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INVESTIGATION AND EVALUATION OF
GEOPRESSURED-GEOTHERMAL WELLS

Notes on Gruy Federal's Well-of-Opportunity Program

February 1979
Date Published

Work Performed Under Contract No. EG-77-C-08-1528

Gruy Federal, Inc.
Houston, Texas

U. S. DEPARTMENT OF ENERGY
Geothermal Energy

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INVESTIGATION AND EVALUATION OF
GEOPRESSURED-GEOTHERMAL WELLS

NOTES ON GRUY FEDERAL'S WELL-OF-OPPORTUNITY PROGRAM

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Date Published--February 1979

Prepared for the
U.S. Department of Energy
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NOTES ON GRUY FEDERAL'S WELL-OF-OPPORTUNITY PROGRAM

The Gruy Federal, Inc. contract to obtain geopressured-geothermal (Geo²) test data from private industry sources became effective on September 26, 1977. The charge was to obtain test data from geopressured aquifers along the Texas and Louisiana Gulf Coast (see Figures 1 and 2) by arranging to assume operation of wells already drilled and found nonproductive of conventional oil or gas accumulations before such wells were abandoned by the operators. The program was styled "Well of Opportunity" (WOO) since advantage could be taken of expenditures which had been made already by the operator. It was proposed that upon assuming control of the well, Gruy Federal would test the geopressured aquifers after performing whatever additional operations were required, such as deepening and/or installing additional casing or wellhead systems.

Parameters used for initial screening of candidate wells are summarized in Figure 3; a flow chart for the procedure for assuming operation of a well of opportunity is shown in Figure 4.

Fourth Quarter 1977

During the first quarter of the contract, the major thrust was publicizing the program with industry.

- Mr. H. J. Gruy, chairman of the parent company, Gruy Enterprises, Inc., spoke to approximately 250 members at a meeting of the Dallas Petroleum Engineers Club. He also visited informally with industry representatives in 9 or 10 technical or industrial meetings.
- Members of the Gruy technical staff participated in three conferences or workshops (see Exhibit 8).

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- A letter describing the program and soliciting industry cooperation was sent to officials of seven companies.

One year later, negotiations were still in progress with three of these seven companies: South Louisiana Power Company, Tenneco Oil Company, and Texaco, Inc. The other companies responded with little interest, or not at all. This is an indication of the considerable length of time required for acceptance of an entirely new concept by industry, i.e., an attempt to produce rather than avoid high pressure saltwater flows.

During the final quarter of 1977, the record (see Exhibit 1) shows that 97 proposed drilling operations were screened and rejected for various reasons, including:

1. Insufficient depth and reservoir pressure.
2. Insufficient temperature.
3. Insufficient sand development.
4. No ready entry to operator.
5. Inland water location.
6. Delay in obtaining insurance coverage.

A geothermal, but not geopressured, test well in the State of Georgia was taken over, deepened to volcanics, and cased for use as a temperature test site.

First Quarter 1978

The program gained momentum during the first quarter of 1978. Land and geological maps were acquired, a vice president was appointed Program

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Manager in February, and a senior petroleum engineer was added. Cameron Parish, Louisiana, was chosen as an area of concentration, and a program of sand mapping was begun. A library of electrical logs was established which now contains copies of logs from 477 wells. The legal aspects of mineral ownership were reviewed.

Screening of potential wells of opportunity continued. The staff considered and eliminated 36 well sites in Texas and 59 in Louisiana (see Exhibit 1) . The reasons for rejection were basically the same as in the previous quarter, plus lack of affirmative response from operators.

The letter of solicitation to industry was revised and mailed to key personnel of 41 additional oil or gas companies. Contacts with key industry personnel were increased, including at least 40 telephone calls and 22 personal visits. Immediate response from industry was less than anticipated. In general, the companies who responded indicated that they favored the program but had no wells proposed that would qualify for the program (see Exhibit 3). One of the earliest contacts did result in the offer of a well of opportunity by Adobe Oil Company in Galveston County, Texas. This was rejected by Gruy and DOE staff because of questionable sand development. A second proposed well in Galveston County (Milton Cooke, Jr.-No. 1 Lobit), was rejected for similar reasons. (This well was never drilled and will be reconsidered if and when it is drilled.)

Because of the slow initial response from industry, Gruy Federal, Inc. began investigating the possible advantages of reentering, for geothermal testing, wells which had been abandoned or temporarily abandoned. (In abandoned wells some of the casing normally has been salvaged, whereas in temporarily abandoned wells casing is intact.) This change in Geo² test targeting appeared to offer several advantages:

1. It eliminated the necessity of dealing with oil or gas operators and the attendant resistance to a new program with high technical risk and insufficient economic incentive.

2. Information on such wells is generally not confidential. (The confidentiality factor is a deterrent to the WOO program as originally conceived.)
3. It eliminated the geological risk of poor sand development or insufficient temperature and pressure since these factors would be matters of record.
4. It eliminated payments to oil or gas operators and rig standby payments to drilling contractors.
5. It promised possible monetary savings through the use of tubular goods already in the wells.
6. It eliminated the tight time factor associated with WOO operations.

The reentry concept was therefore adopted in an effort to obtain test sites at the earliest possible time. However, the effort to obtain wells of opportunity did not diminish. Legal counsel was employed to investigate the applicable statutes and prepare appropriate instruments, and arrangements were completed for \$25 million loss-of-control insurance.

The following abandoned well sites were chosen and recommended as reentry candidates to the DOE Screening Committees in February and March:

- 1) Falcon Seaboard-No. 3-A Baer Ranch, Matagorda County, Texas
- 2) U.S. Oil of Louisiana-No. 1 Mecom, Cameron Parish, Louisiana
- 3) The Superior Oil Company-No. 1 Watkins Miller, Cameron Parish, Louisiana
- 4) Buttes & Getty-No. 1 Gladys McCall, Cameron Parish, Louisiana

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- 5) Pan American (Amoco)-No. 1 State Lease 4183, Cameron Parish, Louisiana
- 6) Sun Oil Company-No. 1 Sturlese, Cameron Parish, Louisiana
- 7) J.P. Owen-No. 1 Hardee, Vermilion Parish, Louisiana
- 8) Union Oil Company-No. 2 Pan Am Fee, Cameron Parish, Louisiana
- 9) The Superior Oil Company-No. 1 Sawyer, Vermilion Parish, Louisiana
- 10) Sun Oil Company-No. 2 Alice C. Plantation, St. Mary Parish, Louisiana
- 11) Union Oil of California-No. 1 Dr. M. O. Miller, Cameron Parish, Louisiana

The DOE Screening Committee met with Gruy Federal, Inc. staff and tentatively selected the Watkins Miller, Gladys McCall, Dr. M. O. Miller, and Alice C. Plantation test sites as promising candidates for further study. The other wells on the above list were eliminated for various technical reasons.

Second Quarter 1978

Gruy Federal moved closer to actual reentry operations while continuing to monitor all announced new well locations in identified geothermal fairways. Some 122 such new well sites were considered, 36 in Texas and 86 in South Louisiana. Logs of adjacent wells were examined during this screening process. These wells, with the reasons for rejection, are listed in Exhibit 1. (All wells monitored during the life of the Gruy contract are similarly listed.)

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Mr. H. J. Gruy made announcements concerning the program at seven technical or industry meetings which he attended. The general letter to industry was revised slightly and sent to key personnel in 74 additional oil and gas companies.

The study of identified geothermal areas continued. In Louisiana, 7 prospective areas and 123 electrical logs were examined and 5 additional reentry sites were identified. Prospective areas were studied in Galveston, Matagorda, and Brazoria Counties in Texas. Galveston and Matagorda Counties were virtually eliminated, but several promising reentry sites were identified in the Chocolate Bayou field of Brazoria County.

A shortage of drilling equipment was an acute problem during this time. Only one response was received from 26 bid solicitations; this involved a light drilling rig, capable of handling reentry operations in only 2 of the 11 sites that had been studied and recommended.

Because of the limited rig capacity available, the first reentry choice was the Gladys McCall well site, with the Pan Am State Lease 4183 site as a second choice. Subsequently, when a larger rig became available, the Union Oil of California - Dr. M. O. Miller well site became the first choice, but negotiations with the landowners proved completely impossible. The monetary demands of the McCall lessors were also deemed excessive, and permission from the state to enter the Rockefeller Game Refuge, which contains the Pan Am site, was denied. The first choice then shifted to the Watkins Miller site, but the landowner would not deal under any conditions. Finally, the Gladys McCall and Alice C. Plantation well sites were chosen for reentry. The former was a marsh location and required building 2.3 miles of board road and repairing a levee. Accordingly, the Alice C. Plantation, a dry land location, was chosen for the first reentry site. (Subsequently, Mr. Watkins Miller named an acceptable price, but the order of selection had been finalized. In retrospect, this location was preferable to the Gladys McCall well site, since it was a dry land location and the mechanical condition of the hole was well known.)

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Complete updated formal recommendations for reentry operations were prepared and submitted to the DOE for the following test sites:

(Superior Oil)	Watkins Miller No. 1
(Buttes-Getty)	Gladys McCall No. 1
(Pan Am)	State Lease 4183 No. 1
(Union of Calif.)	Dr. M. O. Miller
(Sun Oil)	Alice C. Plantation No. 2

Efforts continued to locate suitable wells of opportunity, but the response to approximately one hundred WOO solicitations was limited. Qualified interest was expressed by:

Michigan Wisconsin Pipe Line Company
Louisiana Land & Exploration Company
Shell Oil Company
Dow Chemical Company
I.M.C. Exploration Company
Houston Oil & Minerals
Getty Oil Company
Petro-Lewis Corporation
Goldrus Drilling Company

The Michigan Wisconsin, Dow Chemical, Houston Oil & Minerals, and Petro-Lewis responses involved wells which for various technical reasons did not qualify. The tentatively offered Getty Oil et al - M. O. Miller No. 1 was a highly desirable candidate, but unfortunately the deeper portion of the hole was later lost because of mechanical difficulty.

The general lack of positive and specific response to the many written and personal WOO solicitations appeared to justify proceeding with four of the reentry test sites.*

*Exhibit 3 contains paraphrases of the responses from industry and operators. They represent current thinking. Many operators who now appear willing to cooperate did not bother to reply to earlier solicitations.

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Accordingly, as mid-1978 approached, priority was given to preparations for reentry in the two approved test sites, Alice C. Plantation in St. Mary Parish, Louisiana, and Gladys McCall in Cameron Parish, Louisiana. All necessary state permits were obtained for these sites. The third choice, State Lease No. 4183, located in the Rockefeller Game Refuge, was dropped when the Louisiana Wildlife and Fisheries Commission informed Gruy Federal that the terms of the Rockefeller grant did not allow geothermal testing.

Contracts for equipment, construction, drilling operations, and ancillary operations were executed and designs of equipment and procedures were refined and completed.

Third Quarter 1978

Operational activity centered on the two approved reentry candidates. The Alice C. Plantation test site was reentered and the previously salvaged 9-5/8" casing was successfully replaced and tied back. The well was cleaned out to 18,100 feet. Before a full string of 7" casing could be installed, however, a saltwater flow was encountered from the geopressured-geothermal zones of interest. This uncontrolled flow of saltwater was followed by hole bridging and collapse of the casing. The reentry attempt was subsequently abandoned, and no geothermal data were obtained.

The location for the second reentry attempt, Gladys McCall, was then prepared. The access road had to be rebuilt after damage by heavy rains associated with a tropical storm.

Screening of potential WOO candidates continued on a more selective basis. The Gruy staff considered 30 potential WOO candidates, of which 18 were in South Louisiana and the remainder on the Frio and Wilcox trends in Texas (see Exhibit 1).

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A heartening trend appeared to be shaping up with respect to the WOO program as originally conceived, that is, the takeover of a well while the original rig was on location, as contrasted to the reentry concept. This growing response to the letters of solicitation and personal contacts (see Exhibits 4 and 5) fortuitously coincided with instructions from DOE (at a midsummer program review at the Nevada Operations Office) to renew efforts to obtain WOO candidates. The following progress is noted.

1. Petro-Lewis furnished a list of six or seven 1978-79 wells which, if dry, will be offered.
2. Alcorn Production Company offered a well in St. Mary Parish, No. 1 Fairfax Foster Sutter, which penetrated the same deep geothermal aquifers as the Alice C. Plantation test site. Takeover arrangements were negotiated with the operator, the drilling contractor, and the landowners.
3. Getty Oil reaffirmed their offer to make their No. 1 M. O. Miller available. The Millers also agreed to negotiate terms.
4. Sun Gas Company proposed two WOO candidates, but they were rejected because of low temperatures and poor sand conditions.
5. I.M.C. Exploration proposed a fully cased well, contingent on the success of a replacement. It was rejected because of probable pressure depletion.
6. Forest Oil Corporation responded with an offer of a deep Wilcox wildcat well in DeWitt County, Texas. This was the first Wilcox well to be considered.
7. Sabine Corporation indicated a willingness to make a Lower Tuscaloosa well available if it proved to be nonproductive.

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8. Solatex Petroleum offered a Cameron Parish well, but it was rejected because of the excessive deepening required to reach geopressed aquifers.
9. Diamond M Drilling Company indicated a willingness to make available one or more of its inland drilling barges under certain conditions of notice. As a result, Gruy began to monitor WOO locations accessible only by canals or waterways.
10. Goldrus Drilling Company and Enterprise Oil Company offered the No. 1 Lucien J. Richard in Lafourche Parish, Louisiana. The final log was examined by Gruy staff and proved acceptable, and a detailed proposal was prepared and submitted to DOE. Standby rig time was arranged for pending formal DOE approval of the takeover operation. At this point the Pend Oreille Oil & Gas Company, which held the original leasehold rights, refused to join in the agreement with Gruy and the other operators and the entire operation had to be aborted.

Despite the high mortality rate among the WOO candidates actually offered, the increased interest in the program was a cause for renewed optimism. This increase undoubtedly represented the cumulative results of the continuous effort, by both Gruy Federal and DOE program officials, to convince industry of the merits of the well-of-opportunity concept. Like many new and unusual ideas, this concept simply required time to be fully accepted.

Fourth Quarter 1978

Operations continued in the eventually unsuccessful attempt to engage and replace the 7" casing in our second reentry operation, the Gladys McCall. It was found that this casing had been shot off with explosives rather than cut. Therefore the casing patch that was accomplished so readily in the Alice C. Plantation could not be achieved.

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The Gladys McCall site continues to be a most attractive target because of a very thick development of hot geopressed reservoirs. A recommendation to drill a twin well at the site on a turnkey contract is being prepared.

During this quarter several wells of opportunity which had already been offered became unavailable for a variety of reasons.

1. The Alcorn Production-No. 1 Fairfax Foster Sutter well in St. Mary Parish, Louisiana, encountered substantial conventional gas accumulations in the objective Geo² reservoirs. Arrangements had been completed to engage the drilling contractor on a standby basis while Gruy prepared a request for DOE authority to take over and test the same aquifers that were the targets at the Alice C. Plantation site.
2. The TOTAL Petroleum-No. 1 Means well in Wharton County, Texas, a Wilcox formation test at 16,800 feet, proved to be a dry hole and was offered as a WOO candidate. Wilcox sands at 15,170 to 15,390 feet appeared to be of minimal but acceptable quality. Negotiations with the operators, landowners, and drilling contractors were commenced, and a formal recommendation was submitted to DOE. However, logging tools were lost in the hole during the final run. Attempts to recover the tools failed and the operator abandoned the hole before it could be made available for Geo² testing.
3. The South Louisiana Producing Company (Slapco) No. 1 Joyce Foundation was drilled as a 22,000-foot Lower Tuscaloosa test in Tangipahoa Parish, Louisiana. The well was cased to 19,144 feet. The final log run showed extreme temperature (390°F) but poor sand development. The well was attempting to "kick" 18.5 lb/gal mud from the hole when it was offered as a WOO prospect on short notice. It was rejected because of high cost, poor sand development, and extreme hazard.

4. The Forest Oil Company et al - J. Carter Thomas well in DeWitt County, Texas, was drilled to 14,500 feet. Arrangements had been made to recommend the well for Geo² testing if adequate sand development was encountered. This did not prove to be the case. The well was rejected because of poor sand development and limited flow capacity.
5. The Great Basin Petroleum Corporation No. 1 Gutierrez, a downdip Wilcox dry hole in Jim Hogg County, Texas, drilled to 15,280 feet, showed a temperature of 350° F. There was some sand development in the 12,000- to 12,800-foot interval, but the well was rejected because of apparent low flow capacity. It was estimated that the flow would approach only a small fraction of the target, 10,000 barrels per day.
6. Sabine Production Company et al No. 1 M. Gaudeau was targeted as an 18,000-foot Lower Tuscaloosa test. Over the course of many meetings with Sabine representatives, an arrangement was worked out to make the well and all the required special tubular goods available for Geo² testing in the event of a dry hole.

Sabine experienced lost circulation difficulties after cementing a 7" liner at 16,981 feet. Hole conditions deteriorated and the bottomhole pressure appeared to have entered a regressive phase. When the hole could no longer support 13 lb/gal mud, Sabine et al were notified that the well would no longer qualify for a Geo² test operation. This was regrettable since it represented the only Tuscaloosa operation in which the special tubular strings were offered along with the well. Subsequently, the well experienced even greater difficulty and at last report had drill pipe cemented inside the 7" liner. This well probably would have been lost to the program even if it had qualified.

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7. Texaco No. 1 Fee (A. R. Rucks) is a deep test on the southwest flank of the Danbury Dome in Brazoria County, Texas. Its qualifications would have depended on the character of the deep Frio sands expected at 15,000 feet. Texaco agreed to make the well available and even rewrote the contract which Gruy Federal, Inc. provided. It appeared that the well would be available for consideration early in 1979, but Texaco's legal department aborted the deal because they refused to accept liability above any insurance limits which Gruy Federal would provide.
8. ARCO (Atlantic Richfield Corporation) No. 1 Crews is an extreme downdip Wilcox test projected to reach 22,000 feet in April or May 1979. ARCO has indicated interest in making the well available to the program if dry. We are monitoring the operation, but chances are that the Wilcox will not be sufficiently developed this far downdip.
9. Tenneco Oil Company No. 1 Fee "N" is one of the best WOO prospects Gruy Federal has considered. Many well developed geopressed aquifers were encountered from 13,765 feet to total depth (17,276 feet). Originally Tenneco responded to Gruy Federal's offer to pay for standby rig time and install a liner in the open hole while awaiting formal DOE approval to conduct Geo² tests under the WOO program. Tenneco then expressed the desire to remain the operator; this arrangement was acceptable to Gruy. Subsequently, Tenneco withdrew the offer of the well, at least temporarily. They state that within 60 days from year's end they will decide whether to conduct the tests using only private funding or to cooperate in the DOE program. If the latter course is chosen, they may either deal directly with

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DOE or use Gruy Federal's intermediary services. We are still hopeful that this well will provide good test data for the program under whatever arrangements the tests are conducted.

January 1 to February 10, 1979

Gruy Federal's staff continued to consider the Tenneco No. 1 Fee "N" WOO prospect. In anticipation of Tenneco's ultimate concurrence in contributing this well to the program, a formal recommendation for completing and testing the well was forwarded to Nevada Operation Office of DOE. Several meetings were held to provide information to Tenneco personnel, and the company is now considering whether this prime Geo² well will be made a part of the DOE program or tested for the sole benefit of Tenneco.

Exhibit 6 lists 16 operations in areas of geothermal interest that are currently being monitored. Several of these are prime WOO candidates. All of the operators have been contacted, either in our general solicitation or specifically in regard to the particular well listed on the Exhibit.

Of particular interest is the Superior Oil Company-No. 1 Willis Hulin well in Vermilion Parish, which has reached 21,000 feet and is cased to 19,293 feet. The well is located in an area of known geothermal aquifers, and although the log has not been released, we believe that some acceptable aquifers have been penetrated. This would make an ideal well of opportunity since it will be necessary only to tie back the 7" liner to the surface. This assumes substantial aquifers are cased off and the well is not a producer. Superior may elect to deepen if a difficult fishing job can be completed. Otherwise they have indicated that the well can be made available to the program.

The drilling rig situation is now better than it has been since the beginning of the program. In late 1978 rig scarcity was an impediment to the program, but virtually new deep-drilling equipment is now available on short notice. This will be a positive factor in the takeover of a WOO prospect.

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Summary of Project Activities

Since the beginning of the project, Gruy has monitored and screened all wells which might qualify as potential wells of opportunity. Figure 5 shows the number of wells screened each month since the start of the contract. It should be noted that the decline in prospective wells in the second half of 1978 was caused by a lessening of drilling activity and a decision to ignore wells that required deepening, not by a reduction in Gruy's efforts. Figure 6 shows the cumulative total to the end of January 1979.

The major activities and important milestones accomplished to date are shown in Figure 7. The increase in the number of wells made available to Gruy in the latter part of 1978 is an encouraging indicator of industry awareness. Figure 8 shows both the monthly manpower and the cumulative manpower expended throughout the contract. Except for the months of November and December 1978, in which a large amount of field supervision was required on the Gladys McCall, the level of technical effort has been relatively stable.

Approximately 150 major or independent operators have been contacted. The following tabulation reflects the responses that were forthcoming from these 150 contacts:

Summary of Industry Responses

	<u>Number</u>	<u>Percent</u>
No reply	69	46
Limited activity in area	17	11
Limited or no interest in program	13	9
Expressed interest in cooperating	32	21
Submitted candidates which were rejected	15	10
Qualified wells which became unavailable	<u>4</u>	<u>3</u>
	150	100

FIGURE 1
LOUISIANA

- No sand development at geo-temperature depths in Miocene.
- Region of good Miocene and Frio prospects requiring inland water operations to be reviewed, if necessary.
- Regions of good Miocene and Frio accessible by land that have been reviewed.
- Area where Miocene Geo² formations not penetrated by existing wells.
- Region of Geo² Tuscaloosa prospects under active development.

FIGURE 2

TEXAS

PRIMARY PARAMETERS FOR
GEO² WELL SELECTION PROPOSALS

THE CANDIDATE WELLS WHICH HAVE BEEN PROPOSED TO DOE/NEVADA OPERATIONS OFFICE THUS FAR HAVE BEEN SELECTED ON THE FOLLOWING MINIMUM PARAMETERS:

1. AT LEAST 275°F TEMP. AT DATUM DERIVED FROM MAX. MUD TEMP. +30°F.
2. AT LEAST 4500 PSI GREATER THAN NORMAL PRESSURE GRADIENT OF 0.465 PSI PER FOOT AS DERIVED FROM REPORTED MUD WEIGHT AT DATUM LESS 1000 PSI SAFETY DIFFERENTIAL ALLOWANCE.
3. MINIMUM OF 100' OF NET POROUS SAND WHICH EXHIBITS GOOD QUALITY S.P. WITH APPARENT 100% WATER SATURATION.
4. PRIMARILY WELLSITE LOCATIONS READILY ACCESSIBLE BY LAND.
5. WELLS WHICH APPEAR TO HAVE PENETRATED QUALIFIED SAND AQUIFERS UNDERLYING AT LEAST 1,280 ACRES WITH NO TENDENCY FOR POROSITY PINCHOUT LIMITS SO FAR AS CAN BE DETERMINED FROM THE LIMITED AVAILABLE GEOLOGICAL DATA.
6. WELLS THAT ARE CURRENTLY OFF PRODUCTION OR ABANDONED AS WELL AS THOSE WELLS OF OPPORTUNITY THAT MAY BE DRILLING IN KNOWN GEO² AREAS THAT WILL LIKELY CONTAIN WATER.
7. WELLS THAT ARE EQUIPPED WITH CASING AT OPTIMUM DESIGN TO MECHANICALLY PERMIT THE ACHIEVEMENT OF THE DESIRED TEST.
8. WELLS THAT WERE REPORTEDLY ABANDONED OR THOSE NOT ABANDONED THAT OFFER MECHANICAL CONDITIONS THAT MAKE IT REASONABLE TO EXPECT SUCCESSFUL ENTRY OR REENTRY AND REPAIR AT MODERATE COSTS.

FIGURE 4

FIGURE 5

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FIGURE 6

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FIGURE 8
MANPOWER UTILIZATION
ON
WELLS - OF - OPPORTUNITY CONTRACT

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EXHIBITS

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Exhibit 1

WELLS SCREENED FOR WOO CANDIDATES OCTOBER, 1977

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
8/22	Amoco Production Company #152 Crowley Oil & Mineral Co.	Acadia	Jennings	7,000 (Cam.-A)	*
9/1	Golden Trend Oil & Gas Corp. #5 Sparks-Haisley Unit 1	San Patricio	White Point,E	4,500	*
9/7	Strata Energy, Inc. #1 Dycus-McCampbell Gas Unit	San Patricio	Aransas Pass	14,500	*
9/7	Maynard Oil Company #1 Milton Gabriel, et al	Nueces	Wildcat	12,000	*
9/8	Goodrich Oil Company #1 Evangeline Operating Co.	Acadia	Wildcat	10,875	*
9/8	Marion Corporation #1 C.F. Clement	Acadia	Egan	12,000	*
9/12	Gulf Oil Corporation #3 J. W. Gardner Fee	Calcasieu	Vinton	4,100 (Cam 1)	*
9/12	McRae Exploration, Inc. #1 David Garrison et al	Cameron	Wildcat	13,500	*
9/12	Tribal Oil Company #J-28 Matilda Gray Stream	Calcasieu	Vinton	3,300	*
9/15	The Stone Oil Corporation #1 Cutler Oil & Gas	Cameron	Pecan Lake	12,000	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

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Exhibit 1
Wells Screened For W00 Candidates October, 1977
Page 2

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
9/15	P.J. Klentos #1 Drew Manual Training School	Calcasieu	Choupque, N.	8,700 (1wr Frio)	*
9/23	Marathon Oil Company #2 Kellogg Unit	San Patricio	White Point, E.	12,500	*
9/23	Edwin L. Cox #1 St. Tr. 753	San Patricio	Wildcat	12,700	*
9/23	Peterman-Sturlese et al #1-A American Oil & Sulphur Co.	Calcasieu	Wildcat	9,200	*
9/23	Peterman-Sturlese et al #1 American Oil & Sulphur Co.	Calcasieu	Wildcat	8,800	*
9/26	Watson Oil Corporation #4 Dr. M.O. Miller	Cameron	Crab Lake	13,500	*
9/28	McMoran-Transco Exploration Company #1 McCampbell	San Patricio	Wildcat	12,000 (Frio)	*
9/28	Maynard Oil Company #1 Dorothy L. Valka	Nueces	Nor-Am	10,800	*
9/29	Exxon #3 Dickinson Oil Unit No. 1	Galveston	Dickinson Deep	10,150	*
9/30	J.S. Michael Company #16 Hamill & Hamill	Matagorda	Sargent, S.	6,500	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

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Exhibit 1
Wells Screened For WOO Candidates October, 1977
Page 3

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
10/3	Daniel Oil Company #1 S/L 6938	Cameron	Grand Lake	11,000	*
10/5	Royal Oil & Gas Production #1 W.F. Mauch	San Patricio	Geronimo	11,500 (Frio)	*
10/6	Exxon #45 Charles M. Armstrong	Kenedy	Don Tomas	10,500	*
10/10	Robert Masbacher-Transco Exploration #1 E.M. Ransom, et al	Matagorda	Wildcat	6,500	*
10/10	Energy Reserves Group, Inc. #1 Calvin Sensat	Acadia	Wildcat	12,000	*
10/11	Reb Petroleum Company #1 K.R. Beaver, et al	Galveston	Wildcat	13,000	*
10/14	Integral Energy Corporation #1 Redfish Bay Properties, Ltd.	Nueces	Stedman Island	10,600 (Frio)	*
10/14	Davis Oil Company #1 E.P. Womack et al	Brazoria	Wildcat	12,000	*
10/14	Damson #1 Gordon Latimer, et al	Galveston	Alta Loma	16,000	*
10/14	Exxon #46 Charles M. Armstrong	Kenedy	Candelaria	16,500	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
10/14	Texas City Refining, Inc. #1 Stella Russell Estate	Brazoria	Wildcat	10,000	*
10/19	Delta Drilling Company #1 Hart	San Patricio	Wildcat	8,000	*
10/19	Ged Oil Corporation #2 M.G. Stream	Calcasieu	Vinton	7,000 (Frio)	*
10/20	Texas Crude, Inc. #1 J. M. Faulk	Acadia	S. Crowley	15,500	*
10/20	Exxon #9 H.J. Habetz	Acadia	N. Crowley	9,150	*
10/24	Tribal Oil Corporation #2 Jules Jardell Estate	Calcasieu	Vinton	6,800	*
10/26	Cayman Exploration Corp. #1 Baer Ranch	Matagorda	Baer Ranch	7,000	*
10/31	Cockburn Oil Corporation #1 Dobes et al	Galveston	Hitchcock	5,500	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

WELLS SCREENED FOR WOO CANDIDATES NOVEMBER, 1977

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
11/1	Wainoco Oil & Gas Company #1 Shirley Taylor	San Patricio	Midway, E.	10,300	*
11/1	Wainoco Oil & Gas Company #1 J.R.C. Brannon	San Patricio	Wildcat	10,300	*
11/2	The Dow Company #1 Clara M. Aldred, et al	Brazoria	Clemens Dome	6,000	*
11/4	Gulf Oil Corporation #73 Lutcher-Moore Lbr. Co.	Calcasieu	Starks	4,300	*
11/7	The Dow Chemical Company #3 Texas Gulf, Inc., et al	Brazoria	Clemens Dome	7,000	*
11/7	James M. Cunningham, Inc. #A-1 Michel Leger	Acadia	Crowley	5,750	*
11/7	Petroleum Management, Inc. #1 Ich.	Aransas	Aransas Pass, E.	9,100	*
11/8	Delta American Oil Company #1 B.J. Gallagher	Nueces	Cody	8,500	*
11/8	The Superior Oil Company #16 The Superior Oil Company Fee Leases	Galveston	Gillock	9,400	*
11/8	Amoco Production Company #1 William Plumb Unit	Brazoria	Old Ocean, E.	11,700	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For W00 Candidates November, 1977
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
11/9	Geromino Oil Company #3 C.V. Jones	San Patricio	Midway	6,800	*
11/10	Hassie Hunt Exploration Company #1 Margaret Rogers et al	Galveston	Alta Loma	9,500	*
11/10	General Crude Oil Company #1 General Crude Persimmon Bayou	Brazoria	Martian Ranch	7,800	*
11/10	Exxon #17 King Ranch San Jose de la Parra	Kenedy	Calandria	5,600	*
11/11	General Crude Oil Company #4 E.A. Sweet	Brazoria	Rattlesnake Mound	7,500	*
11/15	General Crude Oil Company #3 E.A. Sweet "A"	Brazoria	Rattlesnake Mound	7,500	*
11/22	Clico Oil & Gas Company #1 Fletcher Trust Unit	Brazoria	Stratton Ridge, SE	7,200	*
11/23	P.C.S.I. #1 Bertrand Sweeney Est. et al	Acadia	Egan	11,000	*
11/23	Canus Petroleum, Inc. #1 P.W. Kelly	Nueces	Wildcat	14,700	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

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Wells Screened For WOO Candidates November, 1977
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
11/28	Scurlock Oil Company #1 Haber-Stagg G.U.	Acadia	Jennings	7,900	*
11/28	Williams Exploration Co. #1 Miami Corporation "C"	Cameron	Wildcat	15,500	*
11/28	Davis Oil Company #1 Harry G. Burkhart et al	Matagorda	Maconda	10,250	*
11/29	Texas Eastern Transmission Corp. #2 Max M. Floerke, Jr.	San Patricio	Midway	11,585	*
11/29	Julian Evans #1 Steven Swetlick	Nueces	Violet	8,000	*
11/30	Dixie Petroleum of Louisiana, Inc. - J.W.F. #1 Houssiere et al Nod 1 RH SU B	Acadia	N. Crowley	13,500	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

WELLS SCREENED FOR WOO CANDIDATES DECEMBER, 1977

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/1	Houston Oil & Minerals Corp. #2 Miami Corporation	Cameron	Wildcat	11,500	*
12/1	Houston Oil & Minerals Corp. #1 Miami Corporation	Cameron	Wildcat	11,000	*
12/1	Watson Oil Corporation #1 A. Nunez	Cameron	Little Cheniere	9,800	*
12/2	McMoran Exploration #1 C. Hamic	Acadia	Wildcat	14,000	*
12/2	Phillips Petroleum Company #1 Houston "00"	Brazoria	Chocolate Bayou	10,830	*
12/5	Diamond Shamrock Corporation #1 B. Duhon	Vermilion	West Parcperdue	16,000	*
12/5	Hanover Petroleum Corporation #1 A.B.M. Head	Nueces	Wildcat	7,500	*
12/7	Pennzoil Producing Company #18 S/L 2340 Rockefeller	Cameron	Deep Lake	16,400	*
12/7	Jake L. Hamon #1 L.L. Phillips	San Patricio	Wildcat	13,000	*
12/8	Mullins & Prichard #2 The Citrus Land Co., Inc.	St. Mary	Shell Island	14,500 (2nd Planulina)	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates December, 1977
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/9	Integral Energy Corporation #1 Paul L. Barr, et al	San Patricio	Wildcat	9,000	*
12/9	Mellon Energy Company #1 Weems & Kelsey Mgmt. Co. No. 2 Ltd.	Galveston	Wildcat	10,700	*
12/12	Inexco Oil Company #1 C.B. Hamill	Matagorda	Wildcat	16,200	*
12/13	Crystal Exploration & Prod. Co. #1 Grace McIlvaine	Galveston	Alta Loma, S.	9,400	*
12/14	American Natural Gas Prod. Co. #1 E.B. Lawton	Calcasieu	Wildcat	9,200	*
12/16	Newhall Land & Farming Co. #1 Vermilion Parish School Board	Vermilion	Baton Rouge	14,500	*
12/16	Mobil Oil Corporation #3 Fred B. Jones	San Patricio	White Point, E.	15,000	*
12/16	Shell Oil Company #4 J.L. & S; VD VUG	St. Martin	West Lake Verret	11,700	*
12/16	Galaxy Oil Company #1 Floerke	San Patricio	Midway	7,000	*
12/16	Hunt Oil Company #1 W.T. Buchholz	Aransas	Wildcat	9,400	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/19	Mar-Low Corporation #1 Garland Stutes et al	Acadia	Crowley	7,000	*
12/20	Milton M. Cooke, Jr. #1-A Louis G. Lobit et al	Galveston	Wildcat	14,500	*
12/21	McMoran Exploration Co. #1 Lafourche Realty Company	Lafourche	Lake Rambo	19,500	*
12/21	Dynamic Exploration, Inc. #1 Sabine Corp. Fee	Assumption	Wildcat	12,400	*
12/21	Venus Oil Company #1 W.W. Walton	Nueces	W.W.W.	7,300	*
12/22	Edwin L. Cox #1 Riverside Irrigation Co.	Acadia	Wildcat	10,800	*
12/22	Davis Oil Company #1 John Clutter Est. et al	Brazoria	Wildcat	9,500	*
12/22	H.L. Hawkins, Jr. #1 Leland B. Kee	Matagorda	Hawkinsville,N	15,000	*
12/23	The Newhall Land & Farming Company #1 F.M. & I.S. Delahoussaye	Vermilion	E. Gueydan	11,400	*
12/23	P.B. Operating Company #2 J.B. Schuling	Iberia	Iberia	9,000 (Lwr.Miocene)	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

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Wells Screened For WOO Candidates December, 1977
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<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
12/27	Great Southern Oil & Gas Inc. #1 Krause & Managan Lbr. Co.	Calcasieu	Edgerly	7,100	*
12/28	Marathon Oil Company #1 Brooks Unit	San Patricio	White Point,E.	14,500	*
12/28	Prairie Producing Company #1 E.W. Brown Jr. et al Unit	Brazoria	Unnamed	9,000	*
12/30	Exxon #2 W.L. Albritton "C"	Vermilion	Pecan Island	14,800	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

WELLS SCREENED FOR WOO CANDIDATES JANUARY, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
1/3	F.B. Lacy, Inc. #1 Bright Gas Unit	Brazoria	Chocolate Bayou	10,995	*
1/3	Integral Energy Corporation #1 Dickinson Gas Unit	Galveston	Dickinson	13,200	*
1/4	Prairie Producing Company #1 Josephine Masterson et al Unit	Brazoria	Wildcat	14,500	*
1/4	Texaco Inc. #1 Stewart Savage	Matagorda	Wildcat	9,100	*
1/4	Crystal Oil & Land Co. #12 Vira Harrell	Nueces	Saxet	9,000	*
1/4	Orleans Expl. Co. - Tideway, et al #1 L. Lapleau Estate	Acadia	Wildcat	11,100	*
1/5	Great Southern Oil & Gas Co., Inc. #1 The Sweet Lake Ld & Oil Co., Inc.	Cameron	Lake Misere	15,000 (Planuline)	*
1/5	Intercoastal Operating Co. #A-1 Miami Corporation	Cameron	Wildcat	10,750	*
1/5	P.B. Operating Company-Dyco #1 Iris Magee	Cameron	Big Lake	9,500	*
1/6	Crystal Oil & Land Company #12 T.H. Isensee	Nueces	Saxet	5,500	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates January, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
1/6	Inexco Oil Company #2 Broussard	Vermilion	Wildcat	13,150	*
1/9	Petro-Lewis Corporation #6 Kerr	Acadia	Ellis	12,000	*
1/10	Brock Exploration Corporation #1 Ducos et al	Lafourche	Bully Camp	15,000	*
1/10	Southport Exploration, Inc. #1 F.F. Sutter et al	St. Mary	Garden City	16,200	*
1/10	Dow Chemical-U.S.A. #3 Brownell - Kidd	Assumption	Wildcat	17,500	*
1/12	The Dow Chemical Company #1-A Clara M. Aldred, et al	Brazoria	Clemens Dome	6,000	*
1/12	Kilroy Company of Texas, Inc. #6 Miami Corporation "B"	Cameron	N. Deep Lake	13,000 (Miocene)	*
1/13	Louisiana Land & Exploration Co. #1 Miami Corp.	Cameron	Twin Island	12,000	*
1/13	Goldking Production Co. #1 Miami Corp. "K"	Cameron	Wildcat	11,050	*
1/13	Goldking Production Co. #1 Miami Corp. "L"	Cameron	Wildcat	10,800	*
1/18	The Superior Oil Company #5 Southdown Inc. "A"	Terrebonne	Sunrise	16,000	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

Exhibit I
Wells Screened For W00 Candidates January, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
1/18	Dynamic Exploration, Inc. #1 Edmund Dugas	Vermilion	Erath	12,400	*
1/20	Goldking Production Co. #5 Miami Corp. "A"	Cameron	Little Chenier	9,200	*
1/20	Pennzoil Producing Co.. #1 Harry Bourg Corp "A"	Terrebonne	Grand Caillou	13,000	*
1/20	Exxon #91 Mrs. S.K. East	Kenedy	Rita, NE	11,700	*
1/23	Galaxy Oil Company #1 Hunt-Lackey GU	San Patricio	Midway, S.	14,500	*
1/23	Southport Exploration #2 Continental Ld & Fur Co., Inc.	Terrebonne	Wildcat	12,050	*
1/25	Mobil Oil Corporation #1 C.E. French Estate Unit	San Patricio	White Point, E.	15,000	*
1/26	TexasGulf Inc. #226 Fee Ownership	Lafourche	Bully Camp	2,500	*
1/27	General Crude Oil Co. #1 New Bayou Point	Brazoria	Alligator Point, W.	7,600	*
1/30	Davis Oil Company #1 Elvin M. Landrum et al	Matagorda	Wildcat	7,000	*
1/30	Davis Oil Company #1 Harold H. Miller	Brazoria	Chocolate Bayou, N.	11,300	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
1/30	Davis Oil Company #1 Herbert Hinkle, et al	Brazoria	Clemens, N.	13,300	*
1/	Adobe Oil & Gas Corporation #1 Stubbs GU	Galveston	Hitchcock	9,700	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

Exhibit 1

WELLS SCREENED FOR WOO CANDIDATES FEBRUARY, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/1	Tiger Oil Co. #1 United Life & Accident Ins. Co.	Jefferson Davis	Hayes	12,500	*
2/2	Amoco Production Co. #1 Reynolds Gas Unit "A"	Brazoria	Sweeny (OWWO)	11,881	*
2/2	Edwin L. Cox #2 Marriott Gas Unit	San Patricio	Stark, N	11,000	*
2/6	LGS Exploration, Inc. #1 Ernest Rodrique et al	Lafourche	Wildcat	12,000	*
2/8	Tiger Oil Co. #1 United Life & Acc. Ins. Co.	Jefferson Davis	Hayes	12,500	*
2/8	Amoco Production Co. #5 MGP RD SUA; LRM Co.	Jefferson Davis	S. Thornwell	13,000	*
2/8	Shell Oil Co. #89 JL&S Co.	St. Martin	W. Lake Verret	7,000	*
2/8	Lynal, Inc.-McRae Expl. Inc. #1 VUA; David Garrison, Sr. et al	Cameron	Wildcat	13,600	*
2/8	Cotton Petroleum Corp. #1 M. Leger	Acadia	Crowley	Unknown	*
2/8	Crystal Expl. & Prod. Co. #1 Grace McIlvaine	Galveston	Alta Loma South	9,400	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

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Wells Screened For WOO Candidates February, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
2/10	Martin Exploration Co. #1 LL&E Co.	Terrebonne	Rice Bayou	18,000	*
2/10	Patrick Petroleum Corp. #1 AYO et al	Lafourche	Wildcat	15,000	*
2/10	Ranger Oil Co. #3 Brownwell - Kidd	Assumption	Bayou Grosbec	16,000	*
2/13	Sun Oil Co. #5-5 BI N VA A	St. Mary	Belle Isle	20,200	*
2/13	Delta Energy Resources Inc. #1 JL&S Co. Plan 3 RA Sud.	Iberia	N. Loisel	12,550	*
2/13	Canus Petroleum Inc. #1 Flato Unit	Nueces	Corpus Christi West	14,700	*
2/14	Texaco, Inc. #2 VU A; SL 1812 Comegys U 3	Cameron	Grand Lake	10,500	*
2/14	Sotrana - Texas Corporation #8 Fred Thomas et al	Galveston	Hitchcock	7,000	*
2/14	Pel-Tex Oil Co., Inc. #1 Lafourche Realty Co., Inc.	Lafourche	Wildcat	16,800	*
2/14	Patrick Petroleum Corp. #2 Miami Corporation.	Cameron	Wildcat	11,000	*
2/14	Houston Oil & Minerals Corp. #1 N. American Land Co.	Cameron	Wildcat	11,000	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

GRUY FEDERAL, INC.

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Wells Screened For WOO Candidates February, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
2/15	Texaco Inc. #1 Victor Matherne et ux	St. Charles	Paradise	11,200	*
2/15	Shell Oil Co. #34 St. Martin Parish School Board	St. Martin	W. Lake Verret	10,100	*
2/15	Cotton Petroleum Corp. #1 Pomeroy Trust	Calcasieu	Gillis-English Bayou	10,500	*
2/20	Chevron USA, Inc. #1 Williams Inc. "H"	St. Martin	Wildcat	14,500	*
2/20	McAlester Fuel Co. #1 Jimmy F. David	Lafourche	Cut Off	14,500	*
2/21	REB Petroleum Co. #1 M H Gunderson	Galveston	Wildcat	13,000	*
2/22	Inexco Oil Co. #1 J. Eschete	Terrebonne	Wildcat	14,750	*
2/22	Entex, Inc. #1 Sidney C. Leger et al	Calcasieu	Iowa	10,300	*
2/24	Inexco Oil Co. #1 Olga Ledet et al	Vermilion	Wildcat	12,200	*
2/27	Davis Oil Co. - Cox #1 J.R. Perez, Jr. et al	Plaquemines	Pointe-A-La-Hache	10,950	*
2/27	Amerada - Hess Corporation #1 Ethlyn M. Cessac	Vermilion	N. Live Oak	14,000	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
2/28	Davis Oil Co. #3 Sidney Lounsberry et al	Jefferson Davis	Lake Arthur	10,300	*
2/28	Goldking Production Co. #1 Gayle	Cameron	Chalkley	10,100	*

* Wells considered and rejected during early stages of program. Reasons for rejection not a matter of record.

WELLS SCREENED FOR WOO CANDIDATES MARCH, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
3/2/78	Davis Oil Co. #1 Mabel R. Glasscock	Brazoria	Collins Lake	10,450	No sand development at this depth.
3/2/78	Amoco Production Co. #1 L.L. & E. "M"	Jefferson	Wildcat	12,800	Insufficient sand development and temperature in area.
3/2/78	Great Southern O & G., Inc. #1 Karl S. Weill.	Vermillion	Bancker	10,900	Field well near production.
3/3/78	Cities Service Co. #1 Moore "E"	San Patricio	Midway, S.	14,500	Poor sand development area.
3/3/78	Diamond Shamrock O & G Co. #1 Maude L. Broussard	Vermillion	W.Parcperoue	17,000	Key off wells indicated poor sand development.
3/6/78	Austral Oil Co., Inc. #1 St. Mary Parish Land Co.	St. Mary	Wildcat	15,500	Location dropped with sale of company.
3/8/78	Texas Pacific Oil Co., Inc. #1 Allied Chemical	Calcasieu	Beckwith Creek	9,000	No Geo ² section at this depth.
3/8/78	C & K Petroleum, Inc. #1 Dixie Rice Agri. Corp., Inc.	Cameron	North Mallard Bay Prospect	11,440	Too shallow to penetrate Geo ² zones.
3/8/78	Union Oil of California #5 J. E. Foolkes	Terrebonne	Houma	16,500	Development well.
3/10/78	Houston Oil & Minerals Corp. #1 Cade Estate	Galveston	Wildcat	10,500	Too shallow in objective for Geo ² zone.
3/13/78	Mobil Oil Corporation #1 Charles B. Weill, et al	Nueces	Wildcat	13,750	Poor sand development area for Geo ² sands.
3/13/78	Mitchell Energy Corp. #2 Gonsoulin	Iberia	Iberia	10,300	Too shallow for Geo ² zone.

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
3/13/78	Texaco, Inc. #3 Miami Corp-Starks Canal	Cameron	Wildcat	13,500	No Geo ² sands at this depth.
3/13/78	Goldking Production Co. #1 Miami Corp.	Cameron	Little Cheniere	10,000	No Geo ² sands at this depth.
3/13/78	Mitchell Energy Corp. #1 Louis Melancon	St. Martin	Section 28	15,100	No known Geo ² zones in area.
3/13/78	Exxon #1 S/L 5854	Vermilion	Pecan Island	14,500	Field development well.
3/14/78	Amoco Production Co. #89 South Gillock Unit	Galveston	Gillock, S.	9,000	Unitized development well.
3/15/78	LGS Exploration-Patrick Petr. #1 Mary O. Long et al	Cameron	Mallard Bay	11,500	No Geo ² zones at this depth.
3/15/78	Petro Lewis Corp. #2 F.L. Daigle	Assumption	Napoleonville	11,100	No Geo ² zones at this depth.
3/16/78	Texaco, Inc. #261 La Terre Co., Inc.	Lafourche	Golden Meadow	12,600	Field development well. No Geo ² zone.
3/16/78	Marion Corp. #1 L.L. & E.	Terrebonne	Wildcat	14,500	Offered by operator. Followed through final log and casing setting. No Geo ² sands developed.
3/16/78	Murphy H. Baxter #2 Donnelly	Brazoria	Wildcat	10,100	Development well.
3/17/78	R. E. Haas #4 W.A. Ball	Kenedy	Wildcat	10,000	Insufficient sand development for Geo ² test. Offsets production.
3/17/78	Southwest Petrochem, Inc. #1 J. P. Sellers	Aransas	Wildcat	9,800	Reentry well with poor sand development.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates March, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
3/20/78	Hilliard O & G, Inc. #1 Continental Ld & Fur	Terrebonne	Wildcat	11,000	Too shallow for Geo ² sands.
3/20/78	Royal Oil & Gas Corp. #1 August E. Guettler	San Patricio	Geronimo	11,800	Normal pressure in adjacent wells.
3/20/78	Florida Gas Exploration Co. #1 General Crude	Galveston	Wildcat	7,350	Not projected to Geo ² depths.
3/20/78	The Superior Oil Co. #2 L.L. & E. U24; VUA	Terrebonne	Four Isle Dome	12,100	Unitized development well.
3/20/78	IMC Exploration Co. #1 S. Broussard SD 3 RC SU A	Vermilion	Theall	13,300	Replacement unit well.
3/20/78	McMoran Exploration Co. #1 Sabine Royalty Corp.	Lafourche	W. Raceland	10,500	Not projected to Geo ² sands.
3/20/78	Pelto Oil Co.-Weaver O&G Corp. #1 Sam W. Bergeron, Sr. et al	Assumption	Wildcat	13,500	Not projected to Geo ² sands.
3/21/78	The Anschutz Corp. #1 James R. Geissen	Brazoria	Danbury, SW	16,000	Offset production.
3/22/78	American Petrofina of Texas #3 Lafourche Realty	Lafourche	E. Golden Meadow	14,000	Water operation. Too shallow for Geo ² .
3/22/78	Davis Oil Co. #1 Valentine Sugars, Inc.	Lafourche	Valentine	12,000	Too shallow for Geo ² zones and offsets production.
3/23/78	Cockrell Corp. #4 A.B. Zenor et al	St. Mary	Patterson	17,590	Field development well.
3/23/78	Mitchell Energy Corp. #2 Lillie M. T. Romero	Iberia	Iberia	13,000	Water operation and too shallow for good Geo ² .

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates March, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
3/23/78	Columbia Gas Dev. Corp. #1 Helena E. Dusenbury	Lafourche	Wildcat	16,000	Water operation.
3/28/78	Amoco Production Co. #1 Talnradge D. Bickham	E.Baton Rouge	Port Hudson	19,000	Tuscaloosa sand play with some gas. Not in scope of contract.
3/28/78	Geological Research Corp. #1 Vieman et al	Braxoria	Wildcat	10,500	Poor Geo ² area.
3/30/78	Murphy H. Baxter #1 McDonald	Brazoria	McDonald	10,100	Devleopment well.
3/30/78	Williams Exploration Co. #1 C.J. Duhon et al	Cameron	Second Bayou	11,200	Too shallow for Geo ² sands.
3/30/78	D.C. Bintliff et al - NAR #1 Willie Zenor Cocke et al	Terrebonne	Wildcat	13,000	Too shallow for Geo ² sands.
3/30/78	Strata Energy, Inc. #1 Miami Corporation	St. Mary	Wildcat	14,200	Area of poor Geo ² sand development.
3/30/78	Strata Energy, Inc. #2 Miami Corporation	St. Mary	Wildcat	14,200	Area of poor Geo ² sand development.
3/30/78	Williams Exploration Co. #3 J. W. Mecon Fee "C"	Cameron	Second Bayou	9,900	Too shallow for Geo ² sand development.
3/30/78	The Superior Oil Co. #1 North American Land Co.	Cameron	Deep Lake	15,000	Water operation.
3/30/78	McIntyre Oil Co. #1 Canal Assets, Inc.	Acadia	Lawson	16,000	Poor sand development area.

WELLS SCREENED FOR WOO CANDIDATES APRIL, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
4/6/78	Flournoy Production Co. #1 McCampbell Gas Unit	Aransas	McCampbell	13,000	Unit development well.
4/6/78	Enterprise Oil Co. #1 Lucien J. Richard, Jr. et. al.	Lafourche	Wildcat	16,500	Operators offered well. Well qualifies. Could not finalize because farmout party for lease would not approve.
4/6/78	Continental Oil Co. #1 Gabriel P. Trahan	Acadia	Rayne	19,500	Repermitted and we are following it now. Currently drilling.
4/6/78	McCormick O & G Corp. #1 Gheens	Lafourche	Wildcat	14,000	Water operation.
4/10/78	Union Texas Petr. Corp. #1 Ernest Hebert	Vermilion	SW Gueydan	15,200	Operator did not respond yet. Pending location.
4/12/78	Amerada Hess-Ethyl Corp. #1 James Purvis Thibodeaux et. al.	Vermilion	Bancker	14,500	Water operation.
4/13/78	Goldking Production Co. #1 Miami Corp.	Cameron	Little Cheniere	8,200	Not deep enough to reach Geo ² sands.
4/13/78	Jake L. Hamon #7 J. H. Harvey	San Patricio	Harvey	10,000	Development well.
4/13/78	American Natural Gas Prodn. #1 Royne J. Thibodeaux	Jefferson Davis	Wildcat	12,500	Not deep enough to reach Geo ² aquifers.
4/14/78	McAlester Fuel Co. #1 Emelien Petit Braud et al	Lafourche	Wildcat	14,000	Not deep enough and in marshland for drilling barge.
4/17/78	Brock Exploration Corp. #1 Ducos et al	Lafourche	Bully Camp	15,000	Field development well.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates April, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
4/17/78	Lynal, Inc. #1 Mrs. Wayne B. Montie, et al	Cameron	Wildcat	10,500	Not deep enough to reach Geo ² sands.
4/17/78	Goldking Production Co. #1 Miami Corp. "O"	Cameron	Chenier Perdue	10,800	Development well and not deep enough for Geo ² sands.
4/17/78	Forest Oil Corp. #1 Rathborne Land Co., Inc.	St. Charles	Wildcat	12,500	No Geo ² sands at this depth.
4/19/78	Exchange Oil & Gas Corp. #1 Harry Bourg Corp.	Terrebonne	Bayou Sauveur	18,500	As of 1/31/79; at 16,429 in STH, having hole trouble.
4/19/78	Bass-Franks #1 Bella Nickerson Chappuis et al	Lafayette	Anse la Butte	11,500	No Geo ² sands in area.
4/20/78	Cico Oil & Gas Co. #1 Z.W. Mitchell Unit	Brazoria	Wildcat	11,000	Water operation. Reentry - hole too small.
4/21/78	Amoco Production Co. #17 Maco Stewart "A"	Galveston	Gillock	9,100	No Geo ² sands at this depth.
4/21/78	Exxon #1 Ellen E. Ross	Galveston	Gillock	9,100	No Geo ² sands at this depth.
4/24/78	McMoran Exploration Co. #2 Hassie	Acadia	Wildcat	14,500	Poor sand development area for Geo ² zones.
4/24/78	Mobil Oil Corp. #8 J.B. Ferguson	Vermilion	W. Gueydan	17,000	Development well. Not possibly available.
4/26/78	Inexco Oil Company #1 R.G. Sirmon	Vermilion	Wildcat	14,000	Only proposed to drill to transition zone for Geo ² . Unless drilled deeper, there is no interest. Will follow if deepened.

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Exhibit 1
Wells Screened For WOO Candidates April, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
4/26/78	McMoran Exploration Co. #1 P. Davis Martinez et al	Lafourche	Rouseau	14,500	Well projected in poor Geo ² area.
4/27/78	Damson Oil Corp. #3 Ramos Investment Co., Inc.	St. Mary	Wyandotte	21,000	Location abandoned.
4/27/78	Davis Oil Co. #1 L.L. Gunnels et al	Brazoria	Clemens, N.	13,000	Geo ² sand development poor in area. Operator did not respond.
4/27/78	Hedge Faulconer #2 Firth Estate Minerals	Galveston	Hitchcock	10,000	Not deep enough for Geo ² . Field development well.
4/28/78	Edwin L. Cox #1 John Thibodeaux	Cameron	Grand Chenier	11,200	Not deep enough to reach Geo ² sands.

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Exhibit 1

WELLS SCREENED FOR WOO CANDIDATES MAY, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
5/1/78	American Natural Gas Prodn. Co. #1 Leverg St. John	St. Martin	Wildcat	12,000	Not deep enough for Geo ² area.
5/3/78	Getty Oil Co. #1 Miller Estate; VUA	Cameron	S. Grand Cheniere	17,500	Lost hole by stuck drillpipe and saltwater flow.
5/3/78	Ranger Oil Co. #1 David L. Garrison, Sr.	Calcasieu	Wildcat	14,000	Not good Geo ² area.
5/3/78	McRae Exploration Inc. #1 Town of Franklin	St. Mary	Franklin	13,500	Not good Geo ² area.
5/4/78	Marion Corp. #1 Hulin; Upper Cib Jeff RA SU A	Vermilion	SW Parcperdue	13,800	Operator offered well. Reviewed log. No sand development.
5/8/78	Atlantic Richfield Co. #1 Whitney J. Simon	Vermilion	Andrew	17,500	Plugged back well-preparing to complete gas well.
5/8/78	Quintana Prodn. Co. #1 Charles M. Smith	Calcasieu	Wildcat	11,000	Not deep enough for Geo ² interest.
5/8/78	McMoran Exploration Co. #1 Tobilar Inc.	Calcasieu	Wildcat	12,000	Not deep enough for Geo ² interest.
5/9/78	Superior-American Quasar #2 D.V. Doussan Oil & Planting Co.	Lafourche	Valentine	13,750	No Geo ² interest in area.
5/11/78	General Crude Oil Co. #1 John Reeves	Brazoria	Wildcat	13,500	No Geo ² sand development.
5/11/78	Daniel Oil Co. #1 M. H. Vincent "A"	Acadia	S. Rayne	10,100	Not deep enough for Geo ² interest.

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Wells Screened For W00 Candidates May, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
5/15/78	Florida Gas Exploration Co. #2 Legendre Land Corp.	Lafourche	Chacahoula,NE	20,000	Location abandoned.
5/18/78	Texaco, Inc. #2 P.R. Norman et al "B"	Assumption	Grand Bayou	16,200	No response from operator.
5/18/78	Marathon Oil Co. #1 J. Burton LeBlanc et al	E.Baton Rouge	Wildcat	21,500	Tuscaloosa sour gas well.
5/19/78	Robert Mosbacher-Transco #1 M. O. Miller	Cameron	Crab Lake	16,200	Did not penetrate Geo ² sands.
5/22/78	The Superior Oil Co.-Pel-Tex #1 L. V. Hebert	Vermilion	Kaplan	18,000	Permit expired.
5/22/78	Edwin L. Cox #1 A.T. Dusenbury, et al	Terrebonne	Houma, N.	13,000	Not deep enough for Geo ² sands.
5/22/78	IMC Exploration Co. #1 August Simon	Vermilion	Leleux	15,500	Replacement for unit well.
5/22/78	Dyco Petroleum Corp. #1 W. Broussard	Lafayette	Maurice	13,000	Not deep enough for Geo ² sands.
5/24/78	Bayou Exploration #1 Miami Corp.	Cameron	Wildcat	13,000	Barge operation.
5/24/78	Marion Corporation #1 Mary O'Brien Long et al	Cameron	Wildcat	10,000	Not deep enough for Geo ² sands.
5/25/78	Edwin L. Cox #1 Joseph L. Vaccaro et al	Plaquemines	Diamond	11,900	Not deep enough for Geo ² sands.

WELLS SCREENED FOR WOO CANDIDATES JUNE 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
6/02	The Anschutz Corp. #1 James R. Marmion	Brazoria	Danbury S.	16,000	This is a development well.
6/05	Dynamic Expl. Inc. #2 Sabine Corp. Fee	Assumption	Ratcliff	12,400	Field development well.
6/05	C&K Petroleum, Inc. #1 S/L 7517	Cameron	Wildcat	18,000	Water location. Well drilling now.
6/05	Tenneco Oil Co. #1 Tenneco Fee "0"	Lafourche	Bay Courant	15,000	Field development well.
6/05	Southport Expl. Co. #1 Anna B. Dubon	Vermilion	Wildcat	13,800	Not deep enough for Geo ² zone. Also water location.
6/08	Southport Expl. Co. #1 Bradish Johnson Co.Ltd.	Plaquemines	Wildcat	15,000	Out of area of interest for Geo ² sands.
53 6/08	Terra Resources, Inc. #1 Replublic National Bank Tr. for W. Davis Est.	Liberty	Pelican W	10,000	Poor sand development area for Geo ² .
6/08	Terra Resources, Inc. #2 Republic Nat. Bank Tr. for W. Davis Est.	Liberty	Pelican W	10,500	Offsets production.
6/09	Anderson, T.G. & Bowman, E.L. #1 C.E. Evoritt	Colorado	Chesterfield N	9,700	Development well.
6/12	Northern Natural & Toce #1 Evans	Vermilion	Gueydan	11,000	Too shallow to reach Geo ² sands.

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Wells Screened for Woo Candidates June 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
6/12	Exchange O & G Corp. #1 Williams, Inc.	St. Martin	Mustic Bayou	14,500	Not in Geo ² region.
6/12	Superior Oil Co. #7 Southdown Inc. "A"	Terrebonne	Sunrise	16,000	Development well.
6/12	General American Oil Co. #1 Albert P. Falgout	Lafourche	Wildcat	12,500	Poor Geo ² area and not deep enough.
6/12	Shell Oil Co. #1 Jerome Respondek Jr.	DeWitt	Wildcat	14,800	Poor Wilcox area.
6/12	Termo Co. of Texas #1 Burkenroad Inv. & Realty Corp.	Lafourche	Wildcat	12,000	Not deep enough to reach area of interest.
6/13	Southland Minerals Co. #1-137 J.R. Lyne, et al	Live Oak	Wildcat	12,500	Poor sand development area.
6/13	Texaco, Inc. #1 John C. Christian Jr. et al "B"	Jefferson	Lafitte	14,100	Not deep enough for Geo ² sands.
6/13	Total Petroleum, Inc. #1 Steward Title Co.	Galveston	Hitchcock NE	10,000	Too shallow.
6/14	Terra Resources, Inc. #1 Thomas A. Wheat et al	Liberty	Cleveland, N	12,000	Not projected in Geo ² .
6/14	Pel-Tex Oil Co., Inc. #1 Gus E. Cranz et al	Colorado	Wildcat	8,700	Not deep enough to penetrate Geo ² formation.
6/15	Belco Petroleum Corp. #1 LL&E Co.	Lafourche	Bay Jaque	15,000	Not hot enough.
6/15	Texas Crude & Dale Gas #1 LL&E Co.-Matherne	Lafourche	Wildcat	14,000	Poor sand development. Sub-borderline temperature where sand development occurs.

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Wells Screened for Woo Candidates June 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
6/16	The Superior Oil Co. #1 G. Hebert	Vermilion	SE Gueydan	16,900	Development well.
6/16	McRae Expl. , Inc. #1 W.J. Walet	Iberia	Iberia	11,500	Not projected to Geo ² zone.
6/16	Phillips Petroleum Co. #1 B. Blanchard	Vermilion	N Pacperdue	14,500	No operator response.
6/16	N. C. Ginther #3 Ginther Fee et al	Harris	Dyersdale N	9,300	Development well for Wilcox.
6/19	Inexco Oil Co. #1 University of Texas	Galveston	Wildcat	11,500	@ 9,534 preparing to set casing at last report.
6/19	Southland Minerals Co. #1 Froehlich	DeWitt	Meyersville E	9,000	Development well in poor sand development area.
6/20	Shell Oil Company #3 L. Penwell	Duval	Rosita NW	14,700	Shell advised well in area of know low permeabilities in the Lower Wilcox of Rosita field. T.D. 14,200 feet. D & A 12/29/78.
6/20	Southland Minerals Co. #1 J.R. Lyne 1-139	Live Oak	Wildcat	10,500	No sand development.
6/20	Williams Expl. #5 J.W. Mecom Fee "A"	Cameron	E Mud Lake	16,000	Good prospect but no response from operator on anything. Drop.
6/20	Williams Expl. #7 J.W. Mecom Fee	Cameron	Second Bayou	15,500	Good prospect but no response from operator on anything. Drop.
6/22	Catlett & Ferguson-Carl O&G #2 Dr. S.O. Carter Est.	Cameron	Kings Bayou	11,500	Too shallow to reach Geo ² sands.
6/22	Bill Forney, Inc. #1 J.H. Spurlock	Karnes	McCaskill	10,000	Too shallow to reach Geo ² sands.

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Wells Screened for Woo Candidates June 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
6/22	Atlantic Richfield Co. #1 Bessie L. Carter	St. Mary	Jeanerette	13,800	Poor Geo ² area.
6/22	Burk Royalty Co. #1 Freeman Unit	Harris	Wildcat	14,500	No operator cooperation.
6/22	Inexco Oil Co. #1 Massie, Miller, Summers	Vermilion	Wildcat	14,000	Would require wildcat deepening. Rejected.
6/23	Inexco Oil Co. #2 C. B. Hamil	Matagorda	Wildcat	16,200	Still following drilling @ 14,452 feet at last report.
6/26	Reb Petroleum Co. #1 Euda Richard	Lafayette	Wildcat	16,000	Completed as a gas well Jan. 2, 1979.
6/28	CPC Expl., Inc. #1 Leonel Gonzalez	Zapata	Lopeno NE	8,400	Poor area. Drop.
6/28	LL&E Co. #1 LL&E	Lafourche	Coffee Bay	13,500	Poor development area for Geo ² .
6/29	Lynal, Inc. #1 F.M. Delahoussaye, et al	Vermilion	E Gueydan	12,500	The Superior #1-A Broussard (16,058 TD) showed no sand development below 12,000 feet.
6/29	W. A. Stockard #2 M. I. Brook, Trustee	Harris	Dyersdale N	9,350	Not deep enough for Geo ² section.
6/29	Phillip B. Berry #2 W.H. Ruschhaupt, Jr."A"	DeWitt	Meyersville	8,850	Not deep enough for Geo ² section.
6/30	Dale Gas #1 W. H. Kuester	DeWitt	Helen Gohlke W	8,500	Not deep enough for Geo ² section.
6/30	Riner Expl. Corp. #1 Pargmann	DeWitt	Pena	9,500	Not deep enough for Geo ² section.

WELLS SCREENED FOR WOO CANDIDATES JULY 1978

Date Permitted	Well Name	Parish/County	Field	Proposed Depth	Comments
7/10	General Crude Oil Co. #1 E.E. Broussard	Vermilion	Wildcat	14,500	The Signal Petroleum #1 Broussard (16,500 TD) approximately 1 mile north-west of the proposed well had no sand below 11,300 feet.
7/10	Exxon Corporation #3 Dave Luke B	St. Mary	Bayou Sale	14,700	Productive.
7/13	Exxon #65 Exxon Fee-Pecan Island	Vermilion	Pecan Island	15,700	Dropped because it was a development well.
7/13	Exxon #51 Exxon Fee-Pecan Island	Vermilion	Pecan Island	16,000	Dropped because it was a development well.
7/14	Shell Oil Co. #1 Z.C. Gonzales et.al.	Duval	Hoffman	16,500	Too close to shallow production to pursue.
7/17	Union Oil Co. of California #1 Robert Trahan	Vermilion	Wright	17,500	Key off well 3/4 of a mile northwest of the proposed well (18,700 TD) had little or no sand development in the Geo ² section to total depth.
57 7/18	Hughes & Hughes #1 Stanley Marshall	Webb	Tom Shearman	11,500	Dropped when permit was published approximately at the time the well was approaching total depth - timing wrong.
7/20	J.R. Vann #1 Acadia Parish School Board	Lafayette	S. Rayne	13,000	Dropped because would be necessary to drill deeper to penetrate the Geo ² section. A key off log 400 feet north of the proposed well had a gross sand interval between 12,700 and 13,300 feet drilled with 16.4 #/gal mud with a temperature range between 203°-244°F. Sands below were shaley.
7/24	Pennzoil Producing Co. #1 Sager	Dewitt	Wildcat	11,000	The Tesoro #1 Dixel-Harold Kirkam (17,817) approximately 3-1/2 miles south of the proposed well indicated that the total Wilcox section was too cool and had too low of pressures to pursue i.e. drilled with 12.5 #/gal mud to T.D. and entire Wilcox section had temperatures less than 222°F.

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Date Permitted	Well Name	Parish/County	Field	Proposed Depth	Comments
7/24	May Petroleum #1 John C. Boudreaux	Lafayette	Wildcat	13,000	Dropped because would be necessary to drill deeper to penetrate the Geo ² section. In key off log 4,000 feet west of proposed well there is approximately 260 feet of broken sands drilled with 18 #/gal mud with temperature ranging from 244 ^o -298 ^o F.
7/24	Pelto Oil Co.-LGS Expl. #1 LL & E	Terrebonne	Wildcat	14,700	The Texas Gulf Prod #1 LL & E (15,505 TD) approximately 1-1/2 miles east of the proposed well had insufficient pressures as well as temperatures ie BHT of 213 ^o F.
7/31	Tana O & G Corp. #1 R.L. Sparkman	Live Oak	Clay West	11,000 (Wilcox)	Too close to production to pursue
7/31	Pennzoil Producing Co. EtAl #1 Lafourche Realty Co., Inc. A	Lafourche	Lake Enfermer	16,500 (Tex W. Sands)	Dropped when reports showed it had been drilled earlier.
7/31	McRae Exploration Inc. #1 J.P. Duhe Inc.	Iberia	Iberia	13,500 (Plan)	Too close to production to pursue.

WELLS SCREENED FOR WOO CANDIDATES AUGUST, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
8/01	Ranger Oil Co. #1 E.T. Clark	DeWitt	Wildcat	11,200 (Wilcox)	Poor sand development.
8/01	Robert Moobacher-Transco #1 Lawrence Keseling	DeWitt	Keseling	12,000 (Wilcox)	Poor sand development.
8/03	Pennzoil Producing Co. #2 Pearly Antill	Terrebonne	Humphreys	15,500	Key off well 3,000' southeast of prospect had no sand development below 13,200' and the sands just above 13,200' had a temperature range of 210°-216° F.
8/07	Sklar & Phillips Oil Co. # P.A. Albert	Goliad	Gottschatt	9,000	Rejected because nearby wells were drilled with 11.4 #/gal mud at 9,000 feet and the temperature was approximately 200°F.
8/11	The Superior Oil Co. #4 Burnell Hardee	Vermilion	SE Gueydon	16,500	Development well.
8/10	Texas Oil & Gas Corp. #1 Parko "B"	Colorado	Altair	11,050	Mud weight in nearby well at 10,363 feet was 11.2 #/gal indicating too low pressures to pursue.
8/10	C.F. Braun & Co. #1 City of New Orleans	Lafourche	Wildcat	15,500	Key off well 1/4 mile north of the proposed well was drilled with 14.3 #/gal mud to 19,086 feet - again pressures indicated as too low.
8/10	Martin Exploration Co. #1 L.L. & E. Co.	Terrebonne	Rice Bayou	18,000	Key off log indicated the pressures were too low ie 13.2 #/gal mud at 17,955 feet.
8/15	Shell Oil Co. #3 F.B. Lloyd	Duval	Rosita, NW	14,500	In or near BEG area of interest however permeabilities are too low in this area. Field lightly faulted - small aquifers.
8/15	Champlin Petroleum Co. #1 Francis Keseling	DeWitt	Yorktown	10,000	Key off log 4,000 feet west of proposed well was drilled with 10.8 #/gal mud at 10,100 feet BHT was 210°F. Not Geo ² enough.

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<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
8/17	Ranger Oil Company #1 Goheke	DeWitt	Wildcat	10,000	Mud weight at 10,165 was 13.8 #/gal in a well 3,000 feet west of the proposed well.
8/21	Strata Energy Inc. #1 J.M. Burguières Co. Ltd.	St. Mary	Bayou Sale	14,200	Not deep enough for Geo ² sands.

WELLS SCREENED FOR WOO CANDIDATES SEPTEMBER 1978

<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
9/08	South Louisiana Prod. Co. Inc. #1 Harry Bourg Corp.	Terrebonne	Bayou Dularge	15,000	Key off log indicated moderate geopressures with 15 #/gal mud weight at 15,200 feet as well as moderate temperatures at that depth-220°F.
9/14	Damson Oil Corporation #1 Kathleen E. O'Brien	Terrebone	Wildcat	13,500	Abandoned location.
9/18	NFC Pet. Corp.-May Petro. #1 Mary E. McConnel	Lafayette	Duson	15,000	Dropped because is an infield well-will probably produce at a shallower field sand if not at depth.
9/29	CPC Exploration Inc. #1 Terrell Bartlett Est.	Zapata	Wildcat	12,500	Dropped because Bebout's studies had not progressed far enough along for us to pursue this fairway actively.

WELLS SCREENED FOR WOO CANDIDATES OCTOBER 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
10/04	Hawthorne Oil & Gas Corp. #1 Cambon Straw-Storey	Terrebonne	Lake Gero	15,000	Too close to producing wells to pursue.
10/18	Amerada Hess-Ethyl Corp. #2 Sagera Heirs	Vermilion	Esther	14,500	Too shallow for the area and likely to be a producer.
10/23	Guardian Oil Co. #1 Robert B. Jacob	DeWitt	Wildcat	11,000	The Amarillo Oil Co. #1 Harry Gips with a total depth of 10,228 feet was drilled with 10.8 lb/gal mud and has a recorded temperature of 213°F (uncorrected). Too low Geo ² to pursue.
10/23	Davis Oil Co. #1 Edward S. Koenig	DeWitt	Wildcat	9,500	The Stan. #1 Sager approximately 1 mile north of the proposed well with a total depth of 9,516 feet, was drilled with 11.0 lb/gal mud and had a maximum recorded temperature of 190°F (uncorrected). Too low Geo ² to pursue.
10/23	Shell Oil Co. #1 R. Wieland	DeWitt	Wildcat	14,200	Well falls north of BEG area of interest.
10/13	Dow Chemical Co. #1 Hannie N.K. Foury, et al	Assumption	Bayou St. Vincent	17,500	This is a barge location because of rig commitment, cannot be made available to Gruy even if the well proved to be a dry hole.
8/11	Alcorn #1 Fairfax Foster Sutter	St. Mary	E. Franklin	15,500	They made a gas well out of it.

WELLS SCREENED FOR WOO CANDIDATES NOVEMBER, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
7/24	Forest Oil Corporation #1 Jack Carter Thomas	DeWitt	Wildcat	14,500	Insufficient flow capacity
10/10	Marion Corporation #1 E.S. Duhon	Vermilion	Southwest Parcperdue	15,500	Chevron Oil Co. #1 W. Guidry approximately 1-1/2 miles northeast of proposed well shows little sandstone development in Geo ² section.
9/5	Martin Exploration Co. #1 Rixby Marceaux Jr., et al	Vermilion	Kaplan	21,000	Either Martin or Superior will have unit operation for the development well and the other well will not be drilled. Rejected on the basis that that one of these wells will be a development well in the objective sands
10/30	Superior Oil Co.-Pel Tex #1 Rixby Marceaux	Vermilion	Kaplan	19,200	Same as Martin Exploration Co. #1 Rixby Marceaux Jr., et al; mentioned above.
4/5	South Louisiana Prod. Co., Inc. #1 The Joyce Foundation	Tangipahoa	Wildcat	22,000	Offered by operator. Insufficient sand, very hazardous well.
5/9	Great Basins Petro. Co. #1 Daniel Gutierrez	Jim Hogg	Wildcat	15,500	Insufficient flow capacity.
10/13	Aminoil USA, Inc. #1 El Paso Natural Gas	Live Oak	Wildcat	11,500	Projected depth too shallow to reach objective geothermal-geopressed sands.
10/16	Houston Oil & Minerals Corp. #1 Ruby Tilley et al	Brazoria	Wildcat	18,000	Abandoned location . . . change in geologic interpretation.
7/18	Prairie Producing Co. #1 Robert Crecy et al Unit	Brazoria	Wildcat	16,500	Abandoned location.
9/21	American Petrofina-Apache- Guardian #1 A.B. Marshal	Brazoria	Alta Loma Southwest	15,000	Field well surrounded by producers.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened For WOO Candidates November, 1978
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
11/2	Exxon Corp. #1 Williams Inc.	St. Mary	Wildcat	19,500	Humble Oil & Refining #8 J.H. Provost (TD 19,000) approximately 1-3/4 miles northwest of the proposed well exhibited insufficient pressure and temperature to pursue.
10/23	System Fuels #1 Marie A.T. Marmande	Terrebonne	Wildcat	15,500	The Gulf Oil Corp #1 Boudreaux (15,230 TD) approximately 1 mile to the North had no sand in the Geo ² section.
10/30	Exchange Oil & Gas Corp. #4 Roy L. Smith	Lafayette	Ridge	16,500	Rejected-Development well surrounded by producers to the same depth.
11/16	Patrick Petroleum Corp. #1 S/L 7464	Plaquemines	Wildcat	16,500	The Gulf #6 S/L 3940, 1-1/2 miles west of proposed well, had little or no sand development below 12,466 feet; however, 17.0 lb/gal mud was used from 12,466 feet to TD. The BHT was 290°F.
11/17	Ada Oil Exploration Corp. #1 E. Broussard	Vermilion	Wildcat	14,000	The Hawthorne Oil & Gas Corp. #1 Delcambre approximately 2-1/2 miles east of the proposed well showed no sand development at 14,000 feet. The section had a recorded temperature of 198°F (uncorrected) and used 16.1 lb/gal mud.
11/17	Inexco Oil Company #1 L.L. & E.	Terrebonne	Rice Bayou	14,500	The Exxon #2 L.L. & E. (16,300 TD) approximately 1/2 mile south of the proposed well was drilled to TD with 12.0 lb/gal mud, therefore no geo-pressure.
11/21	Cockrell Corporation #1 Vermilion Bay Land Co.	Jefferson Davis	S.Thornwell	14,500	The Pan Am Prod Company & Austral Oil Expl. Co. #2 Amanda Fontenot approximately 1/3 mile south of proposed well had no sand development in the geo ² section.
10/31	Williams Exploration Co. #8 J.W. Mecom Fee	Cameron	Second Bayou	14,500	Development well surrounded by producers.
11/3	Chevron #1 O.L. Crowley 19,800 Tusc RASUG	W. Baton Rouge	False River	20,600	No pursuit-unit well.
9/25	Lammert Oil Company #1 Francis W. Condit	St. Mary	Wildcat	17,000	Prematurely plugged and abandoned at 14,178 feet, 3,000 feet before proposed total depth.

WELLS SCREENED FOR WOO CANDIDATES DECEMBER, 1978

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
11/13	Champlin Petroleum Co. #1 Carolyn Ledwig	Dewitt	Yorktown NE	14,500	Well falls north of BEG area of interest. Keyoff log ordered The Highland Oil Company #1 J.H. Wood, Jr. (14,700 TD) approximately 3-1/2 miles east of proposed well indicates that it will be on Edwards test well.
11/30	C.F. Braun & Co. #1 Jenalrette Lumber & Shingle Company	St. Martin	Wildcat	14,000	The C.F. Braun & Co. #3 J.L. & S Co. (14,932 TD) is approximately 3/4 mile west of proposed well. The log shows less than 50 feet of sand development in the geopressed section which begins at approximately 14,000 feet.
11/30	Goldking Production Co. #1 Lutchter & Moore Cypress Lumber Company	Assumption	Wildcat	14,000	The Union Oil Company of California #K-1 P.R. Norman approximately 1/3 mile southeast of the proposed well was drilled with a maximum of 13.3 #/gal mud to a total depth of 14,705 feet. Bottom hole temperature was 228°F (uncorrected). The well was rejected because of insufficient pressures,
11/15	Ada Exploration Corp. #1 Dr. Ardley Hebert	Vermilion	Wildcat	14,500	The Continental Oil Company #1 Frank D. Moss Heirs (16,109 TD) approximately 1 mile southwest of the proposed well has approximately 100 feet of sand in the interval between 14,210 feet and 14,360 feet. 17.2 #/gal mud was used during drilling, however the recorded temperature was 210°F in the interval.
11/21	Quintana Production Co. #1 S/L 6240 (Scruggs contacted)	Assumption	Wildcat	17,500	The General Crude #6 S/L 4919 (17,031 TD) is approximately 2-1/2 miles southeast of proposed well. The General Crude well has approximately 150 feet of sand in the geopressed section drilled with 16.2 #/gal mud with a measured temperature of 278°F (uncorrected). Since this prospect falls in a lake it was considered impractical to pursue at the time.

GRUY FEDERAL, INC.

Exhibit 1

Wells Screened For WOO Candidates December, 1978

Page 2

<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
12/29	American Nat. Gas Prod. Co. #1 Little Pecan Prop. Ltd	Cameron	Wildcat	15,000	Both of the two key off logs ordered showed less than 50 feet of sand development in the geothermal/geopressured section.
12/28	Kilroy Co. of Texas, Inc. #1 Arcis Broussard (Dobbs)	Lafayette	Wildcat	16,000	Key off logs indicated the proposed well would have approximately 130 feet of sand in the geopressured section in the interval from 14,320 feet to 14,580 feet. The interval was drilled with 18 #/gal mud and had a recorded temperature range of 239° F to 244° F (uncorrected) This well was plugged and abandoned over the Christmas holiday. The operator's representative called on December 22, and stated he was in no mood to contact all partners and make necessary arrangements over the holidays. Accordingly we did not examine the log.

WELLS SCREENED FOR WOO CANDIDATES JANUARY 1979

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
	McIntyre Oil Co. #1 Canal Assets	Acadia	Lawson	11,840	Operator contacted Gruy Federal with a dry hole. Upon original meeting with Dr. Hartsock and McIntyre, there was no inconsistency in BHT of this well. The original log run in 1978 showed a maximum BHT of 262°F. Logs were obtained on four surrounding wells, and the maximum BHT from these wells ranged from 182°F to 219°F, indicating the original log was correct, and did not meet the temperature parameters.
12/21	The Superior Oil Co. #37 S/L 3051	Vermilion	Lac Blanc	17,000	Already following two wells in same area and key off logs indicate that this one is likely to be a producer.
10/09	CNA Producing Co. # C.P. Speeg	E.Baton Rouge	Wildcat	17,000	
11/28	Bill Forney 2 A.H. Steinmeyer	Live Oak	Wildcat	16,500	Well falls well outside of BEG area of interest when spotted on map.
11/14	Clayton W. Williams, Jr. #1 Bowie Lumber Co.	St. James	Cut Grass Coulee	18,500	Well is surrounded by producers when spotted on map.
12/13	Bradco Oil & Gas Co. #1 Marcellin Richard	Lafourche	Rousseau	15,400	Key off logs indicated well was too close to production to pursue.
11/10	Shell Oil Co. #1 N.J. Woodland	St. Landry	Moncriel	18,500	The Gulf Oil Corp. #1 Turner Lumber Company approximately 1-1/2 miles northwest of the proposed well was drilled with 11.8 #/gal mud to 16,836 feet and had a measured temperature of 286°F at that depth. It was dropped since the section penetrated had normal pressures.

GRUY FEDERAL, INC.

Exhibit 1
Wells Screened for Woo Candidates January 1979
Page 2

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/18	Pennzoil Prod. Co. #19 S/L 2340 Rockefeller	Cameron	Deep Lake	17,500	Pennzoil Producing Co. #12 S/L 2340 Rockefeller approximately 1/4 mile east of the proposed well had a great deal of sand development in the geopressured/geothermal section, however the well was dropped as it was too close to production.
12/05	Texaco Inc. S/L 7590	W. Baton Rouge	Port Hudson	17,450	
11/09	Wainoco Oil & Gas Co. #1 Sidney Colmier	Beauregard	Wildcat	14,800	Dropped because key off logs indicated little sand development in the Wilcox section this far north.
12/28	Shell Oil Co. #5 L.C. Weatherby "A"	Duval	Wildcat	12,000	Dropped because the well falls well out of BEG fairway and because permeabilities in the Rosita area are known to be very low in the Wilcox.
11/10	Shell Oil Co. #1 C.A.G. Jarrell	St. Landry	Wildcat	21,000	
12/07	Houston Oil & Mineral Corp. #1 S/L 7834	Vermilion	Wildcat	16,000	Key off logs show great sand development in the Geo ² zone, however prospect is in the middle of a lake.
10/18	Inexco #3 Broussard	Vermilion	Wildcat	15,500	Inexco Exploration manager informed Gruy Federal that there was no significant development of geopressured aquifers to its total depth of 14,425 feet. An additional 300 feet of hole was drilled and logged. The well did not reach the sands of interest in key off wells.
10/05	Louisiana Land & Expl. Co. #1 Gilbert Stanford	St. Landry	Wildcat	18,000	Reported to be preparing for completion. Total depth was 16,595 feet.

GRUY FEDERAL, INC.

Exhibit 1

Wells Screened for Woo Candidates January 1979

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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
12/21	McCormick-Lintliff-Pettit #7 Fred Stovall Est.	Vermilion	Live Oak	17,600	Operator advised that they have obtained a farm-out only on the deep rights for these leases and that the basic lease owner has retained shallow mineral rights. It is anticipated that the well will penetrate shallow proven sands that will revert to the original lease owner in the event the deep sands are non-productive rendering Geo ² tests improbable.
1/16	Lear Petroleum Corp #1 Herbert Meyer	Colorado	Wildcat	11,500	The W.V. Paul #1 L. Miller (10,211' TD) approximately 2,000 feet west of proposed well was drilled with a maximum mud weight of 10.6 #/gal and a BHT of 194°F.
12/22	Union Oil Co. of California #F-15 Louisiana Furo, Inc. Dobbs has contacted	Vermilion	Freshwater Bayou	17,500	This is a field well, therefore likely to be a producer as well as being a large location.
1/02	James A. Whitson Jr. et al #1 Albert Pesson	Iberia	Wildcat	16,000	Sand deposition study in area indicates little to no occurrence of porous sands within Geo ² section, operator has evidenced his concurrence of this by advising that he will bottom out the well at the top of the pressure transition zone and complete the well at that point.
11/10	The Stone Oil Corp. #10 Exxon Fee	Vermilion	Lac Blanc	17,500	Operator advised Gruy Federal that this is a development well and will not be available for Geo ² testing; however they are interested in the program and hope to work with us on other wells.
6/06	Sabine Prod Co.-Apache-Fla Gas #1 Marion M. Boudeaux	St. Landry	Wildcat	20,000	Dropped because required hydrostatic pressure by drilling fluid (13 #/gal mud) indicated well no longer qualified as Geo ² candidate
6/26	Reb Petroleum #1 Euda Richard	Lafayette	Wildcat	16,000	Operator advised Gruy Federal that this well has been completed as a gas well.

GRUY FEDERAL, INC.

Exhibit 1

Wells Screened for Woo Candidates January 1979

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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
	Marion Corp. #1 L.L. & E.	Terrebonne	Wildcat	14,748	This well was drilled to a total depth of 14,748 feet and cased to total depth. Lynn McCoy was in Marion's Lafayette office to inspect the logs. Maximum temperature recorded was 230°F and sand development was nil in the geo ² section.
12/29	Southport Expl. Inc. #2 Beulah Simon	Vermilion	Cossinade	15,300	Evaluation of well determined that formation temperature was in the magnitude of 290°F, but well only contained 20 feet of net porous sand with bottom hole pressure of 10,500 psi. Well rejected on basis of poor sand development. Operator advised that they would keep us informed on all wells they drill on the Texas or Louisiana Gulf Coast.
9/19	Texaco, Inc. #1 A.R. Rucks Fee	Brazoria	Dansbury SW	15,000	Texaco advised Gruy Federal that they could not accept the terms of liability set out in our proposal well use agreement. Further questioning as to the possibility of increasing the amount of liability which Gruy Federal carries was rejected by Texaco and they told Gruy Federal that in principle they would not do business with any firm that did not offer unlimited liability.
10/20	Inexco Oil Co. #1 S/L 7612	St. Mary	Wildcat	17,000	Key off logs to 17,000 feet indicate insufficient sand development in the Geo ² section of this area to pursue.
9/07	Exxon #H-3 Exxon Fee	Vermilion	Freshwater Bayou	16,500	Key off logs indicate insufficient sand development in the Geo ² section; in addition the well is a barge location.
10/10	Marion Corp. #1 E.S. Duhon	Vermilion	SW Parcperdue	15,500	Key off logs indicate insufficient sand development in the Geo ² section. Marion is aware of Gruy Federal's program and will notify us if they drill a well that would meet the requirements.

<u>Date Permitted</u>	<u>Well Name</u>	<u>County/Parish</u>	<u>Field</u>	<u>Proposed Depth</u>	<u>Comments</u>
8/07	C.F. Braun & Co. #1 Francis Wylie Condit	St. Mary	Wildcat	18,000	Reached a total depth of 16,400 feet. Operator informed us there was no sand development in Geo ² section.
10/12	Dow #1 Allen Thomas	Vermilion	N. Leroy	15,700	Operator plans to test the well, thinks it is a producer.

GRUY FEDERAL, INC.

INDUSTRY CONTACTS

EXHIBIT 2

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Ada Resources, Inc.	Houston, Texas	J. B. Lassiter, Jr. Senior Vice President, Planning
Adobe Oil & Gas Corporation	Midland, Texas	B. J. Pevehouse President M. D. Rogers Senior Vice President, Production H. R. Holcomb Vice President, Exploration and Land
Alcorn Development Company	Houston, Texas Office	Fred C. Alcorn
William A. Alexander Engineering, Inc.	Houston, Texas Office	William A. Alexander
Amarillo Oil Company	Amarillo, Texas Office	E. W. Mathis Vice President, Land
	Houston, Texas Office	R. E. McCrehan District Manager, Houston District
Amerada Hess Corporation	Tulsa, Oklahoma Office	D. Fleming, Jr. Manager, Exploration Area
American Natural Gas Production Co.	Houston, Texas Office	A. Earl Swift Vice President George A. Stovall Director, Drilling and Production
American Petrofina Company of Texas	Dallas, Texas Office	L. A. Adams, Jr. Vice President, Property Acquisition
American Quasar Petroleum Company	Fort Worth, Texas Office	

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Aminoil USA Inc.	Houston, Texas Office	W. P. Oliver Manager, Eastern Division
Amoco Production Company	Houston, Texas	John W. Phenicie Vice President
	Houston Division Office	W. V. Grisham Division Production Manager
Anadarko Production Company	Houston, Texas Office	C. E. Lasseter Vice President, Controller
Anschutz Corporation	Denver, Colorado Office	M. A. Williams Vice President, Land
		J. D. Haley Vice President, Production
Asamera Oil International, Inc.	Houston, Texas	
Ashland Exploration, Inc. Domestic Exploration and Production	Houston, Texas Office	B. E. Hamric Group Vice President, Domestic
Atlantic Pacific Marine Corporation	Houston, Texas	E. C. Hellums Manager, Special Projects
Atlantic Richfield Company	Houston - South Texas District Office	C. A. Hutchinson, Jr. District Manager
		C. T. Hime, Jr. District Landman
		B. D. Honeycutt District Engineering Supervisor
		S. W. Coan District Engineer
		C. C. Evans Drilling Superintendent

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
B T A Oil Producers	Midland, Texas Office	Carlton Beal Partner Carlton Beal, Jr. Partner Barry Beal Partner, General Manager Spencer Beal Partner
Barber Oil Exploration, Inc.	Houston, Texas	John W. Cooke President
Sid W. Binion	Abilene, Texas	
David C. Bintliff Interests, Oil & Gas Division	Houston, Texas Office	W. Bruce Barbour Superintendent - Drilling and Production
	Lafayette Office	Joseph F. Moss Manager of Exploration
Bonanza Oil Corporation	Dallas, Texas	Dale M. Hall Manager, Exploration
Brewer & Company, Geophysicists	Houston, Texas	Richard Brewer President R. F. Vancleave
Buttes Resources Company	Houston Headquarters	Edgar Wellbaum President Donald B. O'Neill Domestic Operations
	Houston - Gulf Coast Division Office	Lloyd J. Landry Operations Manager
C & K Petroleum, Inc.	Houston, Texas Office	M. J. Kutner Vice President
Carl Oil & Gas, Inc.	Corpus Christi, Texas Office	William E. Carl President
Chandler & Savage, Petroleum Consultants	Midland, Texas	Robert E. Chandler
Cities Service Company		

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Columbia Gas Development Corporation	Houston, Texas	Edward D. Callahan Senior Vice President J. C. Willis Manager, Drilling and Production
Continental Oil Company	Houston, Texas Headquarters Office	F. E. Ellis Vice President North American Production R. L. Adams Executive Vice President Production
Milton M. Cooke Company	Houston, Texas Office	Milton M. Cooke, Sr. President Milton M. Cooke, Jr. Vice President
Edwin L. Cox	Dallas, Texas	Edwin L. Cox Owner
Crown Central Petroleum Corporation	Bellaire, Texas Office	R. M. Kobdish Vice President
Crystal Oil Company	Shreveport, Louisiana	Robert F. Roberts President
Damson Oil Corporation	Houston, Texas - Oil & Gas Division Headquarters	Charles H. Moore Vice President, Production
Davis Oil Company	Denver, Colorado Office	Marvin Davis General Partner and Manager
	Houston, Texas Office	Chuck Noll District Manager
Dixel Resources	Houston, Texas	
Dow Chemical Company	Houston, Texas - Oil & Gas Division	V. H. Buckley General Manager J. S. Talbot Marketing Coordinator
Drilling Tools, Inc.	Houston, Texas Office	Robert F. Ball Chairman of the Board C. M. Malone, Jr. President Robert D. Dilworth Senior Vice President

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Dual Drilling Company	Wichita Falls, Texas Office	Robert W. Priddy President J. V. Langston Vice President, Operations
ENI Exploration	Houston, Texas	Richard Snyder Manager, Houston Office
Energy Reserves Group	Houston, Texas - Southern Region Exploration and Southern Division Production Office	A. S. Bonner, Jr. Vice President, Production
Enserch Exploration, Inc.		
Enterprise Production Company	Houston, Texas	John C. Capshaw Senior Vice President, Energy Resources Group Jack H. Abernathy Vice Chairman and Chairman Big Chief Drilling Company
Exchange Oil & Gas Corporation	New Orleans	Robert L. Goodwin Chairman of the Board President Warren R. St. Pierre Vice President, Exploration Robert J. Martin Chief Landman, Assistant Secretary Harold E. Elston Vice President, Production
Exxon Company, USA	Houston, Texas - Exploration Department	A. Salvador Chief Geologist
Florida Gas Corporation	Houston, Texas Office	T. P. McConn Executive Vice President
Forest Oil Corporation	Corpus Christi, Texas South Texas Division Office	Marvin R. Rathke Division Geologist
	Denver, Colorado - General Office	Herbert J. Warner Vice President, Exploration
	Corpus Christi - South Texas Division	George O. Page Division Manager

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Freeport Oil Company	Houston Division Office	Donald N. Collins Division Manager
General American Oil Company of Texas	Dallas, Texas Office	William P. Barnes President James W. Goss Executive Vice President Joe M. Haas Vice President, Engineering
General Crude Oil Company	Houston, Texas Office	R. L. Draper Vice President, Production Sales & Outside Operated Property W. C. Bagby Manager, Hard Rock Minerals Paul Damek Manager of Drilling
Geochemical Surveys, Inc.	Dallas, Texas	William Duchscherfr President C. V. A. Pittman Consultant
Getty Oil Company	Houston, Texas - Southern Exploration and Production Division	Jerry Jones Division Landman D. G. Gage, Jr. Division Production Manager R. H. Westbrook Assistant Division Exploration Manager
Goldking Production Company	Houston, Texas	Allan C. King President Jack Wilder Chief Engineer
Goldrus Drilling Company	Houston, Texas Office	J. N. Warren President Bill Brannan Executive Vice President
Gulf Energy and Minerals	Houston, Texas	

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Gulf Oil Exploration and Production Company	Houston, Texas Office	E. L. Petree Vice President L. E. Warren General Manager
Hamilton Brothers	Denver, Colorado	Scott A. Cunningham Vice President, Exploration
Jake L. Hamon		
Hawkins & Hawkins	New Orleans, Louisiana Office	H. L. Hawkins, Jr. Partner
Helmerich & Payne, Inc.	Tulsa, Oklahoma Office	Carl H. Young Vice President, Drilling
Highland Resources, Inc.	Houston, Texas Office	Ralph S. O'Connor President
Hill Production Company	Dallas, Texas	John D. Hill Chairman of the Board
Houston Oil & Minerals Corporation	Houston, Texas Office	R. D. Patrick III Vice President, Operations
IMC Exploration Company	Houston, Texas	Gene Roark President
Inexco Oil Company	Houston, Texas	William G. Goodwin Vice President, Land
Irish Oil & Gas Company	Houston, Texas	Leighton F. Young, Jr. President and Geologist
Kilroy Company of Texas, Inc.	Houston, Texas	A. L. Ballard President W. J. Graham Executive Vice President
Kirby Petroleum		Jeff Montgomery Chairman
Ladd Petroleum Corporation	Houston, Texas Office	Sam H. Peppiatt Manager, Exploration
	Denver, Colorado Office	R. G. Spence Vice President, Land
Lammerts Oil Company	Oklahoma City, Oklahoma	R. P. Lammerts, Owner
Louisiana Land and Exploration Company	New Orleans, Louisiana	E. J. Langtree, Jr. Vice Chairman of the Board

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Louisiana Land Offshore Exploration Company, Inc.	New Orleans	D. P. Mitchell Vice President
Marathon Oil Company		
Marion Corporation	Mobile, Alabama	I. R. Chalmers
Marion Drilling Company, Inc.	Mobile, Alabama	Jerry E. Adams President
Marr Company	Dallas, Texas	Jack W. Shirley Exploration Manager
McCormick Oil & Gas Corporation	Houston, Texas Office	Oliver McBryde Senior Vice President Engineering Don B. Clutterbuck Senior Vice President
McCulloch Oil & Gas Corporation	Houston, Texas - District Office	John W. Moore District Manager
McMoran Exploration Company	Metairie, Louisiana Office	James R. Moffett President, Chief Executive Officer
Mesa Development Company	McAllen, Texas	James M. Hicks Purchasing Agent
	Amarillo, Texas Corporate Office	J. D. Larsen Group Vice President
Michigan Wisconsin Pipe Line Company	Houston, Texas	A. E. Swift Vice President Exploration G. A. Stovall Director, Drilling and Production
Mitchell Energy Corporation	Houston, Texas Office	F. D. Covey Senior Vice President Production & Contract Services
Mobil Oil Corporation	Houston, Texas - Exploration and Production Division Office	
Monsanto Chemical Intermediates Company		
Mosbacher Production Company	Houston, Texas	W. T. Mendell Executive Vice President

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Natomas North America, Inc.	Houston, Texas - Gulf Coast	Joe Wanamaker Senior Vice President, Operations
North American Royalties, Inc.	Lafayette, Louisiana	Jim Smyth District Manager
North Central Oil Corporation	Houston, Texas	C. A. Watts President and Chief Executive Officer
Ocean Drilling & Exploration Company	New Orleans, Louisiana	
J. P. Owens	Lafayette, Louisiana	J. P. Owens
Patrick Petroleum Company		
Pel Tex Oil Company, Inc.	Houston, Texas	John Mistrot Vice President, Land
Pend Orielle Oil & Gas Company	Houston, Texas	John H. Lollar, President
Petro Lewis Corporation	Denver, Colorado Office	David A. Frawley Senior Vice President Acquisitions & Economics
Phillips Petroleum Company	Bartlesville, Oklahoma Central Office	Leroy Culbertson Senior Vice President, Planning and Budgeting
		Kenneth Heady Vice President, General Counsel
	Houston, Texas Southeastern Region Office	J. T. Carlisle Regional Exploration Manager
Prairie Producing Company	Houston, Texas	
Quintana Petroleum Corporation	Houston, Texas Office	John B. Brock Executive Vice President Oil & Gas Division
		D. W. Keller Manager, Special Projects
Reading & Bates Drilling Company	Houston, Texas	W. D. Kent President
Republic Mineral Corporation	Houston, Texas Office	E. G. Wallace, Jr. President

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Sabine Corporation	Dallas, Texas Office	A. H. Priddy Chairman of the Board President Chief Executive Officer
	Houston, Texas - District Office	J. L. Pritchett, III District Manager
		R. C. Cline Landman
Sanchez O'Brien Petroleum Corporation	Houston, Texas Office	Pete Groth Landman
Shell Oil Company Exploration & Production	Houston, Texas Head Office	C. P. St. Laurent Manager, Production Administration
Shenandoah Oil Corporation		
Southern Natural Gas Company	Houston, Texas - Exploration and Production	F. D. Leigh Vice President, Exploration and Production
Southland Royalty Company		
South Louisiana Production Company	Lafayette, Louisiana	Bill Hollingsworth Vice President, Exploration
Southern Natural Gas Company	Houston, Texas - Exploration & Production Division Office	F. D. Leigh Vice President, Exploration and Production
		J. W. Brickner Manager, Exploration
		R. H. Kerr Manager, Operations
	Houston, Texas - Gas Supply Division Office	J. M. Van Dyck Vice President, Gas Supply
Southport Exploration, Inc.	Tulsa, Oklahoma Office	Murray Gullatt Chairman
		John A. Brock President
		W. W. Allen Vice President, Land
	Houston, Texas Office	Roy Bagley Geologist

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Stone Oil Corporation	Lafayette, Louisiana	Joe Klutts Executive Vice President, Exploration John Baker
Sun Gas Company	Houston, Texas - Offshore Operations Division Office	J. G. Ford Manager Unit & JT Operations
Sunlite International, Inc.	Houston, Texas	Edwin C. James President
Superior Oil Company	Houston, Texas	E. C. Hixon Manager, Land W. N. Mosley Manager, Engineering
Tejas Production Company	Houston, Texas	M. L. Zeid Executive Vice President, Production
Tenneco Oil Company	Houston, Texas - Gulf Coast Division Office	A. R. Prell Division Drilling Engineer L. L. Sargent Vice President & General Manager
	Houston, Texas - North American Exploration and Production Office	Joe B. Foster Executive Vice President Vernon T. Bolleter Manager, Frontier Project
Terra Resources, Inc.	Houston, Texas Office	J. Mefford District Production Manager
Texaco, Inc.	Houston, Texas - Division Office	M. L. Mixon Division Landman
Texas City Refining, Inc.	Texas City, Texas	H. O. Zenthoefer Acquisition Manager
Texas Crude, Inc.	Houston, Texas - Exploration Geological & Land Office	Charles Weiner President
Texas Drilling Company	Wichita Falls, Texas	
Texas Eastern Transmission Corporation	Houston, Texas -	W. C. Lonquist General Manager John C. Jacobs Executive Vice President

<u>Company</u>	<u>Location</u>	<u>Person Contacted</u>
Texas Gas Transmission Corporation	Houston, Texas Office	R. D. Northcutt Manager, Proration and Deliverability
Texas Oil & Gas Corporation	Dallas, Texas - Corporate Office	Louis A. Beecherl, Jr. Honorary Chairman of the Board Donald Chase Senior Vice President Drilling Operations
Texas Pacific Oil Company, Inc.	Dallas, Texas Office	R. M. Brackbill Executive Vice President, Production
Total Petroleum, Inc.	Houston, Texas	Philippe Magnier Vice President, Exploration & Production Ward M. Clark Production Manager
Transco Exploration Company	Houston, Texas	Allen R. Stern President
Sheridan A. Thompson Consulting Geologist	New Orleans, Louisiana	Lyle H. Harvey District Manager
Trunkline Gas Company	Houston, Texas	W. C. Keefe Chairman
Union Oil Company of California	Houston, Texas - Gulf Region Office	J. D. Clark Regional Reservoir Engineer
Vanderbilt Resources Corporation Exploration	Houston, Texas	
J. A. Whitson, Jr.	Houston, Texas	J. A. Whitson
Williams Exploration Company	Houston, Texas	Kenneth E. Masters Division Exploration Manager
Wintershall Oil and Gas Company	Houston, Texas	Curry Hall Senior Geologist
Zapata Exploration Company	Houston, Texas	Donald S. Hare Vice President, Drilling and Production

GRUY FEDERAL, INC.

INDUSTRY CONTACTS AND RESPONSES

EXHIBIT 3

<u>Company</u>	<u>Reply</u>
Ada Resources	No reply.
Adobe Oil & Gas Corporation	Offered well which did not qualify.
Alcorn Producing Company	Offered well which was later completed as gas discovery.
Amarillo Oil Company	No reply.
Amerada Hess Corporation	No reply.
American Natural Gas Producing Company	Offered two wells which did not qualify. Still interested in program.
American Petrofina Exploration Company	No reply.
American Quasar Petroleum Company	No reply.
Aminoil USA Inc.	No reply.
Amoco Production Company Houston	Referred to Committee.
New Orleans	Promised cooperation anywhere but on Rockefeller Game Refuge.
Anadarko Production Company	No candidates. Already in geothermal steam program in California.
Anschutz Corporation	Now considering proposed well. One did not qualify.
Ashland Exploration, Inc.	No reply.
Atlantic Richfield Corporation (Arco)	No discussing deep Geo ² prospect in Brazoria County.
Asamera Oil International, Inc.	No candidates.
B.T.A. Oil Producers	No interest.
Barber Oil Exploration, Inc.	Principally offshore.

<u>Company</u>	<u>Reply</u>
David C. Bintliff Interests	Verbal reply. Nothing applicable.
Sid W. Binion	No response.
Bonanza Oil Corporation	No candidates.
Buttes Resources Company	Nothing at this time.
C & K Petroleum Company, Inc.	Verbal reply. Nothing applicable.
Carl Oil & Gas, Inc.	No response.
Chevron USA, Inc.	No reply.
Cities Service Company	Nothing that meets criteria, willing to further evaluate possibilities of a cooperative project.
Coastal States Gas Corporation	Border Exploration is a subsidiary company which cooperated in conjunction with Total, Inc.
Columbia Gas Development Corporation	Have nothing now, but are interested and will advise.
Continental Oil Company	In contact on deep well and will cooperate.
Milton M. Cooke Company	Offered deep test in Galveston County (which was never drilled). Operator interested.
Edwin L. Cox	No reply.
Crown Central Petroleum Corporation	No reply.
Crystal Oil Company	No reply.
Damson Oil Company	No reply.
Davis Oil Company	No deep wells (in Texas). No contact made in Louisiana.
Dixel Resources	No reply.
Diamond Shamrock Oil & Gas Company	No reply.
The Dow Chemical Company	Numerous contacts. Two wells considered. One barge location and one well attempted gas completion.
E. N. I. Exploration	No response.

<u>Company</u>	<u>Reply</u>
Energy Reserves Group	No reply.
Enserch Exploration, Inc.	No reply.
Enterprise Production Company	Offered WOO well, but associates declined to join.
Entex, Inc. (Energy Resources Group)	No reply.
Exchange Oil & Gas Corporation	Now in contact on specific well. Some interest.
Exxon Company, USA	Verbal reply only. They claim they are still considering the matter.
Florida Gas Exploration Company	No reply.
Forest Oil Corporation	Negotiated WOO takeover, but Wilcox sand too poorly developed.
Freeport Oil Company	Limited operations in area of interest.
General American Oil Company of Texas	No wells at present time, will advise.
General Crude Oil Company	No response.
Getty Oil Company Houston, Texas	No reply.
Getty Oil Company New Orleans, Louisiana	Negotiated with Getty on a well which later was junked and recompleted at shallow depth.
Goldking Production Company	Promised cooperation.
Goldrus Drilling Company	Promised cooperation.
Gulf Energy and Minerals, Inc. (Gulf Oil)	No reply. Could not reach proper person.
Hamilton Brothers Oil Company	No reply.
Jake L. Hamon	No reply.
Hawkins & Hawkins	No candidates.
Helmerich & Payne, Inc.	Do not operate in area of interest.
Highlands Resources, Inc.	No reply.

Company

Reply

Hill Production Company

No response.

Houston Oil and Minerals
Corporation

Remains inactive contact. Several unqualified
wells offered.

Huffington, Roy

Foreign operations only.

Hunt Oil Company

Will continue to consider participation.

IMC Exploration Company

Several wells offered and considered, but
none qualified.

Inexco Oil Company

Offered one well and considering others.

J. W. Operating Company

Proposed joint venture on Oleum well was
rejected.

Kelly-Brock

No response.

Kerr-McGee Corporation

No reply.

Kirby Exploration Company

Mainly offshore.

Kilroy Company of Texas, Inc.

Active contact. One well was offered and
later withdrawn.

Ladd Petroleum Company

No response.

Lammerts Oil Company

Limited operation.

Louisiana Land & Exploration
Company

Excellent contact. Ready to cooperate. Thus
far, only water locations have had qualified
wells. One land well now on working list.

Marathon Oil Company

No wells that meet criteria, but receptive
otherwise.

Marion Corporation

In contact. First two wells offered did not
qualify.

Marr Company

No response.

McCormick Oil & Gas
Corporation

Nothing came of verbal contact.

McCulloch Oil Corporation

Verbal reply - "Nothing now".

McIntyre Oil Company

Offered well which was not hot enough.

McMoran Exploration Company

No response.

Company	Reply
Mesa Petroleum Company	No reply.
Michigan-Wisconsin Pipe Line Company	Sent descriptions of two Louisiana tests which did not qualify.
Mitchell Energy Corporation	"No good candidates, will keep your plans in mind."
Mobil Oil Corporation Houston, Texas	No reply.
Mobil Oil Corporation New Orleans, Louisiana	No candidates, but will keep in mind.
Monsanto Chemical	No reply.
Mosbacher, Robert	No interest - noncommittal.
Murphy Oil Corporation	Nothing at present time, will keep proposal in mind.
Natomas North America, Inc.	Only Tuscaloosa wells. Would not cooperate because of confidentiality.
Natural Gas Pipeline Company of America	No reply.
North American Royalties, Inc.	Now considering one potential WOO candidate.
North Central Oil Corporation	No interest.
Northern Natural Gas Company	No reply.
Ocean Drilling & Exploration Company	Offshore only.
Occidental Exploration & Production Company	"No wells applicable to program".
Oleum, Inc.	Offered reentry prospect which was rejected (Pressure depleted reservoir).
J. P. Owens	No candidate at this time.
Patrick Petroleum Company	No record of response.
Pel Tex Oil Company, Inc.	No record of response.
Pend Oreille Oil & Gas Company	Refused to join in making Enterprise-Goldrus WOO well available.

<u>Company</u>	<u>Reply</u>
Pennzoil Company	No reply.
Petro Lewis	Offered any available well in 1978-1979 drilling program. None qualified as yet.
Phillips Petroleum Company	Technical levels - cooperative on reentry candidates which were never pursued due to small reservoirs.
Prairie Producing Company	Now monitoring two wells; some inclination to cooperate.
Pruit & Highes Company	No reply.
Quintana Petroleum Corporation	No reply.
Reading & Bates Drilling Company	No qualifying wells.
Republic Mineral Corporation	No record of response.
Sabine Production Company	Negotiated on Tuscaloosa well which did not qualify.
Samedan Oil Corporation	No reply.
Sanchez O'Brien Petroleum Corp.	Offered Wilcox well which was rejected.
Shell Oil Company - Houston	Will consider program as wells become available Have interest with Shell on several prospects.
Shenandoah Oil Corporation	No reply.
Sohio Petroleum Company	No reply.
Solatex Petroleum Co. Oil & Gas	Offered well way too shallow.
South Louisiana Production Company (SLAPCO)	Offered 22,000' Tuscaloosa well was flowing saltwater. Rejected due to hazard, high cost, and sparse sand development.
Southport Exploration, Inc.	Indicated cooperation - now monitoring two of their wells.
Southern Natural Gas Company	No reply.
Southland Royalty Company	No reply.
Stone Oil Corporation	Will negotiate when they have candidate - excellent area.
Sun Gas Company	No reply.

<u>Company</u>	<u>Reply</u>
Sunlite International, Inc.	No qualifying wells.
Sunmark Exploration	No reply.
The Superior Oil Company	Negotiating takeover of qualified well at this time.
Teal Petroleum Company	No reply.
Tejas Production Company	No response.
Tenneco Oil Company	Negotiated takeover of excellent candidate but Tenneco withdrew temporarily while considering various ways of making comprehensive long term test.
Terra Resources Inc.	No reply.
Tesoro Petroleum Corporation	No reply.
Texaco, Inc.	Several conferences; negotiated contract on one well but Texaco withdrew because of liability clause.
Texas City Refining, Inc.	No response.
Texas Crude, Inc.	Verbal - no interest.
Texas Eastern Transmission Corp	No reply.
Texas Gas Exploration Corp.	No reply.
Texas Oil & Gas Corporation	No reply - do not operate in area.
Texas Pacific Oil Company, Inc.	No reply to letters or phone calls.
Texasgulf, Inc.	No reply.
Total Petroleum, Inc.	Offered Wilcox well which was subsequently junked.
Transco Exploration Company	Drilling remote/swamp locations but ready to talk if we have a suitable prospect.
Transcontinental Oil Corporation	No reply.
Transocean Oil Incorporated	No reply.
Trunkline Gas Company	No reply.
Union Oil Company of California	No reply.

Company

Reply

Union Texas Petroleum Corporation

No reply.

Vanderbilt Resources

No reply.

Van Dyke Oil Company

No reply.

Wainoco, Inc.

Monitoring candidate as of 2-6-79.

Whitson, J. A. Jr.

Wells do not qualify.

Williams Exploration Company

No reply to numerous approaches.

Zapata Exploration Company

No reply.

SUMMARY OF INDUSTRY RESPONSES

	<u>Number</u>	<u>Percentage</u>
No reply	69	46
Limited activity in area	17	11
Limited or no interest in program	13	9
Expressed interest in cooperating	32	21
Submitted candidates which were reported	15	10
Qualified wells which became unavailable	<u>4</u>	<u>3</u>
	150	100

GRUY FEDERAL, INC.

NAMES OF COMPANIES WHO RECEIVED LETTERS FROM GRUY FEDERAL, INC. PERTAINING
TO SPECIFIC WELLS OF INTEREST

AMERICAN NATURAL GAS PRODUCTION COMPANY

Wilcox test in Harris County, Texas
(3/2/78)

MR. CHARLES NOVY

FIRST NATIONAL BANK BUILDING -LONGVIEW, TEXAS
Re: Falcon Seaboard Baer Ranch No. A-3 Well
(3/2/78)

EXXON COMPANY, USA

Re: Armstrong Ranch Fairway
(3/2/78)

WILLIAMS EXPLORATION COMPANY

Re: Williams Exploration Co.-No. 1 Edith Cleo Vallette Well
(3/16/78)

PAN AMERICAN PETROLEUM CORPORATION

Re: Pan Am - No. 1 State Lease 4183 Well
Cameron Parish, Louisiana
(4/25/78)

THE ANSCHUTZ CORPORATION

Re: Anschutz- No. 1 James Gessier Well
SW Danbury area
(5/2/78)

GETTY OIL COMPANY

Re: Getty Oil Co. - M. O. Miller No. 1 Well
Cameron Parish, Louisiana
(5/2/78)

IMC EXPLORATION COMPANY

Re: Wrightsman Investment Corp-Arlene Sarver et al No. 1 Well
Wrightsmen Investment Corp-Clovis A. Kennedy No. 1 Well
Perry Point field area, Vermilion Parish, Louisiana
(5/18/78)

PAN AMERICAN PETROLEUM CORPORATION

Re: Pan Am No. 1 State Lease Well
Cameron Parish, Louisiana
(5/23/78)

GRUY FEDERAL, INC.

NAMES OF COMPANIES WHO RECEIVED LETTERS FROM GRUY FEDERAL, INC. PERTAINING
TO SPECIFIC WELLS OF INTEREST

(Cont'd)

SUPERIOR OIL COMPANY

Re: No. 1 Watkins Miller Well
Cameron Parish, Louisiana
(5/23/78)

GETTY & BUTTES OIL & GAS COMPANY

Re: Getty & Buttes No. 1 Gladys McCall Well
East Crab Lake field area, Cameron Parish, Louisiana
(5/23/78)

SUN OIL COMPANY

Sun Oil Co. - No. 1 Dorothy Sutrllese et al Well
Cameron Parish, Louisiana
(5/23/78)

PAN AMERICAN PETROLEUM CORPORATION

Re: Pan Am No. 1 State Lease 4183 Well
Cameron Parish, Louisiana
(5/25/78)

MICHIGAN-WISCONSIN PIPE LINE COMPANY

Re: 14,500-foot Wilcox Test
Evangeline Parish, Louisiana
(8/23/78)

SOLATEX PETROLEUM COMPANY OIL & GAS COMPANY

Re: Solatex No. 1 Lawrence Brown et al Well
Haynes Dome general area
(8/29/78)

AMINOIL USA, INC.

Re: Aminoil USA-No. 1 El Paso Natural Gas Fee
Chapa field area, Live Oak County, Texas
(11/7/78)

ATLANTIC RICHFIELD CORPORATION

Re: Arco No. 1 W. L. Crews et al Estate Well
W. Martin Survey A-83, Brazoria County, Texas
(11/7/78)

GRUY FEDERAL, INC.

NAMES OF COMPANIES WHO RECEIVED LETTERS FROM GRUY FEDERAL, INC. PERTAINING
TO SPECIFIC WELLS OF INTEREST

(Cont'd)

INEXCO OIL COMPANY

Re: Inexco No. 3 Broussard Well
Vermilion Parish, Louisiana
(11/14/78)

TOTAL PETROLEUM, INC.

Re: TOTAL M. B. Means Well
Wharton County, Texas
(9/8/78)

PAMALE PETROLEUM COMPANY

Re: TOTAL M. B. Means Well
Wharton County, Texas
(9/8/78)

LOUISIANA LAND & EXPLORATION COMPANY

Re: L.L. & E. No. 1 Gilbert Stanford Well
St. Landry Parish, Louisiana
(10/17/78)

FOREST OIL COMPANY

Re: Forest Sam Rodrique No. 1 Well
Lafourch Parish, Louisiana
(10/27/78)

THE ANSCHUTZ CORPORATION

Re: The Anschutz Corp. No. 1 Parker et al Well
West Dinero Area, Love Oak County, Texas
(11/9/78)

HAMILTON BROTHERS OIL COMPANY

Re: Forest Oil Company et al No. 1 J. C. Thomas Well
DeWitt County, Texas (11/10/78)

FOREST OIL CORPORATION

Re: Forest Oil Company et al No. 1 J. C. Thomas Well
DeWitt County, Texas
(11/10/78)

ARKLA EXPLORATION COMPANY

Re: Forest Oil Company et al No. 1 J. C. Thomas Well
DeWitt County, Texas
(11/10/78)

GRUY FEDERAL, INC.

NAMES OF COMPANIES WHO RECEIVED LETTERS FROM GRUY FEDERAL, INC. PERTAINING
TO SPECIFIC WELLS OF INTEREST

(Cont'd)

DOW CHEMICAL COMPANY

Re: Dow No. 1 Allen L. Thomas et al Well
Leroy area, Vermilion Parish, Louisiana
(11/14/78)

ALCORN PRODUCTION COMPANY

Re: Alcorn Production et al Fairfax Foster Sutter No. 1 Well
East Franklin field area, St. Mary Parish, Louisiana
(9/6/78)

GOLDRUS DRILLING COMPANY

Re: Alcorn Production Co. et al Fairfax Foster Sutter No. 1 Well
East Franklin field area, St. Mary Parish, Louisiana
(9/7/78)

TURK, KEHLE, AND ASSOCIATES

Re: Great Basins Petroleum Co. No. 1 Daniel Gutierrez Well
Jim Hogg County, Texas (Wildcat Well)
(12/4/78)

TEXACO, INC.

Re: A. R. Rucks Fee Well
Brazoria County, Texas
(12/6/78)

THE STONE OIL CORPORATION

Re: Stone Oil Corp. No. 1 L. B. Broussard et al Well
Lac Blanc area, Vermilion Parish, Louisiana
(12/15/78)

KILROY COMPANY OF TEXAS, INC.

Re: Kilroy No. 1 Arcis Broussard Well
Lafayette Parish, Louisiana
(12/20/78)

SOUTHPORT EXPLORATION, INC.

Re: Southport No. 2 Beulah Simon Well
Vermilion Parish, Louisiana
(1/18/79)

THE SUPERIOR OIL COMPANY

Re: The Superior Oil Company No. 1 Willis Hulin Well
Vermilion Parish, Louisiana
(1/18/79)

NAMES OF COMPANIES WHO RECEIVED LETTERS FROM GRUY FEDERAL, INC. PERTAINING
TO SPECIFIC WELLS OF INTEREST

(Cont'd)

NORTH AMERICAN ROYALTY, INC.

Re: No. American Royalty No. 1 Davis Well
Cameron Parish, Louisiana
(1/24/79)

WAINOCO, INC.

Re: Wainoco, Inc.-Bradco Oil & Gas No. 1 Palmer Bros. Well
Terrebonne Parish, Louisiana
(1/24/79)

INEXCO OIL COMPANY

Re: Inexco Oil Co. No. 1 Williams, Inc. Well
Assumption Parish, Louisiana
(1/24/79)

SABINE PRODUCTION COMPANY

Re: Sabine Production Co.-Apache Corp-Florida Gas No. 1
M. Goudeau Well - St. Landry Parish, Louisiana
(12/13/78)

APACHE CORPORATION

Re: Sabine Production Co. et al No. 1 M Goudeau Well
St. Landry Parish, Louisiana
(12/13/78)

FLORIDA GAS EXPLORATION COMPANY

Re: Sabine Production Co.-Apache Corp-Florida Gas No. 1
M. Goudeau Well - St. Landry Parish, Louisiana
(12/13/78)

CONTINENTAL OIL COMPANY

Re: Continental Oil Co. No. 1 Gabriel P. Trahan
Rayne field area, Acadia Parish, Louisiana
(2/2/79)

TENNECO OIL COMPANY

Re: Tenneco Oil Company No. 1 Fee "N" Well
Terrebonne Parish, Louisiana
(12/20/78 and 12/29/78)

INDUSTRY CONTACTS OF RECORD ON WELL-OF-OPPORTUNITY PROGRAM BY R. J. DOBSON

In the Year 1978:

- January 23: Telephone contact with D. R. Dunham, Shell Oil Company - New Orleans, Louisiana.
- Telephone contact with Robert Brackbill of T.P. Oil Company in Dallas, Texas.
- Telephone contact with C. W. Leisk of Austral Oil Company.
- January 25: Telephone contacts with the following:
- C. P. St. Laurent of Shell Oil Company - Houston.
- Leslie Ballard, President of Kilroy Oil Company - Houston.
- Joe Peevyhouse, President of Adobe Oil Company, Midland, Texas
- *Reactions from Shell and Adobe were favorable.
- January 27: Discussed program with C. W. Leisk and Don Degan of Austral Oil Company, and Herman Engle - East Texas Saltwater Disposal Company.
- January 30: Phone contact with William Kent, President Reading & Bates Drilling Company.
- Personal contact with Bill Kent and Don Degan of Austral and Karl Schneideau, independent geologist.
- Personal contact with D. Hocaday and Ed James of Sunlite Oil Company, with reference to hot well in Presidio County, Texas.
- February 1: Personal contact with W. T. Mendall, Executive Vice President of Robert Mosbacher Company, a large Independent.
- February 2: Phone calls to Ron Thrash of The Superior Oil Company, and Jerel Crowder of Sabine Production Company.
- Call to Jack Talbot, Dow Chemical Company with reference to 17,500-foot well in Assumption Parish, Louisiana.
- Call to I. R. Chalmers, Austral Superintendent in Lafayette, La.

GRUY FEDERAL, INC.

- February 3: WOO Letter to Dow Chemical.
- Return call from St. Laurent of Shell Oil - was positive.
- February 4: Complete discussion of program with William Moseley, Manager of Engineering for The Superior Oil Company.
- February 6: Letter to The Superior Oil Company. Discussion with Degan of Austral.
- Phone call to Talbot of Dow Chemical and J. Crowder of Sabine Production Company.
- February 7: Letter to John Capshaw, President of Entex Production.
- Lunch with Talbot of Dow - was favorable.
- February 8: Talbot of Dow called and withdrew well because of barge location.
- Met with Charles Novy, Executive Vice President of Oleum Corporation who offered deep temporarily abandoned well in Matagorda County, Texas.
- February 9: Meeting with Ron Thrash of The Superior Oil Company.
- February 13: Visited Oleum Office in Longview, Texas.
- February 14: General discussion of program with attendees of Geothermal Symposium at Rice University Media Center.
- Letters to Continental Oil Company and Michigan-Wisconsin Pipe Line Company.
- Calls to C. E. DeWitt of McCormick Oil and Gas Company.
- Visit with J. C. West, Vice President of J-W Operating Company.
- February 17: Phone call from Martin Miller, C & K (formerly of Bradco Oil Company.)
- February 23: Phone calls from Jim West of J-W Operating Company.
- Called Milton Cooke and received concurrence to submit deep Galveston County, Texas, well as WOO candidate (well had not been drilled as of 2/79)
- Telephone call to Jack Moore of McCullough Oil Company

GRUY FEDERAL, INC.

- February 24: Calls to Austral Oil Company personnel.
- Call to Jim Westbrook, Exploration Manager of Getty Oil Company.
- Call to Ed James, President of Sunlite Oil Company.
- Learned from Williams Companies that Matilda Gray reentry candidate well in Cameron Parish, Louisiana is full of junk.
- February 27: Lunch with Weldon Winsauer, Amos Salvador and S.W. Kothman, all of Exxon, relative to WOO prospects in Armstrong Fairway in Kennedy County, Texas.
- Call to Paul Scott of Roy Huffington, Inc.
- February 28: Call from Martin Black of Pendoreille Oil Company.
- March 1: Letters to Union Oil, Exxon, Dave Bintliff of C & K Oil Company.
- Also letter to Michigan-Wisconsin Pipe Line Company.
- March 2: Call from David Smith of Florida Gas Exploration Company, and Jack Moore of McCollough Oil Company.
- March 6: Call from Jack Barnett of L.L. & E. with positive response to prior letter. (Thus far we have not found a suitable WOO Candidate on L.L. & E. lands, but they continue to interest in the program.
- March 7: Discussions with I. R. Chalmers, Manager of Marion Corporation in Lafayette, Louisiana. (Formerly with Austral)
- March 9: Met with Chalmers in Lafayette, La.
- March 14: Discussion with Bill Mosely of The Superior Oil Company.
- March 16: Meeting with Bill Mosely, The Superior Oil Company.
- Letter to Williams Exploration Company.
- March 17: Call to Mike Kelly of Kelly-Brock in regard to a reentry deep Gulf well in Sabine County, Texas.
- March 23: Call to Gene Roark, President of International Mineral Exploration Company.
- March 21: DOE Screening Committee met at Gruy Federal Offices and set reentry well priorities.

GRUY FEDERAL, INC.

March 27: Call to Fred Gavreau of Union Oil Company of California.
Call to Buttes Resources.

March 28: Called on B. Buchanan, Drilling Manager of Union Oil of California.

March 30: Calls to Messrs. Traylor, Westbrook, Gage and Pierce of Getty Oil Company in Houston and New Orleans.

March 31: Began monitoring wells in Texas-Wilcox trend in addition to Miocene-Frio trends.

Calls to Union Oil Company, Getty Oil Company, Amoco Oil Company (Dick Darling, New Orleans) and Charles Weiner, Presid of Texas Crude Oil Company.

April 3: Called Dick Darling and D. D. Gillium of Amoco, with reference to well in Rockefeller Game Reserve.

Called John Pierce of Getty Oil Company.

April 6: Call from Amoco refusing to cooperate on any wells within game refuge.

Decided to propose reentries of Gladys McCall, Watkins-Miller, and Alice C. Plantation, with Union of California Dr. M. O. Miller well as an alternate.

April 11: Sent out first general WOO letters to Industry. Ultimately, some 90-100 of these letters were sent.

April 13: Contacts with Cameron Parish landowners through contract landman, Eugene Dobbs and Frank Scruggs.

April 14: Scruggs made contact with Sun Oil Company with Hardee well, in Vermilion Parish, Louisiana.

April 17: Landowner Watkins Miller refused to deal. Accelerated work on the Gladys McCall test site.

April 19: Contacted Joe Babin of Shell Oil Company in New Orleans regarding reentry of Shell-Broussard No. 1 well in Kings Bayou field, Cameron Parish, Louisiana.

April 20: Calls from Joe Wetheril, Vice President of Exploration for McCollough Oil Company. Called Louis Onley of Houston Oil & Minerals.

GRUY FEDERAL, INC.

- April 20: (cont'd) Call to Gene Roark of International Minerals Exploration, who said they may have some WOO candidates.
- April 21: Lunch with T. K. Matthews and Matt Ralls, President and Vice President of Houston Natural Gas.
- April 24: NEW ORLEANS - Called on Sam Paine and Don Dunham and Joe Babin all of Shell Oil Company.
- Also called on John Pierce of Getty Oil Company.
- Pierce mentioned possibility of making Getty M. O. Miller No. 1 a well-of-opportunity.
- April 25: Discussed program with Industry Personnel at C. K. Geothermal Seminar in New Orleans.
- Discussions with Dick Darling, Vice President of Amoco, who agreed to reconsider making available Amoco wells in Rockefeller Game Refuge.
- April 26: Discussion with attorney for Cameron Parish landowners in which Mr. Keith Westhusing participated.
- April 27: Letter to John Pierce of Getty Oil Company.
- Letter to The Anchutz Corporation, with reference to Brazoria County, Texas, well.
- Located drilling rig of sufficient size for reentry operations.
- May 2: Met with James Hutchison, Deputy Secretary of Louisiana Department of Mineral Resources in connection to obtaining permits necessary for reentry operations in State of Louisiana.
- May 8, 9 & 10:
- In New Orleans in attempt to negotiate reentry rights to Union Oil Company Dr. M. O. Miller No. 1 well.
- May 11: Discussions with I.M.C. Exploration personnel on Perry Point, Louisiana, WOO prospect.
- Discussions with Roy Forbish on Houston Oil & Minerals' well in Roanoke, Louisiana field. We declined due to the necessity to deepen well.

GRUY FEDERAL, INC.

- May 23: Closed deals on Gladys McCall and Alice C. Plantation test sites with landowners.
- May 24: Letter to Amoco, New Orleans, to Dick Darling along with revised WOO letter.
- June 7: Completed material for possible inclusion in talk to be given by Mr. Bennie DiBona.
- June 8: Letters to Hamilton Brothers Petroleum, and Petro-Lewis Corporation. Also letter to Goldking Production Company.
- June 12: Revised WOO letter to Texaco, Inc. - Houston.
- June 19: Formal recommendation for three reentry operations, State Lease 4183, Alice C. Plantation and Gladys McCall.
- These were hand-delivered to Nevada Operations Office.
- June 20: Received authorization to proceed with Alice C. Plantation reentry operation from Department of Energy.
- June 21: Called Dick Darling of Amoco and Peneguey of Texaco, New Orleans.
- July 10: Received positive letter from Petro-Lewis (Mr. R. E. Bennett) with respect to cooperating with WOO Program.
- July 13: Prepared letter to Williams Exploration for Mr. DiBona's signature. Williams Exploration had never responded to previous attempts by Gruy Federal, Inc. to interest them in program.
- July 17: Discussions with industry personnel at C. K. Geothermal Energy Meeting of Legal Slant Institutional Working Sub-groups.
- Dr. Lohse gave talk, Dobson responded to questions.
- July 18: Received communication from M. O. Miller heirs that they were agreeable to negotiate agreement for rights to takeover Getty M. O. Miller well in the event of a dry hole.
- Subsequently, this well was junked and thus was never available as a WOO Candidate.

GRUY FEDERAL, INC.

- July 27: Called on Richard Bennett of Petro-Lewis in Denver, Colorado. Bennett identified six prospects for drilling in 1978 and 1979 and offered to make them available as WOO's if non-productive. Thus far, none of the announced locations have qualified due to insufficient depth or not being located in geothermal fairways.
- July 31: Called on Fred Alcorn of Alcorn Development Company with respect to WOO prospect on the Alice C. Plantation. This well was offered as a WOO prospect, was written up as formal WOO takeover and tentatively approved. However, commercial gas production was discovered and the offer was withdrawn.
- August 1: Taped interview on radio program with the Louisiana News Network relative to Alice C. Plantation operation.
- August 11: Called Herbert Warner, Forrest Oil Corporation, Denver, relative to deep Wilcox well in DeWitt County, Texas. Warner agreed to cooperate.
- August 14: Letter to Forrest Oil Company on DeWitt County well.
- August 15: Conference with Don McMahan, President of Diamond M. Drilling Company, who agreed to make inland barge rigs available for WOO operations.
- August 18: Meeting with D. R. Dunham, Shell Oil Company - New Orleans.
- August 25: Meeting with Brian Hutchinson, President of Solatex on drilling well. Hutchinson was agreeable but well did not qualify.
- August 28: Call to F. E. Ellis, Vice President, North American Production, Continental Oil Company.
- August 29: Call from J. Crowder of Sabine Production Company to effect that Sabine was willing to cooperate on Tuscaloosa test in St. Landry Parish, Louisiana.
- September 5: Contacts with International Mineral Exploration, Michigan-Wisconsin Pipe Line and Alcorn Production Company.
- September 6: Sent letters to Alcorn Production and Jack Warren, President of Goldrus Drilling Company
- September 7: Meeting with Calvin Chimiene of TOTAL Petroleum, Inc. who offered deep Wilcox well in Wharton County, Texas as WOO prospect.

Subsequently, this well was junked before Gruy Federal could take it over.

GRUY FEDERAL, INC.

****Mr. Dobson was out of the country from September 14, 1978 until October 20, 1978. ****

- October 25: Calls to Jack Talbot and J. F. Johnson of Dow Chemical with respect to Vermilion Parish well.
- Subsequently, this well was completed as a gas producer.
- November 9: Meeting with Sabine Production Company personnel on takeover of No. 1 M. Goudeau well as WOO prospect.
- November 13: Call to John Ashman, President Wainoco Oil Company.
- November 14: Call to George Page of Forrest Oil Corporation.
- November 17: Conference with Sabine Production Company personnel.
- December 1: Advised Forrest Oil Company (George Page) of no interest in deep Wilcox wildcat due to lack of sand development.
- Advised Dr. Jan Turk of no interest in Great Basins suspended Wilcox well in Jim Hogg County, Texas.
- December 6: Conference with Sabine Production Company personnel to negotiate takeover agreement.
- December 7: Considered and rejected Sanchez - O'Brien No. 1 Welder well due to poor sand development.
- Contacted Stone Oil Corporation with respect to Broussard well in Little Pecan Island area of Vermilion Parish, Louisiana. Stone has agreed to cooperate but well has not yet spudded.
- December 14: Meeting with Texaco, Inc. personnel with respect to No. 1 Rucks Fee WOO prospect in Brazoria County, Texas.
- December 15: Letter to Executive Vice President of Stone Oil Corporation.
- December 19: Telephone interview on geopressed program with representative of Dallas Times Herald newspaper. Mr. Keith Westhusing participated in this interview.
- December 28: Met with Sabine Production personnel.
- Met with Don O'Neill, vice President of Buttes Resources.

GRUY FEDERAL, INC.

December 29: Made contact with Tenneco representatives who offered Tenneco No. 1 Fee "N" as potential WOO well.

December 30: Drew up three agreements with Tenneco.

1979

January 2: Meeting in Tenneco Offices to negotiate takeover of Tenneco No. 1 Fee "N" well.

January 3: Meeting in Tenneco Offices to negotiate further on takeover of No. 1 Fee "N" well.

January 8: Call from Mickey Braden of Tenneco. Tenneco had reconsidered their offer and was considering the possibility of conducting a geothermal test as a sole benefit project.

January 9: Phone call to Mickey Braden of Tenneco.

Phone call to J. E. Johnson of Dow Chemical with reference to No. 1 Thomas well in Vermilion Parish, Louisiana.

Contacted The Superior Oil Company with respect to 21,100-foot well as WOO prospect.

January 10: Received information that Sabine Production Company No. 1 M. Goudeau well probably will not qualify as WOO prospect due to pressure regression.

January 11: Contacted William Mosely, Manager of Engineering, and Finis Martin, Division Production Manager for The Superior Oil Company with reference to Superior Hulin No. 1 well in Vermilion.

This contact is still active.

January 16: Met with Mickey Braden and Oscar Goud of Tenneco in Gruy Federal offices in an attempt to get Tenneco to reconsider their position with respect to their No. 1 Fee "N" well.

January 19: Call to Sabine Production Company.

Recommendation forwarded to Nevada Operations Office for takeover of Tenneco No. 1 Fee "N" well in event Tenneco chooses to cooperate with Gruy Federal.

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- January 19: (Cont'd) Tenneco advised they will not make a decision regarding the No. 1 Fee "N" well for approximately two months.
- January 22: Received advice from Department of Energy to effect the Gladys McCall will be redrilled and tested at high rates for a period of approximately two years.
- Met with W. T. Mendall, Executive Vice President of Robert Mosbacher Company.
- January 23: Calls to F. E. Ellis (Conoco), W. T. Mendall (Mosbacher) and Gene Hixen, Land Manager for The Superior Oil Company.
- January 24: Lunch with Hank Gruy, Richard Lane and Jack Warren, President of Goldrus Drilling Company.
- January 31: F. E. Ellis of Conoco agreed to consider Conoco Trahan 19,500-foot test in Rayne field as WOO candidate and requested new letter which was sent February 1st.
- February 1: Letter to F. E. Ellis, as mentioned above.
- February 2: Lunch with Gene Hixon and Bill Mosely of The Superior Oil Company. Superior is difficult to deal with, but indications for WOO takeover appear favorable.

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PROSPECTIVE WELLS INVESTIGATED IN DETAIL

EXHIBIT 6

The following wells represent prospective Geo² candidates that underwent extensive study by Gruy Federal. Brief comments as to their disposition are as follows:

TEXAS CANDIDATES:

1. Falcon-Seaboard No. 3-A Baer Ranch was included as item T-1 in our first report on Geo² prospective wells. The well was in the Frio formation situated in the Matagorda Fairway. A reservoir depletion study indicated the entire reservoir to be pressure depleted, and it was rejected for this reason by the Department of Energy Screening Committee.
2. Adobe Oil and Gas et al No. 1 Stubbs G. U. which was located in the Hitchcock Field, Galveston County, Texas, was a Frio sand prospect that required deepening to the Frio sand. The well was rejected for that reason by the Department of Energy Screening Committee.
3. The Milton Cooke, Jr. et al No. 1-A Lewis Lobit was proposed to be drilled to 14,500 feet as a Frio wildcat well near the Green Lake Field, Galveston County, Texas. Sand conditions appeared to be favorable for this test well, and Gruy was in favor of recommending it as a candidate subject to final review of logs. It has not been presented to the Screening Committee as of this date because the operator has not yet commenced drilling the well.
4. INEXCO Oil Company No. 1 C. B. Hamil is situated in Matagorda County, Texas, and was drilled through the Frio formation. Gruy Federal rejected this well on the basis of inadequate and incomplete data supporting sand development in the area, and the Department of Energy Screening Committee concurred with this action.
5. A group of four Phillips Petroleum Company shut-in wells situated in Chocolate Bayou Field area of Brazoria County, Texas, penetrated the Frio formation. They were studied for reentry possibilities and rejected by Gruy Federal on the basis of limited sand development, pressure depletion and mechanical conditions.

LOUISIANA CANDIDATES:

1. The Williams Exploration Company No. 1 Matilda Gray Stream was drilled into the Planulina section and exhibited all the characteristics of an excellent candidate for Geo² testing. A detailed study and analysis of reentry possibilities was made. During the course of this study, it

was determined that the drilling crews on location during the plugging and abandonment of this well deliberately filled the hole with such items as large steel I-beams and used rock bits dumped in the hole upside down. The prospect was therefore rejected prior to submitting it to the Department of Energy Screening Committee.

2. U. S. Oil of Louisiana No. 1 John W. Mecom was evaluated to be a good potential Planulina test well that required deepening to the objective sand. The Department of Energy Screening Committee rejected this well because of the deepening requirement.
3. Superior Oil Company Watkins-Miller No. 1, South Grand Chenier Field area was evaluated on a preliminary basis and submitted to the Department of Energy Screening Committee. It was approved by this Committee as one of a number of candidate wells to be pursued on a reentry basis. Initially, it was rated with a lesser priority than the Gladys McCall No. 1 well, but was more highly rated than some of the other candidates. A more detailed study of this well was requested by the Department of Energy Screening Committee. As a result of scheduled timing for location preparation of various wells under consideration, a second supplementary report was prepared to update required operational activities for this well. Continued negotiations with Mr. Miller for rights to reenter this well were ultimately rejected by Mr. Miller, and the project was dropped.
4. Getty and Buttes Gas and Oil Company Gladys McCall No. 1 in the East Crab Lake area, Cameron Parish, Louisiana, was submitted to and approved as a number one priority reentry well by the Department of Energy Screening Committee because of the excellent sand development and Geo² potential in this area. The inaccessible location of this well within the marsh area and the consequent time requirements for location preparation led to the authorization for preparing this location as a number two reentry site while pursuing a more readily accessible site for a first reentry well. Attempts were ultimately made to reenter the well, and it was found that the mechanical condition of the hole did not conform with the reports which had been filed on it. It had been dynamited during plugging and abandonment to an extent that made it impracticable to reenter. A final report covering these operations was submitted to the Department of Energy. This well has now become the subject of consideration for redrilling, and work is underway to prepare such a proposal for Department of Energy consideration.
5. Sun Oil Company No. 1 Dorothy Sturlese et al reentry well, North Price Lake area, Cameron Parish, Louisiana, was rejected by the Department of Energy Screening Committee to give preference to sand development in other prospective wells.

6. Pan American Petroleum Corporation No. 1 State Lease 4183 reentry well in the Little Pecan Lake area of Cameron Parish, Louisiana, was approved by the Department of Energy Screening Committee. The well was located on the Rockefeller Game Preserve which is owned by the State of Louisiana under a conditional grant from the Rockefeller Foundation. The well could not be made available to Gruy Federal by the State of Louisiana because the State felt that the entire game preserve grant would be in jeopardy.
7. Union Oil of California No. 2 Pan Am Fee located in the Sweet Lake Field area of Cameron Parish was rejected by the Department of Energy Screening Committee because of the apparently limited reservoir indicated by highly limited available geological data.
8. J. P. Owen et al No. 1 L. H. Hardee in the South Gueydon area, Vermilion Parish, Louisiana, was rejected by the Department of Energy Screening Committee because the limited well density suggested the possibility that the objective sand could likely be a channel deposit of limited areal extent.
9. The Superior Oil Company No. 1 Hazel Sawyer in the South Gueydon area, Vermilion Parish, Louisiana was initially placed in a secondary priority classification by the Screening Committee and upgraded to a first priority after supplemental geological work was performed to support the potential drainage area. Program priority was changed to WOO well takeovers at this time.
10. Sun Oil Company No. 2 Alice C. Plantation in the South Garden City Field area was selected by the Department of Energy Committee as the first reentry well because of its Geo² qualities and primarily because of the minimum site preparation time and the willingness of the landowner. Final selection of this well followed two supplementary well prognosis reports.
11. Union Oil Company of California No. 1 Dr. M. O. Miller in the South Grand Chenier area in Cameron Parish was approved by the Department of Energy Committee as an alternate well to the Gladys McCall should the landowner react more favorably than one of the others with whom negotiations were underway. Our proposal for reentry in this well was rejected by the landowner.
12. Enterprise Oil Company No. 1 Lucien J. Richard well was the first well of opportunity offered to Gruy Federal after following its progress to total depth. Our first review of the well data indicated the well to qualify. Approval was received from the Department of Energy Screening Committee to negotiate and exercise a seven day option period on this well and to simultaneously negotiate the terms required to assume all operations on the well. During the option period, a comprehensive engineering and geological report was prepared, submitted to the Department of Energy Screening Committee, and approval was received from the Department of Energy.

During the option period, it was determined by the farmout lease owner (Pend Orielle Oil Company) that geological data gained during the drilling of this well would permit them to gain an increased interest in some existing producing units after the well reverted back to them under the terms of the farmout agreement wherein Enterprise Oil Company only earned the leasehold interest by production. It was therefore Pend Orielle's decision to refuse permission for Geo² testing to avoid risk of jeopardy with the pending unitizations. The option period was then cancelled, and Gruy Federal was relieved of all further obligations on the well.

13. Alcorn Production Company No. 1 Fairfax Foster Sutter well in the East Garden City area was followed from its early operations with the understanding of the operator that the well would be available to Gruy for the Geo² tests in the event it was dry of oil and gas, and provided it qualified for Geo² testing. The well data were made available when the well was 300 feet from its total depth. Approval for an option period on the well was granted to Gruy Federal by the Department of Energy Screening Committee, the rig agreed to stay on for well completion, and the landowner had granted approval. The last 300 feet of hole on this well found several producing gas reservoirs. This terminated the test possibility for the well.
14. Total Petroleum, Inc. and Border Exploration Company No. 1 Means well in Wharton County, Texas, was drilled as a wildcat Wilcox test well outside any of the Bureau of Economic Geology recognized areas. It was offered to Gruy as it neared total depth. A takeover deal was negotiated with the operators, and approval was obtained from the Department of Energy for an option period pending a final review of the well logs. During a logging run, a radioactive device was lost in the well and could not be recovered. The well was eventually junked.
15. Tenneco Oil Company Fee "N" Well No. 1, Bayou Jean La Croix area, Terrebonne Parish, Louisiana, was closely followed from early drilling through completion with the full cooperation of the operator. Arrangements had been made to retain the rig on location for completion operations. The well fully qualified for Geo² testing in multiple sands. A formal recommendation was submitted to and approved by the Department of Energy Screening Committee. A final meeting for WOO takeover was scheduled with the operator including the presence of Mr. Keith Westhusing. At this meeting, the operator informed Gruy that their management was most interested in performing Geo² tests on the well for a long term period of time as opposed to the planned thirty day test period and that Tenneco contemplated making separate arrangements with the Department of Energy. Tenneco advised that they would, therefore, set the necessary casing liner and release the rig while such plans were being made. Gruy has cooperated with Tenneco in this regard to the extent of meeting with and providing to Tenneco all of the procurement and other necessary procedures to work with the Department of Energy.
16. Sabine Production Company No. 1 Goudeau, St. Landry Parish, Louisiana, is a deep Tuscaloosa formation test well located in the False River trend. After having our program with the Department of Energy extended to include the Tuscaloosa sands, we obtained all pertinent data on this well

through personal contact with the operator. Extensive study and planning toward special material requirements required for H₂S gas were made. All other pertinent data preparatory to reducing our study to a formal recommendation to take over the well as a WOO prospect were only pending final review of the well log data through the objective zone. As drilling progressed toward total depth, it became evident that the well would not penetrate the Geo² Tuscaloosa aquifer. Pressures were near normal, and the well most likely encountered a major fault, placing the hole in an environment that would not meet the parameters for Geo² testing. Drill pipe became stuck, and the operator at last report was making an effort to fish out stuck and cemented drill pipe to a sufficient depth to permit sidetracking the well. Should this become successful, we will again review its potential.

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Exhibit 7

POTENTIAL WELLS OF OPPORTUNITY AS OF FEBRUARY 10, 1979

Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
9/20	Atlantic Richfield Company #1 W.L. Crews, et al Estate	Brazoria	Wildcat	22,000	Logging, 13,000 feet. May, 1979 targeted TD.
12/4	Prairie Producing Company #1 Elsie Christensen	Brazoria	Wildcat	16,500	Drilling, 12,591 feet.
12/11	The Anschutz Corporation #1 Ada Sharpe	Brazoria	Wildcat	18,000	Location.
11/27	Continental Oil Company #1 Gabriel P. Trahan	Acadia	Rayne	19,500	Drilling 13,810 feet. The operator has indicated that the well can be made available to the program. Target date - late March.
11/30	Inexco Oil Company #1 Williams, Inc.	Assumption	Wildcat	19,500	Drilling, 14,437 feet. Inexco indicates willingness to cooperate.
8/2	North American Royalties #1 J.A. Davis	Cameron	Wildcat	15,000	Drilling below 12,297 feet.
9/13	Tenneco Oil Company #1-N Tenneco Fee	Terrebonne	Wildcat	17,500	Waiting on decision as to how to test well (sole benefit or under DOE program.) Target date early March.
10/25	Wainoco Oil and Gas & Bradco Oil and Gas #1 Palmer Brothers	Terrebonne	Wildcat	15,800	Fishing at 15,114 feet. Operator advises that liner will be run and that well probably will be productive.
11/10	The Stone Oil Corporation #1 L.B. Broussard, et al	Vermilion	LacBlanc	18,000	Drilling at 3,239 feet. This is an outstep near the Pecan Island area of geothermal interest and can be available if dry. Target date June or July.
2/20	The Superior Oil Company #1 Willis Hugin	Vermilion	Wildcat	21,000	Fishing. Superior will continue attempts to recover drill pipe until 2/15 after which they are inclined to make the well available to the program. This decision has not reached the upper management level.

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Exhibit 7
Potential Wells Of Opportunity As Of February 10, 1979
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Date Permitted	Well Name	County/Parish	Field	Proposed Depth	Comments
1/8	Neuhoff Oil and Gas Corporation #2 Fairfax Foster Sutter	St. Mary	E.Franklin	15,500	Drilling at 4067 feet. Near approved W00 prospect which proved productive
7/25	The Superior Oil Company #1 S/L 7444	Cameron	Deep Lake	15,500	Location.
11/21	Houston Oil and Minerals Corp. #1 Aline M. Reina, et al	Cameron	Kings Bayou	15,000	Location. Lower priority because inland drilling barge required.
6/19	Inexco Oil Company #1 University of Texas	Galveston	Wildcat	11,500	Running casing, 9,534 feet.
6/23	Inexco Oil Company #2 C.B. Hamil	Matagorda	Wildcat	16,200	Drilling 14,452.
5/18	Marathon Oil Company #1 J. Burton Le Blanc et al	E.Baton Rouge	Wildcat	21,500	Set 9-5/8" casing 16,390. Drilling below 17,282 feet in sidetracked hole. Well trouble. Tuscaloosa test.

PARTICIPATION OF GRUY FEDERAL STAFF IN WORKSHOPS AND CONFERENCES

From C/K GeoEnergy Corp. publications

Sept. 28-29, 1977	Geo ² site selection subgroup Geo ² environmental/laboratory research/local subgroup Geo ² drilling and testing subgroup
Nov. 3, 1977	Geo ² drilling/testing subgroup
Nov. 3, 1977	Geo ² environmental/laboratory research subgroup
Nov. 4, 1977	Geo ² site selection subgroup
Nov. 4, 1977	Geo ² legal/institutional subgroup
Nov. 15, 1977	Geo ² C/K GeoEnergy overview group
Nov. 16-18, 1977	Third Geopressed Geothermal Energy Conference
Dec. 12-13, 1977	Geothermal Resources: Survey of an Emerging Industry
Dec. 21, 1977	Informal C/K GeoEnergy group meeting.
Feb. 22, 1978	Geo ² legal/institutional subgroup
April 25, 1978	Geo ² site selection subgroup
April 26, 1978	Geo ² environmental/laboratory research subgroup
July 17, 1978	Geo ² legal/institutional subgroup

Exhibit 8

Alan Lohse in attendance.

Dr. Lohse reviewed status of W00 program. Dr. Hartsock in attendance.

Environmental approval requirements for W00's discussed. Laura Donaldson and Rod Pease were in attendance.

Laura Donaldson and Dr. Hartsock were in attendance.

Rod Pease in attendance.

Dr. Hartsock reviewed Gruy Federal well test project status. Laura Donaldson in attendance.

Hartsock, Donaldson, Gruy, & Lohse in attendance.

Laura Donaldson attended in Dr. Lohse's absence.

Dr. Lohse discussed the W00 program. Points mentioned were (1) the special insurance program required for the wells, (2) wells monitored in the month preceeding and (3) the W00 in Wayne County Georgia. Laura Donaldson and Dr. Hartsock were in attendance.

Dr. Lohse spoke again of the well in Georgia and discussed a change in game plan in the W00 program, i.e., reentry of old holes.

Dr. Hartsock brought subgroup up to date on status of the Gruy Federal contract. Mr. R. J. Dobson in attendance.

Mr. Dobson and Dr. Hartsock attended.

Mr. Dobson and Dr. Lohse discussed reentry program, letters sent and criteria that should be met for a well to qualify as a re-entry or a W00.