

SEC Historical Society

The Experts Forum: The Impact of Falling Oil Prices on Financial Reporting

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Dr. Craig Lewis: Good afternoon and welcome to The Experts Forum: FTI Consulting | Compass Lexecon, broadcast live on www.sechistorical.org. I am Dr. Craig Lewis, Madison S. Wigginton Professor of Finance at Vanderbilt University's Owen Graduate School of Management, and moderator for today's program.

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The SEC Historical Society, through its virtual museum and archive at www.sechistorical.org, shares, preserves and advances knowledge of the history of financial regulation. The virtual museum and archive is the preeminent online source for original and primary material on the regulation of the capital markets.

This afternoon's program is the second in a series discussing cutting edge issues at the intersection of finance, economics and regulation. I was privileged to moderate the inaugural broadcast last year, examining Dodd-Frank, derivatives and structured finance. That broadcast is permanently available in the Experts Forum section under Programs in the virtual museum and archive, and I recommend accessing it after today's broadcast.

Our topic today is the impact of falling oil prices on financial reporting. Joining with me are Christopher Champion, vice-president, chief accounting officer and controller at Anadarko Petroleum Corporation in The Woodlands, Texas. Chris formerly served as a national audit leader for oil and natural gas at KPMG LLP and has more than two decades of accounting experience.

Gary Goolsby, senior managing director at FTI Consulting, is based in Houston. Gary has over 40 years of accounting and auditing experience and has provided professional services to oil and gas exploration industries.

David Woodcock a partner in the securities litigation and SEC enforcement practice of Jones Day in Dallas. David was previously regional director at the SEC's Fort Worth Regional Office and chair of the SEC's national Financial Reporting and Auditing Taskforce.

Welcome. I would like to begin with Gary Goolsby, who's going to provide a brief history of the fluctuation of oil prices.

Gary Goolsby: Thank you, Craig. I think it's important for us to discuss briefly the history of where oil prices have been since the early 1970s. I think this is critical because we see a dramatic decline in the price of over 50% in the last year and a half. I think putting this in perspective just as a backdrop would be helpful. If you go back to 1973 and the OPEC's oil embargo against the United States and Western Europe for support of Israel, the price of oil went from \$4 to \$10 between October 1973 and March 1974 and this is not inflation-adjusted numbers. What happened next is the Iranian Revolution and Iran -Iraq War, with Iran cutting production, cancelling contracts with U.S. companies and Iraq's production declined. The price of oil went from \$15 to \$40 in April 1980. You were seeing some dramatic increases given the economics of what was occurring at the time. Other countries started filling the gap during this period of time, resulting in overproduction. Then we came into the 1980s with prices dropping to \$13 in March 1986. Many of you may recall that the early and mid-1980s was a very difficult period for the oil and gas industry. Many have compared what's going on today with that timeframe, which was a period of time when there were massive layoffs in the industry, difficult problems, liquidity issues resulting from, again, the overproduction and the drop in the price of oil. In 1990, the Iraq invasion of Kuwait occurred and the price of oil went from \$18 in July 1990 doubling to \$36 in October 1990. Then, as the Asian financial crisis occurred in 1997, the global demand for oil fell, with the price declining from \$25 to \$12 in 1999. But then further strengthening of a global economy led to high demand for oil with low supply resulting in oil reaching \$134 in 2008. As you can see, this ebb and flow of economic demand and supply, wars and political events were causing erratic movements in the price of oil over time.

Then, as we all remember, the global financial crisis that started in 2008 resulted in the price of oil declining back down to \$41. Eventually the global economies again recovered and oil reached up to \$106 a barrel in 2012. That brings us to where we are today, the most recent decline over the past year and a half or so which resulted from increased oil supply driven by increasing global production including the shale activities that's occurred, plus demand has been declining due to slow growth in Asia and Europe and the U.S. dollar has been strengthening. We've seen a decline now I think today to about \$41 a barrel and many think it will continue over the foreseeable future, but as you can see from history we really don't know what's going to happen to the price because of all the erratic movement that's occurred and the issues that can impact the price of oil over time. The world uses 93-million barrels of oil a day plus or take some, and produces around 93, 94-million barrels of oil a day, which are huge numbers, but the movement of production and reserves that's on stream and that's still in the ground can still have a dramatic impact on the price of oil.

Dr. Craig Lewis: Thank you, Gary. At this point I'd like to ask the panel to contribute. The one thing that I think we can take away from your comments is that oil pricing is volatile, it's been high, it's been low, and it will continue to fluctuate in the future. I was hoping we could answer a few questions, one would be how long do we think oil prices are likely to stay where they are? Could you talk about some of the geopolitical consequences of the current state of the market, and describe some of the implications are for the industry as a whole.

David Woodcock: The only thing I would add is a quote from Daniel Yergin which is "cycles of shortage and surplus characterize the entire history of oil." That's basically what Gary just went through and I think it's true and will always be true.

Christopher Champion: Your first question is how long is this going to last. First off, my views I say here today are mine and not necessarily the company I work for, but when all this started last Thanksgiving there was a general presumption that it was going to be the second half of 2015 to basically where we are now that we would expect to be coming up the price curve a little bit. What happened over the summer through the Fall is there was a second dip and the phrase that's catching on is "lower for longer". So the question is when does it recover? When we look at the world today, you think about the Russians are bombing in the Middle East and that has not impacted on the price of oil, we are seeing production stay relatively flat because people are able to drill and do more with less. When will this supply/demand balance come back? It's one thing that Gary talked about the 93 million barrels of oil and how much demand there is. There's inventories, there is over 300 million barrels of inventory right now, there's a lot uncompleted wells and so that all needs to work through the system. I'll put something out there my personal view, I'm hoping that sometime mid 2017 or late 2017 we're starting to see some kind of recovery, and recovery might be more than \$50, \$55. One other point I'll add here is we talk about oil a lot but natural gas is the forgotten child here in a way. When you think about natural gas in the U.S. since year end of the five year strip has decreased 25%, it's actually decreased more than the oil strip has. When you think about El Nino and the warmer winter, you think about the inventory levels we have here and what is the outlook for natural gas? One would say that even as oil comes back, there's a lot of associated gas along with that as well. I think for natural gas it might not be lower for longer, it might be lower for longer and longer. Who knows when that will come back?

Dr. Craig Lewis: Chris, for those of us who aren't quite as familiar with oil and gas, what do you mean when you say a strip?

Christopher Champion: There's a five year curve that is published, so that is the market view so at any one point in time, whether that fifth year has the liquidity to say that's really going to be the price in five years remains to be seen. It's certainly very valid for three years and when you look at the five year strip for oil, it doesn't get above \$60 as it stands today.

Gary Goolsby: Again the other issue that I had mentioned is there are so many interacting forces here that one has to consider and think about that you never really know how it's going to impact the price of oil. The world economies are down, the course of the Fed has left our interest rates basically zero. Because the world economies are slow that has dramatic impact on demand from China, India and other countries. Political environments that were discussed in history can impact the price. There are so many things that can impact what's going on here, and the point is, as we'll get into later in the discussion today, this price decline for the foreseeable future is having dramatic impacts on strategies, accounting, disclosure - issues that's impacting so many in the industry, some positive, some negative.

David Woodcock: Sort of getting away from the regulatory questions of what the regulators might do here, when this is going to end regardless of the length of time this happens, there's been a noticeable shift in behavior amongst the participants in the production and exploration sector. When times are tough, issues that would have been worked out more easily start to get escalated more. I guess it's fair to say there is a more litigious environment, but you're also seeing a lot more in that regard, such as royalty and working interest owner litigation and third party audit disputes. You're seeing insolvencies affect litigation posture - if you signed a contract that was profitable at \$80, \$90, or \$100 a barrel, and you're now locked into that contract for the next few years, one option - an unfortunate option - may be insolvency, which is not something a lot of people want to do. I think those are the things that are happening now as far as I can see and this is the short term if it bounces back, and there are a lot of people who think it will bounce back quickly. Companies have raised a lot of money

recently and there are a lot of private equity funds and others who are investing in this space, probably in the hopes that a lot of this is temporary and that prices are going to rebound. They are betting on better outlooks and trying to get cheap assets while they're down, but if the downturn persists then that bet becomes a bad one. I think we talked about the effect, I think accurate statistics are hard to come by, but I've seen upwards to 200,000 people have lost their jobs in the global oil and gas industry. I'm not sure how many have lost them in the United States, but it's a lot of people, a lot of layoffs. Those have ripple effects and they're not happening necessarily only at the large companies, they're happening at the service provider level, the companies who are downstream, the pressure's on them and I think the longer this lasts the more of those you see and the more difficult the environment becomes for everybody. Eventually, some of the larger companies, that can operate in lower price environments in the short term, may not be able to operate at that level for long.

Dr. Craig Lewis: Can anybody contribute to the geopolitical consequences or the underlying motivations that countries like Saudi Arabia and the Middle East have to keep oil prices at the levels they are today?

Gary Goolsby: I'll make a comment. We all know that Saudi Arabia decided not to slow their production, they continued their production and many believe they are doing this to drive other operations out of business, such as the oil shale activity in the United States. If they keep the price low enough it becomes uneconomical and therefore it reduces supply and we're back to the supply and demand concept, obviously, and the supply would drop and the price will go back up. It's interesting and this gets complex because a lot of these countries have become dependent upon the cash flow from oil and now even Saudi Arabia is borrowing money to finish projects. They do have substantial reserves in dollars but they are borrowing money to finish projects rather than using the current cash flow from their sales. I think that when you look at that the impact of Iran, the unknown issues there, obviously Libya, you've had a lot of turmoil and their exports were nothing for many, many months, or perhaps over a year, you get all these factors swirling on the geopolitical front around the world that any one of these can affect the price of oil and they will at some point. It's yet to be seen what the final result of all this will be over time.

David Woodcock: On that note, the Saudi Arabia's Vice-Minister of Petroleum and Mineral Resources in a speech, maybe last week, talked about the ratio of spare capacity to oil consumption and he was talking about the comparison between the mid-80s oil crisis and the current crisis. He was saying the comparison is really not well taken, it's really misguided because the ratio of share capacity to global oil consumption in 1985 was 17% and today it's about 2%. That just tells you Saudi Arabia, despite low prices, has not taken its foot off the pedal, so to speak, of production, and you have that supply being sustained in the face of really remarkable growth in the U.S. production capabilities all coming on the heels of an economic slowdown, or what we believe to be slowdown, in China and most of the rest of the world frankly. Even in the U.S., growth has been around 2.2% or something like that of GDP for the last few years. You've got a lot of supply and a possibly slowing demand but the Saudis are making a bet, it seems to me, about who can last the longest.

Dr. Craig Lewis: It's as if the two forces are interacting to push prices even lower. You have excess supply or more supply than maybe is warranted, at the same time you have countries demanding less oil.

David Woodcock: All for the geopolitical reasons you asked about originally, and I can't say how those will shake out or what all the components actually are but I suspect that's what's driving a lot of this.

Dr. Craig Lewis: What I'd like to do now is transition from that macro view of oil and concentrate a little more on some of the key accounting issues that exist for oil and gas companies. Chris, if you could talk to us about what's happening today and in the future?

Christopher Champion: It's certainly a very active time for all companies. When we talk about oil and gas sometimes we focus on the upstream companies but there are considerations across the value chain. When you think about the drillers and oil field services companies they're really the tip of the spear here as they are the first ones to see the shock when you do have a big price dislocation that we had. For those companies the issues are pretty much the same it's just the timing of when they impact to their companies. Certainly Dave had mentioned layoffs and so there's certainly accounting that goes with that and curtailing operations as well. A lot of this has to do with asset valuation, a lot of these oil field services companies have been in growth mode for the last decade and there's a lot of goodwill on the books and high asset values. If you step back and look at what's transpired in the last year, I certainly didn't have time to go look at the amount of value that's been written off balance sheets, but certainly within this third quarter let's focus on the service companies first. When you think about these assets some of these are drilling rigs, some of these might be rigs of the late 90s, early 2000s that were perfectly good operating rigs but now there's a new class of rig that's come up and if they're available so no one is going to be going back to older technology. I was on a fishing trip in south Louisiana a month ago, I was driving along the coast right there by Sabine Pass and saw probably no less than 12 jack up rigs sitting in port, certainly not the place where you want them to be. They're certainly feeling that pain and some of them are shedding assets which bring on disclosure issues.

When you go to E&P it is difficult, this goal of having one set of global financial standards, when you get within the E&P sector there's actually three right now and going to one might be tough, but we have the full cost accounting which is birthed by the SEC that's still out there. We have successful efforts and then we have IFRS for international players. It's interesting to follow the timing and the amount of impairment for each of these different methods. When you look at full cost when there's impairment and there's been significant ones this quarter, it's not based on fair value, it's based in part on a 12 month average price. When we're sitting there at December 31, 2014, the full cost companies for the most part weren't taking impairments as three quarters of their year was \$90 plus oil. Certainly as the quarters come through and those high prices drop off, you're starting to see impairments, but again they're not based on fair value.

Then you have successful efforts which have a discounted cash flow model.. A lot of this depends on how these companies acquired these assets, were they organic, were they acquired. You start seeing some impairments fourth quarter last year, but mainly through this year and the third quarter I would say was a blood bath for successful efforts. There is some that had already taken their pain but the strip alone from March , which was the prior low watermark, so to speak, oil was down 15% as of September from March. You saw these huge impairments; they were based on fair value. Once you get past the undiscounted cash flow you're based on fair value.

Then you have IFRS which is a totally different model, I always refer to it as you pass go and go directly to jail because you don't have this discounting gate to hide behind. The measurements are just a little bit different though, it's a recoverable value which is the higher value in use, and I will explain what that is, or fair value. The value in use calculation is more from management's view so it certainly has elements that you've seen in fair value as far as cash flows but the pricing could be more management's pricing versus some might use the forward strips. You might have some differences in discounting. When we have an accounting model that yields three different sizes of impairments probably at different times the disclosure around impairments become

important. Formost people in the industry, impairments unfortunately have become a core competency and I think around disclosures when I go and look at various company's disclosures, they're making the correct disclosures.

Something that is very important here is that within the financial statements there's a risk and uncertainties, SOP 94-6. Even within SK 303 there's disclosures about known trends and I'm sure the SEC is very interested that if you've had material impairments today what disclosure are you making about what could happen in the future. If gas is down another 5% from the end of the quarter and if you had an asset that was barely passing at that gas price what kind of forward looking, early warnings disclosure did you have? We've already taken the impairments but if pricesit decreases further we could have additional impairments. I think when people put on their financial reporting hats it's not so much what did happen as you might need to start forecasting a little bit and giving some early warning disclosures of what could happen.

As far as goodwill, goodwill serves an interesting little thing and I think a lot of it depends on when it came on, certainly we've seen the service companies take goodwill impairments. I think their equity prices have been hit disproportionately worse than maybe some others in the industry. There's this warped logic that if you take a \$6-billion impairment charge on an asset but your market caps stay flat that actually helps you in your goodwill test. You're not seeing them as much within the E&P sector. Then we move to midstream and I'd say midstream is probably more of a lager in here. When you think about midstream is like transportation, cars on the highway, and so far we've heard that production has been staying relatively flat. Certainly if you have assets within some shaleplays that are out of favor, Marcellus and the like, that would certainly could put some pressure on Midstream asset valuations. In the third quarter we started to see some of the larger midstream players take impairments. If the volume is not coming through that's the only way you're getting paid. You hear about people laying down rigs and everything else, so eventually if the production takes a big step down in the U.S. and again depending on location, just like buying a house location is about everything in this industry, the midstream companies are going to feel additional pain as well.

David Woodcock: That's something we didn't talk about earlier but it's the, what you might say, devolution of the environment in the face of longer-term price depression. Most of those midstream companies have longer term contracts that require a certain amount of flow through, your option is to pay them that amount or file bankruptcy and you try to sustain yourself as long as you can. Right now the midstream companies aren't really being hit quite as hard as the others but if the low prices are sustained then you'll have people throwing their hands up and saying I don't care that I have a long term contract, I can't operate under it.

Christopher Champion: It's been interesting, it's really been probably in the last three or four months we were certainly looking at the equity values of the midstream, they're starting to play in this decline and in somewhat a disproportionate manner. I think people are starting to read the headlines. If someone is going to have five rigs two years ago and now going down to one, there's less traffic going on that highway, right?

David Woodcock: And most of those companies have been great companies to own. A lot of people like to buy them for the dividends or the distribution which really depends on cash flow.

Christopher Champion: The one final thing we'll talk about and I'm sure we'll talk about this later is disclosures around oil and gas reserves. As we're coming year end, a lot of the E&P companies, if they're public, have required disclosures for oil and gas reserves. It's going to be very interesting because in order to have proved undeveloped reserves you need management intent. You may or may not have a PUD depending on if you

want to run a rig. If it's not my highest return asset then that proved undeveloped reserve I have might not remain as a proved reserve. Then depending on the company's financial wherewithal it's great that you have the intent but do you have the capital to do it. Both those were gates in order to keep that proved undeveloped reserve on your books and so you can start seeing sort of daisy-wheel affect where you start de-booking all these reserves, the next thing you know it leads to an impairment but more than anything else people start getting worried about the underlying asset base.

Dr. Craig Lewis: Let me ask anyone on the panel about the current state of accounting rules, particularly as they apply to firms that file with the SEC. Do you think they do a good job, are they adequate? Are they enough to really inform investors about what they should be able to understand when they look at the financial statements? Are some of these approaches better than others?

Christopher Champion: I'm sure everyone is going to have a different view. My view is I'm going to go back to when the successful effort rules came in, in 1977, when you look at the basis of conclusion. There is certainly advocates back then. This is an unusual type of accounting as most of your asset value is not on your balance sheet. It's down on the ground, so should you go to a fair value type of model here? Certainly back in 1977 they thought that was not the case, there was some thought that with the FASB moving towards more fair value reporting that oil and gas properties could be at fair value as well.. IFRS can give you some of that. Under IFRS, once you trigger the impairment you can reverse impairment, so by definition the property balances can fluctuate. I don't know if the reporting model with respect to this area is broken necessarily, these oil and gas disclosures are important, they are standardized and that's very important. The reason why they're there is so people can compare different companies. I think as long as we're giving the underlying information someone can put in their own model and come up with different asset valuations. I think if you look at analysis reports for a particular company they might be all over the place because they have a different view of their value.

Gary Goolsby: I was going to say I agree with what Chris is saying. I think also as a package of financial reporting, it does a good job. By a package I mean disclosure of the reserves like Chris was mentioning on a consistent basis, but you've also got other disclosures of risk factors. You've got management's discussion and analysis which covers all sorts of issues from liquidity to the forward looking information about your company. You've got disclosures in the footnotes to the financial statements articulating how the rules work. I think as a package the financial reporting model and disclosure does a good job of laying it out for investors to see, not that there won't always be questions, there's analyst calls, people ask questions clearly, but I think as a package it does that. I think there's other issues you get into, like internal control over financial reporting as you go through a period when layoffs occur, you worry about internal controls but that's accommodated through disclosure. There's required Sarbanes-Oxley disclosure on internal controls over financial reporting, do they work appropriately or not or do you have a material weakness. Taking all this as a package I think it does a reasonably good job of communicating to the stakeholders and users of the information that's included.

David Woodcock: I agree with both comments, very good points especially the total package piece. I think the SEC's disclosure rules are designed to be agnostic as to the merits of any particular business model or approach. It's really their design to get information to investors. There's been some criticism recently that maybe there's too much information included, when you start talking about the total package you've got the risks, you've got all of the MD&As, you've got the financial data. I don't know what the average size of the 10-K annual report is but it's several hundred pages I believe and that's a lot of material. So the question is are you getting the right material in the right way to investors. I think disclosure rules try to do that. The oil and gas rules were – not my words, their words – modernized in late 2008/2009. The purpose was to make the information provided more

meaningful to investors. The way the SEC does rule changes is by proposing rules and then putting them out to comment and they got lots of comments on these particular rules, so while certainly nothing is perfect I think they try to get the right information to people who need to make decision on investing or analyzing companies.

Dr. Craig Lewis: That may have been an awkward way to try and transition into the next point but I was wondering in your view, David, what do you feel are some of the key accounting risks? In your work at the SEC you've certainly spent a lot of time looking at these issues, so maybe you could tell us a little bit about the SEC approach and some of the areas of focus and how they review oil and gas financial statements and takeaways with respect to enforcement actions?

David Woodcock: Certainly. Interestingly, Chris mentioned this a second ago, accounting is obviously very important but in this space I think disclosures are in some ways more important. Stepping back, the SEC oversees accounting disclosure issues relating to oil and gas really in several ways but two ways that I'll talk about right now: through the review of corporate disclosures and financial statements, and then through enforcement actions. In this space I think it's fair to say most of the work done for publically reporting companies is done through the review of disclosure and accounting issues, and that's done by the Division of Corporation Finance, who is required under Sarbanes-Oxley to do selective reviews of periodic filing. These are filings that companies make, 10-K, 10-Q, 8-K that sort of thing, and then also transaction based filings, like IPO-related documents. They're checking those for a couple of things, one is compliance with the securities disclosure rules, and we've talked a bit about what those are here, but also for accounting issues. That's an enormous task. There are a lot of publicly traded companies so Corporation Finance is divided up by industry groups - there's a natural resources industry group and that group has a sub-group that's dedicated to oil and gas. They focus on this industry, and they will review financial statement filings, disclosures and accounting issues just for oil and gas companies. If in their reviews they see something they have questions about, they'll issue a comment letter to the company, the company will respond, and that kind of goes back and forth and is really meant to be a dialogue between the company and the Division of Corporation Finance. If there are accounting issues involved, not just disclosure issues, those can be elevated within the Division of Corporation Finance's own accountants, but also the Office of Chief Accountant at the SEC, who really speaks with authority on matters of accounting at the SEC.

That's kind of the background of the review of financial disclosures in accounting that Corporation Finance conducts. What are they looking for? What kind of questions do they ask? Thankfully we know some of that because they will make these comment letters and the responses publicly available. Every year you can go back and look and get at least a good idea of what was on Corporation Finance's mind. As you might expect, reserve issues are always a big source of comments. I shouldn't say this because I don't know if it's 100% accurate, but I've seen people estimate that for a typical E&P company reserves account for about 70% of the company's value, and as Chris was saying, they're really not a financial disclosure, per se, but they drive a lot of measures of corporate health. So Corporation Finance really focuses on areas like finding and development costs, reserves replacement ratios, reserves life index and depreciation, depletion, and amortization. Those are things investors care about, those are metrics or measures that investors care about and a lot of that is driven from the reserves.

I think in the interest of time I'm going to talk a little bit about some of the areas they've made comments on in the past few years. I won't spend a lot of time on this, and then we'll move into the enforcement side of the house. Some of the typical subject matter areas for comment letters have been reserves and reserve reports. These are new requirements. You don't have to use a third party to do a reserve report but if you do you need to disclose certain things about it, including the technical competence of the person doing it or the group doing it, the technology used to establish the additions to reserve estimates, those sorts of things. That's an area of comment, a

big area of comment some have said, about a quarter of all comments in 2012 and 2013 related to proved undeveloped reserves (PUDs) and a lot of overstatements that are out there are maybe more likely to occur here because they're the ones that are subject to more uncertainty. Despite the uncertainty they're also used by investors, banks, investment banks in terms of providing credit. They're a useful metric and so they're an area of focus.

I can go through some of the comment letter examples but I'm going to give you some highlights really: disclosure of material changes to PUDs, development of PUD reserves, disclosure of reasons why any material amounts of PUDs remain undeveloped after five years of the initial disclosures. Chris talked about the five year limit. Corporation Finance has said, tell us why you have any amount leftover after five years. You told investors you were going to develop them. One company's disclosed rate of converting its PUDs to proved developed reserves would not support the company's contention at all that the PUD would develop in five years. If you tell me you're going to develop your PUDs at a 5% annual rate that doesn't seem like it's going to work out to five years. Explain to us, and really what Corporation Finance is doing here is asking you to explain how you made these disclosures. Other areas of focus on can be things like present activities, like the number of wells drilled, completed and shut in awaiting infrastructure, cost and prices and this is where you get into a little bit more of the accounting angle as opposed to disclosure angle. But one example is property acquisition costs, drilling costs or impairment results. How companies treat transportation costs, how they computed net income in connection with the company's standardized measure determination. So those are some of the areas of focus.

Christopher Champion: One thing I'll interject is in my prior life which is pretty much where I spent most of my time is helping clients respond to these comment letters. The one thing I'll say is that on a proportion basis, if you look at the upstream sector 75-80% of the comments were reserve related. I'll tell you, I'll put in a plug for the SEC reserve engineers because a number of times the comments they're asking are very analytical and they're taking something that's disclosed on Page-15 of the business section and using something from MD&A and maybe information that's back in the reserve disclosures and coming up with a very good question. It's amazing that they're doing all this just with the information provided even though the way the rules are they are in three different spots. Sometimes this gets to the point where the comment says "please send us your reserves on a disc" or everything related to this because they might find something that looks a little bit out of sorts with proved undeveloped reserves and the next thing you know it's turned into a real live three to four comment letters back and forth. Just pay particular attention when you're doing your disclosures because we can all do that same math and if there is something that looks out of sorts, there might be a very good reason for it, and that's your opportunity to put a little more disclosure that might save you a lot of time on the backend.

David Woodcock: Some of these comments do result in de-bookings, I think it's a good point and that's why Corporation Finance is aligned by industry group because they want an expertise there. You don't want someone who focuses on banking or finance to be drilling down on your questions – no pun intended - on PUDs. That's the Corporation Finance side and that's a really important component of how the SEC looks at oil and gas and regulates in this space.

The Division of Enforcement is the hammer, that's the one that people don't really like to be engaging with, because it's not necessarily collaborative or a dialogue if you will. A subpoena is not exactly an invitation to a dialogue. So on the Division of Enforcement side, in my mind, I divide the kinds of oil and gas cases the SEC has in two different buckets. The first is one that is probably not worth spending too much time on now, and these are the private offerings where money is raised from sophisticated investors to drill wells. Typically these are set up as joint ventures and they are really relying on Rule 506 of Regulation D as an exemption to registration.

These are private offerings. They can range from \$1-million, \$500,000, and even smaller amounts to several hundred million dollars. They're quite popular, they're quite common and I will tell you that the SEC, most of the oil and gas cases that the SEC has filed historically have been related to these kinds of private offerings. It probably doesn't take much of a stretch to understand why. Most of what you might call fraud would be committed through these kinds of offering. There are very reduced SEC registration requirements, no or very minimal state filing requirements, and then no limit on the amount raised. They are often sold through what are called "captive broker/dealers," who are set up to sell these things, and they're just always high risk.

Without spending too much time on this particular area, I guess there are a couple of reasons that relate to the environment we're in today as to why these might be high risk. If you think about it these are often issuers of small offerings, and who are they competing with? If they find a well somewhere or a potential well that's got some great potential you might think that one of the larger, more sophisticated companies already know about that and passed on it. It's unlikely that a small operator is going to find something that more sophisticated companies haven't found and considered. And so these are small offerings and they're competing with highly capitalized large energy companies to locate and execute leases on drilling locations that are most likely to produce commercially viable quantity of oil and gas. That's very difficult. I think just to relate it back to our discussion today, I think it's much tougher in a weak price environment. If you think you can go rent a rig and have an operation where you're going to be able to raise \$20 million and you've got a lease where you think you can drill some wells. Maybe there used to be operations there, now with fracking and horizontal drilling do you think you can turn that into something? That's pretty expensive to do at very small scale and you probably need prices to be a lot higher than maybe they are now to be profitable. Those are risky for that reason.

Another one of the big risks here is for the same reason, any downward fluctuation in the price of oil and gas reduces the likelihood that well production will be offset by the expenses, and that's basically what I was just saying, which is either you're spending a lot of money to do this and it's unlikely in a low price environment that you're going to get that returned. They will always be around, those types of investments and those types of offerings, but they're riskier and that's where a lot of the SEC's cases come from.

The other kinds more in line with what we've been talking about today are actions involving public companies. It's interesting because there are relatively few SEC-settled or filed cases against public company issuers from misstatements relating to oil and gas reserves. If you go back 15 to 20 years there are very few, a handful really, and we won't talk about each individual case but I will say there have been some very large ones. One in 2004, where there was an overstatement of 4.47 billion barrels of previously reported proved reserves, that's about 23%. The company ended up paying \$120 million, that's sizeable. There have been others, there's another one from 2008 where the company reduced its previously reported proved natural gas and oil reserves by 35%, reduced its earnings by about \$1.7 billion, so that's very sizeable. More recently there were a couple of other cases, 2015 and 2014, that involved much smaller companies, much smaller amounts but I think rather than talk about the details of any of those cases I want to talk about what to take away from these cases.

One is, and Gary mentioned this earlier, and that is in all those cases the companies were cited for having weak internal controls. That's a standard claim in any kind of misstatement disclosure or accounting fraud case, but it's particularly true here and for reasons that I'll talk about. The other thing is in many of those cases the management was ignoring red flags and those red flags were either engineers or reports from third parties or data they were getting from the fields. If they think something's going to produce X amount and they're being told that their predictions are already off in the first or second year, it's probably time to adjust and a lot of them didn't. That goes the same with how these trends are impacting future plans. You think prices might be going down but

you're trying to avoid that and so you're keeping things on the books that you shouldn't, and that's another common theme through some of these cases.

A takeaway from that is, and this is easier said than done, I almost feel guilty saying this but don't unnecessarily delay writing down proved reserves when the evidence requires it. Very few people will say that they do, but in some of these cases that is exactly what happened. My own personal view on these is in every one of these cases you had management suffering from a version of short-termism and that is they were trying to avoid reality in some ways because they were focused on short term profitability, what they could tell the market. I think that prevented them from making the right decision.

Some takeaways on what caused these overestimates include: poor estimating practices - so that's unsound technical work - and then another one that was rather interesting was insufficient understanding or improper application of the SEC rules. They probably could be written better, there's no perfection there but they're pretty clear. Understanding them requires training, it requires people who know how to implement them, and some of these instances they didn't have people who knew the rules. You also had misguided incentives and competition for investors which could have caused some of the overbooking, and then the human biases such as overconfidence or being overly optimistic. That was another theme from senior management in these.

The last thing on this is overstatements can occur in these proved developed reserves which many of these cases involved, but it's much more likely to occur in these proved undeveloped reserves, as I said earlier. This is why the SEC really in the last five years has been focused on PUDs with the modernization of SEC reporting requirements in 2008. I think they started looking in 2011 and 2012 at how companies were treating those PUDs that they disclosed were going to be developed in five years. How did that turn out? I think they did some work in that area, and I suspect you'll see more effort from enforcement on that angle as well.

Dr. Craig Lewis: Some of my work has looked at earnings management and one of the things I think is likely to be the case is when an industry's profitability is eroding, there are many more firms that have strong incentives to try to do things to make performance actually appear to be better than it may actually have been. Gary I'd like you to comment about some of the challenges that face auditors when they are looking at firms.

Gary Goolsby: The issue is any time you've got an industry going through challenges whether it's the financial markets crisis that occurred that was devastating in so many ways or the decline in the price of oil, it results in the auditor being more sensitive and skeptical to the issues at hand. In other words just some of the things that the auditors are going to pay a lot of attention to which is no great surprise to companies that have gone through audits over and over again as public companies, the auditor is going to reassess their risk. The risk of the accounting that Chris talked about, the risk of overstatement of assets, the risk of not booking accruals for severance when you dismissed people, the risk of not booking assets held for sale at fair value; all those type of risk factors impact in the price of oil decline has on the company is important. I mentioned too, the internal controls over financial reporting is a critical area for the auditor and Sarbanes-Oxley requires management assertion as well, and the auditor attestation on the assertion given declining employment base and cutting back on resources is something that will fuel the auditor's concern about that area and will take a closer look to make sure things are as they should be.

In the area of disclosures, we've talked a lot about disclosures in the footnotes a few minutes ago, but also the auditor has responsibility for looking at disclosures outside the audited financial statements to determine if there are any material inconsistencies with what's in the audited financial statements. Some of this information is doing

comparative analysis that David was talking about, and looking at reserves to determine if the information there is inconsistent with the information they've been looking at. We're looking at forward looking information about liquidity of the company, the debt factors, are they going to survive is a growing concern. All those issues of disclosures are critical that the auditor is going to be looking at.

The other key area here is management representations, as we all know auditors get management representation letters that represent to a lot of issues. When you've got a declining environment in your business and challenges dealing with the realization of assets and other factors, the management representation becomes very important but the auditor has to audit those representations that are made to corroborate what's being stated. That's something that will get more attention as well. Clearly communications with the audit committee are always critical but in an environment where things are moving rapidly and there's not improvement being seen for the foreseeable future, the communication will become even more crucial in talking to the audit committee about what the issues and risks may be.

Looking at the comment letters that David mentioned is crucial and a better understanding of what the SEC is dealing with looking at the company's particular set of financial statements will also be something that the auditor will be focused on.

I think overall the key here is again you've got a changing economic environment, rapidly changing economic factors, an unknown horizon and so therefore auditors are going to be more skeptical, they're going to wear a different hat in the skepticism arena to probe deeper in analyzing some of these areas to be sure the accounting is right, the disclosure is right so that the audit report reflects what it should that everything's presented in all material respects as it should be.

David Woodcock: I don't know if you can address this but one of the common ways, both with the private oil and gas offerings and in the public company space, common ways to get comfortable with the estimates you're making about this inherently subjective reserve area is to use experts. I'm not talking auditors but reserve experts, and in some of the cases and many of the private cases where people get sideways, they disregard what the experts say. What kind of work if any do the auditors do with respect to these third party experts?

Gary Goolsby: There's required auditing literature that deals with using an expert and what you do to evaluate an expert. It's not only oil and gas reserve estimates that feed into depletion calculations but also, for example, actuarial calculations for pensions; the auditor has to evaluate the expert, the qualifications, the expertise, the skill, the knowledge, the experience, the background, the history, the methodology those kinds of things, not redo what they did because they're not petroleum engineers in this case. But rather evaluate the credibility of those engineers to know what is being used in the calculations for the financial statements. Again they don't audit the reserve disclosures because numbers feed into depletion calculations for the oil and gas assets. Experts do have to be considered in that way to evaluate the credibility of those experts. Chris, you may have some input.

Christopher Champion: I did this for 22 years, so it is certainly what Gary said about evaluating experts but it really goes beyond that and sometimes we say it's the most audited unaudited footnote. From the standpoint that it's garbage in and garbage out, there's certain things that go in that reserve report that auditors can have a view on, there's pricing that is prescribed, you can go audit that. You can look at the cost assumptions and compare to budget, you can look at the division of interest decks which is very important, that's the company's ownership. Then there's then there's different forms of assurances that these third party engineers are doing, some are doing a methods review that is more on top it says are they appropriately applying right methods. Some do audits of what

the reserves the company prepares. The engineers role will orally tell you that yes they do look at operating metrics and make sure they're within the fairway of some of the other clients but the reports don't say that, they say we take what the company gave us. Then there's a third form of assurance where it is an independent buildup. It is a preparation of the reserve report and so certainly with each of those there's a different level of comfort and it might change the nature and time in the extent of the procedures that the auditors do, but at least in my experience and practice when I was on that side of the fence, we spent a lot of time in that area. We communicated with audit committees about it and it is certainly a focus area, sometimes management sort of forgets whyhey auditors are asking, but there is certainly a professional responsibility to perform those procedures. .

Dr. Craig Lewis: Gentlemen, I think we are approaching the end of our broadcast. Chris, Gary, David, thank you for your excellent discussion today. It's been a pleasure joining you to share your insights on this topic.

Today's broadcast will soon be available in audio format in the virtual museum and archive at www.sechistorical.org. An edited transcript will be added later. Both the audio and transcript will be available under Programs and under the dedicated The Experts Forum section under Programs in the virtual museum and archive.

On behalf of the SEC Historical Society I'd like to thank again FTI Consulting and Compass Lexecon for their generous support and assistance in making today's program possible. Thank you for joining with us today and good afternoon.