

**University of Economics in Prague
Faculty of Finance and Accounting**

DIPLOMA THESIS

2013

Bc.Samal Shagatay

University of Economics in Prague Faculty of Finance and Accounting

Master's Program

Finance and Accounting for Common Europe



Financial reporting according to IFRS in Oil and Gas Industry

Author of the thesis: Bc.Samal Shagatay

Thesis supervisor: Ing. Jiří Pelák, Ph.D.

Year: 2013

Statutory declaration

I declare that I have developed and written the Master Thesis on the theme “Financial reporting according to IFRS in Oil and Gas Industry” completely by myself, and all used literature and other sources I have properly marked and stated in the attached list.

Prague, 2013

Signature

Acknowledgement

I would like to thank to Ing. Jiří Pelák, Ph.D. for his useful advices, willingness and helpfulness. Furthermore I would like to thank to Zulfia Baimukanova for valuable guidance and for the support. My great thanks are to Roza Albekova for her precious time, which she gave for control of my thesis. I would like to express my gratitude to my family for their patience and support during the preparation of this work.

Content

Introduction.....	2
1 Main characteristics of petroleum companies from a financial perspective	4
2 Accounting of assets	9
2.1 The specific assets at Oil and Gas Industry	9
2.2 Depletion, depreciation, amortization and impairment of assets	15
2.3 Exploration and evaluation assets under IFRS 6	20
3 Cost accounting	24
3.1 Cost accounting at pre-licensing stage.....	25
3.2 Cost accounting for the acquisition of rights for exploration, development and exploitation of mineral resources	26
3.3 Cost accounting at the development stage	26
4 Inventory	28
5 Other specific aspects of accounting at Oil and Gas industry	33
5.1 Revenue recognition	33
5.2 Provisions.....	34
5.3 Reserves reporting.....	36
6 Conclusion	39
7 Bibliography.....	41
8 List of figures, tables and attachments.....	43

Introduction

The oil and gas industry is becoming increasingly important sector for the economy and politics in many countries with growing energy consumption. It is a labour-intensive and capital-intensive production. Black gold is used and is required to work in many fields of activities. But the quantity of the given resource is limited and located only in a few countries. In 2011 38,854 thousands bbls were exported per day in the world, the most part was exported by the Saudi Arabia (7,218 thousands bbls per day).¹ It commits to the Oil and Gas Companies to apply the International Financial Reporting Standards (hereinafter IFRS).

In full accordance with the economic laws, more investments for business development are required into the resource companies which they often appeal to the external capital market. It is needed to place listed securities of domestic companies on the world's stock exchanges in order to attract foreign investment. Today many major resource companies face with this task. So that to accomplish this target financial statement shall be transparent and contain an adequate assessment of the financial condition of the company.

The main tasks of this work is to study the properly reflection of business transactions on accounting accounts in the enterprises of this type and their further reflection in the financial statements in accordance with IFRS, the timely recognition of revenues and expenses of the organization.

In the beginning of the work the industry structure and features will be introduced and the main processes of activity at petroleum companies, upstream and downstream operations will be described.

In the second chapter the types of assets that are inherent in the Oil and Gas Industry, evaluation and impairment methods will be discussed. After that, the main focus will be given to the costs incurred by oil and gas organizations in the exploration period. A lot of attention is paid to them both by the organization and the higher authorities during the exploration period. Cost accounting in the oil companies has radically specific feature. It is caused by a contract and work programs in addition to accounting and legal

¹ Organization of the Petroleum Exporting Countries [online]. 2013 [cit. 2013-08-15]. Available from: http://www.opec.org/opec_web/en/index.htm

framework which regulate the rules of presentation of business transactions in accounting. Also the costs incurred in development stage, types and their allocation will be reviewed. At the end it will be described the revenue recognition and the accounting of well abandonment.

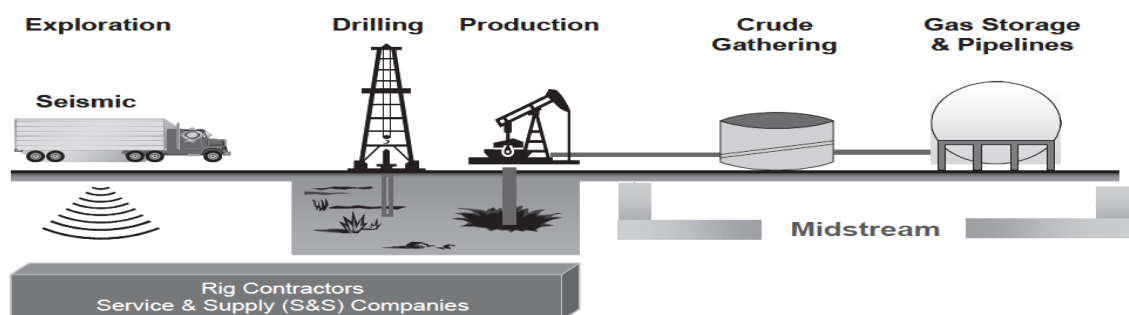
Zhaikmunai LLP will act as a chosen object of study of this issue in the practical part. The Company is the medium-sized businesses located in the Republic of Kazakhstan. The Republic of Kazakhstan (hereinafter RoK) is a member of the organization of the petroleum exporting countries (hereinafter OPEC) and the Company prepares the financial reporting according to the IFRS. The Company also operates in accordance with the constitutive documents composed on the basis of the RoK legislation. Zhaikmunai LLP has a contract for the exploration and production of hydrocarbons in the Chinarevskoye field. It is currently passing the stage of production. On the London Stock Exchange there are listed Zhaikmunai's Global Depository Receipts. The Company explores, produces gas condensate, dry gas and liquefied petroleum gas and sells them abroad and within Kazakhstan (Attachment 1 for more details).

1 Main characteristics of petroleum companies from a financial perspective

As well as other industries Oil and Gas Industry is a complex process requiring knowledge, skills in many different areas and using a lot of specific terminologies that important to know. The whole activity of Petroleum Company can be divided into three operations – upstream, midstream and downstream operations.

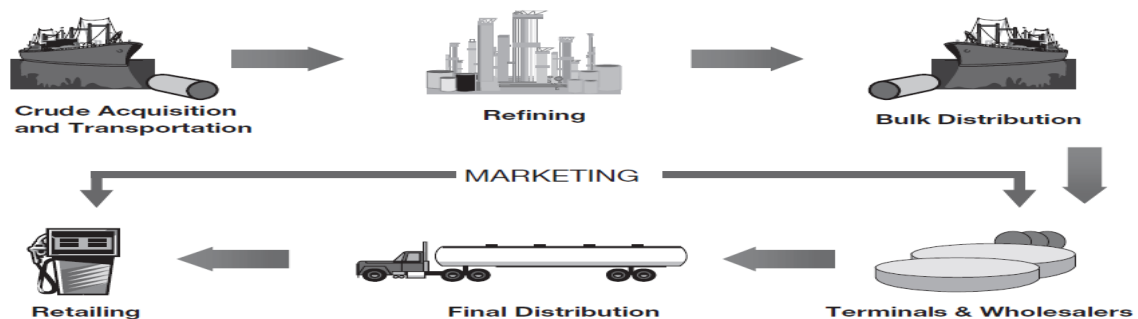
The upstream process consists of exploration (including the period before and after getting license), drilling, development and production activities. The midstream processes consists of crude gathering, gas storage & pipelines (Figure 1). The downstream process consists of the activities like crude acquisition and transportation, refining, bulk distribution, delivery to terminals and to wholesalers, final distribution, and retailing (Figure 2). [1]

Figure 1 The upstream and midstream operations



Resources: [1]

Figure 2 The downstream operations



Resources: [1]

The first stage of the upstream is an exploration stage before acquisition of rights to develop minerals. It includes analysis and evaluation of geological information on some

specific large region. There are a lot of ways to get this information without physical access, for example gravimetrical and magnetic studies, global positioning satellite (hereinafter GPS) survey. [1] Generally it is required to get permission from the owner of land. Company can decide on capitalization (if only temporarily) or impairment of this cost. The reasons of impairment are low certainty in the future economic benefits or the absence of rights to receive those benefits. On the other hand, finding of oil and gas reservoir is also a part of the exploration works.

The second stage is getting the right for exploration, development and field exploitation from the owner of rights with indication of territory.

Generally there is a *production sharing agreement* (hereinafter PSA) between the state and the contractor. The government provides exclusive rights for exploration, prospecting, mining of mineral resources in the specific area of mineral wealth to the private contractor on a reimbursable basis and for a certain period. A Production Sharing Agreement defines the conditions associated with the use of mineral resources, the order of production sharing between the parties. There are some common features of all PSA in various countries such as the contract bonus paid to the state, the royalty paid when a company starts producing. The royalty can be paid by physical terms or by cash. The state remains as the owner of the reserves. The Company gets a share of produced hydrocarbons or in other words the right for revenues from oil and gas sale. According to the PSA for a certain period it is obligatory to pay a specific amount of money for training of local staff (professional development, acquisition of a new profession, non-staff training) or to provide sponsorship to schools (again when the Company starts producing). Also, the Company shall contribute to the development of local infrastructure and social sphere. All the costs and risks during exploration are born by the Contractor.

As the government has the right for mineral resources, the reimbursement of expenses clause is included into the PSA. It means that every year the Contractor can reimburse a part of the costs for development at the expense of produced oil and gas. The maximum quantity of oil and gas that will be reimbursed, the types, the limit of recoverable costs and the possibility to defer reimbursement for future periods are specified in the Contract.

According to conditions of PSA the contractor need to deliver the rights for equipment, machinery, facilities and constructions to the government at a certain time (upon delivery, installation, or a full recovery).

Another obligation of the company is sales on the domestic market. The government regulates the quantity and price of oil sales inside of country.

Because the contracts are concluded for a certain time, which may end before the liquidation period, governments began to obligate the contractors to found the sinking fund. The start time of embedding and their recoverability depends on conditions of the contract.

In the USA the right to private ownership of land automatically entitles the owner to conduct activities related to the exploration, development and mining (called mineral interest). If the landlord does not have the appropriate financial or technical ability, he can rent the land to an investor with right to conduct the relevant works, or to sell this right or the land. The *land rent* is the second type of contract. According to the rent contract the owner does not bear the costs of exploration, development and production, but receives payments for the use of natural resources in the form of royalties (called royalty interest). On the other hand the tenant bears all costs and risks, but also he receives revenue from the sale of shares of the extracted raw materials, less royalties (working interest).

The typical characteristics of land rent are bonus upon the signing the contract, royalty, and the contractor's responsibility for the costs and risks. The rental period goes on until it is mined the hydrocarbons. It is also specified the maximum time when it is need to start exploration of the field. In the USA the right to use oil and gas resources should first exposed on auction, and only in case of failure can be issued on a non-competitive basis. The decisive criterion for determining the winner is mostly the amount of cash bonus, rentals, and (or) royalties.

If the operator or tenant does not have enough resources to carry out the relevant work or wants to share the associated risks, with some restrictions he can sell or give as override some or all of the rights to develop the field (overriding royalty interest, hereinafter ORI). In the case of override, the tenant will receive from the sub-lessee override royalty. However, there are also the net profit interests (hereinafter NPI). The ORI entitles you to the agreed share of net income without the obligation to pay for the

costs of exploration, drilling, development and exploitation. The difference between the ORI and the net profit interest is that in case of ORI the share of net income equals to the percentage from working interest, while in case of NPI the percentage from net income is agreed in the contract.

There are also concession agreements that are similar to the rent agreements, but the concession contract is concluded between the contractor and government, outside the USA. It is the main difference.

The third type is *service contract with the risk* which is less used. For the first time this type of contract used for stimulation of production, modernization of existing field and implementation of new technologies. But nowadays it is also used for exploration, development and production. As in another contracts, the typical conditions of this contract are bonus upon the signing the contract, royalty, contractor's responsibility for the costs and risks and the specified term of the contract. If the contractor is a public company, the government owns the working interest in joint projects. The company does not have right to the revenue, but it has right for service fee and for cost recovery. Many conditions are similar to the terms of the PSA.

After signing the one of the four types of contract the private contractor starts or continues exploration works that is the third stage. It includes the different methods of survey of the subsurface area and exploration drilling for final confirmation of detection the hydrocarbon reserves. If the result of confirmation is positive, obviously it is required the additional drilling to estimate the amount of reserves and the cost of development and production.

According to estimation and field development plan the company builds platforms and gas treatment plants, buys equipments and machineries for the extraction and processing of hydrocarbons, constructs storage, waste management system, ways of transportation and many other works which is called the field development stage. Due to the fact that the degree of economic advantage of field on this stage is high, all costs are capitalized.

Exploitation stage consists from the extraction process of hydrocarbons, collection, storage, removal of sediment and water, the separation of derivative products of oil and gas. As soon as the production costs have a connection with the generation of revenue, these costs are written off. Also there are cases when during an exploitation phase it is required additional reserves search on the same area. The costs on search of new

reserves are capitalized or written off. Since the field is at the development stage, some says that the costs of finding of new reserves need to capitalize. Other believes that due the possibility of a negative result of finding of new reserves, these costs should be written off.

The last stage is field closure. There are such works as decommissioning and abandonment of wells, removal of equipment and facilities, land reclamation in accordance with the terms of the contract.

2 Accounting of assets

Specificity of the Oil and Gas Industry, namely the exploration period in the contract area, causes the creation of specific assets, such as:

- mineral rights - the right to carry out exploration (survey) of the field and production of hydrocarbons within the contract area. It can be acquired through obtaining a license and/or conclusion a contract, or by other way that does not contradict to the legislation of local country;
- all production wells and engineering facilities are required for production, collection and preparation of mineral resources.

There are no specific standards or rules for financial reporting in the Oil and Gas Industry according to IFRS. There are just general rules of asset reporting that cause additional difficulties for a specific industry (except of IFRS 6 “Exploration for and evaluation of mineral resources” that will be looked into below).

The asset according to IFRS “is a resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity”. [5] Based on this definition and on condition that the value of assets will be measured reliably, the management of the Oil and Gas Company can decide about recognition of assets.

2.1 The specific assets at Oil and Gas Industry

The key component of oil and gas property is a *mineral right*. Without a license and the geological information, wells and field facilities have no utility to their owner, because mining operations without possessing the appropriate rights obtained from the state are criminal offense.

Acquisition of rights for unproved properties includes all costs incurred for the acquisition of property rights for exploration and mining activities, such as signature bonus, payments for intermediary and legal services. These costs for right are capitalized as intangible assets.

The cost for exploration of the deposit may be incurred both before acquiring the appropriate rights to reserves (for example, the purchase of geological information), and after its acquisition.

The costs incurred before obtaining mineral right include the following costs:

1. Survey and assessment work related to a specific field (project), such as:

- preparation of documentation to conduct prospecting works, acquisition of geological and geophysical information;
- carrying out of research works;
- project design works to conduct oil operations;
- construction of geological and hydrodynamic models of hydrocarbon reservoirs;
- assessment of hydrocarbon reservoirs;
- feasibility study of the project, preparation of draft contracts, etc.;

2. General and administrative costs associated with a particular field (project), such as:

- consulting services;
- auditing services;
- legal services;
- salaries and travel expenses of employees related to execution of the project;
- costs associated with attracting and training employees in connection with the execution of the project, and so on, and

3. Other similar costs related to the specific field (the project).

Expenditures on exploration and evaluation of mineral resources include all costs incurred in the process of area research that may contain oil and gas reserves. The survey involves site detection potentially suitable for exploration drilling with subsequent drilling of exploratory wells.

The expenditures on exploration and evaluation after acquiring the rights are same as above mentioned incurred costs before obtaining the rights. It also includes:

1. the cost of drilling exploratory wells, including:

- salary costs;

- the cost of materials and fuel;
- amortization of drilling equipment;
- payments to contracting organizations, etc.

2. other costs for evaluation of merchantability of geological sites.

Exploration and evaluation costs are regulated by IFRS 6 that are reviewed in a separate sub-chapter.

During all activity processes of the Oil and Gas Company especially during development, production and downstream operations, a large production fund of fixed assets is formed. It can be classified as:

- owner-occupied buildings and constructions (pumping and compressor plant, boiler house, warehouse, plants);
- installations and facilities for the creation environment required for the implementation of production processes (wells, process facilities, storage tanks, in-field pipelines, gas pipeline, telephone network);
- owner-occupied housing for non-temporary accommodation;
- machinery and equipment (drilling rig, steam boilers, generators, compressor, motors, transformer, measurement instrumentation);
- transport facilities (tankers, cars, barges, tractors, oil tankers);
- production equipment and furniture (storage facilities, devices and furniture).

All this above mentioned assets are regulated by the IAS 16 “Property, plant and equipment”.

According to IAS 16 "Property, Plant and Equipment" (hereinafter IAS 16) and IAS 38 "Intangible Assets" (hereinafter IAS 38) property, plant and equipment and intangible assets are measured at initial recognition at cost and after recognition based on cost or revaluation model.

Borrowing costs related to acquisition or construction of property, plant and equipment are capitalised in a cost of an asset in accordance with IAS 23 “Borrowing costs” (hereinafter IAS 23). In consideration there are taken only those assets that require a substantial time of preparation to its intended use. The capitalisation is possible only

during the period of acquisition or construction of assets and only those borrowing costs that are specifically intended for financing an asset or intended on general purpose, but used for obtaining an asset. If borrowing costs are intended on general purpose, the amount of borrowing costs for capitalization are defined by multiplying weighted average of borrowing cost on general purpose to the amount of expenditures on that asset. In calculation of weighted average of borrowing cost on general purpose there is included outstanding loans intended during the period reduced by borrowings that are specifically intended for financing an asset. Borrowing costs include interest and other costs associated with obtaining of the loan. [10]

Only most used and specific assets at Oil and Gas Companies are discussed in this paper. Other financial or non-financial assets are in scope of appropriate standard.

Next is shown an example of a Zhaikmunai LP's accounting policy for oil and gas properties' accounting for representing accounting of fixed assets in practice.

According to Company's accounting policy common geological and geophysical costs are capitalised. Costs spent on the construction of exploration wells are capitalised as construction work-in-progress till its completion. Employee wages, drilling services, materials are examples of such costs. The capitalised costs will be written off if the results are unsuccessful (dry hole). On the opposite side, the costs continue to be recognised within assets in case of detection of hydrocarbons that leads to commercial development. Once a year these costs are reviewed and tested for impairment. The company chose the unit of production method with the proved estimated developed reserves' basis as the method of amortization of costs. But assets with shorter useful life than the field are amortised using the straight line method.

Oil and gas reserves are required for calculation of depreciation, depletion and amortization. The Zhaikmunai LLP determines unit of production depreciation rate based on reserves quantity. The company explains the choice of this method in relation to the method's features "to reflect the expected pattern of consumption of future economic benefits by the entity". [15] The reserves quantity is measured using the long-term planning prices under the methodology of the Society of Petroleum Engineers (hereinafter SPE). The reserves can be classified as proved and unproved in accordance with SPE methodology. Proved reserves can be classified as the developed and undeveloped. The reserves quantity is treated annually because of the many possible

factors as changes, new data, etc. But the entity uses the proved developed reserves estimation for calculation of unit of production rate. Moreover, the term of the amount of reserves is specified in the accounting policies of the Company that is an expected amount of hydrocarbons produced during the term of the initial license.

For calculation a depletion rate it is required “unamortised costs of proved oil & gas properties” to divide “by the total estimated proved developed reserves”. [15] The exact content of significant accounting policies of Zhaikmunai LLP are shown in the attachment 2.

Zhaikmunai LLP as many Oil and Gas Companies also classifies property, plant and equipment as the oil & gas and non-oil & gas properties. Oil & gas properties are fixed asset that is related directly to the field. There are wells, camps, power transmission line, technical equipments, oil treatment unit, pipelines and others. All these assets are cost intensive and long-term capital expenditures. Thus the Company divides on working assets and construction in progress (Figure 3). Non oil & gas properties consists from buildings, machinery and equipment, vehicles and others.

Figure 3 The movement of Zhaikmunai LLP's property, plant and equipment for the year ended December 31, 2011 and 2012

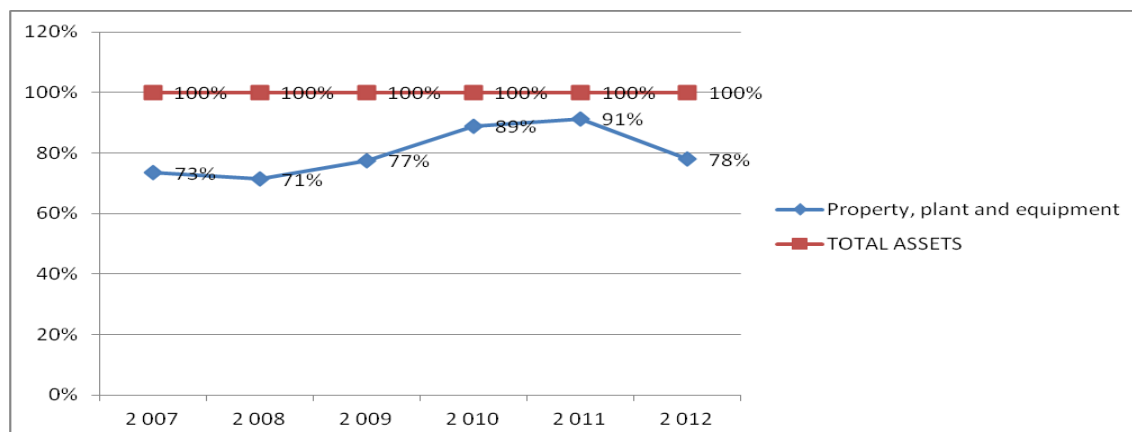
<i>In thousands of US Dollar</i>	Oil and gas properties		Total oil and gas properties	Non oil and gas properties				Total non oil gas properties	Total
	Working assets	CIP		Buildings	equipment & Machinery	Vehicles	Others		
Balance at December 31, 2010, net of accumulated depreciation	456,005	498,552	954,557	2,614	3,325	1,504	1,638	9,081	963,638
Additions	6,318	176,272	182,590	2,714	789	40	1,360	4,903	187,493
Transfers	464,860	(465,625)	(765)	765	—	—	—	765	—
Disposals	(38)	—	(38)	(123)	(98)	(234)	(181)	(636)	(674)
Depreciation charge	(23,967)	—	(23,967)	(482)	(1,097)	(204)	(297)	(2,080)	(26,047)
Balance at December 31, 2011, net of accumulated depreciation	903,178	209,199	1,112,377	5,488	2,919	1,106	2,520	12,033	1,124,410
Additions	5,816	188,390	194,206	609	4,062	378	2,016	7,065	201,271
Transfers	192,872	(194,486)	(1,614)	358	1,245	—	11	1,614	—
Disposals	(61)	—	(61)	—	(143)	—	(201)	(344)	(405)
Disposals depreciation	6	—	6	—	140	—	180	320	326
Depreciation charge	(99,209)	—	(99,209)	(848)	(1,727)	(314)	(524)	(3,413)	(102,622)
Balance at December 31, 2012, net of accumulated depreciation	1,002,602	203,103	1,205,705	5,607	6,496	1,170	4,002	17,275	1,222,980
Cost at December 31, 2011	1,010,746	209,199	1,219,945	7,594	5,813	2,625	4,017	20,049	1,239,994
Accumulated depreciation	(107,568)	—	(107,568)	(2,106)	(2,894)	(1,519)	(1,497)	(8,016)	(115,584)
Balance at December 31, 2011, net of accumulated depreciation	903,178	209,199	1,112,377	5,488	2,919	1,106	2,520	12,033	1,124,410
Cost at December 31, 2012	1,209,373	203,103	1,412,476	8,561	10,977	3,003	5,843	28,384	1,440,860
Accumulated depreciation	(206,771)	—	(206,771)	(2,954)	(4,481)	(1,833)	(1,841)	(11,109)	(217,880)
Balance at December 31, 2012, net of accumulated depreciation	1,002,602	203,103	1,205,705	5,607	6,496	1,170	4,002	17,275	1,222,980

Resources: Consolidated financial statements of Zhaikmunai LLP, year ended December 31, 2012

Property, plant and equipment form more than 50% from total assets of Zhaikmunai LLP (in 2011 more than 90%, Figure 4). This is due to specificity of industry activity

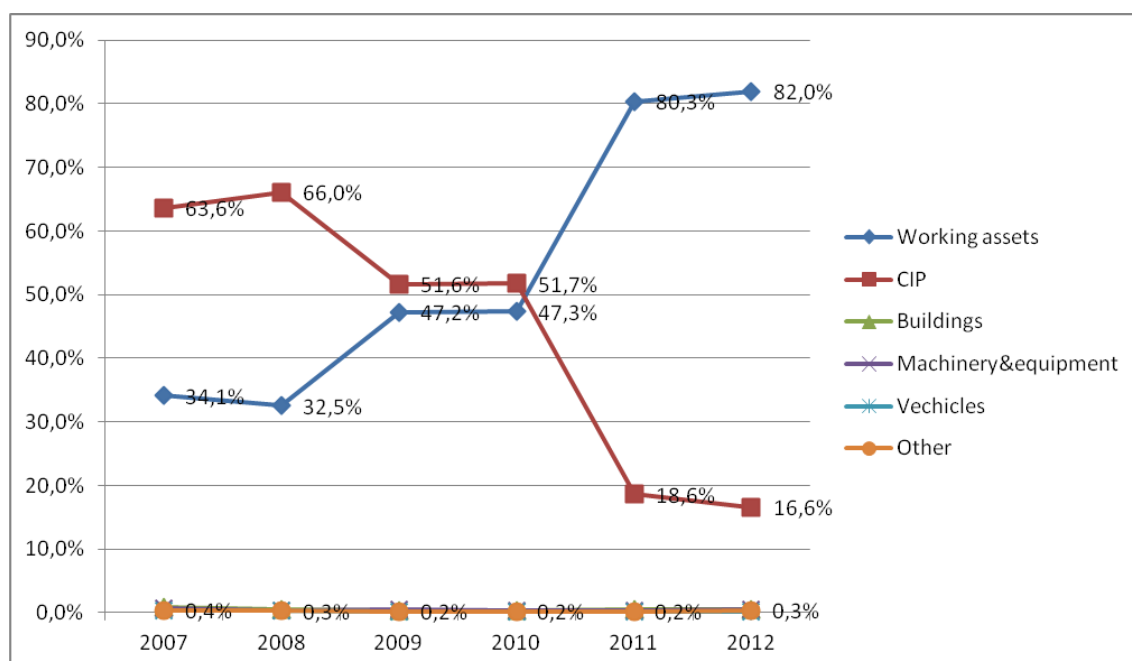
and the necessary cost intensive investments. Main groups of the property, plant and equipment are construction in progress and working assets that make up together more than 90 % (Figure 5). Construction in progress and working assets are related groups of assets. When a certain part of construction in progress is completed, the amount of working assets will increase. So it was in 2011, when cost-intensive gas treatment unit was completed and was put into operation.

Figure 4 The trend line of share of Zhaikmunai's property, plant and equipment from total assets, 2007-2012



Resources: Own elaboration

Figure 5 The trend line of shares of property, plant and equipment's group of assets, 2007-2012



Resources: Own elaboration

2.2 Depletion, depreciation, amortization and impairment of assets

There are three methods appropriate for application of asset depreciation in upstream companies – unit of production, straight line and reducing balance method. According to IAS 16 the used depreciation method should show the possible structure of entity's consumption of future economic benefits from the asset.

The unit of production method is the best choice in accordance with this claim for upstream companies. The quantity of reserves is taken as the basis of estimation. There is mostly taken the proved developed reserves base. But total proved or proved and probable reserve quantity can be taken also. The estimation of quantity of hydrocarbons that are commercially viable is made on the basis of available geophysical, engineering and geological data. Calculation of quantity should be considered only during contract term. The prolongation of contract term is possible if there is proof confirming of entity's intention to prolong the contract without large expenses. If amortization charge is calculated with the basis other than proved developed reserve, then the calculation are adjusted by including estimated probable development costs for access to undeveloped reserves. For example, proved and probable reserve or total proved basis is permissible according to IFRS. Method of depreciation (e.g. unit of production or straight line) is unchangeable except for when the structure of consumption of the future economic benefits is changed. Basis of estimation (e.g. proved developed reserve or total proved) of depreciation can be changeable only. The changes of the basis of estimation and related changes with this decision (additional costs for completion of undeveloped assets) must be reflected on the calculation of depreciation. [11]

Next is described and shown an example of the unit of production method. Unit of production method of depreciation is used mainly for oil and gas assets and the formula 1 looks as:

Formula 1 Depreciation charge for the period, variant 1

depreciation charge for the period	=	production for the current period	×	$\frac{\text{carrying amount of asset at the beginning of period}}{\text{estimated reserves at beginning of period}}$
---------------------------------------	---	--------------------------------------	---	---

Resources: [17]

This formula is used for estimation in the beginning of period, for example in budgeting. Sometimes carrying amount of asset at the beginning of period is shown as original cost of the asset reduced by accumulated depreciation, amortization and impairment. Because new events or the presence of more detailed information influence the physical amount of reserves, it is better to use the formula 2:

Formula 2 Depreciation charge for the period, variant 2

depreciation charge for the period	=	production for the current period	×	$\frac{\text{carrying amount of asset at the end of period}}{\text{estimated reserves at end of period} + \text{production for cur.per.}}$
---------------------------------------	---	--------------------------------------	---	--

Resources: [17]

According to the theory as the basis of estimated reserves can be:

- proved developed reserves;
- proved and probable reserves;
- proved developed and undeveloped reserves.

If the field contains both oil and gas, volumes of reserves and production are needed to convert to a single unit of measurement. The oil and gas are converted mostly in barrels of oil equivalent. The second choice is a conversion on the basis of relative heat content, measured in British thermal units. Next is shown the example of oil and gas conversion to the barrels of oil equivalent.

Example 1

The Oil and Gas Company X extracts both oil and gas mineral resources on the one field. The company measures the oil in metric tons and the gas in thousand cubic feet. The engineer of the company defined that one metric ton is approximately equal 6, 65 barrels and one barrel is equal 5,81 thousand cubic feet of gas. The oil barrels are used by the company for the purpose of reserves estimation for amortization.

Production of oil during the year was 25 000 metric tons and production of gas was 1 570 000 thousand cubic feet.

Estimated proved developed reserves of oil at the end of period were 245 000 metric tons and estimated proved developed reserves of gas at the end of period were 58 180 000 thousand cubic feet.

The carrying amount of oil and gas assets at the end of period is equal 35 000 000 monetary unit

Solution

- 1) The conversion of hydrocarbons to the unit of measurement - a barrel of oil equivalent*

	<i>metric ton</i>	<i>barrel of oil equivalent (boe)</i>
<i>oil volume during the period</i>	<i>25 000</i>	<i>166 250</i>
<i>estimated oil reserves at the end of period</i>	<i>245 000</i>	<i>1 629 250</i>
	<i>thousand cubic feet</i>	<i>barrel of oil equivalent</i>
<i>gas volume during the period</i>	<i>1 570 000</i>	<i>270 224</i>
<i>estimated gas reserves at the end of period</i>	<i>58 180 000</i>	<i>10 013 769</i>

- 2) Total estimated reserves at the end of period = 11 643 019 boe
Total volume of production during the period = 436 474 boe*

$$3) \text{ Depreciation charge for the period} = \frac{35\,000\,000}{(11\,643\,019 + 436\,474)} \times 436\,474 = 1\,264\,670$$

The start time of depreciation is a very important point for the correct accounting of depreciation of fixed assets. According to the IFRS the assets are depreciated or amortized from the moment of asset's availability to use. Exploration and evaluation assets are depreciated or amortized from the moment when field is prepared for exploitation and commence of flows of economic benefits or from the moment of asset's availability for use. Depreciation amount must be capitalized unto the level asset's use for development of other assets. [12]

Example 2

The object of company X was built in August 20XX. The source accounting document was made in September 20XX including the act of working and state commissions and related order about entering the fixed asset to the balance.

When the company needs to start the amortization of the fixed asset according to IFRS?

Solution

According to IAS 16 the depreciation of an asset begins when it is available for use, i.e. when its location and condition allows its use in the manner intended by management.

The location and condition allows use of asset in the manner intended by management in September 20XX when all source accounting document was made and the object is prepared for use. Therefore the depreciation of asset must be start in September 20XX.

Large parts or components of fixed asset with considerable cost are amortized apart. But in this case other parts of asset will be amortized also separately even if their cost is not significant relative to the cost of the whole object. Those large components with resembling useful life and methods of amortization may be incorporated in the group.

Replacement of components of the object is recognized in the carrying value of asset at the incurred time. The carrying amount of old replaced part is written off. Expenditure incurred during maintenance inspection also is added to the carrying value of asset. But remained amount from the last inspection in carrying value is needed to be written off.

Next discussion is about impairment of assets. According to IAS 36 "Impairment of assets" (hereinafter IAS 36) the company looks for indication of possible impairment long-term assets annually at the end of reporting period except of exploration and evaluation assets and goodwill. For those types of assets there are different regulations.

The impairment loss is acquired when carrying amount of asset or cash generating unit surpasses the recoverable amount and the difference is the amount of loss. If fair value less costs to sell is higher than value in use, it will be taken as recoverable amount and vice versa.

Cash generating unit (hereinafter CGU) is defined in IAS 36 as the smallest group of assets which forms cash inflows that are not depended on cash inflows from other assets (groups of assets). In Oil and Gas Industry as CGU can be represented a field, license area, well, petrol station.

Fair value less costs to sell (hereinafter FVLCTS) is the amount that is obtained by the sale of an asset or cash-generating unit between independent, knowledgeable and willing parties, less the costs to sell. [7] If market price could not be determined or it was not a similar market transaction, then FVLCTS is determined by discounted cash flow. Calculation of FVLCTS are made on the after tax basis. It also relates to the discounted cash flow that needs to be based on after tax market rate. In same time the amount of compared carrying value must be less of deferred tax liabilities which are related to cash generating unit.

Value in use is calculated as present value of the future cash flows that will be received from an asset or cash generating unit. [7] Cash flow is based on before tax discount rate. In calculation there are excluded expected costs for improvement of asset, possible future output, but included maintenance costs. Costs for ending need to be included in cash flow from construction in progress.

The currency in which will be formed cash flow will be used for future cash flows, for discounting and will be appropriate for discount rate and it should not be the same with the functional currency of the company. Exchange rate for calculation of present value is used on the date of calculation.

The carrying value of liability is not used in calculation of carrying value of cash generating unit except cases when it is impossible to define the recoverable amount of cash generating unit without liability. The example of such liability can be decommissioning provision.

Reasonable, consistent, supportable and realistic assumptions are taken on the base of both calculation (FVLCTS or value in use).

Indicators for impairment can be such events as:

- a substantial decline in market value or substantial operating or cash losses;
- obsolescence from the technical view or damage;
- regulatory changes (laws, taxes, in politics);
- change of the purpose of asset use.

The exploration and evaluation assets are tested for impairment if its carrying amount is higher than recoverable amount and if it changed and recognised as development assets.

Examples of indications for these special types of assets were given in standard, there are:

- the company has unsuccessful results and commercially viable reserves were not found, the company wants to end activity in the particular field;
- the contract term is ended or would be ended at an early date and would not be prolonged;
- it is information that carrying amount will be recovered just partly even if the development stage and production will occur;
- considerable exploration and evaluation costs are not planned and budgeted.

Intangible assets with indefinite useful life as goodwill are tested for impairment at the lowest level annually even if it is not recorded the indications. But if it is indication it also tested for impairment. The lowest level needs to be the smaller than the operating segment. The goodwill is connected to a particular asset or group of assets because could not generate cash inflow itself without this relation. Respectively it is allocated to the related cash generating unit or group of unit that can be defined as the lowest level. Cash generating unit that includes the goodwill is tested for impairment annually. The asset that included in CGU is tested for impairment when it is indication for impairment of asset. The test for impairment needs to be provided before testing for impairment the cash-generating unit containing goodwill. The same situation is with group of CGU. The loss from impairment reduces the carrying amount of asset or CGU (group of CGU). But if CGU includes the goodwill then losses from impairment reduce first the carrying amount of goodwill assigned to CGU and second the carrying amount of asset in proportion to the carrying amount of each asset in the cash generating unit (group of CGU). [7]

If the recoverable amount of impaired asset is increased, then the recognised loss can be reversed. The carrying amount of asset should not exceed the recoverable amount. Recognised impairment loss from goodwill could not be reversed.

2.3 Exploration and evaluation assets under IFRS 6

One of the most significant IFRS for resource-exploration enterprise is a specially designed standard that applies only in the organizations of this industry - IFRS 6

"Exploration for and Evaluation of Mineral Resources" (hereinafter IFRS 6), according to which the organization choose methods of accounting of business transactions.

In December of 2004 the International Accounting Standards Board approved the IFRS 6 "Exploration for and Evaluation of Mineral Resources", which is applied by the enterprises of resource industries from January 2006.

The purpose of IFRS 6 is to establish the rules for the preparation of financial statements for companies involved in the exploration and extraction of mineral resources. This standard does not require significant changes in accounting policies of resource-exploration companies that existed before its adoption. In accordance with IFRS 6 in the financial statements of a resource-exploration entity shall disclose the results of operations for the exploration and evaluation of mineral resources in such way that the qualified users of the statements can determine the volume, time of obtaining and the probability of future cash flows of economic benefits.

Cost for exploration and evaluation is the cost incurred by the company in connection with the exploration for and evaluation of mineral resources before the technical feasibility and cost-effectiveness will become apparent. Assets related to exploration and evaluation is the cost of exploration and evaluation recognized as assets in accordance with the accounting policies of the company.

Only costs for exploration and evaluation are regulated by IFRS 6. Therefore for other incurred costs the company does not apply regulations of IFRS 6.

Administrative and other general indirect costs related to exploration and evaluation activities are capitalized as an asset only if it is provided by the accounting policies of the company. However, the chosen policy should be based on one of the methods of accounting under IFRS.

Resource-exploration enterprise should develop accounting policies, which determine which costs relate to the costs of exploration and evaluation of mineral resources. These accounting policies must be applied consistently from period to period.

IFRS 6 requires that the commitments to eliminate the effects of activities and environmental restoration need to be adjusted in accordance with IAS 37 "Provisions, contingent liabilities and contingent assets".

In practice there are three methods how companies shows costs for exploration and evaluation in the balance sheet. First method is a capitalization their as part of intangible assets and after the probability of future inflows of economic benefits to displace their as “Oil and gas properties”. Second method is a capitalization of costs as part of intangible assets and to depreciate it during exploration period according to terms of contract on a straight line basis. Third method is to capitalise it as “Construction in progress” or as part of property, plant and equipment since the exploration stage. Again the classification of costs for exploration and evaluation need to be in accordance with accounting policy of the entity. Measurement of recognised assets shall be done at cost. [11]

Therefore once the cost of exploration and evaluation of mineral resources will be formed completely and when the technical feasibility and cost-effectiveness will become apparent, they are accounted as fixed assets or intangible assets. For their accounting it will be used applicable standards (IAS 16 "Property, Plant and Equipment", IAS 38 "Intangible Assets"). But before reclassification the assets related to exploration and evaluation of mineral resources need to be tested for impairment.

IFRS 6 makes reference to IAS 16 and IAS 38 about the valuation of exploration and evaluation assets after recognition with revaluation or cost model.

In case of dry hole (unsuccessful results) incurred costs for exploration and evaluation need to be written off in amount of fair value less costs to sell. [11]

The decision to decrease the value of assets related to exploration and evaluation of mineral resources should be made on the basis of the requirements of IFRS 6, while the rules of IAS 36 "Impairment of Assets" is used for operations of reduction the cost of these assets.

Under IFRS 6 there are described features that indicate for testing for impairment, for example:

- expiration of validity period of rights to explore in a certain area without a future prolongation;
- adequate information about unlikelihood of the full recoverability of book value of the assets, even in case of successful development or sale;

- failure to detect the mineral resources, in consequence of which the company makes a decision to stop such activities in a particular area.

The above list is not a comprehensive. If carrying value of exploration and evaluation assets is more than recoverable amount², then it is considered as features for testing for impairment. The exception is cash generating units or group of units allocated to an exploration and evaluation asset that should not exceed an operating segment described at IFRS 8 “Operating Segments” [3]

After studying the standard, it follows that at the exploration period companies choose the methods of realization of economic activities, develop their own classification of costs and methods of their accounting in the financial statements by itself. During the exploration the costs are capitalized and form a separate group of assets. The standard does not give clear guidance in the area of accounting. There is no developed list of costs to be capitalized during the exploration period. The oil and gas organizations adopt the decisions about capitalization and classification alone by itself.

² Recoverable amount is either a fair value less costs to sell or value in use. The higher value is the recoverable amount according to IAS 36.

3 Cost accounting

In view of international experience of accounting and recognition of the costs of exploration and development, there are two polar approaches of cost accounting: the method of full cost and the method of successful efforts. They were developed according to local GAAP of countries.

If it is used the full costs approach, all costs incurred in exploration and development of natural resources in a particular area should be capitalized. Particular area in international practice can be a country or even a continent in which the company provides cost-effective search for reserves of natural resources. It means that the costs of exploration and development and all operating expenses incurred at cost ineffective field are included in the amount of capitalized costs.

This approach is based on the assumption that companies aim to find natural resources from the beginning of research of several fields. Therefore, all operating costs incurred are perceived as necessary. In international practice this approach is most commonly used by small and medium-sized oil companies.

Companies need to take into account that a large concentration of capitalized costs leads to higher future asset depreciation and the higher expenses of the period. In practice mostly companies, which apply the IFRS, change cost accounting policy from full cost to the successful effort method because full cost approach has a large inconsistency with IFRS. [11] The transition is regulated by IFRS 1 “First-time Adoption of International Financial Reporting Standards”.

On the other hand, there is a method of a successful effort that used mostly by large Oil and Gas Companies. The essence of this method is that only costs directly related to exploration and development of economically effective field can be capitalized. All costs resulting from cost-ineffective projects are recorded as expenses in the current period. It is understandable why this method can be used by mostly large companies, because they are powerful financial groups and they can afford to such large losses of the current period, which would still be covered by profits from the sale of resources from other fields or non-core activity.

It is also possible to meet a combination of both approaches "method in a particular project" that is often used in practice.

Before the technical feasibility and cost-effectiveness become apparent, the capitalised costs are allocated to big pools or cost centres. Obviously cost centre is created on the geographic basis.

Example 3

The company X drills 2 oil wells in reporting year. The incurred costs were for equipment purchase, drilling services, seismic exploration works and other related works. The costs spent on the first well, were \$ 750 000. The costs spent on second well were \$ 1 200 000. The reserves were found on the first well. The second well became dry hole.

Solution

1) The successful effort method

Only dry hole costs in the amount of \$ 1 200 000 are shown in the income statement for the reporting period. Costs in the amount of \$ 750 000 are shown as assets in the balance sheet statement for the reporting period.

2) The full cost method

The costs in the amount of \$ 1 200 000 are recorded as asset "Productive well". The costs of dry hole are also capitalised and are recorded as asset "Non-productive well".

3.1 Cost accounting at pre-licensing stage

Costs for exploration and geosciences surveys before acquisition of license do not fall under the regulation of IFRS 6. These costs could not be capitalised according to IASB because of large uncertainty that costs will be recovered in future. The costs need to be expensed in period when were incurred. There is exception, for example as permission for exploration, when the expenses are spent for creation of an intangible asset according to IFRS 38. [13]

3.2 Cost accounting for the acquisition of rights for exploration, development and exploitation of mineral resources

The costs for obtaining the right for conducting exploration, development, production activities recognised as intangible assets and measured at a historical cost.

Except the right itself there are also can be incurred additional costs for the acquisition of rights that form the obligations to make an additional payment, for example:

- signature bonus,
- related legal and consultation services,
- permission from government institution such as institutions engaged in a health, safety and environment protection,
- reimbursement of historical costs within a framework of contract for subsoil use, that had previously been owned by another subsurface user,
- expenditure for environmental, social programs, and site restoration.

Sometimes governments set a large amount of signature bonus that creates financial difficulties for companies. The government reduces signature bonus in order to meet the needs of companies. Instead of that it requires a production bonus (either at the moment of reaching a certain level of production or at the date of reserves finding, it depends on conditions of contract). In such case production bonus will be part of costs for obtaining the right.

These additional costs could not be separated because right to conduct activities in Oil and Gas industry could not be obtained without these costs.

3.3 Cost accounting at the development stage

The amount of costs that will be spent on development stage depends on the location of the license area and fitting of territory with infrastructure equipment. At this stage it is required the most capital-intensive costs for construction of major projects such as construction of drilling sites, refineries, pipelines, roads, camps, warehouses for storage of equipment and stocks, the installation of equipment. Most of these works are made before exploitation of field, but it also can continue after commencement of production. The companies create cost centre or cost pool for tracking expenses in accounting. The size of cost centre is different in each company. Even the regulations regarding of the

size of the cost centre is different in different countries. For example, in USA the cost centre can include all fields, in other countries it is a one field, but also it can be detailed on the level of wells or constructions.

Costs for drilling of operating wells and their development include:

- the costs of preparation works for drilling, including surveying the drilling, cleaning area, areas for storage the top soil, road construction, road movement of public highways, pipelines, power lines, and others that is necessary for oil extraction;
- the costs of operating drilling and equipping, for example costs associated with the construction of production wells. There are such wells as extractive, pressure, evaluation, observation, and other special types of wells. The costs of drilling of artesian and absorbing wells are intended in disposal of waste washing fluid. They are recorded as the costs for construction of these wells;
- the costs for providing an improved system extraction.

Mentioned above costs for wells that are in the process of construction, the objects of development of oil and gas fields that are not put into operation and the cost of acquisition of uninstalled equipment are recorded as construction in progress until it is completed. After completion regardless of whether well is production or not, costs are recognized as assets in form of wells and associated equipment.

It is no special accounting standard for the accounting of assets in development stage. They all are regulated by the Framework, IAS 16 and IAS 38. Especially it concerns when production is started and capitalisation must meet the definition of assets determined in these standards. All costs that are not recognised as assets within the framework of IAS 16 and IAS 38 will not be capitalised and should be reflected in the income statement of the current period. Capitalization of costs under IAS 16 has a limit on the amount that can be capitalised. Above norm costs are not included in the cost of asset. There are, for example, resources, raw materials, labour and other costs used for creation of an asset by its own efforts. The IAS 16 requires from entity to specify in accounting policy the norm or level of costs when they are normal (permitted) or above-norm.

4 Inventory

Oil and gas inventories are used for many purposes. They are intended not only for sale, but also used in the process of production or in the rendering of service. In practice inventories are grouped and recorded into the following account:

- raw materials and supplies (chemicals, cement, additives for hydrocarbons, fuel, container and packing materials, etc.);
- finished goods (crude oil, natural gas, condensate, LPG, NGL, etc.);
- work in process (oil treatment, gas treatment, etc.);
- other stocks.

Inventory is regulated by IAS 2 “Inventory”. Measurement of inventories is made either at cost or net realizable value. The lowest amount is taken in both values. Net realizable value is equal to estimated selling price reduced by estimated costs for completion of production and the estimated costs to be incurred for the sale. Cost of inventories should obligatory include all costs of acquisition, conversion and other related costs. Next is shown a composition and structure of cost of goods manufactured (Table 1).

Table 1 Production prime cost

Description of costs	Include in inventory		Do not include in inventory
	Direct	Overheads	
Production materials and services (such as explosives, fuel, power, consumables, catalysts and production drilling costs)	V		
Direct labour costs, including related payroll additives (such as pensions)	V		
Mining contractors	V		
Normal amounts of materials wastage	V		
Costs of transporting materials to different locations	V		
Supervisor salaries and related payroll additives		V	
Other indirect labour at the mine site and related processing facilities, including related payroll additives		V	

Indirect materials		V	
Maintenance costs associated with running the mine and related processing facilities		V	
Depreciation of mine property acquisition costs and capitalised development costs (including any amounts transferred from exploration and evaluation expenditure)		V	
Depreciation of mining and production equipment, and related facilities		V	
Waste removal costs (except to the extent that they are capitalised to deferred stripping in periods when the stripping ratio is above the expected life-of-mine stripping ratio)		V	
Amounts transferred from deferred stripping (in periods when the stripping ratio is below the expected life-of-mine stripping ratio)		V	
Storage and handling costs for raw materials, components, other supplies and work in progress that are not a necessary stage of the production process			V
Product research to develop new uses for minerals			V
Around mine exploration (except to the extent that exploration costs are capitalised)			V
Royalties (if based on sales not production)			V
Abnormal amounts of wasted materials or labour or other abnormal inefficiencies (such as strike action)			V
Selling costs			V
Distribution costs			V
Storage costs of finished product, including insurance			V
General management and administration costs			V

Resources: [18]

In the costs of acquisition are included the purchase price, transportation, import duties and related taxes except those that later recovered by the tax authorities, handling and other costs directly related to the acquisition of stocks. Costs of conversion of inventories signify costs directly related to the units of production (direct costs),

systematically distributed fixed (depreciation, general and administrative, maintenance expenses) and variable overhead costs.

Inventories are estimated using either first-in-first-out (FIFO) or weighted average cost method, excepting cases when it is measured by specific identification of particular cost. Inventories that are similar in nature and way of using should be measured with same method. Carrying value of sold inventories will be recorded as expenses and will be attributed to period when related revenue is occurred.

First exception that is not regulated by IAS 2 is valuation of inventories at net realizable value according to the used practice in industry. Second exception is valuation of inventories at fair value less costs of sale. Broker-dealers who resell inventories use this method of inventory valuation. But it is not appropriate to change inventories' nature and structure and to use forward price as fair value. In both cases changes in value are recorded as loss or profit in incurred period.

Third exception is oil and gas inventories minimal amount of which is needed in such objects as pipelines, gas storage or refineries during production and selling process. Some amount of oil and gas product could not be taken for production or sale and is needed for normal operation of these objects. This amount of inventory needs to be recorded as part of these objects in property, plant and equipment under IAS 16. [17]

Finished goods in Oil and Gas Company can be such types of hydrocarbons as oil, gas, condensate, liquefied gas and others. In practice accountant receives internal documents as summary of production every defined period (mostly monthly) and list of shipment of finished goods from production and commercial departments. Next is shown an example of recording and measurement of finished goods in accounting. In this regard, the company sets the standard (planned) product prices, which remain constant for a sufficiently long time. Products are accounted based on these prices in storage during the month (or other determined period, in example is taken a monthly period) and is written off from storage in its sale or other disposal. At the end of the month after all costs are formed and the value of work in progress is determined, the difference between the planned and actual cost is measured.

Example 4

Planned accounting cost is 150 monetary units for 1 ton of crude oil

<i>№</i>	<i>The name of indicators</i>	<i>Product in physical terms</i>	<i>At planned accounting cost</i>	<i>At the actual cost</i>
1.	<i>Balance at the beginning of the month</i>	500	75 000	72 704
2.	<i>Produced during the reporting month</i>	11 000	1 650 000	1 544 495
3.	<i>Total amount</i>	11 500	1 725 000	1 617 199
4.	<i>The planned cost on 1 ton</i>			150
5.	<i>The actual cost on 1 ton</i>			140,4086
6.	<i>Shipped for sale</i>	10 800	1 620 000	1 516 413
7.	<i>Balance at end of month</i>	700	105 000	100 786

After the closes of month and after collection of the actual costs of production on expense account “The basic production”, deviations transactions are made.

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>	<i>Operation</i>
<i>Finished goods</i>	<i>The basic production (expense account)</i>	1 650 000	<i>Taking the finished product to the storage at the planned cost</i>
<i>Finished goods</i>	<i>The basic production (expense account)</i>	- 105 505	<i>Record of the deviation of the actual cost from the planned for accepted for accounting the finished product (red-ink entry)</i>

Shipment of finished products from the storage is recorded by the following transactions:

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>	<i>Operation</i>
<i>Cost of goods sold (expense account)</i>	<i>Finished goods</i>	<i>1 620 000</i>	<i>Written off of planned cost of sold products</i>
<i>Cost of goods sold (expense account)</i>	<i>Finished goods</i>	<i>- 103 587</i>	<i>Written off of deviation of the actual cost from the planned for sold products (red-ink entry)</i>

Sale of finished products (customer billing) is recorded by the following transactions:

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>	<i>Operation</i>
<i>Short-term accounts receivable for the sale of goods</i>	<i>Revenues from sale</i>	<i>4 482 000</i>	<i>At selling price excluding VAT (selling price 415 monetary unit for 1 ton of crude oil)</i>
<i>Short-term accounts receivable for the sale of goods</i>	<i>Tax liabilities</i>	<i>627 480</i>	<i>On the amount of VAT (14%)</i>

Received payment from customers for sold goods is recorded by the following transactions:

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>	<i>Operation</i>
<i>Cash and cash equivalents</i>	<i>Short-term accounts receivable for the sale of goods</i>	<i>5 109 480</i>	<i>Payments from customers for sold goods</i>
<i>Tax liabilities</i>	<i>Cash and cash equivalents</i>	<i>627 480</i>	<i>Payment for tax liabilities (VAT)</i>

5 Other specific aspects of accounting at Oil and Gas industry

In the following chapter other accounting aspects of industry are described that has specific features. It is displayed the correct and timely revenue recognition under the terms of different types of contract, different types of provisions that are obligatory or arose from operating activity, and types of hydrocarbon reserves that are mainly important for unit of production deprecation.

5.1 Revenue recognition

Revenue recognition falls under the regulation of the IAS 18 “Revenue”. Inflows of economic benefits obtained and received on the entity’s account are entity’s revenues. In Oil and Gas Industry revenue recognition has specific features that are discussed in the following sub-chapter.

First situation is revenue recognition between joint ventures companies that overlifted or underlifted. Extracted hydrocarbons divided between joint ventures companies. If one partner during lifting the hydrocarbons takes more (less) than its share, then he will overlift (underlift). Therefore it turns out that underlifter sells the hydrocarbons to overlifter at the date of lifting. The market price is taken for revenue recognition. The underlift receivable and overlift liability is appears. If partners agree on net settlement by cash according to overlifted and underlifted amount of hydrocarbons, such case will be regulated by the IAS 39 “Financial instruments: recognition and measurement“. Market price will be taken for remeasurement at balance sheet date. Occurred change will be recorded as other expense or income.

In case of volumetric production payment contract that is arrangement for sale of a certain amount of hydrocarbons from future production the deferred revenue are recognized during the term of contract.

In purpose of reducing risks and dividing responsibility many companies are involved in international trade to use definitions of Incoterms (the international chamber of commerce terms of trade) in compiling of sale contracts. Choice of a particular commerce term of trade has influence on revenue recognition. For revenue recognition it is important that significant risks and rewards of ownership are transferred from the seller to the customer. It happens at a time when the seller has fulfilled its primary

obligations. For example, in case of ex-works terms taking the goods by customer from the seller's storage is a time of performance of all obligations, and the buyer takes all risks and costs. In case of carriage, insurance and freight terms risks and rewards are transferred in the moment of loading of goods at the agreed port of buyer's destination even if seller is responsible for payment of carriage, freight and insurance. If it is agreed on free on board terms, loading the goods at the port of shipment is the moment of revenue recognition. The seller's obligations are fulfilled at this moment. Summing up, the moment of transferring risks and rewards is the moment of delivering goods by the seller to the agreed point (seller's storage, port of shipment, port of buyer's destination, import customs terminal, buyer's premises).

There are specific types of taxes related with revenue such as income taxes and royalty. Income tax is based on earned profit. Royalty is based on sales or produced volume of output. Income taxes are regulated under IAS 12 "Revenue" and local tax regulations. Royalty is regulated based on local tax legislations and it is not calculated deferred tax. Royalty is paid separately for each type of mineral and is set in the form of percentage from net sales, cost of extracted mineral resources, gross profit or determined as a fixed amount per unit of output. Royalty and other taxes except of income taxes are showed within other expenses in income statement. For the recognition of expenses for taxes that listed above and are not income taxes there are applied the general principles recognition of liabilities in accordance with IAS 37 "Provisions, contingent liabilities and contingent assets". The order, the size, terms and kind (cash or physical amount) of royalty payment are set by contract or current local tax legislation.

IAS 12 is applicable for income taxes both national and foreign. Taxable profit is their chargeable basis.

Reimbursement of expenses or payment of invoices to perform work for which provision is created can be accounted as provisions on debit side and cash, or trade payables, or payroll liabilities on credit side.

5.2 Provisions

Provisions are recognized when the company has present obligation (legal or constructive) as a result of past events. It is possible that for fulfilment of the obligations cost-effective expenditure of resources are required and it is possible to make a reliable cost estimate of the amount of the obligation. Provisions of the oil

companies are mostly divided into two groups - the provisions made under the contract and provisions that result from the operating activities.

Reserves caused by operating activities include, for example: provision for the elimination of accidents, for the restoration of contaminated sites, the provision for decommissioning of the fixed assets, etc. At initial recognition of reserves it is regarded their character. IAS 37 does not prohibit and does not require capitalization of the costs intended at creation of a reserve. Creation of a reserve recognized as an expense in the period in which is formed and accounted as costs of reserve formation on debit side against provisions on credit side. The cumulative amount of the reserve in the balance sheet is presented as a liability (long-term or short-term, depending on the maturity). Provisions are reviewed at every balance sheet date. The reserve must be restored in case when it becomes apparent that it is no longer required to commit payments for fulfilment of the obligations. Restoration or reduction of the provision amount is reflected as provision on debit side and costs of reserve formation on credit side. The provisions made under the contract include liquidation fund, the provision for payment of historical costs, the provision for expenditure of funds for training local personnel, the provision for the payment of bonuses of production and commercial discovery.

Liquidation fund provides a description of the reserve that is used to cover the costs when the field will be eliminated at the end of the license period. Provisions for the costs of abandonment and site restoration are recognized in full on the discounted basis using a pre-tax market interest rate. Recognized amount represents the present value of estimated future expenditure determined in accordance with the terms of the contract or on the basis of expert advice, or as required by law on the basis of sustainable management estimations and available historical data. In addition the possible risk needs to be described either in the present value of estimated future expenditure or in interest rate. Accrued liquidation fund is accounted as part of fixed assets on debit side and reserves (liquidation fund) on credit side. Calculation of the amount of the discount, which is the cost of current period, is included in interest expense (finance expense) against reserves (liquidation fund). Reserve is created for the period of the company's activities.

Any changes in the present value of the estimated costs are accounted for as an adjustment to this reserve and fixed assets, including changes related to exchange rate differences, if the amount of the reserve denominated in foreign currency. In this case,

amount of the reserve should be recalculated at market exchange rates on the date of financial statements. A provision should be used only in relation to those costs for which it was originally recognized.

Next is described one type of provision that is Zhaikmunai LLP's obligation under the legal and contract terms. It is historical cost that is typical provision type in Kazakhstan. Payments to reimburse historical costs is fixed payment of the subsoil user for compensation of total expenses incurred by the state for geological survey on the contract area and fields exploration before the conclusion of production sharing agreement. Historical costs are based on the discounted present value of future obligations to the Government for payment of historical costs, from the time when the company will pass to the production phase. Discounting of historical costs with regard to the discount factor is held as an adjustment at the end of the reporting year. Calculation of the discount is accounted as interest expense on debit side and payable to the government on credit side. The companies that have under the terms of contract the right to provide only exploration activity without further extraction will not pay for reimbursement of historical costs.

Brief information about abandonment and site restoration, environmental obligations, social and education commitments and other contingent commitments shall be disclosed in notes to financial statement for reporting year. The disclosure requirements are described in IAS 37. The example of brief information about contingent liabilities and commitments are shown in attachment 3. The example is taken from financial statement of Zhaikmunai LLP, year ended December 31, 2012.

5.3 Reserves reporting

Special rules and requirements for reserves reporting are not indicated under IFRS. Reserve reporting is crucial information not only in decision making for future outlook and estimation of current performance, but is also used in unit of production calculation of depreciation and in estimation of decommissioning provision (Figure 6).

There are several categories of reserves that are used for reserve estimation:

- Proved developed reserves are the amount of reserves that are extractable from existing wells where was installed all need equipment and with known mining methods. The remaining amount of proved reserves is proved undeveloped

reserve. Basically it is reserves on wells with proved reserves, where not yet developed infrastructure.

- Total proved reserves (proved developed and undeveloped reserves) are amount of hydrocarbons estimated based on geological and engineering data that shows a reasonable degree of certainty of recoverability under existing operating and economic conditions. It means that with 90 % of confidence the actual extractive amount would be higher than the estimated amount of proved and probable reserves.
- Proved and probable reserves has same definition as total proved but only with 50 % of confidence that actual extractive amount would be higher than the estimated amount of proved and probable reserves. The amount of proved and probable reserves should be confirmed by actual production or conclusive formation tests results. [14]

Figure 6 Significance of reserve estimation



Source: Own elaboration

Proved mineral reserves are disclosed at the beginning and at the end of the reporting year over each field with indicating the geographical segments where are located. Changes in the amount of proved reserves that have arisen during the year as a result of various factors: the revision of previous estimates of mineral reserves, improved

extraction (if it is significant, this change is shown separately, If it is not significant, this change is included in the revision of previous estimates), extension of previously discovered reservoirs through additional drilling in periods following to the detection, and detection of new commercial discovery in the contract area, disclosed with appropriate explanations.

6 Conclusion

Petrochemical industry is the most important sector of modern industry, which in recent decades has gained great importance in world production. Oil and gas products either in the crude form or passed the stage of processing, and by-products are used almost everywhere. The accounting system of this field is very complex and important for correct financial reporting.

Nowadays there are no common rules and standards regulating accounting in this industry. There are many issues directly related to accounting methodology. This work is focused to answer to unsettled issues. One of example of such issues is accounting methodology at the exploration period. In addition to accounting and legal frameworks there is also a contract and work programs, which also regulate rules of recording of business transactions in accounting. For Oil and Gas Companies a well-established accounting system is highly required because it allows properly and timely reflection of business transactions, capitalizing costs at a particular stage, and in addition plays the most important role in preparation of financial statements. Practical examples help to enhance the knowledge of readers and to give illustrative picture of oil and gas accounting.

Based on the study the next important points can be highlighted:

- Business management in the oil and gas sector has drastically specific character. A large number of normative base are applied. Nowadays industry passes the stage of implementation and testing of developed methods of business management both from technical side and accounting. New standards are developing and can be applied only in the extractive industries.
- Accounting of costs incurred by the subsoil user in different period of activity at the contract area has also its special features. Cost classifications are applied and developed from the point of mining industry. Industry terminologies are complex and highly skilled professionals are required to work with them. As a result, a large problems strand in front of accounting that consists in the correct recognition of the costs incurred and their correct recording.

- The costs that can be capitalized and their classification should be indicated in the accounting policies of the company. Capitalized costs are allocated to certain cost centres. The size of cost centres can vary from company to company.
- In purpose of valuation the choice of reserve category is important for the following reasons. The estimated reserves are used in estimation of current performance and decision making for future outlook, in unit of production calculation of depreciation and in estimation of decommissioning provision.
- The company should correct and definitely specify the terms in joint ventures and in trade contracts for timely and correct revenue recognition.
- The commitment to establish reserves appears whether as a result from the operating activities or under the legal regulation or contract.

This work developed my knowledge in International Financial Reporting Standards and extended the outlook on oil and gas area.

7 Bibliography

1. BRADY, John, Charles (Chuck) CHANG, Dennis R. JENNINGS a Rich SHAPPARD. *Petroleum Accounting: Principles, Procedures & Issues*. 7th ed. Denton, TX: Professional Development Institute, 2011. ISBN 978-094-0966-277.
2. WRIGHT, Charlotte J. a Rebecca A GALLUN. *International petroleum accounting*. Tulsa, Oklahoma: PennWell Corporation, 2005. ISBN 1593700164.
3. IFRS 6. *Exploration for and Evaluation of Mineral Resources*. EU: International Accounting Standards Board, 2004.
4. IAS 16. *Property, Plant and Equipment*. EU: International Accounting Standards Board, 2003.
5. IAS 38. *Intangible Assets*. EU: International Accounting Standards Board, 2004.
6. IAS 2. *Inventories*. EU: International Accounting Standards Board, 2003.
7. IAS 36. *Impairment of Assets*. EU: International Accounting Standards Board, 2004.
8. IAS 37. *Provisions, Contingent Liabilities and Contingent Assets*. EU: International Accounting Standards Board, 1998.
9. IAS 18. *Revenue*. EU: International Accounting Standards Board, 1993.
10. IAS 23. *Borrowing Costs*. EU: International Accounting Standards Board, 2007.
11. DOLSON, Mary, Derek CARMICHAEL, Akhil KAPADIYA a Alfredo RAMIREZ. *Financial reporting in the oil and gas industry*. PricewaterhouseCoopers, 2011. Available from: <http://www.pwc.com/gx/en/oil-gas-energy/reporting-regulatory-compliance/publications-financial-reporting-oil-gas-industry.jhtml>
12. KPMG LIMITED, a Cyprus. *Accounting in the Oil & Gas Industry*. 2013. Available from: kpmg.com.cy
13. BRADY, Glenn, Riaan DAVEL, Sue LUDOLPH, Aase LUNDGAARD, Joanna SPENCER a Mark WALSH. *Discussion Paper Extractive Activities*. 2010.

Available from: <http://www.ifrs.org/Current-Projects/IASB-Projects/Extractive-Activities/DPAp10/Pages/DP.aspx>

14. OIL INDUSTRY ACCOUNTING COMMITTEE. *SORP Accounting for Oil and Gas Exploration, Development, Production and Decommissioning Activities*. London: Institute of Petroleum, 2001. ISBN 0852932782. Available from: <http://www.oiac.co.uk/>
15. ERNST & YOUNG. *Zhaikmunai LLP Consolidated Financial Statement: Year ended December 31, 2012 with Independent auditors' report*. Almaty (Kazakhstan), 2012. Available from: <http://www.kase.kz/en/emitters/show/ZHMN>
16. ERNST & YOUNG. *Zhaikmunai LLP Consolidated Financial Statement: Year ended December 31, 2009 with Independent auditors' report*. Almaty (Kazakhstan), 2012. Available from: <http://www.kase.kz/en/emitters/show/ZHMN>
17. ЭРНСТ ЭНД ЯНГ (СНГ) Б.В. Особенности применения МСФО для компаний нефтегазового сектора. 2008. Available from: [http://www.ey.com/Publication/vwLUAssets/IFRS_OG_2008_EN_/\\$FILE/IFRS_OG_2008_EN.pdf](http://www.ey.com/Publication/vwLUAssets/IFRS_OG_2008_EN_/$FILE/IFRS_OG_2008_EN.pdf)
18. PRICEWATERHOUSECOOPERS. *Financial reporting in the mining industry*. 2007. Available from: http://www.pwc.com/en_GX/gx/energy-utilities-mining/pdf/ifrs-mining.pdf

8 List of figures, tables and attachments

Figure 1 The upstream and midstream operations	4
Figure 2 The downstream operations.....	4
Figure 3 The movement of Zhaikmunai LLP's property, plant and equipment for the year ended December 31, 2011 and 2012	13
Figure 4 The trend line of share of Zhaikmunai's property, plant and equipment from total assets, 2007-2012.....	14
Figure 5 The trend line of shares of property, plant and equipment's group of assets, 2007-2012	14
Figure 6 Significance of reserve estimation.....	37
Formula 1 Depreciation charge for the period, variant 1	15
Formula 2 Depreciation charge for the period, variant 2	16
Table 1 Production prime cost	28
Attachment 1 General about Zhaikmunai LLP	44
Attachment 2 Significant accounting policies of Zhaikmunai LLP	46
Attachment 3 Contingent liabilities and commitment of Zhaikmunai LLP, year ended December 31, 2012	58

Attachment 1 General about Zhaikmunai LLP

Zhaikmunai, a Limited Liability Partnership (the "Partnership" or "Zhaikmunai") was established in Kazakhstan in 1997 for the purpose of exploration and development of Chinarevskoye oil and gas condensate field in the Western Kazakhstan Region. The Partnership carries out its activities in accordance with the Contract for Additional Exploration, Production and Production-Sharing of Crude Hydrocarbons in the Chinarevskoye oil and gas condensate field (the "Contract") dated October 31, 1997 in accordance with the license MG No. 253D (the "License") for the exploration and production of hydrocarbons in Chinarevskoye oil and gas condensate field between the State Committee of Investments of the Republic of Kazakhstan and the Partnership.

On December 29, 2010 the Partnership has acquired in a transaction under common control 18,000 ordinary shares of Zhaikmunai Finance B.V., representing 100% of its charter capital, from Zhaikmunai Netherlands B.V. (formerly known as Frans van der Schoot B.V.), an entity under control of a common parent. Zhaikmunai Finance B.V. was established by Frans van der Schoot B.V. in April 2010 specifically to issue the US\$450 million senior notes with an October 19, 2015 maturity and a fixed coupon of 10.50% per annum (the "2015 Notes").

The consolidated financial statements include the financial statements of the Partnership, its subsidiary, Zhaikmunai Finance B.V. and a special purpose entity, Zhaikmunai International B.V. established by Zhaikmunai Netherlands B. V., an entity under control of a common parent, in October 2012 specifically to issue the US\$ 560 million senior notes with a November 13, 2019 maturity and fixed coupon of 7.125% per annum (the "2019 Notes") (jointly the "Group"). The Group operates in a single operating segment of exploration and production of hydrocarbons in Chinarevskoye oil and gas condensate field.

On August 17, 2012 the Partnership signed Asset Purchase Agreements to acquire 100% of the subsoil use rights related to three oil and gas fields - Rostoshinskoye, Darjinskoye and Yuzhno-Gremyachinskoye - all located in the Western Kazakhstan region.

The participants of the Partnership, their shares and changes in the participants structure are disclosed in Note 12.

The registered legal address of the Partnership is: 59/2, Prospect Evrazia, Uralsk, the Republic of Kazakhstan.

These consolidated financial statements were authorized for issue by the Partnership's General Director, Chief Financial Officer and Chief Accountant on March 12, 2013.

License terms

The term of the license of the Partnership originally included a 5-year exploration period and a 25-year production period. The exploration period was initially extended for additional 4 years and then for further 2 years according to the supplements to the Contract dated January 12, 2004 and June 23, 2005, respectively. In accordance with the supplement dated June 5, 2008, Tournaisian North reservoir entered into production period as at January 1, 2007. Following additional commercial discoveries during 2008, the exploration period under the license, other than for the Tournaisian horizons, was extended for an additional 3-year period, which expired on May 26, 2011. An application for further extension has been made.

The extensions to the exploration periods have not changed the license term, which will expire in 2031.

Royalty Payments

The Partnership is required to make monthly royalty payments throughout the entire production period, at the rates specified in the Contract.

Royalty rates depend on hydrocarbons recovery levels and the phase of production and can vary from 3% to 7% of produced petroleum and from 4% to 9% of produced natural gas.

Government "profit share"

The Partnership makes payments to the Government of its "profit share" as determined in the Contract. The "profit share" depends on hydrocarbon production levels and varies from 10% to 40% of production after deducting royalties and reimbursable expenditures. Reimbursable expenditures include operating expenses, costs of additional exploration and development costs. Government "profit share" is expensed as incurred and paid in cash.

Resources: Consolidated financial statements of Zhaikmunai LLP, year ended December 31, 2012

Estimation and assumptions

The key assumptions concerning the future, and other key sources of estimation uncertainty at the statement of financial position date, that have a significant risk of causing a material change to the carrying amounts of assets and liabilities are discussed below:

Oil and gas reserves

Oil and gas reserves are a material factor in the Partnership's computation of depreciation, depletion and amortization (the "DD&A"). The Partnership estimates its reserves of oil and gas in accordance with the methodology of the Society of Petroleum Engineers (the "SPE"). In estimating its reserves under SPE methodology, the Partnership uses long-term planning prices which are also used by management to make investment decisions about development of a field. Using planning prices for estimating proved reserves removes the impact of the volatility inherent in using year-end spot prices. Management believes that long-term planning price assumptions are more consistent with the long-term nature of the upstream business and provide the most appropriate basis for estimating oil and gas reserves. All reserve estimates involve some degree of uncertainty. The uncertainty depends mainly on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of this data.

The relative degree of uncertainty can be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Proved reserves are more certain to be recovered than unproved reserves and may be further sub classified as developed and undeveloped to denote progressively increasing uncertainty in their recoverability. Estimates are reviewed and revised annually. Revisions occur due to the evaluation or re-evaluation of already available geological, reservoir or production data; availability of new data; or changes to underlying price assumptions. Reserve estimates may also be revised due to improved recovery projects, changes in production capacity or changes in development strategy. Proved developed reserves are used to calculate the unit of production rates for DD&A.

Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flows model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

Abandonment and site restoration liabilities

The Group estimates future dismantlement and site restoration cost for oil and gas properties with reference to the estimates provided from either internal or external engineers after taking into consideration the anticipated method of dismantlement and the extent of site restoration required in accordance with current legislation and industry practice. The amount of the obligation is the present value of the estimated expenditures expected to be required to settle the obligation adjusted for expected inflation and discounted using average long-term risk-free interest rates for emerging market sovereign debt adjusted for risks specific to the Kazakhstan market. The Partnership reviews site restoration provisions at each balance sheet date and adjusts it to reflect the current best estimate in accordance with IFRIC 1 "Changes in Existing Decommissioning, Restoration and Similar Liabilities". Estimating the future closure costs involves significant estimates and judgments by management. Significant judgments in making such estimates include estimate of discount rate and timing of cash flow. The management made its estimate based on the assumption that cash flow will take place at the expected end of the licenses.

Management of the Partnership believes that the interest rates on its debt financing shall provide best estimates of applicable discount rate. The discount rate shall be applied to the nominal amounts the managements expect to spend on site restoration in the future. The Partnership estimates future well abandonment cost using current year prices and the average long-term inflation rate.

The long term inflation and discount rates used to determine the balance sheet obligation at December 31, 2012 and 2011 were 7% and 10% respectively. Movements in the provision for decommissioning liability are disclosed in Note 14.

Consolidation of a special purpose entity

In October 2012 Zhaikmunai International B.V. was established by Zhaikmunai Netherlands B.V., an entity under control of a common parent, specifically to issue the 2019 Notes (Note 13). The net proceeds from the 2019 Notes were used to fund the repurchase of part of the 2015 Notes (Note 13). The remaining part of the net proceeds is intended to be used to fund the costs and expenses of the repurchase of the 2015 Notes and the issue of the 2019 Notes and for general corporate purposes.

Based on these facts and circumstances, management concluded that the Group controls this entity and, therefore, consolidates the entity in its financial statements.

Foreign currency translation

Each entity in the Group determines its own functional currency and items included in the consolidated financial statements of each entity are measured using that functional currency. The functional currency of Zhaikmunai Finance B.V., Zhaikmunai International B.V. and the Partnership is the United States Dollar (the "US Dollar" or "US\$").

Transactions and balances denominated in foreign currencies

Transactions in foreign currencies are initially recorded by the Group at their respective functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange ruling at the reporting date. All differences are taken to the profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

Exploration expenditure

Geological and geophysical exploration costs are charged against income as incurred. Costs directly associated with exploration wells are capitalized within property, plant and equipment (construction work-in-progress) until the drilling of the well is complete

and the results have been evaluated. These costs include employee remuneration and materials and fuel used, rig costs and payments made to contractors and asset retirement obligation fees. If hydrocarbons are not found, the exploration expenditure is written off as a dry hole. If hydrocarbons are found and, subject to further appraisal activity, which may include the drilling of further wells (exploration or exploratory-type stratigraphic test wells), are likely to be capable of commercial development, the costs continue to be carried as an asset. All such carried costs are subject to technical, commercial and management review at least once a year to confirm the continued intent to develop or otherwise extract value from the discovery. When this is no longer the case, the costs are written off. There was no exploration expenditure expensed during 2012 (2011: Nil).

Oil and gas properties

Expenditure on the construction, installation or completion of infrastructure facilities such as treatment facilities, pipelines and the drilling of development wells, is capitalized within property, plant and equipment as oil and gas properties. The initial cost of an asset comprises its purchase price or construction cost, any costs directly attributable to bringing the asset into operation and the initial estimate of decommissioning obligation, if any. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset. Property, plant and equipment are stated at cost less accumulated depreciation, depletion and impairment.

All capitalized costs of oil and gas properties are amortized using the unit-of-production method based on estimated proved developed reserves of the field, except the Partnership depreciates its oil pipeline and oil loading terminal on a straight line basis over the life of the License. In the case of assets that have a useful life shorter than the lifetime of the field the straight line method is also applied.

Oil and gas reserves

Proved oil and gas reserves are estimated quantities of commercially viable hydrocarbons which existing geological, geophysical and engineering data show to be recoverable in future years from known reservoirs.

The Partnership uses the reserve estimates provided by an independent appraiser to assess the oil and gas reserves of its oil and gas fields. These reserve quantities are used

for calculating the unit of production depreciation rate as it reflects the expected pattern of consumption of future economic benefits by the Partnership.

Impairment of non-financial assets

The Group assesses assets or groups of assets for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. Individual assets are grouped for impairment assessment purposes at the lowest level at which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets. If any such indication of impairment exists or when annual impairment testing for an asset group is required, the Partnership makes an estimate of its recoverable amount. An asset group's recoverable amount is the higher of its fair value less costs to sell and its value in use. Where the carrying amount of an asset group exceeds its recoverable amount, the asset group is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are adjusted for the risks specific to the asset group and are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money.

An assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognized impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the profit or loss.

After such a reversal, the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

Other properties

All other property, plant and equipment are stated at historical cost less accumulated depreciation and impairment. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Subsequent costs are included in the asset's

carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the profit or loss during the year in which they are incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

	Years
Buildings and constructions	7-15
Vehicles	8
Machinery and equipment	3-13
Other	3-10

Borrowing costs

The Partnership capitalizes borrowing costs on qualifying assets. Assets qualifying for borrowing costs capitalization include all assets under construction that are not being depreciated, depleted, or amortized, provided that work is in progress at that time. Qualifying assets mostly include wells and other operations field infrastructure under construction. Capitalized borrowing costs are calculated by applying the capitalization rate to the expenditures on qualifying assets. The capitalization rate is the weighted average of the borrowing costs applicable to the Group's borrowings that are outstanding during the period.

Inventories

Inventories are stated at the lower of cost or net realizable value ("NRV"). Cost of oil, gas condensate and liquefied petroleum gas ("LPG") is determined on the weighted-average method based on the production cost including the relevant expenses on depreciation, depletion and impairment and overhead costs based on production volume. Net realizable value is the estimated selling price in the ordinary course of business, less selling expenses.

Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate of the amount of the obligation can be made.

Abandonment and site restoration (decommissioning)

Provision for decommissioning is recognized in full, on a discounted cash flow basis, when the Partnership has an obligation to dismantle and remove a facility or an item of plant and to restore the site on which it is located, and when a reasonable estimate of that provision can be made. The amount of the obligation is the present value of the estimated expenditures expected to be required to settle the obligation adjusted for expected inflation and discounted using average long-term interest rates for emerging market debt adjusted for risks specific to the Kazakhstan market. The unwinding of the discount related to the obligation is recorded in finance costs. A corresponding amount equivalent to the provision is also recognized as part of the cost of the related property, plant and equipment. This asset is subsequently depreciated as part of the capital costs of the oil and gas properties on a unit-of-production basis.

Changes in the measurement of an existing decommissioning liability that result from changes in the estimated timing or amount of the outflow of resources embodying economic benefits required to settle the obligation, or changes to the discount rate;

- a) are added to, or deducted from, the cost of the related asset in the current period. If deducted from the cost of the asset the amount deducted shall not exceed its carrying amount. If a decrease in the provision exceeds the carrying amount of the asset, the excess is recognized immediately in the profit or loss; and
- b) if the adjustment results in an addition to the cost of an asset, the Group considers whether this is an indication that the new carrying amount of the asset may not be fully recoverable. If it is such an indication, the Partnership tests the asset for impairment by estimating its recoverable amount, and accounts for any impairment loss in accordance with IAS 36.

Financial assets

Initial recognition and measurement

Financial assets within the scope of IAS 39 are classified as financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments, available-for-sale financial assets, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. The Partnership determines the classification of its financial assets at initial recognition.

All financial assets are recognized initially at fair value plus, in the case of investments not at fair value through profit or loss, directly attributable transaction.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognised on the trade date, i.e., the date that the Partnership commits to purchase or sell the asset.

The Group's financial assets include cash and short-term deposits, trade and other receivables.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate method (EIR), less impairment. Amortised cost is calculated by taking into account any discount or premium on acquisition and fee or costs that are an integral part of the EIR.

The EIR amortisation is included in finance income in the statement of comprehensive income. The losses arising from impairment are recognised in the statement of comprehensive income in finance costs.

Accounts receivable

Accounts receivables are recognized and carried at original invoice amount less an allowance for any uncollectible amounts. An estimate for uncollectible amounts is made when collection of the full amount is no longer probable. These estimates are reviewed periodically, and as adjustments become necessary, they are reported as expense (credit) in the period in which they become known.

Derecognition

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired;
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, and has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the asset is recognized to the extent of the Group's continuing involvement in the asset.

In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

Impairment of financial assets

The Group assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred 'loss event') and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and where observable data indicate that

there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

Financial assets carried at amortized cost

For financial assets carried at amortized cost the Group first assesses individually whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial assets original effective interest rate. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate.

The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the profit or loss. Interest income continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. The interest income is recorded as part of finance income in the profit or loss. Loans together with the associated allowance are written off when there is no realistic prospect of future recovery and all collateral has been realized or has been transferred to the Group. If, in a subsequent year, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognized, the previously recognized impairment loss is increased or reduced by adjusting the allowance account. If a future write-off is later recovered, the recovery is credited to finance costs in the profit or loss.

Financial liabilities

Initial recognition and measurement

Financial liabilities within the scope of IAS 39 are classified as financial liabilities at fair value through profit or loss, loans and borrowings, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. The Group determines the classification of its financial liabilities at initial recognition. All financial liabilities are recognized initially at fair value and in the case of loans and borrowings, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables and borrowings.

Subsequent measurement

After initial recognition, interest bearing borrowings are subsequently measured at amortized cost using the effective interest rate method (EIR). Gains and losses are recognized in the profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fee or costs that are an integral part of the EIR. The EIR amortization is included in finance cost in the profit or loss.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

Fair value of financial instruments

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations (bid price for long positions and ask price for short positions), without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's length market transactions; reference to the current fair value of another instrument that is substantially the same; discounted cash flow analysis or other valuation models.

An analysis of fair values of financial instruments and further details as to how they are measured are provided in Note 26.

Derivative financial instruments and hedging

The Partnership has used hedging contracts for oil export sales to cover part of its risks associated with oil price fluctuations. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently premeasured at fair value. Derivatives are carried as assets when the fair value is positive and as liabilities when the fair value is negative.

Any gains or losses arising from changes in fair value on derivatives during the year that do not qualify for hedge accounting are taken directly to profit or loss.

The fair value of financial instruments contracts is determined by reference to market values for similar instruments. As at December 31, 2012 the Group had no open hedging contracts.

Taxation

Deferred tax assets and liabilities are calculated in respect of temporary differences using the liability method. Deferred income taxes are provided for all temporary differences arising between the tax bases of assets and liabilities and their carrying values for financial reporting purposes, except where the deferred income tax arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

A deferred tax asset is recorded only to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilized. Deferred tax assets and liabilities are measured at tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates that have been enacted or substantively enacted at the reporting date.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary difference will not reverse in the foreseeable future.

Revenue recognition

The Partnership sells crude oil, gas condensate and LPG under short-term agreements priced by reference to Platt's and/or Argus' index quotations and adjusted for freight, insurance and quality differentials where applicable.

Revenue from the sale of crude oil, condensate and LPG is recognized when delivery has taken place and risks and rewards of ownership have passed to the customer.

Revenue is recognized when it is probable that the economic benefits associated with the transaction will flow to the Partnership and the amount of revenue can be reliably measured.

Resources: Consolidated financial statements of Zhaikmunai LLP, year ended December 31, 2012

Attachment 3 Contingent liabilities and commitment of Zhaikmunai LLP, year ended December 31, 2012

Taxation

Kazakhstan's tax legislation and regulations are subject to ongoing changes and varying interpretations. Instances of inconsistent opinions between local, regional and national tax authorities are not unusual. The current regime of penalties and interest related to reported and discovered violations of Kazakhstan's tax laws are severe. Penalties are generally 50% of the taxes additionally assessed and interest is assessed at the refinancing rate established by the National Bank of Kazakhstan multiplied by 2.5. As a result, penalties and interest can amount to multiples of any assessed taxes. Fiscal periods remain open to review by tax authorities for five calendar years proceeding the year of review. Under certain circumstances reviews may cover longer periods. Because of the uncertainties associated with Kazakhstan's tax system, the ultimate amount of

taxes, penalties and interest, if any, may be in excess of the amount expensed to date and accrued at December 31, 2012. As at December 31, 2012 management believes that its interpretation of the relevant legislation is appropriate and that it is probable that the Group's tax position will be sustained.

Abandonment and site restoration (decommissioning)

As Kazakh laws and regulations concerning site restoration and clean up evolve, the Partnership may incur future costs, the amount of which is currently indeterminable. Such costs, when known, will be provided for as new information, legislation and estimates evolve.

Environmental obligations

The Partnership may also be subject to loss contingencies relating to regional environmental claims that may arise from the past operations of the related fields in which it operates. As Kazakh laws and regulations evolve concerning environmental assessments and site restoration, the Partnership may incur future costs, the amount of which is currently indeterminable due to such factors as the ultimate determination of responsible parties associated with these costs and the Government's assessment of respective parties' ability to pay for the costs related to environmental reclamation. However, depending on any unfavourable claims or penalties assessed by the Kazakh regulatory agencies, it is possible that the Partnership's future results of operations or cash flow could be materially affected in a particular period.

Capital commitments

As at December 31, 2012 the Group had contractual capital commitments in the amount of US \$ 23,088 thousand (2011: US \$ 17,880 thousand) mainly in respect to the Partnership's oil field development activities.

Operating leases

The Partnership entered into a cancellable lease agreement for the main administrative office in Uralsk in October 2007 for a period of 20 years for US \$ 15 thousand per month.

In March 2010 the Partnership entered into an agreement on lease of 200 railway tank wagons for transportation of LPG and other hydrocarbon products for a period of 7 years for KZT 6,989 (equivalent of US\$ 47) per day per one wagon.

Social and education commitments

As required by the Contract (as amended by, inter alia, Supplement #9), the Partnership is obliged to:

- (a) spend USS 300 thousand per annum to finance social infrastructure;
- (b) perform repair and reconstruction of state automobile roads for the amount of USS 12,000 thousand in 2012;
- (c) make an accrual of one percent of the capital expenditure per annum for the purposes of educating Kazakh citizens; and
- (d) adhere to a spending schedule on education which lasts until (and including) 2020.

Domestic oil sales

In accordance with Supplement # 7 to the Contract, the Partnership is required to sell at least 15% of produced oil on the domestic market on a monthly basis for which prices are materially lower than export prices.

Resources: Consolidated financial statements of Zhaikmunai LLP, year ended December 31, 2012