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Abstract

“Drilling Contract” is an agreement for drilling of a well that generally entered into by “drilling contractors” who own drilling rigs and associated equipments and crew, and “operators” who own mineral rights. Drilling contracts are comprehensive and complicated contracts; therefore they should not be concluded without careful and extensive review. Otherwise the contracting parties could very easily find themselves assuming risks that they would not knowingly have accepted. The market situation has a deep affect on the bargaining power of the each party at the time of conclusion of the contract.

Technically, drilling contracts can be divided into three major types: “daywork”, “footage” and “turnkey” contracts. This categorization is on the basis of calculation of compensation to be paid to the contractor and allocation of risks between operator and drilling contractor. A “daywork contract” provides that the contractor should be paid for work performed over a twenty-four-hour period. In a “footage contract” the contractor will be paid a stipulated price per each foot that was drilled. Under a “turnkey contract”, the contractor agrees to drill, complete and delivers a well to the operator. Geographically, drilling contracts may be divided into “onshore”, “offshore”, “arctic” or “international”. Onshore drilling contract refer to contracts for drilling a well in the onshore areas. Offshore drilling contract is being used for the drilling of an offshore well. An arctic drilling contract refers to any drilling contract concerning the drilling of a well in arctic regions. An international drilling contract is any drilling contract concerning the drilling

of either an onshore or an offshore well within the jurisdiction of a foreign government. These contracts are essentially very similar to each other; however there are some differences due to geographical situation of each one.

There are some clauses in drilling contracts which are common in any other comprehensive contracts. Though, there are some special clauses which are peculiar to drilling contracts such as area of operation or well location, time of performance or various contractual dates, contractor drilling obligations, operator's obligations, contractor and operator's equipments, contractor's personnel, rate of payments, liabilities, termination and force majeure.

Under the terms of a daywork contract some specific risks are allocated to the drilling contractor, while the general risk of delay and the risk of losing of the well and general responsibilities which are not dedicated to the drilling contractor, are imposed on the operator. In footage contracts often the contractor assumes less risk than turnkey contracts and more than dayrate contracts. A drilling contractor, generally, assumes more risk under a turnkey contract than under the other types of drilling contracts because the contractor has general control of all drilling operation.

The issues of "allocation of risk", "liabilities" and "indemnification" are generally discussed together, as liability rests on default and both contractor and operator are liable for damages resulted from their own equipments and crew. Allocation of risk of any damage should be clearly specified in the contract. Some issues such as blowout, well control and redrilling are from risky event of drilling operation. A well-drafted drilling contract, in addition to addressing these issues, will determine the practical way of indemnification of incurred party.

Introduction

Section A – The Necessity and Importance of the Research

The phase of “Drilling” is a primary and fundamental phase in the process of the exploration and exploitation in the oil and gas industry. So as a primary step of such operations, the “drilling contracts” should be examined carefully. There are some matters with regard to drilling contracts that cause them to be so important. They are categorized as a type of “construction contracts” and they are commonly used and are prevalent in the oil and gas industry. As drilling mechanism is a very technical and professional process, even the main international oil companies employ the services of a drilling subcontractor.

Drilling contracts should be set up in a strictly careful manner because the risk allocation between drilling contractor and the operator is so sensitive and even controversial and with huge legal and financial consequences. Therefore, it is important to examine the nature and specifications and different types of drilling contracts and the way of contracting in which the risks and responsibilities are divided and allocated.

Section B – The Aims and Purposes of this Dissertation

This dissertation intends to describe, analyze the “drilling contracts”, different types of drilling contracts, major clauses of these contracts, and especially examine the risk allocation between operator and drilling contractor. Furthermore, some discussions about the issue of liability for indemnification of losses that may rise during drilling operation

will be presented. Last not the least; the way of indemnification of incurred party will be discussed.

Section C – The method of Research

The research was conducted using a combination of descriptive, practical and annalistic methods. Nevertheless, my approach will be more practical and descriptive rather than mere theoretical discussion. However, the thesis will analyze and discuss the issues theoretically when it seems to be necessary. Moreover, some cases will be reviewed in order to compare the theoretical discussion with practical experiences and case study.

It should also be noted that there are mainly two model contracts which commonly used for drilling operation which will be examined in order to present a better understanding of the issues. The first is model produced by International Association of Drilling Contractors (IADC) that tends to favour drilling contractors as opposed to operators, and the second is the model produced by American Petroleum Institute (API) that tends to favour operators. Consequently, sophisticated parties shall, no doubted, modify these forms to provide a balance between the parties' rights and obligations and to address specific concerns.¹ In addition, some operators also have their own forms, which frequently include provisions specifically designed to avoid problems encountered in their particular experiences. While the research will narrow the discussions to “Onshore Drilling Contracts”, because of similarities with other types of drilling contracts, it could be useful for the “offshore drilling contracts”, as well.

¹ - For more information about IADC and API, including the availability of contract forms, see their websites at www.iadc.org and www.api.com.

Section D – The Structure and Organization of the Research

The first chapter will be “Introductory Remarks” and covers the general information about nature and specifications of drilling contracts; such as: definition, parties to the contract, operator, contractor and negotiator, historical background and etc. The second chapter will focus on different types of drilling contracts both technically such as “daywork”, “footage”, “turnkey” and “master” drilling contract and also geographically such as “onshore”, “offshore”, “arctic” and “international” drilling contracts. Third chapter will be dedicated to the contents of drilling contracts; those clauses and contractual terms which are peculiar to drilling contracts and are so important. The fourth chapter will focus on “risk allocation” between operator and drilling contractor and also among them with subcontractors or other service suppliers. Finally, in the last part, the dissertation will be concluded by providing a summary of debates and results in this area of study.

Chapter one: Introductory Remarks

Section A – Definition

“Drilling contracts” may be defined as an “agreements for the drilling of the well or wells entered into between drilling contractors, who own drilling rigs and associated equipments, and persons or entities owning mineral or lease hold rights”¹. The drilling contracts determine the rights and obligations of the parties. Whereas it is possible that the owner of drilling unit² and operator be one person, if they are different, the relationship between the owner of the drilling unit- or contractor- and the operator is governed by the drilling contract³; In each contract, there is a division and stimulation as to those matters which related to the operator and the contractor. The contract exists in order to record the arrangements between the contractor and the operator. It sets out the nature of the tasks to be achieved, the functions to be performed by each party, the responsibilities to be assumed by each party⁴, as will be discussed in this dissertation.

¹ - Lowe, John S, *Oil and Gas Law in Nutshell*, West Publishing Co., Oklahoma, 1985, p. 96.

² - Which is usually the contractor; see: Summerskill, Michael, *Oil Rigs, Law and Insurance*, Stevens and Sons, London, 1997, p. 252.

³ - Ibid, p. 247.

⁴ - The preamble to the International Daywork Drilling contract- Onshore shows how the contracting parties may describe the nature of the tasks to be achieved:

“whereas, operator desires to have onshore wells drilled in the operating area and to have performed or carried out all auxiliary operations and services as detailed in the appendix hereto or as operator may require; and WHEREAS, contractor is willing to furnish the drilling vessel complete with drilling and other equipment (herein after called the :Drilling Unit:) insurances and personnel, all as described in the appendixes hereto for the purpose of drilling the said wells and performing the said auxiliary operations and services for operator”. See more at: Kuntz, Eugene, *Kuntz Oil and Gas*, Anderson Publishing Co., Vol. 3, 1989, revised at 2005. p.168.

It may, rarely, be seen in some texts the phrase of “Rig contracts” whereby, the author purports the concept of “drilling contracts”¹, however the common and well-repudiated phrase is still “drilling contracts” that most of legal authors have used it. We follow current practice and use this prevalent phrase.

Section B: Historical Background

The drilling industry is extremely competitive, and competition has great impact upon the terms of drilling contracts. In the late 1970’s and through 1981 there was high demand for drilling rigs. “The sudden increase of oil prices in the 1970’s and energy crises transformed a comparatively stagnant business into one of the major international growth industries of that decade”.² Many drilling contractors refused to consider anything but daywork contracts, which effectively shifted most of the responsibility and risks to the producers (operators).³ However, by the early 1980s, conservation efforts and a world wide recession slowed the growth in energy demand. These factors, together with discord among member of the OPEC, resulted in decreasing of the price of oil and gas. By the end of the 1982, the drilling industry had experienced a severe recession, and nearly half of the countrys’ drilling rigs were not working in the world. In a period of a few months, drilling contractors’ prices dropped 25 to 40 percent and operators found it possible to make substantial revisions to drilling contractors’ agreements.⁴ After that, through more coordination among OPEC members and increase in the world-wide demand for energy as

¹ - For example see: Jennings, Anthony, *Oil and Gas Exploration Contracts*, Sweet and Maxwell Pub., London, 2002, p. 159.

² - Anderson, Owen L., *The Anatomy of the Oil and Gas Drilling Contracts*, *Tulsa Law Journal*, Vol. 25; United States, 1990, p. 362.

³ - Nachant Swan, Peter, *Ocean Oil and Gas Drilling and the Law*, Oceania Publications Ins., 1997, p. 5.

⁴ - Lowe, John S, *Ibid.*, p. 355

a result of high economic growth in China and emerging economies, again the drilling industry experienced a golden period. This period disrupted by the economic crisis in the East Asian Countries in 1997. However, after handling with that crisis, the world countries have seen themselves in more needs to energy sources and this had effect on demand for more oil and gas, higher prices of oil and gas, much more demand for drilling rigs and changing the business environment in favor of drilling contractors.

Section C - The Effects of Market

The market situations have deep affect on the drilling contracts. Since each party – operator or drilling contractor- seeks more profit via concluding the drilling contracts, every change in the business environment with regard to the high demand for rigs, fluctuations in the prices, increase in the price of oil or equipments or crews' fees will influence the terms of drilling contracts and also the bargaining power of the parties. As a matter of fact, in case of high demands for rigs, especially those with specific functions, the price will raise. Furthermore, because of high bargaining power of drilling contractor, much of risks will be switched to the operator, though many of risks are inherently peculiar to contractor himself.¹ Higher energy prices will result in increase in demand for new and more sophisticated drilling rigs for both onshore and offshore development. This demand brings unprecedented prosperity to the oil and gas business. “The resulting energy boom greatly increases the bargaining power of drilling contractors in negotiating drilling contracts. The shortage of drilling rigs, coupled with what seemed to be an unending increase in the demand for rigs, drove drilling prices to all-time high. Drilling contracts,

¹ - Interview with Mr. Hematian as a Drilling Engineer and the Technical Deputy of Drilling Office at Exploration Department of National Iranian Oil Company; date on 16/05/1386(01/9/2007)

traditionally operator-oriented, were modified to include more and more provisions favoring the drilling contractor.”¹

Over the time, the oil and gas drilling business, like the oil and gas industry in general, was subjected to increasing employment, health, safety and environmental regulations.² In addition, more litigation particularly in the field of tort law³, resulted in both drilling contractors and operators being exposed to greater liability and larger jury awards than in the past.

A recent study⁴ has revealed⁵ that now there are 406 jack-ups⁶ all over the world that 93 ones are established in Middle East. This report divulged a sharp increase in all prices in this era⁷. “Visible rig demand suggests that the present situation will continue at least until the end of next year. Worldwide offshore rig demand through 2008 is expected to remain strong, with current hot spots such as the Middle East, Mexico and India in particular expected to have increasing unsatisfied demand as drilling activity ramped up”⁸.

¹ - Anderson, Owen L., op. cit., p. 362.

² - Like Act for Maximize Utilization of Iranian Industry and Crew (1997),

³ - See Ginsburg, Gilbert J., Allocation of Risk: Contractor responsibility for injury to government property and to third parties under supply and R&D contracts, *Public Contract Law Journal*, Vol. 2, 1969.

⁴ - The International Rig Report on June 2007 by ODS- PETRODATA. The ODS-Petrodata is a famous and reliable institute that tries to gather and publish diverse information about the drilling industry in general and offshore drilling rigs in particular. This information becomes up-to-date in the web page of this institute constantly, and also publishes as distinct reports. The resources of this information are various and comprehensive, so far as the leading oil – and/or drilling- companies easily trust this information.(<http://ods-petrodata.com>)

⁵ - ODS-Petrodata Offshore Rig Monthly – Market Intelligence on the Global Offshore Drilling Business- in June 2007, Vol. 15, N. 6. p.125.

⁶ - Jack-Up is a kind of drilling rig specified for drilling in the water, and works as a foundation for installing other subordinated equipments; it is used in offshore drilling.

⁷ - For example, the day rental – on hire base- rate for a set of jack-up with applicability of working under the 300 ft depth in Middle East for June has been reported between 120,000 to 190,000 USD. As a result of increased order for construction of jack-up, their prices have also doubled in a way that the construction rate of a jack-up that was 100 Mil. \$US now are almost 200 Mil. \$US cited in: Id.

⁸ - ODS-Petrodata Offshore Rig Monthly, op. cit. p.2.

The Middle East¹ continues to attract interest of rig contractors seeking longer-term commitment, as is general in the Middle East and is expected to see an increase in rig activity over the next couple of years.

“Demand from Iran is on course to jump from nine rigs in 2007 to 14.6 rigs next year. The increase is mainly attributed to a number of planned development phases on the South Pars field.”²

Section D – Parties to the Contract

Part 1 – Identity of the Parties

There are two parties in a typical drilling contracts; Operator and Contractor. The operator is the party who has the legal right to produce oil and gas from the given track, the operator may be the original lessee, an assignee-lessee, a farmee, a designated operator under a joint operating agreement, or occasionally, a fee mineral owner³. While an operator may drill a well with its own crew and equipments, the operator often prefer to hire the services of a drilling contractor who is a person or entity engaged in the business of drilling oil and gas wells.⁴

It is primarily important that the identity of the parties be clarified precisely, it should be clarified that whether the drilling contractor is authorized to vest his obligation to a sub-contractor. Moreover, great care should be done to make sure that the signature is done by the parties themselves or by their authorized agents.

¹ - We have focused on the Middle East through all of the Report, for it is a crucial zone, moreover Iran has been categorized as a member of these countries.

² - ODS-petrodata , The International Rig Report, June 2007, p. 36.

³ - Anderson, Owen L, op. cit, p. 364.

⁴ - Ibid, p.365.

Usually the operator invites some drilling contractor to make bid for operation of drilling in the specified location¹ with particular depth. This operation should be done in line with specifications determined in the bid invitation².

It is possible for the operator or contractor or even both of them to contract with various service and supply companies for particular services and facilities that are needed to operate or complete the project. These services may contain surveying and staking the location, assessing the location³, providing access roads, providing water for the operation⁴, setting surface casing⁵, supplying drilling mud services, providing testing services, surveying for drilling deviation, acquiring directional (whipstock) or horizontal drilling equipment⁶, arranging production, etc.

In the broadest sense, the operator is a party whose job is conducting the project and operation. The fact that the operator is called *maître de l'ouvrage* or “master of the undertaking” emphasizes the importance of his position⁷.

Similarly it is possible to compare drilling contracts in some aspects with the Time Charterparty, as if, the operator hires the drilling unit from the contractor⁸, paying on the basis of time, for a specified or, where it is not specified, an ascertainable period.⁹

¹ - The operator shall specify a “sound location” for drilling. Sound location means a location adequate in size, capable of properly supporting the drilling rig and etc. To see more, refer to: Brown, Lisa Bagley and Flanagan, Harold J., op. cit., p. 21.

² - Lopez-Velarde, Rogelio, Mexico's Petroleum Drilling Contracts, *Journal of Energy and Natural Resources Law*, p. 204.

³ - Anderson, Owen L, op. cit, p. 393.

⁴ - Id.

⁵ - “Casing” is defined as “the steel lining used to prevent caving of the sides of the well, to exclude unwanted fluids, and to provides means for the control of well pressures and oil and gas production”. Cited in H. Clarkson & Co. Ltd., *The Offshore Drilling Register*, London, 1987; Summerskill, Michael, op. cit., p. 133; also see: Anderson, Owen L, op. cit, p. 408.

⁶ - There are various ways of drilling namely “Vertical” and “Horizontal”, that in latter, because of some natural or artificial obstacles, drilling operation is being performed in horizontal situation.

⁷ - Summerskill, Michael, op. cit, p. 247

⁸ - Ibid, p. 251.

⁹ - Ibid, p. 248.