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Independent Operators Continue To Lead Charge Into New Gulf Frontiers

Editor's Note: The Gulf of Mexico accounts for roughly one-quarter of the oil and natural gas produced in the United States each year. But a sea change has been taking place in the Gulf over the past decade, one in which the operational focus has shifted to ever-deeper waters and deep geologic horizons. These are the new frontiers for Gulf operators.

Independent exploration and production companies have led the way in deep water in recent years. As a group, independents now own more deepwater leases than the majors and have made the majority of new field discoveries since 2002. At the same time, independents have been the operators of record on all but a handful of discoveries in the deep Shelf play, while the numerous producing legacy assets that dot the shallow-water landscape continue to represent a vital component in many independents' business strategies.

What do these companies have on the drawing board for 2008 and beyond? How are they balancing opportunities in the deep water, deep Shelf and conventional Shelf? In what plays are they concentrating their exploration and drilling dollars, and what technologies are they deploying to bring projects in on time and under budget?

To find out, *The Reporter* asked executives from leading independents to share their perspectives on Gulf of Mexico operations. Panelists are Jim Farnsworth, executive vice president of Cobalt International Energy; Don Crider, chief executive officer of Focus Exploration; Howard Wilson, president and CEO of Leed Petroleum; and Kevin Guilbeau, executive vice president and chief operating officer of LLOG Exploration Company. Questions are in bold type, followed by each panelist's response.

Q: What are your expectations for exploration, drilling and production activity in the Gulf in 2008? What is the size of your company's operating budget for the Gulf this year, and how many total wells do you expect to drill or participate in? How do those numbers compare to 2007?

FARNSWORTH: Cobalt has been in existence for a little more than two years. The first two years were focused on building the team, developing a world-class database and accessing new opportunities. In 2008, we will begin drilling out our newly built inventory and expect to drill two or three wells in the deepwater Gulf of Mexico.

CRIDER: At Focus, our core business is exploring the entire Gulf and identifying top-quality prospects for our industry operator clients. As a nonoperator, our budget is spent on cost-efficient prospect generation through the use of risk/reward programs with industry data vendors and hiring "oil finders" who benefit from the upside of overrides in addition to a salary. Between the last quarter of 2006 and the end of 2007, our clients drilled 12 new field discoveries on Focus-generated prospects and we expect to surpass this performance in 2008.

WILSON: Leed anticipates Gulf exploration, drilling and production activity to be fairly stable for 2008, but sensitive to short-term price swings. Over the intermediate and long terms, we are extremely bullish on the Gulf of Mexico. We expect to spend $180 million in this basin over the next three years, averaging seven drilling projects a year. Our 2008 drilling program will be substantially larger than our 2007 program.

GUILBEAU: LLOG Exploration Co. plans to participate in about 30 wells in the Gulf of Mexico in 2008. We will operate nearly 90 percent of those wells. LLOG's Shelf activity will consist of 15-20 wells, and we will participate in 8-10 deepwater wells. In 2007, LLOG drilled 25 wells with a 70 percent success rate. LLOG's daily production is 127 million cubic feet equivalent (97 MMcf/d gas and 5,000 barrels a day oil). We expect to spend upward of $500 million in the Gulf of Mexico this year.

JIM FARNSWORTH
Executive Vice President
Cobalt International Energy

Q: Last fall's Central Gulf Sale 205 was a barn burner, generating $2.9 billion in high bids–the largest amount for any Gulf lease sale in almost 25 years. Did your company tender high bids at Sale 205 or Western Gulf Sale 204 held a few weeks earlier? Do you plan to be an active participant in 2008 lease sales? Aside from lease sales, in what other ways is your company accessing prospects and participating in drilling projects?

FARNSWORTH: As high bidder on 53 leases in Sale 205, Cobalt was one of the most active and successful companies. We spent $211.3 million in high bids on what we believe are very high-quality opportunities in the core of some of the deepwater trends. Many of these bids were hotly contested. In fact, Cobalt won 13 blocks where four or more companies competed. We anticipate participating in the 2008 sales as well as evaluating potential farm-in or trade opportunities.

CRIDER: Focus has participated in all of the Central and Western Gulf sales since the spring of 2003 when I started the company with my partner, Mike Scherrer. We plan to participate in the 2008 and future lease sales. We are even more active than it appears, because some of our clients prefer to bid our generated prospects in their companies' names. We were high bidder on nine blocks in the 2007 Western Gulf lease sale and 12 blocks in the 2007 Central Gulf lease sale. Another key factor contributing to our success has been in identifying and acquiring farmout opportunities targeting excellent prospects we believe will be highly competitive in a lease sale.

WILSON: Leed was high bidder on two blocks in Central Gulf Sale 205, and we intend to be an active participant in the 2008 lease sale. Leed is always seeking acquisitions that fit our business model. We are at different evaluation stages on several acquisition opportunities.

GUILBEAU: LLOG has consistently placed in the "top 10" for number of high bids and total high bid dollars over the past five years in OCS lease sales. The lease sales of 2007 were no exception. LLOG was an active participant in both Western Gulf Sale 204 and Central Gulf Sale 205. At Sale 204, LLOG was the seventh highest bidder with total high bids of $9.4 million. At Sale 205, the barn burner, LLOG placed sixth in terms of the number of apparent high bids with 28 blocks, and 11th in total dollars spent at $98 million. Offshore lease sales are the dominant prospect pipeline for LLOG. However, by virtue of our reputation for aggressive exploration, we have access to a steady stream of prospects from joint-venture partners, industry partners and prospect generation shops. This prolific prospect access activity has enabled LLOG to drill more than 270 Gulf of Mexico wells in the past six years. We do plan to participate in the 2008 lease sales.

Q: In general, how would you assess the level of opportunity available to independents in the Gulf today? What makes the Gulf a "good fit" for your company's broader strategy and internal skill sets? How does it compare to investment opportunities in onshore North American resource plays or even in the international arena?

FARNSWORTH: The deepwater Gulf of Mexico offers a nearly unique combination of both scale and value per barrel, which is very difficult to find elsewhere in the world. The downsides, of course, are the big technological challenges and the intense competition. These are the same challenges faced by independents and majors alike. From the earliest days, Cobalt has focused its resources and energy on acquiring the highest technology and ensuring we have in place outstanding people and expertise. Of particular focus was the ability to unravel the complexities of the subsalt geology, where most of the opportunities sit. Success at Sale 205 went a long way toward reducing the risks we saw from intense competition.

CRIDER: The level of opportunity for independents in the Gulf today is excellent, provided they employ top-notch oil finders. For the past 50 years, thousands of geoscientists in hundreds of companies have been exploring the same area over and over. It started with excellent 2-D seismic, going to proprietary 3-D, and now today's multiple 3-D spec surveys shot over the same area. Yet, the world's most intensely-studied basin is still yielding high-quality prospects to those geoscientists who possess the skill sets to identify and reduce the risk on today's more subtle prospects.

What makes the Gulf a good fit for Focus is that is where our expertise lies. Our prospectors average 30 years of Gulf experience. We still remember when a 300-foot water depth was considered the deepwater frontier area. We still identify prospects with Gulfwide 2-D seismic and pull down the 3-D seismic after the 2-D mapping proves its economic viability. There are very few blocks from the Texas and Louisiana Shelf out to deep water (4,000-foot water depths) in which one or more of our geoscientists does not have a working knowledge of the area. This is our sandbox, and until the cat finds it, we plan to stay!

Until we have exhausted all our opportunities, Focus plans to concentrate in the Gulf, where we have the most in-house expertise.

DON CRIDER
Chief Executive Officer
Focus Exploration

WILSON: The Gulf provides a wealth of opportunities for an independent, growth-minded company such as Leed. The Gulf is our focus. We have a seasoned technical staff that is familiar with the region, which results in a competitive advantage. I believe you have to have people who know the Gulf very well to be successful there. The economics of Gulf of Mexico investment opportunities as compared to onshore North America are favorable. High-quality reservoirs coupled with relatively easy access to markets translate into high rates of return. And as compared to the international arena, there are the advantages of political stability, higher prices and readily available infrastructure.

GUILBEAU: The Gulf of Mexico continues to be rich in opportunity. This remarkable basin has a capacity and history for rebirth unlike any basin in the world. Where else are the largest fields in a basin discovered after 50 years of exploration activity? That is exactly what has occurred (and is still happening) in the deepwater subsalt trend, where only recently have the largest structures in the Gulf been imaged and explored. These opportunities are not for the faint of heart, however; challenges are extreme in the Gulf of Mexico.

The Gulf is an excellent fit for LLOG's business model. Gulf reservoirs are characterized by high-rate production and high-ultimate reserve recovery per well, as compared to onshore resource plays. Rates of return are extremely high in the Gulf, and hence, producing properties garner high margins. The highest margins are gained through the exploration process, or as they say, "through the drill bit." Exploration is LLOG's core competency, enabling us to have a 70 percent success rate on exploration over the past five to six years.

Q: ***From your company's experience, what are the primary business challenges confronting independents in the Gulf? How is your company overcoming those challenges?***

FARNSWORTH: Beyond the technology and competitive pressures I mentioned above, the high cost of drilling and developing new fields has become a huge challenge for all of the industry, regardless of size. Fortunately, drilling performance has improved significantly over the past years, and without this improvement, deepwater costs would have been clearly prohibitive. Cobalt's focus will be in seeing that this trend continues. Of course, we also closely follow the market to attempt to optimize our rig contracting. Of more recent concern is the high rate of turnover among rig personnel. It is hard to envision much improved performance without some stability.

CRIDER: There are two business challenges. The first is the industry's response to higher drilling costs. We became accustomed to certain lower rig rates at $2 gas and $15 oil for many years. Even though gas is at $7-$8 an Mcf and oil is pushing $100 a barrel, many in our industry are still waiting for a reduction in drilling costs before increasing their activity levels. To overcome this, Focus identifies and sells many prospects in a localized area to selective clients. This cuts down on rig mobilization and demobilization costs, as well as allowing for cost-saving multiwell contracts.

The second is expecting to find yesterday's prospects today. Remember, we drilled those Shelf 30 billion-cubic-foot "bright spots" stacked along a fault with conformance to structure during the first Gulfwide spec 3-D surveys on $2/Mcf gas and $15/bbl oil prices. The 30 Bcf prospects today are in the form of low-resistivity pays with weaker amplitudes and stratigraphic components. Focus mitigates the risks on today's more subtle prospects by geologic trend analysis, multiple pay analogs and detailed attribute analysis utilizing our extensive 2-D/3-D databases. The Focus "team" has actually been together since 1998, employing this methodology with an exploratory success rate in the 90th percentile.

WILSON: Insurance costs and a well-trained workforce are among the challenges we are now facing. Insurance premium rates have spiked in recent years, but seem to be improving finally this year since there have not been any significant storms in the Gulf in the past two years. Leed is proactive in managing our insurance relationship. We work closely with our underwriters to differentiate ourselves because we have a relatively lower-risk profile. We have found that upfront failure analysis of our structures is very helpful in placing the appropriate coverages on our assets, as well as careful administration of our contractual relationships.

Maintaining a viable workforce is a challenge. We have embarked on a program to recruit and hire entry-level professionals to work alongside our seasoned veterans in order to train them to take on leadership roles in the industry. So we like to think we are doing our part.

GUILBEAU: Operating in the Gulf of Mexico has become quite challenging. Two areas that are of particular concern to LLOG include cost escalations and hurricane-related activity. Costs have risen dramatically over the past three years, creating a daunting environment, especially in the deep water. Independents must have deep pockets or flexible bankers to survive. In addition, the aftermath of hurricanes Katrina and Rita is still being felt in the areas of insurance coverage and hurricane season drilling restrictions. Careful planning, working with partners, and clear communication with the Minerals Management Service are critical to managing rigs during the peak of hurricane season. Project selection and portfolio planning with a close eye on cash flow and costs is key for the independent in the Gulf of Mexico.

HOWARD WILSON
President & CEO
Leed Petroleum

***Q:** Compared with onshore basins, operating in the Gulf of Mexico means coming to terms with higher project costs and risks. How would you characterize the cost/risk structure as it relates to the types of projects your company is pursuing? How do you manage the numerous variables that impact cost and risk?*

FARNSWORTH: In a sense, Cobalt is in business to manage risks, and I believe this has to be one of our core strengths, regardless of whether they are technical or commercial risks. Given our technology or "know how" in deep water and our relatively small scale, we have chosen to stay entirely focused in this area. We manage the variables by resisting the temptation to move beyond our areas of strengths.

CRIDER: Compared with onshore basins, the operator community in the Gulf is much smaller. Working with these same operators over the past 30 years, we have developed an insight into their abilities to cost-effectively operate under variable geologic scenarios and water depths. For example, we sell the moderate-reserve, more economically sensitive projects to the proven low-cost operators. Conversely, on the higher-reserve more difficult-to-drill projects such as deep Shelf and deep water, we target the more experienced operators who have the skills and staying power required in those environments.

On a final note, the project risks for drilling may actually be less than onshore in some instances when one considers the overall higher quality of 3-D seismic offshore versus onshore, allowing for better placement of wells to avoid geologic hazards.

WILSON: Leed is very selective in regard to projects in which we commit. We mitigate the risk by applying a time-tested project selection process. We have in place the technical skill sets necessary to risk and evaluate opportunities.

GUILBEAU: The conventional Shelf is still quite manageable for LLOG. Rig costs have moderated somewhat since 2006 so that reasonable drilling costs coupled with abundant infrastructure make even small reserves economically viable. Deeper Shelf wells (>18,000 feet) are much more challenging. High temperatures and pressures create a harsh drilling environment that requires stouter rigs, special logging tools, and high-grade steel. These items add significant cost to deep Shelf drilling. LLOG manages these projects by selecting those that have sufficient reserve potential to justify the risk and by taking joint venture partners to share that risk.

Deepwater projects require a different approach because of the large amounts of capital required to develop these discoveries. Independents have mitigated their investments by utilizing infrastructure companies to fund development. Examples of this approach include The Williams Company at Devils Tower and Enterprise at Independence Hub. The infrastructure company finances and owns the development system, while the independent pays a fee once production is established. The independent benefits by retaining the capital for other investments. Until now, LLOG has self-funded deepwater subsea developments. As we pursue more challenging developments (deeper water and more complex subsea architecture), LLOG will investigate options to manage capital.

***Q:** On a related note, the Gulf has always been a highly competitive environment, but among the new players entering the Gulf are large foreign and even national oil companies. How are these new players changing the competitive dynamic in the Gulf (increased competition, potential partnership possibilities, etc.)?*

FARNSWORTH: Foreign-based companies have long had a big presence in the Gulf of Mexico, and in fact, have been pioneers in its exploration and development. A couple of great examples of this are Shell and BP. Many others also have been active from time to time, including Statoil, Total, ENI and Petrobras. I think each has brought a fresh perspective based on its experiences elsewhere and has made a contribution to the understanding of the Gulf of Mexico. My sense is that the most successful and competitive companies have been those that combined their external experiences with people who have a deep and long history in the Gulf of Mexico and have a profound belief in its potential. I think we will continue to see new entrants, especially from some of the national oil companies that are beginning to realize big cash flows from their new developments.

CRIDER: Focus welcomes our new foreign clients. We have also seen a recent surge in onshore U.S. companies coming into the Gulf for the first time. The operator community in the Gulf is in constant fluctuation with mergers, some Shelf players going strictly to deep water, several deepwater players going back to working only the Shelf, and some are leaving the Gulf to explore only onshore. Because of this ever-changing environment, new offshore companies will continue to play important roles in keeping exploration moving forward in the Gulf.

Focus is working with several of the onshore and international newcomers because they need experienced explorationists to identify opportunities for them in the Gulf.

WILSON: Leed recognizes that there are multinational players in the Gulf, but today we have not noticed a significant competitive impact in the shallow Gulf. They tend to focus mainly on deep water.

GUILBEAU: Recent activity by foreign companies in lease sales and acquisitions seems to indicate they are playing by different rules than those of the typical U.S. public energy company. The foreign players are very competitive and somewhat unpredictable. They have recognized the tremendous deepwater opportunities combined with a stable government and are investing aggressively. Change generally creates new opportunities, and LLOG is considering these carefully.

KEVIN GUILBEAU
Executive Vice President & CEO
LLOG Exploration Company

Q: *While the MMS is projecting increased production from the deepwater Gulf thanks to new field discoveries, the forecast for production from conventional shallow-water fields is not so optimistic. Can the industry reverse the decline in gas production from conventional subsurface depths on the Shelf? Are significant new reserves yet to be found in conventional Shelf geology? What technologies are key to this endeavor?*

FARNSWORTH: First, let me say that Cobalt is not involved in the Shelf and is focused in deep water for the reasons I mentioned earlier. Having said that, I do not believe it is possible to reverse the decline in gas production from conventional depths on the Shelf. The evidence is clear that this play is very mature. I am intrigued, however, by the deep gas play. I believe the play should work and I think it could work in a very big way. The high temperatures and pressures are a concern, but I think the industry will find the means to explore and produce from the deep Shelf. While costs are an issue (just as in deep water), a more significant issue may be the short five-year lease terms that make it far more difficult to pull together a significant position, and see it drilled and made commercial before leases expire. While five years seems appropriate for shallow, much lower-cost and lower-risk ventures, I do not think it works for the deep play.

CRIDER: The conventional Shelf has been explored heavily for decades. The decline will continue, as would be expected in any mature petroleum province having the quantity and quality of 3-D seismic that the shallow-water Gulf has. However, we believe the decline curve will begin to flatten with improved economics, as gas has averaged $7/Mcf in recent years while the jackup rig day rate has dropped from a high of $130,000 a day to $50,000-$60,000 a day in the past two years.

Since our inception, Focus has been stockpiling the 10 Bcf-30 Bcf reserve prospects in the conventional Shelf plays. Finding these plays gets more difficult and they get riskier each year as the amplitudes are more subtle and the bypassed pays become thinner and/or have lower resistivity. The key technology for this environment is seismic attribute analysis combined with experience and detailed geologic input. The days of drilling "hot amplitudes" with minimal geologic input are over. At Focus, we perform attribute analysis on the multitude of "fizz water" dry holes drilled throughout the Gulf, along with the pay analogs when we assess the risk on our amplitude-driven prospects.

Studying the detailed geology of the area around a prospect is basic to risk mitigation, yet often is overlooked. Understanding depositional facies, reservoir characteristics, timing of trap emplacement and hydrocarbons migration, etc. is what separates the "oil finder" from the "interpreter." The successful Shelf players do the basics first, and only then apply AVO, inversion or the latest and greatest "black box" technology to the project for confirmation.

WILSON: There is ample opportunity to impede the rate of the decline. Enhanced 3-D seismic and improved drilling technologies should have a positive impact on the decline rate.

GUILBEAU: Average field sizes on the Shelf continue to decline. While small reserves are economically viable because of ready and available infrastructure, the decline in gas production from the conventional Shelf will continue. New seismic imaging technology will help to uncover hidden gas reserves, but not enough to reverse the decline from the Shelf's heyday.

Q: *Independents have been aggressive in exploring the deep horizons underlying the shallow-water Shelf. So far, the results of deep Shelf exploration programs may be best characterized as "mixed" for the industry as a whole. How does your company view the prospectivity of the deep Shelf play? Can any conclusions be drawn from the industry's deep Shelf experience to date?*

FARNSWORTH: I think it is far too early to reach any conclusions. The Shelf is an enormous area sitting adjacent to a terrific market. Can you imagine if the industry had written off the entire deep water after having drilled only a couple wells? I have great admiration for the companies that are leading the way in deep gas exploration.

CRIDER: On the previous question, I suggested we could begin to flatten the decline curve on conventional Shelf plays. The deep Shelf is the one play I believe we could actually reverse the Shelf's decline curve. Outside of the high cost and risks associated with drilling subsalt and 20,000-30,000-foot targets, the main risk is finding economic hydrocarbon accumulations in reservoir-quality sands where the deepwater facies are connected throughout a large drainage area. We believe some of the negative results are the result of drilling on an AVO response or amplitude (not even expected at 20,000 feet in Miocene), rather than a fully-integrated geological interpretation.

At Focus, the deep Shelf play is an integral part of our larger reserve prospect portfolio. Accurate regional and detailed geologic analyses are paramount in this environment, since the typical seismic pay indicators can be nonexistent or misleading. To adhere to keeping our responses brief and in lieu of divulging our prospect identification and risk mitigation techniques to the industry, next question please!

WILSON: Deep horizons in the shallow waters of the Gulf of Mexico are largely unexplored; there is great promise in the deep Shelf play. As the industry continues to drill and gain more knowledge at these deeper depths, the success rates will improve as exploration drilling becomes appraisal and development drilling.

GUILBEAU: LLOG is actively playing the Shelf down to about 20,000 feet. The ultradeep Shelf play has been disappointing thus far and is not on LLOG's radar screen.

Q: ***MMS projects that the ultimate recoverable potential in the deepwater Gulf is at least 71 billion barrels of oil equivalent, of which 80 percent is yet to be discovered. How does your company view opportunities in the deep- and ultra-deep water? Independents have accounted for the majority of new field discoveries over the past five years. Will that be the case for the next five years? What technologies are enabling independents to find and develop reserves in these water depths?***

FARNSWORTH: The deepwater Gulf of Mexico has transformed over the past 15 years from a basin that was dominated by a few supermajors to a truly diverse set of companies. I see no reason why this will change. Access to what had earlier been proprietary technology and data is now widespread and the huge acreage positions that had been built early on are now breaking up because of lease expirations. In the future, I think we will see a diverse set of winners and losers, both large and small. With widespread access to technology, the advantage has shifted from holding the technology to understanding how to apply it. This comes down to people.

CRIDER: Focus has a strong acreage position in the deepwater Gulf. Our large-reserve deepwater portfolio is actually low to medium risk, since many of our prospects have unproduced oil and gas pay with robust amplitudes tied to analog production. Our thorough understanding of deepwater depositional facies and their seismic signatures, identification of low-resisitivity pays, attribute analysis, timing of trap emplacement relative to hydrocarbon migration, and knowledge of salt tectonics continually help us to identify new opportunities. Focus has competed against the majors and large independents at several deepwater lease sales. As our competition moves farther south and concentrates its exploration efforts in the ultra-deep water and Lower Tertiary trends, we hope to substantially increase our acreage leasehold in the conventional deepwater plays.

WILSON: We focus strictly on drilling and producing on the Shelf. Our business plan is to remain in the shallow waters of the Gulf of Mexico.

GUILBEAU: LLOG plans to participate in 8-10 deepwater wells in 2008, as we believe the opportunities are excellent. State-of-the-art, nonproprietary seismic data are readily available for exploration. Strategic alliances such as LLOG's subsea alliance with FMC enable us to leverage FMC's vast technical expertise on deepwater developments. Looking forward and preinvesting in subsea trees also has allowed LLOG to meet aggressive development schedules. The deepwater arena continues to mature with more and more floating production platforms, enabling less-expensive subsea tiebacks for the cost-conscience independent.

Q: ***The Lower Tertiary play has received a lot of press on the heels of some high-profile discoveries and an MMS estimate that the play could hold up to 15 billion boe in reserves. Is the Lower Tertiary on your company's radar screen for the future? What implications might this play have on activity in the Gulf going forward?***

FARNSWORTH: In many respects, I think the future of the deepwater Gulf of Mexico will be driven by success in the Lower Tertiary; therefore, it must be on Cobalt's radar. The Lower Tertiary appears to me to be the single largest source of future oil discoveries in North America. I could see a substantial proportion of the deepwater rig market being kept busy drilling this play for the next 20 years. Unlocking its potential will require huge increases in drilling efficiency and production technology on a scale similar to what we have seen over the past 20 years.

CRIDER: The Lower Tertiary is the only play in the Gulf not on our radar screen for the immediate future. Now, immediate future could be six months or six years, and since we are a non-operator that sells to all of the industry, we have identified some prospects and prospective areas for taking an acreage position in the future. Successful companies cannot be a "Jacks of all trades," so we concentrate our efforts where our client base prefers. While the play is being proven to hold world-class reserves, we believe the producibility, and therefore economics, will require more than the limited production testing to date. Assuming the play becomes established to have economic viability, the substantial cost of drilling will create a high turnover rate on numerous undrilled 10-year leases, therefore creating many opportunities for Focus and our clients in the future.

WILSON: Our business plan is to continue to focus on the strategy that we have been successful with in the past: a focus on the Gulf Shelf.

GUILBEAU: LLOG is participating in its first Lower Tertiary well. The Lower Tertiary will most likely be a big part of the future for the Gulf of Mexico and LLOG plans to be a part of it. ❐