

The BP/Deepwater Horizon accident spells a word of caution for oil & gas service and supply companies: **T&C standard warranty may expose you**

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Executive Summary: following the Deepwater Horizon oil spill – possibly the largest coastal environmental disaster in the Western Hemisphere - British Petroleum formed an investigation team in order to identify possible causes of the accident.

The BP Investigation Team identified a well integrity failure as the critical factor that initiated the chain of events leading to the spill, and pointed out that *“Improved engineering rigor, cement testing and communication of risk by Halliburton could have identified the low probability of the cement to achieve zonal isolation.”* Predictably, Halliburton rejected BP’s conclusions and asserted that *“well owner is responsible for designing...testing...”*

The conflicting views of BP and Halliburton outline a relevant question: **what is - or should be - the extension of contractor’s responsibility for the performance of the good or service it delivers?**

The contract between the oil company and the contractor should provide accurate instructions as to who is responsible for what and when. **The wording of the warranty provision, specifically, provides guidance as to extension of the vendor’s liability for the performance of the product or service.**

The warranty provisions used by the major oil companies commit the contractor to all-embracing obligations: *“fit for the purposes specified in the CONTRACT or, where no such purpose is specified, fit for the ordinary purpose”, “high quality and workmanship within generally recognized industry standards.”* Such wording places ample and – more critical - open-ended liability in the shoulders of contractor

It is questionable that in the context of equipment and services delivered for a complex, high-risk activity such as offshore E&P "fitness for a particular purpose" type warranties represent a realistic and fair allocation of risks between the oil company and the contractor.

Manufacturers of computer programs, especially mission-critical applications (such as MS SQL, Oracle DB and SAP), **face liability issues similar to those of O&G contractors:** underperformance or malfunctioning of those applications, even for a short time, will bring a business to a halt, costing money and even damaging a brand.

However, the examination of the standard warranties provided for computer programs shows that the IT industry adopted a benchmark entirely different from the O&G industry.

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Instead of the open-ended warranties used by the O&G industry, the IT industry standard warranties are closed ended.

Computer software manufacturers guarantee that their product will perform the functions described in the documentation. Because of such definite scope warranty claims can be determined against specific standards, tests and metrics.

Open-ended and closed ended warranties represent opposite approaches to the negotiation of the distribution of the rights, responsibilities and risks between the parties.

Open-ended warranties are perceived as less controversial by the negotiating parties, allowing the earlier closure of the deal. But because there is no free lunch, **claims based on open-ended warranties tend to be time-consuming as they require substantial fact-finding and information for their settlement** (*what is "fit for the purpose of the Contract?" Or "fit for the ordinary purpose?" How to establish "high quality and workmanship?"*).

In other words, open-ended warranties purely transfer the potential controversy inherent to risk allocation from the sales/procurement teams - the ones negotiating the contract - to the contract management.

Such deferral however is not a zero sum game. By postponing the definition of the areas of risks and the party responsible for them, buyer and vendor inadvertently create discreet contingencies (actual risk larger than forecast) that can have a major impact on their business.

Closed ended warranties on the other hand lead the contracting parties to explicitly agree on a mutually acceptable clear and comprehensive allocation of risk (*vendor is responsible for delivering agreed-upon measurable specifications, functions or performance*).

The extensive agenda that the offshore drilling business will need to review in the aftermath of the BP/Deepwater Horizon catastrophe should include the substitution of the current T&C Standard Warranties by closed ended warranties.

"No amount of incremental return merits the one day that kills you"
Seth Klarman²

The Deepwater Horizon oil spill is already a gloomy landmark in the history of offshore drilling as well as a major – if not the largest – coastal environmental disaster in the Western Hemisphere³.

The facts and numbers of the catastrophe are overwhelming: after burning for 36 hours the "Deepwater Horizon" rig sank leaving eleven people dead and

² Value investor and portfolio manager of the investment partnership The Baupost Group and author of the book "Margin of Safety."

³ With 200M gallons is the largest oil spill in the Western Hemisphere, surpassing Mexico ('79-80 - 140M gallons) and Trinidad and Tobago ('79 - 90M gallons).

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other seventeen injured while oil continued to flow from the reservoir for 87 days totaling close to 400 million Dollars' worth of oil spilled⁴; 665 miles of coastline were contaminated and over 57 thousand square miles of Gulf waters were closed to fishing; up to 47,000 people were deployed in response to the spill and nearly 30,000 remained working through August 31.⁵

Specifically **concerning loss or damage to third party property**, Dun and Bradstreet estimates that the oil spill can affect more than 7.3 million active businesses throughout the states of Alabama, Louisiana, Florida, Mississippi and Texas, involving over 34 million jobs and U\$5.2 trillion in sales volume⁶.

BP Accident Investigation Report links contractor to the causes of the accident

British Petroleum (BP), the lease operator of the well, formed an investigation team (“BP Investigation Team”) that was charged with gathering the facts surrounding the accident and analyzing available information in order to identify possible causes of the accident.

The BP Investigation Team released its report (the “Report”) on September⁷. The Report presents an analysis of the events leading up to the accident, and concludes that it “...involved a **well integrity failure, followed** by a loss of hydrostatic control of the well. This was **followed** by a failure to control the flow from the well with the BOP equipment, which allowed the release and subsequent ignition of hydrocarbons.” (pg. 9 of Report).

Analyzing the critical factor that initiated the chain of events leading to the spill – well integrity failure – the Report points as key finding that the annulus cement barrier did not isolate the hydrocarbons: “**The investigation team concluded that there were weaknesses in cement design and testing, quality assurance and risk assessment**” (pg. 10 of Report).

Concerning the cement design the Report refers that Halliburton, the cement job contractor, recommended and implemented a complex cement slurry design. However, the Report alleges that “...important aspects of the foam cement design, such as foam stability, possible contamination effects and fluid loss potential did not appear to have been critically assessed in the pre-job

⁴ At a market price of \$81.17 per barrel.

⁵ Source: www.popularmechanics.com.

⁶ Source: http://www.dnbgov.com/pdf/DNB_Gulf_Coast_Oil_Spill_Impact_Analysis.pdf

⁷ Published at www.bp.com.

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reviews...cement slurry was not fully tested prior to execution of the cement job. The third party test results suggest that the foam cement slurry used for Macondo well was likely unstable, resulting in nitrogen breakout.” (pg. 34 of Report).

The BP Investigation Team concludes that concerning well integrity failure – identified as key finding 1 – “Improved engineering rigor, cement testing and communication of risk by Halliburton could have identified the low probability of the cement to achieve zonal isolation.”

The Report also indicates that *“Halliburton in-house cementing engineer should have considered other factors not predicted by the OptiCem report, such as foam stability, fluid loss and compatibility of fluids. ...It did not appear that Halliburton conducted all relevant lab tests on the final cement slurry prior to proceeding with cement placing”* (pgs. 67, 68 of Report).

The Report addresses as well several recommendations including *“Conduct an immediate review of the quality of the services provided by all cementing service providers...Compliance with applicable service provider, BP and industry standards....Effective identification, communication and mitigation of risk associated with providers’ services”* (pg. 185 of Report).

The 234-page report underlines that *“The team did not identify any single action or inaction that caused this accident. Rather, a complex and interlinked series of mechanical failures, human judgments, engineering design, operational implementation and team interfaces came together to allow the initiation and escalation of the accident. Multiple companies, work teams and circumstances were involved over time”* (pg. 11 of Report).

Nevertheless, the discussion of flaws in the cement job design and execution – marked by the BP Investigation Team as key finding #1 - puts Halliburton, as contractor, in the eye of the storm. Predictably, Halliburton promptly reacted to the Report (*“As we continue to review BP's internal report, we have noticed a number of substantial omissions and inaccuracies in the document...Halliburton remains confident that all the work it performed with respect to the Macondo well was completed in accordance with BP's specifications for its well construction plan and instructions, and that it is fully indemnified under its contract for any of the allegations contained in the report. Deepwater operations are inherently complex and a number of contractors are involved which routinely make recommendations to a single point of contact, the*

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*well owner...The well owner is responsible for designing the well program and any testing related to the well. Contractors do not specify well design or make decisions regarding testing procedures as that responsibility lies with the well owner.”*⁸

Contractor responsibility: where do standard Ts&Cs draw the line?

The Deepwater Horizon accident will unavoidably be a humbling experience for the offshore drilling business. In the aftermath of the disaster numerous questions and issues will be raised to and by the offshore drilling business community.

The conflicting views contained in the Report and in the above mentioned press release from Halliburton outline a relevant question: **what is - or should be - the extension of contractor’s responsibility for the performance of the good or service it delivers?**

In the Deepwater Horizon incident the oil company and the contractor are clearly at odds about which of them is responsible for failure of the cement job to achieve zonal isolation.

While **BP Investigation Team holds Halliburton responsible for “*design and testing, quality assurance and risk assessment,*” Halliburton contends that “*well owner is responsible for designing...testing...Contractors do not specify well design or make decisions regarding testing procedures as that responsibility lies with the well owner.*”**

At this point the contract between the oil company and the contractor enters into the scene: a contract being the owner’s manual of a transaction it should provide accurate instructions as to who is responsible for what and when.

In the forensic analysis of a contract (e.g., with a view to litigation) **the wording of the warranty provision, specifically, provides guidance as to extension of the vendor’s liability for the performance of the product or service.**

Here, the **perusal of the main forms of standard terms and conditions (the “Ts&Cs”)** used in the oil & gas industry reveals that warranty provisions

⁸ Published in the “Torts and Personal Injury Law Blog” at www.lexisnexis.com.

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therein place ample and – more critical - open-ended liability in the shoulders of contractor.

“Good quality and workmanship” and similar vague wording are commonplace in oil & gas service and supply contracts

The main forms of Ts&Cs used for the purchase of services and equipment by oil companies (both IOCs and NOCs) have similar warranty provisions (the “T&C Standard Warranties”):

“The WORK shall be fit for the purposes specified in the CONTRACT or, where no such purpose is specified, fit for the ordinary purpose. (...) Materials and equipment for which there is no detailed specification included in the CONTRACT shall be new or, subject to the COMPANY’s approval, as new, of good quality and workmanship and fit for the intended purpose where a purpose is defined in the CONTRACT or, where no such purpose is defined, fit for the ordinary purpose” (LOGIC - Leading Oil & Gas Industry Competitiveness. CRINE Network. “General Conditions of CONTRACT for Supply of Major items of Plant and Equipment”⁹)

“The Goods shall conform to Buyer's Data, shall be new and unused, of high quality and workmanship within generally recognized industry standards and shall be fit for the purpose or use for which they are bought to the extent such purpose or use is known or reasonably should be known to Vendor.” ARAMCO Overseas Company B.V. “Conditions of Purchase”¹⁰)

“The guarantee comprises the recovery or replacement at SUPPLIER’s cost, including transportation from the location where the Property was delivered up to the SUPPLIER’s facilities of any component or equipment that presents a divergence of characteristics or any design errors or manufacturing defects” (PETROBRAS. “Conditions for Material Supply - CFM 2005”¹¹)

The above warranty provisions (used by some of the top international and national oil companies) commit the contractor to all-embracing obligations: “fit for the purposes specified in the CONTRACT or, where no such purpose is specified, fit for the ordinary purpose”, “high quality and workmanship within generally recognized industry standards” “any design errors or manufacturing defects.”

⁹ Published at www.logic-oil.com.

¹⁰ Published at: <http://info.aramcooverseas.net/AOC-6980C-696.PDF>

¹¹ Published at: <http://www.petrobras.com.br/en/supplier-channel/>

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Their wording places an ample, open-ended, final cause liability on the shoulders of contractor that can be summarized as an obligation to deliver a good or service that meets the oil company's needs in a flawless manner.

There can be no question that the T&C Standard Warranties address the legitimate desire of any buyer. **The issue however is whether in the context of equipment and services delivered for a complex, hazardous activity such as offshore E&P "fitness for a particular purpose" type warranties represent a realistic and fair allocation of risks between the oil company and the contractor.**

Reading the T&C Standard Warranties while watching the Deepwater Horizon accident from the rear-view mirror bares the fact that their finalistic approach does not take into account the difficulties and uncertainties inherent to subsea E&P, as acknowledged in the Report: *"Several key factors (such as small cement slurry volume [approximately 62 bbls], narrow pore pressure/fracture gradient window and upper technical range for using nitrified foam cement) highlight the difficulties in designing a reliable cement slurry."* (pg. 67 of Report)

Similar situation, different solution: standard warranties in the information technology industry

Manufacturers of computer programs, especially mission-critical applications (such as MS SQL, Oracle DB and SAP), face liability issues similar to those of O&G contractors: **a product that runs business core operations involving sums that are many times the price charged by vendor.**

These programs are the lifeblood of very large organizations. Underperformance or malfunctioning of these applications, even for a short time, will bring a business to a halt, costing money and even damaging a brand. The typical buyers of such critical applications are Fortune 500 companies and similar world-class players.

The examination of the standard warranties provided for computer programs, even critical applications, shows that the IT industry adopted a benchmark entirely different from the O&G industry.

"SAP warrants for a period of 6 (six) months from delivery of software ('Warranty Period') that it will substantially meet the functional specifications

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contain in the Documentation when used without any relevant modification in the Designated Unit(s)."

"Adobe warrants to you that the Software will perform substantially in accordance with the Documentation for the ninety (90) day period following your receipt of the software."

"Microsoft Office XP will perform substantially in accordance with the accompanying materials for a period of 90 days from the date of receipt."

Differently from the open-ended T&C Standard Warranties used by the O&G industry, the IT industry standard warranties are closed ended. They have a restrictive scope that delimits the exposure of vendor and allows faster answer to a claim.

Specification-based warranties constitute a realistic assessment of what vendor can actually guarantee

Computer software manufacturers guarantee that their product will perform the functions described in the documentation. Functions are the features of the program, basically, its ability to generate, track, record, store, manage, interface and transfer data as well as, when applicable, to generate and print formal reports.

Because the IT standard warranty has a definite scope – the functions referred in the documentation - warranty claims can be determined against specific standards, tests and metrics:

Can the software transact the specified tasks? Can the software correctly calculate and display data? Can the software work on the specified hardware and operating system? Can the software forward transaction information adhering to related standards, conventions or regulations? Can the software secure customer information according the established protocols?

It is quite evident that inquiry and resolution of the above questions is a much more streamlined and objective process than appraising if a product or service is "fit for the purposes specified in the CONTRACT or, where no such purpose is specified, fit for the ordinary purpose" or whether it meets "high quality and workmanship within generally recognized industry standards."

Open-ended vs. closed ended warranties: allocating risks in an up-front manner

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In contracts that deal with the delivery of critical and complex good and services (such as in the O&G and IT industries) the warranty conditions are very important and thus a potentially controversial part of the document. The negotiation of the warranty clause involves defining the rights and responsibilities of the contracting parties and a reasonable distribution of the business risks between them.

Open-ended (such as the T&C Standard Warranty) **and closed ended** (such as IT Standard Warranty) **warranties represent opposite approaches to the negotiation of the distribution of those rights, responsibilities and risks.**

Because of its generic wording, open-ended warranties are perceived as less controversial by the negotiating parties, allowing the earlier closure of the deal. But because there is no free lunch, **claims based on open-ended warranties tend to be time-consuming as they require substantial fact-finding and information for their settlement** (*what is “fit for the purpose of the Contract?” Or “fit for the ordinary purpose?” How to establish “high quality and workmanship?”*).

In other words, open-ended warranties purely transfer the potential controversy inherent to risk allocation from the sales/procurement teams - the ones negotiating the contract - to the contract management.

Such deferral (some would call it procrastination) **however is not a zero sum game. By postponing the definition of the areas of risks and the party responsible for them, buyer and vendor inadvertently create discreet contingencies** (actual risk larger than forecast) **that can have a major impact on their business** (...try to picture the contingencies arising out of the Deepwater Horizon accident).

Closed ended warranties on the other hand lead the contracting parties to explicitly agree on a mutually acceptable clear and comprehensive allocation of risk (*vendor is responsible for delivering agreed-upon measurable specifications, functions or performance*). **This increases the awareness of the risks associated with the work or job** and motivates the parties to (i) perform in a foreseeable manner, and (ii) to better forecast contingencies arising out of the performance of the good or services delivered.

Conclusion

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The extensive agenda that the offshore drilling business will need to review in the aftermath of the BP/Deepwater Horizon catastrophe should include the substitution of the current T&C Standard Warranties by closed ended warranties.

Deferring the discussion of risk allocation may accelerate the closure of sales by O&G service and supply companies, avoiding the strain of drawing the line of their liability...but then, as Seth Klarman's sage caveat points out: *"No amount of incremental return merits the one day that kills you."*

Rio de Janeiro, December 6, 2010.

Doubts, clarification or just more information?

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