

تدقيق حسابات مرحلة البحث والاستكشاف وفق معيار
الإبلاغ المالي (٦)

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**Auditing the accounts of research and exploration stage
in accordance with the financial reporting standard (6)**

Abstract

The oil and gas production industry is considered the most important industries in the modern world because of its large relative significance among the group of energy resources required for the world, where the natural resources represent the oil and natural gas fields, phosphate, gold, coal, forests and others. The most important advantage of the natural resources is its need for huge financial investments for a relatively long period of time from the beginning of the work until the start of extracting natural resources. Also, there are numerous cases where the natural source is not feasible economically and is not discovered until after the passage of a long period of time from the start of work and paying relatively high amounts of money. The research aims to develop a proposed program to audit the activity of research and exploration for natural resources and evaluating them according to the financial reporting standard No. (6) and to show the impact of the application of this standard on the data of the sample company to determine any of the exploration and evaluation expenditure that must be recognized as an asset and which should be recognized as an expense as well as the extent of the disclosure of financial statements based on the international standard No. (6) for research and exploration expenses for the purpose of knowing the financial position of the company.

تدقيق حسابات مرحلة البحث والاستكشاف وفق معيار الإبلاغ المالي (٦)

المستخلص

تعد صناعة إنتاج النفط والغاز من أهم الصناعات في العالم المعاصر لما لهذه الصناعة من أهمية نسبية كبيرة بين مجموعة مصادر الطاقة اللازمة لتسيير العالم حيث تمثل المصادر الطبيعية حقول النفط والغاز الطبيعي مناجم الفوسفات والذهب والفحم والغابات وغيرها وأهم ما تمتاز به المصادر الطبيعية هو حاجتها إلى استثمارات مالية ضخمة كما تحتاج لفترة زمنية طويلة نسبياً من بداية العمل ولغاية البدء باستخراج المصادر الطبيعية كما أن هناك حالات عديدة يكون فيها المصدر الطبيعي غير مجدي استغلاله اقتصادياً ولا يتم اكتشاف ذلك إلا بعد مرور فترة زمنية طويلة على بدء العمل ودفع مبالغ عالية نسبياً ، ويهدف البحث إلى وضع برنامج تدقيق مقترح لتدقيق نشاط البحث والاستكشاف عن المصادر الطبيعية وتقييمها وفق معيار الإبلاغ المالي رقم (٦) وبيان أثر تطبيق هذا المعيار على بيانات الشركة عينة البحث لتحديد أي من نفقات الاستكشاف والتقييم التي يجب الاعتراف بها كموجود وأي منها يجب الاعتراف بها كمصروف فضلاً عن مدى إفصاح القوائم المالية استناداً إلى المعيار الدولي رقم (٦) عن مصروفات البحث والاستكشاف لغرض معرفة الوضع المالي للشركة .

Introduction

The oil is a blessing of the natural gifts that God gives it to whom he will of his slaves and a verse of the verses reflected in the way its composition in the ground over millions of years and he surrounds it by care and in which he confirms his wisdom since all of what in the universe is harnessed for the man whom God created for great wisdom which is, a recognition of God Almighty through his signs and faith in him and worship him. Oil is considered having strategic significance dramatically in the contemporary time as the primary source for energy saving in one hand and the basic resource in budget of producing countries, on the other hand. Given the strategic importance of oil many giant companies have appeared, to make oil industry activates in its multiple phases, which represents sequential episodes inseparable from each other to provide oil in its

various derivatives for the purpose of meeting the needs of human consumption of required energy.

Firstly: Research methodology

The research methodology is considered the major step that defines the scientific and practical path chosen by the researcher to identify the research problem and its importance, objectives and hypothesis to reach the desired goal and then determine the research related the place and time limits and methods of collecting data and information.

Research problem

Anyone who has followed the activity of mineral resources exploration and evaluation of oil institutions and specifically the Oil Exploration Company, as the only company that is doing research and exploration activities for oil in Iraq, the following problems have been noticed:

Deficiencies in the disclosure of exploration expenditures that must be recognized as a current asset (Inventory) and expenditure that must be recognized as a revenue expense.

Research importance

The importance of research emerges as a detailed critical study of the accounting reality of the mineral resources exploration activity and its evaluation by oil companies in Iraq as well as the features of financial reporting related to exploration and evaluation activities of natural sources to demonstrate the sincerity and fair presentation of the financial statements in the research sample company because they reflect the financial position at the end of the period and the results of the business during the period also they tie the importance of research with the importance of the adoption of international financial reporting standards, particularly the financial reporting standard No.(6) exploration and evaluation of mineral resources, and its impact on the disclosure of the expenses of research and exploration in the financial statements in a form that helps to understand the nature of these expenses and to know the financial position of the company as well as the application of this standard

ensures the safety of the preparation of financial statements. as well as the importance of the auditor in expressing his technical neutral opinion financial in the financial statements and to show any of the exploration expenditures that must be recognized as an asset and which must be recognized as an expense.

Research objectives

The research seeks to achieve the following objectives- :

1- Establishing a proposed program to audit the activity of mineral resources exploration and evaluation according to the requirements of financial reporting standard No. (6).

2- Showing the extent of the company's commitment to research sample with the international financial reporting standard No. (6) to determine which of exploration and evaluation expenditures that must be recognized as an asset and which must be recognized as an expense.

3- Verifying from the disclosure in the financial statements based on the International Standard No. (6) for the research and exploration expenditures for the purpose of fairness and accuracy of the financial statements of the research sample company.

Research Hypotheses

The research is based on the following Hypothesis:-

1- Applying the financial reporting standard No. (6) exploration and evaluation of mineral resources by the company will lead to the adequacy of audit programs, and this would help the auditor of the accounts to express his natural and technical opinion about the credibility and fairness of the financial statements.

2- The disclosure of information related to exploration and evaluation expenditures that must be recognized as current asset as well as the disclosure of the research and exploration expenditures, which should be recognized as an expense in the financial statements of the company based on the International Standard No.

(6) for the purpose of knowing the financial position of the company.

search limits

✓ spatial boundaries: -

The research applied study in the oil exploration company to being the only company that are doing research activities and exploration for oil in Iraq.

✓ temporal boundaries:

Was chosen the year / 2013 to conduct the necessary analysis in the practical side of the research and the selection of this year was the result of the activity of the company was the best in this year compared to other years.

Secondly: The theoretical part

The importance of disclosure of oil:

The energy is the lifeblood of the earth planet and it is, a commodity that provides energy to the global economy, where oil and natural gas have become since the fifties of the last century, the main source of basic energy that supplies the world's population. In spite of this, the obvious benefits of energy consumption can carry with it significant environmental effects which can be at a regional level or on a global level these effects pollute air and change the global climate (Yousif K. Kharaka and Nancy S. Dorse 2005; 61-62.).

The main works of the research and exploration stage are summarized as follows:-

1. Identifying areas of thick sedimentary rocks, namely, the areas in which oil is probably existent and which contain porous and non-porous layers.
2. Looking for oil traps and identifying their locations and borders to choose the appropriate method for drilling wells, some of which appears above the earth's surface through the use of the Geological Survey or the use of aerial photography, which gives a quick and

comprehensive picture of the areas of research so that the geologist can determine the traps of oil sites in areas which do not show rocks above the ground (such as dissects and water pools) therefore the geophysical survey must be used, which relies on the measurement of the natural qualities of rock layers (physical and chemical properties) beneath the earth's surface.

3. Choosing the appropriate traps among several traps to conduct exploratory drilling operations, where the selection is based on general geological study for the area and here the focus is on the near-oil basins traps. (Khansa 39 to 40,2006).

4. Begin drilling exploratory operations to ensure the presence of oil, and conduct several tests to evaluate the productivity quantities of these wells, and in the case of verification of the presence of oil quantities that can be exploited commercially this successful exploration is announced, while in the case of the contrary the wells are considered dry and useless economically to extract oil from them.

The concept of exploration and evaluation:

It can be said that the exploration is considered the "exploratory activities that precede drilling exploratory wells and through which intensively examine a geological and geophysical test for the area that is expected to be promising in order to analyze the layers of earth to determine the location in which it is expected the presence of oil deposits and thus drilling exploratory will and exploring it (evidence Emirates ,14, 2012). The evaluation is intended that it be done at this stage to assess the technical feasibility and the possibility of the presence of oil in commercial quantities or not in the area that were obtained on the reserve. (guide Emirates, 19,2012)

Accounting distinctive features of the activity of research and exploration:

- The magnitude of the cost of tasks, equipment and machinery
- Magnitude of the investments for the exploration works.

- High cost of obtaining the franchise right of the search and exploration.
- The exploration works and subject to risk factors and uncertainty significantly.
- The need for human resources with specific and developed technical specialties.
- Facing difficulties in the accounting adaptation for exploration expenditures and determining business results
- Facing difficulties when preparing the Financial Statements
- Not achieving material physical revenues

The most prominent technologies for the exploration of oil internationally and regionally are as follows:

1. Methods of Geological Exploration

It is well known that oil does not exist except in certain types of geological combinations and thus the analysis and examination of those layers become the basic requirements about oil and the geological exploration works, are made above the earth's surface through the following ways: (50-49,2001, حجر)

- Noticing oil leak
- Photographical aerial survey
- Examining the exposed parts of the surface from the earth

2. Methods of geophysical exploration

The basic techniques used include:(, Jacobson, 2008, 96-105).

- Seismic methods: Such as reflexive seismic survey, seismic refraction and seismic imaging, which are used heavily now.
- Science of space and gravity technology: include gravitational gradient measurement.
- Magnetic technologies: These include aerial magnetic survey methods.

- Electrical technologies: These include electric resistant imaging and include polarization.
- Electromagnetic methods: such as electromagnetic geophysical imaging and radar to measure the earth, and electromagnetic survey methods in transit.
- Keypunching drilling geophysics: This is also called drilling record.
- Remote sensing techniques: These include ultra-spectral imaging.

The following table shows the geophysical survey methods:

Geophysical Survey Methods

N	Method	Variables requiring to be measured	Natural properties that are deduced
1	Seismic	Time lump of reflection / seismic refraction waves	Density, flexibility coefficients that determine the speed of transmission and the spread of seismic data, and then the shape and thickness of the layers and their depths
2	Gravity	Changes in the recordings of the earth gravity field	Density, composition and shape of the rock
3	Magnetic	Changes in the recordings of the strength of earth magnetic field	Magnetic susceptibility, and resonance
4	Electrical	Earth-resistant for the electrical conductivity	Electrical Power conductivity, permittivity, permeability
5	Induced polarization	Earth-resistant Based on the frequency	Electrical capacity, permittivity, permeability

6	Self effort	Electric	Electrical conductivity, permittivity, permeability
7	Electromagnetic	Respond to electromagnetic radiation	Electrical conductivity and electric induction, permittivity, permeability

Source : Al-Aubaidi et al , 2014

The nature of exploration costs

Exploration costs are the costs related to the collection and analysis of geophysical and seismic data which contribute to the initial screening of the target area as well as costs related to the drilling of exploratory wells. These costs may be material and may be immaterial (Asian, 2015,)). The basic types of exploration costs are as follows :(Holborn, 2001)

1. Seismic survey costs.
2. Geological, geophysical and topographic and terrain studies costs.
3. The costs charged to non-proven areas and their retention costs such as rentals.
4. Drill costs of exploratory wells and their provision with equipment.

The concept of exploration expenses and their components:

Exploration and evaluation expenses: These are expenses incurred by the enterprise with respect to the exploration and evaluation of mineral resources before the technical feasibility and commercial possibility to extract of metal resource become possible to show (international reporting standard No. (6).

Special problems in the accounting of exploration costs:

- 1- exploration licenses only
- 2- Purchasing of geological and geophysical data
- 3- Geological and geophysical works to set the drilling site
- 4- 3D vibratory studies to develop proven reserves

The accounting treatment methods of survey and exploration and its impact on the financial statements:

The first method: it consider the research and exploration expenditures capitalized: and also it is as known full costing method which considers here all the research and exploration expenditures as capital expenditure shown in the statement of financial position of the company as research and development expenditure, regardless of whether they had been confirmed in the areas explored or not namely the company has to capitalize all the research and exploration expenses. (Adams, 1994: 66- 67)

The second method: It considers the research and exploration expenditures as a revenue expenses. This method means that all the expenses spent in reconnaissance and exploration stage as operating expenses (Revenue). To be closed at the end of the year (after opening specific accounts for them) in the income account (General Income Summary Account) regardless of the result of this stage of achieving revenue or not.

The third method: It considers the expenditure pertaining to producing areas capital expenses and related to unproductive areas as revenue expenses: Flory and Grossman see the need to use the successful efforts method where this method has proven to be more accurate because the financial statements describe the successes and failures achieved by the company as where the total is capitalizing all will costs whether these wells, successful or unsuccessful, so that this method hides the amounts spent on the wells failed while the successful efforts method illustrate where, precisely, the money spent and how much, therefore, this method is more valuable than the total cost method (Flory,1980)

The exploration machinery and equipment costs:

The exploration machinery and equipment are related to the exploratory drilling bales, factory equipment and laboratories used in the exploration stage, as well as the geological and geophysical survey machines and transport vehicles, etc., the cost of these assets appears in an account titled (Machinery, Equipment and Exploration Account), which is divided to a group of sub-accounts each account

belongs to one asset specifically this account is debited by the cost and the cash or bank account is created. As well as these assets are depreciated using one accepted depreciation method where the asset depreciation account is debited and the accumulated depreciation account is credited. This means that the accounting treatment for these machines and equipment do not vary from the treatment used for any fixed asset (Abdullah, 69.2006)

International Accounting Standards IASB

In 2004, The International Accounting Standards Board, IASB (Issued an exposure draft for the standard ED6: exploration and evaluation of natural resources, and at the end of 2004 the IASB issued the standard IFRS No.(6): "Natural Resources Exploration and evaluation for preparing financial reports where the Financial Accounting Standards Board decided to develop the international financial reporting standard for the exploration and evaluation of mineral resources No. (6).

This standard has come to establish some limited guidelines the process of accounting for natural resources.

The international financial reporting standard (6)

Objectives of the standard

- Identification of financial statements for the exploration and evaluation of natural resources.
- Recognition foundations of assets exploration and evaluation.
- Measurement bases assets exploration and evaluation.
- Determination of accounting policies.
- Determinants of disclosure

The standard is not applied to the following expenses

- Expenses occurred before the enterprise has obtained the legal rights to explore a specific area

- Expenses incurred by enterprise after the manifestation of the technical feasibility and commercial benefit for the extraction of natural resources.

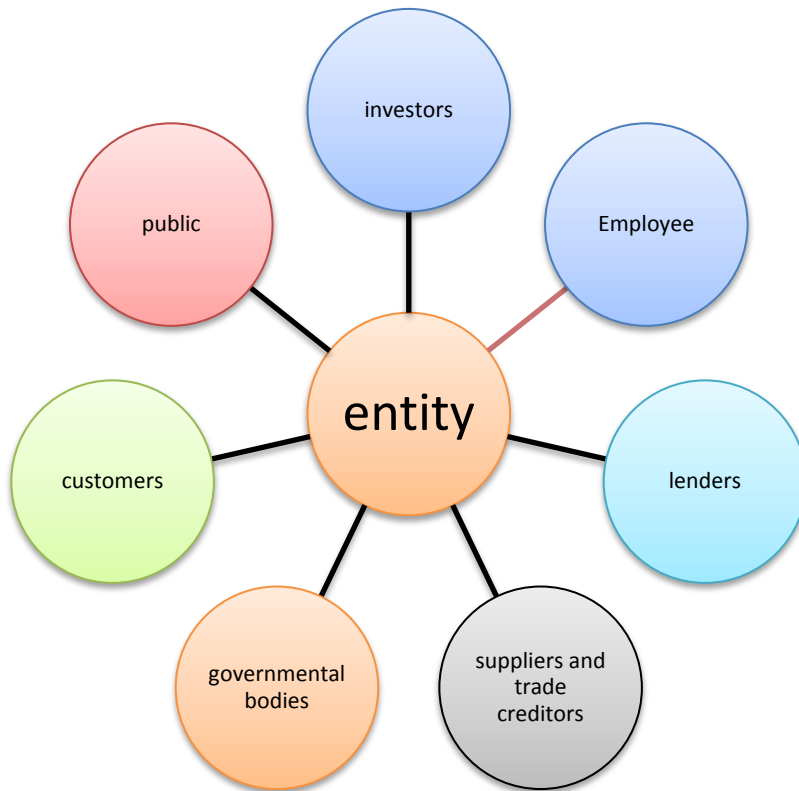
Examples of expenses eligible for capitalization:

- Obtaining exploration rights
- Topographical, geological, geochemical and geophysical studies
- Exploratory drilling
- Trenching
- Sampling and testing.
- Activities related to the evaluation of the technical feasibility and commercial benefit for the extraction of natural resources.

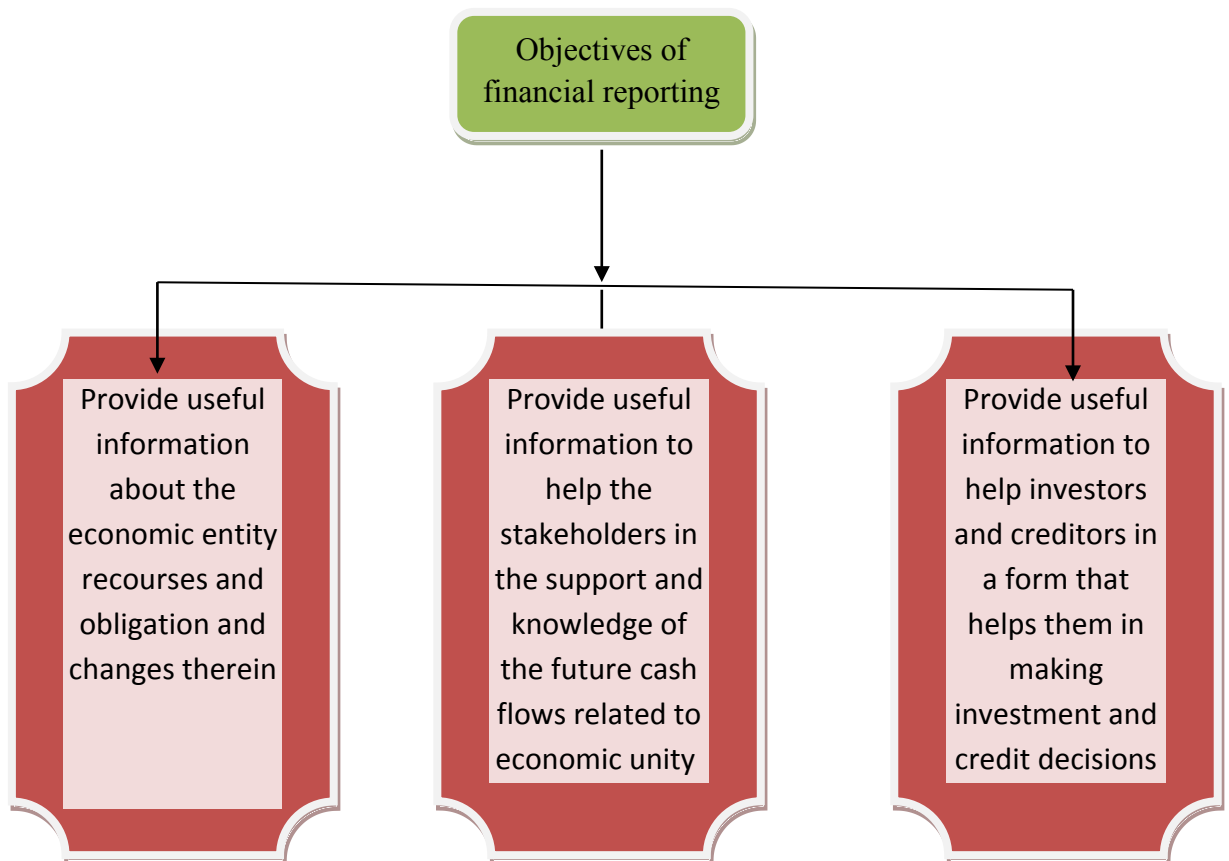
The concept of financial reporting:

The US Financial Accounting Standards Board, (FASB) has defined in its first statement (Concepts of financial reporting in the economic units) the financial reporting as "activities that rely to serve the needs of the users of the financial information needed from the enterprise (Salar, 2006.31).

The following figure shows the accounting information users:



Objectives of financial reporting



Audit programs:

An audit program is defined as a set of detailed instructions for the total of evidences which will be assembled for one side of the audit process, always contains a list of audit procedures and includes volumes of samples and the elements to be selected and the timing of the tests. There is usually a program for each audited component and therefore there will be a program to review the debtors, sales and so on ((Arens, 2012, 176). Because of the importance of the audit plan the paragraph (8) of the standard audit No. (300) has confirmed that as the auditor has to establish and document the overall audit plan to describing the expected range of the audit process and how to implement it in the time that overall audit plan report must contain sufficient details to guide the establishment of the audit program and the methodology and technology used by the auditor's program (Mamouri, 2006.145 – 146).

Types of audit programs:

- **the general audit program (Typical– constant – predetermined) :**

It is a constant program contains all the audit procedures that can be used in most of the audit processes with the amendment of what commensurate with a particular audit process. These programs consist of a detailed list of procedures established before starting the audit, the circumstances of the company should be taken into consideration to prepare the audit procedures, the auditor assistants are committed to implement. (Alusi: 2003.204)

- **Private audit program:**

It is a program that is designed for a specific audit process after taking into account the nature and size of the company's activity as well as the internal control systems and whatever the type of program used in the audit process the auditor should not follow it literally. Perhaps some problems may appear during the audit process, which were not taken into account and thus the procedures of them have not been mentioned, so the auditor must use caution and precision in carrying out the audit process and add any other procedures considered necessary for the completion of the audit process.

- **Audit program which is prepared during implementation:**

It is the program, which is limited to the development of the main lines of the audit process and the objectives to set and achieved while leaving the detailed procedures to be followed and the amount of testing depended on during the audit process.

Thirdly, the practical part

The application of proposed audit program for the research and exploration stage.

Since the revenue method adopted by the research sample company has interspersed with a lot of flaws and the successful efforts method are approved by the accounting professional organizations where the Financial Accounting Standards Board, FASB has preferred it.

Therefore, the expenses incurred by the Explorations of Oil Company for the Year 2013 can be addressed according to the financial reporting standard (6), that distinguished between revenue expenses and expenses which are considered assets (Inventory) and the cost of the studies conducted by the research sample company have been calculated in order to arrive to the costs of each study and classifying them as current assets or revenue expenses. It must also pointed out that the calculation of the costs of the studies have been made by the researcher without relying on the costing program, prepared by the Higher Institute of Accounting and financial Studies for the research sample company because the program is still in

process and the application of the costing program began in the research sample company from 01/01/2015 and therefore there is a difficulty in calculating the cost of each study accurately for the data / of the year in 2013 and as much as possible the cost of the study was calculated according to the data available in the research sample company, and table () shows the total studies carried out during the year 2013:

Table (1) The total studies carried out during the year 2013

Prepared by the Commission	Total Studies	Studies that were considered within the current assets (Inventory)	Studies that were considered its expenses as revenue expenses.
Geology	30	19	11
Geophysics	61	61	0
Total	91	80	11
The proportion of studies		88%	12%

The table is prepared by the researcher

Table (2) The distribution of expenses pertaining to studies which were considered within current assets (Inventory)

Accounting Manual Number	Account name	Cost of Production Activities (5) / Dinar	Expenses pertaining to studies that were considered within the current assets (inventory) 88%
31	Salaries and wages	36092718431	31761592219
32	Supplies goods	6113154670	5379576110
33	Supplies services	3297845062	2902103655
37	Depreciations	30969824142	27253445229
	Total	76473542287	67296717213

The table is prepared by the researcher based on the company's financial statements

Table (3) The distribution of expenses pertaining revenue studies

Accounting Manual Number	Account name	Cost of Production Activities (5) / Dinar(12%)	cost of production services(6) 100%	cost of management services(8) 100%	Total
31	Salaries and wages	4331126212	10637867594	13269239609	28238233415
32	Supplies goods	733578560	319568663	1054779438	2107926661
33	Supplies services	359741407	747414369	3432086349	4575242125
37	Depreciations	3716378895	5855220640	1158080453	10729679988
	Total	9176825074	17560071266	18914185849	45651082189

This means that the expenses pertaining to studies that were considered within the current assets (Inventory) amounted to (67,296,717,213) dinars, which must be recorded using adjusting entries by making them within the inventory account which appear in the financial statement position,

inventory \ 13	67296717213
salaries and wages\31	31761592219
supplies goods\32	5379576110
supplies services\33	2902103655
Depreciation\37	27253445229

As for the revenue expenses of the studies are closed, in the profit and loss account for the year / 2013 , for the manufacturing expenses/ 38 and other expenses / 39 these expenses are considered burdens borne by the company and it does not get any good or service. It is also not linked to the company's activities directly and thus such expenses are considered revenue expenses closed at the end of the year in the profit and loss account.

Modifying the company's accounts for the year / 2013

The following statements and final accounts before and after the amendment, according to the proposed program of audit based on financial reporting standard (6), which distinguished between the expenses of the studies that were considered within the current assets (Inventory) and revenue expenses for the fiscal year ended 12/31/2013 :-

Oil Ministry

Oil Exploration Company (a public company)

General balance sheet as of 31 / December / 2013

List No.	Accounting	before	after
	Manual number	adjustment 2013	adjustment 2013
		Dinar	Dinar
	<u>1 Assets</u>	54319521771	54182214695
	11 Fixed Assets (book value)	----	137307076
	Exploratory and evaluation assets	52370025	52370025
	118 Deferred revenue expenditure	1156643800	1156643800
	12 Project in process	55528535596	55528535596
	<u>Current assets</u>	5253456860	72550174074
	13 Inventory (in cost)	2038839138	2038839138
	1381 Credit letters for purchasing raw material	72318464938	72318464938
	16 accounts receivables	144473406847	144473406847
	18 Cash	144473406847	144473406847
		<u>224084167783</u>	<u>291380884996</u>
	Total assets	<u>279612703379</u>	<u>346909420592</u>
	2 Finance source		
	<u>Long term finance source</u>		
	21 Capital	83963134	83963134
	22 Reserves	202940105501	202940105501
	23 allowance for	19516188	19516188

uncollectable accounts

	203043584823	224658524337
<u>Short time finance sources</u>		
26 Accounts payable	76569118556	122250896255
	76569118556	122250896255
Total finance sources	279612703379	346909420592
Systematic control accounts/ Received guarantee letters	1742148529	1742148529

Fourthly: Conclusions:

(1) There are deficiencies in the disclosure of the survey and exploration expenditures which must be recognized as a current asset (finished goods inventory) where the financial goods inventory does not appear in the balance sheet (finished and work in process) within the inventory account, leading to the loss of credibility of the financial position of the company.

(2) The lack of audit program to the research and exploration stage that ensures the quality audit for the purpose of expressing the neutral and technical opinion on the financial statements.

Fifthly: Recommendations:

The compliance to apply the financial reporting standard No.(6) "exploration and evaluation of mineral resources"

- To describe how the financial report in the detecting of natural resources.
- To identify any of the exploration and evaluation expenses which must be recognized as a current asset (Inventory) and which must be recognized as an expense.

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