

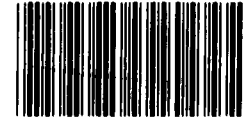


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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ENERGY AND MINERALS
DIVISION

NOVEMBER 25, 1980

B-196920



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The Honorable Cecil D. Andrus
The Secretary of the Interior

Dear Mr. Secretary:

Subject: [Followup on Actions Taken in Response
to GAO Recommendations Concerning the
Department of the Interior's March
1979 Shut-In and Flaring Wells Report]
(EMD-81-23)

As you are aware, the Outer Continental Shelf (OCS) Lands Act Amendments of 1978 require the Secretary of the Interior to prepare an annual report listing all shut-in oil and gas wells and wells flaring natural gas on OCS leases. Section 601(b) of the Amendments requires the General Accounting Office to review and evaluate the methodology used by the Department in allowing wells to be shut-in or flare natural gas, and to report to the Congress. On November 21, 1979, we issued our first report on Interior's methodology and recommended several ways that Interior could improve its report and enhance its OCS oversight role.

In June 1980, we were advised by Interior and U.S. Geological Survey officials that the Department's fiscal year 1979 shut-in and flaring well report, which should have been issued by March 1980, had been drafted but was not yet issued. The report was issued on October 20, 1980. Since, prior to that date, we had completed our review of actions taken by Interior and the Survey in response to the recommendations made in our November 1979 report, we are reporting several areas of continuing weakness that we believe need to be called to your attention at this time. We are also concerned about the Department's 6-month delay in issuing the fiscal year 1979 report and about questions raised by Department officials regarding whether the report fulfills the Congressional intent. These matters are discussed below.

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THE SURVEY'S VERIFICATION AND FOLLOWUP PROCEDURES
FOR SHUT-IN WELLS NEED IMPROVEMENT

The Survey continues to accept data from OCS operators without analyzing or verifying the reasons wells are shut-in and the reasonableness of corrective actions planned to restore shut-in wells to production. Furthermore, although a followup program has been initiated to identify operators who are not timely in commencing corrective actions, the followup program has little value since the Survey does not question the validity of delays or require operator justification for extending planned corrective action dates.

Limited verification of operator-reported
data regarding shut-in wells

In our 1979 report, we recommended that the Survey should begin testing reportings of shut-in well completions by OCS operators to assure that (1) the reported problems exist and (2) corrective action planned is reasonable and timely. In responding to our recommendation, on January 29, 1980, the Department indicated that procedures to test or verify the reasonableness of operator data had just been initiated when the first shut-in report was issued in March 1979. According to the Department, after having inspected hundreds of operator field records and facilities, it was decided that the Survey's verification procedures were adequate. Our current review indicates that although the Survey monitors information submitted by OCS operators regarding shut-in wells, verification of that information is essentially limited to validating Survey reports with reports submitted by operators. Little is done to verify the reasonableness or validity of data submitted by OCS operators.

The Survey currently relies on OCS operators to report each month on shut-in wells. The operators report the reason for the shut-in, the type of corrective action required to restore the well to production, and an estimated date the corrective action will begin. Survey district inspectors, as part of their routine platform inspection visits, verify the status of shut-in wells reported by operators. The inspectors attempt to determine why a well is shut-in by visually inspecting the well, reviewing platform records, and having discussions with platform personnel. There is no verification of operators' estimates of what planned corrective actions will be taken to restore a shut-in well to production, or when.

Following the inspections, the inspection results are recorded and compared to data previously reported by the operators. Although the inspections are performed routinely, comparison of the results with operator-reported data is done only on a spot-check basis when time permits. According to Survey officials, discrepancies are normally treated as data processing or clerical errors. The errors are resolved by contacting the operator and asking whether the information obtained by the inspector or the information supplied by the operator is correct.

Survey officials admit that the quality of information obtained through its inspections is questionable since (1) the only thing to be learned from visually inspecting a shut-in well is that it is indeed shut-in, (2) there is no requirement that there be platform records pertaining to the shut-in, and (3) platform personnel may or may not know why a well is shut-in and if, when, or how it will be restored. Regarding operators' planned restoration attempts, the officials felt it would be difficult to question an operator's estimate because the Survey does not review economic factors considered in scheduling workover operations. Furthermore, Survey officials believe they do not have the authority to require restoration attempts should they disagree with an operator's estimate. Although recognizing that its current procedures do not fully serve as an independent verification of operator-reported information, the Survey does not plan to expand its verification process. We were told that in order to do so, the Survey would need technical information currently maintained only by operators.

We believe the Survey's current monitoring methods fall short of providing an assessment of the reasonableness of information provided by OCS operators. We recognize that the Survey currently does not have access to the technical data used by operators to support decisions to shut-in wells, or to plan corrective work to restore shut-in wells. We believe, however, that the Survey should request and review such data on at least a selective basis. Such reviews could provide the Survey, at least to some degree, a basis for accepting operator decisions regarding shut-in wells.

Followup on operators' planned corrective actions still needs improvement

In our 1979 report, we recommended that the Survey should implement a followup program to verify that the operator starts and completes the corrective work needed to restore a shut-in well as and when planned. The Department

responded on January 29, 1980, that it had implemented a program to verify the promptness of operators in initiating corrective action needed to restore shut-in wells as and when planned. During our current review, we found that although the Survey has begun keeping track of operator delays in initiating restoration attempts, it does not question the validity of the delays or require operator justification for extending corrective action dates.

To identify restoration delays the Survey monitors dates reported by operators through two computer reports-- one that lists planned corrective actions that are 90 days or more overdue and another that lists changes in planned restoration dates. When it identifies expired corrective action dates, the Survey notifies the operator and inquires about the status of the planned corrective action. According to a Survey official, the operator usually submits a new estimate that is accepted by the Survey and recorded as the new date corrective attempts are to occur. The validity of the new estimate is not questioned nor is the operator required to justify the extension. In addition, the Survey does not question those restoration dates which are changed.

A Survey official told us that since the Survey does not question restoration dates originally proposed by operators, it has no basis for questioning a revised date. Furthermore, as stated earlier, Survey officials believe that since the Survey does not maintain technical or economic data used by operators in planning restoration attempts, it would be difficult for the Survey to question those plans or to require restoration if it disagrees with an operator's estimate.

We believe the Survey has taken a step in the right direction in its monitoring of planned corrective action dates that have lapsed and changed. We question, however, the value of having such controls if the Survey merely accepts revised operator estimates without question. We believe the broad authority granted the Secretary in the OCS Land Act Amendments of 1978 includes the authority to require production from shut-in wells. The Survey should review operators' plans and dates for restoration from the viewpoint of promptness and effectiveness, and in the event of a disagreement should question the operator. A prudent operator will be able to justify its position-- any disagreement should be recorded and reasonable efforts made to establish a new date.

INADEQUATE MONITORING
OF FLARING

The Survey has not substantially improved its monitoring of approved long-term gas flaring since our last review. Furthermore, although the Survey has begun to follow up on reports of emergency flaring provided by operators, it needs more information to determine the extent of unreported, excessive short-term flaring.

Systematic monitoring of approved
long-term flaring needed and
approval criteria not being applied

In our 1979 report, we recommended that the Survey

--begin testing approved long-term (extended) flaring to assure that the flaring conducted is for only those amounts and periods permitted by the statute and revised regulations, and

--implement a followup program to verify that the approved flaring of natural gas ceased when scheduled or an extension, where justified, was issued.

In responding to our recommendation, the Department indicated it had started to review routinely and periodically each approved long-term flaring project to assure that flaring is conducted for only the amounts and periods permitted by statute and regulation. The Department also stated it had implemented a program to verify that the approved flaring of natural gas ceased when scheduled or an extension, where justified, was issued.

Expired flaring approvals

The Survey did not begin reviewing approved long-term flaring until about December 1979. At that time, while gathering information for its fiscal year 1979 shut-in flaring well report, the Survey discovered that three of the six long-term approvals listed for September 1979 had in fact expired. Although the three were subsequently extended or reapproved, all three had flared for 1 year or longer without approval. Furthermore, although the Survey was aware that the September 1979 listing of approved flarings

contained the three expired approvals, it submitted the erroneous listing to Survey headquarters for inclusion in the fiscal year 1979 shut-in and flaring report.

A Survey official agreed that the three wells should not have been allowed to continue flaring with an expired approval. Officials explained that because these had been prior approvals and because they had been or would be re-approved, they decided to include them in the September 1979 listing of approved flarings. Survey officials maintain that they have been monitoring long-term flaring more closely in 1980 and have taken action to identify and extend, where justified, long-term approvals that expire.

Unsystematic monitoring approach

We have reservations concerning the adequacy of the Survey's monitoring system. It is very informal, unsystematic, and, if left unchanged, will continue to present difficulties in determining whether long-term approvals are in compliance with approval conditions. In monitoring approved long-term flaring, Survey personnel must keep abreast of approvals and extensions that have been granted, expiration dates for approvals and extensions, monthly reports of all operators flaring gas, monthly reports of operators flaring gas under an approval, and operator requests for approvals and extensions. The Survey maintains a variety of reports and files to monitor long-term approvals. But it does not have a formalized coordinated system to utilize its information in monitoring long-term approvals.

We found that in monitoring and preparing reports regarding long-term approvals, Survey personnel use a very unsystematic and undocumented approach. There are no written procedures regarding monitoring or report preparation. Further, because no systematic approach is followed, it is difficult to review or recreate past monitoring efforts or even reconstruct previously reported information. Also, monitoring efforts do not always indicate whether operators who are required to submit periodically data regarding approved flaring are doing so in a timely manner.

The Survey is contemplating establishing a tickler system that will identify flaring approvals that are about to expire and thus allow the Survey advance notice to

contact operators regarding the expiration. Aside from the tickler system, the Survey has no specific plans for altering its monitoring system.

Insufficient information
submitted with approval requests

The Survey does not consistently obtain the type of information it needs to decide whether to approve requests for long-term gas flaring. OCS Order No. 11 provides for Survey approval of oil well gas flaring provided that (1) positive action has been initiated to eliminate the flaring or (2) the flaring will result in an ultimately greater total energy recovery. In applying for approvals or extensions to flare oil well gas, the regulations call for operators to provide specific information such as

- the estimated amount and value of oil and gas resources that would be lost if the application were rejected;
- the estimated total amount of oil that would be recovered and the associated gas that would be flared if the application were approved; and
- all appropriate economic, engineering, and geologic data in an evaluation showing that the absence of approval to flare gas will result in premature abandonment of oil and gas production or curtailment of lease development.

We reviewed operators' requests for extending approvals listed in the Survey's September 1979 report of approved flarings and found that operators submitted varying degrees of information and did not always include the type of information called for in the regulations. For six approval requests reviewed, four included the information required by OCS Order No. 11. The remaining two, although containing some of the required information, were not specific regarding the amount and value of resources that would be lost if flaring was disallowed. Neither did they present an economic evaluation showing that the absence of an approval would result in premature abandonment of oil and gas production or curtailment of lease development. Although the requests did not contain all the required information, they were all approved by the Survey.

More information and followup needed
regarding unreported emergency flaring

In our 1979 report, we recommended that the Survey test reports of emergency flaring for excessive flaring. In responding to our recommendation, the Department indicated it would continue to review its procedures regarding short-term (emergency) gas flaring, and continue to review all company-submitted followup reports of emergency flaring to reduce the amount of gas flared without significant interruption in the rate of oil production. We found that although the Survey has begun testing reportings of emergency flaring, it needs more information from operators to determine if unreported emergency flaring occurs, and should follow up to ensure that operators do indeed stop excessive flaring that is identified.

Survey regulations allow the intermittent flaring of small volumes of gas in oil and gas wells without approval in instances of (1) gas vapors released from low-pressure production vessels, (2) emergencies, and (3) well purgings and evaluation tests. In the case of emergency flaring, if the flaring is continuous for over 24 hours, the operator must report the flaring to the Survey, but needs no approval at that time. However, when emergency flaring is continuous for over 72 hours or exceeds 144 hours in a month, the operator must notify the Survey and obtain approval to continue to flare.

In monitoring for excessive short-term flaring, the Survey requires operators to provide monthly reports showing the volume and type of gas flared by lease. These reports do not indicate the hours associated with the flaring and thus cannot be used to verify whether unreported emergency flaring occurred. Instead, the Survey relies on operators to report instances of emergency flaring. Upon notification, the Survey records information regarding the flaring, determines if the flaring should cease or be inspected, and advises the operator to submit a written report. We were told that although operators do not usually report the hours associated with gas flaring in their monthly reports, such information is usually available in platform records. Although we realize that the hours flared may not be maintained on a well-by-well basis, reviewing such data even on a platform basis could aid the Survey in better identifying and investigating instances of unreported emergency flaring.

In addition to monitoring voluntary reports of emergency flaring, the Survey prepares and periodically reviews

a 6-month summary report of gas flared by OCS operators. To identify excessive flaring, the Survey reviews the percentage and volume of gas flared during the 6-month period. If the Survey suspects an operator has been flaring excessively without an approval, it notifies the operator and requests an explanation for the flaring. Upon receiving the explanation, the Survey assesses whether the explanation is "reasonable" and files it. Thus far, all explanations have been "reasonable." There is, however, no followup to ensure that the flaring actually ceased. In our opinion, without timely followup to ensure that flaring actually stops, the value of the Survey's monitoring efforts is diminished. Further, without timely followup, operators who have been flaring excessively could continue to waste natural gas resources that might otherwise be commercially produced.

"NO FUTURE UTILITY" WELLS
NOT IDENTIFIED FOR POSSIBLE
PLUGGING AND ABANDONMENT

In our 1979 report, we recommended that the Survey be directed to

- review the circumstances of OCS wells that are shut-in and categorized as "no future utility" to determine which of these have idle or useless structures and/or equipment that can be removed from the OCS; and
- enforce, where feasible, regulations pertaining to the plugging and abandonment of wells actually having "no future utility."

The Department responded to our recommendation by pointing out problems associated with plugging and abandoning "no future utility" wells. In December 1979, the Department changed the language of its regulations by requiring plugging and abandoning wells that are "no longer useful" rather than "no longer used or useful." The Department's rationale for the change was that some well bores that are no longer used might still be useful. The Survey felt this would allow operators to postpone plugging and abandonment operations until such action is appropriate from a safety, production, and economic standpoint.

Our purpose for the recommendations was to persuade the Department to include in its report information that will advise the Congress how many and which of the shut-in

wells are actually dry and have no future utility. We felt that Members of Congress concerned with environmental issues are interested in knowing why such wells have not been plugged and abandoned and the lease cleared as required by regulations. The Department, however, focuses its attention on well completions, i.e., zones within a single well bore. Its report is confusing and misleading because it addresses shut-in well completions rather than shut-in wells. ^{1/} Members of Congress who may not be familiar with the terminology might not be able to discern from the report that a well bore may include several completions or zones, some of which may be shut-in, some producing, and some with potential production. Obviously, a well bore which includes producing or potential producing zones and shut-in well completions should not be plugged and abandoned.

We identified a number of "no future utility" wells that apparently could and should be plugged and abandoned. According to Survey data, as of September 1979, there were 3,635 shut-in oil and gas well completions classified as having "no future utility." We made a limited analysis of these completions and identified at least 117 located in well bores from 39 platforms and 3 well jackets where there is no production or potential production. Many of these have been in this status for at least 6 years.

In discussing Survey practices, the Metairie District Supervisor told us that district inspectors do not normally review the circumstances surrounding shut-in, "no future utility" wells to determine if idle or useless structures can be removed. The Supervisor stated that the District does not require an operator to plug and abandon a well simply because it is shut-in and classified as having "no future utility." Usually, plugging and abandoning actions are initiated by operators, rather than the Survey, at the time of lease expiration.

^{1/}The Department statistics refer to individual well completions rather than numbers of actual wells drilled. Actually, the well is the wellbore, or hole, made by the drill bit. The well completions are the strings of tubing (one or more smaller diameter pipes) placed within the well bore and through which the oil or gas is produced. Using two or more tubing strings enables operators to produce oil or gas from two or more reservoirs simultaneously through the same borehole when multiple reservoirs are encountered. For Survey data gathering purposes, each completion is treated as a separate well.

We discussed this matter with the Survey's Deputy Conservation Manager of Offshore Field Operations for the Gulf of Mexico OCS Region. As a result, the Deputy Conservation Manager, in a September 22, 1980, memorandum to the district supervisors, clarified the Survey's policy with respect to reviewing "no future utility" wells. The memorandum pointed out that Survey regulations require plugging and abandonment of wells that are no longer useful and that district personnel should be more actively reviewing such wells. The memo recognized that there may be situations where immediate plugging and abandonment of wells may not be feasible from a current or future production standpoint. However, it directed at least some review by the District Supervisor in deciding the best course of action.

We agree that there may be various circumstances surrounding OCS wells classified as having "no future utility" that might preclude requiring operators to plug and abandon such wells. We believe, however, that in instances of single "no future utility" wells or "no future utility" wells located on platforms with no other wells producing or producible, the Survey should at least review the circumstances involved and determine if such wells should be plugged and abandoned and the associated structures removed. The Survey's recent effort to address this situation is a step in the right direction and we encourage followup efforts to ensure that appropriate "no future utility" wells are in fact plugged and abandoned and associated structures removed.

PROCRASTINATION IN ISSUING REPORT

We are concerned over Interior's procrastination as well as its methodology in preparing its fiscal year 1979 report. The law calls for the report to be issued within 6 months after the close of the fiscal year, or by March 1980. The Department has not complied with its legislated mandate because the report was not issued until October 20, 1980, and the actions taken to prepare it leave much to be desired. We believe that Interior should make a concerted effort to comply with the annual reporting requirements of the OCS Lands Act Amendments as long as the law remains in effect.

It is our understanding that the principal reason the Congress enacted the legislation requiring an annual shut-in and flaring report was because of its concern that OCS operators might be withholding production in anticipation

of future higher prices. The annual report is intended to provide the Congress with some oversight of this important area. Based on the manner in which shut-in and flaring data are gathered, monitored, and reported by the Department, we believe that the needs of the Congress are not being met. Indeed, some of the Survey officials charged with responsibility for preparing the annual report have expressed uncertainty as to the intent and usefulness of the report. They told us that if the intent is to show whether OCS operators are deliberately withholding production, the reporting approach currently used does not achieve that goal. They generally believe that OCS operators are in fact producing as much as possible.

In light of the apparent uncertainty concerning the usefulness of the report, we believe it would be appropriate for the Department to review its approach to meeting the legislative requirement of an annual report. If it is believed that the congressional intent is not or cannot be met through continued reporting efforts or that it is not worth the effort to develop such a report, legislative relief from the annual reporting requirement should be sought. However, until such a decision is reached, every effort should be made to provide the Congress, within the timeframes specified, the best possible information on the subjects dealt with in the legislation.

CONCLUSIONS AND RECOMMENDATIONS

We believe that while some improvements have been made in response to our previous recommendations, many of the conditions we reported still exist. The Survey's monitoring efforts regarding shut-in well problems and restoration dates still do not provide an independent assessment or periodic questioning of the validity of operator-reported conditions and estimates. In the area of natural gas flaring, the Survey's monitoring efforts are unsystematic and undocumented. The Survey needs more information to decide whether to approve operators' requests for long-term gas flaring, and to determine whether unreported emergency flaring is occurring. The Survey also needs to follow up to ensure that operators suspected of excessive flaring have actually ceased such flaring.

We recognize the Survey's recent efforts in planning to review "no future utility" wells and to identify those that should be plugged and removed from the OCS. The Survey should ensure that "no future utility" wells are identified and, where appropriate, require OCS operators to plug and remove the wells and associated structures and equipment.

We recommend that the Secretary of the Interior review the Department's approach to preparing the annual report on OCS shut-in and flaring wells. If, after such review, the Secretary believes that the annual report does not result in beneficial results at least commensurate with the cost of preparing it, the Department should seek legislative relief from the annual reporting requirement. Meanwhile, as long as the law remains in effect, the Secretary should instruct the Director of the U.S. Geological Survey to

- review supporting data used by OCS operators so as to assess the reasonableness and validity of such decisions;
- obtain justification from operators who continually extend planned restoration dates;
- require operators desiring approval of long-term gas flaring to submit all of the information required by OCS Order No. 11 as necessary for deciding whether to grant such approval;
- establish a more systematic and documented approach to monitoring long-term approvals for compliance with approval conditions;
- follow up on operators suspected of excessive flaring to ensure that such flaring ceases; and
- implement a followup program to ensure that "no future utility" wells that can be plugged and abandoned are reviewed and, where appropriate, plugged and abandoned, or modify existing regulations if it is believed enforcement of the regulations is inappropriate.

AGENCY COMMENTS

We met with Department and USGS-Metairie officials and obtained their comments regarding our findings and recommendations. They substantially agreed with most of our recommendations, particularly those concerning monitoring long-term flaring.

The Department and USGS-Metairie officials did not agree with our recommendation concerning periodic testing of shut-in well data submitted by OCS operators. According

to the officials, in order to expand current procedures, the Survey would need additional personnel resources to conduct testing of operator-submitted data. The officials indicated that to determine independently why a well is shut-in would require very time-consuming and detailed analyses that probably would not uncover whether an operator is deliberately withholding production. Based on our discussion, we have clarified our recommendation to indicate that the Survey should review operator data supporting a decision to shut-in a well. We are not suggesting that the Survey devote existing resources to such measures as independently testing wells to determine if and why a well is shut-in. We believe, however, that the Survey should at least do more than compare operator reports with Survey reports based on the same operator data. Unless there is at least some review of supporting data upon which operator reports are based, the Survey has no basis for disagreeing with operators and thus will continue to serve merely as a conduit of unverified operator data to the Congress.

Regarding our recommendations concerning reviewing "no future utility" wells for possible plugging and abandonment, Department officials indicated (1) there is uncertainty as to the benefits derived from requiring operators to plug and abandon wells prior to lease abandonment, and (2) if the Department would require such actions, operators would probably discontinue classifying wells as having "no future utility" in order to avoid plugging and abandoning the wells until the lease is relinquished. We feel, however, that as long as the Department has responsibility for managing OCS activities, including plugging and abandoning wells, and has regulations specifically requiring such plugging and abandoning and removal of idle and useless structures, it should require adherence to those regulations. If the Department believes such regulations are inappropriate and can show why, then it should take whatever action is necessary to modify the regulations.

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Section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report; a like statement to the House and Senate Committees

on Appropriations should accompany the agency's first request for appropriations made more than 60 days after the date of the report.

Copies of this report are being sent to the Director, Office of Management and Budget; the Chairmen, House Committees on Appropriations and Government Operations and Senate Committees on Appropriations and Governmental Affairs; and the Chairmen, House Committee on Interior and Insular Affairs and Senate Committee on Energy and Natural Resources.

Sincerely yours,


for J. Dexter Peach
Director