

OIL & GAS CONSERVATION COMMISSION  
Meeting: March 18, 1970  
Mr. John Bannister, Exec. Sec.

Minerals Dept - (Mar.) reorganized

Oil & gas Lease + Development

Problems - The Lease Term

Now 10 year - No minimum bid

Shut-in Gas Clause not yet in lease

Tribe now attempting to secure  
such a clause

Question - diligent drilling at end of  
term get some extension



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

A G E N D A

Meeting  
March 18, 1970  
Room 204, Arizona State Office Bldg.

10:00 a.m.

Call to order

- ✓ 1. Approval of minutes of meeting of February 18, 1970
- ✓ 2. Executive Secretary report
- ✓ 3. Geologist report
- ✓ 4. Old business
- ✓ 5. New business
- ✓ 6. Adjourn

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

NOTE: MR. P. K. HURLBUT OF THE NAVAJO INDIAN NATURAL RESOURCE DEPARTMENT WILL APPEAR BEFORE THE COMMISSION TO DISCUSS THE NAVAJO LEASE SALES AND LEASING POLICIES.

*May Meeting*

*in Holbrook?  
Lucien to  
rept. in app.*



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

March 12, 1970

Memo: Commissioners  
From: John Bannister  
Re: Report of Activity

Since our last meeting, the monitoring system for the salt project at Glendale Avenue and Dysart Road has been established. All interested parties were invited to a meeting held March 5, 1970. The Commission's initial monitoring system was agreed upon and approved. As a result, a letter of instructions has been issued to Southwest Salt Company, requesting the company to establish a permanent trench in the indicated path of the earth crack to the east of its Pond No. 4. The purpose of this trench is to act as a visual observation point in the event the crack continues to approach the pond. The company likewise has been required to make monthly visual observations of the known cracks and the trench and to report the condition so noted to this Commission. The company will also be required to secure approval of the surface site of any future ponds. At this particular time they are not contemplating additional ponds, however if the operation is successful additional ponds will undoubtedly be granted.

The monitoring system established will be the yearly coring and sampling of the area, similar in scope to our initial effort. It is planned that some 22 holes will be drilled throughout the ponding area. In addition to these holes, 9 cased and open holes will be maintained for the purpose of a nuclear moisture probe. It is not known at this time if this will be successful and in order to determine if it will be suitable, 2 test holes will be drilled in July. It has been suggested that should the moisture probe give sufficient information, the above-specified 22 holes need not be drilled yearly. This would greatly reduce surveillance cost.

Letters of appreciation have been sent to Luke Air Force Base, Engineers Testing Laboratory and Dr. Hasan Qashu for their contribution and help in the effort. In addition, Southwest Salt Company has borne a small portion of this cost - that of establishing and maintaining the above-mentioned trench.

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Executive Secretary Report  
3-12-70

The established total and outside cost of our yearly surveillance will be approximately \$5,000. This breaks down to roughly \$3,500 for Engineers Testing Laboratory to drill the above-specified monitoring holes and collect samples. The samples will be forwarded to the University of Arizona for analysis and this cost is estimated to be \$1,500. These analyses will be furnished Engineers Testing Laboratory and a final report submitted to this Commission. All parties concerned are most satisfied with this Commission's efforts as to monitoring the potential pollution from this project. You, of course, will be kept advised as to conditions.

The underground storage project at Holbrook has been thoroughly investigated. A copy of a report of my investigation is attached for your information. As a result of this investigation, letters of instruction have been written to Eagleton Engineering Company, the supervisor of the establishment of this project. The large and permanent brine water pond has been ordered divided in such a manner that either section can be emptied into the other in case emergency repairs are needed. The company has likewise been advised to report immediately any undue loss of brine in either section of this pond.

You will note that we have contacted the City of Holbrook and find that they are in accord with this storage project and I feel that any threat of pollution is most minimal.

Rumors continue to circulate concerning drilling in Cochise County, however we do not at this time have any permits or applications for wells in this location.

I have heard nothing further from either the Senate or House Appropriations Committees. Again I would stress that I feel no further action can be taken by this Commission other than we, as individuals, contacting the Legislators whenever possible.

I have repeatedly tried to contact Mr. John Hazelett, State Tax Commissioner, per your instructions, to request his presence at our next meeting. As yet all attempts have been completely unsuccessful, but we shall continue our efforts.

As previously reported, the Personnel Department has assumed responsibility of finding a replacement for our Administrative Assistant position. All applications this office has received have been turned over to them. As yet we have received no response from the Personnel Department, however they have insisted that they assume the responsibility so we can do nothing but sit and wait.

Senate Bill 186 removing the limitation on the amount of state acreage an individual may hold has now passed the Natural Resources, Commerce and Industry, and Rules Committees of the Senate. It is not known when it will be brought to the floor. I do anticipate that this bill will pass and become law.

Page 2  
Executive Secretary Report  
3-12-70

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Executive Secretary Report  
3-12-70

New Permits:

- 529 - Union Texas Petroleum #1-17 Navajo (2214), SE/4 SE/4  
17-7N-10W, Apache County.
- 530 - Aritex Development Corp. #1 Fee Strat, NE/4 SE/4  
6-17N-21E, Navajo County.
- 531 - Union Texas Petroleum #1-1 Navajo (2262), NW/4 NW/4  
1-7N-10W, Apache County.



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
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March 12, 1970

Memo from John Bannister

Re: Files 530 and 532  
Aritex No. 1 and No. 2

On March 10 and 11, 1970, the storage project involving these two wells has been inspected. Mr. Tom Martin of Eagleton Engineering Company and Mr. James Baldry of Aritex have been contacted. Eagleton Engineering Company is setting up the storage project and Aritex is a corporation which has been formed to manage the propane project. Mr. Martin represents Eagleton and Mr. Baldry is being employed by Aritex.

As to Well No. 1, Permit No. 530, a small cable tool rig has been brought in and is currently drilling out cement. After the hole has been opened, Halliburton will run a wire line to determine accurately total depth and 4-1/2" tubing will then be set to approximately 1150', which will bring this tube down to an anhydrite section approximately 40' below the top of the salt. This 40' section is both overlain and underlain by anhydrites and should prove ideal for storage purposes.

The No. 2 well, Permit 532, has been drilling 400' to the north of Well No. 1, currently at a total depth of 760'. As I left the site there had been a twist off and 240' of drill pipe and the drill bit was left in the hole; however, due to the nature of the twist off, it should be easily recovered by a spear.

Initially, Well No. 2 will be drilled to a depth of approximately 1200' and 7" casing set through the total salt zone to be used. A collar and cement plug will be set at bottom hole below the lowest anhydrite section. The well will be perforated into the lower salt zone. It is intended to use a fresh water frack by Halliburton through these perforations until communication is



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Memo from Mr. Bannister  
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established with Hole No. 1. The brine will be taken at this time through the 4-1/2" tubing in Well No. 1 and will be temporarily ponded. Once the storage cavern has been created, Well No. 2 will also have 4-1/2" tubing run. At this time, brine water will be injected through Well No. 1 into a storage cavern to displace propane for production purposes.

Propane will be brought to the storage area by tank car from the Cineza plant east of Gallup, New Mexico. Holbrook seems to be the central distribution point for propane in Arizona and this location seems to be ideal for this purpose. If the project is successful, Southern Pacific will extend a spur from the railroad located some 100 feet from the southern boundary of Aritex property. Propane will be moved both by tank car and truck.

If the initial phase now being undertaken is successful, it is intended to immediately create three such underground storage caverns. Each cavern will involve the use of two wells as outlined above. Each cavern will be approximately 400 feet long by 80 feet wide by 40 feet high and will contain approximately 150,000 barrels each of propane. A permanent brine pond of approximately 200,000 barrels capacity will be maintained. This brine will be used to displace the propane in storage. It is decided to use a saturated solution of brine, inasmuch as when introduced into the cavern it will not enlarge same.

Prior to contacting Mr. Martin and Mr. Baldry, I contacted Mr. W. S. Carpenter, City Manager of Holbrook. Mr. Carpenter has been thoroughly advised as to the proposed plans and progress of this project. Mr. Carpenter advises that there are no fresh water wells within a three mile are of the project and that the city is satisfied that no contamination can or will occur from the ponding operations. Mr. Carpenter joined me in my initial inspection of this project.

As a result of my meeting with Mr. Martin and Mr. Baldry, this Commission has ordered that the necessary well signs be erected and maintained, and has again advised that all wells drilled for this project, regardless of their purpose, must be permitted by this Commission and samples collected.

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Memo from Mr. Bannister  
March 12, 1970

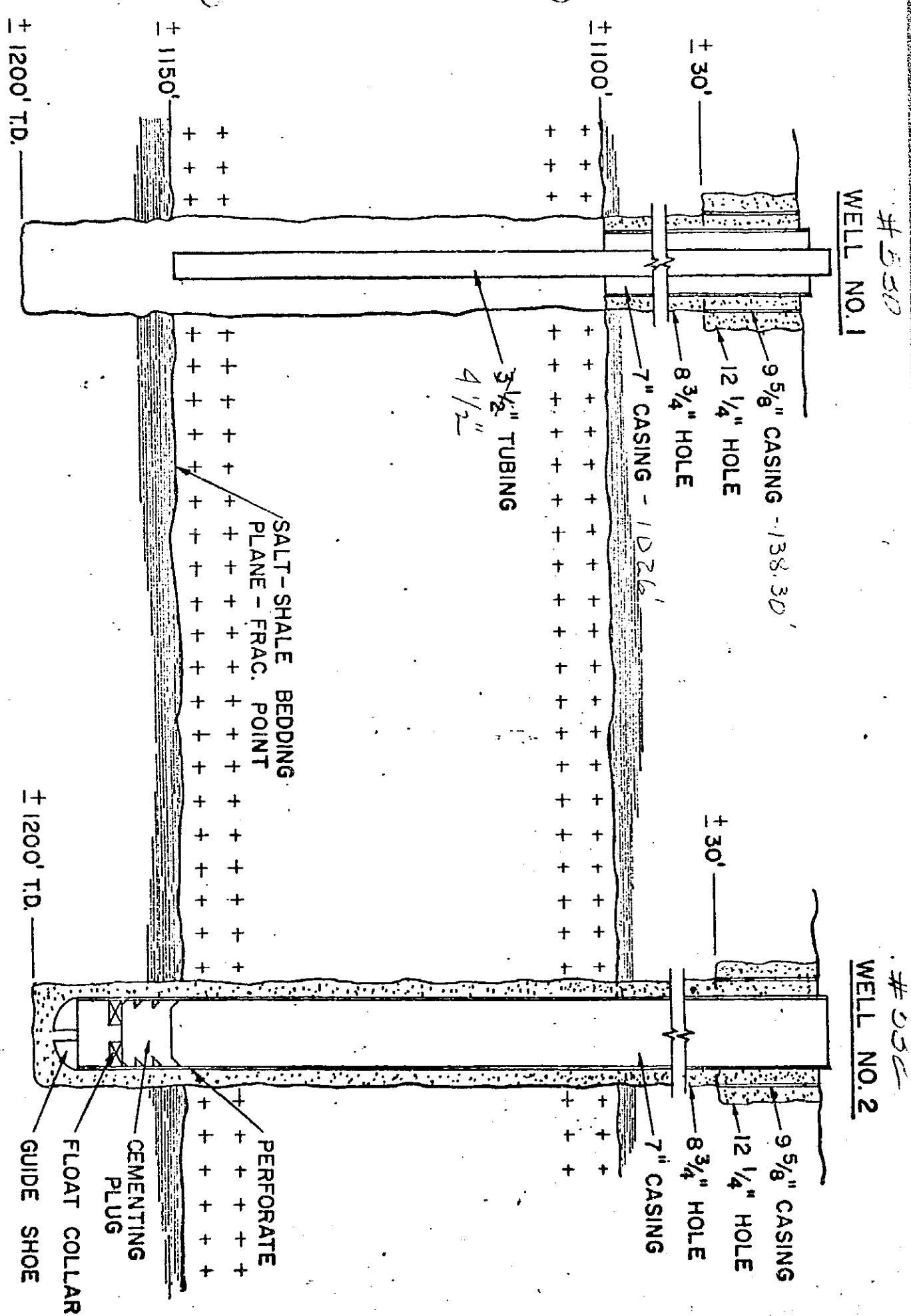
The Commission insisted that some method of evacuation of the contents of the large permanent brine pond be established so that it could be emptied in the event of any emergency. In the event of a severe emergency the contents of the pond could be put back into underground storage. This, of course, would necessitate a loss of the stored propane. The Commission suggested that the pond, in effect, be cut in half so that in the event of emergency the contents of the pond in either section could be transferred to the other section and any repairs be made that might be necessary. It was further suggested that, in establishing the bottom of the permanent pond, the recovered brine be evaporated and the salt worked by sheephead well into the bottom. These suggestions will be followed.

Mr. Martin outlined a proposal to insert 6 to 7" piping from his pump into both sections of the pond, which would give him a method of transferring the contents from one section of the pond to the other. The suggested division of the pond was most favorably received in that it will give the company a greater control of the brine and percentage concentration plus give the company a readily available means of doing any repair work necessary to the pond without undue loss of its contents.

I would like to say Mr. Martin and Mr. Baldry were most cooperative with this Commission and I feel that their continued cooperation is assured.

Please see File 530 for photographs of the above-captioned wells and temporary ponds, also for initial plans concerning proposed wellheads and initial ponding of water.

*John Bannister*



SOLUTION WELL SCHEMATIC PREPARATORY TO FRACTURING

FIG. 1

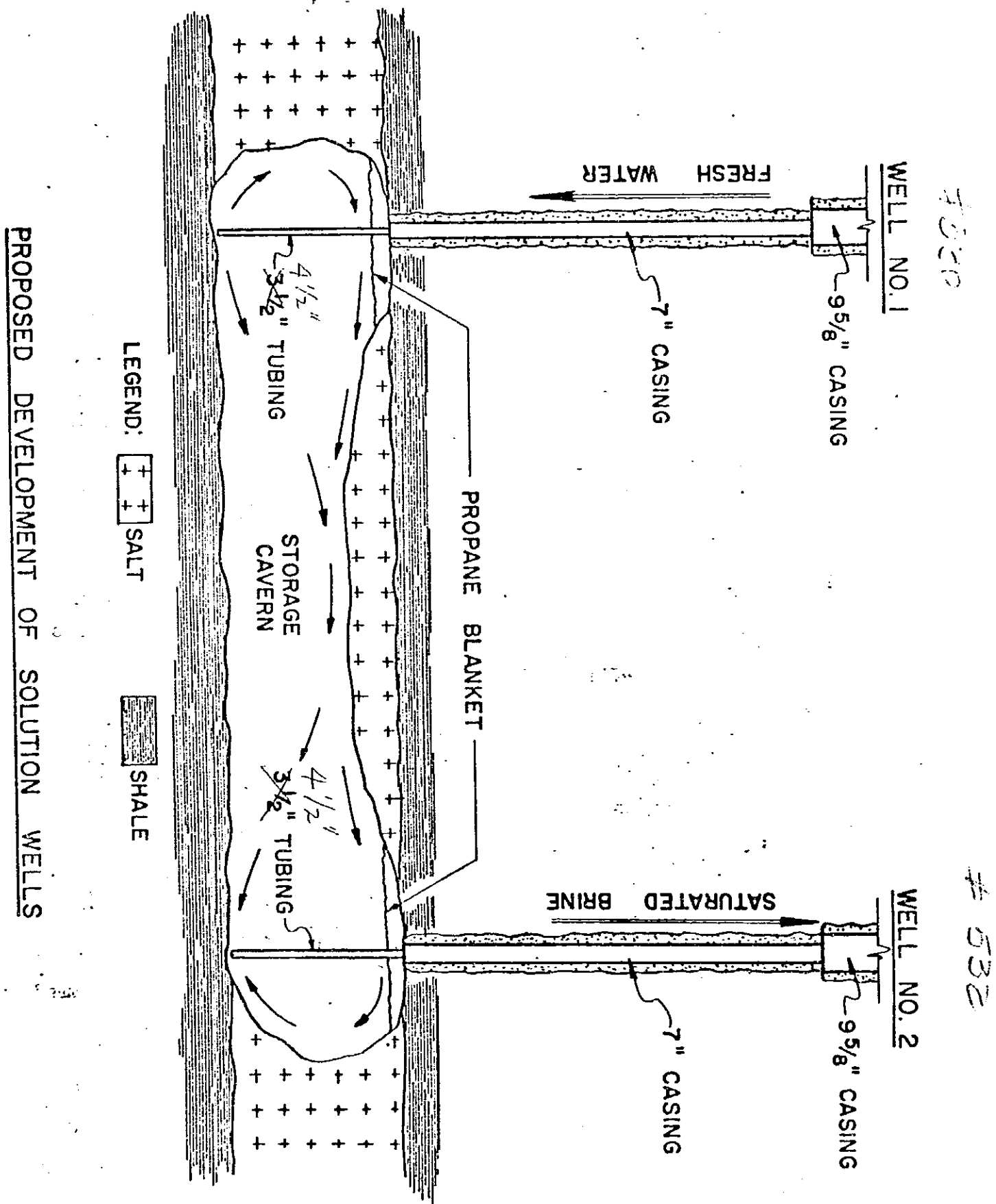


FIG. 2



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

March 12, 1970

GEOLOGIST'S REPORT

FROM: JAMES SCURLOCK  
TO : COMMISSIONERS

APACHE COUNTY

Consolidated Oil & Gas #1-1 Navajo (226)  
T41N, R28E, G & SRM East Boundary Butte Field  
Sec. 1: SW/4 SW/4 Development Well  
Permit #528

Spud 2-10-70.  
Set 8-5/8" surface casing at 512'.  
Drilled 7-7/8" hole to total depth of 6150'.  
Log tops:

Shinarump	1904'
Coconino	2355'
Hermosa	4300'
Ismay	5048'
Lower Ismay	5126'
Desert Creek	5170'
Akah	5358'
Molas	5940'
Mississippian	6047'
Total depth	6150'

DST #1 - 5144-5199; received 2400' fluid:  
600' heavily gas and oil cut mud  
1800' slightly oil and gas cut salt water  
2400' total

DST #2 - 5209-5250'; received 510' sulfur water; no show.  
No cores were taken.  
Plugged and abandoned 3-3-70.

Consolidated Oil & Gas #3 Navajo (227)  
T41N, R28E, G & SRM East Boundary Butte Field  
Sec. 11: SW/4 NE/4  
Permit #524

This location cancelled, well will not be drilled.

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Geologist's Report  
March 12, 1970

APACHE COUNTY (Cont.)

Union Texas Petroleum #1-1 Navajo  
T7N, R10W, G & SRM  
Sec. 1: NW/4 NW/4  
Permit #531

Spud 2-12-70.  
Ground elevation 5658'.  
Set 8-5/8" casing at 211' with 160 sacks of cement.  
Drilled 7-7/8" hole to total depth of 3435'.

Formation tops:

Organ Rock	735'
Hermosa	1268'
1st Chaetetes Zone	2615'
2nd Chaetetes Zone	2739'
Molas	2822'
Mississippian	2913'
Elbert	3060'
McCracken	3250'
Aneth	3380'
Total depth	3435'

No cores taken.  
No drill stem tests taken.  
Plugged and abandoned 2-25-70.

Thoureen #1 Santa Fe  
T21N, R26E, G & SRM  
Sec. 27: NE/4 SW/4  
Permit 504

"TIGHT HOLE"

Shut down. No rig on location.  
Will attempt Shinarump completion.

Eastern #1 Navajo (2601)  
T20N, R28E, G & SRM  
Sec. 30: NE/4 SW/4  
Permit #523

Location. Well will be drilled with the company rig.

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Geologist's Report  
March 12, 1970

NAVAJO COUNTY

Aritex Development Corporation #1 Fee Strat  
T17N, R21W, G & SRM  
Sec. 6: NE/4 SE/4  
Permit #530

Spud 2-23-70. Ground elevation 5078'.  
Set 9-5/8" surface casing at 145'. Set 7" casing at 1026'  
with 175 sacks of cement. Set 4-1/2" casing at 1062'. Total  
depth is 1100'.

Formation tops:

Coconino	138'
Supai	725'
Salt	1025'

Well completed 3-6-70.

Apparently they have sufficient salt here for their operations  
as a gas storage project.

A second well will be drilled 400' to the north and water will  
be circulated between these two wells until good communica-  
tions are established.

Two temporary pits will be established for this purpose.

MOHAVE COUNTY

Harris #1 Federal 3758A  
T38N, R7W, G & SRM  
Sec. 29: NW/4 NE/4  
Permit #502

Rig has been removed. Operator plans to move rig back on  
location in the near future.

He will try to get a rotary rig to finish the hole.

Present depth is 1010'.

SCUTTLEBUTT:

There is no rig drilling for oil and gas in Arizona at present.

Understand that Union Texas Petroleum will drill another well on  
the Navajo to be located approximately eight miles south of Many  
Farms.

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Geologist's Report  
March 12, 1970

SCUTTLEBUTT: (cont.)

According to rumor the prospect on the old Guadalupe Structure east of Douglas is to be drilled by Virginia Oil and Gas as operator. This will be a 8000' hole to basement, to be drilled by Delta Drilling.

Cockrell is said to be planning another wildcat test for Hidalgo County, New Mexico. This will be a 14,000' basement test.





OFFICE OF  
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ROOM 202  
1024 WEST ADAMS  
Phoenix, Arizona 85007  
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March 3, 1970

Memo to the Commissioners  
Memo from John Bannister

Gentlemen:

I was requested to appear before Representative Tom Goodwin's subcommittee of the House Appropriations Committee at ten a.m. this date. Inasmuch as the request came in late Monday I did not have sufficient time to notify you; however, it was specified that I alone appear. The committee meeting went extremely well and I was informed that this subcommittee would definitely support our request for the increased budget. I met with them some forty-five minutes. The question did arise as to what additional things beyond this Commission's effort might be advisable and I did briefly explain the tax situation; however, only an extremely small portion of the total appearance before the committee was spent on unrelated subjects.

We have now appeared before subcommittees of both the House and Senate Appropriation Committees and in both instances have been promised the support of the subcommittees. It is my feeling that all effort should be made by us to contact various senators and representatives which we feel may be sympathetic to our cause. I feel that we do have at least a fighting chance.

I would like to take this opportunity to express my personal appreciation for the support and effort each of you have put into our attempts to secure an adequate budget for this Commission.

AGENCY Oil & Gas Conserv Commission

DIVISION \_\_\_\_\_

IDENTIFICATION CODE NO. 1-7-10-000-0000

1	2	3	4
CLAIMS PAID YEAR TO DATE	OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION	CLAIMS PAID MONTH OF 19
28,791.00	110	1 Salaries, wages: employees	1 3,248.00
1,550.00	150	2 Per diem: board members	2 200.00
		3	3
320.24	211	4 Postage	4 198.00
932.46	212	5 Telephone, telegraph	5 109.71
1,092.08	221	6 Travel -State meals and lodging	6 144.36
754.28	222	7 mileage reimbursed private car	7 48.20
328.00	223	8 fares for planes, trains, etc.	8 96.00
923.30	224	9 State-owned auto expense	9 113.22
24.55	225	10 telephone, taxi, etc.	10 3.20
19.00	226	11 registration fees at meetings	11 -
		12	12
		13	13
599.05	231	14 Travel-out of State meals and lodging	14 47.56
1,140.40	233	15 fares for plane, train	15 150.40
	234	16 State-owned auto expense	16 -
124.40	235	17 telephone, taxi, etc.	17 -
98.00	236	18 registration - meetings	18 -
		19	19
	240	20 Professional services	20
		21	21
603.60	262	22 Mtns/repairs to office equip., furniture	22 51.60
290.34	294	23 Legal advt., notary, court, recording fees	23 -
	295	24 Transportation of things (well samples)	24 -
3,752.07	299	25 Miscellaneous (blueprint service, Ariz Bu Mines, Museum N. Arizona)	25 - 26 -
		27	27
		28	28
443.07	310	29 Office supplies	29 82.50
303.24	360	30 Scientific supplies	30
35.18	370	31 Mtns supplies (duplicate keys)	31
70.40	390	32 Other supplies (film)	32 12.85
		33	33
		34	34
	411	35 Rent, office equip: copy machine	35 -
		36	36
	421	37 Bond (notary public)	37 -
44.50	430	38 Subscription/organization dues	38 -
		39	39
		40	40
480.17	611	41 Office equipment/furniture	41 -
1,896.70	616	42 Automobile	42 1,896.70
		43	43
		44	44
		45	45
250.00	995	46 To create revolv fund	46 -
		47	47
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		54	54
		55	55
44,816.03		TOTAL	6,402.30

**MONTHLY FINANCIAL REPORT**

1 RECEIPTS MONTH OF <i>Feb 1970</i>	2 CLASSIFICATION <b>RECEIPTS</b>	3 APPROPRIATED RECEIPTS	4 UNAPPROPRIATED RECEIPTS	5 TOTAL ALL RECEIPTS YEAR TO DATE
<i>50 00</i>	1 Permits to drill		<i>50 00</i>	<i>600 00</i>
	2			
	3			
	4			
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	16			
	17			
<i>50 00</i>	TOTAL CURRENT MONTH RECEIPTS		<i>50 00</i>	<i>XXXXXX</i>
	TRANSFERS <i>In</i> / <i>Out</i>		<i>(200 00)</i>	
<i>XXXXXX</i>	BALANCES BROUGHT FORWARD		<i>2,970 25</i>	<i>XXXXXX</i>
<i>50 00</i>	<b>TOTALS - MONTH AND YEAR TO DATE</b>		<i>2,820 25</i>	<i>600 00</i>

6 CLAIMS PAID MONTH OF <i>Feb 1970</i>	7 FUND TITLES <b>EXPENDITURES</b>	8 TOTAL AMOUNT AVAILABLE YEAR TO DATE	9 CLAIMS PAID YEAR TO DATE	10 OUTSTANDING ENCUMBRANCES	11 UNENCUMBERED BALANCE
	1 Personal Services:				
<i>3,248 00</i>	2 General Fund	<i>34,296 00</i>	<i>28,794 00</i>	-	<i>5,502 00</i>
<i>200 00</i>	3 Conservation Fund	<i>2,250 00</i>	<i>1,550 00</i>	-	<i>700 00</i>
<i>436 66</i>	4 Current Expenditures	<i>4,484 38</i>	<i>2,835 30</i>	<i>599 46</i>	<i>1,049 62</i>
<i>422 98</i>	5 Travel - State	<i>6,090 00</i>	<i>3,054 51</i>	<i>1,183 07</i>	<i>1,852 42</i>
<i>197 96</i>	6 Travel - Out of State	<i>3,496 00</i>	<i>1,911 85</i>	-	<i>1,584 15</i>
-	7 Current Fixed Charges	<i>500 00</i>	<i>44 50</i>	-	<i>455 50</i>
-	8 Professional Services	<i>1,800 00</i>	<i>549 00</i>	<i>250 00</i>	<i>1,001 00</i>
<i>1,896 70</i>	9 Capital Outlay	<i>2,376 87</i>	<i>2,376 87</i>	-	-
-	10 Museum N. Arizona	<i>1,875 00</i>	<i>1,875 00</i>	-	-
-	11 Arizona Bureau Mines	<i>1,875 00</i>	<i>1,875 00</i>	-	-
	12				
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<i>6,402 30</i>	<b>TOTALS</b>	<i>59,043 25</i>	<i>44,866 03</i>	<i>2,032 53</i>	<i>13,144 69</i>