

OIL & GAS CONSERVATION COMMISSION
Meeting: April 21, 1978
Mr. John Bannister, Exec. Sec.



OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
1645 WEST JEFFERSON, SUITE 420
PHOENIX, ARIZONA 85007
PHONE: (602) 271-5161

A G E N D A

Meeting
April 21, 1978
1645 West Jefferson, Room 212
Phoenix, Arizona

10:00 A.M. Hearing, Case No. 53
Hearing, Case No. 54

Immediately
Following
Hearings

- Call to order
1. ✓ Approval of minutes of meeting of February 17, 1978
 2. ✓ Report of Executive Secretary
 3. ✓ Report of Enforcement Section
 4. Report of Geology Section
 5. Old Business
 6. New Business - *June Meeting*
 7. Adjourn

IF YOU ARE UNABLE TO ATTEND THIS MEETING, PLEASE NOTIFY THIS OFFICE AS SOON AS POSSIBLE.

OIL AND GAS CONSERVATION COMMISSION
1645 West Jefferson Street
Suite 420
Phoenix, Arizona 85007

Minutes of Meeting
February 17, 1978

Present:

Mr. Ralph W. Bilby, Chairman
Mr. Hal Butler, Vice Chairman
Mr. Robert A. Gallaher, Member
Dr. J. Dale Nations, Member
Mr. Norman D. Levitt, Member

The regular Commission meeting of February 17, 1978 was called to order at 10:15 a.m. in Room 421, 1645 West Jefferson Street, Phoenix, Arizona.

The minutes of the meeting of December 16, 1977 were approved as written.

Reports of Executive Secretary, Enforcement Section and Geology Section were accepted.

Executive Secretary reviewed proposed updating of a state geological map which was outlined at the December 16, 1977 meeting of the Commission. The Office of Economic Planning and Development has been requested to seek funding for the first phase of the project, which will involve gathering of information and the preparation of a tectonic map and a Bouguer gravity meter map of the State of Arizona, at an estimated cost of \$258,000.

Executive Secretary advised that a proposal has been submitted to the Four Corners Regional Commission for \$5,000 to be paid to GS Laboratories, which is doing some work for the United States Geological Survey, to extend their work to the Mogollon Rim area. It is anticipated that the Four Corners Regional Commission will approve the proposal on or about March 9, 1978.

Executive Secretary reviewed the legislative bills involving the Oil and Gas Conservation Commission which have been introduced in the current session of the Legislature.

After discussion, the following Resolutions were adopted.

RESOLUTION

WHEREAS, the regulatory authority of the State of Arizona over the production of various energy sources under its jurisdiction now rests in several commissions, agencies, or departments; and

WHEREAS, the authority of the State of Arizona to encourage the development of the various energy sources within the State and to protect the ecology associated therewith, now rests in several commissions, agencies, or departments; and

WHEREAS, due to this fragmentation of authority, it is difficult for the State of Arizona to express its vital interests in energy matters with one strong and consolidated voice in Washington, D.C., or elsewhere; and

WHEREAS, Senate Bill 1183, introduced January 30, 1978 during the 2nd Regular Session of the 33rd Legislature of the State of Arizona, proposes consolidation of several energy related agencies into one strong central Arizona Department of Energy, which would provide for one regulatory authority over the production of various energy sources, and over the encouragement of development of the various energy sources and the protection of the ecology associated therewith:

NOW, THEREFORE, BE IT RESOLVED that the Oil and Gas Conservation Commission, State of Arizona, in regular session on February 17, 1978, endorses the principle and intent of Senate Bill 1183 and urges the enactment into law the principles and intent as therein expressed.

RESOLUTION

The United States of America must import one-half of its daily requirements of crude oil. The State of Arizona must import approximately 90% of its daily energy needs. Any action that would reduce the need for importation of energy into the United States and into Arizona would be of great benefit to our State and to our Nation.

Daily, millions of gallons of used petroleum lubrication oils are thrown away and disposed of in such a manner as to be a detriment to the environment and a waste of reusable fuel. It is estimated that 9 million gallons of used petroleum lubricating oils could be saved in Arizona each year.

House Bill 2168, as introduced on January 24, 1978 during the 2nd Regular Session of the 33rd Legislature of the State of Arizona, is designed to encourage the saving, collection and reuse of valuable used petroleum lubricating oils.

Minutes of Meeting
February 17, 1978
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THEREFORE, BE IT RESOLVED that the Oil and Gas Conservation Commission, State of Arizona, in regular session on February 17, 1978, endorses the principles and intent of House Bill 2168 and urges the enactment into law the purpose and principle as therein expressed.

Executive Secretary was instructed to submit the prepared resolutions to the Chairman for approval and then transmit copies of the signed resolutions to the legislative members involved.

It was reaffirmed that the regular Commission meetings be the third Friday of every other month.

Executive Secretary advised that Kerr-McGee Corporation intends to request that a hearing be held to coincide with the next regular Commission meeting of April 21, 1978. The purpose of the hearing is to request a change in spacing regulations in the Dineh-bi-Keyah field.

Authorization was granted for the Executive Secretary to attend the Executive Committee meeting of the Interstate Oil Compact Commission in Tampa, Florida on March 3, 1978.

The next meeting of the Commission will be April 21, 1978.

Meeting adjourned at 11:40 a.m.

APPROVED April 21, 1978



Ralph W. Bilby, Chairman



OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

1645 WEST JEFFERSON, SUITE 420

PHOENIX, ARIZONA 85007

PHONE: (602) 271-5161

ACTIVITY REPORT

April 12, 1978

John Bannister
Executive Secretary

The regular Commission meeting will be on April 21, 1978 at 10:00 a.m. Hopefully, we will meet in Room 212 of this building, but it is suggested that you come directly to this office in the event there is a change in the meeting place.

At the hearing scheduled for 10:00 a.m., Kerr-McGee Corporation will propose drilling of additional wells in the Dinebi-Keyah field. This will call for an amendment of our field rules. It is our opinion that Kerr-McGee's request should be granted, inasmuch as it would aid in securing additional production. If the proposed well is a success, additional wells will be requested.

Following the Kerr-McGee hearing, a second hearing will be held. This will be a hearing on the Commission's part to adopt additional rules and regulations covering storage projects in the state. As you are aware, as a result of the Cal Gas explosion at the salt domes near Luke Air Force Base, the Commission closed in the field, pending alleviation of the explosion cause. In reporting this action to the Attorney General, he suggested that we seek legislation for the spelling out of our authority in the case of storage wells, disposal wells, etc. House Bill 2027 accomplishes this. Inasmuch as the Commission was meeting for a hearing on April 21st, we felt that it would be less costly to adopt our suggested rule at that time. A copy of the proposed rule is attached to Bill Allen's report. This has been properly and duly filed with the Secretary of State.

It is anticipated that the two hearings should take approximately one hour.

We have received no adverse comments as to our suggested regulations on storage, although we expect some changes will be suggested by interested parties.

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Executive Secretary
April 12, 1978

Arizona Public Service is requesting the Corporation Commission allow it to amortize exploration expenses of some \$42 million over a period of five years. The proposal is that any unsuccessful exploration attempts made by the company become part of the rate base and be charged to its customers. Corporation Commissioner Bud Tims has contacted me and requested that we look over APS' proposal. Mr. Tims will meet with the staff on Thursday, April 13th, for our suggestions.

Basically, it seems that APS has requested that its customers underwrite any final loss, while allowing its stockholders to enjoy the profit from the final success. The customer, of course, would have no option as to whether or not he would underwrite such a cost, if the Corporation Commission so approves. This is a problem facing many public utility companies throughout the United States and various solutions have been suggested.

It is my personal feeling that APS should be encouraged to engage in exploration activities, but at the stockholders expense and/or profit, rather than force a customer to bear any loss. Any gas which may result from such exploration would be sold to the customer, at a profit to APS, thus the customer would be allowed to engage in only financially losing propositions, with no reward for a successful venture.

Legislation:

House Bill 2027, above mentioned, explicitly spells out the Commission's authority over storage and disposal wells. This bill has passed the House and is currently in the Natural Resources Committee of the Senate. The bill was before the Senate committee on April 11th but it wasn't heard, due to lack of time. It is now scheduled for hearing at 2:00 p.m. on Monday, April 17th.

House Bill 2168, which is the oil recycling bill, has passed all House committees but has not yet been sent to the Senate.

House Bill 2325, which spells out state policy as to geothermal reservoirs, has been amended to change the name of the Oil and Gas Conservation Commission to the Arizona Oil and Gas Commission and to allow the Commission to actually drill a well for information purposes in the event grants are made available for this purpose.

This latter amendment is the result of a proposal from NASA and DOE wherein they propose to finance a program for state agencies to investigate state land within Arizona, select a site and actually drill and test occurrences of geothermal energy. Should the program become a success, this Commission

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April 12, 1978

would be the agency actually drilling the well. Currently, the Commission has no authority to engage in such activities. This bill would grant the authority.

Senate Bill 1183 creates the Arizona Department of Energy. This is the bill which the Commission, by resolution, has endorsed. This bill passed the Senate and is currently in the House.

House Bill 2313 creates an Arizona Energy Institute and has not as yet passed the House. However, it has passed the House Appropriations Committee and the Natural Resources Committee. It is my understanding that the House bill will probably not pass caucus and that the intent is to get the legislative aides of the House and Senate together to work out a compromise and amend Senate Bill 1183 in a manner that will pass both the House and Senate. There is some sentiment that Mineral Resources, the Fuel and Energy Office of OEPAD, and the Solar Energy Commission could be merged into the Oil and Gas Commission for this purpose, inasmuch as the structure of the Oil and Commission is basically that being sought and our organization is such that it could accommodate additional responsibilities. However, I do not anticipate at this time that such a move will occur.

You will be kept advised as to the progress of these bills.

The state geological map proposition, of which you have been advised, is apparently dead at this time. Briefly, the Bureau of Geology and Mineral Technology, together with the Oil and Gas Conservation Commission, intended to seek a bill to finance the updating of the state geological map, together with a new gravity map and a tectonic map at a scale of 1:250,000. The amount sought was \$258 thousand for the first year's effort. The Chairman of the House Natural Resources Committee suggested that this Commission seek a budget amendment for the 1978-79 fiscal year to accomplish this purpose. About that time, Governor Bolin indicated that he preferred no budget be increased. In compliance with this, we returned to the Chairman of the House Natural Resources Committee, who then requested that we amend a bill the Commission had before his committee. This was done, but during the hearing it was suggested that rather than amend the Commission's bill, we wait until a bill from the Senate came before this committee and at that time amend the Senate bill. This step was taken.

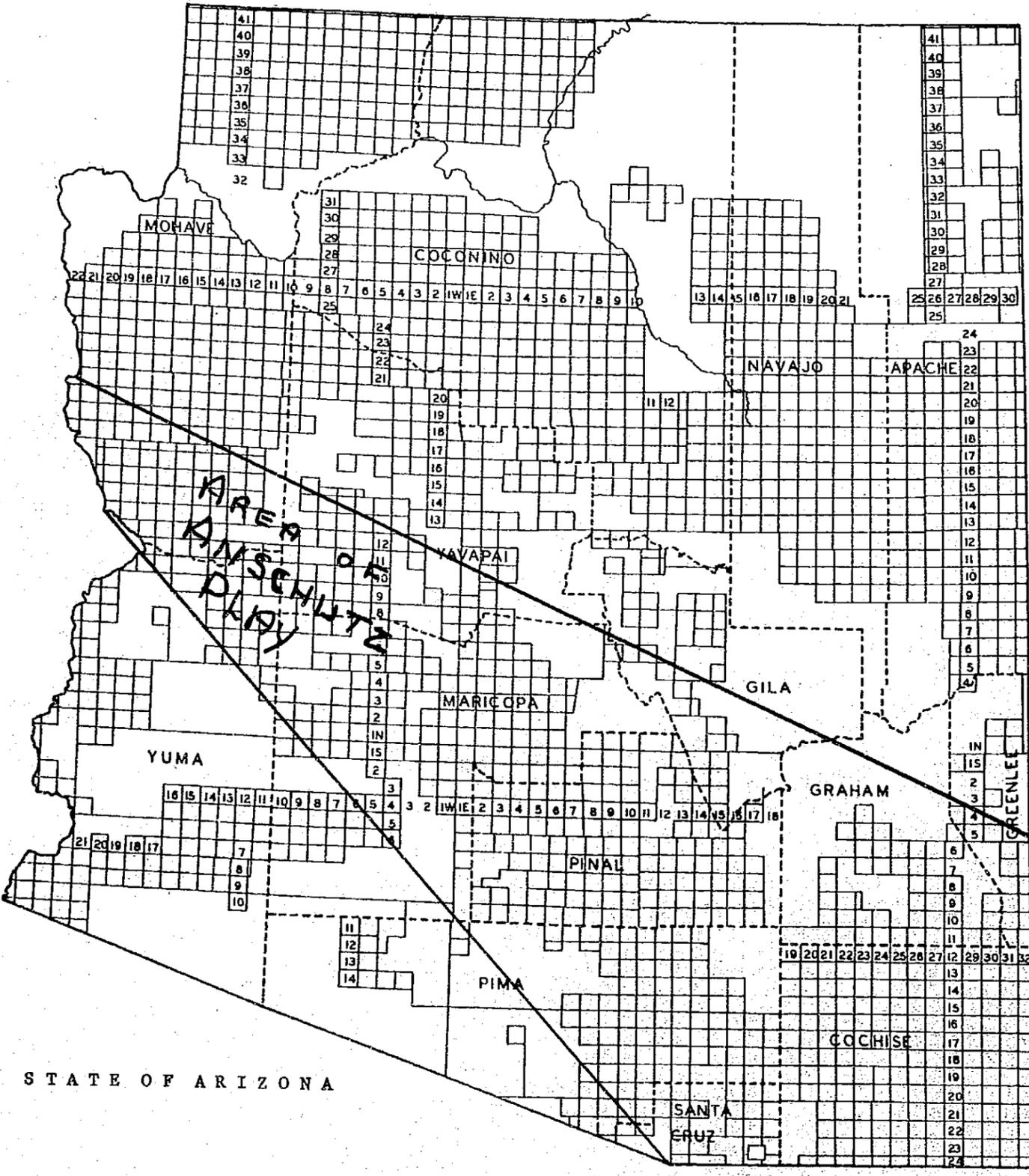
At the hearing on the Senate bill, the requested amendment did not pass. Throughout all of this, the merits of the bill were praised but, in view of the vast amount of monies needed for prison changes and for retarded children, this appeared not to

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April 12, 1978

be the year to make this request. At this point, it is our intention to seek a bill next year to accomplish this purpose. As you are aware, we have contacted many of the departments which would use and desire updating of the geological map and have their support. I am sure this support will also be with us next year.

Attached is a map showing the broad area of the recent play executed by Anschutz. I have been unable to secure a detailed breakdown of the acreage involved at this time, inasmuch as it is so large that it has not yet been put together by the State Land Department. Representatives of Anschutz have been in contact with the Commission, as you will see in the reports of Bill Allen and Jack Conley.

Inasmuch as two important hearings are facing this Commission at the meeting on April 21st, it is necessary that we have a quorum present. Consequently, we respectfully request that you advise us at your earliest convenience if you cannot be with us.



STATE OF ARIZONA

Courtesy of
ARIZONA OIL REPORT



OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

1645 WEST JEFFERSON, SUITE 420

PHOENIX, ARIZONA 85007

PHONE: (602) 271-5161

ACTIVITY REPORT

April 12, 1978

W. E. Allen
Enforcement Section

You are aware of the Indian uprising in Utah. At a meeting on April 10th the Navajo Tribal Chairman, Peter McDonald, ordered Continental Oil, Superior Oil, Texaco and Phillips Petroleum to cease operations in a large portion of the Aneth field in southeastern Utah. These companies closed down their operations due to an Indian protest about a week ago, however their employees continued to maintain the companies' facilities. McDonald's order prohibits anyone except Indians living in this 100 square mile area and federal government agents from entering the area. The nation is losing 30,000 barrels of oil a day due to this shut down.

What effect McDonald's order will have on the operators in Arizona is not known. Energy Resources Group, operating in the Teec-Nos-Pos field, did shut in their wells for a few days. These wells were returned to a producing status last Friday.

I made a field trip to the northwestern corner of the state the last week in March. There was a lot of snow in the Dineh-bi-Keyah field. Kerr-McGee's people took me around the field in their snow cat.

You are aware, of course, of the hearing to be held on April 21, 1978. This hearing, requested by Kerr-McGee, is for the purpose of changing the spacing rules previously assigned to this field. We will also have a hearing on the same day to adopt a rule pertaining to the creation and operation of underground storage projects. (A copy of this proposed rule is attached.) This proposed rule has been needed for a long time and since a hearing had been called

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for this date, we thought that this would be an appropriate time to request that the proposed rule be adopted. Considerable time was spent in compiling this rule and I believe that it merits favorable consideration.

We can only hope that this is the lull before the storm - it's a lull, at any rate. There has been no activity regarding the drilling for oil, gas or geothermal resources. There is still some leasing activity and Anschutz is doing some seismograph work on some of the acreage it has under lease. It is understood that Anschutz has acquired the geophysical information that Exxon had accumulated during its Arizona play a few years back.

Also attached to this report is copy of an editorial from "World Oil" that was rather interesting and very pointed. Hope you enjoy it.

Flower power



Scott

The clean green bunch has done it again. Late last month, the so-called environmentalists, along with the state of Massachusetts, prevailed upon a federal district judge to halt another offshore lease sale, this time in the Georges Bank area off New England. And after the original injunction was upheld on appeal, Interior Secretary Andrus canceled the sale "indefinitely"—without too much of a protest, we might add.

The petroleum industry often thinks it is singled out for attention from the flower sniffers, but that's not the case. Not only are attempts to develop more oil and gas reserves being hindered at every turn, but anything else that has practical potential as an energy source—shale oil, coal, nuclear, hydroelectric, etc. Recently, Mr. W. Doham Crawford, president of the Edison Electric Institute, made a speech he called "Energy—an endangered species." Mr. Crawford did an outstanding job of putting things in perspective. Some of his points, especially those concerning incredible bungling on the part of those in Congress who wrote and voted for environmental legislation, are well worth considering. For example:

► The endangered species list contains 637 animals, insects (that's right, insects) and reptiles. But two million species of living organisms have been identified and 10,000 new ones are discovered annually. Interior, now populated heavily with anti-everything types, estimates that 200,000 more species and 600,000 to one million additional sub-species should be listed as endangered or threatened. Any one threatened by any energy project could shut it down.

► Three major hydroelectric projects have been shut down because they "threaten" the habitat of endangered species, namely the snail darter, a small minnow of which there are 116 species; the Cumberland monkey faced mussel (you read it correctly); and the furbish lousewort, which, after *Nicotiana Glauca*, must be the second most famous weed discovered in recent years.

► Three other hydroelectric projects each have been stymied by congressional stupidity and bureaucratic procrastination. After nine years, one (a \$1-billion effort) got a construction license in 1974—only to have Congress declare the river

that it was on "wild and scenic," which stopped everything. A second \$1-billion project was proposed 16 years ago and is still in limbo waiting on a "study of fisheries." The third was initiated in 1958, and after hearings and approvals over the years, was quashed last June because of a 1975 act of Congress declaring the river it was on a "national recreation area."

► Backers of the \$500 million, 5,000 megawatt coal-fired Kaiparowits generating project threw up their hands and quit in 1976 after 14 years of hassle with Interior, endless environmental hearings, litigations and plain fooling around on the part of every government agency imaginable. A major environmental concern was that the plant would threaten the blackfooted ferret and the kangaroo rat.

► A \$2 billion, 2,300 megawatt nuclear plant that would supply 80% of New Hampshire's power needs has encountered incredible delays. After beginning an environmental study in 1969, EPA shut down work in 1976 by reversing one of its own earlier decisions—it decided cooling water discharged into the Atlantic would "threaten" clam larvae. That, too, was reversed, but environmentalists now are threatening lawsuits to keep things shut down.

► Attempts are underway to declare some 13 million acres in the west as "critical habitat" for grizzly bears—meaning any energy business planned for the area will encounter innumerable delays in getting anything done at all.

The utter foolishness of the foregoing emphasizes once again the sorry state to which government has fallen. Those responsible either pay little or no attention to their jobs and give no thought to the consequences of their actions; have lost touch with reality; or are engaged in some monstrous conspiracy to sabotage the nation. The first reason is most likely. Others may apply more to those who dream up and then take advantage of such incredible legislation to continually hinder all attempts to contribute to the national energy need.

For those of us still around, it is going to be interesting to see how the United States functions in 1990, when we will have many more megawatts of flower power than electric power. Maybe by then we'll also have drilled a well or two off New England—but don't count on it.

R W Scott



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PHOENIX, ARIZONA 85007
PHONE: (602) 271-5161

April 11, 1978

ACTIVITY REPORT

J. N. Conley
Director, Geology Section

PUBLICATIONS

Sales. Sales since March 8 total \$156.00.

Map - Geothermal Energy Resources of Arizona. This preliminary map was compiled by W. R. Hahman, Sr., C. Stone, and J. C. Witcher and produced by the Bureau of Geology and Mineral Technology, Geological Survey Branch, University of Arizona. It was funded by the U.S. Department of Energy, Division of Geothermal Energy. It incorporates preliminarily identified geothermally anomalous areas compiled in 1975-76 by our Commission.

Geothermal Report GT-5. This is a Commission report, tentatively entitled "An Appraisal Study of Geothermal Resources of the Southern Portion of the Basin & Range Province of Arizona Based on Well Temperature Data." This manuscript has not been fully edited. We expect to make it available as an open-file item in May.

ENERGY RESOURCE LEASE ACTIVITY

Geothermal. A. Smith, Wickenburg, is assembling a block of leases in T. 4-5 N., R. 5-6 W., Maricopa County. To date he has been issued one State lease and one Federal lease. Applications for one State lease and 15 Federal leases have been filed. No action will be taken on the 15 sections of federal lands pending completion of an environmental impact statement by the Bureau of Land Management. The block of leases Smith and two unidentified partners are trying to assemble is south of the old Vulture Mine in T. 6 N., R. 6 W., sec. 36. This lease play is apparently based primarily on a hot water well in the area.

Oil & Gas. Cochise County. Lease brokers, working for unidentified clients, are purchasing oil and gas leases on privately owned lands in Sulphur Springs Valley.

SW Basin & Range Province. Last month the State Land Department reported that Anchutz Corp. had indicated that it was planning to acquire additional oil and gas leases. No applications have been filed to date.

However, an Anchutz geologist has informed me that additional leases may be acquired for the accounts of competitive companies who may join them in planned exploratory programs.

ENERGY RESOURCE EVALUATION & EXPLORATION

Governmental - Geothermal. Heat Flow Investigations. "Heat flow" is the product of the thermal conductivity of a substance and the thermal gradient in the

direction of the flow of the heat. In geophysics it represents a measurement of the amount of heat leaving the earth. It involves the measurement of the geothermal gradient of rocks by accurate resistance thermometers in drill holes (preferably about 1,000 feet deep) and the measurement of the thermal conductivity of rocks on rock samples from the drill holes. Heat flow is reasonably constant over many parts of the earth. Heat flow exploration more accurately detects geothermally anomalous areas than areas based only on thermal gradients.

Heat flow evaluation programs, Arizona. U.S. Geological Survey. A program involving the drilling of 30-plus holes scattered over the state reportedly is to be commenced this month.

New Mexico Bureau of Mines & Mineral Resources and Geoscience Department, New Mexico Institute of Mining & Technology, Socorro, New Mexico. A first report of terrestrial heat flow in eastern Arizona has been completed. Most of the heat flow measurements were made in an area near Safford. This Commission furnished rock samples for some of the heat flow studies made in the Colorado Plateau province of the state. We recently furnished rock samples of several wells for additional studies.

Arizona Bureau of Geology & Mineral Technology. Well temperature logging and heat flow measurements in Arizona this year are being planned and will be conducted by a group consisting of the Bureau and New Mexico State University and the Los Alamos Scientific Laboratory as an outside advisor to the program.

Geological, Geophysical, and Geochemical. According to the most recent quarterly progress report of W. Richard Hahman, Sr., principal investigator for the Bureau of Geology & Mineral Technology low-temperature geothermal reservoir site evaluation program being funded by U.S. DOE, extensive geological, geophysical, and geochemical investigations are to be made to determine new regions of interest and to conduct detailed investigations in the following areas: 1) Springerville-St. Johns, 2) Clifton-Morenci-Safford, 3) San Bernardino Valley, 4) Phoenix, and 5) Tucson.

Direct uses of low-temperature geothermal energy can be split into several categories: agribusiness, space/water heating and cooling, industrial process applications, and integrated (cascaded) uses involving multiple applications at different temperatures. Listed below are a number of examples of direct applications of geothermal energy:

Agribusiness - greenhouse growing of vegetables, house plants, cut flowers, etc.
- kiln drying of lumber
- food processing (canning, dehydration, evaporation and crystallization, and freezing)
- aquaculture - pond rearing of catfish, fresh-water prawns, etc.
- livestock rearing in controlled environments

Space Conditioning - home heating and cooling
- commercial heating and cooling
- water heating
- district heating/cooling systems
- snow melting

Magnetotelluric Survey. The U.S. Geological Survey plans to make a magnetotelluric survey in portions of the state this year. One line will extend from the New Mexico state line in south-central Apache County westward to the California state

Activity Report
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line west of Kingman in Mohave County. Another line will extend from a point in south-central Apache County to the vicinity of Alpine.

Industry - Geothermal. We have no specific information as to physical exploration for geothermal resources by industry in the state, although some drilling has been reported in Mohave County.

A Chevron geologist recently spent considerable time in our office and that of the Bureau of Geology & Mineral Technology in gathering geothermal data.

Industry - Oil & Gas. An unidentified oil company, believed to be Mobil, is conducting a seismograph exploratory program in T. 35-36 N., R. 14-15 W. in Mohave County. Anchutz Corp. reportedly will soon commence some seismograph explorations on federal and A.T. & S. F. Ry. lands near Kingman in Mohave County.

STATE GEOLOGIC MAPPING PROGRAM

Our efforts to obtain state funding for the initiation of a long-range geologic mapping program was not approved by this session of the Legislature.

However, we can expect to have by 1981 a series of 1:250,000-scale geologic maps covering most of the state. These maps, representing principally a compilation of existing data, are being produced under the U.S. National Uranium Resource Evaluation (NURE) program. This program was discussed in the December 7, 1977, Activity Report. We have received the first map of the series, entitled "Geology, Structure, and Uranium Deposits of the Gallup 1° x 2° Quadrangle, New Mexico and Arizona." This map will be displayed at the next Commission meeting.

CURRENT COMMISSION INVESTIGATIVE PROJECTS

Energy Potential of the Colorado Plateau Province of Arizona. This is the title of a contract received recently from the Four Corners Regional Commission covering a technical assistance grant for certain studies in the central and east portions of the Colorado Plateau province. The request was submitted originally in November, 1976.

The project consists of two phases. The purpose of Phase I is to gain a better understanding of the ways in which LANDSAT data integrates with conventional geophysical methods. This phase of the project is to be performed by GS Laboratories, Santa Ana, California, largely funded by a grant from the U.S. Geological Survey. Phase II will be performed by the Geology Section of this Commission. Completion of Phase I will furnish us much-needed gravity, magnetic, and LANDSAT information to permit a continuation of planned subsurface investigations.

Approval of the final contract is dependent upon execution of a satisfactory Letter Agreement between GS Laboratories and the Commission. In view of the time lapse (Nov. 1976-Apr. 1978), GS Laboratories may no longer be interested in the project.

Our subsurface studies will continue whether the grant is received or not. Sal Giardina is currently devoting most of his time to the Strip Country portion of the Colorado Plateau province. I am devoting most of my available time to the balance of the province.

JNC:os


J.N.C.

MONTHLY FINANCIAL REPORT

RECEIPTS MONTH OF MARCH 1978	CLASSIFICATION	APPROPRIATED RECEIPTS	UNAPPROPRIATED RECEIPTS	TOTAL ALL RECEIPTS YEAR TO DATE
-0-	1 Permits to Drill			200 00
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
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	15			
	16			
	17			
-0-	TOTAL CURRENT MONTH RECEIPTS		-0-	XXXXXX
	TRANSFERS IN			
XXXXXX	BALANCES BROUGHT FORWARD		3,901 83	XXXXXX
-0-	TOTALS - MONTH AND YEAR TO DATE		3,901 83	200 00

CLAIMS PAID MONTH OF MARCH 1978	FUND TITLES	TOTAL AMOUNT AVAILABLE YEAR TO DATE	CLAIMS PAID YEAR TO DATE	OUTSTANDING ENCUMBRANCES	UNENCUMBERED BALANCE
12,694 35	1 Personal Services	83,450 00	74,482 57		8,967 43
2,156 46	2 Emp. Related Exp.	14,380 00	11,979 70		2,400 30
196 00	3 Professional Services	3,275 00	2,910 02		364 98
121 30	4 Travel - State	5,175 00	4,280 24	198 75	696 01
438 64	5 Travel - Out of State	2,000 00	1,906 63		93 37
3,316 10	6 Other Operating Exp.	14,740 21	11,634 82	200 00	2,905 39
-	7 Capital Outlay-Equipment	800 00	790 22		9 78
	8				
	9				
	10				
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	30				
18,922 85	TOTALS	123,820 21	107,984 20	398 75	15,437 26

AGENCY Oil & Gas Conservation Comm.

DIVISION _____ IDENTIFICATION CODE NO. _____

CLAIMS PAID YEAR TO DATE	OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION	CLAIMS PAID MONTH OF MARCH 1978
840 00	71140	1 Per Diem: Commission Members	1 270 00
73,642 57	71150	2 Salaries: Staff	2 12,424 35
499 05	71510	3 Emp. Related: Workmens Comp	3 85 59
441 87	71520	4 Unemployment Insurance	4 74 49
3,366 75	71530	5 F.I.C.A.	5 751 65
5,155 03	71542	6 Retirement	6 869 73
1,887 00	71550	7 Health Insurance	7 228 00
420 00	71552	8 D & L Insurance	8 72 00
210 00	71570	9 Personnel Comm. Pro Rata Charges	9 75 00
595 52	72169	10 Professional Serv: Cartographic Symbols	10
	72169.1	11 Cartographic Symbols (U of A)	11
1,972 75	72199	12 Cartographer	12 196 00
341 75	72199.1	13 Cartographer (U of A)	13
576 00	72511	14 Travel-State: Mileage - Private Vehicles	14 34 80
2,509 95	72512	15 Mileage - State Vehicles	15
1,018 94	72520	16 Subsistence	16 36 00
56 00	72531	17 Air Fare	17
83 10	72541	18 Registration Fees	18 30 00
17 75	72543	19 Parking	19 2 50
18 50	72549	20 Misc.	20 18 00
675 95	72560	21 Travel-Out of State: Subsistence	21 114 00
1,057 64	72571	22 Air Fare	22 296 00
102 20	72574	23 Taxis	23 23 70
65 00	72581	24 Registration Fees	24
5 84	72589	25 Other-Telephone, etc.	25 90
5,000 00	72711	26 Occupancy: Office Rent	26 2,500 00
	72713	27 Warehouse Rent	27
25 13	72821	28 Mtn. & Repairs: Furniture	28
	72823	29 Adders & Calculators	29
43 00	72824	30 Typewriters	30
168 00	72826	31 Copy Machine, Other	31
7 50	72827	32 Mimeo, Reader-Printer, etc.	32
	73111	33 Office Supplies: Printed Stationery & Envelopes	33
	73113	34 Carbon & Ribbons	34
117 99	73117	35 Reproduction Supplies	35 50 67
1,320 85	73119	36 Misc. & Blue Prints	36 432 63
150 39	73119.1	37 Misc. & Blue Prints (U of A)	37
	73259	38 Field Supplies: Logs, etc.	38
184 30	73514	39 Printing - Large Maps, etc.	39 184 30
109 90	73514.1	40 Large Maps, etc. (U of A)	40
115 35	73519	41 Misc.	41
53 91	73524	42 Legal Advertising	42
	73531	43 Subscriptions: Newspaper	43
29 60	73533	44 Technical Journals	44
325 00	73541	45 Postage Stamps	45
241 59	73551	46 Telephone Service: Central System	46 28 95
730 05	73552	47 Equipment Rental	47 85 65
175 56	73553	48 Long Distance	48 6 78
319 00	73554	49 ATS Service Charge	49 27 12
1,569 50	73720	50 Organization Dues	50
98 80	73730	51 Technical or Reference Books	51
600 00	73741	52 Insurance	52
250 00	79220	53 Revolving Fund	53
502 26	74312	54 Capital Outlay: Map Cabinet	54
287 96	74313	55 Light Table	55
107,984 20		TOTAL	18,922 85

OFFICE

(DO NOT WRITE BELOW THIS LINE)

FIELD



OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

1645 WEST JEFFERSON, SUITE 420

PHOENIX, ARIZONA 85007

PHONE: (602) 271-5161

ACTIVITY REPORT

March 8, 1978

John Bannister
Executive Secretary

Since our meeting in February, my activity has again been primarily with the Legislature. A brief rundown is as follows:

House Bill 2027, which is the bill sought by the Commission and concerns redefining the term "well" so as to remove any question as to our authority over storage and injection wells, has now passed the House Natural Resources Committee and the House Commerce Committee. It will go to the Rules Committee and then to the floor. I do not anticipate any trouble in securing passage here.

House Bill 2168, which is our bill concerning recycling of used petroleum-based lubricating oils, is still before a House Natural Resources subcommittee. A meeting of this subcommittee was scheduled for Friday, March 3rd, but was called off due to weather. There is a possibility this meeting will be rescheduled for Friday, March 10th. This bill has been redrafted so as to make the initial program one involving State vehicles, only, initially covering Maricopa and Pima Counties, but with authority to expand into all areas of the state, county and municipal governments.

House Bill 2325 is our geothermal bill. Again, it is a housekeeping measure which merely sets forth the State policy concerning geothermal energies. It should be noted that an amendment has been suggested wherein the name of the Oil and Gas Conservation Commission would be changed to the Arizona Oil and Gas Commission. I feel that this amendment is quite acceptable in that the word "Conservation" in our present title is misleading to most people. This bill is assigned to the subcommittee considering recycling of oil and will be heard at the same time.

House Bill 2313 establishes the Arizona Energy Institute, a supervisory and coordinating body, and is assigned to the House Committee

Page 2
Executive Secretary
March 8, 1978

on Government Operations and the Committee on Appropriations. This bill has not as yet been put on either agenda.

Senate Bill 1183 is the bill concerning establishment of a centralized energy agency, combining the Oil and Gas Commission with other agencies. This bill has passed the Senate Natural Resources Committee and some time will be on the agenda of the Senate Appropriations Committee.

It should be noted that copies of the two resolutions adopted by the Commission at its last meeting endorsing House Bill 2168 (recycling of used oil) and Senate Bill 1183 (the centralized energy agency) have been forwarded to committee members on the key committees and will be presented to each committee as we appear before it.

As authorized, I attended the Executive Committee meeting of the Interstate Oil Compact Commission in Tampa, Florida. The usual business of such meetings - approval of the budget, etc. - was conducted. The most interesting discussion concerned the IOCC's recommendations to the Federal Congress as to the establishment of a definition of "stripper gas well". The various energy committees in Washington seem amenable to establishing a stripper gas well category similar to stripper oil well, which is now recognized. The IOCC is proposing that a stripper gas well be a well which is not capable of producing more than 100,000 cubic feet of gas per day, averaged over a period of one year. It is proposed that the state regulatory body confirm and reclassify a gas well as a stripper. Once this has been accomplished, the concerned well will be free of federal regulations.

The one problem area in this definition concerns the fact that an unscrupulous operator might initially complete a well in order to gain classification as a stripper well and, once freed of regulations, be able to recomplete his well to a much greater volume. It was the consensus of the members of the Executive Committee that the state regulatory agency which would be responsible for classifying wells could handle this problem, should it arise.

After consultation with Representative Bill Lewis, Chairman of the House Committee on Natural Resources and Energy, we are now considering requesting an amendment to House Bill 2325, the Commission's geothermal bill, requesting appropriation of the necessary monies to begin work on the state geological map. This project has been discussed with you, wherein three maps will eventually be prepared, one updating the state geological map, the second a Bouguer gravity map and, third, a tectonic map. I will keep you advised as to the progress of this project. If this step is taken, I will make certain that the basic bill will not be jeopardized.

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Executive Secretary
March 8, 1978

I feel that Dr. Dresher, with the Bureau of Geology and Mineral Technology out of Tucson, will appear with us if money is requested in this matter.

You are, of course, aware of the death of Governor Wesley Bolin and the subsequent swearing in of Governor Bruce Babbitt. Very few rumors are circulating concerning this change, however it was announced today that Mr. William Reilly will stay on as Governor Babbitt's chief assistant. Mr. Ray Roles, who was brought in by Governor Bolin, has resigned his position. It isn't known at this time who will fill this slot.

Kerr-McGee Corporation has filed a request for a hearing, which will be held in conjunction with our April 21st meeting. They are seeking permission to do infill drilling in the Dineh-bi-Keyah area so as to increase ultimate recovery of oil. Advertisement for the hearing will be set in April so as to comply with our statutory charges. I do not anticipate that this will be an over-lengthy hearing. Arrangements are being made for the court reporter.

Location of our meeting will probably not be known until relatively close to the actual time. We are anticipating meeting in Room 212 of this building and have reserved same, however we have been advised that we are subject to being bumped should the Tax Appeals Board or the Ethics Board need the room at that time. As soon as possible we will nail down a permanent meeting room, however the rooms now available are so much in demand it may be some time before this can be accomplished.



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STATE OF ARIZONA
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ACTIVITY REPORT

March 8, 1978

W. E. Allen
Enforcement Section

Due to the inclement weather, I have been unable to make a check of our operations in Apache County. When the roads have become passable in the Dineh-bi-Keyah field, a routine inspection trip is planned.

We have received a formal request from Kerr-McGee Corporation for a hearing to be held April 21, 1978. (This is our regular Commission meeting date. It will be necessary that a quorum be present at this hearing.) Kerr-McGee is requesting permission to drill one additional well, off pattern, in the field and to amend the field rules to provide administrative approval for the drilling of any additional wells.

Some time ago we reported two well locations to be drilled in Washington County, Utah. These locations were only 500 feet north of the Arizona line. One well was drilled below 2400 feet last summer. The hole was lost before reaching the proposed total depth of 4000 feet. The operator reported several shows in this hole. We have been unable to confirm these reported shows. The second well is now drilling below 2100 feet.

You will recall that Pyramid Oil Company reported several oil and gas shows in their Federal No. 1 well located in the NE/SE/4 of Section 28, Township 41 North, Range 9 West, Mohave County. This well reached a total depth of 4145 feet. Due to difficulties with the drilling contractor, operations have been suspended until spring. I recently discussed this well with the geologist who was engaged to make an evaluation on this hole. This geologist is very enthusiastic concerning the prospects of successfully completing this well as a producer.

The State Land Commission recently had a hearing regarding the cancellation of the one geothermal lease it has issued. This lease

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Enforcement Section
March 8, 1978

was issued to Reed Nix. Nix had drilled to 690 feet on his well and had some artesian water with a temperature of approximately 119°F. This well is very near Indian Hot Springs. The springs also have a 119°F temperature. My presence was requested as a witness. The hearing officer has not announced his decision but it looks like the Commission will cancel the lease.



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STATE OF ARIZONA

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ACTIVITY REPORT

March 8, 1978

J. N. Conley
Director, Geology Section

PUBLICATIONS

Sales. Sales since February 8 total \$78.25.

State Well Location Map 4. This new publication will be offered for sale in the near future. It consists of two maps and a bound tabulation of well data. Sheet 1 covers the entire State of Arizona. It shows wells drilled for oil, natural gas and helium, and selected wells drilled for stratigraphic information. The scale of the map (approximately 11½ miles to the inch) precluded showing legibly wells in densely drilled areas, such as the helium and oil and gas pools in Apache County. These pools are shown on Sheet 2 at a larger scale (approximately 2 miles to the inch). Supplementary well data is presented in the bound tabulation.

Geothermal Areas, State of Arizona. During fiscal year 1975-76 we prepared a work map showing the results of a very preliminary investigation of the geothermal energy potential in the State based on water well temperature data. The principal objective in preparing the map was to identify gross areas warranting additional investigation. In many instances the areal extent and configuration of the geothermally anomalous localities mapped were highly conjectural. We did not believe that the map warranted publication.

However, the geothermal staff of the Arizona Bureau of Geology & Mineral Technology earlier this year requested permission to redraft and publish the map. Permission was granted and the published map will be available for distribution in the near future.

Subsurface Temperature Maps, State of Arizona. Non-funding by the State Legislature of two geological positions on our staff curtailed all of the planned follow-up studies of the geothermal energy resources of the State during fiscal year 1976-77. One investigation was continued, however, and the results published in June 1977. The publication presents a tabulation of the temperature and associated data of subsurface rocks and two maps showing the location of wells in which borehole temperature measurements were made.

Current Geothermal Study. A continuation of our geothermal energy resources in the State was resumed this past October. Drafting of the illustrations and three plates has been completed. The manuscript of the report is currently being edited by W. Richard Hahman, Sr., Arizona Bureau of Geology & Mineral Technology. Mr. Hahman is the Principal Investigator for the current evaluation of the State's non-electrical geothermal energy potential being funded by the U.S. Department of Energy, Division of Geothermal Energy. Funds for our participation in the evaluation program were obtained through Mr. Hahman.

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March 8, 1978
Page Two

The report, tentatively entitled "An Appraisal Study of the Geothermal Resources of the Southern Portion of the Basin and Range Province of Arizona Based on Well Temperature Data," may be published by the Arizona Bureau of Geology & Mineral Technology. If not, we can make it available to interested parties as an open-file item, i.e., reproduction at private expense.

ENERGY RESOURCE EXPLORATION

Oil and Gas. Anchutz Corp., the firm that has leased more than 4-million acres of State lands in Basin and Range counties, attempted to conduct some seismograph surveys near Kingman, Mohave County, earlier this year. Permits to make such surveys on federal lands were not granted by the Bureau of Land Management. We have no information as to the permit status of the proposed seismic exploration program.

William Allen has received a report that Gulf Oil Corp. has requested permission from the Bureau of Land Management to conduct a seismograph exploration program on federal lands in the Strip Country portion of Mohave County.

Geothermal. No report.

Uranium. Continues active.

OIL & GAS LEASING ACTIVITY

Cochise County. Transcontinent Oil Co. is taking assignments from an unnamed broker on approximately 60,000 acres of oil and gas leases on Arizona state lands in the general Willcox area.

Southwestern Basin & Range Province. Anchutz Corp. has notified the Arizona State Land Department that it is planning to acquire more oil and gas leases.

At a recent geological meeting which I attended I heard that Anchutz Corp. is looking for partners in this large-scale oil and gas lease play.

GENERAL

Geological Meeting and Educational Course. This past month I attended the Southwest Section American Association of Petroleum Geologists convention in Midland, Texas, and the preceding one-day educational course pertaining to deltaic and shallow marine sandstones: sedimentation, tectonics and petroleum occurrences. The keynote address was delivered by Dr. Orlo E. Childs, a geologist with professional experience in petroleum exploration, in geologic research, and in teaching and educational administration. Since 1972 he has served on the General Technical Advisory Committee to the Energy and Development Administration. Under the new reorganization this function will continue for the new Department of Energy.

During his excellent address he presented four general conclusions emerging from the discussions at a Conference concerned with the Future of Natural Petroleum, held in Laxenburg, Austria, 1976. This meeting was attended by 75 participants from 14 countries. Dr. Childs was one of the 36 attendees from the U.S.A. The conclusions:

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March 8, 1978
Page Three

1. There is no dearth of petroleum remaining in the earth. Distribution and dislocation shortfalls result from economic, institutional, and political forces.
2. New emerging technologies can augment supplies of natural petroleum from conventional sources.
3. There is a huge potential for additional petroleum resources from unconventional sources widely distributed over the earth. Examples: heavy oil sands of Canada and Venezuela, tight gas sands of U.S., oil shales of France, USSR, and USA. The key is cost-price.
4. Petroleum extraction technology has traditionally produced the easiest and least expensive. Advances in technology have progressed, except where retarded by nontechnical barriers.

He added that the U.S.A. participant were concerned about the economic restraints upon successful application of extraction technology and the political and sociological barriers that slow the processes of finding and using new reserves, and that "It seems clear that we are not doing all we can do and must do to keep our 'invisible crisis' from becoming political and economic chaos."

Several papers pertained to alternative sources of energy. With respect to coal, two speakers were very pessimistic about achieving the Carter administration production goal by 1985. Aside from labor and price constraints, environmental delays are the biggest adverse factor. This is also the conclusion of a recent Citibank study: "Thus coal end users will have to continue to operate in a squeeze, with federal energy authorities pushing coal use on the one side and federal, state, and local jurisdictions hindering use with environmental restrictions on the other."

This problem exists on the Navajo Indian Reservation. WESCO's attempt to obtain permission from the tribe to build a coal gasification plant on or near the reservation was unsuccessful. According to the Western Interstate Energy Board energy update report of February 24, 1978, WESCO reportedly offered to pay more than \$750 million in royalty, rental, and tax during the 25 years of the agreement.

Another deterrent to any type of exploration for energy on the Navajo Indian Reservation is a new tax scheduled to become effective July 13, 1978. The tax of 3% applies to holders of energy mineral leases. It will be levied only on companies with a possessory interest of more than \$100,000 annually.

JNC:os


J.N.C.

AGENCY Oil & Gas Conservation Commission

DIVISION _____ IDENTIFICATION CODE NO. _____

1	2	3	4
CLAIMS PAID YEAR TO DATE	OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION	CLAIMS PAID MONTH OF FEB 1978
570 00	71140	1 Per Dien: Commission Members	1
61,218 22	71150	2 Salaries: Staff	2 8,244 36
413 46	71510	3 Emp. Related: Workmens Comp	3 56 48
367 38	71520	4 Unemployment Insurance	4 49 44
2,615 10	71530	5 F.I.C.A.	5 498 78
4,285 30	71542	6 Retirement	6 577 12
1,659 00	71550	7 Health Insurance	7 228 00
348 00	71552	8 D & L Insurance	8 36 00
135 00	71570	9 Personnel Comm. Pro Rata Charges	9
595 52	72169	10 Professional Serv: Cartographic Symbols	10
101 00	72169.1	11 Cartographic Symbols (U of A)	11
1,426 75	72199	12 Cartographer	12 70 00
590 75	72199.1	13 Cartographer (U of A)	13 350 00
541 20	72511	14 Travel-State: Mileage - Private Vehicles	14 133 50
2,509 95	72512	15 Mileage - State Vehicles	15
982 94	72520	16 Subsistence	16 120 00
56 00	72531	17 Air Fare	17
53 10	72541	18 Registration Fees	18
15 25	72543	19 Parking	19 8 25
	72549	20 Misc.	20
561 95	72560	21 Travel-Out of State: Subsistence	21
761 64	72571	22 Air Fare	22
78 50	72574	23 Taxis	23
65 00	72581	24 Registration Fees	24
90	72589	25 Other-Telephone, etc.	25
2,500 00	72711	26 Occupancy: Office Rent	26
	72713	27 Warehouse Rent	27
25 13	72821	28 Mtn. & Repairs: Furniture	28
	72823	29 Adders & Calculators	29
43 00	72824	30 Typewriters	30
168 00	72826	31 Copy Machine, Other	31
7 50	72827	32 Mimeo, Reader-Printer, etc.	32 7 50
	73111	33 Office Supplies: Printed Stationery & Envelopes	33
	73113	34 Carbon & Ribbons	34
67 32	73117	35 Reproduction Supplies	35
828 36	73119	36 Misc. & Blue Prints	36 77 23
210 25	73119.1	37 Misc. & Blue Prints (U of A)	37 59 86
	73259	38 Field Supplies: Logs, etc.	38
	73514	39 Printing - Large Maps, etc.	39
109 90	73514.1	40 Large Maps, etc. (U of A)	40 109 90
115 35	73519	41 Misc.	41
53 91	73524	42 Legal Advertising	42
	73531	43 Subscriptions: Newspaper	43
29 00	73533	44 Technical Journals	44
325 00	73541	45 Postage Stamps	45
212 64	73551	46 Telephone Service: Central System	46 33 97
644 40	73552	47 Equipment Rental	47 80 53
168 78	73553	48 Long Distance	48
291 88	73554	49 ATS Service Charge	49 29 53
1,569 50	73720	50 Organization Dues	50
98 80	73730	51 Technical or Reference Books	51
600 00	73741	52 Insurance	52
250 00	79220	53 Revolving Fund	53
502 26	74312	54 Capital Outlay: Map Cabinet	54
287 96	74313	55 Light Table	55
89,061 35		TOTAL	10,772 47

OFFICE

(DO NOT WRITE BELOW THIS LINE)

FIELD

MONTHLY FINANCIAL REPORT

RECEIPTS MONTH OF FEB 1978	CLASSIFICATION	APPROPRIATED RECEIPTS	UNAPPROPRIATED RECEIPTS	TOTAL ALL RECEIPTS YEAR TO DATE
-0-	1 Permits to Drill		-0-	200 00
	2			
	3			
	4			
	5			
	6			
	7			
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	15			
	16			
	17			
-0-	TOTAL CURRENT MONTH RECEIPTS		-0-	XXXXXX
XXXXXX	TRANSFERS IN			
	BALANCES BROUGHT FORWARD		3,901 83	XXXXXX
-0-	TOTALS - MONTH AND YEAR TO DATE		3,901 83	200 00

CLAIMS PAID MONTH OF FEB 1978	FUND TITLES	TOTAL AMOUNT AVAILABLE YEAR TO DATE	CLAIMS PAID YEAR TO DATE	OUTSTANDING ENCUMBRANCES	UNENCUMBERED BALANCE
8,244 36	1 Personal Services	83,450 00	6,788 22		21,661 78
1,445 82	2 Emp. Related Exp.	14,380 00	9,823 24		4,556 76
420 00	3 Professional Services	3,275 00	2,714 02		560 98
261 75	4 Travel - State	5,175 00	4,158 94	288 25	727 81
	5 Travel - Out of State	2,600 00	1,467 99	477 50	54 51
400 54	6 Other Operating Exp.	14,543 86	8,318 72	503 35	5,721 79
	7 Capital Outlay-Equipment	800 00	790 22		9 78
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	28				
	29				
	30				
10,772 47	TOTALS	123,623 86	89,061 35	1,269 10	33,293 41