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THE NEWSLETTER OF THE BDO NATURAL RESOURCES PRACTICE

NATURAL RESOURCES RECORD

CONTINUOUS MONITORING

Detecting Fraud and Mitigating Risk for Natural Resources Companies

By Jeff Harfenist

The natural resources industry is often noted for three things: the mercurial nature of a commodities-based market; pressures from myriad national and regional regulations; and the inherent challenges presented by disaggregated operations in high-risk areas.

Oversight of risks related to operational and financial reporting decision-making – primarily through exposure to corruption and fraud – is top-of-mind for executives and their advisors. And amid the rapid pace of globalization and the growth in compliance obligations in the natural resources sector, resources are stretched further than ever. The risks stemming from today's heightened regulatory environment are significant and demand that organizations take action sooner rather than later.

The process of designing, implementing and testing an integrated suite of thorough compliance programs and related controls to safeguard company assets has become a daunting task for many energy and mining organizations – and one placing increased scrutiny and pressure on boards and management teams, forcing them to allocate more personnel and related resources to address the threats they face.

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DID YOU KNOW...

The *Energy Information Administration's* August 2015 Short-Term Energy Outlook predicts that West Texas Intermediate crude oil prices will average $49 per barrel in 2015 and $54 per barrel in 2016.

According to the *BDO 2015 Global Energy Middle Market Monitor*, publicly traded North American middle market oil & gas companies' reserve replacement rates reached a median of 182 percent in 2012, 268 percent in 2013 and 175 percent in 2014.

Economic and market analysis firm *BMI Research* estimates that oil & gas companies owe about $550 billion in debt repayments over the next five years.

The number of U.S. oil company bonds yielding greater than 10 percent – a signal of distress – has more than quadrupled in the last year, reports *Bloomberg Business*.

According the *American Petroleum Institute*, U.S. demand for oil reached its highest August levels in five years in August 2015 – up 0.8 percent to an average of 19.6 million barrels per day.

The *International Energy Agency's* August Oil Market Report finds that global oversupply reached 3 million barrels per day in the second quarter of 2015, the widest gap between supply and demand in 17 years.

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CONTINUOUS MONITORING AS A PROPHYLACTIC MANAGEMENT TOOL

Continuous monitoring integrates sound forensic practices with data mining tools to detect high risk behaviors and potentially anomalous transactions, as well as evaluate policy compliance within an organization's financial and operational environment. Continuous monitoring systems can identify, quantify and report, in real time, instances of non-compliance with company policy, high-risk behaviors and transactions with high indicia of fraud, as well as failures in internal controls.

Continuous monitoring systems can also identify high-risk operations within a company's global business by testing for uncharacteristic trends, data discrepancies, duplication of payments, policy violations, missing data and a host of other high-risk attributes. These tests can be performed remotely and, based upon the reported results, appropriate compliance and forensic experts can be routed to the geographic areas posing the greatest risk of loss and exposure. This produces increased efficiency, reduces travel costs and allows companies to focus limited resources on their highest and best application.

CONTINUOUS MONITORING VS. TRADITIONAL INTERNAL AUDIT APPROACH

The Association of Certified Fraud Examiners estimates that the average fraud scheme goes undetected for approximately 18 months. This should come as no surprise to companies employing the traditional intermittent, sampling-based audit approach. But facing the ever-expanding risks associated with violating anti-corruption laws, companies simply cannot afford to wait 18 months to recognize potentially anomalous transactions and high-risk relationships. In an 18-month period, the number of Books & Records violations can multiply drastically, and substantial amounts of cash can vanish as a result of non-economic transactions.

As further outlined above, when comparing the two approaches, Continuous Monitoring is a far superior protocol for the *early* identification and mitigation of suspect behaviors.

Continuous Monitoring	Traditional Approach
Evaluates 100 percent of the transactions or associated target functions	Evaluates only a small percentage of transactions or targeted functions
Transactions or functions requiring further review are identified in real-time	Transactions or functions requiring further review are identified during scheduled reviews
Process is highly automated and can be repeated on as frequent a basis as required	Process is somewhat automated and is repeated on a rolling basis as determined by Internal Audit
Automatically brings in relevant outside data (i.e., PEP[1] lists)	Outside data is considered only if it is specifically sought
Leads to optimal allocation of limited internal resources	Internal resources are dispatched in less than optimal fashion
Timely correction of errors and identification of prohibited behaviors	Errors and prohibited behaviors are not identified on a timely basis

[1] *PEP – Politically exposed person (PEP) is a term describing an individual entrusted with a prominent public function or a relative or known associate of that person. PEPs generally present a higher risk for potential involvement in bribery and corruption based on the nature of their position and potential influence.*

It is clear that if fraudulent behaviors are permitted to continue undetected, the associated liabilities will compound, along with the loss of critical cash flows.

APPLYING FORENSIC DATA ANALYTICS TO ANTI-CORRUPTION

The detection of prohibited payments, dubious relationships and high-risk activities represents a central element of both proactive and reactive anti-corruption engagements. When designing a forensic data analytics plan, it is important to consider that violations of company policy and/or various statutes can occur by manipulating vendor payments, accounts receivable, payroll, expense reporting, purchasing cards, expense classifications within the general ledger and the posting of journal entries. Below is a sample list of target areas energy and mining companies with a high operating risk profile should review:

Accounts Payable and Receivable	Supplier validation; duplicate suppliers; unexpected relationships; detailed transaction testing; review of unexpected relationships and detailed transaction testing
Human Resources and Payroll	Employee verification; duplicate employees; unexpected relationships; high-risk transactions; unauthorized transactions
Employee Expenses and Petty Cash	Procedural bypass; cash advances; keywords that typically surround anti-corruption violations; transactions that continually approach authority levels
General Ledger/ Journal Entries	Entries made outside business hours; re-classifications; entries that write off receivables

Lastly, it is important to consider that any negative outcome resulting from the aforementioned tests does not constitute proof that prohibited behaviors or fraudulent transactions have occurred. Companies must

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carefully consider qualitative issues with their data and how these issues might impact the results of the applied tests.

PROGRAM IMPLEMENTATION AND EXCEPTION MANAGEMENT

Continuous monitoring systems produce the most significant benefits in organizations that approach the process in a structured manner. In our experience, there are six prerequisites for success:

1. **Clear vision of the program's goals.** Is the organization solely looking to test for compliance with company policy, or is there a broader ambition to improve management oversight by detecting and eliminating accounting irregularities, as well as potentially fraudulent behaviors and transactions? These decisions will dictate the types of analytical tests to perform.

2. **Understand the nature of risk faced by your organization.** Companies need to move beyond the geographic approach to quantifying risk and adopt a more reasoned methodology that considers a number of quantitative and qualitative factors. In addition, risk is not a static condition, so companies must periodically reassess the appropriateness of prior risk evaluations.

3. **Consensus on which data sources will be monitored.** Companies should consider evaluating their Enterprise Resource Planning (ERP) system, legacy systems and system logs.

4. **Keen insight into the underlying data that will be mined.** For example, do the recorded cash disbursements represent transactions initiated through the ERP system, or are they being recorded post-issuance, producing underlying data that may lack integrity?

5. **A work-flow process covering the full range of actions and responsibilities, including the assignment and management of exceptions.** In the absence of timely follow-up, the benefits of a continuous monitoring system will be substantially diluted.

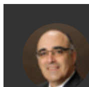
6. **Experienced forensic professionals.** These individuals can be involved in both designing the front-end analytical tests that drive the system, as well as monitoring the output generated in order to separate instances of real concern from the range of false positives that are inherent in this type of early warning system.

Once the continuous monitoring system is generating exceptions, a process of managing and risk-ranking these exceptions on an enterprise-wide basis needs to be implemented. Without the ability to effectively triage results, the team responsible for following up on perceived high-risk matters will find itself wasting time and valuable resources on false positives.

CONCLUDING THOUGHTS

The pressure being brought to bear on energy and mining companies will continue to grow as commodity prices remain depressed. This pressure will increase the risks of prohibited behaviors as individuals attempt to mitigate the financial impact of current market conditions. Clearly, the costs associated with delayed detection – and in some cases, a complete lack of detection – are high and escalating at an ever-increasing rate. In addition, the observed trends in the sphere of forensic investigations are quite troubling. Schemes are growing in their sophistication and aggressiveness, conspiratorial relationships are on the rise within companies, and those committing fraud are increasing their awareness and understanding of the investigatory protocols being employed by forensic experts. Each of these conditions poses unique challenges requiring thoughtful, reasoned and evolving responses. The unfortunate truth is that you cannot completely eliminate fraud; however, you can implement solutions to detect prohibited behaviors and fraudulent transactions quickly, shut them down in their infancy and implement additional controls to further enhance existing systems.

For more on data analytics and mitigating risks, refer to BDO's archived webinar and self-study course, 2015 Board Matters – Data Analytics and Risk Management: A Board Primer.



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BDO SPOTLIGHT:
Q&A with Vicky Gregorcyk
National Practice Leader - Advisory

Tell us a bit about your practice area, especially in the Natural Resources industry.

I lead BDO's Advisory practice, helping clients manage risk with internal audit, internal controls, technology and business solutions. Our team consults with clients to improve their business performance through the design and implementation of comprehensive global compliance programs, as well as evaluation of their existing policies, procedures and controls. We enjoy creating a positive change for companies facing issues where process, people and technology meet.

The natural resources sector is constantly changing and faces an ever-evolving threat environment. The industry also brings together a diverse group of businesses and people, each with a unique set of challenges. Risk advisory work in the natural resources sector is exciting simply because no two client problems are exactly the same, and we can bring a wide variety of tools to the table to help solve them.

What do you see as the biggest opportunities facing the industry today? The biggest challenges?

The industry's biggest challenge – low oil prices – is also its biggest opportunity. Though the markets may feel uncertain now, companies can take proactive steps to protect their assets and gains until oil prices improve. For example, now is a great time for companies to think about acquiring new assets. Some of the supermajors with stronger balance sheets are already growing quite acquisitive, looking for solid investment opportunities in productive shale plays. But this opportunity also extends to the middle market and smaller companies who also enjoy strong balance sheets .

Given the longer term outlook for WTI and Brent crude, many E&P and oilfield services companies are facing cost-reduction challenges, threatening their long-term cash flow. By investing in the right portfolio, clients may be able to weather the ongoing price volatility by improving efficiencies and diversifying their businesses.

What do you see as some of the biggest risks facing energy companies, and what can they do to mitigate them?

Energy companies cannot control volatile oil and gas prices, but they can control how they manage their operations to gain the most efficiencies and prevent surprises.

Companies must have the right internal checks and balances in place to effectively address risk. If they don't, they'll have a difficult time sufficiently gathering and processing information, limiting their access to the insights that facilitate better decision-making. By implementing robust internal processes and systems to detect fraud, inefficiencies and other internal threats, companies can improve their businesses' performance in a market plagued by uncertainty.

Cybersecurity is a growing concern across numerous industries. How can natural resources companies protect themselves against cyber threats?

There are a number of cybersecurity risks that can significantly impact natural resources organizations. For example, they could lose sensitive customer data to a breach or see declines in organizational efficiency if resources aren't available to handle an attack. Companies could also receive fines from government bodies or experience a rise in insurance costs if they don't implement proper security measures.

Though the situation of "perfect security" does not exist, there are a number of measures an organization can take to minimize the impact if a breach were to occur. For example, companies should establish comprehensive policies and procedures that outline how to respond to a breach, and train their employees and contractors regularly on these policies and procedures.

Additionally, implementing firewalls on externally facing networks and using a deny-all policy that authorizes and monitors inbound and outbound communications are critical steps companies should take. This way, they can quickly identify and close the gaps where attacks have occurred. Moreover, performing regular cybersecurity risk assessments can refine an organization's specific threat profile. Companies must establish strategies that mitigate both severe and moderate risks, and test the solutions on a regular basis.

The 2015 BDO Oil & Gas RiskFactor Report, unsurprisingly, found that volatile commodity prices were the most-frequently cited risk in publicly traded oil & gas companies' 10-Ks. As you noted earlier, no one can control commodity prices, but how can BDO help companies facing cash flow issues or those trying to reduce expenses as a result of recent price fluctuations?

We can help companies identify practical and sustainable risk management solutions to help them remain resilient in times of uncertainty. For example, we assisted a publicly traded natural gas company with its vendor audit program. In the initial stages of the project, we identified recoveries resulting from overbillings related to labor, transportation and other expenses. As we conducted the audit, we found there were contractually required discounts certain vendors had not provided or inaccurately calculated. Our professionals worked alongside the client's ethics and compliance department to carry out an investigation in conjunction with our audit, and as a result of our coordinated efforts, we helped the client quickly recover claims while assisting with rebuttals and negotiation with vendors. In a market with low commodity prices, finding savings or, in some cases, refunds, is more important than ever.

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GENERATE TAX SAVINGS FROM PAST AND FUTURE INVESTMENTS WITH R&D TAX CREDITS

By Jonathan Forman & Chai Hoang

Companies operating in the oil and gas industry could be missing out on millions of dollars in the form of federal and state research and development (R&D) tax credits. Whether in the upstream, midstream, or downstream sectors, companies operating in this industry are potentially performing activities that qualify for these credits.

The R&D Tax Credit provides the potential for significant benefits for oil and gas companies. The most recent data reported by the IRS shows that over $10.8 billion in R&D Tax Credits from all sectors were claimed in 2012. However, the total credits claimed by petroleum and coal manufacturers made up only $80 million of those credits. With only 54 manufacturers within this industry claiming the credit, the average claim was $1.48 million. These statistics illustrate the possibility of significant benefits but also point to the large number of oil and gas companies that might not be taking full advantage of the credit.

R&D TAX CREDITS IN OIL AND GAS

Companies attempting to develop or improve the functionality, performance, reliability or quality of products, processes or software are likely eligible for the credit. The R&D Tax Credit is an activity-based credit and represents a dollar-for-dollar offset against income tax liability.

Businesses of all sizes can use these benefits generated from spending on past and future investments to increase their cash flow to hire employees, invest in equipment and expand their operations. Even more, incremental improvements may be enough to qualify for the credit and the research and development does not have to be successful.

In general, if a company has or is attempting to develop more effective and efficient ways to explore for oil and gas, extrude and produce it, transport it and/or refine it, then the company may be eligible for the R&D Tax Credit. In addition to large oil and gas companies, small and mid-size companies that provide services to the oil and gas industry are also potentially eligible for these credits.

Specific examples of eligible activities within the oil and gas industry include attempting to develop or improve the functionality, performance, reliability or quality of components such as drilling techniques, chemical reaction processes, conversion and treating, coiled tubing technology, product optimization technologies, and geological and geophysical interpretive methods.

Eligible costs that qualify for the R&D Tax Credit include wages paid to employees engaged in qualified research as well as for directly supervising or directly supporting qualified research and a percentage of payments to consultants or contract laborers for qualified research. Additionally, tangible, non-depreciable property used in the process of research and development may also be eligible.

EXTENDING THE CREDIT

Since the R&D Tax Credit (also commonly referred to as the Research Credit) is a temporary credit, it is not surprising that it's currently expired. The credit has in fact expired many times previously and has subsequently been extended each time. At the end of July this year, the U.S. Senate Committee on Finance voted to approve a tax-extenders package that would extend various tax items, including the Research Credit. This package is now pending a vote from Congress.

POSSIBLE CHANGES TO THE R&D TAX CREDIT

As mentioned above, a tax-extenders package has been passed by the U.S. Senate Committee on Finance and is currently with the House of Representatives, which can consider the current bill or introduce its own.

Possible changes within the current bill can be beneficial for oil and gas companies, especially for smaller businesses or startups. Under this bill, small businesses can claim the Research Credit not just against their regular income tax liability, but also against their payroll taxes, an option not available in the past. Additionally, some companies would be able to claim the credit against their Alternative Minimum Tax, allowing previously excluded companies to potentially be able to claim it. If the past is prologue, the credit should be extended once again. If the current legislation is passed as written, then the R&D Tax Credit would be extended retroactively for 2015 and also through 2016. If companies in the oil and

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gas industry haven't done so already, this is a good time to consider whether they're leaving significant benefits for their past and future investments unclaimed.

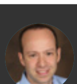
OTHER RECENT DEVELOPMENTS

Additional taxpayer-friendly developments in the Research Credit area have made the potential for tax savings even greater.

Earlier this year, the IRS released proposed regulations that help clarify what is considered internal use software (IUS). Software developed for a company's internal use has had to meet a higher standard than other activities that qualify for the credit. The proposed regulations narrow the definition of IUS and thus broaden the software development activities that do not need to meet this additional standard.

Another major development came last year, where the IRS released regulations allowing a taxpayer to elect the Alternative Simplified (ASC) method on an amended return. There are two types of methods, the Regular Credit Method and the ASC method. Previously, the ASC method had to be claimed on an originally filed tax return. With the new regulations, companies can claim this method that generally requires more recent financial information than the Regular Credit and, as its name suggests, is a simplified method.

With an extension of the R&D Tax Credit likely to come soon and in light of these recent developments, oil and gas companies would be wise to re-evaluate whether they're one of the many companies leaving money on the table by not claiming the credit.



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PErspective in NATURAL RESOURCES

Deal activity in the oil and gas sector continues to be sluggish as commodity prices remain depressed. However, private equity investors may see some opportunity in the alternative energy market.

Continuing a trend from Q1, oil and gas deal activity was down in terms of volume during the second quarter of this year, but was the highest by dollar value since the fourth quarter of 2012, according to the Energy Information Administration (EIA). This is thanks to Royal Dutch Shell's acquisition of British rival BG Group for $83 billion, which accounted for a whopping 73 percent of second quarter M&A, *Oil and Gas 360* reports. Without that megadeal, the value of Q2 deals would have totaled just $31 billion. The transaction is not likely to spur a megadeal M&A boom, however, because companies in the sector have been unable to agree on prices for buying and selling assets, *Oil and Gas 360* reports.

Oil and gas deal volumes were below normal levels, with 137 deals announced in Q2. This was the lowest number of deals since Q4 2008 and was 42 percent below the previous two years' median quarterly number of deals of 235. The bid/ask spread remains too wide for many deals to take place, as sellers bide their time hoping for a recovery in the price of oil, which would increase the value of their assets. One noteworthy transaction was PE company Global Infrastructure Partner's purchase of a 50 percent stake in Hess Corporation's Bakken midstream assets for $2.675 billion. The goal of the joint venture is to pursue an IPO in the third quarter of this year, *Oil and Gas 360* reports.

The alternative energy space, by contrast, has seen fairly robust deal activity, especially in the middle market. The solar energy sector has seen an uptick in mid-market M&A, stemming at least in part from anxiety over imminent reductions in the federal solar investment tax credit from 30 percent to 10 percent by the end of 2016, according to *The Middle Market*. Larger solar firms are rushing to grow their businesses by acquiring smaller shops and to get rooftop solar projects installed completely in order to qualify before the higher tax credit is eliminated.

Noteworthy deals in the solar space include Gibraltar Industries' recent acquisitions of both RBI Solar and Rough Brothers Manufacturing for $130 million. SunEdison recently acquired seven renewable energy projects including wind, hydro and solar projects in Brazil, China, India, Peru, South Africa and Uruguay. *The Middle Market* indicates that Blackstone Group, Everstream Opportunities Fund II and Altai Capital Management made a $175 million investment in a SunEdison subsidiary in connection with the deal.

While solar M&A is hot, recent IPOs have demonstrated a lack of confidence among investors, according to *Penn Energy*. Solar financing pioneer SunRun raised $250 million in an IPO only to see shares fall 13 percent, and SunEdison shares fell 28 percent following its recent acquisition of rooftop installer Vivint Solar for $2.2 billion. The tax credit reduction coupled with a potential interest rate hike could further spook investors. However, if approved, new regulations targeting carbon dioxide emissions could raise the costs of traditional power, thereby giving the alternative energy sector a boost, writes *Penn Energy*.

In general, 2015 has been a difficult year for deal-making in the natural resources sector, with uncertainties driving mismatched buyer and seller expectations and depressed valuations. However, as the U.S. continues to diversify its energy base, PE firms may find lucrative opportunities in areas less prone to the whims of commodities markets.

PErspective in Natural Resources is a feature examining the role of private equity in the natural resources sector.

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MARK YOUR CALENDARS

The following is a list of upcoming conferences and seminars of interest for natural resources executives:

OCTOBER 2015

Oct. 5-7
IPAA Oil & Gas Investment Symposium
The Palace Hotel
San Francisco

Oct. 6
The Oil Council North America Assembly
The Four Seasons Hotel
Houston

Oct. 8-9
AICPA & PDI Oil & Gas Conference*
ARIA Resort & Casino
Las Vegas

Oct. 25-27
DUG Eagle Ford Conference & Exhibition
Henry B. Gonzalez Convention Center
San Antonio

Oct. 30-Nov. 1
19th International Petroleum Environmental Conference
Grand Hyatt Downtown Hotel
Denver

NOVEMBER 2015

Nov. 9-10
Hart Energy Executive Oil Conference
Midland County Horseshoe
Midland, Texas

Nov. 17-19
22nd International Petroleum Environmental Conference
Grand Hyatt Hotel
Denver

Nov. 30-Dec. 4
American Exploration & Mining Association Annual Meeting
Spokane Convention Center
Spokane, Wash.

DECEMBER 2015

Dec. 1-2
University of Texas at Arlington Oil & Gas Environmental Conference
The Fairmont Dallas
Dallas

Dec. 6-9
International Petroleum Technology Conference
Qatar National Convention Centre
Qatar

Dec. 9-10
Denver NAPE (North American Prospect Exposition)
Colorado Convention Center
Denver

**indicates that BDO representatives will be present at this event."*

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BDO'S NATURAL RESOURCES INDUSTRY PRACTICE

BDO's Natural Resources industry practice provides assurance, tax and advisory services to emerging and established businesses in the United States and all over the world who are involved in both the traditional and alternative energy industries. Our clients often operate across borders either raising capital or making acquisitions abroad. Our extensive industry knowledge is supported by our international network of 1,328 offices in 152 countries, allowing us to provide a consistently high level of service wherever our clients do business.

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