BILL 343: Providing for the Payment of a Reward

As of this date House Bill 343 is still in committees to which it was originally assigned: the Judiciary, Appropriations, and Tourist and Industry Development Committees.

HOUSE BILL 345: Abolishing the Oil and Gas Commission

As you were advised by letter of March 6th, I have been following the progress of this bill through contact with Mr. John McGowan. To date this bill is also still in the committees to which it was assigned: Judiciary, Appropriations, and Boards and Commissions.

March 18, 1964

Items of Interest Since the February 18th Meeting
Page Two

HOLBROOK TRIBUNE-NEWS

The March 6th issue of above referenced newspaper carried an editorial criticizing the Governor of the State, various State agencies, and our Commission as follows:

Drilling for oil or natural gas in Arizona has come to a practical standstill since the Arizona Oil and Gas Conservation Commission was brought into existence during the administration of our present governor. He has been coached and shown the way to make this a reasonable commission, or that it would be a detriment. That it is a detriment few people will question who know anything about it.

In order to correct the erroneous impression that the Commission has hampered development of oil and gas in Arizona, a letter was written to Mr. V. P. Richards, Editor of the Holbrook Tribune-News, and Mr. J. Morris Richards bringing them up to date on the current drilling activity in the state. Mr. V. P. Richards has acknowledged receipt of our letter. It would seem that he retains his original opinions.

ARIZONA OIL AND GAS INDUSTRY TO BE FEATURED BY FIRST NATIONAL BANK

I met with Mr. Stewart Robinson of the Publicity Department of the First National Bank who will print an article on Arizona's oil and gas industry in the bank's publication, Arizona Profiles. This publication is distributed to the presidents of the 1000 largest corporations in America as well as to the presidents of the 1000 largest banks in America, and is given varied wide distribution. We discussed at length the role of the Arizona banks in Arizona's future oil and gas economy.

STATE AND FEDERAL LEASES

Currently it is estimated that there are approximately 4000 oil and gas leases on State lands covering approximately 1,225,000 acres; and approximately 1800 leases on Federal lands covering approximately 1,550,000 acres.

TREMPEALEAU FIELD, MORROW COUNTY, OHIO

You were furnished with my report of March 12th regarding Interior Secretary Stewart L. Udall's criticism of the conditions existing in Morrow County, Ohio, together with letter sent from this office to Secretary Udall. There is nothing new to report regarding this matter.

EL PASO NATURAL GAS PRODUCTS COMPANY

El Paso Natural Gas Products Company's marketing and refineries have been sold to Shell Oil Company for approximately \$34-\$35 million. Shell is negotiating with American Petrofina and others to sell the Arizona outlets so acquired for approximately \$6 million.

February 18, 1964

TO: Commissioners of Oil and Gas Conservation Commission
State of Arizona

FROM: John K. Petty

SUBJECT: Report of Acting Executive Secretary-Petroleum Geologist for
Period from January 29th to February 18, 1964.

There were four drilling permits applied for during this period, namely:

1. The Richard Harless #27 Harless Federal, 660 FN & 900 FW Lines of Section 4-T17N-R4E, Yavapai County, just north of same operator's #1 Federal which is presently being tested and worked over.

The #27 will be a 3000 foot basement test which should have Permian, Pennsylvanian, Mississippian, Devonian and Cambrian sediments. Harless has a new cable tool drilling rig on location.
2. Eastern Petroleum Company #22 Eastern-Santa Fe Fee, 2016' FNL & 629' FEL of Section 5-T20N-R27E, Apache County. Location is 3 miles northeast of Navajo just off Highway 66. Proposed depth is 1200 and this will be a Coconino project. This will be drilled with a rotary rig owned by Eastern Petroleum Company. The irregular location was made due to topography. This is just north of the Navajo Springs area.
3. Texaco Inc. #2 "AG" Navajo Tribe, 660 FNL and 1980 FEL of Section 21 - T41N-R25E, Apache County. This will be a 6462 foot Devonian test and is just south of Texaco's #1 AG, a 1963 Devonian discovery named the Walker Creek Field.
4. The Superior Oil #33-12 Navajo V, 1994 FS and 2017 FE Lines of Section 12-T39N - R23E, Apache County, fourteen miles southwest of the Walker Creek Devonian production. This will be a 6530 foot Devonian project.

Items of Interest During this Period

NEW PROSPECTS

There are several more drilling projects in the making for the Holbrook Pinta Dome Salt Basin area, the Four Corners area and the Flagstaff to Fredonia Strip Country areas. Renewed interest in the Cochise-Pima County area has been expressed by several independents.

Operators have been checking on some old wells which have been shut in for some time. There's a possibility of more work being done on them.

POTASH EXPLORATION

The potash exploration is progressing and replies to the Commission letter in regard to information being furnished have been favorable. Someone suggested that copies of all logs run on all wells (water, mineral, as well as oil and gas) drilled in the state be required to be filed with the Commission. I mentioned that the Commissioners had discussed this briefly

February 18, 1964

Report of Acting Executive Secretary-Petroleum Geologist for Period from January 29th to February 18, 1964.

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last year and that I would mention it to you. Utah's Attorney General interpreted their statute as giving their Oil and Gas Conservation Commission legal authority to ask for a copy of each log run in Utah.

BONUS REWARD, SENATE BILL 13 FOR OIL AND GAS

You received a copy of the Willett letter suggesting the "Reward" being paid as royalty and for the oil well to potential 50 BOPD instead of 25.

Richard Harless visited this office last week and said he'd like for the "Reward" to be split and a certain amount allowed for the first well in each of the several counties favored for petroleum potential. I told him and others to write in their thoughts and they would be shown to the Commissioners.

GEOLOGICAL MEETING AT MIDLAND, TEXAS

I appreciated permission to attend the Southwestern Federation of Geological Societies Meeting and S W Regional Meeting of A.A.P.G. for I have been going to and from Midland since I was five years of age; and since 1948 have lived there for several years off and on. However, the day before I was to leave, I injured my elbow and it kept me from attending.

The meeting was attended by more than 1100 geologists and was very worthwhile. I have obtained a copy of the main address, a preview copy of which was sent to you some time back. This is in regard to ground water, petroleum and natural gas mainly; then also something about helium, carbon dioxide, hydrogen sulfide brines, geothermal water and steam. The latter three are the source of many minerals; and steam of course is also a source of power.

REMARKS ABOUT "ARIZONA OIL'S A GOOD BUY"

Several phoned this office in regard to this Merrill, Lynch, Pierce, Fenner & Smith Inc. ad in the February 10th Newsweek. They said the Commission should do something about it, that they were going to, etc. I do not know if it was intentional for MLPP&S to be disparaging about Arizona's oil or not. At any rate, I promised I would mention this occurrence to the Commissioners and you have been sent copies of the page.

STATE'S SHARE OF FEDERAL MINERAL LEASING INCOME FOR 1963.

This totaled \$310,252 for Arizona State's income from federal mineral, grazing leases, and timber sales under the mineral leasing act.

The State received \$109,093 for the last half of 1963 which was more than double the \$53,436 received the last half of 1962. This was undoubtedly caused by the Kaibab Forest being opened for oil and gas exploration for the first time in 1963.

DESERT DRILLING COMPANY

The leases are still in force on the D. H. Roe drilling properties: Desert

February 18, 1964

Report of Acting Executive Secretary-Petroleum Geologist for Period from January 29th to February 18, 1964.

Page Three

Drilling Company #1 State in Apache County 15 miles south of Chambers, a 1620 foot shut in project; and the Desert Drilling Company #1 State just northwest of Dateland in Yuma County, a 6767 foot shut in project well. Mr. Weaver, Memphis, Tennessee, said he owned a 3/4 interest in the Apache County property which he asked if he could cap and let it set for a while until he decided what to do. He said he'd have a cap welded on the other Roe well in Yuma County in order to keep any surface junk from entering the well bore. I asked him to do this so the Commission wouldn't have to act on using some of the drilling bond money to do it.

At any rate, Roe will probably be in a position to drill deeper in a year or so and this will just avoid plugging the Yuma County 6767 foot project, at least at this time. It's had no shows of petroleum thus far.

I O C C

The Interstate Oil Compact Commission has announced the June 22 - 24 meeting will be held at Billings, Montana, with headquarters at the Northern Hotel.

NEW MEXICO OIL CONSERVATION COMMISSION HEARINGS, SANTA FE, NEW MEXICO

On February 19, 1964, there are 18 cases on Docket for Examiner Hearing. Some of these cases are "To show reason why a certain well shouldn't be plugged"; "Approval of unorthodox location"; "Approval of Unit Areas"; "Institute pressure maintenance"; "Approval of non-standard proration units"; "Utilize natural gas in a carbon black plant"; "To show reason why a pool, allowed temporary 80 acre proration should not be developed on 40 acre proration units"; "To show why another pool shouldn't be developed on 106 acre spacing units, when it had established temporary 320 acre spacing units"; "Application for salt water disposal"; etc.

I would like to visit at least part of these hearings, if it's agreeable with the Commissioners as I believe it would be worthwhile. Perhaps some of the Commissioners would like to go also.

SENATE AND HOUSE BILLS

We have copies of the different bills up before the House and Senate as well as legislative reviews here in the office for your pleasure.

VISITORS AND QUERIES BY PHONE AND LETTER

We have had many visitors and still more phone calls and letters about oil, gas and helium activity in general throughout the state; as well as for specific information which we strive to satisfy.

NAVAJO SPRINGS-PINTA AREA IN APACHE COUNTY

As stated in the Geological Report, Eastern Petroleum has extended their unit area northward and added several more producers. They're still testing and working on them and will report the potentials when properly completed.

February 18, 1964

Report of Acting Executive Secretary-Petroleum Geologist for Period from January 29th to February 18, 1964.

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FOUR CORNERS AREA

The Superior Oil Company submits for the Commissioners' approval the field name of "Twin Falls Creek" for the field discovered by their H #14-16 Navajo in Section 16 - T41N - R30E, Apache County. The open flow potential on this well is 12,500 MCFPD on a 7 hour test through 2½" tubing, SIP 1757 PSIG, GOR 99,013 cubic feet of gas per barrel of oil through perforations from 4999-5071 (184 shots) in Pennsylvanian, top of pay 4999, T.D. 5697, PBTD 5644.

Casing program 10 3/4" @ 1044; 7" @ 5697, 5076 feet of 2½" tubing. 500 gallons of wash acid, and 8000 gallons of retarded acid was used to complete this well in the perforated zone. The well was spudded October 19, 1957 and completed January 19, 1959. Then it was shut in and was just connected to a pipe line recently.

HOPÍ INDIAN LAND OPEN FOR OIL AND GAS PROSPECTING AND LEASING.

Their headquarters for inquirers is Hopi Indian Agency, Keams Canyon, Arizona. The Hopis can lease grazing District #6 (T25N through 31 and R13E through 22); however separate permits from the Navajo Tribe and Hopi Tribe will be necessary for the area of 1/2 interest Hopi Land lying outside of District 6. Procedures regarding this latter part have not been developed but they're having a July 31st deadline on requests for their first lease sale which is slated for September.

DEPLETION REMAINS THE SAME

The U. S. Senate vote defeated two bills which would have reduced the 27½ percent depletion allowed in petroleum production. Repeated attempts to amend the 27½ percent to a lower figure have lost. If they were to lower it now, it would be very disastrous to petroleum exploration.

RATABLE TAKE

The Regulatory Practices efficiency study was sent to the Commission from the Interstate Oil Compact Commission. This was prepared by the Advisory Committee. This information was compiled on all member states by questionnaire last year; and Arizona has a "waste" statute which can be used in the same manner as a Market Demand Statute in that the agency is empowered to request purchaser nominations, if needed. There is no production regulation at this time as none is needed since there is no market problem evident.

They requested this Commission to check through the material and advise them of any errors. It will be checked.

Arizona Republic
February 14, 1964

Reserve Oil, Gas Rights, AEA Asks

A PLEA that Arizona join other Western states in reserving oil and gas rights on state school and institutional land that is sold by the land department was made yesterday by the Arizona Education Association.

In making the plea before the Senate Counties and Municipalities Committee, AEA officials said Arizona is one of only two states that does not reserve oil and gas rights. The other is Nevada, which disposed of most of its state land many years ago.

ARIZONA now has only about \$12 million in its permanent school fund," said Ray Booth, Winslow, chairman of the AEA Public Lands Committee, "while New Mexico has \$200 million in its fund and receives \$6 million each year in interest for the operation of schools."

Booth said most of the New Mexico fund came from oil and gas royalties.

Arizona had no law governing oil and gas rights from statehood until 1964, and it was generally believed that under this situation rights were reserved. Then in 1964 a law was passed reserving only one-eighth of the oil and gas, but Sen. Harold C. Hill, D-Yuma, pointed out yesterday that the 1964 law may be unconstitutional because the enabling Act says that no less than 12½ per cent or one-eighth must be reserved.

GLAS LUNT, Phoenix, member of the AEA land committee, and Dix Price, AEA secretary, backed the bill, and Lewis Duncan, head of the land division of the land department, indicated the department would support the measure. He said he would assist in working out several amendments to make sure it included helium as well as hydrocarbons.

One of the senators said that Dr. Charles Kahl of the Arizona Oil and Gas Commission had endorsed the bill. The senator said Dr. Kahl stated that by reserving oil and gas rights, the state would be encouraged because it would be under the obligation to block oil leasing.

January 13, 1964

TO: The Commissioners, Oil & Gas Conservation Commission
State of Arizona

FROM: John K. Petty, Acting Executive Secretary and Petroleum
Geologist

SUBJECT: Geological Field Trips Taken Since the December Meeting

GEOLOGICAL FIELD TRIP #1, December 26, 1963

Purpose of trip was to visit all wells possible in northern Arizona and contact a mineral exploration company at Navajo to receive well cutting samples to take to sample cut at Farmington.

Coconino County

The James R. Pickett #1 Padre Canyon C/NE SE SE Section 26-T20N-R10E, located 26 miles southeast of Flagstaff, was visited. The Lawrence rig was still on the location and it did not look as though any of the rig equipment had been moved from the well site. No one was around the project area.

The well is to be taken over as a water well by the land owner. It is at a total depth of 3596 feet in granite. The reports and logs have not been turned in yet.

December 27, 1963

A "U-Haul It" trailer was rented in Holbrook and taken to Navajo to load up with mineral exploration sample cuttings and any others available for pick up. The samples filled 15 boxes 3' x 1½' x 1½'. The trailer was later turned in at Farmington.

All but the salt section samples of Duval's mineral exploration holes were released to me and deposited at the Four Corners Sample Cut in Farmington, New Mexico, where they'll be held until further notice. If I don't obtain them immediately on release, we may not be able to have them later. The names and locations of the exploration holes will be obtained and reported on soon. At present they are just numbers and I have to be most particular with any title information available to me or they will stop supplying this Commission with anything at all.

Unless the Commissioners decide otherwise, I believe it best for me to obtain all the information possible in regard to the mineral exploration holes where oil and gas bearing formations definitely exist, and keep it confidential when asked to. Then when some sort of regulation is agreed upon by the Commissioners, we won't have "back" information to attempt to compile and the samples won't be destroyed or thrown away.

I contacted all the friends I could in Farmington after depositing the samples and reminded them that there's plenty of room for petroleum and helium exploration and drilling in Arizona. Also I mentioned the possible "reward" and they said that this would really start the oil to flowing.

January 13, 1964

Geological Field Trips Taken Since the December Meeting
Page Two

December 28, 1963

I came from Farmington by Shiprock, Gallup, then west on 66 and turned south at Sanders. The abandoned well site of the Eastern Petroleum Company #23 Santa Fe Cheto Dome, NE SW Section 25-T21N-R28E, located in Apache County, and drilled to around 500 feet testing the Coconino Sand. A marker identifying the well has not been erected. Henry Fullop said it would be erected soon.

The Desert Drilling Company #1 State, NW NW Section 32-T19N-R29E, Apache County, 15 miles south of Sanders was visited and the casing was capped with a welded piece of iron as reported before. The operator will drill this test on to the Coconino later. It is 1620 feet deep in the Chinle Formation. We have the samples and will obtain the information on this well as it is available. Thus far, there's been no log run and no tests made.

December 29, 1963

Navajo County

The Lydia Johnson Trustee #2 Aztec Land and Cattle Company, Section 33-T14N-R20E, was visited and checked for bond release.

This well is reported to have 1500 feet of 4 1/2 inch casing in it and has heavy mud covering the open hole. Total depth is reported as 1542. This well was drilled in 1959 and had a blow of flammable gas which became very weak and finally had no blow at all. This condition was noted last year when the Commission legal counsel, Mr. Edward Kennedy, Assistant Attorney General, and I visited the well site. At the next Commission meeting it was voted to plug the well since it could not be made useful to man.

After leaving this Snowflake area I studied the surface formations westward to Heber and on west along the Mogollon Rim until the highway turned south to Payson. The traffic was rather thick from a few miles this side of Payson and I was unable to see much geology outside of the highway.

There are many structures along a trend just north of the Mogollon Rim where the possible pay formations may thicken.

A few geologists are studying this and I expect some companies to come in this year on some exploration and drilling programs.

GEOLOGICAL FIELD TRIP #2

Purpose of trip was to investigate an increased blow on a dry water well drilled two years ago and checked last year. This was a three or four hour trip just north of Scottsdale and west of the Carefree Highway.

I had visited the well before and taken a sample of a blow which was too weak to capture a good sample, but I understood it was blowing more so I went back, but it was weak and no better than last year. Little time was spent at the well.

January 13, 1964

Geological Field Trips Taken Since the December Meeting
Page Three

I worked several hours on a geological reconnaissance in the area. As there were no sedimentaries except recent sands and gravel beds in the valleys and volcanics in the mountains, there was nothing to check any geological structure on.

GEOLOGICAL FIELD TRIP #3, January 7, 1964

Purpose: To visit wells in western Maricopa and eastern Yuma Counties and to make a geological reconnaissance of southwestern Yuma County.

Maricopa County

The Montezuma Oil & Gas Company #1-A Federal, 3316' from north line and 585' from west line, Section 30-T2S-R9W, located 33 miles north of Sentinel in western Maricopa County, was shut in with rig intact and more than thirty joints of 10 inch casing on site. No One was at the lease. The Montezuma Company has been reorganized and it is expected they will begin drilling soon. The total depth is 430 feet in sand. Several nearby leaseholders have inquired about this well.

Yuma County

The Desert Drilling Company #1 State, Section 16-T7S-R13W, is at a total depth of 6767 feet in valley fill.

The large rotary rig has been moved from the drill site and much junk, boxes, pipes, racks, etc. is strewn over the area for several hundred feet. The casing is completely covered with half a drum over it which unless removed will keep any junk from falling in the hole.

As the Commissioners know, the operator is indisposed and not in an operating capacity presently.

A possible part-owner will be contacted as to possible plans for deepening this well. Since it is so deep, I hope some of the owners will deepen it, but there isn't much hope that they will at present.

Until granite or igneous material is drilled into, there is still a chance that producing sediments may be penetrated. I realize that it looks utterly hopeless, but it's not; and while one cannot recommend it to be a promising prospect, no interested party should be discouraged.

January 8, 1964

I went south of Yuma through the lettuce acreages and other farms and out on the sideroads all morning, and did not see any surface formations other than recent sands without any geological significance.

There has been seismic work done in the extreme southwestern part of Yuma County. There is a water well drilling there on the highway, but no one was around it. Several of the petroleum companies have done exploratory work in the area and I believe as time goes on I can obtain more data which will be helpful.

January 13, 1964

Geological Field Trips Taken Since the December Meeting
Page Four

There are some possibilities of petroleum bearing sedimentary formations of Cambrian, Devonian and Mississippian age being in the very deepest part of those huge valleys in southwestern Arizona in Yuma County. Several persons have this belief. This is merely a possibility which exists and while there's nothing presently known to substantiate it, there is no conclusive evidence that there are no petroleum bearing strata in the deepest part of these valleys. Consequently, it is part of my job to investigate the areas of lesser possibility when I have the opportunity of doing so.

Between Phoenix and the California border, many water well drillers have drilled wells which had shows of hydrocarbons in them. We have an electric log (a confidential log) of a water well in Maricopa County which has a good hydrocarbon indication. I think it'll be a shale oil mixture when I can ever see the samples of the formation, but there may be some pockets of live oil elsewhere in that same material.