

OIL & GAS CONSERVATION COMMISSION
Meeting: February 19, 1988
Dr. Daniel J. Brennan, Exec. Director



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

PHOENIX, ARIZONA 85015

PHONE: (602) 255-5161

**NOTICE OF COMBINED PUBLIC MEETING
AND EXECUTIVE SESSION OF
OIL AND GAS CONSERVATION COMMISSION**

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Oil and Gas Conservation Commission and to the general public that the Oil and Gas Conservation Commission will hold a meeting open to the public on February 19, 1988 at 10:00 A.M. at 3110 North 19th Avenue, Suite 190, Phoenix, Arizona 85015. As indicated in the agenda, the Oil and Gas Conservation Commission may vote to go into executive session which will not be open to the public to discuss certain matters.

The agenda for the meeting is as follows:

1. Call to Order
2. Approval of Minutes of Meeting
of January 15, 1988
3. Request of Camroy Research Corp. for
Extension of Time to Plug Two Wells
The Commission may vote on this request.
4. Adjournment

The Oil and Gas Conservation Commission may vote to go into executive session (pursuant to A.R.S. 38-431.03.A.3) which will not be open to the public to consult with its attorney and receive legal advice with respect to the regular agenda item listed on this agenda.

The public will be afforded an opportunity to comment on any item on the agenda; however, at the beginning of the meeting, the Commission may vote to set a time limit on individual comments.

DATED THIS 18th day of February, 1988.

OIL AND GAS CONSERVATION COMMISSION

A handwritten signature in dark ink, appearing to read "Daniel J. Brennan", is written over a horizontal line.

Daniel J. Brennan
Executive Director



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

PHOENIX, ARIZONA 85015

PHONE: (602) 255-5161

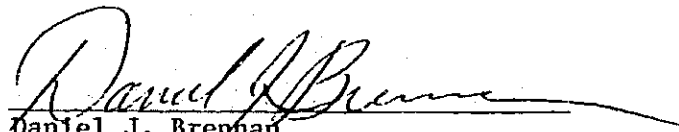
**STATEMENT OF WHERE ALL NOTICES
OF THE MEETINGS OF THE
OIL AND GAS CONSERVATION COMMISSION
WILL BE POSTED**

**TO: THE HONORABLE SECRETARY OF STATE
AND THE CITIZENS OF ARIZONA**

Pursuant to A.R.S. § 38-431.02, the Oil and Gas Conservation Commission hereby states that all notices of the meetings of the Oil and Gas Conservation Commission and any of its committees and subcommittees will be posted in the window at 3110 North 19th Avenue, Suite 190, Phoenix, Arizona 85015 which is open to the public Monday through Friday from 8:00 A.M. to 5:00 P.M. and at the press room of the State Senate Building, 1700 West Washington, Phoenix, Arizona. Such notices will indicate the date, time and place of the meeting and will include an agenda or information concerning the manner in which the public may obtain an agenda for the meeting.

Dated this 18th day of February 1988.

OIL AND GAS CONSERVATION COMMISSION


Daniel J. Brennan



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

PHOENIX, ARIZONA 85015

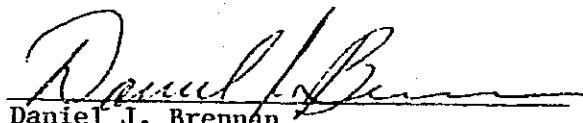
PHONE: (602) 255-5161

**NOTICE OF REGULAR MEETINGS
OF THE
OIL AND GAS CONSERVATION COMMISSION**

Pursuant to A.R.S. § 38-431.02(F), notice is hereby given to the members of the Oil and Gas Conservation Commission and to the general public that the Oil and Gas Conservation Commission will hold regular meetings on the third Friday of January, March, May, July, September and November 1988. The meetings will begin at 10:00 A.M. and will be held at 3110 North 19th Avenue, Suite 190, Phoenix, Arizona 85015. A copy of the agenda for the meeting will be available at 3110 North 19th Avenue, Suite 190, Phoenix, Arizona 85015 at least twenty-four (24) hours in advance of the meeting.

Dated this 18th day of February 1988.

OIL AND GAS CONSERVATION COMMISSION


Daniel J. Brennan
Executive Director



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

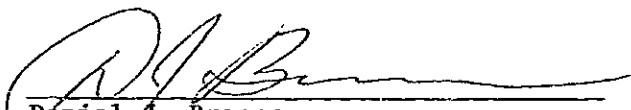
PHOENIX, ARIZONA 85015

PHONE: (602) 255-5161

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the attached notice was duly posted at 3110 North 19th Avenue, Suite 190, Phoenix, Arizona 85015, on February 18 1988 at 9:58 AM in accordance with the statement filed by the Oil and Gas Conservation Commission with the Secretary of State.

DATED this 18 day of February 19 88.


Daniel J. Brennan
Executive Director



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

PHOENIX, ARIZONA 85015

PHONE: (602) 255-5161

A G E N D A

Meeting

February 19, 1988

3110 N. 19th Ave., Suite 190
Phoenix, Arizona 85015

10:00 A.M.

Call to Order

1. Approval of Minutes of Meeting
of January 15, 1988
2. Request of Camroy Research Corp. for
Extension of Time to Plug Two Wells
The Commission may vote on this request.
3. Adjournment

The public will be afforded an opportunity to comment on any item on the agenda; however, at the beginning of the meeting, the Commission may vote to set a time limit on individual comments.

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

OIL AND GAS CONSERVATION COMMISSION
3110 North 19th Avenue, Suite 190
Phoenix, Arizona 85015

Minutes of Meeting
January 15, 1988

Present

Dr. J. Dale Nations, Chairman
Mr. A. R. Bennett, Member
Mrs. Mary Ann Niccoli, Member
Mr. James E. Warne, Jr., Member
Mrs. Jan C. Wilt, Member
Dr. Daniel J. Brennan, Executive Director
Mr. Rudy A. Ybarra, Enforcement Director

The regular Commission Meeting of January 15, 1988 was called to order by Dr. J. Dale Nations, Chairman, at 10:00 A.M. in the Commission's office.

APPROVAL OF MINUTES OF MEETING OF NOVEMBER 6, 1987

Mr. Warne moved, seconded by Mrs. Niccoli:

THAT THE MINUTES OF THE REGULAR MEETING OF
NOVEMBER 6, 1987 BE APPROVED AS PRESENTED.

Motion carried unanimously.

REQUEST OF CAM-ROY RESEARCH CORP. FOR EXTENSION OF TIME TO
PLUG TWO WELLS

Mr. Bennett moved, seconded by Mr. Warne:

THAT EACH SPEAKER LIMIT HIS PRESENTATION TO TEN
MINUTES AND THAT THE TOTAL TIME NOT EXCEED THIRTY
MINUTES.

Motion carried unanimously.

Mr. Pomeroy requested another extension of time for the abandonment of the Power Ranch #1 and #2 geothermal wells (permits #605 and #611) because litigation is still pending for the title to the wells and the general rights. Mr. Turner, hydrologist, stated he does not believe there is any environmental threat. On January 11, 1988, he measured the static water level at 570' below ground surface in the No. 1 well. Local ground water level is about 280'. He said this demonstrates that the surface casing is intact. Everything at the surface was in good condition. No temperature measurements were taken.

Minutes of Meeting
January 15, 1988
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Mr. Gilbert of the law firm, Beus, Gilbert, Wake & Morrill, represented the owners of the property known as the Powers Road Joint Venture. He expressed opposition to any further extension on the plugging of these wells. The court has issued a Summary Judgment Motion indicating that these leases are no longer valid. It is necessary to get the wells plugged in order to develop the property. Zoning hearings are now in process in the Town of Gilbert so that development of the property may be accomplished for industrial, commercial and residential purposes. A 2,000-acre project is involved.

Mrs. Niccoli requested the assistance of Mr. Muller, our counsel in the Attorney General's office, to provide us with information as to our position regarding the leases not being valid. This information should be available in two to four weeks.

Mr. Johnston, attorney for Mr. Pomeroy, commented on the delay encountered by Mr. Pomeroy being attributed to the lease rights and a question of expense. Mr. Turner responded that the cost for testing of these wells would average from \$7,000.00 to \$50,000.00. Due to the pending litigation, this testing has not been done. Mrs. Niccoli requested that the testing be done before the February 1988 meeting.

After a lengthy discussion regarding the integrity of the casing and testing for producing wells, Dr. Nations moved, seconded by Mrs. Wilt:

THAT WE WILL HOLD TO OUR LETTER OF AUGUST 21, 1987.
WE WILL MEET OUR COMMITMENT TO GIVE THE EXTENSION
UNTIL FEBRUARY 21, 1988, BUT PRIOR TO THAT TIME, WE
MUST HAVE TEST RESULTS RELATIVE TO THE INTEGRITY OF
THE WELL, THE CASING AND ALL THESE PARAMETERS THAT RUDY
CAN LAY OUT, AND WE WANT TO HAVE SOME SENSE THAT THERE
IS POTENTIAL FOR GEOTHERMAL PRODUCTION IN THESE WELLS
AS WELL.

Motion carried unanimously.

Dr. Nations emphatically stated to Mr. Pomeroy that we must have results regarding the integrity of the well and the potential, or we cannot extend that again.

Mr. Warne moved, seconded by Mrs. Niccoli:

THAT WE HAVE THE INFORMATION BY OUR NEXT REGULAR
MEETING WHO THE LEGAL OWNER OF THE WELL IS AND IF
IT IS IN CONTENTION, THEN FROM THE AG's OFFICE,
ADVICE AS TO HOW WE SHOULD TREAT THE CONDITION.

Motion carried unanimously.

REPORT OF THE EXECUTIVE DIRECTOR

The Activity Report of Dr. Brennan was sent to the Commissioners, and has been made a part of these minutes. Dr. Brennan advised that on February 10, 1988 he and Rudy will be interviewed by the Arthur Young Company, the contractor, on the state's mini-Grace Commission. He referred to a rough draft of a bill to establish a publications' revolving fund for the O&GCC to be introduced by Senator Todd, Representative Hawke and co-sponsored by Senator Hays. Dr. Brennan passed out reprints of his article on Oil and Gas Developments in the Four Corners Intermountain Area published in the Exploration Issue of the AAPG Bulletin.

REPORT OF ENFORCEMENT SECTION

The Activity Report of Mr. Ybarra was sent to the Commissioners, and has been made a part of these minutes. Mr. Ybarra updated his report on Cal Gas. On January 8, 1988, they installed a new flare system which is to be approved by the pollution people of Maricopa County. The old well will be plugged and a new one will be drilled, and the operations will be witnessed by the staff.

Mr. Ybarra reported that Central Oil is to be transferred to Contender Oil. The old bond will be released, and a cash bond will be provided. Another interval is to be tested, and if it is unsuccessful, the well will be plugged.

The specs and procedures for the annual inspection on Ferrellgas, Inc. should be available soon.

Ed Kaufman and the Bradshaws are vying for the grant money for the geothermal venture in Nutrioso. This amounts to about \$470,000.00, and will be announced in a few weeks who gets the money from the oil overcharge fund.

Mr. Ybarra reported that John Karabees and Petro Sun are going to be drilling several wells around the old Brooks #126. Salt Grass plans to drill another well near Springerville.

DISCUSSION OF BUDGET CUTS

Dr. Brennan explained that we met the 2.9% budget cut requested of all agencies by having a savings in the secretarial position which was vacant from September 28, 1987 to October 26, 1987. An additional 10% cut ordered by the Governor's Office for next year's budget request was met by the intended retirement of Mr. Ybarra in August 1988. A change in job title and grade will be done when Mr. Ybarra retires. The grade will be 19 for an Oil and Gas Specialist. Another consideration would be the eliminating of the \$3,000.00 dues and \$2,000.00 travel money for the IOCC.

DISCUSSION OF FIVE-YEAR REVIEW OF RULES

Dr. Brennan explained that every agency is required to review its rules every five years, and five questions are pertinent to each rule. A draft of this review was sent to each Commissioner. The review goes to the Governor's Regulatory Review Council.

ELECTION OF CHAIRMAN AND VICE CHAIRMAN

Mrs. Wilt nominated Dr. Nations for Chairman, seconded by Mr. Warne.

Mrs. Wilt moved, seconded by Mr. Warne:

THAT NOMINATIONS BE CLOSED.

The motion carried unanimously.

Mr. Warne nominated Jan Wilt for Vice Chairman of the Commission, seconded by Dr. Nations.

Mr. Warne moved, seconded by Dr. Nations:

THAT NOMINATIONS BE CLOSED.

The motion carried unanimously.

Dr. Nations and Mrs. Wilt were unanimously elected to the two positions.

MOTION TO AUTHORIZE EXECUTIVE DIRECTOR TO HIRE, DISCIPLINE, AND DISMISS STAFF ON BEHALF OF THE COMMISSION

After an explanation by Dr. Brennan of hiring, disciplining and dismissing employees, Mrs. Wilt moved, seconded by Mr. Bennett:

THAT THE EXECUTIVE DIRECTOR BE AUTHORIZED ON BEHALF OF THE COMMISSION TO HIRE, DISCIPLINE AND DISMISS EMPLOYEES.

An Order was signed by Dr. Nations to this effect and was placed in the Commission's Policies File.

MOTION TO SEND EXECUTIVE DIRECTOR TO ANNUAL MEETING OF AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS IN HOUSTON, MARCH 19 - 23, 1988

Minutes of Meeting
January 15, 1988
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Mr. Bennett moved, seconded by Mrs. Wilt:

THAT THE EXECUTIVE DIRECTOR BE SENT TO THE AAPG
MEETING IN MARCH 1988 IN HOUSTON, TEXAS.

Motion carried unanimously.

CALL TO THE PUBLIC

John Haas of the Bureau of Land Management advised that the Bureau will be operating under a new Oil and Gas Leasing Act for onshore activity. Petroleum Technical Services is in the process of letting contracts to reclaim the two well sites south of Yuma. An application from Jay Shields is expected to deepen one of his wells near Fredonia. Mr. Haas reported on the filing of applications about 12 years ago for geothermal leases in the Coconino National Forest. No action was taken pending completion of the Forest Management Plan in the Fall of 1987. Hunt Oil does not plan to continue any interest in their leases, but Union Oil wishes to pursue their interests. The BLM plans to begin work on these leases shortly. Ms. Flo Wilhight, working with Mr. Haas, was introduced.

Mr. Jim Goff with the Department of Water Resources, Hydrology Division, introduced himself. Mr. Goff related how his department is in the process of revising their regulations on well drilling and licensing of drillers.

The next meeting was set for February 19, 1988.

ADJOURNMENT

Mr. Bennett moved, seconded by Mrs. Niccoli:

THAT THE MEETING BE ADJOURNED.

Motion carried unanimously. Time of adjournment was 12:11 P.M.

APPROVED

Dale Nations
Dr. J. Dale Nations
Chairman

Minutes of Meeting
January 15, 1988
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GUESTS IN ATTENDANCE:

Lloyd Canton	Switzenberg
Jim Goff, P.E.	Arizona Department of Water Resources
Don Switzenberg	Power Ranch Joint Venture
Mark Monserez	Beus, Gilbert, Wake & Morrill
Paul Gilbert	Beus, Gilbert, Wake & Morrill
John Haas	Bureau of Land Management
Flo Wilhight	Bureau of Land Management
Larry Fellows	Arizona Geological Survey
Ron Turner	Geothermal Synergy Corp.
Logan Johnston	Winston & Strawn
R. J. Pomeroy	Cam-Roy Research Corp.
Sheldon Muller	Attorney General's Office
Gary Davidson	D. M. & Associates

AGENCY Oil & Gas Conservation Commission

DIVISION _____

IDENTIFICATION CODE NO. _____

CLAIMS PAID YEAR TO DATE 1987-1988		OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION		CLAIMS PAID MONTH OF JANUARY 1988	
40,258	15	6011	1	Salaries: Staff	1	5,780 68
26,957	08	6057	2	Appointed Official	2	3,770 22
180	00	6058	3	Commission Members	3	60 00
		6081	4	Temporary Help	4	
4,414	93	6111	5	Emp. Related: F.I.C.A.	5	697 34
3,113	42	6113	6	Health Insurance	6	530 88
386	58	6115	7	D&L Insurance	7	60 64
134	62	6117	8	Unemployment Insurance	8	19 10
237	51	6118	9	Dental Insurance	9	29 84
551	58	6119	10	Workmen's Comp	10	77 08
2,688	53	6155	11	Retirement	11	382 02
499	44	6183	12	Personnel	12	71 12
121	00	6293	13	Prof. Serv.: Court Reporter	13	
		6499	14	Cartographic Symbols	14	
		6499	15	Cartographer	15	
		6511	16	Travel-State: Air Fare	16	
		6531	17	Taxi; parking	17	
469	78	6541	18	Mileage-Private Vehicles	18	121 50
1,657	47	6551	19	Mileage-State Vehicles	19	281 46
45	19	6582	20	Lodging	20	
143	00	6583	21	Per Diem	21	10 00
		6595	22	Telephone	22	
		6599	23	Other	23	
		6611	24	Travel-Out of State: Air Fare	24	
		6631	25	Taxi/Rail	25	
		6639	26	Other (Public transport.)	26	
		6641	27	Personal Auto	27	
		6651	28	Motor Pool	28	
		6669	29	Other (Nonpub. transport.)	29	
		6682	30	Lodging	30	
		6683	31	Per Diem	31	
		6699	32	Other	32	
104	30	7019	33	Legal Advertising	33	
		7036	34	Postage Stamps	34	
730	80	7044	35	Telephone Service: ATS Service (WATS)	35	121 80
456	30	7045	36	Line Costs	36	76 05
		7046	37	Station Equipment	37	
153	22	7047	38	Toll Service	38	
295	71	7048	39	Other	39	54 10
677	00	7066	40	Insurance (Risk Management)	40	
9,258	19	7108	41	Office Rent	41	2,422 48
		7311	42	Printing	42	
		7532	43	Furniture (Maintenance Noncontract)	43	
		7532	44	Adder/Calculator (Maintenance Noncontract)	44	
		7532	45	Reader/Printer (Maintenance Noncontract)	45	
92	00	7553	46	Typewriter (Maintenance Contract)	46	
		7553	47	Copy Machine (Maintenance Contract)	47	
		7583	48	Computer Equipment - Other	48	
		7621	49	Stationery/Envelopes	49	
		7623	50	Printed Forms	50	
		7624	51	Reproduction Supplies	51	
502	65	7625	52	Blue Prints/Office Supplies	52	51 62
		7628	53	Printing Maps	53	
		7628	54	Printing Misc.	54	
		7962	55	Revolving Fund	55	
			TOTAL			

OFFICE
AUDIT:

(DO NOT WRITE BELOW THIS LINE)
TYPED:

FIELD
AUDIT:

AGENCY Oil & Gas Conservation Commission

-2-

DIVISION

IDENTIFICATION CODE NO.

1	2	3	4
CLAIMS PAID YEAR TO DATE 1987-1988	OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION	CLAIMS PAID MONTH OF JANUARY 1988
	7967	1 Books	1
2,000 00	7971	2 Organization Dues	2
	7975	3 Registration Fees	3
42 90	7997	4 Subscription; Newspaper	4 14 30
24 00	7997	5 Technical Journal	5 24 00
29 95	7999	6 Other	6
1,638 60	8483	7 Office equipment	7
		8	8
		9	9
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		12	12
		13	13
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		55	55
97,863 90		TOTAL	14,656 23

OFFICE
AUDIT:

(DO NOT WRITE BELOW THIS LINE)
TYPED:

FIELD
AUDIT:

MONTHLY FINANCIAL REPORT

1 RECEIPTS MONTH OF JANUARY 1988	2 CLASSIFICATION	3 APPROPRIATED RECEIPTS	4 UNAPPROPRIATED RECEIPTS	5 TOTAL ALL RECEIPTS YEAR TO DATE
	1 Permits to Drill			4,302 00
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	TOTAL CURRENT MONTH RECEIPTS			XXXXXX
	TRANSFERS IN			
XXXXXX	BALANCES BROUGHT FORWARD		4,302 00	XXXXXX
	TOTALS - MONTH AND YEAR TO DATE		4,302 00	

6 CLAIMS PAID MONTH OF JANUARY 1988	7 EXPENDITURES FUND TITLES	8 TOTAL AMOUNT AVAILABLE YEAR TO DATE	9 CLAIMS PAID YEAR TO DATE	10 OUTSTANDING ENCUMBRANCES	11 UNENCUMBERED BALANCE
9,610 90	1 Personal Services	128,400 00	67,395 23		61,004 77
1,868 02	2 Emp. Related Exp.	24,900 00	12,026 61		12,873 39
	3 Professional Services	400 00	121 00		279 00
412 96	4 Travel - State	7,500 00	2,315 44		5,184 56
	5 Travel - Out of State	600 00			600 00
2,764 35	6 Other Operating Exp.	24,500 00	14,367 02		10,132 98
	7 Capital Outlay-Equipment	1,600 00	1,638 60		(38 60)
	8				
	9				
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14,656 23	TOTALS	187,900 00	97,863 90		90,036 10

OIL AND GAS CONSERVATION COMMISSION
STATE OF ARIZONA

[illegible]

ALLEN, KIMERER & LAVELLE

LAWYERS

2715 NORTH THIRD STREET
PHOENIX, ARIZONA 85004-1190
602-279-5900

JOHN A. HENRY*
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JOHN V. FELS*
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RICHARD B. HOOD
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GARY G. MAY
SARAH McGIFFERT
LINN J. PLOUS
J. STEVEN ROLLINGS
JEFFREY R. SIMMONS
GARTH V. SMITH
RITA L. SPEARS
JEAN I. UPDIKE

FEB 17 1988

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February 17, 1988

PA PROFESSIONAL CORPORATION

Dr. Daniel J. Brennan
Director
Oil and Gas Commission
3110 North 19th Avenue, Suite 190
Phoenix, AZ 85015

Re: Request for Continuation of Temporary Abandonment
- Cam-Roy Research Corporation, GKI Power Ranch
#1, GKI Power Ranch #2

Dear Dr. Brennan:

As you know, Cam-Roy Research is involved in a legal battle over the ownership of the two above-referenced geothermal wells located on the Power Ranch near Gilbert, Arizona. Notwithstanding the final outcome of that legal battle, it would not be in the State's best interest to order the plugging of those wells anytime in the near future.

Although Cam-Roy Research has not yet complied with various well inspection procedures required by the Oil & Gas Commission, this has been the result of complicated legal maneuverings and lack of understanding by various lending institutions of the nature of the geothermal power. Although we are overcoming the latter of these two problems, the former is still in court.

In order alleviate some of your concerns relating to the potential environmental impact, I have enclosed a memorandum from Ron Turner, the hydrologist who was retained by Cam-Roy. As you can see, there has not been any demonstrated hydrological problem in the past 15 years. Accordingly, it seems very unlikely that any adverse environmental damage could occur in the near future.

For these reasons, Cam-Roy Research requests that the Oil & Gas Commission extend the temporary abandonment until such time as the legal title to the wells is finalized. At that time, the owner thereof can conduct necessary reworking and

ALLEN, KIMERER & LAVELLE
LAWYERS

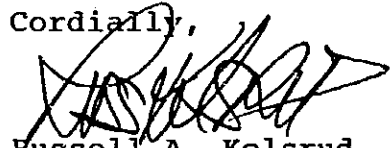
Mr. Daniel J. Brennan
February 17, 1988
Page Two

development. In the meantime, our hydrologist will monitor surrounding wells for any contamination.

Quite frankly, it would be a shame for the Commission to order the plugging of the only geothermal energy that it presently available for use in Arizona. The problems Cam-Roy is facing can and will be solved.

If you have any questions in this regard or would like further information, do not hesitate to contact me. In addition, we will be glad to appear and discuss these issues at the next meeting of the Arizona Oil & Gas Commission.

Cordially,


Russell A. Kolsrud

RAK/db

cc: Mr. R. J. Pomeroy
Mr. Logan Johnston
Mr. Sheldon Muller

MEMORANDUM

To: R.J. Pomeroy
From: Ron Turner

Date: 1/29/88

PROJECT: Power Ranch Geothermal Wells

SUBJECT: Environmental Impact of the Wells

It would seem that, given our sincere intentions to develop these wells as soon as the pending lawsuit is settled, the prime concern of the Commission would be for protection of the environment. The following paragraphs present data which clearly demonstrate that there has been no adverse environmental impact as a result of these two geothermal wells.

Located within one-quarter mile of the geothermal wells is an irrigation well (#D-2-611 dda) which is monitored regularly by the State of Arizona Department of Natural Resources. That well was drilled to a total depth of 802 feet and is perforated from 350 to 785 feet. The most recent static water level measured in that well is 273 feet below ground surface. The Power Ranch geothermal wells were drilled to depths of 9,207 feet and 10,464 feet and are perforated below 6,000 feet. The static water level of the aquifer tapped by the geothermal wells was measured at 570 feet below ground surface in January of 1988. The gross difference in static water levels of the two aquifers indicates that there is no hydraulic communication between the two aquifers. The Department of Water Resources is now monitoring the water level in Power well #1 on a semi-annual schedule. Any change in the hydraulic separation of the two aquifers would be readily noted by this water level monitoring.

The aquifer tapped by the irrigation well consists of alluvial, basin-fill material (i.e. sand, gravel and clay). The deep aquifer tapped by the geothermal wells is composed of dacite (the Superstition volcanic complex). These two aquifers are separated by 5,000 feet of sandstone, siltstone, claystone and evaporite beds. In the geothermal wells the entire annular space between the outside of the casing and the borehole walls, from 6,000 feet up to the surface, is cemented. Additionally, the upper 3,117 feet in Power well #1 and the upper 2,704 feet in Power well #2 has both 20-inch diameter and 13 3/8-inch diameter casing cemented into place, therefore providing double protection for the shallow aquifer that occurs in the upper 1,200 to 1,500 feet in this area.

In addition to static water levels, the Department of Water Resources has also monitored the specific conductance and fluoride content of the nearby irrigation well. Their latest publication (Hydrologic Map Series Report No. 12, 1986) reports a specific conductance of 1130 umhos/cm which indicates a total dissolved solids content of approximately 790 mg/l for the water from this well. It also reports a fluoride content of 0.5 mg/l. Both of these constituent values are within the limits set by the U.S. Environmental Protection Agency for drinking water quality. Earlier testing in the two geothermal wells indicated a specific conductance of the geothermal fluids to be about 30,000 umhos/cm which indicates a total dissolved solids content of about 21,000 mg/l. The gross differences in the water quality again demonstrate the hydraulic separation of the two aquifers. In addition, the excellent quality of the shallow aquifer indicates that it has not been contaminated by the geothermal fluids of the deep aquifer.

Since there has been no adverse environmental impacts in the 15 years that the wells have existed it seems very unlikely that any environmental damage will occur in the very near future. If testing of the integrity of the casing was conducted at this time and it was found that there was excessive corrosion or other damage to the casing those problems could be addressed in six months or a year just as effectively as they could now. In fact, if any such problems do exist, they are not necessarily insurmountable nor would that preclude the refurbishing of those wells.



CAM-ROY RESEARCH CORPORATION

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FEB 17 1988

O & G COM. CTR.

February 16, 1988

Dr. J. Dale Nations
Chairman, Oil & Gas Commission
State of Arizona
% Dr. Daniel J. Brennan
Executive Director
3110 N. 19th Ave. Suite 190
Phoenix, Arizona

Dear Dr. Nations:

Since the last meeting of the Commission, it has become necessary to request a modification of the order adopted at that meeting, wherein this firm was to perform some exploratory work on the so-called Power wells if a temporary abandonment of them was to be extended as requested. We ask that the order be modified from the date of February 21, 1988, to July 1, 1988, to do that work. There are now legal circumstances that prohibit us from having the legal right to perform any work on the wells at this point in time, and that prohibition will continue until the current ruling of the court is appealed and successfully concluded in our favor.

In making this request, we wish it to be fully understood that we appreciate the consideration given us by the Commission the past three years. We also express our appreciation for the temperate control of the meeting that could have developed into a court-house confrontation. To a certain extent, we feel that this meeting gave a degree of exposure to the type of problems that we have inherited that are beyond our control.

Many times during the past three years, we have been tempted to cut our losses, and leave the Power wells to whatever fate might decree. We found encouragement in the willingness of the Commission to continue the T.A. of the wells. That, and the constant challenge to bring about a successful development of that particular geothermal resource, has sustained our motivation.

We firmly believe that we have the best qualified knowledge and understanding of the practical importance of the Power wells. It is also our belief that, since these are the only two produceable geothermal wells in the state, and are located in a renowned geothermal basin, the Chandler-Higley Basin, they have a tremendous impact on the future geothermal development in Arizona. In our opinion, this transcends in importance any set of regulations that could terminate the T.A. of the wells. If, in fact, there is suspicion that because of the length of time of the

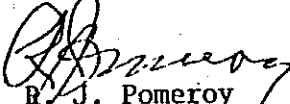
shut-in of the wells, there could be damage dangerous to the environment, we believe it is not supported by any findings on the subject to this point in time. Further, we also feel that whatever condition might develop, it is in no way going to appreciably increase the danger to the environment of the area within the extended time requested.

In this letter we are including a copy of a memorandum by our hydrogeologist, Ron Turner, which indicates the water wells in the area have been monitored by the Department of Water Resources and there is no indication of water contamination from the Power wells as might be feared. We have long recognized that due to the age and the lengthy shut-in-time of the wells, an extensive refurbishing and conditioning will be necessary before they can be qualified for an extracting fulfillment. In probability the # 2 well will be the easiest to control and possibly should be extended another 500 feet in depth. We feel it is the unit on which refurbishing and rehabilitation work should be started first.

Due to the experimentation in the drilling process of the # 1 well, it is not as simple to visualize the extent of work needed on that hole. But, whatever it is, the proper time to open and explore the condition of both wells is when the proper rigging facilities are available, and the financing of approximately \$1,000,000 is in place, as our plans include. In our opinion, our development plans for these wells are sound and meritorious, but unfortunately, they must be held in abeyance until the legal problems at hand are solved. We just do not have the legal right to do anything to the wells at this time.

Counsel advises that we have a good prospect of winning an appeal of the current ruling which could lead to a judgment in our favor. In addition, we are continuing our efforts to effect a compromise of the problem that would be fair and reasonable and more practical than a court proceeding. This has always been our hope and desire. May we emphasize this point? We are not attempting to steal or compromise any interest that our opponents have. In fact, we have offered to pay cash for their fee title interest which would make them wealthy. We feel we will yet succeed, if we can have your continued cooperation in this matter.

Sincerely yours,


R. J. Pomeroy
Chairman

RJP/csp

Enclosure

cc: Mr. Logan Johnston
Mr. Russ Kolsrud

MEMORANDUM

To: R.J. Pomeroy
From: Ron Turner

Date: 1/29/88

PROJECT: Power Ranch Geothermal Wells

SUBJECT: Environmental Impact of the Wells

It would seem that, given our sincere intentions to develop these wells as soon as the pending lawsuit is settled, the prime concern of the Commission would be for protection of the environment. The following paragraphs present data which clearly demonstrate that there has been no adverse environmental impact as a result of these two geothermal wells.

Located within one-quarter mile of the geothermal wells is an irrigation well (#D-2-6)1 dda) which is monitored regularly by the State of Arizona Department of Natural Resources. That well was drilled to a total depth of 802 feet and is perforated from 350 to 785 feet. The most recent static water level measured in that well is 273 feet below ground surface. The Power Ranch geothermal wells were drilled to depths of 9,207 feet and 10,464 feet and are perforated below 6,000 feet. The static water level of the aquifer tapped by the geothermal wells was measured at 570 feet below ground surface in January of 1988. The gross difference in static water levels of the two aquifers indicates that there is no hydraulic communication between the two aquifers. The Department of Water Resources is now monitoring the water level in Power well #1 on a semi-annual schedule. Any change in the hydraulic separation of the two aquifers would be readily noted by this water level monitoring.

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In addition to static water levels, the Department of Water Resources has also monitored the specific conductance and fluoride content of the nearby irrigation well. Their latest publication (Hydrologic Map Series Report No. 12, 1986) reports a specific conductance of 1130 umhos/cm which indicates a total dissolved solids content of approximately 790 mg/l for the water from this well. It also reports a fluoride content of 0.5 mg/l. Both of these constituent values are within the limits set by the U.S. Environmental Protection Agency for drinking water quality. Earlier testing in the two geothermal wells indicated a specific conductance of the geothermal fluids to be about 30,000 umhos/cm which indicates a total dissolved solids content of about 21,000 mg/l. The gross differences in the water quality again demonstrate the hydraulic separation of the two aquifers. In addition, the excellent quality of the shallow aquifer indicates that it has not been contaminated by the geothermal fluids of the deep aquifer.

Since there has been no adverse environmental impacts in the 15 years that the wells have existed it seems very unlikely that any environmental damage will occur in the very near future. If testing of the integrity of the casing was conducted at this time and it was found that there was excessive corrosion or other damage to the casing those problems could be addressed in six months or a year just as effectively as they could now. In fact, if any such problems do exist, they are not necessarily insurmountable nor would that preclude the refurbishing of those wells.

Commission Meeting

2-19-88

Name	Firm
SIM WARNE	DTG Comm
M.A. Nicolson	" "
R Ybarra	" "
R Stillman	GSC
Logan Johnston	Winston & Strawn
Ron Turner	Geothermal Synergy
Dale Nations	OGC
Jack Witt	OGCC
W. Brown	OGCC
Don Switzerberg	Power Research
J.E. Carter	"
Sheldon H. Muller	A.G. & Assoc
Paul E. Gilbert	Burns Hillbert Wake Marshall
NEIL V. WATKINS	" " " "
MARK MONSIEZ	" " " "
Ralph J. Pommeroy	Cons. Dev. Research Corp
Roy Bennett	DTG Comm
Gary Davidson	D&M Ass.