

COMMISSION MEETING
February 1964

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 \$8 million each year in interest for the operation of schools."

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

Arizona had no law governing oil and gas rights from statehood until 1954, and it was generally believed that under this situation rights were reserved. Then in 1954 a law was passed reserving only one-eighth of the oil and gas, but Sen. Harold C. Glas, D-Yuma, pointed out yesterday that the 1954 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 Kelli of the Arizona Oil and Gas Commission had endorsed the bill. The senator said Dr. Kelli stated that by reserving oil and gas rights, exploration for oil and gas would be encouraged because it would be easier for developers to check out leases.

To Commissioners 2/18/64
at meeting.

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

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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 MLPFS 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

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

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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, PBD 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.

HOPI 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.

STATEMENT OF LEDGER TRANSACTIONS
January 1964

EXPENDITURES OUTSTANDING TO DATE	ENCUMBRANCES JAN. 1964	EXPENDITURES APPROPRIATION FOR YEAR	UNENCUMBERED BALANCE
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Office Staff		\$1,175.00	
Commissioners		300.00	
TOTAL PERSONAL SERVICES	\$11,463.00	\$20,850.00*	\$9,387.00

Telephone		55.31	
Office & Geological Supplies		214.93	
Postage		97.40	
TOTAL CURRENT EXPENDITURES - OTHER	\$2,211.44	\$7.50	\$4,837.50*
TOTAL CURRENT EXPENDITURES - OTHER		00	\$150.00
TOTAL SUBSCRIPTIONS & ORGANIZATION DUES	\$15.35		\$134.65

Car Expenses		13.88	
Commissioners		34.50	
John K. Petty		64.72	
TOTAL TRAVEL - STATE	\$1,777.79	\$28.50	\$4,500.00
TOTAL TRAVEL - STATE		209.08	\$2,693.71

Lynn Lockhart - Texas		11.65	
John K. Petty - Farmington		\$220.73	
TOTAL TRAVEL - OUT OF STATE	\$369.17		\$2,130.83
TOTAL TRAVEL - OUT OF STATE		00	\$152.71

TOTAL CAPITAL OUTLAY - EQUIPMENT	\$72.29		\$250.00
TOTAL CAPITAL OUTLAY - EQUIPMENT		\$12.10	\$71.78

TOTAL FIXED CHARGES (Trailer Rental)	\$178.22		\$4,000.00
TOTAL FIXED CHARGES (Trailer Rental)		00	\$3,664.20

TOTAL PROFESSIONAL SERVICES	\$335.80		\$1,875.00*
TOTAL PROFESSIONAL SERVICES		00	\$625.00

TOTAL MUSEUM OF NORTHERN ARIZONA	\$625.00		\$1,875.00*
TOTAL MUSEUM OF NORTHERN ARIZONA		\$625.00	00

TOTAL BUREAU OF MINES - U of A	\$1,875.00		\$41,062.50
TOTAL BUREAU OF MINES - U of A		\$2,813.57	\$21,478.44
TOTALS	\$18,923.06	\$661.00	\$18,923.06

CASH BOND			00
Filing Cabinet		\$77.11	
Electric Heater		12.90	
LUMP SUM BALANCE	\$90.01	\$367.65	\$277.64

RECEIPTS	\$725.00		\$6,545.25
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NOTE: *Quarterly Allotments Through Third Quarter

February 11, 1964

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

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

SUBJECT: Geological Field Trips Taken Since January 29, 1964

Field Trip #1, February 1, 1964

Purpose of trip is to visit wells in the Flagstaff-Sedona area, Four Corners area and Pinta Dome area.

Yavapai County:

1. The Richard Harless #1 Federal, 1320' f NL and 660' f WL, Section 4 - T17N - R4E, was visited. The driller and helper were greasing their cable tool rig and trying to fish some junk from the hole which was lodged at the total depth of 1710 feet. This total depth has been reported to me by the people in the rig to be at different depths at different times; and considering everything, I believe it is from 1710 to 1717 feet. They have had varying amounts of junk and bits in the hole so as to vary the T.D. They said they hadn't produced any oil. There was a pump jack on location ready to be installed.
2. Yavapai Oil Company #18 M. K. Alsbury Federal, 1980 f S and 1980 f W Lines, Section 32 - T18N - R4E, a proposed 3000 foot basement test approximately 12 miles west of Sedona has 306 feet of surface casing set in it. The rig was moved back to the #1 Federal for workover purposes. Complete information on this #18 will be reported when operations are resumed.

Coconino County:

3. The site of the James R. Pickett #1 Padre Canyon State, 1980' f S and E Lines, Section 26 - T20N - R10E, 3596 foot basement test reported previously as turned over to landowner for water well, was visited to determine status of drill site. The rig has been moved and from the condition of the fittings on well head, the landowner is preparing to use the well.
4. The Shoshone Oil Company well site, a few miles southwest of the previously mentioned Pickett well is still in the same condition as last reported -- capped with welded plate on casing. I have been told they plan to go back into this project and drill it further. O'Neill, a Denver attorney and owner of this project, took out a drilling bond on it and has assumed full responsibility. Since no release has been asked for, I assume they still plan to re-enter and drill it deeper. Present total depth is 1125. Top of Coconino is 350 with Kaibab line on the surface.

February 2, 1964

The Four Corners area in Apache County was visited. There is much very interesting geology to be observed along the highway from Flagstaff northward to Cameron to Tuba City to Kayenta to Mexican Water to Red Mesa, the nearest trading post to Four Corners visited on this trip.

Mailed 2/13/64

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Geological Field Trips Taken Since January 29, 1964
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Apache County:

5. The Texaco Inc. #1 "AG" Navajo Tribe, SE NW SE Section 16 - T41N - R25E, a Devonian discovery in 1962, was actively pumping as I passed by it. This well produces around twenty-two hundred barrels of oil per month, between 70 and 80 barrels per day presently. This is the Walker Creek Field, the name having been approved by the Commissioners.
6. The Texaco Inc. #2 AG Navajo which is located 660' f NL and 1980' f EL, Section 21- T41N - R25E, Apache County. This places it just south of Texaco's #1 "AG". They had just begun drilling to set surface casing when I arrived at the site. This was the spud date, 2/2/64. Elevation is 4862 DF and this will be a 6462 foot Devonian test.

Texaco is playing a north-south trend possibility in the Devonian.

7. The Occidental Petroleum #1 Texaco Navajo, NW NW Section 6 - T40N - R27E, a 6000 foot Devonian test with Arapahoe as the drilling contractor, was drilling a tight hole at 6530. Operator considers this location as the west Toh Atin area since it's just a few miles northwest of Texas Pacific Coal and Oil Company's Toh Atin or "Dry Mesa" oil field, producing from Mississippian limestone.
8. The Superior Oil #33-12 Navajo V, 1994 f S and 2017 f E Lines of Section 12 - T39N - R23E, was moving in rotary preparing to drill their 6530 foot Devonian project which is located 14 miles southwest of the Texaco Inc. #1 "AG" Navajo Tribe Devonian 1963 discovery mentioned above. The ground elevation is 5222 and it will be a tight hole as well as a very expensive one.

February 3, 1964

Navajo County

9. The New Mexico & Arizona Land Company #3 Fee located in Section 27 - T17N - R22E, was visited and there was no progress shown on this project. I have not found any evidence of a blow on it. This well reportedly blew out while coring in the Supai salt but it evidently had no volume and has never revived. Perhaps it will be reperforated and reworked in the future as the operator will no doubt leave it open awhile. The total depth is 1065 and the perforations are 1004-21. Acid was applied with no results.

Apache County

I visited with some of the fee landowners at Navajo, Arizona, and they said they hoped all the mineral exploration companies would protect the fresh water when they pulled casing upon abandoning the potash tests. If this deficiency does develop, it will have to be corrected. We discussed the items I asked for from the potash exploration companies and these Pinta Dome area landowners think that will suffice.

Wells have been drilled successfully by Eastern Petroleum in Sections 27, 28, 29 - T20N - R27E, in the Navajo Springs Field; thus extending it northward a mile. A dry hole was drilled in Section 30 and Henry Fullop said

February 11, 1964

Geological Field Trips Taken Since January 29, 1964

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he'd send some more permit applications in very soon. He wanted to test his wells in the above sections some more before turning in completions on them. He said he'd drill next in Section 21 which is just north of proven production; then in Section 5, all in T20N - R27E. Thus we'll receive two more permit applications soon. He is delineating the northern boundary of the field by this drilling.

Field Trip #2, February 4, 1964

The purpose of this trip was to visit the Mountain States Exploration #1-A State NE NE Section 29 - T19S - R18E, in Pima County, located 9 miles north-east of Sonoita. The total depth is 4410 and they tried to whipstock several times when they had twist off trouble and continued coming up the hole toward the surface with one piece of bad luck after another. Finally they plugged the well at a plug-back depth of 3450. The hole was filled with heavy mud and a proper marker was erected. The Commission rules and regulations were thus satisfied; so the \$2,500.00 check he had deposited with the Commission and which was deposited in the bank to draw interest was refunded to Stan Adams.

Presently Stanley Adams is negotiating for another well to be drilled.

Field Trip #3, February 10, 1964

Purpose of trip was to visit the well listed below as I heard they were shut down because of serious complications.

Ram Oil Company #1 Ram-Sierra Bonita Fee located C SE SE Section 2 - T11S - R22E, in Graham County, 29 miles north of Willcox. This well is to be a 5000 foot Devonian test. Elevation on the ground is 4425 feet. They have 31,039 acres in this lease which is on the Hooker Ranch.

They are drilling at 1305 in shale. They are operating two shifts for 16 hours per day, have not lost any time and do not anticipate being shut down.

*"I hear that
Arizona Oil's
a good buy"*



"Good for what?" we asked our barber.

For income? For long-term growth? For speculation?

Obviously, Frank didn't know. He'd simply heard the man in the next chair talking about it that morning.

Anyway, we told him we didn't know either. Matter of fact, we said he'd never heard of Arizona Oil and he'd probably be better off if he hadn't either, since a tip like that — little gossip about some little known stock — is apt to be worth about what it costs you.

But Frank doesn't give up easy. He thought it still sounded like a good buy.

In that case, we told him he should certainly check the stock out with our Research Department first and get some facts about the company — if any.

Facts about earnings, sales, proved reserves, management, and the current outlook for the company. Facts

any investor should have before he ever buys a stock that "someone tells him about."

As it turned out, our specialist in oil stocks — a man who gets paid for knowing all he possibly can about the oil industry and the companies that make it up — had never heard of Arizona either. In fact, he reported that there never had been an Arizona Oil Company — and that it must be a new and doubtful venture — a pure, pie-in-the-sky promotion.

Just one more instance, that, of why our firm motto has always been, "Investigate... then invest."

JOSEPH C. QUINN, Vice President

One more instance of how that motto can save you money. Because in addition to an oil specialist, we have others covering every major industry and nearly any important company you can name.

So, if you'd like to know what we know about any stocks of interest to you... just ask.

There isn't any charge, you don't have to feel obligated to do business with us either.

Just tell us the stock you want information about — even a postcard will do — and we'll take it from there.



MERRILL LYNCH, PIERCE, FENNER & SMITH INC

MEMBERS NEW YORK STOCK EXCHANGE AND OTHER PRINCIPAL STOCK AND COMMODITY EXCHANGES

70 PINE STREET, NEW YORK 5, NEW YORK

Here is the page out of
the Feb. 10th Newsweek
which contained the
disparaging remarks about
Arizona oil.

JKP

Mailed 2/13/64

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MERRILL LYNCH, PIERCE, FENNER & SMITH INC

MEMBERS NEW YORK STOCK EXCHANGE AND OTHER PRINCIPAL STOCK AND COMMODITY EXCHANGES

70 PINE STREET, NEW YORK 5, NEW YORK

DOMESTIC SERVICE	
Check the class of service desired; otherwise this message will be sent as a fast telegram	
TELEGRAM	
DAY LETTER	
NIGHT LETTER	

\$
S
E

WESTERN UNION TELEGRAM

1206 (4-55)

W. P. MARSHALL, PRESIDENT

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise the message will be sent at the full rate	
FULL RATE	
LETTER TELEGRAM	
SHORE-SHIP	

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

RECEIVED VIA PHONE 11:15 a.m., February 10, 1964

Mr. Petty

Would appreciate your conferring with Senator Lockhart regarding appointment on Regulatory Practices Committee to replace N.A.Ludewick. Am assuming other appointments remain the same.

Lawrence R. Alley
Interstate Oil Compact Commission
Oklahoma City, Oklahoma

A G E N D A

OIL AND GAS CONSERVATION COMMISSION
1624 West Adams, Room 202
Phoenix, Arizona

February 18, 1964
9 a.m.

1. Approval of the Minutes of the previous meeting.
2. Consideration of the written reports of the Acting Executive Secretary-Petroleum Geologist.
3. Any other matters the Commissioners may desire to discuss.

Mailed 2/7/64

D R A F T

Minutes

State of Arizona

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

December 16, 1963

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.
John Bannister, Applicant for
position of Executive Secretary.
Jack M. Little, Jr., Applicant for
position of Executive Secretary.

Chairman R. Keith Walden called the meeting to order at 9:30 a.m. in the Conference Room of the Commission with only the Commissioners and Mr. John K. Petty present. Immediately preceding this meeting, the Commissioners and Mr. Petty had appeared before the Senate Committee on Appropriations in Room 220 of the Senate Wing regarding the budget request for 1964-1965.

Commissioner Lynn Lockhart's motion that the minutes of the previous meeting be accepted as prepared was duly seconded and unanimously approved.

Mr. John K. Petty presented briefly the following highlights of the Interstate Oil Compact Commission Meeting in Santa Fe, New Mexico, December 9th, 10th, and 11th, which he attended and which was reported in more detail in Mr. Petty's written report to the Commissioners dated December 16th: That Mr. Jack Campbell, Governor of New Mexico, was elected Chairman of the I.O.C.C. for 1964 to succeed Mr. Matthew Welsh, Governor of Indiana. That the midyear I.O.C.C. meeting would be held at Billings, Montana, during May or June and the December meeting at Biloxi, Mississippi, with the specific dates to be announced later.

Mr. Petty advised that he has requested the New Mexico Oil Conservation Commission to place this Commission on their mailing list for notices and all publications from their office as the publications would be informative and of interest to the Commission as an example of an efficient agency.

Mailed 2/7/64

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Mr. Petty discussed the potash exploration in the state by Duval Corporation, U. S. Borax & Chemical Company and Kern County Land Company; and copies of the rules and regulations of the State of Utah regarding potash exploration were furnished to the Commissioners for their information.

Mr. Petty also reported on some of the drilling activity in the state, and a discussion of same followed.

Mr. John Bannister was interviewed by the Commissioners for the position of Executive Secretary of this Commission. The Commissioners also spoke briefly with Mr. Jack M. Little, Jr., who had been interviewed for the same position at the November 27th meeting. No decision was reached regarding this vacancy.

Motion was made by Commissioner Charles Kalil that the Arizona Weekly Gazette be designated the official publication of the Commission for the next year, seconded by Commissioner Lynn Lockhart, unanimously approved and so ordered.

Commissioner Charles Kalil raised the matter of the Chairmanship for the next year; however no action was taken on this matter.

Upon motion to adjourn by Commissioner Lockhart, which was seconded by Commissioner Kalil and unanimously carried; meeting was adjourned at noon.

AIR BASE
PHONE WY 8-5751

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P. O. Box 307

LEMOORE AIR BASE

LEMOORE, CALIFORNIA

February 3, 1964

John Petty
Oil and Gas Commission
1634 W Adams
Phoenix, Arizona

Dear John:

I am sorry for not answering your letter of January 29, 1964, Sooner.

Along with your letter I received the purposed draft of a bill S.B. 43, \$250,000.00 reward for the oil or gas well that is found on state land of Arizona.

John, I think that it is a wonderful gesture on the part of the people of the State of Arizona, to attempt to come up with such a bill. However I can see where such a bill could be a wonderful asset on a long range program and it could also have a lot of misgiving. I hope to get together with you in the very near future with the idea of possibly helping draft such a bill, shall we say plug a lot of loop holes that could develop and make it stringent enough so that only bonified operators could qualify to get in the pot.

I have another suggestion in lieu of this bill or a amendment to S.B. 43, that the reward would not have to be paid out in cash by the state, but could be collected from the royalties that would normally be due payable to the state from the state leases and by all means 25 barrels of oil per day I do not feel is enough. I think that possibly a 50 barrel program should be considered. Anyway we will discuss this thoroughly upon my arrival in Phoenix, possibly this weekend or first of next week.

Yours Truly

George Willett
George Willett *ad*



Mailed 2/7/64

--While skills of the geologist will be required in the exploration for new supplies of natural mineral fluids, the mobility of these substances calls for supplemental studies of the hydrologist. To both of these skills should be added extraction techniques of the engineer as well as legal and political concepts that must be provided by the social scientist.

"Mineral fluids," said Dr. Nolan, "constitute a major part of America's natural resources as well as the basic starting ingredients of many manufactured and refined products. Their abundance, therefore, is essential to the Nation's economy."

The earth scientist took note of some recent predictions indicating a need on the part of the United States for 200 to 250 billion barrels of oil or its equivalent between now and the year 2000; roughly, three times the present rate of consumption and four times the rate of domestic production.

Discussing the sources of supply needed to meet the Nation's oil needs, Dr. Nolan noted that estimates of domestic petroleum reserves or resources have ranged from such extreme low "engineering measurements" commonly cited as approximately 35 billion barrels of crude oil to high "geologic" estimates of approximately 100 trillion barrels.

"The most significant conclusions that can be drawn from current estimates of reserve supplies of oil," the scientist said, "are that there appears to be no likelihood of a critical exhaustion of domestic petroleum supplies in the immediate future; that there is need for continued research on both improved methods of search and extraction; and that there is, and has been for many years, a real inability to reach agreement on what constitute valid assumptions of future economic and political developments."

"Perhaps," Dr. Nolan added, "we should conclude that here, particularly, sound basic research in the social sciences involved may be of over-riding importance."

The Survey's Director reported that about 13.9 trillion cubic feet of natural gas was produced in the United States in 1962 and that national consumption of gas almost exactly equals production.

"A recent prediction," noted Dr. Nolan, "indicates that the United States will require about 30 to 35 trillion cubic feet of hydrocarbon gas per year--about two and a half times the present amount produced and consumed. This means that approximately 800 trillion cubic feet of natural gas or its equivalent must be obtained between now and the year 2000."

Dr. Nolan said that currently available sources for natural gas include about 270 trillion cubic feet of proved reserves in the United States with undeveloped potential sources, including possible extensions of explored fields and undiscovered gas fields in the United States and offshore areas estimated by various authorities to contain natural gas quantities ranging from 850 to 2,000 trillion cubic feet.

"If new discoveries of natural gas fail to keep pace with national needs," the Survey's Director said, "the most likely new source will be foreign natural gas. Small supplies are currently imported by pipeline from Canada and Mexico, but the major surplus reserves are in areas such as the Middle East. Their availability is dependent upon development of economic transoceanic transportation."

Reporting on the status of helium, Dr. Nolan pointed to a sharply increased demand for this resource because of many additional demands by numerous industrial applications.

"About 700 million cubic feet of helium is currently used or conserved each year," said Dr. Nolan, "but several times this amount is lost in the burning of natural gas that has not been processed for its helium content."

The Geological Survey spokesman said that between now and the end of the century, it would not be unreasonable to estimate a need of between 50 and 100 billion cubic feet of natural gas.

"Unless new and totally unsuspected large-volume uses come into being," he added, "these future requirements should be adequately met by geologic supplies and by augmented production of gas through recovery of helium now wasted in the burning of natural gas."

Dr. Nolan reviewed the ground water situation, stressing the significance of this commodity as "one of the Nation's principal mineral fluid resources."

He reported that, in 1960, ground water was taken from wells and springs at a rate of about 47 billion gallons per day, which was about one-sixth of the total amount used in the United States.

While ground water for the Nation as a whole existed in satisfactory "reserve" amounts, the Geological Survey's Director reported, there is great need for increased coordination among geologic, hydrolic and legal authorities if the full potential of this resource is to be realized.

"We are still deficient in our knowledge of both the principles of geohydrology and the geologic and hydrologic environments in many areas," Dr. Nolan emphasized, adding that "some of the current and many of the potential water shortages can be minimized if the necessary coordinated geologic, hydrologic, engineering and economic research can be carried out promptly."

"All told," Dr. Nolan concluded, "the mineral fluids truly represent a challenge to us, and to the representatives of other disciplines, to find the key to successful coordination of our efforts to assure our future national supplies of these substances."

x x x

Petroleum's role in chemical manufacturing

Natural gas (based on 1961 production of 13.45 trillion cu ft or 36.9 billion cfd)

	Vol % of gas	Disposition	Million gal or million cfd	%	%	Million cfd	%	Product	Million lb					
Methane (million cfd)	90.0	Fuel	32,260	97	19	95	95	Methanol	2,040					
		Carbon Block	440	1				60	25	Acetylene	800			
		Chemicals	500	2								75	Calcium Carbide	100
			33,200	100										
Ethane (million gal)	4.0	Fuel	13,740	95	6	15	70	Hydrogen Cyanide	180					
		Chemicals	710	5				30	Other raw materials	100				
			14,450	100										
Propane (million gal)	2.3	Fuel	3,681	43	60	100	30	Chlorinated Solvents, etc.	11,000					
		LP-gas	4,021	46				77		Ammonia	100			
		Chemicals	938	11										
Butanes (million gal)	0.9	Fuel	584	15	30	300	77	Ammonia	11,000					
		Gasoline	2,450	61						15	Other Refinery H ₂	100		
		LP-gas	600	15										
		Chemicals	366	9										
	4,000	100												

Petroleum refining (based on 1961 runs of 126 billion gal or 8.18 million b/d)

	Vol % of gas	Disposition	Million gal or million cfd	%	Million lb	Product	Million lb							
Hydrogen (million cfd)		Fuel	1,565	89	5	30	Polyethylene	1,610						
		Refinery Hydrogenation	130	7					24	Ethylene Oxide	1,290			
		Chemicals	70	4										
	1,765	100												
Ethane (million gal)	1.7	Fuel	1,790	84	44	19	Ethyl Alcohol	2,070						
		Chemicals	350	16					9	Styrene	1,760			
			2,140	100										
Ethylene (million gal)	0.8	Fuel	827	82	10	7	Ethyl Chloride	500						
		Chemicals	183	18					7	Ethylene Dichloride	1,290			
			1,010	100										
Propane (million gal)	3.7	Fuel	1,040	25	41	100	Acids, Aldehydes, Alcohols, etc.							
		LP-gas	2,720	65										
		Chemicals	400	10										
	4,160	100												
Propylene (million gal)	2.3	Fuel	435	15	60	44	Isopropyl Alcohol	1,190						
		Polymer Gasoline	1,628	55					20	Tetramer	420			
		Alkylate Gasoline	307	11								12	Propylene Oxide	350
		LP-gas	160	6										
Chemicals	370	13	8	Trimer	170									
	2,900	100												
Butanes (million gal)	6.0	Fuel	1,132	15	25	100	Acids, Aldehydes, Alcohols, etc.							
		Gasoline	6,050	80										
		LP-gas	378	5										
	7,560	100												
Butylenes (million gal)	2.5	Fuel	158	5	75	79	Butadiene	1,910						
		Polymer Gasoline	150	5					6	Sec. Butyl Alcohol	260			
		Alkylate Gasoline	2,280	72								5	Butyl Rubber	200
		LP-gas	32	1										
Chemicals	530	17	10	Others										
	3,150	100												
Benzene (million gal)	0.8	Gasoline	624	61	76	38	Styrene	1,760						
		Chemicals	386	39					20	Phenol	780			
			1,010	100										
Toluene (million gal)	1.7	Gasoline	2,097	94	24	9	Nylon	470						
		Chem. & Solvents	140	6					7	Dodecylbenzene	490			
			2,237	100										
Xylene (million gal)	2.6	Gasoline	3,209	95	89	3	DDT	170						
		Chem. & Solvents	159	5					2	Aniline	120			
			3,368	100										
												21	Others	
			100	22	Benzene									
			100	19	Solvents									
			100	27	Misc. Chem.									
			100	32	Exports									
			100	28	Solvents									
			100	26	O-Xylene									
			100	97	P-Xylene									
			100	3	Misc. Chem.									
			100	15	Exports									



FINISHED residue samples being bottled at Missouri Geological Survey Residue Laboratory, preparatory to study.



PERMANENT STORAGE at laboratory for insoluble residue samples is located in Rolla facilities.

the State of Missouri from northwest to southeast in all formations below the Middle Ordovician St. Peter sandstone. Above this a different sedimentary pattern is present with thickening to the southeast, east, and northwest of the Ozark Dome.

Maps. Structural maps on a datum plane such as a zone of insoluble residue material are quite precise. For example, the base of the Roubidoux formation is a good mapping horizon.

An example of what can be accomplished with such mapping is the structural map of the base of the Roubidoux formation in the Southeast Missouri Lowland area (Fig. 2). Structural contours set to sea level datum are here superimposed on a subcrop map of the Paleozoic. This map has been made by contouring points available on base-of-Roubidoux formation. Thickness maps of units were prepared for Cambrian "Bonnetterre," "Davis and Derby-Doerun," "Potosi-Eminence," and Ordovician "Gasconade." Then the datum was reconstructed from the formation topped to the base of the Roubidoux formation in areas of pre-Roubidoux erosion.

Conclusion. A simple and efficient technique for sample study of well cuttings by insoluble-residue methods has been used at the Missouri

Geological Survey since its initiation by McQueen in the later part of the 1920s.

The salient features of the method have been described. The application of this method has proved that it can be a valuable tool in the regional correlation of carbonate strata.

Earl McCracken (1959) has mentioned that he has been able to carry insoluble-residue types over wide areas in the Lower Ordovician of the Mid-Continent. This certainly points to a continuity between residue material and the sedimentary environment. The fact that residue types in general change throughout the column; eg., the Cambrian clastic section contains no true chert, the Mississippian carbonates are everywhere characterized by crinoidal chert, the lower Devonian is noted for its thick chert beds, the Silurian is generally silty; the pre-Cambrian iron cherts are almost worldwide; leads one to believe that sedimentary conditions in changing have left their mark in specific types of residue material over wide areas.

There seems to be no substitute for a considerable amount of work in examination of residues from as many long carbonate-rock sections as possible as preparation for plunging into the deeper basin areas. Work spent in this study will not be lost when thick, basinward carbonate sections are encountered.

Acknowledgment

Photographs used are from the files of the Missouri Geological Survey. Plates were drafted by D. R. Stark and Maretta Stevenson. Dr. T. R. Beveridge and Dr. W. B. Howe critically read the manuscript and Mrs. C. A. Johnson did the typing of the manuscript. Published with the permission of Dr. T. R. Beveridge, Missouri State Geologist.

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Geologists to gather for Texas meeting

THE regional meeting of the AAPG, Southwestern Federation of Geological Societies, slated for Midland from Jan. 29 through Feb. 1, will be one of the most informative geologic gatherings of the year.

The convention committee has been working on this meeting for 1½ years. Convention headquarters and exhibit halls are to be located on the second floor of the Midland Mart Building.

John E. Galley, program chairman, has arranged an outstanding group of papers by both local geologists and eminent research people from the entire continent under the theme, "The Geology of Fluids." These papers on the geology of fluids, according to John M. Hills, general chairman, will be of great benefit to all

exploration people working the Permian basin. This convention will give knowledge of the character and origin of the fluids, both oil and water, that inhabit the reservoir rocks of West Texas-New Mexico.

The industry has laid great stress on learning the tectonic history of structures and understanding the sedimentary environment of our reservoir rocks. It is now apparent that knowing the origin and character of these fluids is of utmost importance in obtaining a full understanding of hydrocarbon entrapment. This knowledge will aid greatly in the search for new oil and gas deposits and extend old fields.

Following are selected abstracts of the coming Midland meeting:

ABSTRACT

THE MIGRATION AND SEGREGATION OF OIL AND GAS. By S. R. Silverman, California Research Corp., La Habra, Calif.

THE mechanisms and extent of oil and gas migration have long been controversial subjects among petroleum geologists. Acceptance of proposed "primary" migration mechanisms, which involve the initial transfer of oil or gas from source rock to reservoir, is further complicated because several of these hypotheses require that petroleum formation occur during the primary migration stage.

"Secondary" migration, which refers to the movement of oil and gas from one reservoir position to another, is better understood because geochemists have shown that petroleum undergoes small but measurable changes in chemical composition during this type of migration. Fortunately for all concerned, these chemical changes can be distinguished from those chemical transformations which stationary petroleum slowly experience in response to reservoir temperatures and pressures over geologic time intervals.

In contrast to the relatively minor chemical changes that can be attributed to secondary migration, certain petroleum, produced from distinct but narrowly separated horizons within a single field or limited geographic area, are markedly different in chemical composition. Other chemical characteristics of this group of oils, however, suggest that they were derived from a common source. The observed chemical differences cannot be explained as transformations of the stationary maturation variety. Detailed studies of the compositional differences encountered in such oil sequences imply that these oils must have experienced physical separations of major petroleum fractions prior to or during the migration process. This variety of petroleum segregation, capable of producing major chemical changes, is herewith designated as a "separation-migration" mechanism to distinguish it from the typical secondary migration phenomenon which results in relatively minor petroleum composition changes.

Although the recognition of a new petroleum migration mechanism may appear to further complicate our already strained concepts of petroleum migration and segregation, the existence of a "separation-migration" mechanism is in accord with and a

plausible consequence of some of the best-founded hypotheses of petroleum evolution.

ABSTRACT

DEEP PAYS IN THE DELAWARE-VAL VERDE BASINS. By Harold J. Holmquest, Mobil Oil Co., Midland, Tex.

THE Delaware-Val Verde basins lie as a continuous elongate northwest-southeast trending downwarp extending from Eddy County in southeast New Mexico to Edwards and Kinney counties in Texas. Deep production consists mostly petroleum condensate and gas containing substantial amounts of carbon dioxide, and is confined primarily to the Ellenburger group of the Ordovician; the Devonian; the Morrowan, Atokan, and Strawn series of the Pennsylvanian; and the Wolfcampian series of the Permian.

Original water salinity distribution in the Ellenburger and Devonian horizons appears to have been highly modified by hydrodynamic movement of meteoric waters in the west, southwest, and south portions of the trough. This flushing, extremely active in early Pennsylvanian, late Permo-Pennsylvanian and Triassic-Jurassic periods, continues to a lesser degree to the present. Charged meteoric water which introduced carbon dioxide to the subsurface had as its major origin the solution of carbonate and bicarbonate components in the exposed rocks of the Ouachita, Marathon, and Diablo Platform areas. The most likely periods of generation were early Pennsylvanian, late Permo-Pennsylvanian and during the Tertiary igneous disturbance. Forceful emplacement of carbon dioxide and methane may have occurred in the Val Verde basin throughout early Pennsylvanian and mid-Wolfcampian folding and thrusting in the Ouachita-Marathon region.

Absence of oil production from the deep zones in the Delaware-Val Verde basins appears to be the result of two major factors. The first is the hydrodynamic flushing of crude accumulations from all but the deeper and larger closures. This scattering of oil occurred coincident with the major periods of hydrodynamic activity. The second factor is that restored maximum overburden, as well as present overburden in many cases, exceeds the gas-condensate conversion point for Delaware-Val Verde basin oils. These oils, derived from the Simpson, Woodford and Permo-Pennsylvanian shales, disassociate into gas-condensate and gas below 14,000,

13,000 and 8,000 to 9,000 ft depths respectively.

ABSTRACT

HYDRODYNAMICS OF THE PERMIAN BASIN. By Robert P. McNeal, Sinclair Oil & Gas Co., Midland, Tex.

A HYDRODYNAMIC study of several stratigraphic units in the Permian basin shows a regional west to east dip of the potentiometric surface. The Ellenburger and Devonian have closed lows against a part of the Fort Stockton uplift and against some faults in the general area. The Devonian has a steeper dip of the potentiometric surface in New Mexico than in Texas. The Mississippian has too sparse data to show significant features other than east dip. The Strawn potentiometric surface has steeper east dip on the east flank of the Midland basin and approaches hydrostatic conditions around the Central basin platform. The dip of the Wolfcamp is to the east and north in New Mexico and east and northeast in Texas. The San Andres shows east dip. The Delaware Mountain group has general east dip, but anomalous conditions are suggested in central Reeves County.

The potentiometric surface of all units mapped is approximately the same regionally, in spite of the wide differences in elevation and location of the outcrops and subcrops. However, locally there are many variations. Tilting of the hydrocarbon accumulations is a significant factor in a few fields. Vertical and horizontal pressure relationships around faults and subcrops, vertical and lateral continuity of oil, relative permeability to oil, and other hydrodynamic conditions can be critical factors to be considered in exploration in the Permian basin.

The quality of drill-stem-test instrumentation and programming in the Permian basin needs to be improved to furnish the pressure data that should be available to the industry.

ABSTRACT

MINERAL FLUIDS AND AMERICA'S FUTURE. By Thomas B. Nolan.

SUBSURFACE mineral fluids and the substances recovered from them constitute a major part of the value of all minerals produced in this country, increasing from about 48% in 1946 to 58% in 1961, not

including ground water. Each mineral fluid has its own preferred location, and finding new sources will require ever-increasing knowledge of geologic principles and processes.

The predicted annual demand for petroleum and natural gas by the year 2000 is three to four times present domestic production. This increased demand must be balanced by increased rate of production from known fields, by new discoveries, by increased imports, or by synthetic products extractable from coal and oil-shale deposits, or by utilization of other energy sources.

Other natural gases that come from subsurface reservoirs include helium, carbon dioxide, and hydrogen sulfide. Helium is in particular demand because of its unique physical and chemical properties; its geologic location is becoming better known.

About one-sixth of the country's present water supply comes from ground water. In some areas withdrawal exceeds recharge, but in other areas withdrawal can be increased greatly without exceeding potential recharge. Currently about one-third of the ground water withdrawn is not being replaced. The behavior, quality, and quantity of both surface and ground water are geologically intimately interrelated. Increasing water usage will require improved scientific and legal coordination.

Subsurface saline waters pose a threat to some fresh-water supplies; but with improved conversion techniques saline water can provide additional fresh water. Some fossil brines are now rich sources of valuable chemicals and other brines are potential sources.

Development of geothermal energy from subsurface thermal water and steam has begun, and further exploration will increase the power output. Recovery of valuable chemicals dissolved in some geothermal fluids is being considered.

New uses for low-value fluids include "fluidizing" solids for easier transport and handling, and "solution mining" of low-grade ores.

ABSTRACT

PETROLEUM: ITS ORIGIN IN THE EARTH. By Dr. J. Gordon Erdman, Mellon Institute, Pittsburgh.

THE gas-liquid-solid mixture which we know as producible petroleum represents only a small proportion of all fossil organics including coals, oil shales, natural asphalts, etc. In past ages, as today, plant and animal detritus was deposited and preserved in fine-grained sediments in environments ranging from fresh-water swamps to marine slopes and basins. Why do only certain of these environments favor the genesis of accumulable oil? What are the controlling ecological and chemical factors? By what mechanisms do the constituents of petroleum migrate into the reservoir? To what extent does fractionation occur during migration? Does chemical alteration occur during migration and after accumulation in the reservoir? Today, answers to these questions are being sought in many laboratories throughout the world.

Living organisms do not generate, as part of their life processes, many of the hydrocarbons and other chemical compounds characteristic of petroleum. Further the components are not in thermodynamic equilibrium under earth conditions and, hence, independent of the structure of the source material. The nature of the source material derived from living organisms and its quantitative variation as a function of environment is being determined through study of Recent sediments. Changes in composition with age and depth of burial are being observed and the

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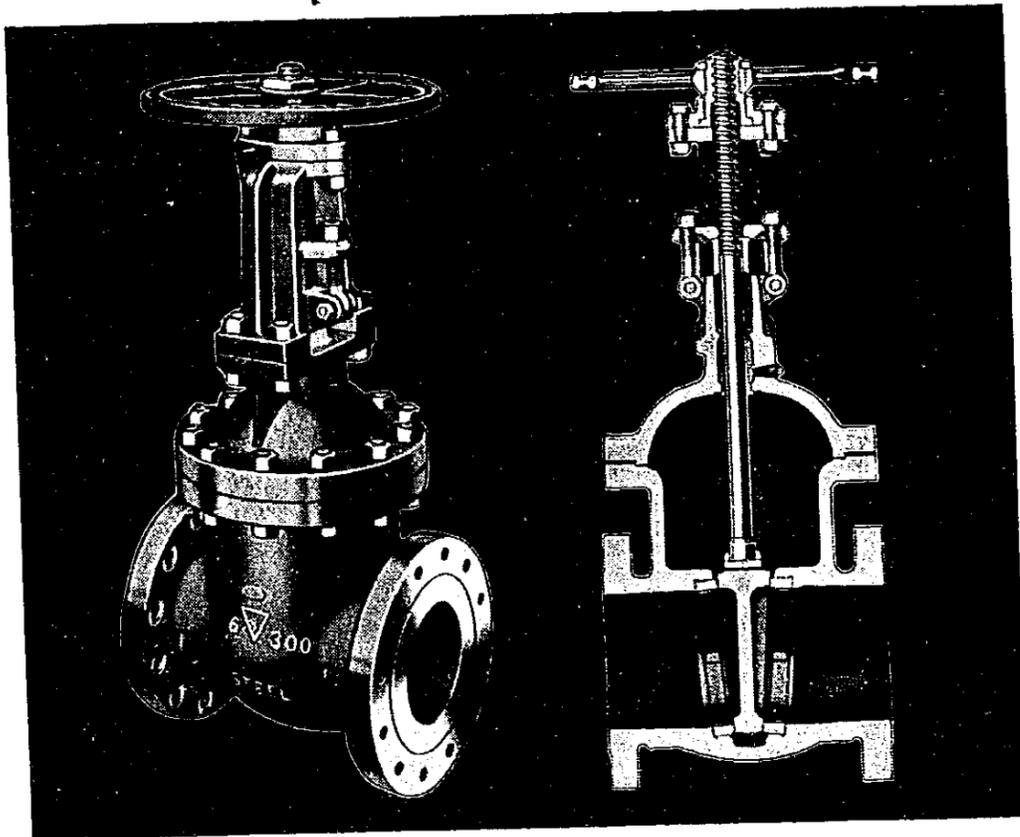
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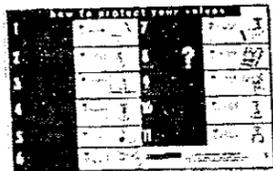
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mechanisms of the reactions elucidated. Good progress has been made toward recognizing the sources for constituents of petroleum ranging from the hydrocarbon gases to the asphaltic residues. In a number of instances reactions involved in their genesis have been duplicated.

Fractionation of the organic matter begins with deposition and continues throughout subsequent geologic time. Physical processes are interrelated with the chemical and the two must be considered together.

No satisfactory mechanism has been proposed for the migration of petroleum out of the fine-grained source rocks into the reservoir. Mechanisms involving oil as a separate phase, as a soapy colloid, or as a solution in water, all seem to fail under experimental scrutiny.

ABSTRACT

THE GEOLOGY OF SUBSURFACE FLUIDS—PROBLEMS AND RESEARCH NEEDS. By M. King Hubbert.

OIL AND GAS occupy the pore spaces of sedimentary rocks in petroliferous basins to the extent of the order of 1 part per 100,000; below shallow depths the remainder of the pore space is filled with water. Hence, oil and gas originate, migrate, and become stably trapped in a rock-water environment.

From an initial state of dispersion elementary volumes of oil or gas are driven by physical forces to positions of concentration and entrapment. The direction of these forces is from regions of higher environmental energy for the given fluid to lower-energy regions; and traps for a given fluid are regions of local minimum potential energy.

The search for oil and gas thus reduces itself to a search for regions of minimum potentials for these two fluids. These, in turn, depend upon the density and state of motion of the ambient water as well as upon the geometrical configuration of the rocks. Petroleum geology, to the extent that it is to become a rational, rather than an empirical science, must therefore ultimately be based upon a comprehensive knowledge of the mutual relations of the rock-water-oil (or gas) complex.

Out of such knowledge, it is seen that the conventional horizontal stratification of gas, oil, and water is true only for the special case of hydrostatics. For the general dynamical case, when the water is in motion, traps for gas and those for oil do not coincide. Furthermore, it is possible for such traps to exist in almost any structural position from the crests of anticlines to the troughs of synclinal basins.

ABSTRACT

THE OCCURRENCE OF OIL AND GAS IN THE SOUTHWESTERN REGION—THE GEOLOGIC FRAMEWORK. By George Gibson, Geological Consultant, Midland, Tex.

A STRUCTURAL relationship exists in a number of areas in the southwestern region between rock types in the Precambrian and Paleozoic structural trends. The Ouachita geosynclinal belt on the south and east of the Texas Craton which underlies the southwestern region was the dominant structural feature during the Paleozoic and probably exercised indirect control over all intracratonic structures. Most of the early and middle Paleozoic oil and gas reservoirs are associated with unconformable surfaces. These reservoirs were formed by weathering of the unconformity surface particularly where pre-unconformity folded and faulted structures existed.

Four Paleozoic continent-wide interregional unconformities are present. The ap-

proximate dates of the regressional maxima represented are: (1) very late Precambrian, (2) early Middle Ordovician, (3) early Middle Devonian and (4) post-Mississippian. In addition, many regional unconformities are present, the most important in relation to the source, migration, and accumulation of oil and gas being that between the Permian and Pennsylvanian. This regional unconformity is composed of a number of local unconformities associated with structurally positive areas.

Early and middle Paleozoic hydrocarbon source beds were probably organic-rich sediments overlying the unconformities. Late Paleozoic Pennsylvanian and Permian sediments were by far the most abundant source of hydrocarbons in the reservoirs in the middle and early Paleozoic formations. Within the Pennsylvanian and the Permian, unconformities are important; however, their importance is overshadowed by lithofacies phenomena in the form of reefs which formed the most prolific oil-producing reservoirs of those two periods.

ABSTRACT

TIMES OF MIGRATION AND ACCUMULATION OF PETROLEUM IN THE ABO REEF OF SOUTHEASTERN NEW MEXICO: A HYPOTHESIS. By William K. Stenzel, Area Geologist, Marathon Oil Co., Midland, Tex.

THE API GRAVITY of crude oils from the Abo shelf-margin carbonates decrease in a northeastern direction. It is hypothesized that this gravity pattern reflects regional secondary migration in an original up-dip direction.

The gravity pattern of crude oils from the younger Grayburg formations conflicts with the pattern of Abo gravity—therefore regional secondary migration within the Abo must have ceased prior to regional secondary migration within the Grayburg. The gravity pattern of the Grayburg resulted from tilting of the Grayburg carbonates during the late Guadalupian; therefore regional secondary migration within the Abo must have ceased prior to late Guadalupian or by the close of Grayburg deposition.

The time when accumulation should have been completed was calculated by Levorsen's technique of converting the original saturation pressure of an undersaturated reservoir to that overburden necessary to force the original solution gas cap back into solution. At Vacuum field, accumulation should have ceased prior to the late Guadalupian and thus this field could be an example of accumulation during regional secondary migration in the late Leonardian or early Guadalupian.

At Lovington field, the disappearance of the solution gas cap was computed to have occurred possibly during the Triassic. This indicates remigration associated with the unconformity between the Permian and late Triassic. At Empire field, the original reservoir pressure approximated the original saturation pressure. This indicates that accumulation had ceased at approximately the present depth of burial. Beneath some Quaternary sands, the Tertiary, Triassic, and a portion of the Permian have been eroded; thus accumulation at Empire occurred during the late Tertiary and early Quaternary.

ABSTRACT

RELATIONSHIPS OF RESERVOIR FLUIDS IN DELAWARE SANDSTONE STRUCTURES AND STRATIGRAPHIC TRAPS. By William F. Crauten, Consulting Geologist and Oil Operator.

FROM the axis of the Delaware basin to the western monocline, the upper Delaware sandstone exhibits a regular progression from gas-bearing structures to oil-bearing

structures up-dip, an example of Gussow's migration theory.

Starting in western Reeves County, Tex., the monocline has trends of clean sandstone encased in very shaly laminated siltstone. These stratigraphic traps contain such perplexing fluid relationships as water above oil, and gas down-dip from oil, both in the same correlative electric-log zone.

The writer submits that these phenomena are caused by the entrapment of different fluids in lenses within a sandstone body. "Membranes" with various low permeabilities form the boundaries of the "sub-lenses" and control the migration of various fluids.

ABSTRACT

THE PENNWELL-TO-MEANS UPPER SAN ANDRES REEF OF WEST TEXAS. By Addison Young.

THE Permian central basin platform consists in large part of a great carbonate build-up of Wolfcamp to upper Guadalupe age, and within it may be recognized a great many individual but related reefs. One of the best revealed of these reefs is one of upper San Andres age which extends for over 70 miles along the east flank of the Central basin platform from the Pennwell-Jordan Pool of Crane and Ector counties to the Means Pool of northern Andrews County. Isopach and facies studies demonstrate that during upper San Andres time this reef grew in relatively shallow water along the then eastern margin of the platform. To the east lay somewhat deeper water of the Midland basin where rocks of the same age are sandstone, limestone, and dolomite. On the opposite or western side of the reef the water was nearly as shallow as over the reef itself, but slightly more saline and the rock is dolomite with traces of anhydrite.

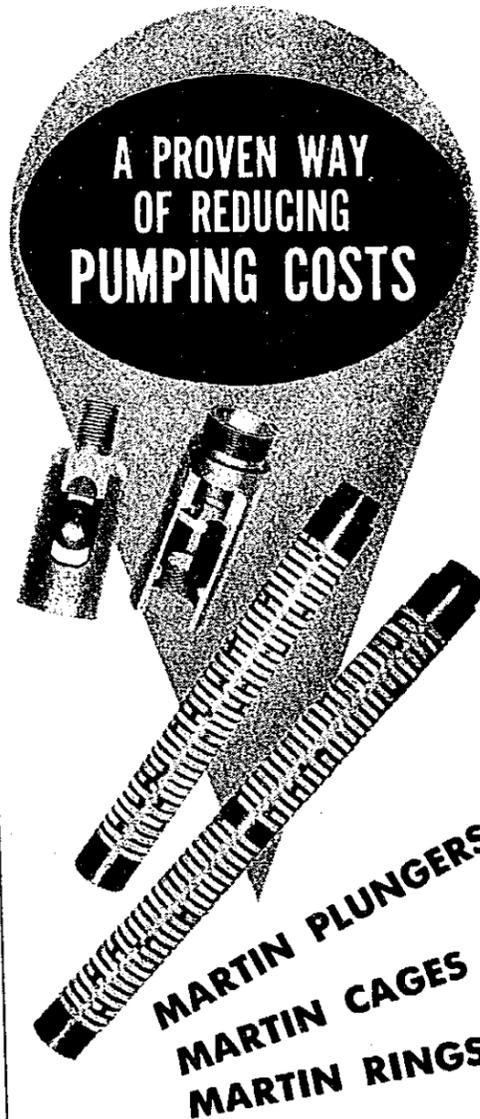
Growth of the upper San Andres reef ceased at the close of San Andres time, but the reef was affected by subsequent post-San Andres crystal movements so that now the southern part of the reef is 600 ft higher than the northern end.

During reef growth porosity developed widely throughout its extent and can now be traced almost continuously from the southern to the northern extremity, but beyond the reef to the east and to the west relatively little porosity was produced.

By the beginning of post-San Andres time the voids had been filled with fluids—gas, oil, and water. These fluids, according to their specific gravities, responded to subsequent structural movements, within the limits of available porosity, so that now the oil is concentrated in the several pools which occupy much of the trend.

Ohio's first 1964 well opens pool in Lawrence County

In southern Ohio, the first test in Aid Township, Lawrence County this year appears to be a pool opener. William Tabor moved about 2 miles south of Harvey Starr 1 J. E. Gillis discovery to hit on 1 Alma Wieteki, Section 24. It had an estimated flow of 80 Mcfd natural and after fracture with 550 bbl of water and 10,000 lb of sand, reported flow was 500 Mcfd. Shut-in rock pressure was 650 psi in the Clinton sand from 3,462-79 ft.

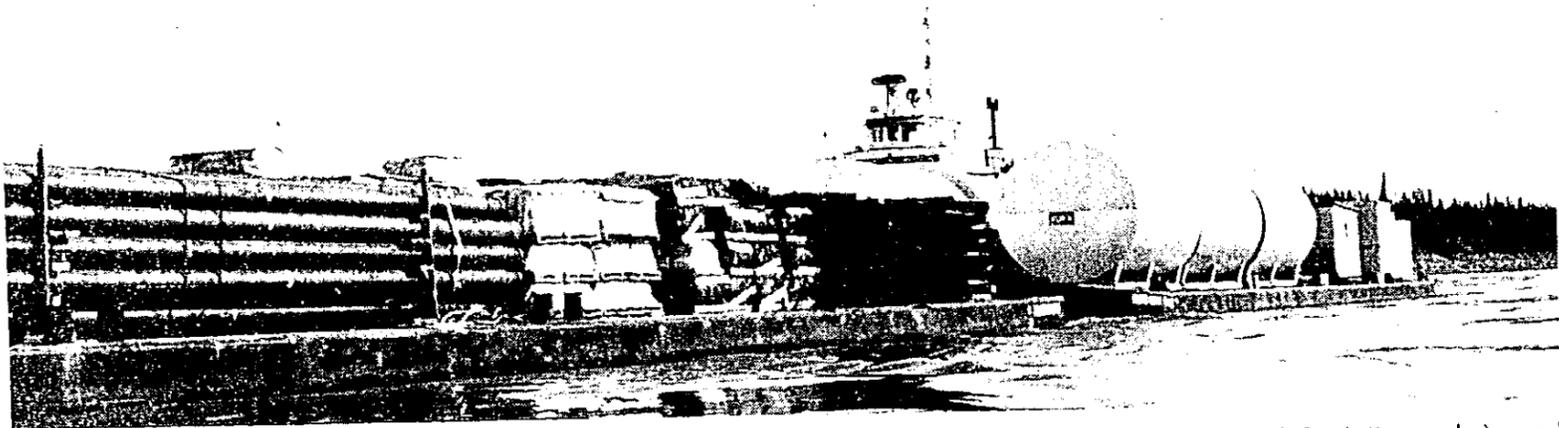


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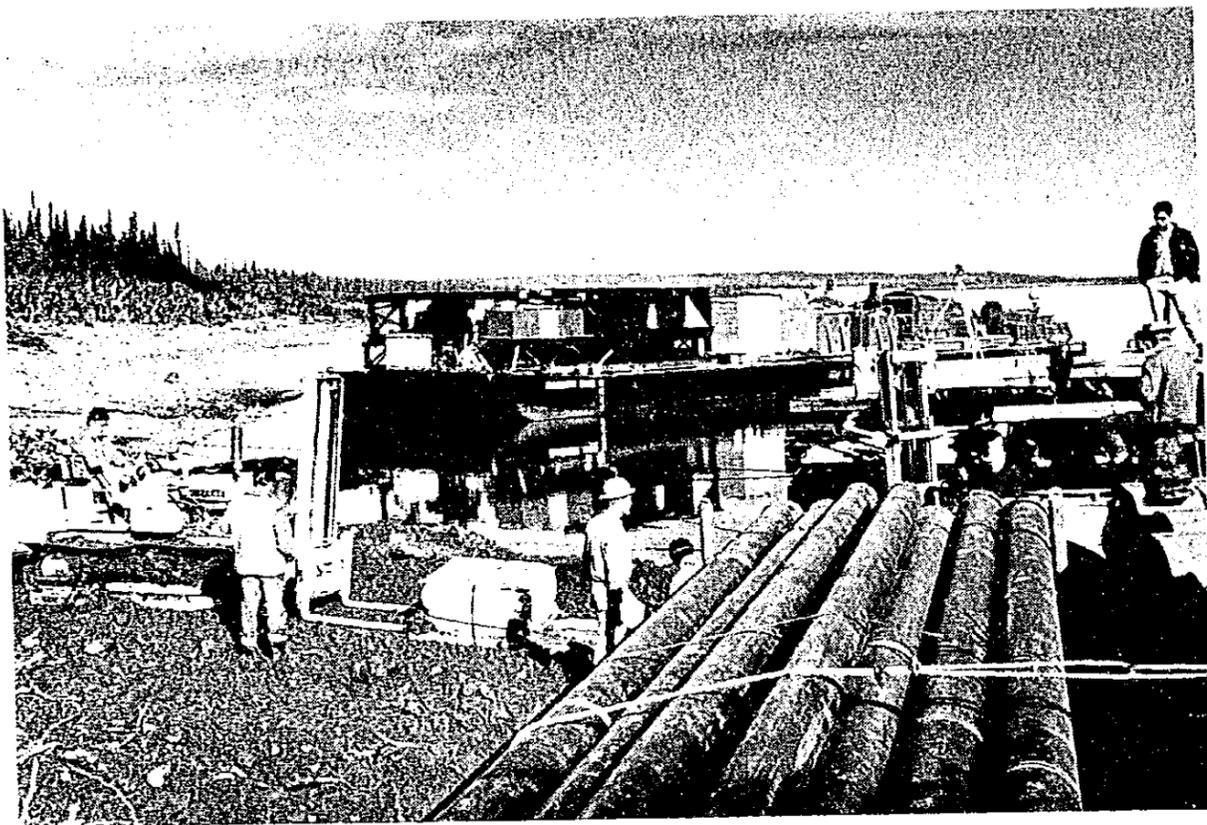
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LONG BARGE RIDE down Canada's big Mackenzie River nears end for load of casing, diesel fuel (in tanks), and other drilling supplies. Casing supply for deep test includes 16, 11 $\frac{3}{4}$, 8 $\frac{1}{2}$, and 5 $\frac{1}{2}$ -in. sizes—the latter for the production string if one is needed. Fuel comes from refinery at Norman Wells.



OVERLAND MOVE to drilling location about 80 miles to the west begins from this staging area on Mackenzie's west bank. Road-clearing work over relatively flat terrain began in summer and was completed early this winter. Intervening area, for most part, is not heavily forested.

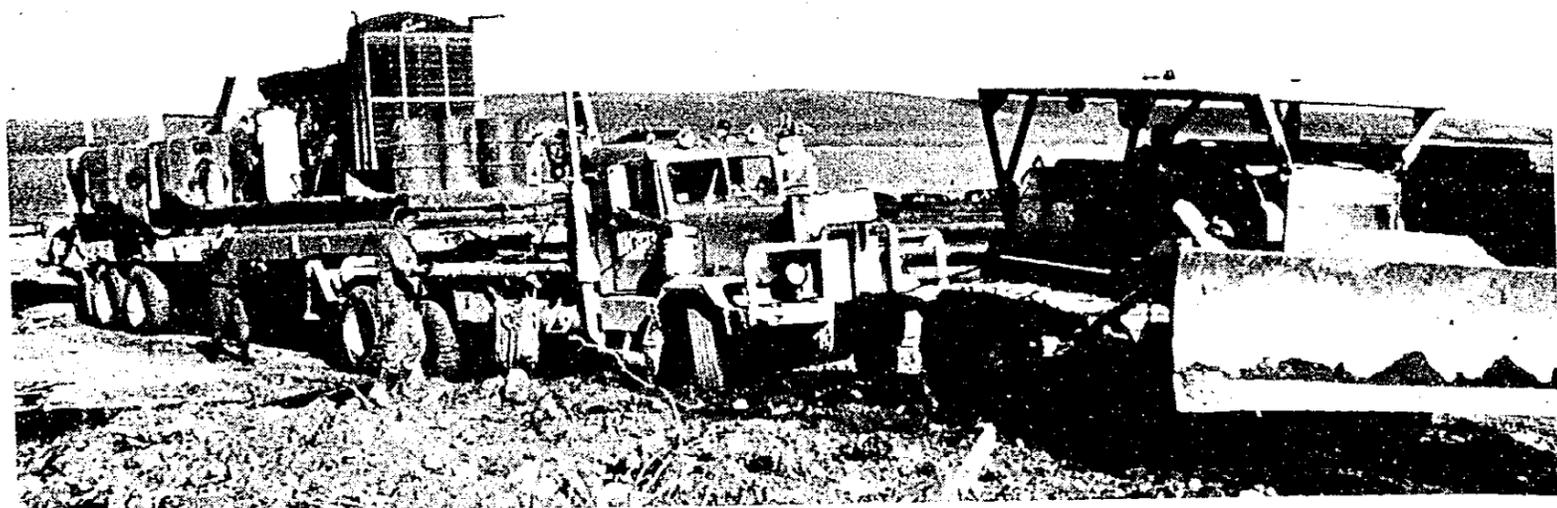
Just getting to drill site is problem in Far North

A \$1.3 MILLION one-well wildcat was spudded on Dec. 20 by a two-company team in Northwest Territories.

The well is the Atlantic-Columbian Carbon 1 Arctic Circle and is located on Permit 1287 approximately North Latitude 66° 23' West Longitude 132° 6', about 160 miles northwest of Norman Wells producing field.

Partners in the project are Atlantic Refining Co. and Columbian Carbon Co., a wholly owned subsidiary of Cities Service Co.

The well is drilling as a tight hole



DIESEL DRILLING ENGINE, one of three Superior PT-D8's providing about 1,400-hp for big National 80-B rig which will put down the Atlantic-Columbian Carbon 1 Arctic Circle, is offloaded at staging area. Contractor on project is Cascade Drilling Co. Ltd.

Two California wells tap rich steam

Pure and Shell wells bottom in a steam reservoir which contains valuable chemicals and minerals. Testing is hampered by temperatures of 800° F.

A SIZABLE steam reservoir rich in minerals has been confirmed by two wells drilled in the Imperial Valley of southern California.

Neither well has been tested, but preliminary results indicate the wells have tapped a reservoir which in the past has produced steam and brine containing "valuable chemicals and minerals."

Pure Oil Co. and Shell Oil Co. drilled the two wells as operators of separate joint ventures (OGJ, Nov. 11, 1963, p. 100). Both companies are planning extensive tests on the wells to determine just what is in the reservoir.

The extreme heat—Pure estimates the bottom-hole temperatures of its well hit 800° F.—caused no insurmountable problems during drilling, but made conventional oil-well testing to total depth impossible.

Electric logs were run on both holes by pumping cool mud down the hole and logging for short intervals, but the high bottom-hole temperatures prevented a complete set

of logs since the insulation on logging cables can't withstand extreme heat indefinitely. Drill-stem testing also was hampered. Some tests were run up the hole, but could not be run to total depth since packers are not available for such high temperatures.

The minerals in the brine also have clogged some valves so that modifications are needed before any conclusive tests are possible.

The wells. The two wells are located about 1¼ miles apart and on the flank of two other steam wells drilled in Imperial County, Calif.

Pure's well, drilled by Earth Energy, Inc., a new subsidiary, is the deepest steam well ever drilled. The well, 1 River Ranches in SW SW NW 24-11s-13e, went to a total depth of 8,100 ft.

Shell's well, 2 Imperial Irrigation District, is in the center of the NE¼ SE¼ 22-11s-13e or just a little over a mile west of the Pure well. Shell took its hole to 5,826 ft.

Loffland Bros. was contractor on

the Pure well. Shell used a company rig to dig its hole.

Casing has been cemented in both holes. Pure hung 8½-in. casing to 6,632 ft in the 1 River Ranches and Shell 7½-in. casing to 5,610 ft in its hole.

Although Pure's well is almost 2,500 ft deeper than Shell's well, the two may be in the same reservoir.

The reservoir from which the steam comes is believed liquid bearing with the liquid flashing into steam when the pressure is released. There also is the theory that young sedimentary rocks are converted into metamorphic rocks within the depths of the wells due to extreme heat at the bottom of the hole.

The mineral content of the wells may prove to be a valuable asset, but it also hampers testing the wells. The operators are not permitted to flow the wells into nearby Salton Sea for fear of polluting the sea. Pure has built a 10-acre pond at its site for testing and Shell a 60-acre pond.

Both of the wells are deeper than the 2 Sportsman, one of the two wells drilled in 23-11s-13e by J. I. O'Neill, Ashmun & Hilliard, Midland, Tex., independent oil firm. The O'Neill firm & Imperial Irrigation District are Shell's partners in the venture. Shell may run further tests on the two wells drilled by the O'Neill interest.

Pure's partner is Magma Power Co., Los Angeles, a firm which owns six producing steam wells in northern California. The Magma wells provide steam for two Pacific Gas & Electric Co. plants which generate 28,000 kw-hr.

Additional drilling is planned by Shell and Pure, but not before thorough tests are run on the current wells. A Shell spokesman said the company plans a "very aggressive" steam program in the next year and may drill another two holes in the area. Shell also has hired a consulting firm to study prospects of processing the brine from the wells. **End**

Union-Atlantic merger off

UNION OIL CO. and Atlantic Refining Co. have called off their merger talks.

Both companies last week closed the door on any future talks between the two companies. A joint statement from A. C. Rubel, president of Union, and Henderson Supplee, Jr., president of Atlantic, said "there are no plans for resumption of discussions."

No reason for the break in the negotiations was revealed. However, it was understood Atlantic's management didn't want to sacrifice the company's identity. This would have been required in a merger with Union since Union was scheduled to become the surviving corporation.

A Union spokesman pointed out it was Atlantic's board that "took final action" to kill the merger at a meeting Jan. 6. Union's board met the previous week, but took no action one way or the other on the proposal.

There were reports Union may attempt a merger with another company now that the Atlantic talks have fallen through, but a company spokesman declined to speculate on this report.

A Union-Atlantic merger would have created an oil company with assets of \$1.7 billion, seventh biggest in the industry (OGJ, Dec. 23, p. 36).

vidual cost-of-service basis or on an area guideline basis.

This option would apply where exploration and development expenses have never been underwritten by the consumer. That is, in instances in which the affiliate generates its own revenues rather than using those of the pipeline company.

In instances in which consumer money is involved, O'Connor suggested a different approach: Allow the creation of a producing affiliate which would generate its own exploration and development funds independent of consumer subsidies or "extraordinary" financial help from a parent pipeline.

When this was accomplished, area guidelines would then be used to set maximum rates on all production after the creation of the affiliate.

O'Connor made it clear he feels strongly that the commission must not close the door or unfairly hamper producing activity by pipeline companies or their affiliates. To do so, he indicated, would tend to lessen the future supply of natural gas at a time when demand would be climbing.

"The majority must face the facts that pipelines are engaging in the production of natural gas and that as long as there is a Federal Power Commission in existence, there will be this production to regulate," O'Connor said.

He said the problem—admittedly complex—is how they should be regulated.

"I contend that those affiliations where production and transmission are distinct, so that the risks of the former are not subsidized by the customers of the latter, are sufficiently comparable to an independent producer to warrant their regulation as such."

O'Connor said Union Producing Co. has clearly established that its operations stand on their own and are not subsidized by its pipeline affiliate nor the pipeline's customers.

O'Connor said that if the commission ignores the fact that Union's operations are clearly comparable to those of an independent and insists on regulating Union Producing like a pipeline company, "the repercussions will be serious, far reaching and harmful . . ."

WATCHING WASHINGTON

with Clyde La Motte



Those day-to-day chores in Washington are important, too

MUCH OF THE work of the oil industry in Washington consists of a continuing effort to supply the right information to the right people at the right time.

This is often a tedious, undramatic chore, but an essential one.

For instance, the Labor Department published last October proposed safety regulations for all firms with Government contracts. Thus oil, as well as other industries, would be affected.

The petroleum industry has demonstrated by its record that it is safety conscious, but it found that many of the proposed regulations simply do not fit its operations and thereby would be difficult, if not impossible, to comply with.

It was necessary, therefore, for industry representatives to spend considerable time and effort to get this idea across to Labor Department officials.

The battle isn't over, but there is hope because the Labor Department has expressed an interest in—and a better understanding of—the industry's situation (see related story on opposite page).

This sort of thing occurs again and again. Often it simply stems from a lack of sufficient information on the part of those Government people instituting the action. That is why the industry has to keep on the job in Washington regardless of who is president or who the cabinet members may be.

If Mohole can survive politics, it can survive anything

IT APPEARS THAT the Mohole project is going to survive the heavy buffeting of political winds and tides.

There was a time when the outcome was in doubt. The Senate had passed an appropriations bill which specified that National Science Foundation could not use any more of its 1964 fiscal year budget on Mohole.

This restriction was finally deleted in conferences between the Senate and the House, leaving only an admonition that NSF work out the problems surrounding Mohole to the satisfaction of the Bureau of the Budget.

NSF is currently conferring with the bureau and a final agreement is expected shortly.

The project has been beset by complications in Washington. First there was an uproar over the award of the prime contract. Later, there was heated dispute over whether there should be two ships or only one. In each instance, congressional investigations were held. And there may be more.

Scientists may be able to design ships and drilling equipment to withstand the stresses and storms at sea but unfortunately this affords no protection against political storms.

Johnson would increase employment by reducing overtime

ONE OF THE SUBJECTS touched upon by President Johnson in his state of the union address could have considerable impact on business and industry operations in which overtime is a considerable factor.

The President wants an industry-by-industry study to determine the feasibility of hiking some overtime wage rates as a means of encouraging employers to hire additional help rather than having their regular employees work extra hours.

Published by
THE INTERSTATE OIL COMPACT COMMISSION

A MONTHLY
NEWSLETTER

Volume 19, Number 1
January, 1964

EXECUTIVE COMMITTEE TO MEET

Gov. Jack M. Campbell of New Mexico, Chairman of the Interstate Oil Compact Commission for the year 1964, has called a meeting of the Executive Committee for Monday, February 3, 1964, at 9:00 A.M. The meeting will be held in Oklahoma City in the headquarters office of the Interstate Oil Compact Commission. Gov. Campbell has said there will be several important matters taken up at this meeting. A progress report by the Council of Committee Chairmen will be made on the Governors' Efficiency Study report. The committee appointments for the year 1964 will be approved, as well as the details of the budget for the operation of the Interstate Oil Compact Commission for the year. A full attendance of the Executive Committee is expected at the meeting.

COUNCIL OF COMMITTEE CHAIRMEN TO MEET

Richard C. Byrd, administrative assistant to Governor Matthew E. Welsh on the Governors' Special Study Committee, has asked W. H. Carson, chairman of the Council of Committee Chairmen, to call a meeting in Oklahoma City for February 1, 1964. Mr. Byrd hopes to obtain the material necessary to furnish to the Editing Committee, so that a report will be ready on the study of the Council of Committee Chairman as edited by the Midyear Meeting in Billings, Mont.

CHARLES E. BOWLIN NAMED

The executive secretary of the Interstate Oil Compact Commission has announced that, pursuant to the authority given by the Commission, Charles E. Bowlin has been named as director of technical services for the Commission, effective Feb. 1, 1964. Mr. Bowlin has been employed in the conservation department of the Oklahoma Corporation Commission since 1953. While with the conservation department, Mr. Bowlin served as natural gas engineer and in September, 1962, was promoted to senior engineer and acting assistant director of the department. In July, 1963, he was named as senior engineer for the department when the position of assistant director was filled.

Mr. Bowlin was active on the engineering subcommittee that prepared the recently-released "Manual of Back-Pressure Testing of Gas Wells" and at present, he is serving as secretary of the Regulatory Practices Committee of the Interstate Oil Compact Commission.

Mr. Bowlin is also a member of the University of Oklahoma Gas Measurement Short Course General Committee.

Editors and others are invited to make free use of reprinting liberties in the utilization of any material in Compact Comments, with or without credit to the Interstate Oil Compact Commission.

Mailed 2/7/64

Mr. Bowlin will be responsible for assisting the technical committees of the Commission in their studies and work, as well as assuming the responsibility for assimilating secondary recovery projects by states.

OKLAHOMA SECONDARY RECOVERY REPORT

A preliminary draft of a "Survey of Secondary Recovery Projects in Oklahoma, December 31, 1962" has been completed by a committee chaired by Dan R. Dunnitt, director of conservation, Oklahoma Corporation Commission. This report is now being circulated for comment and criticism to the members of Mr. Dunnitt's committee, and it is expected to be completed by May for distribution. The report contains details on 864 projects in Oklahoma.

FILM - MORE OIL AND GAS FOR TODAY AND TOMORROW

The film produced by the Interstate Oil Compact Commission, "More Oil and Gas for Today and Tomorrow," that was premiered in New Orleans, La., at the 1963 Midyear Meeting is now being circulated upon request to all interested persons. Any school, civic organization, or oil and gas agency should request booking dates from the headquarters office of the Interstate Oil Compact Commission, P. O. Box 53127, Okla. City, Okla. 73105.

PRELIMINARY PLANS FOR MIDYEAR MEETING

The executive secretary of the Interstate Oil Compact Commission is meeting with representatives of the state of Montana on January 22 in Billings, Mont., to make arrangements for the meeting in June of 1964. Reservation requests will be mailed from the headquarters office on or about Mar. 1, 1964, for the Midyear Meeting. Due to the fact that there is not a hotel sufficiently large to accommodate all those who desire reservations, it will again be necessary to house some of the people at other hotels and motels for this meeting.

WELSH'S TALKS AS CHAIRMAN PUBLISHED

The talks made by Gov. Matthew E. Welsh, of Indiana, as chairman of the Interstate Oil Compact Commission have been published in one volume by the headquarters office of the Interstate Oil Compact Commission. Anyone desiring a copy of this compilation should request this publication from the headquarters office of the Interstate Oil Compact Commission, P. O. Box 53127, Okla. City, Okla. 73105.

NEW METHOD OF NAMING COMMITTEES

At the meeting of the Executive Committee of the Interstate Oil Compact Commission held in Okla. City, Okla. on Feb. 4, 1963, it was unanimously approved that in 1964 and following years that the standing committees of the Interstate Oil Compact Commission should be made up of one member from each of the states, and any number of associate members recommended by the governor of a compacting state. The designated member shall have the power to vote for the state and shall be responsible for the accumulation of data on committee studies. In the member's absence, he shall have the privilege of designating one of the associate members to represent him at any committee meeting.

NEW COMMITTEE BULLETIN PUBLISHED

Papers presented before standing committees of the Interstate Oil Compact Commission at its Annual Meeting in Santa Fe, New Mexico, December 9, 1963, have now been published in "The Interstate Oil Compact Commission Committee Bulletin." Anyone desiring a copy of this publication should request it from the headquarters office of the Interstate Oil Compact Commission, P. O. Box 53127, Okla. City, Okla. 73105.

SOUTHWESTERN LEGAL FOUNDATION ANNOUNCES PROGRAM

The Southwestern Legal Foundation, Dallas, Tex., has announced the meeting of the fifteenth annual institute on oil and gas law and taxation on Feb. 12-14, 1964. The meeting will be held at the International Oil and Gas Educational Center at Southern Methodist University. Among those appearing on the program will be R. M. Williams, chairman of the Legal Committee of the Interstate Oil Compact Commission. Mr. Williams will speak at 11:00 A. M., Thursday, February 13, on "Compulsory Pooling and Unitization. Legal theories; case law; state statutes; proposed legislation pertaining to compulsory pooling and unitization." Anyone interested in attending this institute should contact the Registrar, Southwestern Legal Foundation, Hillcrest at Daniels, Dallas, Texas 75205.

COLORADO ISSUES THREE SIGNIFICANT ORDERS

D. V. Rogers, director of the Oil and Gas Conservation Commission of the state of Colorado, has announced that the following significant orders have been issued by the commission:

"In the Ranger Field, Washington County, Colo., the commission authorized an exception for a well to be drilled approximately 330 feet from a property line on a tract adjacent to and partly located outside of the "J" sand oil pool. The order provides for the commission to take such action as will offset any advantage the operator may gain over other producers by reason of the exception, such action to be precipitated by the application of any interested person after notice and hearing.

"Mount Hope-East Triple Completion - A triple completion with commingling of the "D", "J", and "O" sand reservoirs in the Mount Hope-East Field, Logan County, Colo., was approved by the commission, with provisions that the bottom hole pressure be maintained at a reasonable minimum and specific tests be conducted to periodically check the bottom hole pressure and commingling.

"Gas Storage in the Springdale Field - A gas storage project for the storage of natural gas in the "J" sand reservoir was approved for the Springdale Field, Logan County, Colo. The field was formerly a gas producing reservoir."

In addition to the above, Mr. Rogers has informed us that H. C. Bretschneider was unanimously elected as the new chairman of the Oil and Gas Conservation Commission on May 21, 1963. Mr. Bretschneider has been the vice-chairman for some time, and replaces Warwick M. Downing as chairman. Mr. Downing had been chairman of the commission since its inception.

On October 3, 1963, Gov. John A. Love appointed Howard M. Schmidt of Springfield, Colo., as a member of the Oil and Gas Conservation Commission. He replaces W. A. Dillon as the member from the 3rd Congressional District.

OIL AND GAS MAP OF SLAUGHTERS AREA PUBLISHED

According to Dr. Wallace W. Hagan, director and state geologist, Kentucky Geological Survey, an oil, gas, and structure map covering the area of the Slaughters oil pool and several other oil pools in northern Hopkins and southern Webster Counties, Ky., has just been printed. The map, titled "Oil, Gas, and Structure Map, Slaughters Quadrangle, Kentucky," was prepared by William D. Rose, geologist on the Kentucky Geological Survey staff. It is printed in three colors and depicts the location and identification of 98 wells. Structure contours are drawn on the base of the Vienna Limestone. Location of faults and the cumulative oil production of the several pools are also shown on the map. Copies of the map may be ordered from the Kentucky Geological Survey offices on the University of Kentucky campus, Lexington, for \$1.13 each.

The **OIL AND GAS**
JOURNAL

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JANUARY 13, 1964

How Stewart Udall
sees his job as

**OIL POLICY
MAKER FOR
GOVERNMENT**

p. 43

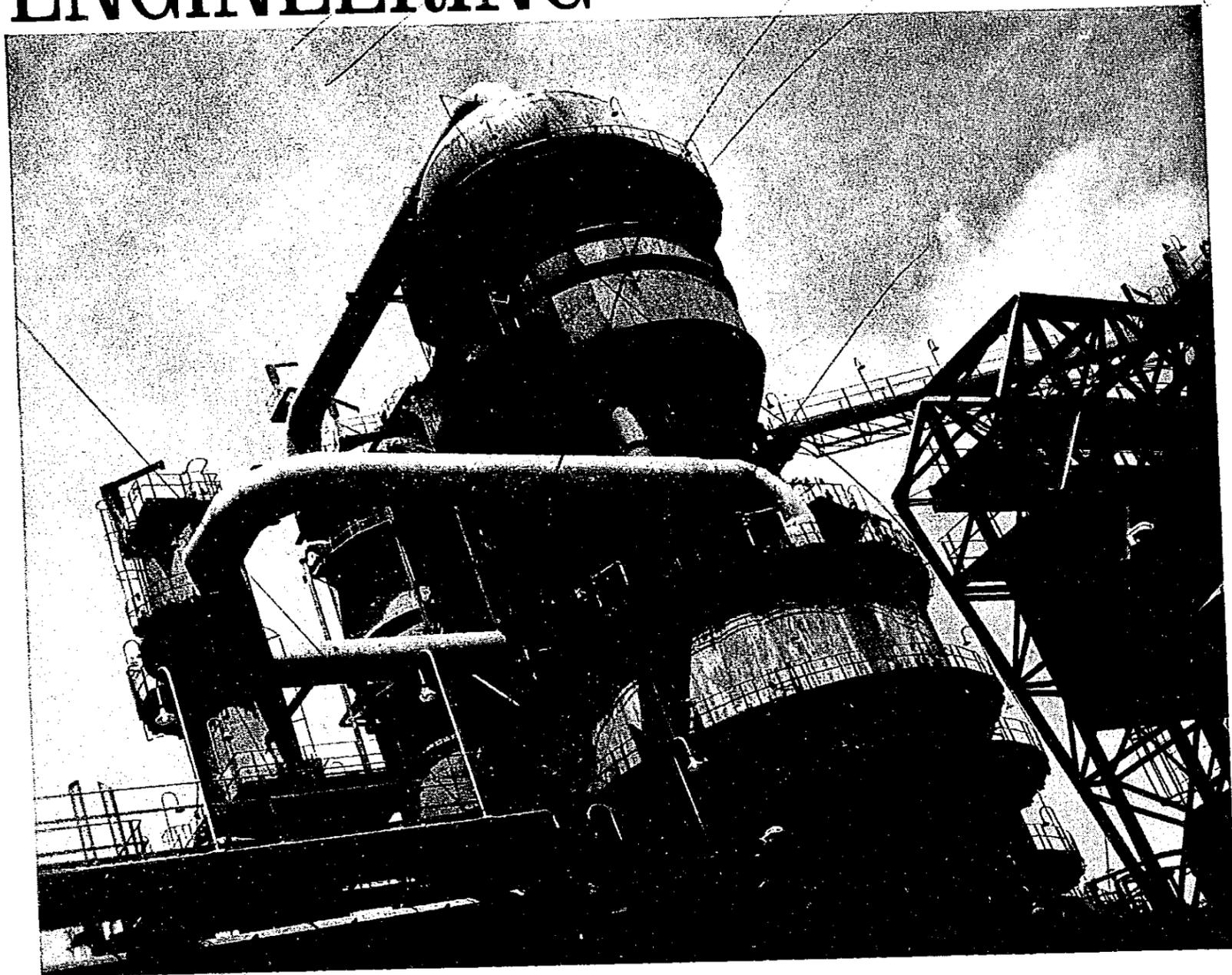


Petrochemicals growing 8-10% yearly 46

Operators fight icy tides in Alaska 52

New tool protects waterflood piping 78

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How Stewart Udall
sees his job as

Oil policy maker for Government

Clyde La Motte
Washington Editor

STEWART L. UDALL, Secretary of Interior, considers his assignment as the Johnson administration's oil-policy draftsman as one of the most important and challenging of his entire career.

He is aware that petroleum is sensitive politically and economically, at home and abroad, and therefore must be handled with skill and care.

And he realizes that having a President from an oil state intensifies the sensitivity of oil-related problems.

These impressions were evident in a recent exclusive interview during which Udall discussed not only his own job and how he intends to approach it but his feeling that the industry itself has increased responsibilities in the present setting.

1. Calling the signals

There is no doubt that Udall intends to be the boss in oil-related matters.

"The buck stops here," he said, borrowing a pet expression from former President Harry S. Truman. "If anything goes wrong, I'll be the one to blame."

Then he added with a grin: "Of course, if something works out well I'll want the credit, too."

There has been speculation that while Udall would be the front man, the real decision making on oil would be done by others.

This apparently stems from the fact that under President Kennedy the White House staff played the key role in oil-policy determination. Udall seemingly paid only routine attention to most oil problems, letting subordinates draft plans for consideration at the White House along with recommendations from other departments and agencies.

But now that primary responsibility and authority has been placed in his office, Udall intends to exercise it.

Even so, he does not plan on running a one-man show.

He will continue to rely heavily on those within his department who are familiar with oil problems, such as Asst. Sec. John M. Kelly.

He will continue to call on the National Petroleum Council and other industry sources for oil data and advice.

He will consult with Congress and other governmental departments and agencies on broad oil-policy matters.

Doubtlessly, he will take into consideration the political implications of any oil action, especially in the months ahead.

In the end, however, he will have to make the decisions.

2. Industry responsibility

Udall and the Johnson administration will lean over

backward to avoid anything that smacks of favoritism to oil.

In turn, Udall feels that the industry itself must be especially alert to avoid giving critics any opening for making such charges.

During the interview the Secretary appeared intent on getting this point across to the industry, hoping for its understanding and cooperation.

Aware of the close scrutiny that will be given to the industry and its relations with the new administration, Udall warned that much of the responsibility for the resulting public image will hinge on the industry and its approach to problems in Washington.

"It seems to me," he said, "that with a President

New oil role not apt to be dull

ONE THING Stewart L. Udall discovered quickly as Secretary of Interior was that anything pertaining to the oil industry is apt to stir controversy.

For instance, he learned at the outset that appointing a man with an oil background to a government position is sure to prompt cries of outrage from oil critics.

Such reaction puzzles Udall. "Treasury calls in bankers and Commerce appoints businessmen and no one thinks anything about it," he commented recently. "But if an oilman is appointed to a job requiring some oil knowledge, a hue and cry is raised."

Udall had another oil-related experience which baffled him almost as much as it pained him.

This concerned a Democratic Party fund-raising dinner. Udall, like other Cabinet members and party leaders, was seeking to get as big a turnout as possible to replenish the party's depleted coffers.

At one point he mentioned to a personal friend connected with the oil industry and active in the party that he hoped his oil friends would attend the dinner.

"I was asking everyone I knew to buy tickets," Udall said later, "and I thought nothing about it because it is an accepted way for a party to raise funds."

But Udall was to learn from front-page headlines that it is different if oil is involved.

On still another occasion Interior managed to draw fire from within the industry as well as from outside the industry. All at the same time.

This was when it became known that Asst. Sec. John M. Kelly had conferred with officials of the Interstate Oil Compact Commission over the possibility of an IOCC study of state regulations affecting oil.

Some industry leaders were alarmed, feeling that the federal Government was trying to move into state domain. Meanwhile, there were charges from the other side that Interior was surrendering to the oil industry.

"We can't win for losing," an Interior official said wryly at the time.

from a leading oil-producing state, this puts special responsibility on the leaders of that industry.

"I don't think, from my experience, that any oil people feel they deserve or will get special treatment simply because the President is from Texas. If so, they should get that notion out of their system.

"As far as we are concerned, there will be no favoritism but there will be fair treatment. We will attempt to shape oil policy in the public interest, considering all aspects of a given situation."

The implication seems clear. If any oil group insists on a showdown on some oil issue in the near future it may harm rather than help its cause.

3. Immediate outlook

Secretary Udall believes that continuity and stability are the key factors in governmental oil-related programs.

Therefore, he will tend to go slow in making major changes in existing programs. Certainly he will avoid making changes for sake of change under present conditions.

"An industry needs to know what to expect from the Government if it is going to plan with any assurance," Udall explained. "It may not always like what the Government is doing but if there is stability in the government's program the industry can adjust accordingly. It's the uncertainty that is the most unsettling factor."

This does not foreclose change, Udall asserted, because adjustments must be made to changing conditions. But it does rule out sudden shifts in emphasis and policy unless there is an overpowering need.

Udall's approach appears in keeping with the overall Johnson administration intention of carrying forward, for the time being at least, the basic programs and policies of the Kennedy administration, leaving most major revisions for consideration after the November elections when Johnson—if he wins—will be in a position to turn from the mandate of 1960 to the mandate of 1964.

This means, then, that decisions on whether to tighten crude-oil-import restrictions, to drop or continue the residual-fuel-oil import program, to open public oil-shale lands to development, and similar policy matters will be kept in abeyance, if possible, until after November.

4. Looking ahead

There seems little doubt that Udall has been favorably impressed by the oil industry's record, but he implies that even greater challenges lie ahead.

"One reason the oil industry has been successful worldwide is that it has relished competition and has shown a willingness to take the high risks that were necessary," he said. "This has been its greatest strength."

He added: "It is important that it retain this competitive spirit and that it continue to be a leader in scientific and technological advances."

He cited with approval the industry's record in research and in developing new product markets.

"This is the type of initiative we are going to have to have in the future," he said.

As for the Government's role in the international

Basic facts about Stewart L. Udall

- Born in St. Johns, Ariz., on Jan. 31, 1920.
- Educated in Arizona schools, including the University of Arizona where he played basketball and earned his law degree.
- Served in combat during World War II, as an enlisted gunner on B-24 Liberators.
- Practiced law in Arizona with a younger brother until he was elected to Congress in 1954. He is married and has six children. He is a Mormon.
- When President Kennedy took office in 1961, Udall became his Secretary of Interior.
- For a time Udall appeared to be the Kennedy administration's "lightning rod," drawing public attention and some criticism by his remarks on a wide range of controversial issues. In the last year or so, however, Udall has appeared more restrained and has been in the limelight less frequently.
- In his early days as secretary Udall was active in Interior's oil-related functions. As time went by, he appeared to withdraw into the background on oil matters.
- Shortly after Lyndon Johnson became President he announced that Udall would have primary oil-policy responsibility. This put Udall back in the oil spotlight.



area, Udall said: "We have to do what we can to help international companies hold their own, even improve their position. This is important for this country as well as for the free world generally."

On the domestic scene, Udall finds some encouraging signs, a few discouraging ones, and some unanswered questions. And here again he leaves the impression that while the industry has done a good job, there is an increasing need for it to do even better.

The encouragement he feels is based on the fact that the industry is strong and healthy for the most part, continuing to keep the nation supplied with oil at reasonable prices.

The discouragement stems largely from economic factors that have resulted in some slowdown in domestic exploration and a less desirable climate for the small independents.

The unanswered questions include one on how far the Government should go in "protecting" the small operator who is encountering increasing difficulties. And whether the larger, more successful firm should be held in check.

"The independents are demanding that something be done," Udall commented. "Yet we have to consider what is best in the long run."

Seemingly, Udall has some concern that too much protection could lead to less efficiency and to an increasing inability to compete vigorously in the open market.

But while he does not pretend to have the answer to all of oil's problems, there is one point on which he is positive: "Oil has been a venture industry from the outset and it has to remain that way."

5. Assorted views

During the interview with the Journal, Udall ex-

pressed an opinion on a wide range of subjects.

He spoke highly of John Kelly and of Kelly's record as assistant secretary of minerals.

"I have the highest confidence in him," Udall said. "He is an able, public-spirited man who has always acted in the best public interest."

Udall made it clear he intends to continue to appoint men with a knowledge and understanding of oil to oil-related posts. This comes despite criticism from Sen. William Proxmire (D.-Wis.) and a few others.

Regarding his own future, Udall indicated a willingness to remain in his present position for as long as the President wishes.

He said flatly he does not intend to run for the Senate this year. Thus he apparently has cast his political future with President Johnson.

Concerning his experience with the oil industry since becoming Secretary of Interior, Udall confessed he has found that oil-related actions created a bigger stir than he had anticipated.

"It is a sensitive area," he said, "with broad political and economic ramifications."

He remarked ruefully that he had gotten into hot water a couple or more times as a result of oil-related action.

Even so, he said he is not going to flinch from tough oil decisions.

"After all," he pointed out, "I've been assigned the job so there's not much else I can do but face the problems and do the best I can." **End**

Petrochemicals growing 8-10% yearly

Houston consultant Henry Groppe figures growth of chemicals from natural gas and refinery operations will continue at this rate through 1966.

THE petrochemical industry in the U.S. is on the upswing, and a steady growth appears likely in the years just ahead.

This continued growth is forecast by Henry Groppe, Houston consultant, who prepared the diagram on the opposite page showing the volumes of natural gas and refinery hydrocarbons going into petrochemicals.

According to Groppe's estimates, presented at a meeting of the Natural Gas Men of Houston, there was a growth rate of 8 to 10% yearly in the amount of petrochemicals produced from natural gas in the 5-year period of 1957-61.

In 1961, such petrochemical production consumed 500 MMcfd of methane and 2,014,000,000 gal of ethane, propane, and butanes.

Groppe figures the annual growth rate for the period of 1962-66 will be about the same as the rate in the earlier 5-year period.

Also during 1961 refinery operations supplied 2,518,000,000 gal of liquids and 70 MMcfd of hydrogen for petrochemical production. These amounts likewise rose in the 8 to 10% range during the 1957-61 period and should continue at the same growth rate for the following 5 years.

Groppe's data on petrochemical production, never before assembled in schematic form showing end-use of crude and natural gas, are based on a variety of information sources: U.S. Tariff Commission and Bureau of Mines reports, general literature in the industry, private information sources, and his own personal estimates.

In making his estimates of growth rate for individual petrochemicals, Groppe took two 5-year periods of 1957-61 and 1962-66.

Natural-gas derivatives

Methanol's growth rate of 6% yearly during 1957-61 should continue throughout 1962-66. A large-volume basic product, methanol

goes mostly into steadily growing markets such as formaldehyde, which, in turn, is used in adhesives and polyesters.

Acetylene is in for a smaller rate of growth. Competition from ethylene should cause acetylene's growth rate of 10-12% yearly during 1957-61 to slacken to about 8% for 1962-66. Most chemicals made from acetylene, such as vinyl chloride, can be made also from ethylene; and acetylene never has been able to become very competitive in price—it sells for 12 cents/lb vs. 5 cents for ethylene.

(Acetylene numbers shown in the diagram are for only that portion going to chemical production; about one-fourth of all acetylene production goes for nonchemical uses, and nearly all of this is made from calcium carbide.)

The growth rate for hydrogen cyanide (HCN) should decrease slightly because of increasing use of propylene as raw material for acrylonitrile, presently a major market for HCN.

Chlorinated solvents are not expected to register a change in growth rate.

Ammonia faces a decline in growth. Huge volumes have built such a large base that the growth rate of 13% yearly during 1957-61 should taper off to 8 to 10% for the following 5 years. The demand for ammonia-based fertilizers has made ammonia the biggest consumer of methane raw material. About three-fourths of ammonia production goes into fertilizers.

LP-gas, crude derivatives

Ethylene growth is about 10% yearly. Ethane cracking accounts for 44% of total production, propane cracking 41%, refinery operations 10%, and other heavier materials 5%.

About one-third of the propane going into ethylene comes from refinery operations and two-thirds from natural-gas operations.

Polyethylene takes about one-

third of the ethylene production.

Polyethylene production in 1957-61 grew at a 40% yearly clip, but this should taper off to 10 to 12% for the following 5 years because of the large base on which percentages will be figured. Also polyethylene has virtually taken over the large existing markets for which it is best suited from the standpoint of physical properties and price. Competitive products also have moved in.

Ethylene oxide's annual growth rate for 1957-61 was about 10%. This should drop to about 5% because of leveling off of some of the larger markets such as ethylene glycol. Foreign competition is drying up the export market.

Ethyl alcohol's growth rate of 5% yearly for 1957-61 should decrease because of a new process for making acetaldehyde from ethylene.

Styrene is due for a setback in growth rates. Loss of export markets for styrene-butadiene rubber (SBR), plastics, and monomer should cut the growth rate of 12% yearly during 1957-61 to about 6 to 7% during the following 5 years. Competition from other products also is affecting production. Styrene goes about 50-50 into rubber and plastics.

Ethyl chloride's growth generally has leveled out, since about 90% goes into rubber and plastics.

Ethylene dichloride's 20% yearly growth during 1957-61 will show a drop because of the large base volume which has developed. It goes mostly into vinyl chloride in competition with acetylene.

Propylene will increase but at a slow rate. About 40% comes from cracking propane and the rest from refining operations. Isopropyl alcohol is the largest derivative.

Isopropyl alcohol's growth was 2% yearly during 1957-61, but production should level off for the following 5 years because the major outlet, acetone, is now being made in large quantities as a byproduct from phenol production.

For propylene tetramer, the

January 9, 1964.
Office Contact Carson City
472-4095 Nevada

Dear John:

Just a note to let you know that I
am out here in Reno, probably to stay
for awhile.

At present I am feeling around for
clients, looking for a place to live in order to get my wife
and family and myself altogether again.
It's great, great country. Never had so much
fresh air in my life - not since I left
Dr. Texas anyway. I am still working
harder on the Pima County prospect and
I hope that any inquiry about me
with your office will bring favorable
comments to Nevada - you know how
people are when you change location.
I tell people here that the Argyre Oil
& Gas Commission is in good hands - at
last. I would say to keep the maps etc.
until I get a chance to pick them up.

Best regards from

Al Russell

encl. Delivery
Reno, Nevada

Mailed 2/7/64

THE FOLLOWING NOT MAILED TO COMMISSIONER HEWARD AT SAME TIME AS MAILED TO OTHER COMMISSIONERS:

Mailed to Mr. Heward 2/6/64:

- ✓ Two page report of Geological Field Trips by JKP dated January 20, 1964.
 - ✓ Four page report of Executive Secretary by JKP dated January 22, 1964.
 - ✓ H. B. 14
 - ✓ S. B. 43
 - ✓ Three page Potash memo from JKP to exploration companies.
 - ✓ December statement of ledger transactions
 - ✓ Production report for December.
 - ✓ Compact Comments, Volume 18, Number 11 & 12
 - ✓ Letter dated January 14, 1964 reported United Fund results.
 - ✓ Potash letter to Texas Gulf Sulphur Company dated January 24 from JKP.
 - ✓ JKP's letter of January 30th re T14N R20E Area Navajo County and Map
- TO BE MAILED:

- ✓ H. B. 13
- ✓ I.O.C.C. - Minutes
- ✓ Oil Securities
- ✓ Blue I.O.C.C. booklet *no extra copies thermo 7 of Mld 2/7*
- ✓ Newspaper clipping "Drilling for oil in Willcox"
- ✓ Newspaper clipping "The search for oil"

(Note: Blue I.O.C.C. booklet was the Interstate Oil Compact Commission Committee Bulletin, Volume V, Dec., 1963, Number 2, Containing papers delivered before committees, December 9, 1963, Santa Fe, New Mexico)

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NEWSLETTER

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November-December, 1963

1963 ANNUAL MEETING

Meeting in Santa Fe, New Mexico, the Interstate Oil Compact Commission elected Gov. Jack M. Campbell, the host governor, and a former member of the Legal Committee, its chairman for the year 1964.

In his address of acceptance, Gov. Campbell expressed his pleasure at his election to this office and announced that he had requested Gov. Matthew E. Welsh, of Indiana, Chairman of the Commission in 1963, to continue to serve in his capacity as Chairman of the Governors Special Study Committee. He also sounded a note of optimism regarding the recent announcement by the President that oil and gas matters would be handled directly by Stewart L. Udall, Secretary of the Interior. Gov. Campbell pointed out that, in past years, the Department of the Interior had been the direct liaison department in this regard.

Other officers elected during the business session on Wednesday morning included Howard Rose, Texas, First Vice-Chairman; F. Allen Calvert, Jr., Oklahoma, Second Vice-Chairman; and Lawrence R. Alley, Headquarters Office, Executive Secretary.

States serving on the Executive Committee for 1964 are Arkansas, Colorado, Illinois, Indiana, Kansas, Louisiana, Montana, New Mexico, Oklahoma, Pennsylvania and Texas.

Governors participating in the meeting were Gov. John A. Love, Colorado; Gov. Welsh; Gov. John Anderson, Jr., Kansas; Gov. Tim M. Babcock, Montana; Gov. Frank B. Morrison, Nebraska; Gov. Campbell; Gov. Henry L. Bellmon, Oklahoma; Gov. George D. Clyde, Utah; and Gov. Clifford Hansen, Wyoming. Also in attendance were Lawrence J. O'Connor, Jr., Federal Power Commission; John M. Kelly, Assistant Secretary of the Interior; John Lamont, Department of Justice; and J. Cordell Moore, Oil Import Administrator, Department of the Interior.

In his report to the Commission regarding the progress made on the efficiency study, Gov. Welsh said that, although the bulk of the background material for the report -- factual data which will form the basis for the report -- has been gathered, it will be approximately a year before the report will be issued in final form. Gov. Welsh said that the committees have made tremendous strides in gathering and tabulating the information required, but some committees have found it necessary to acquire information not originally considered necessary for inclusion in the report. These committees, he said, would therefore continue their efforts to make their reports as completely factual as possible. He commended the committees of the Commission for their work in this study and said that virtually all of the committees had submitted preliminary drafts to the editing committee.

Editors and others are invited to make free use of reprinting liberties in the utilization of any material in Compact Comments, with or without credit to the Interstate Oil Compact Commission.

Mailed 1/31/64

Present plans, Gov. Welsh said, included presentation of a draft for discussion at the Midyear Meeting of the Commission in Billings, Mont., with the final report to be submitted to the Commission at its Annual Meeting in December, 1964, in Biloxi, Miss.

In his report, Gov. Welsh stated that, although the report has not yet been issued, its compilation has stimulated investigations in several states into their laws, rules and regulations. He cited as examples the states of Texas and Kansas, particularly, and he also mentioned that the state of Ohio recently passed an oil and gas conservation statute. "I have been told that Governor Bellmon, during a meeting with Governor Rhodes, stressed the importance of having an oil and gas conservation statute to cope with the current development in a certain section of that state," he said.

Often during the past months, it has been recognized that the Compact Commission is in a unique position to draw the states and the federal government together in a mutual effort to solve a mutual problem, said Lawrence J. O'Connor, Jr., Federal Power Commission, in his address before the Commission. Mr. O'Connor suggested that the Interstate Oil Compact Commission could perform an outstanding service by promoting the cooperative efforts of the states, the industry and the federal government in achieving a standardized system of collecting and reporting statistics.

He selected as an example the use of pressure base for gas volumes, and pointed out that there is no standardization in this area, with the result that there may be a wide variation in the meaning of "cubic foot of gas" between states and operators. He also suggested that a standardization of measures of B. T. U. content of gas would be of great assistance to the Federal Power Commission, as well as to state agencies.

He pointed out that, where gaps exist in available information, opportunity is created for endless and expensive litigation and adjudication, and he said that, in his opinion, standard measurements in many areas would speed up the rate at which the Federal Power Commission is able to deal with problems in its domain.

In his address before the Commission, A. L. Porter, Jr., Secretary-Director of the New Mexico Oil Conservation Commission, cited the Hobbs Pool as a major example of a pool whose life has been prolonged by sound conservation practices far past its normal expectancy in the days of its discovery. He said the completion of the second well in this pool in 1930 opened the doors to New Mexico's thirty years of significant oil and gas production.

Mr. Porter outlined the manner in which the conservation statute in New Mexico is administered, and listed some of the economic advantages accruing to the state as a result of its oil and gas production. He also cited the state's continued activity in the Interstate Oil Compact Commission, dating from its ratification, as the first state to do so, of the Interstate Compact to Conserve Oil and Gas.

Mr. Porter said that New Mexico's laws and rules and regulations were passed at a time when public officials were becoming increasingly aware of the importance of conservation practices and, therefore, have needed relatively few changes since their adoption. He stressed the fact that strong administration is the deciding factor in controlling the production of oil and gas to prevent waste and to obtain the greatest ultimate recovery.

The Response to Governor Campbell's Address of Welcome was presented by Mr. Jack H. Abernathy, because of Gov. Bellmon's unavoidable absence. Mr. Abernathy read Gov. Bellmon's address, detailing Oklahoma's position among the oil and gas producing states and reiterating Gov. Bellmon's often-stated opinion that critics of the federal government should work doubly hard to see that the federal government is not burdened with responsibilities that should be assumed by the states.

In his address, Gov. Bellmon quoted from the Inaugural Address of Oklahoma's first governor, Charles N. Haskell:

"... Let us pray for the reservation within the hands of the people of Oklahoma of the right to govern themselves to the fullest extent that the teachings of Washington and Jefferson contemplated we should have when they created and defended the Constitution of the United States."

Gov. Bellmon also congratulated Gov. Welsh and the members of the Executive Committee "for their foresight in authorizing and conducting the efficiency study now so far advanced by the capable committees of the IOCC. The total cooperation which has been given by state regulatory agencies and by all segments of the industry is abundant evidence of the confidence the IOCC has fostered in state regulation."

In a resolution presented to the Commission during the business session, it was recommended that all oil imports be tied to a specified percentage of actual future domestic production. It was again the opinion of the Interstate Oil Compact Commission that the program be strengthened and made more effective by restricting total oil imports to a specified constant percentage of United States oil production of the forthcoming year.

Additional resolutions expressed appreciation to Gov. Matthew E. Welsh for his efforts as Chairman during 1963, and particularly for the work he has done regarding the special efficiency study being conducted by the Governors Committee. The Commission especially commended Elmer L. Hoehn for his outstanding efforts on behalf of the Commission during 1963. The Commission expressed regret at the recent tragic accident suffered by Governor Connally, of Texas, and its wish for his rapid and complete recovery.

It was also recommended by the Public Lands Committee that a resolution be approved commending Warwick M. Downing for his long years of outstanding, loyal service to the Public Lands Committee and the Interstate Oil Compact Commission. Judge Downing served as a representative from Colorado when the Compact was written at Dallas, Texas, on February 15-16, 1935. Since then, this was the first meeting of the Commission that Judge Downing has not represented the state of Colorado, and it was only due to the condition of his health that he was absent at this time.

In other actions of the Commission, reports were approved from the Resolutions Committee, Nominating Committee and Finance and Publications Committee. Both the Chairman of the Finance and Publications Committee, A. L. Porter, Jr., and Gov. Welsh, in his report as Chairman of the Commission, affirmed that the finances of the Commission were in excellent condition. The Commission also approved the recommendation of the Finance and Publications Committee that the 1964 budget be set at \$105,000, as it was in 1963.

The Commission approved the report of the Public Lands Committee, which announced the election of a new Chairman, Howard Bratton, of New Mexico, for 1964.

The Engineering Committee, Regulatory Practices Committee, Research Committee, and Secondary Recovery and Pressure Maintenance Committee presented for the consideration of the Commission the reports they have prepared in connection with the efficiency study, currently being conducted by the Compact Commission.

Mr. Minor S. Jameson, Jr., Executive Vice President of the Independent Petroleum Association of America, presented the "1964 Outlook for U. S. Oil Production." Mr. Jameson's report noted that the IPAA Supply and Demand Committee had recently concluded that "the U. S. general economy would continue to advance in 1964 -- but at a somewhat slower rate than in 1962 and 1963." Rate of growth in oil consumption is expected to moderate, he said, and show an increase of 2.6 percent as compared with 4.3 percent in 1962 and 3.1 percent in 1963.

"The feeling of much of the petroleum industry toward President Johnson's approach to federal regulatory policies was exemplified by the reaction of state officials and industry representatives at last week's meeting of the Interstate Oil Compact Commission... Oil conservation, while a matter of national concern, is peculiarly unsuited to regulation on a national basis. It requires the cooperation of the industry with technically knowledgeable officials, acting on a local basis and with field-by-field adaptations." (Oil and Gas Journal, December 16, 1963.)

In this same issue, the Oil and Gas Journal describes the Annual Meeting of the Interstate Oil Compact Commission as a "working meeting" and most of the 500 people in attendance at the meeting would agree. At no time in the history of the Compact have more people been active in discussion sessions, in making reports and in general participation.

The Committee sessions at this meeting were particularly outstanding, in that they covered a wide range of interest.

The Engineering Committee's session included "A Review of the Problems, Solutions, and Results Associated with the Operations of the Magnolia and Adena Gas-Cap Reservoirs: Progress Report of a Larger Study Covering Different Ways of Effecting Good Gas-Cap Management," by L. K. Weaver and K. F. Anderson, both with the U. S. Bureau of Mines, Region IV, in Dallas, Texas. The discussion of this subject was accompanied by slide illustrations.

Mr. Joe D. Ramey, New Mexico Oil Conservation Commission, presented a paper before the Secondary Recovery and Pressure Maintenance Committee entitled, "Water Flooding in Southeast New Mexico." Mr. Ramey discussed the history of water flooding in New Mexico, beginning in April, 1952, and also discussed the spirit of cooperation existing between the operators in this area and those responsible for administering New Mexico's Rule 701, covering the injection of fluids into reservoirs. He pointed out that, while Rule 701 was written for the purpose of maintaining a balance beneficial to all phases of the oil industry in New Mexico, and does, therefore, place certain restrictions on water floods, these restrictions are liberal and flexible and permit very profitable water flood operations in the state.

The Joint Session of the Engineering, Regulatory Practices, Research, and Secondary Recovery and Pressure Maintenance Committees was one of the best attended sessions in recent years.

Appearing on the program of this session was Emery C. Arnold, New Mexico Oil Conservation Commission, who discussed "Gas Proration in the San Juan Basin." Mr. Arnold discussed proration problems in the San Juan Basin and described the activities of the Oil Conservation Commission as it attempted to arrive at a proration formula which would be fair to all and still avoid placing New Mexico's oil industry in jeopardy as a result of overproduction. He pointed out that the decision of the Supreme Court in the Jalmat Case would carry great weight in the determination of future proration cases.

"The Oil Import Program and the IOCC" was the subject discussed by J. Cordell Moore, Oil Import Administrator, U. S. Department of the Interior. In his address to the Joint Session, Mr. Moore stated that "the mandatory oil import program is but one implement in encouraging the creative search for efficient petroleum use, the diligence in seeking out new reserves and the vigilance to resist wasteful development, all of which contribute to a healthy and vital oil industry, so essential to national security." Mr. Moore discussed the problem of oil imports as they relate to national security and domestic production, presenting a history of the various attempts to control the flow of imported oil into the United States. In addition, he discussed briefly some of the problems which have developed during the present administration.

The third speaker before the Joint Session was Mr. Daniel S. Nutter, New Mexico Oil Conservation Commission, who discussed "The Application of Engineering Principles to the

Conservation Rules of New Mexico." Mr. Nutter's address dealt in some detail with matters relating to automatic custody transfer, including the regulations in New Mexico controlling the use of this equipment. He also discussed the regulations permitting the commingling of oil produced from separate pools and from separate leases, and described the Conservation Commission's manual on this subject.

Ladies attending the Annual Meeting were entertained at a Tea given by Mrs. Jack M. Campbell, at the Governor's Mansion on Tuesday afternoon.

Following this, on Tuesday evening, Gov. Welsh presided over the banquet which was preceded by a Social Hour, both held at the La Fonda.

ATTENDANCE AT SANTA FE MEETING

- Abbott, Seth, Box 2819, Dallas, Tex.
 Abernathy, Mr. and Mrs. Jack H., Box 14837, Oklahoma City, Okla.
 Abington, Mr. and Mrs. William H., 4050 Devon Court, Ft. Worth, Tex.
 Albares, Mr. and Mrs. Edward A., Box 719, El Dorado, Ark.
 Alley, Mr. and Mrs. Lawrence R., IOCC Hqs. Ofc., Oklahoma City, Okla.
 Anderson, Gov. and Mrs. John, Jr., State Capitol, Topeka, Kans.
 Anderson, Mr. and Mrs. John A., Box 1857, Roswell, N. M.
 Anderson, K. F., 1114 Commerce St., Dallas, Tex.
 Anderson, Mr. and Mrs. R. M., Box 1470, Midland, Tex.
 Anderson, Warren R., 204 First Federal Savings Bldg., Austin, Tex.
 Armstrong, Mr. and Mrs. M. L., Drawer DD, Artesia, N. M.
 Arnold, Emery C., 100 Rio Brazos Rd., Aztec, N. M.
 Aston, Mr. and Mrs. Rogers, Box 1090, Roswell, N. M.
 Babcock, Gov. and Mrs. Tim M., State Capitol, Helena, Mont.
 Bailey, O. C., First National Bank Bldg., El Dorado, Ark.
 Ballou, Mr. and Mrs. A. R., Box 2880, Dallas, Tex.
 Balsam, Mr. and Mrs. E. G., Box 990, Miles City, Mont.
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 Bauer, Art, Box 144, Bismarck, N. Dak.
 Beach, Mr. and Mrs. Ross, Box 599, Hays, Kans.
 Beck, Mr. and Mrs. Bryan D., Jr., 395 10th St., Beaumont, Tex.
 Bedford, C. F., Box 1410, Ft. Worth, Tex.
 Beery, Mr. and Mrs. Roy, 2001 Gulf Bldg., Houston, Tex.
 Bell, A. H., Natural Resources Bldg., Urbana, Ill.
 Belimon, Gov. and Mrs. Henry L., State Capitol, Oklahoma City, Okla.
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 Botset, H. G., 103 State Hall, University of Pittsburgh, Pittsburgh, Pa.
 Bowlin, Charles E., 380 Jim Thorpe Bldg., Oklahoma City, Okla.
 Boyd, Edward B., Rt. 1, Larned, Kans.
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 Broschat, R. E., Box 1009, Williston, N. Dak.
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 Brown, William H., 1140 S. Center St., Casper, Wyo.
 Buckles, Mr. and Mrs. George L., Box 56, Monahans, Tex.
 Buckwalter, Mr. and Mrs. John F., 922 8th St., Wichita Falls, Tex.
 Byram, Mr. and Mrs. R. W., Drawer M, Capitol Station, Austin, Tex.
 Byrd, Mr. and Mrs. Richard C., First National Bank Bldg., Ottawa, Kans.
 Cain, H. W., Box 1642, Houston, Tex.
 Calhoun, Mr. and Mrs. Henry C., 601 Denver Club Bldg., Denver, Colo.
 Calvert, Mr. and Mrs. F. A., Jr., 418 National Bank of Tulsa Bldg., Tulsa, Okla.
 Campbell, Gov. and Mrs. Jack M., State Capitol, Santa Fe, N. M.

- Carlson, T. C., Box 10185, Dallas, Tex.
Carlton, James L., Jr., ESC Bldg.,
Casper, Wyo.
Carnes, Mr. and Mrs. John P., Box 1553,
Roswell, N. M.
Carr, Mr. and Mrs. Charles E., Box 419,
Lawrenceville, Ill.
Carson, Capt. and Mrs. M. V., Jr., 406
Universal Bldg., Washington, D. C.
Carson, Dean and Mrs. W. H., University
of Oklahoma, Norman, Okla.
Cartwright, Mr. and Mrs. Wilburn, 801
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Coker, Mr. and Mrs. Mac L., 206
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Petroleum Center, Farmington, N. M.
Cooper, R. C., Box 271, Olney, Ill.
Cox, Earl, Box 208, Belle Fourche, S. Dak.
Cox, Mr. and Mrs. Winston L., 702 Midland
Bank Bldg., Billings, Mont.
Cullender, Dr. and Mrs. M. H., 424B
Phillips Bldg., Bartlesville, Okla.
Cupps, Cecil Q., Box 3395, University
Station, Laramie, Wyo.
Davis, S. H., Box 2819, Dallas, Tex.
Davis, Mr. and Mrs. W. Jeff, Times-
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Dawson, Arch, Box 7600, Los Angeles,
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Dillon, Mr. and Mrs. W. A., Box 738,
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Dippel, Mr. and Mrs. Harry G., Box 2197,
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Nebr.
Doyen, Ross, Rice, Kans.
Durrett, Mr. and Mrs. James M., Jr.,
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Durst, Mr. and Mrs. Roy T., 1210
Ft. Worth Natl. Bldg., Ft. Worth, Tex.
Dutton, Mr. and Mrs. Granville, Box 2880,
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The SEARCH FOR OIL...

We've never had the opportunity to live in an oil producing area, and consequently when a real oil-drilling rig moved onto the Hooker Ranch we were keenly interested.

There has been considerable oil exploration in the Willcox area in times past, and although we personally have no knowledge of oil formations or what it takes to produce oil, we have talked to some good friends in the business who believe there's oil around here.

One of the great rules of baseball was stated for all time by the noted slugger who gave this as the secret of his success: "I hit 'em where they ain't."

Oil men must, we are told, follow pretty much the same rule. They know they can't depend on meeting present and future energy demands with the same existing wells, because the moment any well starts producing, it begins running dry. Many wells run for years, but no well will last forever.

That being the case, oilmen have to look for new petroleum reserves in areas where oil and gas have not previously been found. This is the reason for the rig on the Hooker property today, and also why men with knowledge and background in oil exploration are interested in our area.

As we all know, the search for oil sometimes takes them to some far-flung places, including near the equator and the north pole. In fact, oil wells are successfully drilled off the shores of our nation as widely separated as the borders of the nation will permit.

These projects -- known in the oil business as wildcats -- are on a rocky mountainous Alaskan peninsula; near the Mexican border in Southwest Texas; near the Everglades on the west coast of Florida; in rolling farm country in up-state New York; and in Oregon's Willamette Valley. Each of these tests is at least 1,200 miles from the others.

Prospecting for oil is a lot different from saddling up a burro and going off alone to look for gold nuggets. Despite some helpful clues from geologists and geo-physicists, the only way oilmen can be sure of finding petroleum is to drill a well. That means investing in tremendously expensive machinery and equipment. The average well on land, whether productive or not, costs \$55,000, while we are told offshore wells cost an average of \$382,000.

When they drill a well -- which may probe as far down as four or five miles below the earth's surface -- oilmen have no guarantee of success. Out of every 100 wells drilled in untested areas, only three find commercial quantities of oil or gas.

Despite these odds, oilmen drilled from 10,800 exploratory wells in this country last year. This is the kind of determined effort which has made petroleum-producing areas out of 33 of our states. This is the kind of work it takes to supply nearly 75 percent of America's energy needs.

Arizona is one of the remaining 17 states that is not considered "oil-producing" by petroleum authorities. We would like to extend our congratulations to the men who drill for oil, and have made America one of the world's largest producers. And at the same time, we wish to encourage the oilmen who are using their knowledge and skill and money in trying to make Arizona one of the oil-producing states.

Mailed 1/31/64

ARIZONA RANGE NEWS

Dec 27, 1963

Willcox

WILCOX, ARIZONA
Willcox

Arizona Range News
Dec 27, 1963

Drilling For Oil In Willcox Area



PRINCIPALS OF RAM DRILLING in the Willcox area are shown here during a visit to the well by C of C Manager Rex Emrick (left), and Publisher Clyde S. Roberts of the Arizona Range News (not shown). Shown above (l.r): Rex Emrick, manager of C of C.; Maynard J. Davies, Managing Director Ram Oil Co.; Orval Harden, head driller and rig owner, and J. M. "Bo" Tucker, assistant driller.

The Ram Oil Company is in charge of drilling operations for the test well now underway at the Sierra Bonita Ranch. It is an Arizona Corporation, incorporated October 17, 1960, with its principal office located in suite 414, 2727 N. Central Avenue, Phoenix.

The company was organized to engage in the leasing of lands believed to contain petroleum, oils, and Helium gas; and drilling for, producing and marketing of oil and gas and other related hydrocarbons.

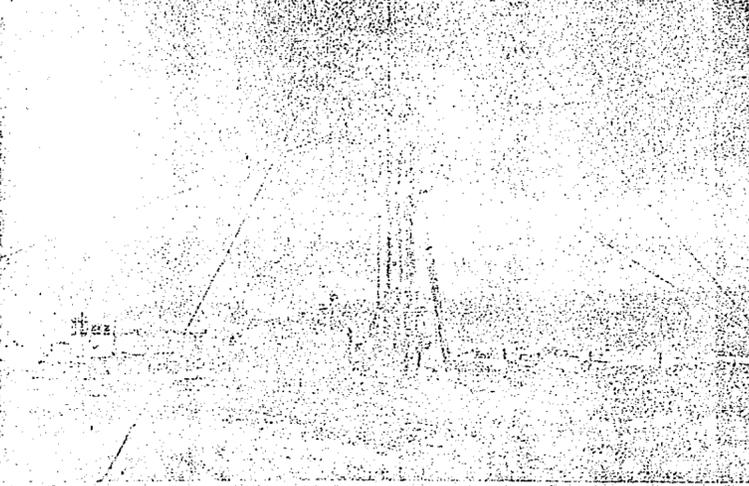
The Ram Oil Company has two successful Helium completions in Apache County, and encountered gas in a wildcat drilled near Springerville. Crevice conditions in the latter well created drilling difficulties, but operations in this area are scheduled for this coming spring. Several new wells are scheduled also in the Pinta-Dome area in the coming year.

The Ram Oil Company holds a pipeline franchise by a Certificate of Convenience and Necessity granted by the State of Arizona January 22, 1963. It has placed the company in the position of being able to actively negotiate the financing of both pipeline and extraction plant and to negotiate contracts on existing Helium wells, presently shut in awaiting Ram Oil Company facilities. Several large producers have expressed willingness to finalize such contracts upon the availability of necessary facilities. This Certificate of Convenience and Necessity gives Ram Oil Company the exclusive rights to construct, operate and maintain in Apache, Navajo and Coconino Counties, Arizona and any extensions provided by law, a public service utility pipeline for the transportation of Helium, Nitrogen and Helium bearing gases from points of production to separation plants and from separation plants to railhead or pipeline.

The Ram Oil Company is not unmindful of the search for petroleum in the State of Arizona as evidenced by protective acreage holdings, and will continue its policy of acquiring acreage in strategic areas geologically favorable to the accumulation of oil and gas, all in conformity with the policy of becoming a fully integrated organization, and in conformity with this policy "Ram" several months ago opened negotiations with Roy A. Sharp of Denver, who put together a substantial block of acreage in the Sierra Bonita area. Ram, after geological evaluation, concluded negotiations on some 32,000 acres and agreed to immediate drilling operations.

Donald E. Hornecker, President, and Maynard J. Davies, Managing Director and Exploration Chief, carried out negotiations and "Walker Neer S42" heavy duty drilling equipment was moved to the location on the Sierra Bonita Ranch, being about one and three-quarter miles S.W. of the Old Hooker Well drilled in 1930 and reporting several oil shows from 1600 feet to 1985 feet.

Ram Sierra-Bonita No. 1 Well has run 16" casing to 508 feet and is now sitting with 12 3/4" casing cemented at 751 feet. Operations will resume December 29, 1963.



RAM SIERRA BONITA NO. 1 WELL is shown here with drilling operation proceeding under the supervision of Maynard J. Davies, Managing Director - Explorations Chief, Ram Oil Co.



J. M. "Bo" TUCKER, Willcox driller, catches samples from Ram Sierra-Bonita Well No. 1 for analysis by Ram engineers. Mailed 1/31/64

Mailed to Commissioners 1/31/64, Xeroxed copies of the following:

Letter to Commissioner Kalil re T14N-R20E, Navajo County (Originals)

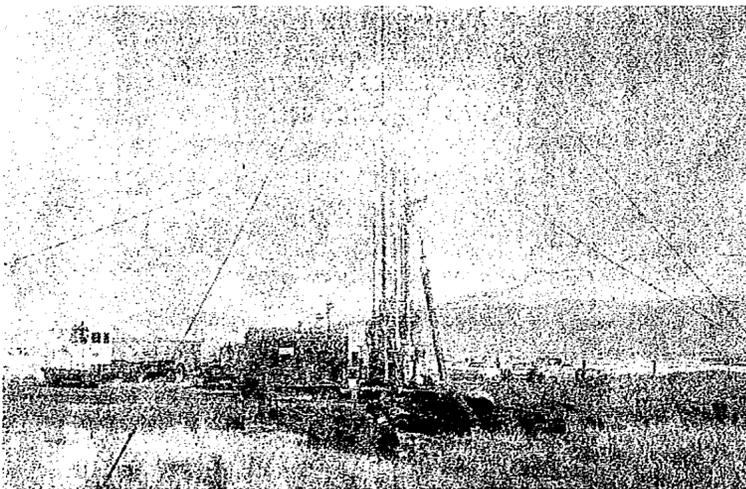
"The Search for Oil", article from the Arizona Range News, Willcox, December 27, 1963

Compact Comments, Volume 18, Number 11 & 12, November, December, 1963.

"Drilling for Oil in Willcox Area," article from Arizona Range News, Willcox, Arizona.



PRINCIPALS OF RAM DRILLING in the Willcox area are shown here during a visit to the well by C of C Manager Rex Emrick (left), and Publisher Clyde S. Roberts of the Arizona Range News (not shown). Shown above (l-r): Rex Emrick, manager of C of C.; Maynard J. Davies, Managing Director Ram Oil Co.; Orval Harden, head driller and rig owner, and J. M. "Bo" Tucker, assistant driller.



RAM SIERRA BONITA NO. 1 WELL is shown here with drilling operation proceeding under the supervision of Maynard J. Davies, Managing Director - Explorations Chief, Ram Oil Co.

Drilling For Oil In Willcox Area

The Ram Oil Company is in charge of drilling operations for the test well now underway at the Sierra Bonita Ranch. It is an Arizona Corporation, incorporated October 17, 1960, with its principal office located in suite 414, 2727 N. Central Avenue, Phoenix.

The company was organized to engage in the leasing of lands believed to contain petroleum, oils, and Helium gas; and drilling for, producing and marketing of oil and gas and other related hydrocarbons.

The Ram Oil Company has two successful Helium completions in Apache County, and encountered gas in a wildcat drilled near Springerville. Crevice conditions in the latter well created drilling difficulties, but operations in this area are scheduled for this coming spring. Several new wells are scheduled also in the Pinta-Dome area in the coming year.

The Ram Oil Company holds a pipeline franchise by a Certificate of Convenience and Necessity granted by the State of Arizona January 22, 1963. It has placed the company in the position of being able to actively negotiate the financing of both pipeline and extraction plant and to negotiate contracts on existing Helium wells, presently shut in awaiting Ram Oil Company facilities. Several large producers have expressed willingness to finalize such contracts upon the availability of necessary facilities. This Certificate of Convenience and Necessity gives Ram Oil Company the exclusive rights to construct, operate and maintain in Apache, Navajo and Coconino Counties, Arizona and any extensions provided by law, a public service utility pipeline for the transportation of Helium, Nitrogen and Helium-bearing gases from points of production to separation plants and from separation plants to railhead of pipeline.

The Ram Oil Company is not unmindful of the search for petro-

leum in the State of Arizona as evidenced by protective acreage holdings, and will continue its policy of acquiring acreage in strategic areas geologically favorable to the accumulation of oil and gas, all in conformity with the policy of becoming a fully integrated organization, and in conformity with this policy "Ram" several months ago opened negotiations with Roy A. Sharp of Denver, who put together a substantial block of acreage in the Sierra Bonita area. Ram, after geological evaluation, concluded negotiations on some 32,000 acres and agreed to immediate drilling operations.

Donald E. Hornecker, President, and Maynard J. Davies, Managing Director and Exploration Chief, carried out negotiations and "Walker Near S42" heavy duty drilling equipment was moved to the location on the Sierra Bonita Ranch, being about

one and three-quarter miles S.W. of the Old Hooker Well drilled in 1930 and reporting several oil shows from 1600 feet to 1985 feet. Ram Sierra-Bonita No. 1 Well has run 16" casing to 598 feet and is now sitting with 12 1/2" casing cemented at 734 feet. Operations will resume December 30, 1963.



J. M. "Bo" TUCKER, Willcox driller, catches samples from Ram Sierra-Bonita Well No. 1 for analysis by Ram engineers.

The SEARCH FOR OIL...

We've never had the opportunity to live in an oil producing area, and consequently when a real oil-drilling rig moved onto the Hooker Ranch we were keenly interested.

There has been considerable oil exploration in the Willcox area in times past, and although we personally have no knowledge of oil formations or what it takes to produce oil, we have talked to some good friends in the business who believe there's oil around here.

One of the great rules of baseball was stated for all time by the noted slugger who gave this as the secret of his success: "I hit 'em where they ain't."

Oil men must, we are told, follow pretty much the same rule. They know they can't depend on meeting present and future energy demands with the same existing wells, because the moment any well starts producing, it begins running dry. Many wells run for years, but no well will last forever.

That being the case, oilmen have to look for new petroleum reserves in areas where oil and gas have not previously been found. This is the reason for the rig on the Hooker property today, and also why men with knowledge and background in oil exploration are interested in our area.

As we all know, the search for oil sometimes takes them to some far-flung places, including near the equator and the north pole. In fact, oil wells are successfully drilled off the shores of our nation as widely separated as the borders of the nation will permit.

These projects -- known in the oil business as wildcats -- are on a rocky mountainous Alaskan peninsula; near the Mexican border in Southwest Texas; near the Everglades on the west coast of Florida; in rolling farm country in upstate New York; and in Oregon's Willamette Valley. Each of these tests is at least 1,200 miles from the others.

Prospecting for oil is a lot different from saddling up a burro and going off alone to look for gold nuggets. Despite some helpful clues from geologists and geophysicists, the only way oilmen can be sure of finding petroleum is to drill a well. That means investing in tremendously expensive machinery and equipment. The average well on land, whether productive or not, costs \$55,000, while we are told offshore wells cost an average of \$382,000.

When they drill a well -- which may probe as far down as four or five miles below the earth's surface -- oilmen have no guarantee of success. Out of every 100 wells drilled in untested areas, only three find commercial quantities of oil or gas.

Despite these odds, oilmen drilled from 10,800 exploratory wells in this country last year. This is the kind of determined effort which has made petroleum producing areas out of 33 of our states. This is the kind of work it takes to supply nearly 75 percent of America's energy needs.

Arizona is one of the remaining 17 states that is not considered "oil-producing" by petroleum authorities. We would like to extend our congratulations to the men who drill for oil, and have made America one of the world's largest producers. And at the same time, we wish to encourage the oilmen who are using their knowledge and skill and money in trying to make Arizona one of the oil-producing states.

ARIZONA RANGE NEWS

Dec 27, 1963

Willcox

S T A T E O F A R I Z O N A
OIL, GAS & HELIUM PRODUCTION
December 1963

COMPANY

WELL NAME & NUMBER

FIELD

BBLs.

CUMULATIVE

OIL

Humble Oil & Refining Co.	Navajo Tribe of Indians "E"	E. Boundary Butte	94	28,630
Humble Oil & Refining Co.	Navajo Tribe of Indians	E. Boundary Butte	75	1,894
Pan American Petroleum Co.	Navajo Tribal "P" #1	Undesignated Paradox	143	5,735
Shell Oil Company	Navajo Tribal #23-11	E. Boundary Butte #8	538	7,270
Shell Oil Company	Navajo Western Navajo #1	North Toh-Atin	0	334
The Superior Oil Company	Navajo "H" #14-16	Twin Falls Creek	28	28
Texas Pacific Coal & Oil	Navajo Tract 138	Dry Mesa	646	116,676
Texas Pacific Coal & Oil	Navajo Tract 138	Dry Mesa	2,198	111,255
Texaco, Inc.	Navajo Tribe "AG" #1	Undesignated	2,282	20,474

HELIUM GAS

Kerr-McGee Oil Industries

Fee #1 Unit III	Pinta Dome	8,249	152,964
Fee #2 Unit VIII		4,405	122,985
State #1 Unit VI		6,228	76,004
State #3 Unit IV		123	4,497
State #2 Unit V		12,953	268,731
State #4 Unit I		1,136	37,462

Eastern Petroleum Company

State #1-28 Unit II	Pinta Dome	3,194	113,299
State #1-2 Unit IX		2,695	47,011
State #1-10 Unit X		603	13,874

NATURAL GAS

Humble Oil & Refining Co.	Navajo Tribe of Indians	E. Boundary Butte	21,780	236,990
Humble Oil & Refining Co.	Navajo Tribe of Indians "E"	E. Boundary Butte	4,607	401,516
El Paso Natural Gas Co.	Navajo Tribal - Beta Peak #1	Undesignated	5,126	276,638
Shell Oil Company	Navajo Tribal #23-11	E. Boundary Butte 8	31,276	316,441
Shell Oil Company	Navajo Tribal #2	E. Boundary Butte 7	415	165,532
Shell Oil Company	Navajo Western - Navajo #1	North Toh Atin	1,542	198,428
The Superior Oil Company	Navajo "H" #14-16	Twin Falls Creek	5,118	5,118

Mailed 1/28/64

Also mailed January 27th, but no samples attached:

1. Oil Securities
2. Blue IOCC booklet: The Interstate Oil Compact Commission Committee Bulletin, Volume V, December, 1963, Number 2, Containing Papers delivered before Committees, December 9, 1963, Santa Fe, New Mexico.

MINUTES OF THE ANNUAL MEETING
 INTERSTATE OIL COMPACT COMMISSION
 LA FONDA HOTEL
 SANTA FE, NEW MEXICO
 DECEMBER 9-11, 1963

The Annual Meeting of the Interstate Oil Compact Commission was held in Santa Fe, New Mexico, December 9-11, at the La Fonda Hotel. Governor Matthew E. Welsh of Indiana, Chairman, presided at the meeting, and the following states were represented:

ALABAMA	Senator Neil Metcalf
ARIZONA	John K. Petty (Representing Lynn Lockhart)
ARKANSAS	O. C. Bailey
COLORADO	Governor John A. Love John M. King
GEORGIA	Captain Garland Peyton
ILLINOIS	Guy E. McGaughey George R. Lane
INDIANA	Governor Matthew E. Welsh Elmer L. Hoehn
KANSAS	Governor John Anderson, Jr. William L. Mitchell
KENTUCKY	Fred E. Moran
LOUISIANA	Thomas M. Winfield (Representing G. M. Anderson)
MICHIGAN	L. W. Price (Representing Gerald E. Eddy)
MONTANA	Governor Tim M. Babcock G. W. Yoder
NEBRASKA	Governor Frank B. Morrison Ray L. Smith
NEW MEXICO	Governor Jack M. Campbell A. L. Porter, Jr. Cecil Heacox
NEW YORK	William S. Murray
NORTH DAKOTA	Richard C. McConnell
OHIO	Governor Henry L. Bellmon F. Allen Calvert, Jr.
OKLAHOMA	Ray C. Jones Howard Rose
TEXAS	Governor George D. Clyde C. R. Henderson
UTAH	Governor Clifford P. Hansen Warren A. Morton
WYOMING	

Official Observers present were:

SASKATCHEWAN, CANADA	A. J. Williams
VENEZUELA	Carlos Perez de la Cova
DEPARTMENT OF THE INTERIOR	John M. Kelly
DEPARTMENT OF JUSTICE	William J. Lamont
FEDERAL POWER COMMISSION	Lawrence J. O'Connor, Jr.

In addition to the above, John E. Miles and John F. Simms, former governors of the State of New Mexico, and F. E. Kasline of California, were in attendance at the meeting, as well as Lawrence R. Alley, Executive Secretary of the IOCC Headquarters Office.

Mailed 1/27/64

MONDAY, DECEMBER 9

All of the standing committees of the Commission met, heard prepared papers, and prepared reports to submit to the Commission at its Business Session on December 11.

TUESDAY, DECEMBER 10

The First General Session of the Commission was called to order by Governor Matthew E. Welsh of Indiana, Chairman.

The Address of Welcome was delivered by Governor Jack M. Campbell, of New Mexico. In his Address, Governor Campbell stated, "In the long history of this Compact, it seems to be demonstrated that we are beyond the point of being an experiment. It has proved a way in which the states, through the exchange of information and through dialogue and discussion, and through cooperative effort, can properly regulate, properly conserve, properly develop our country's greatest basic resources of oil and gas."

Due to the necessity of Governor Henry L. Bellmon having to leave the meeting earlier than anticipated, Mr. Jack H. Abernathy presented his Response to the Address of Welcome. Mr. Abernathy read Governor Bellmon's address, detailing Oklahoma's position among the oil and gas producing states and reiterating Governor Bellmon's often-stated opinion that critics of the federal government should work doubly hard to see that the federal government is not burdened with responsibilities that should be assumed by the states.

Mr. Lawrence J. O'Connor, Jr., of the Federal Power Commission, Washington, D. C., gave a talk on "Natural Gas and the Challenge for Cooperation." Mr. O'Connor said it has been recognized that the Compact Commission is in a unique position to draw the states and the federal government together in a mutual effort to solve a mutual problem. He suggested that the Interstate Oil Compact Commission could perform an outstanding service by promoting the cooperative efforts of the states, the industry and the federal government in achieving a standardized system of collecting and reporting statistics.

Mr. A. L. Porter, Jr., Secretary-Director of the New Mexico Oil Conservation Commission, spoke on "Oil and Gas Conservation in New Mexico." He outlined the manner in which the conservation statute in New Mexico is administered, and listed some of the economic advantages accruing to the state as a result of its oil and gas production. He also cited the state's continued activity in the Interstate Oil Compact Commission, dating from its ratification, as the first state to do so, of the Interstate Compact to Conserve Oil and Gas.

In his report to the Commission regarding the progress made on the Efficiency Study, Governor Welsh said that although the bulk of the background material for the report -- factual data which will form the basis for the report -- has been gathered, it will be approximately a year before the report will be issued in final form. He said the committees have made tremendous strides in gathering and tabulating the information required, but some committees have found it necessary to acquire information not originally considered necessary for inclusion in the report. These committees, he said, would therefore continue their efforts to make their reports as completely factual as possible. He commended the committees of the Commission for their work in this study and said that virtually all of the committees had submitted preliminary drafts to the Editing Committee.

Following the report on the Efficiency Study by Governor Welsh, Mr. Richard C. Byrd, Administrative Assistant to Governor Welsh on the Study, served as Moderator of a Panel discussing the Study. The Panel consisted of chairmen of the Engineering, Legal, Regulatory Practices, Research, and Secondary Recovery and Pressure Maintenance Committees. Progress reports were filed on the Study by each of these committee chairmen.

WEDNESDAY, DECEMBER 11

The Second General Session was called to order by Governor Welsh at 9:00 A.M.

All of the standing committees of the Commission gave reports as had been prepared by them in their meetings on Monday, December 9.

Mr. Minor S. Jameson, Jr., Executive Vice President of the Independent Petroleum Association of America, filed a report on "The 1964 Outlook for U. S. Oil Production." Mr. Jameson's report noted that the IPAA Supply and Demand Committee had recently concluded that "the U. S. general economy would continue to advance in 1964 -- but at a somewhat slower rate than in 1962 and 1963." Rate of growth in oil consumption is expected to moderate, he said, and show an increase of 2.6 percent as compared with 4.3 percent in 1962 and 3.1 percent in 1963.

There being no further business, the General Session was adjourned and the Business Session of the Commission was called, wherein all present were invited to attend.

ENTERTAINMENT FEATURES

Ladies attending the Annual Meeting were entertained at a Tea given by Mrs. Jack M. Campbell, at the Governor's Mansion on Tuesday afternoon.

On Tuesday evening, Governor Welsh presided over the banquet which was preceded by a Social Hour, both held at the La Fonda.

Respectfully submitted,

(original signed by)

Lawrence R. Alley
Executive Secretary

MINUTES OF THE BUSINESS SESSION
ANNUAL MEETING
INTERSTATE OIL COMPACT COMMISSION
LA FONDA HOTEL
SANTA FE, NEW MEXICO
DECEMBER 11, 1963

The meeting of the Business Session was called to order by Governor Matthew E. Welsh, Chairman, at 9:00 A. M., December 11, 1963, at the La Fonda Hotel in Santa Fe, New Mexico, with the following members present:

ALABAMA	Senator Neil Metcalf
ARIZONA	John K. Petty (Representing Lynn Lockhart)
ARKANSAS	O. C. Bailey
COLORADO	Governor John A. Love John M. King
GEORGIA	Captain Garland Peyton
ILLINOIS	Guy E. McGaughey George R. Lane
INDIANA	Governor Matthew E. Welsh Elmer L. Hoehn
KANSAS	Governor John Anderson, Jr. William L. Mitchell
KENTUCKY	Fred E. Moran
LOUISIANA	Thomas M. Winfield (Representing G. M. Anderson)
MICHIGAN	L. W. Price (Representing Gerald E. Eddy)
MONTANA	Governor Tim M. Babcock G. W. Yoder
NEBRASKA	Ray L. Smith
NEW MEXICO	Governor Jack M. Campbell A. L. Porter, Jr. Cecil Heacox
NEW YORK	William S. Murray
NORTH DAKOTA	Richard C. McConnell
OHIO	F. Allen Calvert, Jr.
OKLAHOMA	Ray C. Jones Howard Rose
TEXAS	Governor George D. Clyde C. R. Henderson
UTAH	Governor Clifford P. Hansen Warren A. Morton
WYOMING	

Official Observers present were:

SASKATCHEWAN, CANADA	A. J. Williams
VENEZUELA	Carlos Perez de la Cova
DEPARTMENT OF THE INTERIOR	John M. Kelly
DEPARTMENT OF JUSTICE	William J. Lamont
FEDERAL POWER COMMISSION	Lawrence J. O'Connor, Jr.

In addition to the above, John E. Miles and John F. Simms, former governors of the State of New Mexico, and F. E. Kasline of California, were in attendance at the meeting, as well as Lawrence R. Alley, Executive Secretary of the IOCC Headquarters Office.

The first order of business was the approval of the Minutes of the Executive Committee meeting held in Oklahoma City, Oklahoma, October 7, 1963. The Executive Secretary explained these Minutes had previously been mailed to all members of the Commission and, upon the motion of Mr. Rose, seconded by Mr. Porter, these Minutes were unanimously approved.

Upon the motion of Mr. Lane, seconded by Mr. Hoehn, the Operating Reports for the months of October and November, 1963, were unanimously approved. (Copies attached hereto and made a part hereof.)

The Estimated State Contributions, Payments Thereon, Expenditures and 1963 Budget as of November 30, 1963, were examined, but no action deemed necessary. It was called to the attention of the Commission that all of the states had now made their payments in accordance with the amount that was estimated during the year 1963, and that the expenditures during the year would be less than the anticipated contributions. In view of this, there will be a small surplus in the General Fund for operations in 1964. (Copy attached hereto and made a part hereof.)

Governor Matthew E. Welsh, as Chairman of the Commission, made his annual report on the activities of the Commission during 1963. (Copy attached hereto and made a part hereof.)

The Executive Secretary explained that there was a vacancy in the Headquarters Office and that the Commission had previously authorized him to employ someone to fill this vacancy at a salary not to exceed \$9,000, but had instructed him to confer with the committee chairmen before such vacancy was filled. This authorization was renewed for the Executive Secretary.

The Resolutions Committee report was unanimously approved on motion of Mr. Mitchell, seconded by Mr. McGaughey. (Copy attached hereto and made a part hereof.)

The report of the Nominating Committee was unanimously approved on motion of Mr. Hoehn, seconded by Mr. Mitchell. (Copy attached hereto and made a part hereof.)

The report of the Finance and Publications Committee was unanimously approved on motion of Mr. Rose, seconded by Mr. Porter. (Copy attached hereto and made a part hereof.)

The report of the Public Lands Committee was unanimously approved on motion of Governor Campbell, seconded by Mr. Rose. (Copy attached hereto and made a part hereof.)

It was explained that the amount of the budget for the year 1964 was set at \$105,000, as had previously been set in 1963, by action and approval of the Finance and Publications Committee report.

The Executive Secretary reported on the distribution of the recently released motion picture, "More Oil and Gas for Today and Tomorrow."

The new policy on naming committees was again discussed at the Business Session. This policy was set by a meeting of the Executive Committee held in Oklahoma City, Oklahoma, February 4, 1963 -- the policy being that each state would recommend a member to each committee and any number of associate members they so desired. The member named would be the voting member for the state, and would be responsible for furnishing information to the Commission from each particular committee.

The Executive Secretary reported on plans now being made for the Midyear Meeting to be held in Billings, Montana. He also reported on a conference during the present meeting with Governor Tim M. Babcock, of Montana, and members of his staff.

The report was made on the Annual Meeting, which is to be held in Biloxi, Mississippi, December 7-9, 1964, by the Executive Secretary.

Governor Jack M. Campbell, of New Mexico, who was elected at this meeting as Chairman of the Interstate Oil Compact Commission for the year 1964, expressed his appreciation for the chairmanship, and also expressed the appreciation of the Commission for the work that had been done by Governor Welsh, as Chairman during 1963. Governor Campbell stated that he had asked Governor Welsh to continue as Chairman of the Governors' Special Study Committee during the year 1964.

There being no further business to come before the Commission, the meeting was adjourned.

Respectfully submitted,

(original signed by)

Lawrence R. Alley
Executive Secretary

October 31, 1963

Interstate Oil Compact Commission
Operating Report for the Month of
October, 1963

General Fund

Balance as of September 30, 1963 -----	\$60,352.09
State Contributions - State of Tennessee -----	250.00
Sale - Oil and Gas Production Book -----	2.75
	<u>\$60,604.84</u>

Disbursements

<u>Claim</u>	<u>Payee</u>	<u>Purpose</u>	<u>Amount</u>					
10,872	Petroleum Engineer Publishing Co.	Library & Publications	4.00					
10,873	Oklahoma Press Service, Inc.	Library & Publications	15.78					
10,874	Oklahoma Gas and Electric Co.	Building Expense	30.55					
10,875	Oklahoma City Water Dept.	Building Expense	11.98					
10,876	Oklahoma Natural Gas Co.	Building Expense	8.73					
10,877	Oklahoma City Garbage Dept.	Building Expense	4.00					
10,878	A. G. Stephens	Building Expense	10.00					
10,879	A & A Lock Shop	Building Expense	15.15					
10,880	Johnson & Johnson Enterprises	Building Expense	6.00					
10,881	Southwestern Stationers	Office Supplies	24.08					
10,882	The Oklahoma Publishing Co.	Office Supplies	2.00					
10,883	Postmaster - Okla. City, Okla.	Postage	1,000.00					
10,884	Southwestern Stationery & Bk. Supply	Printing	46.95					
10,885	Duplicating Products, Inc. of Okla.	Printing	71.36					
10,886	R. K. Black, Inc.	Office Supplies	64.48					
10,887	Western Union Telegraph Co.	Telephone & Telegraph	3.60					
10,888	Southwestern Bell Telephone Co.	Telephone & Telegraph	126.25					
10,889	Albert E. Sweeney, Jr.	Meeting & Outside Travel	259.69					
10,890	Lawrence R. Alley	Staff Travel	230.60					
10,891	Richard C. Byrd	Staff Travel	227.71					
10,892	Nancy Royal	Staff Travel	98.23					
10,893	Braniff Airways, Inc.	Staff Travel	30.80					
10,894	Richard C. Byrd	Salaries & Services	1,003.75					
		<u>Salary</u> <u>Withhold.</u> <u>S. With.</u> <u>FICA</u> <u>Pens.</u> <u>Rtmt.</u>						
10,895	Lawrence R. Alley	\$1,208.33	207.50	10.38	-	36.25	-	954.20
10,896	Johnny Lee Foss	250.00	25.40	1.40	9.06	-	-	214.14
10,897	Earl Foster	-	-	-	-	-	185.50	185.50
10,898	Lee Hull	450.00	21.00	1.15	16.31	13.50	-	398.04
10,899	Margaret L. Ray	400.00	33.80	1.65	14.50	12.00	-	338.05
10,900	Nancy Royal	750.00	103.20	5.25	27.19	-	-	614.36
10,901	Nancy St. Clair	400.00	43.80	2.15	14.50	12.00	-	327.55
10,902	First National Bank and Trust Co.							October, 1963, Withholding 434.70
10,903	Oklahoma Tax Commission							October, 1963, St. Withhold. 21.98
10,904	Federal Reserve Bk. K. C., O. C. Br.							October, 1963, Soc. Sec. 163.12
10,905	Southwestern Life Insurance Co.							November, 1963, Pension 420.37
10,906	Addressograph-Multigraph Corp.							Printing 9.20
								<u>\$7,376.90</u>

General Fund

Balance as of October 31, 1963 -----	\$53,227.94
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November 30, 1963

Interstate Oil Compact Commission

Operating Report for the Month of
November, 1963

General Fund

Balance as of October 31, 1963 ----- \$53,227.94

State Contributions - State of Kansas	- \$1,250.00	
State of Nebraska	- 600.00	
State of Texas	- 4,011.84	-----
		5,861.84
		<u>\$59,089.78</u>

Disbursements

<u>Claim</u>	<u>Payee</u>	<u>Purpose</u>	<u>Amount</u>
10,907	The Oil Daily	Library & Publications	50.00
10,908	American Gas Association	Library & Publications	13.50
10,909	Oklahoma Press Service, Inc.	Library & Publications	23.58
10,910	Okla. Gas and Electric Co.	Building Expense	21.05
10,911	Oklahoma Natural Gas Co.	Building Expense	4.26
10,912	Oklahoma City Water Dept.	Building Expense	8.34
10,913	Oklahoma City Garbage Dept.	Building Expense	4.00
10,914	A. G. Stephens	Building Expense	10.00
10,915	Harrison-Orr Air Conditioning, Inc.	Building Expense	12.00
10,916	Ace Janitor Service	Building Expense	85.00
10,917	Southwestern Stationers	Office Supplies - \$12.25	
		Building Expense - 162.00	174.25
10,918	REA Express	Express & Freight	9.61
10,919	Addressograph-Multigraph Corp.	Office Supplies	6.45
10,920	R. K. Black, Inc.	Office Supplies	51.69
10,921	Southwestern Stat. & Bk. Supply	Office Supplies	105.50
10,922	International Business Machines	Office Supplies	25.60
10,923	Oklahoma Typewriter Co.	Office Supplies	13.35
10,924	Pitney-Bowes Inc.	Postage	53.95
10,925	Duplicating Products, Inc.	Printing	27.90
10,926	Remco Office Equipment Inc.	Printing	33.00
10,927	Eastman Kodak Stores, Inc.	Printing	100.00
10,928	Southwestern Bell Telephone Co.	Telephone & Telegraph	165.46
10,929	Western Union Telegraph Co.	Telephone & Telegraph	9.43
10,930	Trade Winds Motor Hotel	Meeting & Outside Travel	8.16
10,931	Braniff Airways, Inc.	Staff Travel	372.99
10,932	Richard C. Byrd	Staff Travel	105.56
10,933	Nancy St. Clair	Staff Travel	6.70
10,934	Richard C. Byrd	Salaries & Services	515.00
10,935	Lawrence R. Alley	Salary \$1,208.33	
		Withhold. 207.50	
		S. With. 10.38	
		FICA - 36.25	
		Pens. Rtmt. - 954.20	
10,936	Earl Foster		185.50
10,937	Lee Hull	450.00	21.00
			1.15
			16.31
			13.50
			- 398.04
10,938	Nancy St. Clair	400.00	43.80
			2.15
			14.50
			12.00
			- 327.55
10,939	Margaret L. Ray	400.00	33.80
			1.65
			14.50
			12.00
			- 338.05
10,940	Johnny Foss	250.00	25.40
			1.40
			9.06
			- 214.14
10,941	Oklahoma Tax Commission	Nov., 1963, St. Withhold.	16.73
10,942	First National Bank & Trust Co.	Nov., 1963, Fed. Withhold.	331.50
10,943	Federal Reserve Bank of K.C., O.C.Br	Nov., 1963, Soc. Sec.	108.74
10,944	Southwestern Life Insurance Co.	December, 1963, Pension	420.57
10,945	Lawrence R. Alley	Staff Travel	199.53
			<u>\$5,510.88</u>

General Fund

Balance as of November 30, 1963 ----- \$53,578.90

Estimated State Contributions
for the Year 1963 and Payments Thereon

<u>Member States</u>	<u>1963 Contributions Estimated by States</u>	<u>Payments Credited to 1963 Budget</u>	<u>Receipts Since Jan. 1</u>
Alabama	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Alaska	1,000.00	1,000.00	1,000.00
Arizona	1,000.00	1,000.00	1,000.00
Arkansas	2,500.00	2,500.00	2,500.00
Colorado	2,000.00	2,000.00	2,000.00
Florida	500.00	500.00	500.00
Illinois	7,000.00	7,000.00	7,000.00
Indiana	1,000.00	1,000.00	1,000.00
Kansas	9,000.00	9,000.00	4,500.00
Kentucky	1,000.00	1,000.00	1,000.00
Louisiana	10,000.00	10,000.00	10,000.00
Maryland	-	-	-
Michigan	1,250.00	1,250.00	1,250.00
Mississippi	1,000.00	1,000.00	1,000.00
Montana	600.00	600.00	600.00
Nebraska	600.00	600.00	600.00
Nevada	100.00	100.00	100.00
New Mexico	3,500.00	3,500.00	3,500.00
New York	1,500.00	1,500.00	1,500.00
North Dakota	1,250.00	-	-
Ohio	-	-	-
Oklahoma	25,000.00	25,000.00	25,000.00
Pennsylvania	1,500.00	1,500.00	-
South Dakota	150.00	150.00	150.00
Tennessee	250.00	250.00	250.00
Texas	25,000.00	25,000.00	29,011.84
Utah	1,000.00	1,000.00	1,000.00
Washington	-	-	-
West Virginia	1,000.00	1,000.00	1,000.00
Wyoming	3,000.00	3,000.00	3,000.00
<u>Associate Members</u>			
Georgia	100.00	100.00	100.00
Idaho	-	-	-
Oregon	-	-	-
	<u>\$ 102,800.00</u>	<u>\$ 101,550.00</u>	<u>\$ 99,561.84</u>

Interstate Oil Compact Commission
Expenditures as of November 30, 1963

<u>Expenditures</u>	<u>Exp. to Nov. 30, 1963</u>	<u>Balance</u>
Library & Publications	1,650.00	262.01
Bond Premiums	50.00	15.00
Express & Freight	100.00	47.63
Office Supplies	2,000.00	1,117.55
Building Expense	3,000.00	849.85
Postage	4,000.00	357.37
Printing	8,000.00	272.19
Telephone & Telegraph	2,000.00	-1,935.57
Meeting & Outside Travel	6,000.00	3,787.36
Staff Travel	15,000.00	5,456.25
Salaries & Services	53,700.00	9,867.56
Social Security Expense	1,200.00	86.70
Pension Trust	6,000.00	2,451.24
Retirement	2,300.00	259.50
	<u>\$105,000.00</u>	<u>\$ 22,894.64</u>

REPORT OF THE CHAIRMAN

This is my last and final report as Chairman of the Interstate Oil Compact Commission. The year 1963 has been a period in the long history of oil and gas conservation when the Commission, being the Governors, the Committees and all the Member States, sought and brought about a study of the past and present so that they may better fulfill their responsibilities in the future. History sits in judgement of deeds and events. In a brief span of appointed service, each of us dedicates a full measure to our responsibilities in the hope that success, in whatever measure will lead our states and the nation into its fulfillment of hopes and aspirations.

Together, we shall go on to provide the laws and rules, and the motives, that a great civilization needs for an adequate supply of power and energy. This year is truly a year of transition in the history of the Interstate Oil Compact Commission.

Let us go forth from this period, proud of our accomplishments, willing to commit ourselves to a future of abundance and plenty through conservation, to a primary purpose and goal to which we have dedicated ourselves. "To obtain the greatest ultimate recovery of oil and gas," from the depths of the earth, is coming nearer attainment with each passing year. Let us encourage the men and women in the great oil and gas industry to advance their technology and economies so that they may be able to provide energy and fuels abundantly and reasonably to the booming population in the years to come. This is our challenge.

Let me give you a brief fiscal report. As of November 30, all the states had paid their estimated contributions for the year. The full \$102,800 estimated has been received. The expenditure as of November 30, 1963, amounted to \$82,105.36. Even with the extra expense that we have had on the Efficiency Study, we will again spend less than the estimated contributions. There was an additional \$10,000 added to the budget at the Midyear Meeting in New Orleans. However, by cutting down on other items in the office, none of this money will be needed during the current year. Expenditures anticipated in 1964 will be higher than in 1963, due to the fact that the Efficiency Study will be completed during the first six months of 1964. However, with the savings that we have been able to make during 1963, it should balance the excess expenditure in 1964, without using any surplus.

In addition to the above, there is a balance as of November 30, 1963, of \$53,578.90 in the General Operating Fund. Probably more will be spent in 1964 than in 1963 due to the completion of the Efficiency Study, and the expense of printing could be considerable.

I want to say that it has been with pride and a pleasure to serve as your Chairman. I wish to express my appreciation and thanks to the other officers, Committee Chairmen, Committees, regular and special, who have been so very cooperative. I should include the Commission Staff, Mr. Alley and the ladies in the Oklahoma City office for their help and assistance. I have experienced a real sense of satisfaction from the interest and attention, the Governors of the Member States gave to our mutual problems. I sincerely appreciate the honor you have bestowed on me by electing me to serve during the year 1963.

Respectfully submitted,

(original signed by)

Matthew E. Welsh, Chairman
Interstate Oil Compact Commission
and Governor of the State of Indiana

REPORT OF THE RESOLUTIONS COMMITTEE

The Resolutions Committee met at breakfast on Wednesday, December 11, 1963, in the Gate of Spain Room, La Fonda Hotel, Santa Fe, New Mexico, at 8:00 A. M., and recommended the passage of the following resolutions:

RESOLUTION

The Mandatory Oil Import Program, as revised in June, 1963, limits non-residual oil imports from foreign country sources only into Districts I-IV to 12.2 per cent of estimated domestic production. District V total oil imports and residual fuel imports into Districts I-IV are essentially limited to the difference between domestic supply and demand.

The Interstate Oil Compact Commission has previously recommended that all oil imports be tied to a specified percentage of actual domestic production. In the absence of an effective overall limitation, there is little assurance that the program can achieve recognized objectives. If major segments of total imports continue to be controlled under varying and unconnected guidelines or standards which remain subject to continuous upward revision, the ratio between total oil imports and domestic crude production will undoubtedly continue to increase.

NOW, THEREFORE, BE IT RESOLVED by the Interstate Oil Compact Commission, in meeting duly assembled this 11th day of December, 1963, in Santa Fe, New Mexico, that the program be strengthened and be made more effective by restricting total oil imports to a specified constant percentage of U. S. oil production of the forthcoming year.

RESOLUTION

The Chairman of the Interstate Oil Compact Commission is not merely the person who presides over meetings. He is the one who sets the pace and determines what course the activities of the Commission shall take during his year of office.

The Interstate Oil Compact Commission is aware that the interest of the Chairman is vital to the success of the endeavors of any organization, and feels it has been most fortunate in 1963 in having as its Chairman Governor Matthew E. Welsh.

Governor Welsh, by his ability and interest in the Commission's activities, has guided the Interstate Oil Compact Commission through a most auspicious year. He is fully aware that the nation's adequate supply of oil for peace and war was in very large measure the result of efficient application of conservation practices developed under the leadership of the Interstate Oil Compact Commission. Since in the foreseeable future, oil will continue to be the principal supplier of energy for our economy, he was determined that the momentum achieved in the conservation of this vital natural resource should be continued, and was instrumental in initiating an evaluation and study of existing practices to assure that this momentum would be maintained. Because of his efforts, technological developments and economic changes -- state, national and worldwide -- will be easier brought into focus. The Secretary of the Interior, as well as many others in the Federal Government, have lauded his efforts. It is chiefly as a result of Governor Welsh's diligent attention to this project that it has moved forward with great speed and that a completed report will be ready in the ensuing year.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its gratitude to Governor Matthew E. Welsh for his untiring efforts in behalf of the Commission, for the enormous amount of time and talent he has devoted to the work of the Commission, and, most of all, for his leadership, which has made 1963 a year of unparalleled progress for the Commission.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby directed to furnish a duly certified copy of this Resolution to Governor Welsh.

RESOLUTION

The Interstate Oil Compact Commission was greatly disturbed to learn of the unfortunate accident recently suffered by Governor John Connally, of Texas. The Commission is, however, most pleased to learn that he is progressing favorably in his recovery.

Governor Connally has been most cooperative in appointing outstanding men to represent him during the course of this meeting. In the past he has always demonstrated a sincere interest in the work of the Commission and its purposes.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled this 11th day of December, 1963, expresses its sincere wish for Governor Connally's early and complete recovery, and hopes that he will be able to attend future meetings of the Commission.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby instructed to furnish a duly certified copy of this Resolution to Governor John Connally.

RESOLUTION

Warwick M. Downing was one of the original founders of the Interstate Compact to Conserve Oil and Gas. Judge Downing was present at the organizational meeting in Dallas, Texas, on February 15-16, 1935, where the draft of the Compact was originally drawn. He was Chairman of the subcommittee that wrote the compromise draft which was finally approved by all present at the organizational meeting.

Judge Downing has served continuously as Representative from the State of Colorado since the formation of the Interstate Oil Compact Commission, and has served continuously as Chairman of the Public Lands Committee since its inception in 1938.

It was with great regret that the Public Lands Committee and the Interstate Oil Compact Commission learned that it would be impossible for Judge Downing to attend the Annual Meeting in Santa Fe, New Mexico, December 9-11, 1963. This is the first meeting that he has missed since the formation of the Interstate Oil Compact Commission.

Judge Downing has given unstintingly of his time in the work of both the Interstate Oil Compact Commission and its Public Lands Committee, always available to appear in Washington to press his point on the subject of public lands.

NOW, THEREFORE, BE IT RESOLVED by the Public Lands Committee and the Interstate Oil Compact Commission that both groups express their deep appreciation to Warwick M. Downing for the part that he has played in the growth of both the Committee and the Commission. The entire Public Lands Committee joins with the Commission in this Resolution.

BE IT FURTHER RESOLVED that the entire Commission greatly hopes and expects that it will be possible for Judge Downing to attend the next meeting of the Interstate Oil Compact Commission.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby instructed to furnish a duly certified copy of this Resolution to Warwick M. Downing.

RESOLUTION

The year 1963 has been a year marked by great progress for the Interstate Oil Compact Commission. It has been a year that will be remembered as one in which the Commission's position in our nation and in the industry has been secured. Without question, the work done by the Commission during this year has helped the Interstate Oil Compact Commission achieve a position of prominence greater than any enjoyed heretofore in the Commission's history.

The progress achieved this year has not been accidental. It is the result of an enormous amount of work done by many people, all devoted to the conservation of oil and gas and the prevention of physical waste.

Foremost among those contributing time and effort to the work of the Commission during 1963 has been Mr. Elmer L. Hoehn. As the representative of the Chairman Governor, Mr. Hoehn would normally be called upon to contribute a great deal of time and effort to the aims and purposes of the Commission. But Mr. Hoehn, because of his great interest in the Commission, has made an outstanding contribution during this year. He has devoted time that he could ill afford. He has overlooked no smallest detail in his effort to make this year one of almost remarkable achievement.

Mr. Hoehn has been available at all times for advice and counsel. He has spent a great deal of time in the Headquarters Office attending meetings and aiding the many small groups of people working on the Commission's current project. His correspondence during this year has been monumental and reflects his zealous devotion to his responsibilities and his willingness to assume responsibilities that would not usually be considered his.

Mr. Hoehn's individual personality, his training, background, and inherent ability have combined to make him particularly suited for the tasks he has been called upon to perform.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled this 11th day of December, 1963, in Santa Fe, New Mexico, expresses to Mr. Elmer L. Hoehn its extreme gratitude and appreciation for the work he has done during 1963, recognizing that his efforts alone have been largely responsible for the enormous amount of progress achieved by the Commission during this year.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby instructed to furnish Mr. Hoehn with a duly certified copy of this Resolution.

RESOLUTION

The members of the Interstate Oil Compact Commission mark the passing of time not in hours, but in terms of each meeting: the speakers, the fellow attendants, the locale. No meeting has been more outstanding, or will be longer remembered, than the one now being concluded in Santa Fe, New Mexico.

This has been a successful meeting from many aspects, not the least being the colorful atmosphere of the oldest city in the United States, and the warm hospitality of its citizens.

The Interstate Oil Compact Commission expresses its sincere thanks to the Honorable Jack M. Campbell, Governor of New Mexico, for his gracious invitation to hold this meeting in New Mexico's capital city, and to Mr. A. L. Porter, Jr., for his efforts in making the arrangements so vital to the success of our meetings.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its gratitude to Governor Jack M. Campbell and to Mr. A. L. Porter, Jr., for their roles in the success of this meeting.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby directed to furnish a duly certified copy of this Resolution to Governor Campbell and Mr. Porter.

RESOLUTION

Through the years, it has become a tradition that the finest, most knowledgeable speakers in the United States address the General Sessions of the Interstate Oil Compact Commission. This meeting has certainly been no exception.

The General Sessions at this Annual Meeting have been distinguished by the appearances of a group of able, informed men who have imparted to the Commission most valuable and thought-invoking material.

The Interstate Oil Compact Commission has been privileged to have the following speakers at the General Sessions of this Annual Meeting in Santa Fe, New Mexico:

Honorable Henry L. Bellmon
Honorable Jack M. Campbell
Honorable Lawrence J. O'Connor, Jr.
Honorable A. L. Porter, Jr.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its sincere thanks to these gentlemen for their contributions in time, certainly, but more importantly, in the valuable messages they delivered to the Commission.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby directed to furnish a duly certified copy of this Resolution to each of the above-named gentlemen.

RESOLUTION

Of necessity, the speakers before the Committees of the Interstate Oil Compact Commission are, and have always been, the most outstanding men in their respective fields. Again, this has been true of this meeting held in Santa Fe, New Mexico.

The speakers at this meeting are well known by the members of the Commission for their ability and for their interest in and contributions to the field of oil and gas conservation.

The speakers before the Committees at this Annual Meeting in Santa Fe, New Mexico, are:

K. F. Anderson
Emery C. Arnold
J. Cordell Moore
Daniel S. Nutter
Joe D. Ramey
L. K. Weaver.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its sincere thanks to these gentlemen for their participation in this outstanding meeting.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby directed to furnish a duly certified copy of this Resolution to the above-named gentlemen.

RESOLUTION

From time to time, in the history of our nation, there have appeared men, equally renowned in many fields, who seemed destined for success no matter how broad the scope of their endeavors.

General Patrick J. Hurley was such a man.

To some, General Hurley will long be remembered as a soldier; to others, a statesman; to others, as a diplomat. To the oil industry, General Hurley will be remembered primarily as a fellow oilman -- the man who built the first oil refineries in New Mexico.

To the Interstate Oil Compact Commission, he will be remembered as the man who was advisor to Governor Marland in the formative sessions of the Interstate Oil Compact Commission, a man who played an important part in the formation of the Compact. He will be remembered, too, as one who contributed vastly and in many different ways to the conservation of oil and gas.

The Interstate Oil Compact Commission is deeply aware of the great loss it has suffered by his death.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its sincere sympathy to the family of General Patrick J. Hurley

BE IT FURTHER RESOLVED that the Executive Secretary is hereby instructed to furnish a duly certified copy of this Resolution to Mrs. Hurley.

RESOLUTION

It was with deep regret that the Interstate Oil Compact Commission learned of the sudden death of Mr. Theo A. Morgan, of Wichita, Kansas.

Mr. Morgan had long been active in the oil industry, and, at one time, he served as director of the Kansas Corporation Commission. He was the first chairman of the Regulatory Practices Committee of the Interstate Oil Compact Commission. Even after his resignation from this position, in 1955, he was at all times available to the Commission for counsel and advice.

The Interstate Oil Compact Commission is aware of the loss it has suffered by his death.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses its sincere sympathy to the family of Mr. Theo A. Morgan.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby instructed to furnish a duly certified copy of this Resolution to the family of Mr. Morgan.

RESOLUTION

It was with deep regret that the Interstate Oil Compact Commission learned of the death of Mr. Ralph J. Pryor, of Wichita, Kansas.

Mr. Pryor had long been active both in the oil industry and in various organizations connected with it. He was instrumental in the formation of the Interstate Oil Compact Commission and was one of the original signers of the Interstate Compact to Conserve Oil and Gas. Additionally, at various times, he worked closely with his state government and the federal government on petroleum matters.

The Interstate Oil Compact Commission recognizes that it has lost one of its staunchest supporters and a man who has contributed much to the program of oil and gas conservation.

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission, in meeting duly assembled in Santa Fe, New Mexico, this 11th day of December, 1963, expresses to the family of Ralph J. Pryor its sincere sympathy in their loss.

BE IT FURTHER RESOLVED that the Executive Secretary is hereby directed to furnish a duly certified copy of this Resolution to Mrs. Pryor.

Respectively submitted,

(original signed by)

Richard C. Byrd
Chairman

REPORT OF THE FINANCE AND PUBLICATIONS COMMITTEE

The Finance and Publications Committee met in the Coronado Room of the La Fonda Hotel at 4:00 P. M., December 9, 1963, and agreed upon the following recommendations:

1. That the 1964 budget be fixed at \$105,000, which is the same as for 1963.
2. That \$300 be paid to Miss Nancy Royal for her work in connection with arrangements for the Santa Fe meeting.
3. That an additional two weeks' salary be paid to the three ladies in the IOCC Headquarters Office for overtime work in connection with the special study.
4. That the previous action of the Executive Committee, which authorized the Executive Secretary to employ a Director of Technical Services at a salary not to exceed a salary not to exceed \$9,000 a year, be reconfirmed.
5. That consideration be given to the employment of an Assistant Executive Secretary.

Respectfully submitted,

(original signed by)

A. L. Porter, Jr.
Chairman

REPORT OF THE PUBLIC LANDS COMMITTEE

The Committee on Public Lands of the Interstate Oil Compact Commission was called to order by Acting Chairman, E. S. Johnny Walker, at 1:30 P. M.

Opening remarks by Mr. Walker were to the effect that he had been requested to preside as temporary chairman because of the illness of Chairman Warwick M. Downing, Denver. After briefly referring to Mr. Downing's years of service as head of the committee and the fact that because of his age, Mr. Downing's present illness was of a serious nature, Mr. Walker suggested that it might be the pleasure of the committee to select a new permanent chairman.

Mr. Harold E. Rorschach, Tulsa, moved that the committee recommend to the whole body of the Interstate Oil Compact Commission that a resolution commending Mr. Downing for his outstanding loyal service to the organization be spread upon the records and that a copy be sent to Mr. Downing. This motion was seconded by Mr. Ted Hammett, Denver, and carried by unanimous vote.

The chair recognized Mr. W. R. Hall, Roswell, who placed the name of Mr. Howard Bratton, Roswell, before the meeting for the post of permanent chairman of the committee. In making the nomination, Mr. Hall pointed to Mr. Bratton's interest in the industry, his work with the New Mexico Oil and Gas Association, and his active participation in IOCC organization.

The nomination of Mr. Bratton was seconded by Mr. Ted Hammett, Denver, who also moved that the nominations be closed and that the election be by acclamation.

Mr. Walker put the question and Mr. Bratton was elected by acclamation.

After a brief discussion as to the need for a vice-chairman to act in the absence of the permanent chairman, Mr. Ted Hammett nominated Mr. Charles Read, Roswell, as vice-chairman. This nomination was seconded by Mr. W. R. Hall and election of Mr. Read was unanimous. Following his election, Mr. Bratton made a brief report on the Aspinall Bill, now before Congress. He said that as a result of the interest shown and opposition to various factors of the measure, this bill had been changed to meet most of the objections of businessmen and principal industries interested in the public lands. Mr. Bratton said the bill had been favorably reported out of the House Committee and that he thought it would pass the Senate in one form or another.

Following his talk, Mr. Bratton moved from the floor that the Committee on Public Lands recommend to the whole body of the Interstate Oil Compact Commission that the organization go on record as being heartily in favor of H. R. 8070, in principle, and that if the commission contemplated under the measure is created that the Interstate Oil Compact Commission extend its full offices and cooperation.

The motion was seconded by Mr. Charles Read and carried unanimously.

Mr. Douglas Henriques of the Bureau of Land Management was introduced to the meeting by Mr. Walker and asked if he had any comments to make. Mr. Henriques said that he would not speak for the Bureau of Land Management, but that he personally favored the measure.

Mr. Fred Moxey, executive secretary of the New Mexico Oil and Gas Association was introduced by Mr. Walker.

A report on the Wilderness measure submitted by Mr. Rorschach was read to the meeting by Mr. Walker.

Mr. C. Burt Folsom, North Dakota, spoke on the problem of oil leasing on game and wildlife refuges under the jurisdiction of the Interior Department.

Mr. Porter of Louisiana reported that they had similar problems in his state.

It was pointed out that as more and more land is withdrawn for wildlife purposes, the problem could become more acute.

After several members of the committee voiced opinions in regard to this matter, Mr. Bratton said that the organization should once again restate its basic position in regard to the matter. He moved that the committee reaffirm its support of the multiple use of the public domain. With Mr. Hammett seconding, the motion carried unanimously.

Respectfully submitted,

(original signed by)

E. S. Johnny Walker
Acting Chairman

January 22, 1964

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

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

SUBJECT: Executive Secretary's Report for December 16, 1963, to
January 22, 1964.

There were four permits for petroleum and helium exploration in Apache County applied for and issued which are as follows:

1. Eastern Petroleum Company #35 Eastern Santa Fe Fee, 1650' f South, 1650' f West Lines of Section 27-T20N-R27E. This is a northeast offset to the unit applied for. This is to be a 1200 foot Coconino test with rotary and they're about finished now, but haven't reported on it. I haven't been able to locate Henry Fullop lately. This project is 5 miles southeast of Navajo.
2. Eastern Petroleum Company #36 Eastern Santa Fe Fee, 1650' f South, 1650' f West Lines, Section 21-T20N-R27E. It is to be a rotary drilled 1200 foot Coconino test. This well is 4 miles southeast of Navajo and offsetting shut in gas wells on the north side of the unit applied for and if successful will extend the field still further northward.
3. C. E. McCaughey #1 Sunland State, 1790' f East and 2100' f North Lines of Section 20-T19N-R26E. This will be a rotary drilled 900 foot Coconino sand helium test and is 15 miles southwest of Navajo. They spudded in January 20 on the project. Truet Henderson is drilling this well. It is on Sunland acreage.
4. Occidental Petroleum Corporation #1 Navajo Texaco located 660' from North and 660' f West Lines of Section 6-T40N-R27E in the Four Corners area of the Navajo Indian Reservation. It is a 6100 foot basement test to be drilled. Occidental has just completed good wells in Musselshell County and Carbon Counties, Montana. They are 5500 feet and have had no shows of petroleum.

Items of Interest During this Period

Senate Bill #43. The proposed oil and gas discovery reward of \$250,000 dollars for the first oil well producing 25 BOPD or the first hydrocarbon gas well producing one million cubic feet per day for a period of not less than ninety days. It is not to be paid on a well discovery on Federal or Indian land. (A copy of S.B. 43 is enclosed even though you already had been sent one previously.) Copies of this bill have been sent to the following news media: The Arizona Journal, The Evening American, The Arizona Weekly Gazette, Rinehart Oil News, Utah Oil Report, Petroleum Information, Oil and Gas Journal, and World Oil.

House Bill #13, "Securities" provides that subdividing of an oil and gas lease for purpose of public offering, where whole interest is conveyed, shall not be considered in dealing in a security. Amends AR44-1801. Copy enclosed.

Mailed 1/27/64

January 22, 1964

Executive Secretary's Report for December 16, 1963, to January 22, 1964

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House Bill #14 Oil and Gas provides for classifying state land into restricted districts as relates to oil and gas. Unrestricted districts shall be those districts not known to possess oil and gas. Prescribes the number of acres which may be leased and prescribes per acre rental price of each land classification. Copy enclosed.

The potash exploration effort is growing in the Holbrook-St. Johns-Navajo area and more than fifteen tests have been drilled as of now. I fully expect several hundred tests through the Supai salt section to be drilled in this area by January 1, 1965.

At a Commissioners meeting in 1963, I was given permission to write a letter to the potash exploration companies in regard to letting us have information on their projects. I contacted seven, and they were agreeable to giving us the information which I asked for on the attached memorandum. I was going to have this memorandum at the January meeting for your approval before sending it. Since the tempo of exploration has increased and the January meeting was cancelled, Senator Lockhart said to send it to the companies so they won't dig any holes and not know we want the information. A copy of one of the letters accompanying the memorandum is attached. Consequently, this memo has been sent to Duval Corporation, U. S. Borax and Chemical Co., Arkansas Louisiana Gas Company, New Mexico and Arizona Land Company, Kern County Land and Exploration Company, National Potash, Kerr-McGee Oil Industries, Santa Fe Railroad, Texas Gulf Sulfur Company, Texaco Incorporated, American Metal Climax Inc. and Superior Oil Company.

Seven of these companies say the information requested in the memorandum is very reasonable and they believe the other companies will cooperate also.

In regard to potash, sylvite (potassium chloride K cl) is the refined product. Sylvinite is a mixture of halite (table salt) and sylvite and some clay and is the geological term for potash ore. Generally the potash ore is classed as anything from 15 to 20% K cl and up and this is considered economical. I have heard of some 6 and 8% production in the past, however. Then there is polyhalite, carnallite, langbeinite and a few other potash minerals and minor salts.

A major has connected another shut in gas well. The Superior Oil Company #14-16 Navajo "H" in Four Corners Navajo Nation area, located 660' f South and West Lines of Section 16-T41N-R30E, Apache County, completed as a 12,500 MCFPD open flow potential gas well, 2-10-59, G.O.R of 99,013 CFGP Barrel of oil of 64.8% gravity was connected to the El Paso Natural Gas pipeline. Superior handles this area from their Cortez, Colorado, office. They will ask the Commissioners very soon to designate this new field as the "Twin Falls Creek".

The Commission had favorable mention in regard to contributions to the United Fund. A reproduction in regard to this is included.

Three hundred nine more brochures on "Oil, Gas and Helium in Arizona" were sent to oil and gas producers in Albuquerque, New Mexico, and Midland, Texas. This totals around 1800 of these booklets which I have tried to place in the reach of people and companies and operators I know

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Executive Secretary's Report for December 16, 1963, to January 22, 1964

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will read them and who may be the cause of drilling and exploration being done in Arizona. Quite a number of brochures have been requested and other Commission people have distributed many of them.

We are receiving letters saying they have the book and want to know more about certain areas, etc. Whether I have placed the booklet or not means nothing; it's the fact that they have it and that it is distributed. Thus at any time it can cause accelerated interest and possibly lead to a drilling project.

I believe that ninety five percent of the petroleum and drilling companies in Salt Lake City, Utah; Durango, Colorado; Farmington and Albuquerque, New Mexico; Midland and Abilene, Texas; as well as several in Las Vegas, Nevada, have the Arizona booklets in their company libraries besides different ones who have been sent personal copies.

If possible, however, Denver, Roswell, Oklahoma City should be supplied; however it is expensive and we have to keep a supply on hand for requests by mail, phone or visit for the booklets.

A copy of the Oil Securities requirement enclosed for each of you was given us by the Corporation Commission.

We've received some relief maps of most of the state which we purchased from the Department of the Army. The others are forthcoming. I have ordered quite a number of these maps the past few years and have never seen anyone look at them the first time who didn't seem utterly fascinated by them. One can certainly become well acquainted with the topography of Arizona by studying them.

We have had many requests for geological information in all parts of the state.

I believe if the bonus "reward" bill passes, it will help immeasurably.

Senator Lockhart, Dr. Kalil and I went before the House Appropriations Committee January 6th, and outside of a few questions involving carried over money from the original appropriation, etc.; everything seemed to progress smoothly. They asked for an explanation of the \$367.65 Lump Sum in the fund carried from the original appropriation. Being in a different form than what we had all the items listed confused me somewhat on it but I don't believe I'd be confused again on it.

At any rate, Mr. Biles, Chairman, said for Chairman R. Keith Walden to write him an explanation of this; the different convention meetings to be attended by members of this Commission, for example: AAPG, IOCC, API, etc., and detail the account; explain the unused salary of the Executive Secretary; explanation of the \$2,863.54 which was \$1,684.63 out of the Lump Sum account and \$1,178.91 spent out of the \$1,200 Capital Outlay allotment for 1962-63.

They seemed favorably inclined about purchase of a new typewriter and keeping the old one since only \$110 would be allowed on a trade-in.

January 22, 1964

Executive Secretary's Report for December 16, 1963, to January 22, 1964

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There have been several phone calls and visits from persons interested in the Executive Secretary position.

On January 6th, Ed LaFrance, announcer of Radio Station K-14, called about the proposed bonus and what it would do. He wanted a statement and I told him it would "create stronger interest among operators and cause more drilling for oil and gas in Arizona". He taped that statement and it was on the air at about 4:30 p.m. that day according to a fellow next door who heard it.

Russell Anderson, Portland, Oregon, visited this office and we went over the activity in the state, especially at Pinta Dome. He has helium overrides in Pinta Dome purchased for \$400 per acre, and \$450 and \$500 per acre purchased in March, 1963. Some of this same acreage was offered to him for \$600 in 1959. I mention these prices because this is the first Pinta Dome royalty holder who has come into the office like this from out of state since I have been here and told me about his business in that locality. During 1958, 1959, and 1960, I spent a great deal of time with people from West Texas who had been offered percents override and acreage override in the Pinta Dome area for from \$100 to \$3,500 per acre.

We had several visitors, phone calls and letters inquiring about Arizona activity, activity status of several areas, and about drilling bond release on several wells.

The Highway Department needed the space where they very accommodatingly let me keep the Commission Ford for nearly four months. I took it to a station last week to put it in shape and have it stored for \$5 per month a few blocks from here.

The Eastern Petroleum proposed unit in Apache County has expanded northward with two more helium wells and three more to be drilled. This may possibly become a 10 well unit.

Navajo Nation oil and gas lease sale involved seven successful company bidders who spent \$3,312,764 in bonus money in the sale of 28 tracts January 9, 1964. The high bid, \$375.07 per acre, was by Socony-Mobil Oil Company. Next sale is February 6, 1964, at Window Rock.

A few inquiries have been made about wanting geological instrument men for alidade plane table mapping and one query about wanting to hire a mining engineer.

January 20, 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 January 13, 1964, Report

GEOLOGICAL FIELD TRIP #4, January 15, 1964

Purpose of trip was to visit the drilling wells near Sonoita in Pima County and north of Willcox in Graham County and to make surface geological reconnaissance whenever practical.

January 15, 1964

The Mountain States Exploration Company #1-A State, NE NE Section 29-T19S-R18E, Pima County, 10 miles northeast of Sonoita, has had considerable misfortune in drilling deeper than the 4430 feet which Donith Pixley drilled it to in 1963.

This project was re-entered last fall to be drilled to 7000 feet more or less searching for petroleum from the Devonian or any formation to that depth.

The bit and lower drillstem twisted off and was left in the bottom of the hole. An attempt was made to whipstock around this "fish" and another twistoff was experienced. With some hole caving trouble and having some further tools lost in the hole, they are attempting to whipstock now at a depth just below 3400 on the original hole.

This information was obtained from Tex Lewis whose brother, owner of Ross Dog Food Corporation, a California concern, is financing the operation. Mr. Durant, the drilling superintendent, was securing special tools for his whipstocking operation and there were no rig men on the operation on this date. They plan to resume drilling as soon as they can.

Tex Lewis gave me a sample of an oily looking substance which they have taken from the hole when cleaning it out to renew operations. It fluoresces like crude under the ultra-violet light in the Commission office, and I'm sure it's had some oil added to it because Tex Lewis showed me a chemical analysis of it which stated that silicon was the major constituent and that it contained no carbon or hydrogen. Crude oil always has the latter two constituents and without them it will not fluoresce. In certain stages, they won't fluoresce, but this sample fluoresced. Therefore, the sample is not a true one and can be discounted. He said he was going to run an electric log on the project when he finished drilling. All the thin stringers from which they have had bitumen and shale oil shows, etc. will be apparent on the log. Then, if they have any thickness at all, Lewis said he was ready to set pipe and try all completion practices he could in order to bring in an oil or gas well.

Mailed 1/27/64

January 20, 1964

Geological Field Trips Taken Since the January 13, 1964, Report
Page Two

Graham County, January 16, 1964

The Ram Oil Company #1 Ram Sierra Bonita Fee, Section 2-T11S-R22E, wildcat operation 29 miles north of Willcox, a scheduled 4000 foot Devonian test, was drilling at 915 feet in very hard material at the rate of one foot per hour. No shows of oil and gas have been reported.

Surface reconnaissance shows this Sulfur Springs Valley floor to continue to rise in elevation northwestward for approximately three miles, then slopes westward to drain into the Gila River.

GEOLOGICAL FIELD TRIP #5, Saturday, January 18, 1964

Purpose: For geological reconnaissance of areas in north Yavapai County and southern Coconino County east of the Phoenix-Flagstaff highway.

The first part of the geological reconnaissance was mostly made on the area east of the highway and on the south part of the Mogollon Rim. The outcrops are partly undifferentiated, but nearly all are of Permian age. This area is in north Yavapai and south Coconino Counties.

I had reports of some water wells or possible mineral exploration being conducted and I wished to determine some thicknesses of the various beds.

The rigs were not to be seen and I couldn't determine any locations; however the work expended was rewarding by the "on the ground" viewing of the Supai and Coconino formations.

The outcrops were checked for identification by fossil remains, lithology and observations are made in regard to oil stain, petroleum odor on fracture. There is always the possibility of finding a formation not listed on the published geological map of any area. The maps of this state are very good and in some areas outcrops of Devonian, Mississippian and Pennsylvanian age have not been differentiated, however that is being worked on.

Eastward in Coconino County in the area of the Apache Maid Mountain there were no rigs in operation. This is an area of structure. The Kaibab lime of Permian age outcrops, and I believe the volcanic formation which surround it are from one hundred to two-hundred feet thick as a maximum. I had visited this area in 1963 while going through the Coconino Forest. It would have the same section to drill through as the Pickett #1 Padre Canyon Well east of Flagstaff; that is, having Kaibab lime at the surface, then going down hole into the Coconino, Supai (including Fort Apache), Pennsylvanian, Mississippian, Devonian, Cambrian, then Pre-Cambrian granite.

Possibilities are good that the Kaibab outcrop is on a structural high. Detailed surface geology could determine this.

I was hoping someone was drilling for minerals here since it would afford very worthwhile information even though they just drilled through the Supai formation. I am fairly certain a core from the Devonian here on this mountain would have strong petroleum odor and possibly better.

Page..#2

Since I do not know anyone connected with your Mining Company and no Texas Gulf man has been by the commission office, I am using this method of contacting you. As you can see, I'm sending a copy to Mr. Lester and Gravender.

Wishing you success in your ventures, I am

Yours truly,

John K. Petty

JOHN K. PETTY
Acting Executive Secretary

JKP/kag
Eac1

cc Mr. Howard H. Lester, Chief Geologist
Texas Gulf Producing Co.
Box 2199
Houston, Texas

Mr. M. F. Gravender, Dist. Geologist
Texas Gulf Producing Co.
1509 Tower Building
Denver, Colorado



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MEMBER

ORME LEWIS
MEMBER

OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

ROOM 202

1624 WEST ADAMS

Phoenix 7, Arizona

271-5161

JOHN K. PETTY
PETROLEUM GEOLOGIST

January 24, 1964

TO: All Potash and Other Mineral Exploration
Companies Operating in Arizona.

SUBJECT: Suggested Commission Potash and Other
Mineral Drilling Policy.

After discussing with seven interested and participating companies the matter of obtaining well information from mining companies drilling exploration holes in localities where there are existing sediments which are known to at one area or another produce oil, gas, and/or helium; we have decided on a few points which if complied with would eliminate the need for any legislation to be enacted in the near future. Also we wish same to apply to water wells.

Since several mining company representatives who have visited this office have had a favorable attitude, and one company is already cooperating; it is believed that our needs can probably be accommodated with a minimum of effort on your part.

This policy will satisfy our present requirements, as well as protect your interests; and at the same time allow the Commission pertinent stratigraphic information without divulging any of your findings of mineral interests to your competitors.

The Commission would like copies of, and believes the following would be beneficial to all concerned:

1. The location plat showing exact location and elevation of all tests.
2. Core samples and cuttings to be saved at approximately ten foot intervals or whatever is convenient. The Commission Geologist will pick up the samples when notified. A regular size canvas bag properly labeled with company name, location of test, footage interval, and reasonably full of material is desired. These samples are to be taken in all formations except the salt and anhydrite section or where you expect your potash or other minerals to occur.

Mailed 1/27/64

January 24, 1964

TO: All Potash and Other Mineral Exploration Companies Operating
in Arizona.

Page Two

3. The Commission completion and plugging forms will be furnished and we'd like for you to fill these out and return one copy of each to us for our record. All shows of oil, gas, helium or "blows" can be reported on the completion form also.
4. A copy of all logs run (electric, gamma ray-neutron, etc.) sent to the Commission. The salt and anhydrite section can be cut out of the log with any section below being clipped or attached to the upper section of log with a note of the footage missing. This keeps your potash and other mineral section private information and yet delivers the stratigraphic information to us. Then at such time as it is no longer imperative for you to keep the mineral part of the section, you can forward it to us and we can insert it in its proper place on the log.
5. Setting Casing: This can be agreed on. The fresh water must be protected and in case of potash in the Supai salt, you will cause it to be protected from the fresh water for the potash minerals benefit. When you protect your salt, you'll be protecting our fresh water.
6. Plugging: The Commission plugging rules if followed and made a matter of record in this office will show to anyone concerned that an effort was made to accomplish their aim.
7. Marker: We want erected a good identification which is used in other states and consists of a four foot long pipe, four inches in diameter, vertical and cemented in the hole with upper end closed, with operator and location welded on it or a sign permanently attached.
8. All of this information could be sent to the Commission within three months after a project or test is completed.

January 24, 1964

TO: All Potash and Other Mineral Exploration Companies Operating
in Arizona.

Page Three

The withheld salt and anhydrite section of the log as well as core chips of same can be turned in at the operator's discretion. All samples saved can be sent to the Four Corners Sample Cut Association at 641 West Broadway, Farmington, New Mexico, or given to the Petroleum Geologist of the Commission as previously mentioned.

We wish to be clearly understood that the above information is for stratigraphic purposes only.

Attached find a copy of our rules and regulations as well as a copy of "Oil, Gas and Helium in Arizona" booklet as well as some thirty drillers logs and sample descriptions which you may find helpful.

We hope you will visit the Commission office and use our information.

Hoping you will cooperate with us in your exploration activities, and wishing you huge success, I am,

Yours truly,

John K. Petty

John K. Petty
Acting Executive Secretary

JKP:mkc
Encl.



**1034 GREATER PHOENIX SCOTTSDALE
UNITED FUND CAMPAIGN**
1515 EAST OSBORN ROAD * PHOENIX, ARIZONA
PHONE 277-5421

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PRESIDENT, KOOL RADIO & TELEVISION

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FINAL REPORT

STATE EMPLOYEES' UNITED FUND DRIVE 1964

January 14, 1964

TOTAL CONTRIBUTIONS	\$20,580.35
Total No. Employees Contributing	3,246
Number of Agencies Participating	73
Number of 100% Agencies	42
Average Contribution	\$6.34
Percent of Last Year's Contributions	97%
Percent of Quota	92%

*** HONOR AGENCIES ***

Governor's Office.	100%	\$38.10	Avg. Contr.
Barber Examiners	100%	\$24.00	" "
Game & Fish Commission	84%	\$15.06	" "
Mineral Resources.	100%	\$14.38	" "
Administrative Office, Arizona			
State Employment Service	100%	\$13.24	" "
Attorney General	100%	\$13.09	" "
Planning & Building Commission	100%	\$13.00	" "
Phoenix Farm Office, Arizona State			
Employment Service	100%	\$12.63	" "
Public Buildings Maintenance	100%	\$12.28	" "
Oil & Gas Commission	100%	\$12.00	" "
State Veterinarian	100%	\$12.00	" "

Co-Chairmen: Justin Herman
Victor L. Nielsen, Jr.
James A. Rork
Floyd Williams, Jr.

Mailed 1/27/64

STATE OF ARIZONA
26TH LEGISLATURE
2ND REGULAR SESSION

HOUSE

H. B. 14
INTRODUCED
JANUARY 14, 1964

Referred to	Date	Reported Out
Judiciary		

Committee of Whole _____

3rd Reading — Aye _____ No _____ Absent _____

Senate Action _____

Sent to Governor _____ Action _____

Introduced by Members Pugh, Brown, Frantz, Holmes,
Young of Maricopa

AN ACT Relating to Oil and Gas; Providing for Classification and Determination of Restricted and Unrestricted Districts on State Lands; Prescribing Annual Rental Fees, and Amending Sections 27-554 and 27-555, Arizona Revised Statutes.

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

2 Section 1. Sec. 27-554, Arizona Revised Statutes, is
3 amended to read:

4 27-554. DESIGNATION OF KNOWN GEOLOGI-
5 CAL STRUCTURES OF PRODUCING OIL AND GAS
6 FIELDS; RESTRICTED AND UNRESTRICTED DIS-
7 TRICTS

8 A. The department shall from time to time determine
9 and designate the known geological structures of producing
10 oil and gas fields. The determinations and designations shall
11 be published twice in a newspaper of general circulation in
12 the state, the last publication to be not less than five days
13 from the first date of publication. The determinations and
14 designations shall become effective from the date of first
15 publication. Until such a determination and designation is
16 made by the department, all state lands shall be deemed
17 located not within any known geological structure of a pro-
18 ducing oil and gas field.

19 B. THE DEPARTMENT SHALL DETERMINE
20 AND CLASSIFY STATE LANDS AS BEING IN EITH-
21 ER A RESTRICTED OR UNRESTRICTED DIS-
22 TRICT. FOR THE PURPOSE OF THIS ARTICLE,
23 A RESTRICTED DISTRICT SHALL COMPRISE AN

1 AREA USUALLY IN A PROVEN OIL AND GAS
2 AREA. AN UNRESTRICTED DISTRICT SHALL IN-
3 CLUDE ALL STATE LANDS NOT INCLUDED IN A
4 RESTRICTED DISTRICT.

5 [B.] C. The department may refuse to lease any state
6 lands for oil and gas when the lands are being used by the
7 state or any state department for a state purpose.

8 Sec. 2. Sec. 27-555, Arizona Revised Statutes, is amend-
9 ed to read:

10 27-555. LEASE OF STATE LANDS NOT LOCATED
11 WITHIN KNOWN GEOLOGICAL STRUCTURE OF
12 PRODUCING OIL AND GAS FIELD; APPLICA-
13 TION; PROVISIONS OF LEASE; ACREAGE LIM-
14 ITATION; WITHDRAWAL OF LANDS FROM LEAS-
15 ING

16 A. When state lands are not located within any known
17 geological structure of a producing oil and gas field, as
18 determined pursuant to section 27-554, the person making
19 the first application for the lease shall be issued a lease
20 covering the lands without competitive bidding.

21 B. The noncompetitive leases shall provide for the pay-
22 ment by the lessee of a royalty of twelve and one-half per-
23 cent of the market value of all oil, gas and other hydro-
24 carbons produced, saved, sold and removed from the lands
25 at the well as of the time of sale or removal from the lands,
26 as the department may elect.

27 C. The leases shall provide for an annual rental of one
28 dollar and twenty-five cents per acre per year ON RE-
29 STRICTED DISTRICTS AND ONE DOLLAR AND
30 TEN CENTS PER ACRE PER YEAR ON UNRE-
31 STRICTED DISTRICTS until oil or gas in paying quanti-
32 ties is discovered on the lands covered by the lease. The
33 rental shall be payable as follows:

34 1. Twenty-five cents cash per acre per year in advance
35 ON RESTRICTED DISTRICTS AND TEN CENTS
36 CASH PER ACRE PER YEAR IN ADVANCE ON UN-
37 RESTRICTED DISTRICTS until oil or gas in paying
38 quantities is discovered upon the lands covered by the lease.

39 2. The balance in the amount of one dollar per acre per
40 year to be determined as though it were payable in advance
41 for each year of rental, as a cash bonus to be paid by the
42 lessee within ninety days after discovery of oil or gas in
43 paying quantities upon the land covered by the lease.

44 (a) The subsequent rental payments from date of the
45 discovery of oil or gas in paying quantities upon the land

1 covered by the lease shall be at the rate of one dollar per
2 acre per year. [*and shall be credited on the royalty pay-*
3 *ments for that year.*]

4 (b) All leases shall provide for a minimum rental of
5 eighteen dollars per year.

6 [C.] D. The leases shall be for a term of five years and
7 as long thereafter as oil, gas or other hydrocarbon sub-
8 stances are procured and produced therefrom in paying
9 quantities. The lease upon which drilling operations are
10 being diligently prosecuted on the expiration date thereof
11 shall continue in effect for a period of two years and so
12 long thereafter as oil, gas or other hydrocarbon substances
13 are procured and produced in paying quantities from the
14 lands.

15 [D.] E. Each lease shall provide that the state's royal-
16 ties shall be computed after deducting any oil or gas rea-
17 sonably used in operations on the lease and after deducting
18 the cost of dehydrating the oil production therefrom in-
19 cluding the cost of extraction of liquid products from the
20 gas produced.

21 [E.] F. The leases shall contain other terms and pro-
22 visions, not inconsistent with the provisions of this article
23 or other laws of the state, as in the opinion of the depart-
24 ment are for the best interest of the state.

25 [F.] G. NO LEASE UPON STATE LANDS SHALL
26 BE ISSUED TO COVER [*not*] more than two thousand
27 five hundred sixty acres of land confined to an area of [*six*
28 *miles square shall be included in any one lease.*] ONE
29 TOWNSHIP, BUT NO RESTRICTION SHALL BE
30 PLACED UPON THE NUMBER OF LEASES ANY
31 ONE PERSON MAY HOLD. The lands shall be in as
32 compact a body as possible but may include non-contiguous
33 land within the six-mile area if the maximum acreage of
34 contiguous land is not available.

35 [G. *No person, association or corporation shall take or*
36 *hold at any one time noncompetitive oil or gas leases issued*
37 *hereunder exceeding in the aggregate fifteen thousand three*
38 *hundred sixty acres.*]

39 H. Noncompetitive oil and gas leases committed to unit
40 operation, as provided in section 27-557, shall be exempt
41 from the acreage limitation mentioned in subsection G.

42 I. Each lease shall provide that any combination, under-
43 standing or agreement entered into by the lessee, written,
44 verbal or otherwise, for the purpose of delaying discovery or
45 development of oil or gas is an illegal practice, and that

H. B. 14

1 upon legal determination thereof shall constitute grounds
2 for cancellation of the lease. Appropriate proceedings may
3 be instituted by the attorney general against the lessee in
4 the county in which the land or any part thereof is located.

5 J. The provisions of this section shall not apply to a
6 unit plan or operations entered into under the provisions
7 of this article, or to any plan or operation authorized by
8 any conservation law of this state.

9 K. Applications for noncompetitive leases shall be in
10 writing addressed to the department and shall contain a
11 description of the lands sufficient to identify them, the
12 name and address of the applicant, and shall be accompan-
13 ied by a filing fee of ten dollars and the rental payment for
14 the first year. Each application shall be stamped when
15 received by the department with a stamp showing the day
16 and hour when received. If valid applications covering the
17 same lands are filed simultaneously, the department shall
18 provide by general regulation for a drawing between the
19 applicants to determine which shall be entitled to a lease of
20 the lands. In event the lease is not issued, the rental pay-
21 ment shall be refunded to the applicant.

22 L. The department may withdraw from leasing any
23 specific area of land not located within any known geologi-
24 cal structure of a producing oil and gas field when it ap-
25 pears that the withdrawal is in the interest of the state, but
26 no lands shall be withdrawn by the department without the
27 consent of a committee composed of the governor, who shall
28 be chairman, the attorney general, and the dean of the col-
29 lege of mines of the university of Arizona. The committee
30 shall consider the proposed withdrawal presented by the
31 department and determine whether the withdrawal shall
32 be permitted. The land, after being withdrawn from leas-
33 ing, may again be offered for leasing at any time the de-
34 partment deems in the best interests of the state, subject
35 to the advice and consent of the committee provided for in
36 this section, and pursuant to notice as the committee deems
37 necessary.

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STATE OF ARIZONA
26TH LEGISLATURE
2ND REGULAR SESSION

HOUSE

H. B. 13

**INTRODUCED
JAN. 14, 1964**

Referred to	Date	Reported Out
Judiciary		

Committee of Whole _____
3rd Reading — Aye _____ No _____ Absent _____
Senate Action _____
Sent to Governor _____ Action _____

Introduced by Members Pugh, Brown, Frantz,
Holmes of Maricopa

AN ACT Relating to Sales of Securities; Defining "Security" or "Securities"; Defining Subdividing of Oil and Gas Leases, and Amending Section 44-1801, Arizona Revised Statutes.

- 1 **Be it enacted by the Legislature of the State of Arizona:**
2 Section 1. Sec. 44-1801, Arizona Revised Statutes, is
3 amended to read:
4 44-1801. DEFINITIONS
5 A. In this chapter, unless the context otherwise re-
6 quires:
7 1. "Commission" means the Arizona corporation com-
8 mission.
9 2. "Dealer"
10 (a) Means a person who directly or indirectly engages
11 full or part time in this state as agent, broker or principal
12 in the business of offering, buying, selling or otherwise
13 dealing or trading in securities issued by another person,
14 and who is not a salesman for a registered dealer or is not
15 a bank, savings institution or trust company the business
16 of which is supervised and regulated by an agency of this
17 state or the United States.
18 (b) Means an issuer who, directly or through an of-
19 ficer, director, employee or agent who is not registered as
20 a dealer under this chapter, engages in selling securities
21 issued by such issuer.
22 (c) Does not include a person who sells or offers to sell
23 securities exclusively to dealers registered under this chap-
24 ter, and who has no place of business within this state.

H. B. 13

1 (d) Does not include a person who buys or sells securi-
2 ties for his own account, either individually or in a fiduci-
3 ary capacity, but not as part of a regular business.

4 3. "Director" means the director of the securities di-
5 vision of the commission.

6 4. "Issuer" means any person who issues or proposes to
7 issue any security, except:

8 (a) With respect to certificates of deposit, voting-
9 trust certificates, collateral-trust certificates, certificates
10 of interest or shares in an unincorporated investment trust,
11 whether or not of the fixed, restricted management, or unit
12 type, issuer means the person or persons performing the
13 acts and assuming the duties of depositor or manager pur-
14 suant to the provisions of the trust or other agreement or
15 instrument under which such securities are issued:

16 (b) With respect to equipment-trust certificates or like
17 securities, issuer means the person by whom the equipment
18 or property is or is to be used.

19 (c) With respect to fractional interests in [*an oil, gas*
20 *or other*] A mineral lease, permit, claim or right, issuer
21 means the owner thereof or of any interest therein, whether
22 whole or fractional, fractional interests in which are created
23 for the purpose of a public offering.

24 5. "Offer to sell" or "offer for sale" means an attempt
25 or offer to dispose of, or solicitation of an order or offer to
26 buy, a security or interest in a security for value, any sale
27 or offer for sale of a warrant or right to subscribe to an-
28 other security of the same issuer or of another issuer. Any
29 sale or offer for sale of a security which gives the holder
30 thereof a present or future right or privilege to convert
31 such security into another security of the same issuer or
32 of another issuer, shall be deemed an offer to sell the secur-
33 ity to be acquired pursuant to such right or privilege, but
34 the existence thereof shall not be construed as affecting the
35 registration or exemption under this chapter of the security
36 to which it attaches.

37 6. "Person" means an individual, corporation, partner-
38 ship, association, joint stock company, trust, or any other
39 unincorporated organization.

40 7. "Registered dealer" means a dealer registered under
41 this chapter.

42 8. "Registered salesman" means a salesman registered
43 under this chapter.

44 9. "Sale" or "sell" means a sale or other disposition of
45 a security or interest in a security for value, and includes

1 a contract to make such sale or disposition. A security given
 2 or delivered with, or as a bonus on account of, a purchase of
 3 securities or other thing, shall be conclusively presumed to
 4 constitute a part of the subject of the purchase and to have
 5 been sold for value.

6 10. "Salesman" means an individual, other than a
 7 dealer, employed or appointed or authorized by a dealer to
 8 sell securities in this state. The partners or executive offi-
 9 cers of a registered dealer shall not be deemed salesmen
 10 within the meaning of this definition.

11 11. "Securities act of 1933" means the act of Congress
 12 know as the securities act of 1933, as now or hereafter
 13 amended.

14 12. "Securities exchange act of 1934" means the act of
 15 Congress known as the securities exchange act of 1934, as
 16 now or hereafter amended.

17 13. "Security" or "securities" include any note, stock,
 18 treasury stock, bond, debenture, evidence of indebtedness,
 19 certificate of interest or participation in any profit-sharing
 20 agreement, certificate of interest in any trust or unincor-
 21 porated association, any preorganization certificate, agree-
 22 ment or subscription, voting trust certificate, investment
 23 contract, any fractional interest in [*an oil, gas or*] A min-
 24 eral lease, claim, permit or right, any assignment of sub-
 25 divided portions of any [*oil, gas or*] mineral lease, permit,
 26 claim or right which is subdivided for the purpose of a pub-
 27 lic offering, any certificate of interest in title to property,
 28 earnings or profits, or, in general, any instrument com-
 29 monly known as a security, including any guarantee of,
 30 temporary or interim receipt for, certificate for, or war-
 31 rant or right to subscribe to any of the foregoing.

32 14. "Underwriter" means a person who has acquired
 33 from an issuer with a view to, or sells for an issuer in con-
 34 nection with, the distribution of any securities or partici-
 35 pates or has a direct or indirect participation in such under-
 36 taking or participates or has a participation in the direct or
 37 indirect underwriting of such undertaking. "Underwriter"
 38 shall not include a person whose interest is limited to a
 39 commission from an underwriter or dealer not in excess
 40 of the usual and customary distributor's or seller's com-
 41 mission.

42 B. THE SUBDIVIDING OF AN OIL AND GAS
 43 LEASE FOR THE PURPOSE OF A PUBLIC OFFER-
 44 ING, WHERE THE "WHOLE INTEREST" IS CON-
 45 VEYED IN THE ASSIGNMENT OF THE SUBDI-

H. B. 13

1 VIDENT PORTION AND NO INTEREST IS RETAINED
2 BY THE OFFEROR OR SELLER IN THE ASSIGNED
3 PORTION OF THE LEASE, SHALL NOT BE CON-
4 SIDERED AS DEALING IN A SECURITY, BUT
5 SHALL BE CONSIDERED AS DEALING IN AN IN-
6 TEREST IN REAL ESTATE AND THE OFFEROR OR
7 SELLER SHALL BE BONDED AND LICENSED BY
8 THE STATE REAL ESTATE COMMISSION.

9 Sec. 2. EMERGENCY

10 To preserve the public peace, healty and safety it is
11 necessary that this act become immediately operative. It
12 is therefore declared to be an emergency measure, to take
13 effect as provided by law.

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STATE OF ARIZONA
26TH LEGISLATURE
2ND REGULAR SESSION

SENATE

S. B. 43

INTRODUCED
JAN. 14, 1964

Referred to	Date	Reported Out
Judiciary		

Committee of Whole _____
3rd Reading — Aye _____ No _____ Absent _____
House Action _____
Sent to Governor _____ Action _____

Introduced by Senators Simms, Mickelson, Cook

AN ACT Relating to Oil and Gas; Providing for the Payment of a Reward to the Owner of the Well for the First Oil or Hydrocarbon Gas Well Brought in Within the Boundaries of the State of Arizona that Produces Not Less Than Twenty-Five Barrels of Commercial Oil or at Least One Million Cubic Feet of Hydrocarbon Gas Every Twenty-Four Hours Consecutively Pumping or Flowing for a Period of Not Less Than Ninety Days; Prescribing the Method of Payment of the Reward and Making an Appropriation.

- 1 **Be it enacted by the Legislature of the State of Arizona:**
2 Section 1. REWARD PAYMENT TO OIL OR HY-
3 DROCARBON GAS WELL OWNER
4 The oil and gas conservation commission shall offer a
5 reward of two hundred fifty thousand dollars to be paid
6 to the owner of the well for the first oil or hydrocarbon gas
7 well brought in within the boundaries of the state of Ari-
8 zona that produces not less than twenty-five barrels of
9 commercial oil or at least one million cubic feet of hydro-
10 carbon gas every twenty-four hours pumping or flowing
11 consecutively for a period of not less than ninety days.
12 Sec. 2. PROCEDURE FOR PAYMENT
13 The oil and gas conservation commission shall determine
14 the owner of the oil or hydrocarbon gas well who is qualified
15 to receive the reward as prescribed by the terms of section
16 1 of this act and prior to authorizing payment shall pre-
17 sent the facts to the governor and obtain his approval.
18 Sec. 3. APPROPRIATION
19 The sum of two hundred fifty thousand dollars is ap-



1 appropriated from the state general fund to the oil and gas
2 conservation commission, to be available for the purposes of
3 this act.

4 Sec. 4. EXPIRATION DATE

5 The terms of this act shall expire on July 1, 1966, and
6 the appropriation authorized by this act is exempt from the
7 provisions of section 35-173 and 35-190, Arizona Revised
8 Statutes, relating to quarterly allotments and lapsing of ap-
9 propriations, except that the appropriation, if not expended
10 for the purposes provided by this act, shall lapse on July 1,
11 1966.

12 Sec. 5. EXCLUSIONS

13 A. Helium gas is excluded from the provisions of this
14 act since it has already been discovered in commercial quan-
15 tities.

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

19 Sec. 6. EMERGENCY

20 To preserve the public peace, health and safety it is
21 necessary that this act become immediately operative. It is
22 therefore declared to be an emergency measure, to take ef-
23 fect as provided by law.

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STATEMENT OF LEDGER TRANSACTIONS
December, 1963

	EXPENDITURES OUTSTANDING TO DATE	ENCUMBRANCES DEC. 1963	EXPENDITURES DEC. 1963	APPROPRIATION FOR YEAR	UNENCUMBERED BALANCE
Office Staff			\$1,150.00		
Commissioners			150.00		
TOTAL PERSONAL SERVICES	\$9,988.00		<u>1,300.00</u>	\$13,900.00 *	\$3,912.00
Telephone			112.48		
Office & Geological Supplies			113.45		
Postage			97.50		
TOTAL CURRENT EXPENDITURES - OTHER	1,843.80	\$20.00	<u>323.43</u>	3,225.00 *	1,361.20
TOTAL SUBSCRIPTIONS & ORGANIZATION DUES	15.35		00	150.00	134.65
Car Expenses			61.40		
Commissioners			143.50		
TOTAL TRAVEL - STATE	1,664.69	36.00	<u>204.90</u>	4,500.00	2,799.31
TOTAL TRAVEL - OUT OF STATE	148.44	30.00	137.60	2,500.00	2,321.56
TOTAL CAPITAL OUTLAY - EQUIPMENT	72.29	00	00	225.00	152.71
TOTAL FIXED CHARGES	166.12	00	00	250.00	83.88
TOTAL PROFESSIONAL SERVICES	335.80		49.00	4,000.00	3,664.20
TOTAL MUSEUM OF NORTHERN ARIZONA	625.00	625.00	00	1,250.00 *	00
TOTAL BUREAU OF MINES - U of A	1,250.00		00	1,250.00 *	00
TOTALS	\$16,109.49	\$711.00	\$2,014.93	\$31,250.00	\$14,429.51
CASH BOND					00
LUMP SUM BALANCE					367.65
RECEIPTS	625.00		25.00		6,445.25

NOTE: * Quarterly Allotments - Through Second Quarter

Mailed January 16, 1964

~~XXXXXXXXXX~~
~~XXXXXXXXXX~~

January 14, 1964

Mr. R. Keith Walden, Chairman
Oil and Gas Conservation Commission
P. O. Box 1271
Tucson, Arizona

Re: January 16th Commissioners Meeting Cancelled.

Dear Mr. Walden:

This will confirm our telephone conversation of last evening in regard to the January 16th Commissioners meeting being cancelled and also that there will be no regular meeting later this month because of the unavoidable absence of several members.

I understood that if some of the Commissioners wished to have a special meeting called next month prior to February 20th (regular meeting date); they could contact you or this office so that it could be arranged.

Very truly yours,

John E. Petty
Acting Executive Secretary

JEP:mbs

Cc: The Commissioners:
Mr. Lynn Lockhart
Mr. Charles Hall
Mr. Robert E. Howard
Mr. Gene Lewis

Mr. Edward I. Kennedy

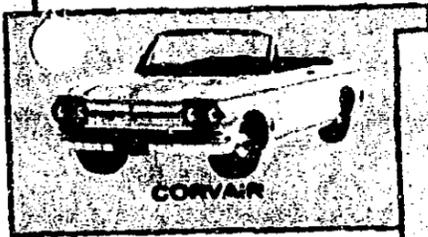
A G E N D A

OIL AND GAS CONSERVATION COMMISSION
1624 West Adams, Room 202
Phoenix, Arizona

January 16, 1964
9 a.m.

1. Approval of the Minutes of the previous meeting.
2. Consideration of the written reports of the Acting Executive Secretary-Petroleum Geologist.
3. Any other matters the Commissioners may desire to discuss.

Mailed January 13, 1964
Notified of Cancellation Jan.14, 1964



HEWARD MOTOR COMPANY
1000 Navajo Boulevard Phone 524-3951
Holbrook, Arizona

January 10, 1964

John K. Petty
Room 202
Oil and Gas Conservation Commission
1624 West Adams
Phoenix 7, Arizona

Dear John:

KEARNEY & GAYNE

My commission expired on January 1, therefore, I will be unable to attend your meetings as I am no longer a commissioner.

I have enjoyed working with you very much and wish you lots of good luck in your job in the future.

While you guys are in your meetings, I am going to be working on that 10 million I hope to make in 1964.

Yours very truly,

HEWARD MOTOR COMPANY

Robert B. Heward
Robert B. Heward
Manager

RBH:mb

Mailed January 13, 1964

COUNT ON CHEVROLET TO BUILD THE ONE YOU WANT

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.

Mailed January 13, 1964

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 4½ 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.