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PROJECT PERFORMANCE ASSESSMENT REPORT

AZERBAIJAN REPUBLIC

PETROLEUM TECHNICAL ASSISTANCE PROJECT
(Credit 2708-AZ)

April 27, 2006

Sector, Thematic, and Global Evaluation Group
Independent Evaluation Group

Currency Equivalents (annual averages)

Currency Unit = Azerbaijanian Manat (AZM)

1995	US$1.00	4413	Manats
1996	US$1.00	4301	Manats
1997	US$1.00	3985	Manats
1998	US$1.00	3869	Manats
1999	US$1.00	4120	Manats
2000	US$1.00	4474	Manats

Abbreviations and Acronyms

CAS	Country Assistance Strategy
EBRD	European Bank for Reconstruction and Development
FID	Foreign Investment Department (of SOCAR)
FSU	Former Soviet Union
GOA	Government of Azerbaijan
ICR	Implementation Completion Report
IDA	International Development Association
IEG	Independent Evaluation Group
IT	Information Technology
MIS	Management Information System
MOP	Memorandum of the President
MT	Metric Ton
MTR	Midterm Review
PCD	Project Concept Document
PIU	Project Implementation Unit
PPAR	Project Performance Assessment Report
PPF	Project Preparation Facility
PSA	Production Sharing Agreement
PTAP	Petroleum Technical Assistance Project
QAE	Quality at Entry
REC	Reservoir Engineering Center
SOCAR	State Oil Company of Azerbaijan Republic
SW	Staff Week
TA	Technical Assistance

Fiscal Year

Government: January 1 – December 31

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IEG Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by IEG. To prepare PPARs, IEG staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader IEG studies.

Each PPAR is subject to a peer review process and IEG management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the IEG Rating System

The time-tested evaluation methods used by IEG are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEG evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the IEG website: http://worldbank.org/oed).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. Possible ratings: Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Contents

This report was prepared by Mohammad Farhandi (Consultant), who assessed the project in April 2005. The report was edited by William Hurlbut, and Helen Phillip provided administrative support.

Principal Ratings

	*ICR**	*ICR Review**	*PPAR*
Outcome	Satisfactory	Moderately Satisfactory	Unsatisfactory
Sustainability	Likely	Non-Evaluable	Non-Evaluable
Institutional Development Impact	Modest	Modest	Modest
Bank Performance	Satisfactory	Unsatisfactory	Unsatisfactory
Borrower Performance	Satisfactory	Unsatisfactory	Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate Independent Evaluation Group (IEG) product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

Project	*Task Manager/Leader*	*Division Chief/ Sector Director*	*Country Director*
Appraisal	Michael Levitsky	Jonathan Brown	Yukon Huang
Completion	Michael Levitsky	Peter Thompson	Judy O'Connor

Preface

This is a Project Performance Assessment Report (PPAR) on the Azerbaijan Petroleum Technical Assistance Project. A credit of SDR14.3 million (US$20.8 million) was approved for the project on April 20, 1995, and became effective on November 22, 1995. The credit closed on November 30, 2000, and SDR 7.3 million (US$11.5 million) was cancelled.

The PPAR presents the findings of a mission to Azerbaijan in April 2005 by the World Bank Independent Evaluation Group (IEG). The mission met with the officials of the State Oil Company of the Azerbaijan Republic (SOCAR), State Gas Company (Azerigas), Ministry of Industry and Energy (MIE), Ministry of Economic Development (MED), European Bank for Reconstruction and Development (EBRD), as well as with private oil and gas companies and the Bank staff. The cooperation and assistance of the government officials, the officials of energy sector entities, and various other concerned organizations is gratefully acknowledged.

The project was the Bank's first lending operation in Azerbaijan and was for a sector whose viable operation was essential to the country's economic recovery. The project's concept and principal objective were consistent with the country's development priorities and the Bank's assistance strategy, but many project activities were not completed and over 50 percent of the credit amount was cancelled. Also, the project's performance ratings under the Implementation Completion Report (ICR) differed in some areas from those in the ICR Review prepared by IEG. For those reasons, and because of the continuing importance of the oil and gas sector to the economy, an assessment was deemed necessary. The purpose of the PPAR was to assess in more depth the project's quality at entry, as well as its outcome, institutional development impact, and sustainability, to propose lessons from the experience. (Concurrently with this PPAR, IEG also assessed the Gas System Rehabilitation project).

The PPAR draws on the Memorandum and Recommendation of the President (MOP) and its appended Technical Annex (Report No. T-6377-AZ of March 28, 1995), the ICR (Report No. 22113 of May 31, 2001), and other related documents.

Following standard IEG procedures, copies of the draft PPAR were sent to government officials and agencies for their review and comments, but none were received.

Summary

Azerbaijan's oil production began to decline almost two decades before its independence in 1991. The decline was due to inadequate investment, lags in using modern technology, and the natural depletion of the producing oilfields.

After the disintegration of the Soviet Union, Azerbaijan's economy declined rapidly and real output fell by over 50 percent during the period 1991-95. Revival of the oil and gas (hydrocarbon) sector was considered the most effective way to reverse the economic downturn. Increased revenue from oil exports and reduced natural gas imports were expected to generate substantial earnings in foreign exchange. Accordingly, the country's development agenda gave its highest priority to increasing hydrocarbon production. This was supported by the Bank's country strategy at the time.

However, to revive the hydrocarbon sector, Azerbaijan faced two sets of challenges. One was the need to continue investments in the existing fields to maintain the production. But the fields were old, production was declining, and the infrastructure was dilapidated. Another was the even larger investment required (estimated at US$10 billion over 1995-2005) to tap the potential for new production from large undeveloped offshore fields, which had far greater prospects than the existing fields.

Since most of the needed investment (both for the development of new fields and the rehabilitation of the old ones) had to come from the private sector, the Bank's strategy was to support the government with a package of technical assistance (TA). The main objective of this assistance was to create an enabling policy and institutional environment to facilitate private sector investment in the petroleum sector. This objective was consistent with the country and the Bank strategy. However, the design of the project had several shortcomings. The most important of these was that the multitude of diverse activities and the significant policy conditions exceeded the limited capacity of the implementing agency and the government. As a result, the ability to achieve the project's main objective was substantially weakened. Also, the majority of the credit amount was allocated to address problems associated with the *existing* fields and related infrastructure, whereas the production increases were to come largely from the *new undeveloped* fields.

By early 1994, the country's focus shifted toward the development of the new offshore fields and international oil companies rushed to sign Production Sharing Agreements for the undeveloped offshore basins. This distracted government attention from the project's aims and left implementation essentially up to the Project Implementation Unit. But the PIU did not have sufficient authority to ensure the implementation of the key policy actions needed to ensure a successful project outcome.

The Bank twice missed opportunities to adjust the project's design to the rapidly changing environment. First, during the project preparation stage from 1993 to 1995 the design evolved very little. Yet by 1995 the shift in the country's and private sector's focus toward the undeveloped fields had already occurred. The Bank did not rebalance the project's components to increase the activities related to undeveloped fields. Further,

during implementation, even the activities that were included in the project's original scope for the undeveloped fields were not implemented. Second, the Bank did not restructure the project to simplify the design and sharpen its objectives following the midterm review (MTR), even though only about 10% percent of the credit had been disbursed after two years of implementation.

The project's poor quality at entry, combined with the shift of the government's focus to undeveloped fields, caused the project to gradually lose momentum and undermined the achievement of its objectives. Many activities were never completed, including major ones such as the development of petroleum legislation and exploration promotion. At the end, about 50 percent of the credit amount was canceled, and of the amount disbursed, about half was for activities that were not part of the project's original scope. Accordingly, the outcome of the project is rated unsatisfactory and its sustainability is non-evaluable. While the project contributed to strengthening State Oil Company's (SOCAR's) institutional capacity, the extent of the contribution was limited given the size of the SOCAR operation, and institutional development impact is thus rated as modest. The Bank's performance during lending and implementation phases is rated unsatisfactory and the borrower's performance is also rated unsatisfactory on balance.

Some of the key lessons from this evaluation are:

- Under country and sector conditions like those in Azerbaijan, the design of the project should have been simpler, to include only a few high impact components and substantial "real time" interventions by the Bank in response to the borrower's needs.

- The need to include major legislative action as a policy condition needs to be carefully considered based on borrower ownership and capacity.

- The Bank needs to ensure that the borrower has in place the necessary arrangements and commitments to ensure that PIUs are given adequate authority (including financial authority) to deal with day-to-day implementation issues.

Vinod Thomas
Director-General
Evaluation

1. Country and Sector Background

1.1 The hydrocarbon sector historically has been a prominent feature of Azerbaijan's economy, accounting for about 15 percent of GDP in 1991. Even before the dissolution of the Soviet Union, however, oil production had begun to decline. Shortcomings in technology and inadequate investment were partly to blame, but onshore hydrocarbon reserves also had been depleted. Oil production fell from 20 million tons in 1970 to half that level in 1993, and net oil exports fell 81 percent, from 8 million tons in 1981 to 1.5 million tons in 1993. Natural gas production also declined 43 percent, from 14 billion cubic meters in 1980 to 8 billion cubic meters in 1993. As natural gas accounted for 60 percent of domestic energy use, Azerbaijan became a large net importer of natural gas, which put a heavy burden on the economy.

1.2 Azerbaijan's economy contracted more than 50 percent between 1991 and 1995, mostly a consequence of the disintegration of highly interdependent economies of the Soviet Union. Inflation ranged from 800 percent to 1800 percent, real wages declined and, mainly due to the decline in oil revenue, the government account registered a deficit of 11 to 13 percent of GDP.

1.3 Revival of the hydrocarbon sector was considered the best hope for an economic recovery, but such a revival would have to address multiple challenges. The continued operation of the existing fields was essential in order to maintain the current production. But the fields were old, production was declining, and the dilapidated infrastructure would require substantial rehabilitation investment. In addition, the only export outlet for oil was the pipeline from Baku to Russia. Finally, the country's two old refineries needed to be upgraded. The country also had large undeveloped offshore fields with great potential, but their development required an even larger investment—estimated at the time at US$10 billion over 1995-2005.

1.4 The economic structure of the sector made investment on such a large scale impossible. The price of energy products was mostly below international levels, and the low prices had created a precarious financial situation for the energy enterprises, which contributed to the lack of new investment and the inadequate investments in maintenance and replacement. Although Azerbaijan adopted a privatization law in 1993, no program was adopted to implement the law. Further, the institutional structure of the sector was weak. The State Oil Company of the Republic (SOCAR) was established in September 1992. However, at the time there was no ministry of energy or petroleum, thus government capacity for focusing on strategic aspects of energy policy was limited. [1]

1.5 Under these conditions, the World Bank's strategy (precipitated by an Energy Sector Review carried out by the Bank in 1993 under Report No. 12061-AZ), was to support the government through a package of technical assistance (TA). The main objective of this package, known as the Petroleum Technical Assistance Project, was to create an enabling policy and institutional environment to facilitate private sector

1. The Ministry of Fuel and Energy was established in April 2001 and subsequently was replaced by the Ministry of Industry and Energy in December 2004.

investment in the petroleum sector, to strengthen the sector institutions, and to liberalize petroleum product prices.

1.6 Oil production was eventually turned around in 1995—though primarily because of development of the offshore fields—and the economy slowly began to recover. Growth has averaged about 10 percent a year over the past five years. The oil production is expected to peak by 2010/2011. Barring any new discovery, production will decline rapidly afterwards, possibly dropping to its 2000 level by 2025. Therefore, Azerbaijan's continued economic recovery will depend on whether it can economically and efficiently manage the exploitation of these exhaustible resources.

The Role of the Bank and Previous Operations in the Sector

1.7 Azerbaijan became independent in 1991 and joined the Bank in September 1992. Following the preparation of its first Country Economic Memorandum in July 1993, the first sector work was a broad review of the energy sector completed in December 1993. The first lending operation for the country was for the Petroleum Technical Assistance Project, which was approved in April 1995.

2. The Project

Concept, Objectives, and Design

2.1 The concept for the Petroleum Technical Assistance Project was consistent with the macroeconomic and sectoral context, aiming to attract foreign private investors in Azerbaijan's petroleum sector to increase hydrocarbon production.[2]

2.2 The project's objectives, as provided in the Memorandum of the President [3]were to (a) accelerate foreign private investment and financial participation in petroleum exploration and production by providing technical assistance to SOCAR, particularly for restructuring of the Guneshli field[4]; (b) strengthen petroleum subsector institutions through development of petroleum legislation, training, and improvement in information systems; and (c) prepare investment projects in the petroleum subsector, through joint studies between SOCAR and foreign advisors.

2.3 The design of the project mostly originated from the findings of the Energy Sector Review (para. 1.5). That review provided a broad analysis of sectoral issues, and

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2. The project's concept and objectives were broadly consistent with Azerbaijan's first Country Assistance Strategy (CAS), which was presented to the Board on April 20, 1995. It was in the form of a limited CAS, and was presented together with the Memorandum of the President for the project as an integrated document, under Report No. P-6377-AZ.

3. A Staff Appraisal Report (SAR) was not prepared for the project. A Technical Annex was prepared.

4. The Guneshli field accounted for about 60% of the oil production in Azerbaijan in early 1990's. Its production peaked in 1990 and then began to decline mainly as the result of inadequate water injection program.

recommended a wide range of policy and operational actions intended to attract foreign investors to increase hydrocarbon production and to rehabilitate the existing energy-related infrastructure as well as constructing new infrastructure. The review emphasized the need to address the pricing distortions, strengthen the sector's institutions, develop a legal framework, establish regulatory agencies, mitigate environmental concerns, and focus on more efficient production and use of natural gas. To this end, the review provided a detailed policy matrix and recommended that the government seek a comprehensive program of technical assistance from international donors in order to develop the sector. Many of the project's activities were based on this policy matrix.

Components and Implementation

2.4 The project consisted of 11 components, entailing 17 activities. These components fall under four broad categories (Annex B).

a) **Support to SOCAR to facilitate private investments in petroleum exploration and production** (68 percent of the project's base cost, or US$14.4 million). The components under this category consisted of (a) financial and contractual advice to assist SOCAR in negotiating contracts with foreign oil companies for the Guneshli field rehabilitation, export pipeline, and other petroleum field and infrastructure projects; (b) legal advice to assist SOCAR in negotiating contracts with foreign oil companies for petroleum projects, export pipeline, and Caspian Sea boundary issues; (c) technical and costing advice to assist SOCAR with preparing and managing a rehabilitation contract for the Guneshli field (shallow water) and for other petroleum projects; and (d) advisory services for petroleum licensing and explorations promotion. These four components covered nine activities, the main objectives of which were to facilitate foreign investment in petroleum exploration and production, and to prepare a rehabilitation project for the shallow water part of the Guneshli field. At the project's closing date, only about 4 percent (US$0.55 million) of the resources allocated to this category was used, and seven of the nine activities were not completed, including critical activities related to financial and contractual advice to SOCAR, the main phase of rehabilitation of Guneshli field (i.e., Phase II), and the advisory services for petroleum licenses and exploration promotion. The only activities that were implemented were the Phase I study of the Guneshli field and a legal study of Caspian Sea boundary. The reasons for not proceeding with implementation of the seven activities ranged from the objectives of the activity being overtaken by the rapidly unfolding events in the country and the sector, to procurement problems.

b) **Institutional strengthening** (8 percent of project's base cost, or US$1.6 million). The components under this category consisted of (a) development of petroleum legislation to provide a legal and fiscal framework for exploration and production of the country's petroleum resources; (b) development of management information system, to strengthen SOCAR's ability in information technology, provide it with satellite communications, and procure computers; and (c) training of SOCAR staff in commercial aspects of the petroleum industry. Component “a” was not implemented because the government decided not to proceed with it. Component “b” was not implemented because of a procurement problem. Only the training of SOCAR staff was carried out. About 16 percent (US$0.25 million) of the amount allocated to this category was used.

c) **Investment project studies** (16 percent of the project’s base cost, or US$3.35 million). There were four components under this category related to studies for (a) rehabilitation and restructuring of Oil Rocks and other old offshore oilfields; (b) rehabilitation of the old onshore oilfields; (c) restructuring of gas processing facilities; and (d) export pipeline for Early Oil. The four studies aimed to prepare a package of technical and economic evaluation that would facilitate decisions by foreign investors to invest in these areas. All but the export pipeline study were completed, and 88 percent (US$2.95 million) of the funds allocated to this category was spent.

d) **PIU support** (3 percent of the project’s base cost, or US$0.75 million). This consisted solely of support for the Project Implementation Unit (PIU). About US$1.15 million was used for this component.

2.5 Three additional activities were implemented but were not part of the project’s objectives or original scope of work.

a) **Environmental aspects of petroleum operation.** An amount of US$200,000 was spent for this activity.[5]

b) **Reservoir Engineering Center.** About US$2.8 million was used to establish the center (para 2.18).

c) **Financial audit of SOCAR.** The legal documents only required the annual audit of the project accounts. However, an audit of SOCAR was carried out under the project at a cost of about US$1.3 million. This was the first audit of SOCAR in accordance with international standards.

2.6 At the project’s closing date (November 30, 2000), about $9.5 million of the Credit’s $21 million was used and the balance was cancelled (in terms of SDR, from the original amount of SDR 14.3 million, SDR1.5 million was cancelled due to MIS misprocurement and SDR 5.8 million was cancelled upon closing). The project’s closing date was extended by one year to accommodate the procurement of advisors for export pipeline negotiations, which were never completed.

5. There is no mention of this item in the Technical Annex or MOP of the project, although the Credit Agreement provides for this item under Project Description, part A2.

Quality at Entry

2.7 The project's quality at entry (QAE) suffered from several shortcomings. First, the design included too many components and activities for the limited capacity of the system that was to implement them. At the time, the sector was in the early phase of its transition from central planning to a more liberalized operation, and suffered from myriad issues, including staff unfamiliarity with "western" type approaches to sector management and operation as well as with the Bank's lending operations. At the macro level, the economy was going through a steep downturn. Under such conditions, it was unrealistic to expect the system to provide the effective coordination, strategic direction, and supervision of numerous foreign consultants needed to implement such a large number of activities.[6]

2.8 Second, as Bank experience has shown elsewhere, some of the policy action required under the project would have been difficult to achieve even under more "normal" conditions. Hence, petroleum legislation was never completed despite the provision of dated covenants in the Credit Agreement.

2.9 Third, the major share of the credit amount was allocated for rehabilitation and promotion of the old oilfields and related infrastructure. As the focus of the petroleum activities changed to the new undeveloped fields by early 1994, the project design was not adjusted to bring it more in line with these changes, considering that the project was approved in April 1995. In the end, most of the production increase came from the new fields (mostly offshore).[7]

2.10 Finally, the project did not focus on the major risk identified in the CAS. The CAS specified weak institutions as a major risk, while the project identified the main risks as implementation delays and the necessary follow up with the TAs.

2.11 These shortcomings at entry contributed substantially to the problems during project implementation and affected the project outcome. On this basis, *the assessment rates the QAE as* **unsatisfactory.**

Project Results

Relevance

2.12 The key objectives of the Petroleum Technical Assistance Project continue to be relevant to Azerbaijan's development priorities and are consistent with Bank's assistance strategy. An increase in oil and gas production contributed to a turnaround in the economy during 1997-2002, when it grew at an average of about 9 percent per year,

6. When the project concept document was under review, one peer reviewer raised concerns regarding the large number of components, and reiterated those concerns when reviewing the revised project concept.

7. The project had envisaged that the development of oilfields would increase the production from 10 million tons in 1995 to 45 million tons in 10 years and that oil exports would rise from about 1 million tons in 1994 to about 34 million tons in 2005. The actual production in 2004 was 16 million tons and actual exports were about 11 million tons.

while annual inflation dropped to less than 1 percent. The 2003-05 CAS (report No. 25790-AZ) provides a strategy that also aims to help realize the oil potential of the country and manage the recent windfall, in order to generate jobs and boost non-oil growth.

2.13 The objectives also continue to be consistent with sectoral strategy as defined in a recent sector review.[8] The country has accelerated its oil production and exports, although this has come as the result of exploitation of the new offshore fields. Also, more emphasis is now being given to efficient use of natural gas, including the recent increase in the price of gas to recover the full cost of supply. A Ministry of Industry and Energy was created in 2001, to better integrate the energy subsectors (oil, gas, and power). A study is underway by EBRD for restructuring SOCAR and establishing a regulatory agency. IFC is currently involved in a large investment for the export pipeline and for oil production. Thus, some of the key objectives of the project have been achieved, although their achievement has been the result of actions outside the scope and time frame of the project. Nonetheless, these objectives remain substantially relevant to the country's development priorities and sectoral strategy, and therefore *this assessment rates the relevance of project's objectives as* **substantial.**

Efficacy

2.14 The following section discusses the extent to which each objective was achieved.

(a) <u>To accelerate foreign private investment and financial participation in petroleum exploration and production, particularly for restructuring the Guneshli field.</u>

2.15 The objectives of the four components under this category (US$14.4 million from total Credit amount of US$21 million) aimed to provide various types of advice to SOCAR to help develop petroleum projects that would be attractive to foreign investors.

2.16 The first component (US$4.7 million) consisted of four activities, to provide financial and contractual advice to SOCAR, in connection with (i) the export pipeline, (ii) re-development of the Guneshli field, (iii) other petroleum development projects, and (iv) other infrastructure projects. None of these activities were completed (see para 2.18 for Guneshli field).

2.17 The second component (US$1.26 million) consisted of two activities to provide legal advice to SOCAR in connection with (i) an export pipeline and (ii) Caspian Sea boundary issues. Only the Caspian Sea boundary study was carried out (at a cost of US$300,000). The export pipeline study was not done due to disagreement on the short list of consultants.

2.18 The third component (US$8.4 million) consisted of (i) preparation and management of a rehabilitation contract (including the preparation of the bid documents)

8. "Azerbaijan: Issues and Options Associated with Energy Sector Reform," a Bank report dated November 2004.

for the shallow part of the existing Guneshli field (US$6.5 million); and (ii) technical and costing advice for development of other fields (US$1.9 million). The rehabilitation of Guneshli was to be carried out in phases. Only Phase I (Pre-Project Planning) was carried out at a cost of US$250,000. Phase II (and a possible Phase III), which was meant to prepare a comprehensive tender and contract award documents, and to supervise the construction of the rehabilitation contract, was not implemented. The main reason was that the government could not secure a commitment from private investors to invest in the rehabilitation of the field. As a result, IDA and SOCAR agreed to reallocate part of the resources (US$2.8 million) originally allocated for Phase II to establish a Reservoir Engineering Center (REC). Although some of the project's documents refer to establishment of REC as Phase II, REC was not part of the original objective, and its functions are different than the scope of work envisioned for Phase II of the Guneshli field rehabilitation.[9] The activity related to "other fields" was not carried out.

2.19 The fourth component (for which no specific amount was allocated), consisted of the activity related to the development and implementation of policy for petroleum exploration and production. This was not implemented.

2.20 The performance indicators for these components included the number of exploration and production agreements concluded, number of joint ventures signed, and the amount (in US$ millions) of foreign investment committed and disbursed. With regard to the export pipeline, the performance indicators also included the analysis of the project alternatives and agreed pipeline routing. The performance indicators specific to Guneshli field included (in addition to the amount of investment committed and disbursed) the progress made in improving the rate of production. However, none of these occurred. In fact, as of end-2004, no private investor had participated in the rehabilitation of the Guneshli field.

2.21 Thus, from a total of US$14.4 million allocated to this objective category, only US$550,000 was used (an additional US$2.8 million was used to establish the REC but this was not part of the original objective). The key components that were not implemented were the provision of technical and financial advice to SOCAR, the study for export pipeline, and the substantive works related to preparation and management of a rehabilitation contract for the Guneshli field (Annex B). Therefore, *the extent to which this objective has been achieved is rated as* ***negligible.***

(b) <u>To strengthen petroleum sector institutions.</u>

2.22 The main objective of the three components under this category (US$1.6 million from US$21 million) was to strengthen the petroleum sector institutions. Despite its formal commitment to the implementation of petroleum legislation, the government decided not to proceed with this component.[10] The management information system also

9. The contractor for Phase I informed SOCAR that due to major modification of Phase II, the REC falls under the purview of another affiliated company, with expertise in subsurface studies.

10. The commitment was a key condition of the Credit agreement, in form of two dated covenants; (i) to submit an interim report to the Bank by September 30, 1995, and, after the Bank's review, (ii) to submit a final draft to the Supreme Soviet by February 29, 1996.

was not implemented, due to procurement issues, resulting in the Bank declaring misprocurement and subsequently canceling about US$2 million of the Credit. The training component was the only one completed, and about 250 staff of SOCAR were trained in various short-term courses related to the petroleum industry.

2.23 The implementation of petroleum legislation for the country and the establishment of an effective management information system for SOCAR (which is essential to its operation and finances) are crucial to attracting private investors. Neither of the two components was implemented. While the implementation of training component was useful for capacity building, training 250 of SOCAR staff in an organization of 50,000 employees would provide little comfort to private investors.[11] Therefore, *the extent to which this objective has been achieved is rated as **negligible**.*

(c) <u>To prepare investment projects in the petroleum sector through joint studies between SOCAR and foreign advisors.</u>

2.24 The main objective of the four components under this category (US$3.35 million from US$21 million), was to prepare investment studies in four areas (para. 2.4c), to facilitate decisions by private investors. Three of the studies were completed. The study on the export pipeline was not undertaken because, due to time constraints, SOCAR decided to procure advisors from its own resources. These studies were useful in two ways. First, they revealed, for the first time, the needs in the country's petroleum sector, which resulted in substantial interest by potential investors (although no actual investment took place). Second, the "road show" presentation of the studies exposed SOCAR staff to the international oil industry and to the challenges SOCAR had to face to deal with vast number of sector issues.[12] Because of the usefulness of these studies, *the extent to which this objective has been achieved is rated as **substantial**.*

2.25 Thus, most of the major objectives of the project were not met. Moreover, less than half of the project funds were used and some of those funds were used for components that were not directly related to achieving the project's objectives. Although some of the key objectives of the project (such as accelerating foreign private investment in the sector) have been achieved, their achievement was not due to the project. Therefore, *this assessment rates the project's overall efficacy as* **negligible**.

Efficiency

2.26 There is no quantitative way of measuring the efficiency of this project, given that it consists of technical assistance activities only. Besides, many of the project's objectives were not met. Therefore, an assessment of efficiency would not be meaningful. However, if a qualitative assessment of the project's efficiency is to be provided, the

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11. The program included training for some of the managers but mostly for the technical staff. The amount used for the program was $250,000, or an average of $1000 per staff, including the traveling costs of some of the staff to Boston.

12. The Bank did not participate during presentation of these studies to the investors. The performance indicators for these studies required the follow-ups with the investors and joint ventures, but the follow-ups were not specifically part of the project objectives.

implementation delays due to several changes in the scope of the original design justify *rating project efficiency as* **modest.**

Outcome

2.27 The overarching objective of the project was to create an enabling policy and institutional environment that would allow foreign investors to be mobilized efficiently in the petroleum subsector. The achievement of this overall objective was negligible. This was in part because the project's poor quality at entry (para.2.7), which weakened the project's focal objective by spreading it across many diverse activities. Further, no action was taken to rectify some of the shortcomings associated with the project's original design, either before Board approval or during implementation, such as a formal restructuring of the project at mid-term review.

2.28 Only 6 of the project's 17 activities were implemented. Among the activities that were not implemented were those that were critical to facilitating the participation of private investors, such as provision of financial, legal, and technical advisors for development of (i) a legislative framework for petroleum exploration and production; (ii) petroleum licensing and exploration promotion programs; (iii) an MIS for SOCAR.; and (iv) the export pipeline. Although the implementation completion report (ICR) indicates that it is difficult to assess the contribution of the project in isolation, the activity-by-activity assessment under each objective category shows that the contributions from project components were negligible to achieve the focal objective of the project. Two positive outcomes of the project—neither of which was among the original activities—were the first audit of SOCAR in accordance with international standards, and the establishment of REC, both of which have contributed to the institutional development of SOCAR (para.2.29). *Given this implementation record, and based on the ratings of substantial for relevance, negligible for efficacy and modest for efficiency, this assessment rates the outcome of the project as* **unsatisfactory.**

Institutional Development Impact

2.29 SOCAR had sole responsibility for implementing all aspects of the project. The only item under the government's responsibility was the implementation of new petroleum legislation, which was cancelled. The project affected the institutional development of SOCAR in three areas.

2.30 *Reservoir Engineering Center.* During the Phase I study of the Guneshli field, the reservoir modeling capability of SOCAR was determined to be inadequate. It was therefore agreed to reallocate some of the funds (US$2.8 million) for the development of a Reservoir Engineering Center.[13] The funds were used to train 13 staff in Norway in geophysical, geological, petrophysical, and reservoir and production engineering. Part of the funding was used to procure office equipment and software. REC provides technical

13. This assessment did not find any communication indicating that the project documents were formally amended to provide for the reallocation of $2.8 million for the REC. However, the Aide memoire of October 1996 includes $1.3 million as a preliminary cost estimate for REC, and the management letter subsequently approved the Aide memoire.

services to SOCAR's exploration and production departments, and plans to provide fee-based services to international oil companies (IOCs). Although the REC has helped to improve SOCAR's ability to make better use of the country's hydrocarbon resources, the role of the REC is not clear, considering the ongoing initiative for restructuring of SOCAR. If it were to provide commercial services to IOCs operating in Azerbaijan—a likely outcome under a restructured SOCAR—it would need to expand its facilities and enhance its technical capabilities to be able to compete with the private sector.

2.31 *Training.* The project provided specialized short-duration training in petroleum industry topics to about 250 SOCAR staff. Further, during the preparation of the investment project studies and their promotions, SOCAR staff were exposed to additional learning forums during the presentations of those reports to stakeholders, which helped to improve their skills in answering various questions related to investment projects and in future negotiations with foreign oil investors.

2.32 *Financial audit of project accounts and of SOCAR.* According to the ICR, in addition to the annual audit of the project accounts, an audit of SOCAR was required under the Credit agreement.[14] Thus, a full audit of SOCAR for 1997/1998 was carried out. This was the first audit of SOCAR in accordance with international accounting standards and appropriate auditing principles. The audits for 1999 and 2000 were not carried out because of Credit closing date of November 2000.[15] There was no specific category or allocation for SOCAR audit, but an amount of US$1.3 million was disbursed from the project for this purpose. The 1997/1998 audit had a positive institutional impact on SOCAR in that it improved the company's ability to use its financial resources consistent with international standards and accounting principles.

2.33 While each of the above has contributed to improving SOCAR's ability to use more efficiently its resources, the overall extent is limited given the size of the SOCAR operation.[16] *This assessment rates the project's institutional development impact as* **modest.**

Sustainability

2.34 Although the net benefit generated through implementation of some of the components will likely be sustainable (i.e., training, reservoir engineering center, Caspian Sea study, and audit of SOCAR), considering that the project consisted entirely of technical assistance, that most of the activities were not completed, and that the overall

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14. This assessment has not been able to verify this requirement under the Credit agreement.

15. The auditor had two major reservations in the 1997/98 audit: inaccessibility to SOCAR's refinery and inadequacy of SOCAR's information system and records for an audit according to international standards. These issues were resolved and the audit was completed but only in September 2000, or two months before the credit closing date. SOCAR subsequently completed 1999 and 2000 audits, using its own resources.

16. SOCAR is one of the largest state-owned enterprise in Azerbaijan responsible for all aspects of exploration and development of oil and gas in the country. It employs over 50,000 people and it makes contributions to government revenue from both the operating activities it manages and from its holding in production sharing agreements and joint ventures. It also plays a regulatory role and act as a single buyer of gas for the domestic market.

objective of the project was not achieved, an assessment of sustainability at the project level would not be meaningful. *This assessment rates the project's overall sustainability as* **not evaluable.**

Bank Performance

2.35 **Lending.** This was the Bank's first project in a country that was in the early stages of a difficult transition. As discussed earlier, the project's quality at entry was not satisfactory in several ways, including not fully considering the necessary commitment, capacity, and skills needed by SOCAR and the government to effectively coordinate and supervise such a complex undertaking under difficult country and sector conditions. Further, considering the time that elapsed between the review of the project concept and the Board presentation of the project (three years), ample opportunities existed for the Bank to have considered a more balanced design. *This assessment rates the Bank's performance during lending as* ***unsatisfactory****.*

2.36 **Supervision.** The quality of Bank's supervision was uneven, partly because of frequent changes in the task management. The quality of supervision improved during the later years but implementation continued to be hindered by problems stemming from the project's design. However, the major shortcoming of the Bank's performance during implementation concerned the mid-term review (MTR), held in October 1997, about two years after the effectiveness of the Credit. At the time of the MTR, many of the problems had already surfaced, particularly those related to the quality of the project design and including the fact that only about 10 percent of the Credit had been disbursed. Yet, no attempt seems to have been made to formally restructure the project at the MTR to sharpen the project's objectives and simplify the design.

2.37 In addition, the Bank should have made every effort to devise ways to overcome some of the procurement obstacles, particularly those related to procurement of critical components such as the management information system. Bids for the MIS were received almost 4 years after the project had become effective, and despite the involvement of a consultant to help SOCAR (in view of SOCAR's lack of in-house capacity in IT area) with the preparation of the IT specifications and bid documents. Four years is ample time to resolve the "compatibility" issue so that the bids did not have to be declared non-responsive by SOCAR (and declared responsive by the Bank), which resulted in the Bank declaring misprocurement. This is in part related to the point raised in the ICR regarding the supervision team not having the appropriate skills mix needed to prepare feasible procurement-technical packages for the information technology components. Also, as pointed out in the ICR, IDA did not participate during the presentation of the investment project studies. IDA's presence in these presentations could have mobilized greater private sector interest in these studies. The ICR raises a point regarding the inadequacy of supervision resources. However, this assessment finds the supervision resources to have been adequate, given that 172 staff weeks were spent over the five-year implementation period and on average two missions were fielded per year. Possibilities of clustering with other supervision activities also existed. *This assessment therefore rates the Bank's performance during the supervision as* ***unsatisfactory****. The assessment rates Bank's overall performance as* **unsatisfactory.**

Borrower Performance

2.38 **Preparation.** SOCAR, particularly the staff that later formed the core team of the PIU, assisted in preparation of the project in their areas of expertise. The government's only role involved the petroleum legislation. The government intended (at the time of project preparation) to implement this component, considering its preparatory action in this regard and its covenanted commitment under the Credit Agreement. Accordingly, *the implementing agency's and the borrower's performance during the preparation of the project were* ***satisfactory.***

2.39 **Implementation.** A good feature of the PIU arrangement was its location in the Foreign Investment Department (FID). Enhancing FID's operational capacity to facilitate private investors was the focal point of the project's key objective. The level of staff and resources available to PIU was adequate. However, the PIU did not have sufficient authority—including financial authority but particularly authority to address key policy actions—to ensure the successful outcome of the project. For many of its key decisions, the PIU had to rely on other departments of SOCAR, which were focusing on exploration and development of the new offshore fields. SOCAR should have continued with full efforts to achieve the objectives of the project, particularly since SOCAR was representing the government virtually in all aspects. Or, SOCAR, having the direct knowledge of the sector affairs, should have requested to restructure or sharpen the focus of the project. *SOCAR's performance in support of project implementation was* ***modest****.*

2.40 With regard to the borrower's performance, the government decided to cancel the component related to the development and implementation of petroleum legislation. The government has stated that it decided to use individual Production Sharing Agreements (PSAs) instead, but absent a coherent legal framework and associated implementing rules and regulation (including several variations of model PSA contracts), the government did not benefit from an integrated approach to put in place a sound and consistent legal framework. With regard to reform, despite several promises of reform and plans to improve regulations and policy formulations, no action were taken by the government. Therefore, *the performance of the borrower in support of project implementation is* ***negligible****.* As a result, *the borrower's overall performance during implementation is* ***unsatisfactory*****.**

2.41 With respect to the overall performance of both the implementing agency and the borrower during lending and implementation, *this assessment rates the overall performance* **as unsatisfactory.** However, this rating needs to take into account several factors that would result in a "moderately unsatisfactory" performance by the borrower, had there been such a rating. First, the government needed to respond rapidly to opportunities to increase hydrocarbon production, and in this context the new offshore fields were the best candidates for this objective. Second, the project's original design became non-responsive to the borrower's/SOCAR's operational needs in 1996/1997, but the Bank did not act to restructure the project. Third, SOCAR and the government were not familiar with the Bank's lending operations.

3. Lessons Learned

3.1 The main lessons from this evaluation are as follows:

- Under country and sector conditions like those in Azerbaijan, the design of the project should have been simpler, to include only a few high impact components and substantial Bank flexibility (including "real time" interventions by the Bank) in response to the borrower's needs. With a more flexible stance, the Bank could have better served the client in the areas where the original objectives were being overtaken by the rapidly unfolding events in the country and the sector, such as for example the Bank contributing to SOCAR's negotiations with foreign investors for PSAs and export pipeline.

- The need to include major legislative action as a policy condition needs to be carefully considered based on borrower ownership and capacity.

- The Bank needs to ensure that the borrower has in place the necessary arrangements and commitments to ensure that PIUs are given adequate authority (including financial authority) to deal with day-to-day implementation issues.

Annex A. Basic Data Sheet

PETROLEUM TECHNICAL ASSISTANCE PROJECT (CREDIT 2708-AZ)

Key Project Data *(amounts in US$ million)*

	Appraisal estimate	*Actual*	*Actual as % of appraisal estimate*
Original commitment	21	9.5	45
Total cancellation		11.5	
Total project cost	22.86	10.37	45

Cumulative Estimated and Actual Disbursements

	FY95	*FY96*	*FY97*	*FY98*	*FY99*	*FY00*	*FY01*
Appraisal estimate (US$M)	0	1.5	6.7	14.6	19.2	20.8	20.8
Actual (US$M)	0	0.3	2.1	4.1	7.5	9.5	9.6
Actual as % of appraisal	0	20	31	28	39	46	46
Date of final disbursement: 9/8/2000							

Project Dates

	Original	*Actual*
Departure of Appraisal Mission		03/22/1994
Board approval		04/20/1995
Signing		05/23/1995
Effectiveness	08/23/1995	11/22/1995
Closing date	11/30/1999	11/30/2000

Staff Inputs *(staff weeks)*

	Actual/Latest Estimate	
	N° Staff weeks	*US$('000)*
Identification/Preparation	82.40	260
Appraisal/Negotiation	36.80	101
Supervision	171.59	540
Total	290.79	901

Mission Data

	Date (month/year)	No. of persons	Specializations represented	Performance Rating	
				Implementation Progress	Development Objectives
Identification/ Preparation	02/1993	8	Mission Leader Division Chief Principal Petroleum Spec. Sr. Power Eng. Sr. Refining Sp. Energy Economist Petroleum Engineer Finance Systems Consultant		
Identification/ Preparation	09/1993	1	Mission Leader		
Identification/ Preparation	01/1994	3	Mission Leader Sr. Gas Engineer Operations Asst.		
Identification/ Preparation	04/199	1	Mission Leader		
Appraisal/Negotiations	05/1994	10	Mission Leader Principal Energy Spec. Principal Petroleum Spec. Sr. Power Specialist Gas Specialist Legal Counsel Operations Assistant Consultant Petroleum Engineer-Offshore Implementation Consultant Consultant Procurement Specialist		
Supervision	05/1995	1	Task Manager	S	S
Supervision	02/1996	6	Task Manager, Gas Specialist Petroleum Specialist Lawyer Training/Computerization Specialist Implementation Specialist	S	S
			Annual Update: No mission	U	S
Supervision	06/1996	2	Task Manager Energy Specialist		
Supervision	10/1996	1	Task Manager	S	S
Supervision	02/1997	5	Task Manager Economist Petroleum Engineer Reservoir Engineer Financial Analyst	S	S
Supervision	10/1997	3	Task Manager Petroleum Engineer Energy Economist	S	S
Supervision	06/1998	3	Task Team Leader Petroleum Engineer Consultant	S	S
Supervision	09/1998	1	Team Leader	S	S
Supervision	02/1999	2	Team Leader, Consultant	S	S
Supervision	06/1999	3	Team Leader Consultant Operations Officer (No PSR prepared following mission)	S	S

	Date (month/year)	No. of persons	Specializations represented	Performance Rating	
				Implementation Progress	Development Objectives
Supervision	10/1999	3	Mission Leader Operations Officer Training Consultant	S	S
Supervision	04/2000	3	Mission Leader Financiall Management Specialist Operations Officer	S	S
ICR	10/2000	1	Task Team Leader		
ICR	02/2001	1	Task Team Leader		

Other Project Data

Borrower/Executing Agency:

FOLLOW-ON OPERATIONS			
Operation	**Credit no.**	**Amount (US$ million)**	**Board date**
Gas System Rehabilitation Project	Credit 29230	US$20.2	09/19/1996

Annex B. Project Components, Allocated Costs and Actual Disbursements

	Components	Amount Originally Allocated	Amount Disbursed
I) Support for Foreign Investment in Petroleum Exploration and Promotion			
a)	Financial and Contractual Advice		
	Guneshli Field	US$2.100 million	None disbursed
	Other Fields	US$1.100 million	None disbursed
	Export Pipeline	US$0.900 million	None disbursed
	Other Infrastructure	US$0.600 million	None disbursed
b)	Legal Advice for Petroleum Projects Development		
	Project Development and Crude Oil Pipeline	US$0.810 million	None disbursed
	Caspian Sea Boundaries	US$0.450 million	US$0.300 disbursed
c)	Technical and Costing Advice		
	Guneshli Field	US$6.500 million	US$0.250 million disbursed
	Other Fields	US$1.900 million	None disbursed
d)	Advisory Service on Petroleum Licenses and Exploration Promotion	None	None disbursed
II) Institutional Strengthening-Advisory Services			
a)	Petroleum Legislation	US$0.450 million	None disbursed
b)	MIS, PC and Communication	US$0.700 million	US$0.300 million disbursed
c)	Training for SOCAR Staff	US$0.450 million	US$0.250 million disbursed
III) Petroleum Project Investment Studies			
a)	Oil Rocks/Old Offshore Oilfields Rehab	US$0.850 million	US$1.500 million disbursed
b)	Old Onshore Oilfields Rehab	US$0.850 million	US$0.800 million disbursed
c)	Gas Processing Facilities Reconstruction	US$0.750 million	US$0.650 million disbursed
d)	Early Oil Export Pipeline	US$0.900 million	None disbursed
IV)	**Project Implementation**	US$0.750 million	US$1.148 million disbursed
V)	**Unidentified**	US$1.000 million	
Total		**US$21.060million**	**US$5.150 million disbursed**
Additional Activities Not Part of the Original Scope:			
1)Reservoir Engineering Center		None	US$2.800 million disbursed
2)Audit of SOCAR		None	US$1.265 million disbursed
3) Environmental Study		None	US$0.200 million disbursed
Total Base Cost and Disbursed		**US$21.060million**	**US$9.463 million disbursed**
Contingencies		US$1.100 million	
Refinancing PPF		US$0.700 million	
Total Project Cost		**US$22.860million**	

Helen Phillip
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