MMS OFFSHORE GULF OF MEXICO

ORAL HISTORY PROJECT

Interviewee: CHRIS OYNES

Date: July 8, 2003

Place: Harahan, Louisiana

Interviewer: Tyler Priest

Code: MMS043

Keywords: exp/prod, MMS, Gov

Bio

Mr. Oynes is the regional director of the Gulf OCS for the MMS. He attended Cal State Fullerton and George Washington Law School. Instead of going into practice he starting working for the Bureau of Land Management in 1975, and got involved with the OCS in 1978. He became branch chief in 1983 and now regional director.

Summary

The interview covered issues surrounding the OCS in the 1970's. He comments extensively on policy goals for the MMS. Covers LOI and tract nomination procedures. An excellent discussion of area wide leasing and deep water including comments on SPARS and natural gas. Good information on safety and hurricane preparedness as well.

Side 1

TP: . . . the regional director of the Gulf of Mexico OCS office for the MMS, at the MMS office in Harahan, Louisiana. The date is July 8, 2003. The interviewer is Tyler Priest. Let's just start off with some background.

CO: I started off with an interest in government in history and politics at an early age in high school. I was a debater in high school and I debated in college.

TP: Where are you from?

CO: I am from California originally, southern California. I got my degree in political science in California. Then, I moved to Washington, D.C.

TP: Where did you go to school?

CO: At California State University, Fullerton. After my bachelor's in political science and a minor in economics, four years of debating in college and three years in high school, I could debate anyone, anytime, and was pretty good at it, too, if I might say so. I did well. I did very well. Anyway, then I went to law school in Washington, D.C. I went to George Washington University and I graduated there in 1972. While I was in law school and also in my last years in college, I was an

intern in city government in California. I worked for two different cities three summers – in the city manager's office as a management intern and the planning department as a planning intern. And so, I grew up with government and politics and debating and all that stuff every time I turned around.

TP: Offshore oil was a hotly debated issue in California at the time.

CO: Well, it was not on a radar scope. This is 1969, I graduated from college. In fact, I do not even remember the Santa Barbara blowout as an event because I was either not paying attention or was leaving California. Anyway, it was not on my radar scope because I remember picking it up years later. I do not remember what month it occurred. In 1969, August or September, I left to go to law school. Anyway, besides an internship in city government while I was in law school, I also got involved in an association in Washington. I was working part-time for them in the summer. They represented city attorneys. It is called NIMLO – National Institute of Municipal Law Offices, but it has nothing to do with the police. It is city and county attorneys; municipal law meaning attorneys, law officers, sheriffs.

They give legal advice and legal analysis and publications within, so I was familiar with a lot of things. I became more familiar with energy and environment issues. There was a publication our group did, but I was not

involved in it. But I was aware of it.

Anyway, I transitioned after law school . . . sort of halfway through law school, decided I did not want to practice law but it had not quite jelled yet. I knew I did not want tax. I did not want divorce, etc. So, it was sort of like, well, what are you going to do? Anyway, I will spare you the specifics. I got a job in 1975 with the federal government. I worked first with the Bureau of Land Management, BLM, and I worked on onshore minerals. It started out to be mostly hard rock minerals – copper, gold, that kind of stuff, and transitioned into oil and gas onshore out in the western states. And then, at that point in, whatever it was – 1976, 1977 – they were starting to push the 1978 OCS Lands Act Amendment through the Congress. And because of my legal background, I got tagged to do reviews of the pending legislation. So, I was one of the central people doing the reviews on that legislation. And, of course, then once it passed, I was an instant expert! I was in high demand! So, it was a great career move. Talk about being in the right place and the right time. I have always been very fortunate in how things just sort of fell together.

TP: Is there anything that you would say about your review of that legislation? What was the range of proposals put forward?

CO: Oh, it was everything. In fact, I still have a file of all the amendments. There

were like 100 something amendments that were debated on the Senate floor, and they had up or down votes on 100 of them. I mean, it was unbelievable. That is a history in itself. All kinds of things. They wanted the Federal Oil and Gas Corporation . . . there was a series of amendments on that. I think it went down 40 to 60 in the Senate, where they wanted the Federal government to become an oil and gas body. Really strange proposals. Ran the whole gamut. They had big fights even then on coastal zone consistency, fair market value, bidding systems. Just all kinds of things.

Reaching a balance as compared to now was much better back in those days. Frankly, I thought they had a very well designed statute. They were fairly extensive. The OCS Lands Act before that was passed in 1954, 1953, and was just a couple of pages long. And then, the document with the amendments became multiple pages – very long. So, the guidance became much stronger, and therefore, limiting to the agency's bureaucracy. But, at the same time, there were an awful lot of well-thought out provisions. There were an awful lot of compromises and a lot of safeguards. There were a lot of sections of the bill that, for us who got involved in the administration of it, they were forever emblazoned in our mind. It used to be Section 5 and Section 8 was it. Section 18, the five-year plan, became the strong guidance, and Section 19, which is involvement with the coastal states, became a very heavy provision. And there are others, but I spent a lot of years on 18 and 19. And those sections are burned in my brain.

Anyway, so then from that, what happened was when the law was passed, and then it became implemented at the time. I stayed a short time in BLM. I do not remember the exact amount of time but maybe another year or so, year and a half, something like that.

And then, the way the program, the OCS program, was administered at that point, you had no MMS yet because it was in the late 1970s, early 1980s. No MMS was yet formed. And so, it was handled by the operational side. It was handled by the Conservation Division of U.S. geological Survey, and the leasing was administered by BLM – Bureau of Land Management. And those two agencies fought all the time, like brother and sister, cats and dogs. You can take any of those analogies that you like. That is probably being kind to them. They fought a lot.

TP: Were they just turf battles or were they ideological?

CO: It was probably at all levels. Ideology, turf, personalities, who was king of the mountain. It was at all levels. As a result, in one of those years – 1975, 1976 – sort of coinciding with Project Independence by President Nixon, and the big uproar of trying to work with the states, there was an OCS Coordination Office created in the Office of the Secretary of the Interior. And the OCS Coordination

Office had many functions, but it was a small office. We are talking about 8 to 10 people. Its function was basically first to referee between the two agencies that were at war to make something happen given presidential demands for Project Independence. Nixon, at that point, wanted to lease 10,000,000 acres a year or something like that, which was unheard of, which was a real reach. Anyway, so I moved to the OCS Coordination Office, again, because of my legal background and because of my following the OCS Land Act Amendments. So, I became part of that office and worked and coordinated various things.

TP: Was there a chairman . . .

CO: There was a director of that office. That was Al Powers, and one of his chief lieutenants. I was sort of the young Turk. The chief lieutenant, senior person was Carolita Kallaur. And another chief lieutenant, another person maybe, and if you could find was Ray Karam. I have no idea where he is, or even if he is still alive. He was a bit older so that is more problematic. So, those were like the two senior lieutenants to Al Powers - Carolita and Ray. What happened is they handled . . . when we say ”coordinate,” we were basically coordinating various sales. So, as an example, I coordinated Gulf sales, which were easier, and they coordinated the really hard sales – North Atlantic, Beaufort Sea, Southern California – anything that was a real big hot potato. I was involved in the side issues and gave advice and help and whatnot, but they carried the load. So, a person who was supposed

to know anything about that sale, anything about the states and what was going on with the governor's offices, they were the ones – Carolita and Ray. And I did the same thing for the Gulf.

There were some other folks that joined us in our office as we grew by one or two people there towards the end, other names that . . . well, I am not going to mention this. It is just more . . . And then, when MMS was formed, I moved over in 1983 to the MMS. I was a branch chief. The branch chief was planning and coordination. That gave us responsibility for the five-year program. It gave us responsibility for interaction with the coastal states, both on the Section 19 balancing and Section 18 five-year plan, and coastal zone consistency. I was one of the chief writers on the first coastal zone consistency determinations for lease sales when we finally decided to do that. So, that gets me to MMS as a branch chief. Carolita is the division chief of the offshore leasing division, and Al Powers, at one point . . . after a few months, there was a person who was deputy associate director there for a while – Bob Rio. And then, I forget if he moved up or he went somewhere else, but anyway, Al Powers then became the deputy. So, Al still had a very similar position then and Carolita was the division chief for leasing. So, all the documents and everything to process the lease sale and five-year plan of coastal zone consistency was in her shop. And I was the branch chief.

I am not sure that it is important, but then, at one point, Al Powers became regional director in Alaska. He moved. Carolita moved up to be the deputy associate director for leasing, and I moved up to be chief of leasing division. So, the OCS Coordination Office took over! And there was some comment in that, but that is in the Washington circles.

TP: Powers and Carolita, did they come from the leasing side initially?

CO: Carolita used to be in BLM in the leasing side, and Al, I believe, was recruited for his sort of senior level coordination and finessing skills. He was an OMB budget examiner and a geologist by training, if I remember right. So, he knew how to wrestle with bureaucracies and various interests as an OMB budget examiner, and analyzed things. Both Carolita and he were very, very smart.

TP: Right after the passage of the OCS amendments in 1978, you had the Ixtoc blowout in the Bay of Campeche, which concerned people worried about possible dangers. And then, with the election of Reagan and James Watt entering office in Interior, it seemed like this was a watershed period for the program. And, as I mention in my notes here, there were people coming at you from all different directions. Do you have any stories or memories about how you dealt with all these interest groups and from the states themselves? The oil companies were pushing you one way, and the environmentalists coming at you from another

direction. What were your greatest battles? Do you see it in terms of battles?

CO: Yes, the battles, you could assign a number to them. Every sale was a battle other than the ones in the Gulf, and then, even those, sometimes, depending on what was going on. So, to hold a lease sale was sort of psychologically viewed as a major victory; at the same time, as long as it had some substance to it. If you held a lease sale when there was nothing but poor acreage, you lost the battle. You won the battle but lost the war.

First of all, from my perspective, the Ixtoc blowout was not that big an event. It was an event. It did get a lot of senior attention, but, if you will, it was more of a passing thing from my perspective anyway.

TP: It was not in the U.S. . . .

CO: Right, but it did dip into the Texas beaches. And so, there were lessons to be learned on that, and those were handled well and fought through by the bureaucracy and the various things. It had an impact, but to me, the Santa Barbara blowout in 1969 was more memorable and was more forgotten. And the environmentalists never let us forget, even though the regulatory regime bears no resemblance to what was in 1969. From a technical standpoint, you could almost say it is impossible for that to happen again. That is going out on a limb in a

sense. You never want to say that something is impossible. But, at the same time, realistically, you look at it and you say, "There are so many different redundant things that have changed, redundant safeguards that have been installed since then" that it just does not make sense anymore.

So, that . . . coming at us, I guess. In a sense, I learned a lot about how all politics was local. I mean, governors who compromised at times or stood their ground at times based on what it took to get them reelected. That was very obvious as to how things were going to get settled. And then, national politics got involved; you know, do you overrule California or not because you may need it in an election? And I am not referring to any particular election or any particular president. I am just saying those kinds of factors float around all the time. You try to desperately working on the issues, from an issue standpoint. We are worried about oil on the beach. O.K., well, what can we do? What new things can we add to mitigate and minimize your concern, and then give you the governor of state X a way to say, 'I can live with this given these additional protections.' And so, there was a lot of negotiation on that. Sometimes it worked, sometimes it did not. Sometimes it worked up to the very 11th hour and then politics took over, and people reneged.

TP: It still works that way.

CO: Yes. Same old story. And even in the Gulf, it was that way. When I say the Gulf, that was probably principally Florida. Florida has stabbed us in the back, reneged on deals, a number of times.

TP: So, one thing I am interested in, and I mentioned this before we started, was the area-wide lease initiative. Where did that idea came from? What kind of challenges did the department face in implementing area wide leasing? Which oil companies, if you remember, were of greatest help in trying to work with you on this new program?

CO: Right, well, I was in Washington at the time, and I think some of the philosophical and analytical basis was thought through very well and fairly in Washington. But from the company's perspectives pushing for it . . . now, it either occurred at other levels well above me or it occurred also in the regional office where I was not at yet. So, I do not have any memories or even intuition as to what companies . . . the smaller companies, the independents, who were pushing for this . . .

TP: The drilling companies?

CO: And the drilling companies, yes. I mean, they would benefit from more drilling, but the analytical basis was that just because . . . Do you put something on a sale

because five companies nominated it? And something that is nominated by two companies does not get in a lease sale? Well, you do not know where the oil and gas is with certainty. There are so many dry holes drilled that to say that you had a well thought out program by using the nominations is still a lot of guess work. I mean, the oil is where you find it. By luck, you would find it. In some ways. At the very least, technological abilities to reduce the risk to change the odds has improved over the years, but it still is a risky venture. There are still lots of dry holes that are drilled. And people spend and lose a lot of money. Lots of money.

TP: The smaller independents wanted to open up the lease sales?

CO: Oh, yes. Not only was it maybe that five companies would nominate a block and therefore, that block would get in the lease sale, but if Exxon and Shell nominated a block as opposed to John Doe, that was more likely to be a block offered in the lease sale. Because Shell and Exxon were viewed as more . . . John Rankin would be the one to tell you more about that. I mean, he basically built the tract selection list, so exactly how that process worked, you would have to talk to him.

TP: The companies were always complaining about "checkerboarding."

CO: Oh, yes. And it gets back also into acceptance of the bids because you could checkerboard that way, too.

TP: That is interesting because the study I was mentioning before argued that it was much more competitive under tract selection because tracts were rationed. And the companies did not have as much information. They still had a pretty good idea that if something was nominated, it might be a pretty good idea, that it might be something that the majors were looking at. But under area-wide leasing, they did not get those kinds of signals or clues that they got in the tract selection. It seems a sort of speculative argument . . .

CO: Those are credible arguments, and there is some basis to them, but at the same time, you used the right word, you are rationing. But if your national policy goal is to increase production, rationing is kind of counter intuitive. And so, at some point, you create a shortage. If you create a shortage, prices go up. Competition or perceived competition because only the "better" prospects are being made available and therefore, bid on. Well, if only the better ones are bid on, well, then the lower bids, because of lower prospects, are not in any averaging. So, guess what? Yes, you would see how a false number of dollars per acre or, for that matter, not a false number in competition . . . but then the other question is, well, what are you trying to do? If you do not have another oil company bid on a block, is that the only way to measure what the true question is? You do not care whether there is competition. Did the public get an adequate return for its potential resources? Competition is a means to an end. It is not the end. And that gets lost in a lot of policy debates sometimes, or at least by some of the groups

that argue things. So, as an example, if the government puts in a reservation price, even if there is only one bidder, one company, well, he is bidding also against the government. So, there is always one other bidder even if there is no other "competition" from other companies. And then, the question is well, do we have a good system and does the government know enough to rationally protect the public interest, the return on public resources. I do not know if you want to get into the theories and design of all that stuff. There are other people that are much more qualified than I am to get into the fair market value.

TP: There has been a lot written on fair market value. I have talked to a couple of people about it.

CO: Well anyway, that is the thing. But to get back to the who started it, I think the bigger push was for companies of all sizes that could not get, maybe, let's say, their second tier blocks nominated into the lease sale. They could not get them selected. And therefore, there were other prospects that they would like to put money on and drill that did not get in the lease sale. And then, there were the small companies who said, "Well, we have got an idea. We are interested in knowing this area, this patch of the oil patch, but nobody else is interested. We have got a different idea." So, that is another key concept – the different idea guys of, "We have a different view of the geology." We have an idea that there is something to go look for over here. And they want to put their money where their

mouth is and bid on it. Well, under tract selection, if nobody else nominated it, it did not get in the lease sale. And again, we are back to, well, what is the goal of the program? Production? Exploration? Or rationing? In one sense, it does not make any logical sense. It serves goals and good goals, but what are your ultimate goals and what are the goals you value the most? And that is where that finally broke down.

TP: And you could also say, too, that there also were games played with nominating tracts.

CO: Oh, absolutely. So then, you might have some false overlays. Exxon, Shell and BP happen to nominate some oil pasture. It got three nominations by the three majors. Well, that got in the sale. So, that explains why some tracts did not get any bids at all because some of the oil pasture got in there.

TP: I am amazed, first the in BLM and then in the MMS, at the difficulty they faced in trying to weigh all these different variables and come up with a system to meet whatever objectives are set, and these objectives are changing over time. And clearly, you do not have the same kind of information that the oil companies had.

CO: Well, we do. One of the things is, you have to go back to premises. Well, O.K., what are the two basic pieces of information, data about wells that have been

drilled and seismic data? O.K., well, every well log that is ever done is sent to MMS. So, if you will, we have more data than anybody in terms of well logs. And all the seismic data, as a condition of the permit to shoot the seismic data, it is available to MMS. We can get it all. So, there is never a situation that anybody has more information, raw data, than us. We have at least equal, assuming that we are talking about . . .

TP: They had more resources to interpret . . .

CO: Well, O.K., and then, the question is, O.K., well, what are our resources? I noticed in your write-up about the OCS office under John Rankin, which started out as a four-person office and did not have any capabilities. O.K., well, that has changed. Now, I cannot give you the numbers, what they were in 1983, but we have a lot of people in this building. In terms of where we are now or where we have been for the last ten, maybe even twenty years, that has radically changed.

So, as an example, again, back to trying to bring something current into this now, you know we have about, I would say, 120 geologists and geophysicists in my resource evaluation group. And what they do is they calculate reserves, and they calculate values of tracts that are bid on in the lease sales. And they do other things. They develop resource estimates based on the same geologic information, but that is a pretty powerful thing. They are equipped. In the last 7-8 years, we

have made a major effort to equip them with the state-of-the-art geological workstations. We can go toe-to-toe with Shell, Exxon, BP. There is no question about it.

TP: Yes, we have thought about that, that the costs and efficiencies of doing this kind of work. The costs have declined radically with work station technology. It is sort of a great equalizer. That is interesting.

CO: So, that shift has occurred with the work station more in the last few years, 6-7 years. But even in the 1980s, we had a lot of geologists and a lot of geophysicists. So, we had some ability to analyze all that. Whereas, back in the mid 1950s, late 1950s, early 1960s, yes, the government did not have many resources devoted to this effort; certainly not in BLM and USGS a little bit later on.

TP: That brings me to the question: How crucial do you think the area wide leasing was to stimulating deepwater development? I mention again this study which says a lot of these companies were . . . going to need to look for the oil out there anyway. They were developing these technologies to drill and then produce it in deep water. Bonuses went down and revenues or total take went down in area-wide leasing. The government could have gotten more for its money because the companies were interested in the deep water already. And that is kind of contrary to the way the industry and everyone perceives it, which is that area wide leasing

was critical to opening up the deep water . . .

CO: There really are two concepts. I want to differentiate area wide leasing and then say, in 1995 and farther with deep water leasing.

TP: I am thinking of Shell which I have looked at, they picked up a lot of deepwater leases in the 1984 and 1985. But Shell was anomaly.

CO: There were others. Exxon did and BP did. Shell was certainly the leader. They picked up probably the most. I mean, I do not have the statistics, but my intuitive reaction is yes, they probably picked up more than 50% of of all the stuff in the deep water that was leased at the time. And they drilled some of that, even in the 1980s. Well, I do not know that anybody ever is going to have a fine-toothed answer. It is like, how many angels can dance on the top of the pinhead? Everybody is entitled to a guess. The way I have talked about this . . . Well, let me first go back to the area wide. The area wide, I think there are a couple of things there. First of all, companies, at least the multinationals, allocate resources between areas. So, if you have a rationing system, well then, if they are trying to raise production for whatever reasons in a country – increase their profits, whatever, the drivers are "O.K., we need to go elsewhere if there is rationing in one place." So, then the question is well then, is that prospect X that was rationed and therefore not in the lease sale, it was not tract selected, will that ever come

back in? And somebody had a view of it at one point, if, in year 0 or year 1, it was rationed, did a company who wanted it go elsewhere? So, first of all, does anybody ever come back to it? The second thing is O.K., even if they come back to it, now we have got a timing question. O.K., so then when did the production occur? So, what are the national economic and energy costs accruing from that delay? From a rationing system, they have not calculated those loses if you do that. And then, the other question is will they ever come back? It will be second-tier prospect or third-tier prospect that may never get back in.

TP: Yes, you could argue that the companies are eventually going to get out in deep water at some point, but it could be 2010 instead of 1995 when we start seeing these benefits. What have you foregone?

CO: Right. But then, the other thing is there is an assumption there that, "Okay, we should have rationed it until it was time for deep water." Well, in terms of technology, there were a whole bunch of things that have occurred and, if you will, needed to occur in order to make not just deepwater drilling but deepwater development possible. And now, I am going to transition from area wide into deepwater in, say, 1995-1996.

As an example, and I have got a chart here. I do not know what you have got or what you have seen, but historically, what you had is fixed platforms out to about

1,000 feet. And you had a couple of compliant towers like Lena.

TP: I wrote a chapter on Lena for Brown and Root.

CO: And then, these intervening systems, tension-leg platforms, mini tension-leg platforms and spars, did not exist in 1983 when Shell picked up those leases. It was fixed platforms, compliant towers and there was, I am sure, some semis and some FPSs – floating production systems. O.K.? But guess what? When they had the prospect, they said, 'Well, I know we are going to have to figure out a technology to produce this.' So, all of a sudden, the first tension leg platform in the world appeared in 1995 on one of those 1983 Shell leases.

TP: Well, I think there was one in North Sea that Conoco had one.

CO: A TLP?

TP: Yes.

CO: O.K., well, at least the first in the Gulf.

TP: But Auger was really one of the early prototypes.

CO: Yes, so then, how do you get to that technology? You have got to have prospects that are worth spending on. You have to have a reason to invest in that technology to perfect it and make it work. So, you know, getting to the chicken and the egg. Well, it may be the none of this would have never occurred if Shell had not picked up those leases in 1983.

TP: They might have walked away.

CO: They might have walked away. In fact, in 1992-1993, it was called the Dead Sea in the Gulf. The Dead Sea. And then, we are going to get to why it became the Booming Sea.

TP: It almost sounds like . . . do you see this in some way as MMS competing with, say, West Africa and other parts of the world.

CO: Oh, absolutely. Right now. To the degree . . . it probably was to a smaller degree and a much smaller . . . Nobody probably even formulated it that way. But right now, you can read any of the magazines, the trade press and whatnot, and you can see the company decisions every once in a while, where, like, in terms of deepwater prospects, the three big areas are Brazil, West Africa and the Gulf. Now, that is starting to shift. There is now starting to be where . . .

TP: Australia . . .

CO: Australia and other places, too. So, even that is shifting because, again, it is sort of like the companies are global. We have to deal with that premise every once in a while. One thing, as a piece of that, just to digress here, from an operational standpoint, if you move a drilling rig from the North Sea to here, to the Gulf, you would hope that the drilling requirements are as similar as possible, so you do not have to retrofit the drilling rig to move from one to the other. And, for that matter, even in the North Sea between Norway and the U.K. There are some discussions and differences on that.

TP: Was that with the international production section?

CO: Well, our international section really does not do that. It is more of a visiting and cooperative type thing. But then, in the engineering division, I mentioned Bud Dannenberger again. Back in 1994, we started having an informal meeting with the international regulators, what we called the International Regulators Forum – IRF. We would meet once a year on the operational side of the house to discuss issues, safety, and also, how can we get our requirements to be closer together so that a global industry can operate globally with greater ease? Now, nobody wants to give up safety, so the question is, is it something excessive that we can modify or we can waive or something? Where, in effect, is this important enough to

cause this kind of problem with the industry? And so, we had a lot of discussions like that. As an example, the international group, IADC – International Association of Drilling Contractors – is very interested in working with us on minimizing those kinds of conflicts. And so, I cannot point to anything real specific that has ever happened on that but we are at least trying to move in that direction.

TP: That is interesting. I had not thought about that angle. You are clearly . . .

CO: You are competing for capital. So, the question is, well how good is the prospect over in the Gulf versus West Africa and then, what are the associated other things that affect the investment? Stable regulatory climate, tax systems, how fast can you bring the system on line? Are there roadblocks there? Are you going to have civil war? Etc. All these questions. So, somebody has to weigh all that. So, your allocation of funds in a global company is influenced by royalty rates, tax regimes, stable regulatory climate, changes in regulatory climate. All of these things need to be thought through. It did not necessarily change what our decision is, but we should be cognizant of that.

TP: Interesting. We are going to move on to talk about deepwater. It would be interesting, from your perspective . . . I have talked to a lot of Shell guys and got their story about Auger and Mars and some of these projects that radically

changed the game. They turned the Dead Sea into one of the hottest places in the world. How did you see that happen? Did you realize it when the wells came in Auger?

CO: No, it started sinking home in 1996 and 1997 when we had our record lease sales. And again, I do not know what you have . . .

TP: Well, I can get those figures.

CO: I know. I am going to give them to you. I pulled them. These are the same, but one is marked up. So, as an example, before the record lease sales in 1996 and 1997, before that, those were your records, in terms of tracts bid on. Five and six. So, by 50% more, or doubling, the records fell in terms of tracts bid on. Astronomical levels of leasing. Unbelievable levels of leasing! And, buried in that, it is not just the majors. The independents are jumping in and they are figuring out a way. So, as an example, I would, at the lease sale, see many bids where you have four independents combined to make the bid and five independents combined to make the bid. Whatever the bid was - $10 million, $20 million, or $5 million – whatever the amount was, they spread the risk. They spread the risk. And they jumped in big time.

TP: It reminds me of the 1962 sale, which was an exception in the trend, in that they

offered everything that was nominated even if they only had one tract. So, it was sort of like an area wide sale, but you did see this infusion of new companies.

CO: Now, the other thing is, well, why the explosion? O.K., well, first of all, yes, there is no question the Deepwater Royalty Relief Act passed by Congress, signed by the president in 1995, had an effect. And how big that effect was will probably be debated for years. It had a big effect. But it was not the sole driver because coincident with all of this, we had several things. First of all, we had had several years of a relatively stable and relatively higher price range. So, you had good investment climate, from 1992 or so when it was really poor. But in 1994, it sprung up. I think it was 1994 or somewhere around there. It firmed up in 1995, firmed up in 1996. O.K., so you have a very stable price. O.K., and a relatively good level. O.K., so that encourages investment anyway – deepwater or otherwise. Another piece of this, by the way, is when we had those record sales, yes, deepwater got lots of bids but guess what? Shallow water got lots of bids, too. It is buried behind it. You have got to look but it is there.

TP: 3D seismic . . .

CO: That is the next thing I was going to mention. O.K., so then, there were a whole bunch of other things besides prices. The seismic allowed you to more accurately locate resources; this was coming more into prominence. O.K., so that was a

breakthrough that evolved through this whole same period of time. Those two are very strong factors, very strong factors, for people buying leases and being able to find out where they want to go. Then, another thing is technology. Now, technology is sort of a whole broad range of things, but as an example . . . well technology in general. And I would say another thing is production systems. So, in 1995, Shell's Auger was installed. O.K., they have proven a new type of production system besides the North Sea as well. But my point is, O.K., so now, how are you going to go after deepwater in terms of producing? Not only where do you find it but how do you produce it, and economically? O.K., even though we are talking about $1.4 billion for Auger. But Shell proved it. That changed the psychology. So, it is both technology and the psychology that were coming out of that.

TP: They were getting, what, 8, 10, 12,000 barrels a day?

CO: Yes, flow rates. That is another one. It is a new one. There are about eight or nine things. Flow rates. And all these overlap, but flow rates are definitely in there. The other thing I would mention here that I do not think has gotten near enough credit, at least in the press in general, is that . . . keep changing companies . . . it is Kerr McGee now. They bought out . . . anyway, they built the spar . . . well anyway, the development of the spar . . .

End of Side A

Tape #1, Side B

CO: The development of that first production spar, and it was the first production spar in the world. They had used spars for meteorological buoys and various other things before but not for production. When that company, now merged into Kerr-McGee, had started that first spar, I believe that was in 1996 or 1997, it created, and there is psychology, but it established a much lower cost. You do not have to spend $1.4 billion producing deepwater. Now, they installed that particular spar in deepwater, shallow deepwater, if you will. I do not remember the numbers but say 1,400 feet. O.K., so we are not into 2,000, 3,000, 4,000 feet. So, it seems to evolve, but you broke the model, you broke the template. O.K., now there is another system out there that is less costly, but that works. Somebody demonstrated it. So, you have got proven technology, psychology has changed. So, all these things came together of why in the world do you have, in 1996 and 1997 especially . . . 1997 was the record of all when you had 1,032 tracts bid on. All those things were driving it. It was like, oh, an independent has a new production system in the deep water at lower cost! Bingo. Let's go after the stuff.

TP: Was it Placid?

CO: No.

TP: Didn't Placid have some other deep water . . .

CO: Yes, they had some other project that failed, yes.

TP: Well, anyway, that is all subsea . . .

CO: Yes, I mean, you have the list. You can recite the list as well as I can. Although subsea, its real strong impact was a little bit later, at least, my sense of things.

TP: Once you get the infrastructure out there, the TLPs, then companies can tie wells back to these hubs.

CO: Right. And then, what is happening now is that switching now to 2003, what is driving things in 2002, 2003, 2004, is spar technology has taken off. I forget the exact numbers. I think we have five spar installed and seven more that are being constructed right now for installation in the Gulf. And there are like three or four different types of spars. They are sort of just variations on a theme, but they are somewhat different. The latest one is what they call a soft, cell spar. Kerr-McGee is working on that. That is scheduled for installation next year. And that reduces your minimum economic field size using a soft, cell spar to 30 million

barrels. Well, that brings a lot of fields into production, possibilities. So, I think, yes, Shell had a very heavy role, and TLPs and those kinds of things have a big role still, but, first of all, spar technology has been underestimated . As it evolved now in the last few years and for the next few years is what is really driving things. I mean, they are talking now of spars being technically feasible out to 9,000 or 10,000 feet of water. And that is a lot less costly than a TLP. A lot less costly. Especially if you get to the cell spar. If you can do the cell spar, you are talking about a huge amount of money savings.

And MMS has best practices. We recently went through our technical review of that. So, that is another piece of the puzzle which I am just going to mention briefly now but that is another piece. The MMS has a role in technology encouragement. Not acting as a stifler of it, but instead, being aggressive on blessing things when we are ready. We are asking questions early enough, and getting along with industry so we help say, "Wait a minute: do these three questions answer it?" And then industry says, "We think that those are good questions, too." And they are going to do the research and boom, three years from now when somebody wants to file, the research has been done. We are happy as a regulator. They are happy as a good investor. And we bless it.

And now, if you will . . . I got digressed here but there is an example of that. There are actually a couple, but there is an example of that where they recently

blessed synthetic moorings here in 2003. That is saving on the cost of steel moorings. Instead of steel rope, if you will, you use synthetic rope. It is a tremendous weight savings and cost savings therefore on what your platform design has to be to hold that extra steel weight. So, you are reducing your cost for your production facility – what is floating in the water, whatever is going to be the floater. So, that cannot be underemphasized. BP got that approval from Mad Dog. So, that is another piece where, that the technology has to occur. MMS has to take a very strong aggressive role in not being artificially the road block. Because we come in too late and say, "Well, we should have done these studies two years ago." "Well, we are trying to participate in the technology development."

TP: Who are you working with on this?

CO: With API and various industry groups. So, one of their big research groups they called Deep Star, and we have a representative on the Deep Star Committee for planning the research.

TP: So, spar technology sort of overtook what floating production . . .

CO: Probably is fair to say that it had not overtaken the other floaters and TLPs right this moment, but it is about to.

TP: That is interesting. O.K. So is there anything you want to follow up on? The change in the leasing system was a little controversial, but it seems like it is widely credited as . . .

CO: Right. And then, it also goes back . . . it really begs the question of, "What is your bottom line goal?" Now, if your bottom line goal is royalty – money to the treasury, well, you could probably criticize that. But if your bottom line goal is expediting production and development to bring the in leases not only faster but enable the program to blossom, it succeeded big time. And I think that is the more proper goal. It certainly turned the Dead Sea into the Live Sea!

TP: That is the agency's prime directive right?

CO: Well, also, from a national standpoint, we have many directives as well. We have the directive of fair market value and protecting the environment and whatnot, and I do not think we have given up on those roles. I think we have done a good job on all of those as well. But it turns out again, sort of, well, "What is the central result that you are trying to obtain? What is your driver?" O.K., well, if your driver is money, well, we probably are going to be failing here in the next ten years. If your drive is production, right now, production of oil is about 60-70% higher than it was in 1995. It is geometrically increasing.

TP: Well, when you talk about revenue, it is sort of artificial to separate out royalties from the general economic benefits that enhance revenue to the government in indirect ways.

CO: Right. Exactly. Well, I mean, as an example, if we still had the Dead Sea, if the Gulf Coast was closing down for lack of activity, guess what? You have got a lot more unemployment. So, revenues come in different forms. And economic activity comes in different forms. And the material benefits of energy production. I do not know that it fits here, but I think one of the things I wanted to make sure I mentioned to you again, talking about something more current, is this rise in oil production. There is almost no way that you can overstate its significance because what is happening is, at the same time that OCS oil production is getting close to double where it was in 1995, we're about 1.6 - 1.7 million barrels of oil a day . . . in 1995, we were at 995,000. So we are real close to doubling. That is going to go above 2,000,000 easily in the out years. At the same time that this amount of oil production coming from the Gulf is rising, total domestic oil production is declining and our imports are growing. So, two observations: the first is that the amount of oil imported if the Gulf had not been going like this would have risen even more. So, to the degree that anybody wants to worry about that or feels that is bad or has policy implications, all of this would have been aggravated even more had OCS production not come on line from 1995 on. The

second thing is that as a strategic asset, the Gulf OCS area, because you have these two numbers working, production is going up from the Gulf, and total domestic production is going down. So the Gulf's percentage of total domestic production is rising for two reasons: one, because it is rising and two, because total domestic is going down. So, we are very close now to about 30%, 28-30%, of all domestic oil production. And the vice-president's energy report predicted by 2010, we would be 40% of all domestic oil production. So now, the Gulf OCS is becoming even more and more a strategic asset. I would say that it is already a very strong strategic asset. That needs to be therefore handled in a strategic way, carefully handled, thought through, and managed as a national strategic asset. And you can see that that is starting to sink in, in many different quarters of the government. And then, the other piece of that is even in terms of our gas supply, 27% of all the gas, 28% of all the gas production . . .

TP: Deepwater is mainly producing oil right now, isn't it?

CO: Well, it is and it is not. There is a lot of gas out there, too.

TP: Well, I know a lot of some of these subsea projects like Mensa . . .

CO: Right. And what is happening is that the amount of gas, while that as an absolute number from deepwater, is good. It is quite strong. O.K., there is so much gas

that is and was being produced in the shallow water that it has not had the effect of that. Now, I want to give you a whole thing. I want to show you two charts on that. I gave this back in 2002. This is our 20th year anniversary. If you need something explained, let me know. But I went back and talked about what was going on.

TP: This is great.

CO: Well, let me first go back to this. The total number of leases in the Gulf went up almost 4 times, 400%.

TP: From 1982 to 2002.

CO: Yes, so that is one of the strategic observations. Total OCS production. This is in 2001. Millions of barrels.

TP: 315 to 517.

CO: When you get to an out year, the most optimistic projections maybe takes this to one billion. Maybe. I think that we have a very good chance of making it myself. A very good chance. But this is back to the basics. Now, this is my water depth. In shallow water, 0 to 200 meters, 240 meters, 800 meters and then really deep

water. And you can see your amount of leases in 1995 and your amount of leases in 2001 as it turns out, and we can update this chart. So, most of the leases, because this is a very long number, see, 1995, most of the leases are in shallow. Well, guess what? This stayed about the same. Again, I was seeing shallow . . .

TP: That is an impressive thing in and of itself.

CO: That is right. And so, shallow has been hidden. Shallow leasing has not died. It has been overrun by deep water. And articles have focused on it, but shallow has continued.

TP: Well, what seems to be happening is the majors are upgrading to deep water, and some of the smaller companies are realizing what they can do in shallow water with 3D and things like that to extend all the fields.

CO: Yes. One of the fields that I went back and looked at, and I do not have any exact numbers. But I thought we had a net increase of the number of companies participating in the lease sales like this year versus 1983 when area wide first started, or the year before without area wide. The numbers will vary out because we have so many majors. Everybody is merged out of existence. I mean, the numbers have been decimated. O.K., well, guess what . . .

TP: I wonder if you can think back and unravel those and find . . .

CO: Oh, yes, and that is my next point. So, I use an example. At the last lease sale, we thought that there were five or six, I believe there were six, companies that bid for the very first time offshore in the OCS. Now, they may have owned an interest in a block before, but they had never come to the lease sale to buy leases. So, we have five companies and they basically stand on what you would think: an onshore group, one little foreign group, but usually an onshore group moving offshore because that is where the prospects are or where they want to see better.

TP: You almost have to.

CO: But anyway, back to this slide. This is all in deepwater. But you can see, in 1995, these are the Shell leases from 1983. . .

TP: These are new leases?

CO: Of all the leases in existence, back to that 7,300. If you add these two numbers, you can see there is your total. This is all the leases. So then, of the leases in these two periods, how are they divided by water depth? Well, of course, this is a color graph. I can give it to you in color, by the way. But anyway, let's say 3,652 of them with only one thousand in deepwater. Ultra deepwater, let's say. 800

meters. That is about 2,400 feet, give or take. So this is getting pretty deep. But then, after the Deep-Water Relief Act and there were record sales, guess what? This is where the huge increase occurred. They went after the ultradeep stuff and deepwater. You can see that here, too. But these are small bands. These are a small number of tracts, and we can bid on almost everything that was there. I mean, it is like 80%, 90% of all the tracts we bid on. They were not at 80% or 90% but they went after a lot of them. So, this is the story and, if you will, the shift from shallow to deep. This is almost at opposite ends of the bars. It is a perfect chart to show.

Anyway, now to talk about gas production, which went up. This is deepwater gas production. And the same thing with oil. So, you see, they built them on steep inclines, but shallow gas is so high that this percentage does not change very rapidly. Whereas, oil in shallow water is lower, and it is declining. So, this percentage is growing very rapidly, and there is the chart that shows it. Oil production from deep water crossed 50% in 2000. And gas from deep water is still at 23%, 24%. It is still predominantly shallow water.

TP: What do you think is the potential for deep gas relief that is under discussion?

CO: Well, in all fairness, it is very unknown. It has a lot of potential. There are some really big structures down there, very big, that potentially could hold huge

amounts of gas. Whether it is there, whether it is economic to produce, what price. That is why we put the relief on is to try to jump start that. Now, the other piece of the jump starting . . . I have a whole write up here on adopting our deep gas incentive. First, we adopted it for new leases when we hold the lease sale, and now, we have proposed it for existing leases, but this is the reason. This is the chart that analytically drove why. This is an exaggerated chart. Notice, it does not go down to zero. So, this is an exaggerated chart. But you could see, we are roughly at 5 tcf. I am sorry, not quite 5 tcf. From shallow water. And then, it declined precipitously. And it is still declining. So, if 80% of your gas production is coming from shallow water, which is a big number for the nation, is on a precipitous decline, some of the policy alarm bells ought to go off! And that is exactly what happened. So, this chart is a good summary of its drive . . .

TP: I will bet industry is excited about that.

CO: Oh, yes. A lot of people are very excited. Well, what happened is that when we first of all put this provision in for new leases on the first lease sale, it is down towards the very, very end. So, it did not have time to sink in. That was the first central Gulf sale in 2000. And then, by the western Gulf sale in 2000, it had sunk in a little bit and we saw some bidding activity that was obviously responding. Then, in 2001, we saw much more response. And this last year, Shell, Chevron and BP went back and bid on leases in shallow water.

TP: Really?

CO: Instead of selling things. Now, they are still selling things, but they are going after the deep gas. That is an attractive prospect. Back to, again, what do you allocate your resources to even globally of, well, where are your best prospects? Now, they seem geologically to be good targets.

TP: That is interesting. It is all very exciting.

CO: It is. I mean, there is never a dull day. It is like sometimes riding a bucking bronco.

TP: Well, it must be personally gratifying . . . all of this huge revival of the Gulf of Mexico on your watch, as director.

CO: To say the least! Like I said, I have been very fortunate in my years. Very fortunate.

TP: Well, I am sure it is not just fortune. I was thinking about, when I interviewed Robin West . . . He was very gratified to see what has happened after the incentives that you put in with the area wide leasing. He said one regret that he

had was that more money has not seen its way back to the coastal states who assume a lot of the risks of development. Can you talk a little bit about that, or is it just not your area?

CO: It is my area in a general sense. If you are in the field office, you do not get involved . . .

TP: It is much more of a high level . . .

CO: It is in a much more high level, but, at the same time, I served eleven years in Washington so I know about these things, too. It is a disappointment. It is kind of a hard thing to think through as to well why couldn't this occur? There are a couple of things going on. First of all, it is a money issue. First of all, we are talking about millions and millions of dollars. Probably hundreds of millions. If you are going to do something with Louisiana and the rest of them, they want lots of money. But then, you always go back to why you are structuring it based on at least one of the premises. Maybe 50% of the money is tied to production. Well, Louisiana and Texas and Alabama, to a degree, and Mississippi, they want a huge amount of money. Now, they should. But from the other states' perspective and if you are a senator waiting for it, if you are from Maine . . .

TP: Yes, it is the national domain . . .

CO: That is a national domain and it is money out of the treasury. O.K., so $500,000,000 to Louisiana . . . well, what is in it for Maine or Vermont or Oregon? So then, you build a formula that says, "O.K., we are going to give you some money just because you have coastline." And various bills have done that to some degree. Let's try to spread the support that there is something for everybody. Well then, the numbers get larger. So then, it has a chance of dying under its own weight. We are talking these huge amounts of money. So, you know, then to satisfy Louisiana and Texas really and to spread the wealth . . . Your coastal dollars are over one billion dollars very easily. Well, that is serious money! So, some of that is just the sheer weight of the dollars.

Well, the second thing is the environmental lobby, which is very, very strong, hates this with a passion because they fear it as the opening wedge to encourage the states . . .

TP: It might be an enticement . . .

CO: An enticement for them to have development because you get more money if you have production. Well, guess what? That means you might want to encourage production. So, they fight it tooth and nail. The fear of God. The fear of God.

TP: It becomes a real complex political issue. That is interesting.

CO: I guess the only other thing I would say is that I would not disagree that it has been unfair to Louisiana and the other states that have production. In terms of the degree of risk, I would argue how much the risk is, but impacts, yes.

TP: Today as opposed to . . .

CO: Yes. And the chance of oil spills and even if you had a spill, how much harm it is going to do? Because, again, we have a huge network of oil spill response that the companies pay for. And that does not mean that you are going to solve every single problem, but I am just saying the likelihood . . .

TP: The record in the last . . .

CO: Yes, the record on oil spills has been very good. And we have a whole bunch of things that are designed to try to keep that at top performance. I mean, we do twenty oil spill drills a year where we go and say, surprise, Unocal. You have a spill on this property that you own. It is of this size and this is the wind direction. Mobilize all your command posts right now. And we do it on the weekends at midnight. Whatever. We do twenty of those a year.

TP: Twenty, really?

CO: We have got one this week. So, we keep them on their toes, and we critique them. And then, they go back and fix whatever the problems were. Down to did the walkie-talkies have batteries? O.K., they maybe wore out. Well, we are going to fix that. Then the company knows it and they appreciate the drills of keeping them on their toes so that they can handle it. Anyway, I have been digressing, but that whole system, underlying system there, does not get the credit that it deserves, by any means.

TP: Yes, because it is never called into play, or rarely called into play.

CO: In fact, usually when it is called into play, it is because there is a tanker spill, and the equipment that the oil companies have for exploration and production, the E&P side of the house, they mobilize the equipment to go deal with the tanker spill.

TP: Well, this has been great. I do not want to take up too much of your time. Are there any anecdotes or are there any other individuals you want to mention as far as the whole leasing and regulatory programs that should be acknowledged in history?

CO: Well, I have to say there was an environmentalist who has caused a lot of harm and damage but he is a prominent player and I do not know if he is on your list. Richard Charter. He is in California. He is this virulent, violent, whatever, anti OCS as they come. And he has gotten money . . .

TP: What is he . . .

CO: He is just like a private consultant. He has gotten money from the counties out there to . . . you have to talk to him about where his money comes from but anyway, he basically is just a professional environmentalist and any time we try to do anything or even think about it, he is on our backs in California and nationwide.

TP: He messes here in the Gulf, too?

CO: Well, to a small degree but what he does is he tries to mess with us indirectly by affecting things at national, at headquarters. But constantly vigilant about any hint of things about California. He has been doing it for 20 years. I mean, this guy has been at it for a long time! So, I am surprised you have not got his name before. But he is up like in Mendocino or San Francisco or somewhere up there is probably his location. Our California office could give you his name, address and phone number.

TP: What about environmental groups? Are they all the same? Are some easier to work with than others?

CO: Well, yes and no. As an example: I will give an anecdote. Every once in a while, a new administration will come in and they will say, well, we are going to do really green and so, we want you to assemble the environmental community down in the Gulf of Mexico to talk about OCS issues. Well, guess what? There isn't anybody. I do not know that I would phrase it that they do not care. It is not high enough on their radarscope. They have got bigger fish to fry that are of concern to them. And they also . . .

TP: They are more worried about downstream problems.

CO: Very probable. But the other thing is . . . I think, first of all, it is a matter of do we care about water quality in the local estuary or something else that they can get their hands on and is more important to them? The second thing that is probably behind and maybe even subconscious, is that the oil and gas industry offshore down here is so large that it is like trying to tackle a 900 pound gorilla. And it is like they have not got the stomach and the resources to go after these guys if they wanted to. I do not think that they even really want to, but there are some people that I think it deterred in that sense.

TP: It is almost the basis of existence . . .

CO: Yes, so, back to my anecdote of can we assemble some environmental community types? Well, we did this like six or seven years ago, whatever it was. We got together and had a love fest. All they were really interested in was more rigs to lease. Now, if you go to California, it is completely opposite. If you went to the Atlantic, it would be different. In Alaska, it would be different. And I am not talking about Florida because we stay away from Florida, to a large degree. I do not know if you are familiar with our current leasing and all that, but we basically stay away from Florida to a large degree.

TP: I remember the big flack during the first Bush's presidency. Going back to the OCS amendments and that period in the late 1970s and early 1980s.

CO: I want to give you one anecdote. I have been debating whether I was going to tell you this, but I am going to tell you. I have to be careful here. One of the questions that you had put down here was, what was the department strategy for navigating these various pressure groups? I do not know that they had a strategy other than full steam ahead. I was down low enough where I was never privy to . . . I am talking about James Watts' administration.

TP: The Sagebrush Rebels.

CO: Right. Now, that group is also very much one of the politicos. They talked to politicos. They did not talk to the career servants. So, strategy was very, very hard, and I was like third level down in the bureaucracy or something like that. So, I was not privy but I can tell you an anecdote. I was in a decision meeting on one lease sale and I will not say which one. And I will not say who said this. But it was one of the political appointees. The question was one of the states wanted us to delete a measly, I think it was four blocks, because of the national marine sanctuary for I forget which Civil War Ironclad. I am not sure if it was the *Monitor*. I believe it was the *Monitor* off North Carolina. That was one of the requests of the states, was to delete a measly four blocks. And we had like 6,000 blocks in the lease sale. And not only would they not delete the blocks, which I was just aghast at, but there was one individual who said, 'Oh hell, let's just drill right through the deck!' And that always struck me as the epitome of what was wrong. It was just insane!

TP: I've got similar stories from Robin West.

CO: I am sure he has got all kinds of anecdotes!

TP: I remember he said that the biggest battles were not with the environmentalists.

From his perspective, the biggest battles were with those who wanted to drill, drill right up the coast of New Jersey and anywhere that could be drilled.

CO: Right. As near as I could tell, there was no compromise until you were forced in a court. There was no compromise. It was like, we want it all, and we do not care. Drill through the deck . . . I am just giving you my perspective. Again, I was third level down so in terms of history and a full evaluation, others can bring to bear other things that I cannot bring to bear. But from my perspective, it seemed like full steam ahead and only when we had litigation to block did we back off in some way. Very hard to work under.

TP: On the issue of environmental impacts or whatever, there seems to be a lot of elevated concern, and let me know if I am taking up too much time, about the coastline in Louisiana. And this rapid disappearance of the coast line. I do not know how much responsibility the dredging of canals from oil development is given for that. I do not think it is a major factor . . .

CO: It is something but not the major factor.

TP: How has MMS sort of entered into the discussion of all this?

CO: Well, first of all, we are working with the states including Louisiana, to provide

sand resources from the federal OCS to, if you will, help restore the sand and gravel part and to restore beaches, wetlands, land area, because the more it erodes, the more vulnerable it becomes to hurricanes and more gets washed away. So, it is a vicious circle. And as to the merits of that, from a geologic standpoint, do you put the sand down and it gets washed away and you have to put it back down again and back and forth. Do you just keep doing this? I will defer to others, but there is a strong element of criticism that says we are fighting nature and nature is going to win. But, be that as it may, so MMS has responded in that fashion. I am in a very good cooperative program with many of the states including Louisiana, New Jersey and Florida. I mean, they are enemies in a sense, "enemies" in New Jersey and Florida on OCS oil and gas but on sand and gravel, we are wonderful. We give it to them free, for one thing, but again, that is another story. So, that is one aspect of it.

The other aspect is that Louisiana, for many years - five, six, seven, whatever – has commented on the oil and gas lease sales, saying that MMS has a responsibility to adhere to no net wetlands loss. Therefore, we are contributing to this, and therefore, we owe them some compensation/mitigation. And the word mitigation means give us some money. So, that is a constant refrain for impact assistance, but it is under the guise of wetlands loss. And it is under the guise of you have a duty to mitigate. Well, that argument can go back and forth. The bottom line is nothing can get it built in the way of a canal or an expansion of a

canal or redredging of a canal unless the state approves it. So, their coastal zone act gives them total power. So, why don't you police your own area? Sometimes, my blood boils when I hear these arguments too much.

TP: Well, it seems to be the biggest problem is the leveeing of the river.

CO: Absolutely. It cannot replenish and therefore, you have natural subsidence. You have natural subsidence, and no replenishment. Guess what? The land is going to disappear because it is very low to begin with. This is not a beach. This is a dropping of mud from the Mississippi River for the last ten thousand years.

TP: Does it make you fearful sometimes to be located here?

CO: Oh, absolutely.

TP: Because if you get a Category 5, it could wash away the city?

CO: Yes. We have a contingency plan where all of our data, all of our electronic data, is stored as a duplicate in California, and we have an elaborate emergency plan to bring up the entire regional office again legally in Houston. We have a COOP plan, Continuity of Operations Plan, or something, whatever it is called. And we are testing it again. We have got a very elaborate plan to last like three years. We

had one before that, but we really sort of stepped it up big time. And, as an example, we used it to the first stage of our COOP plan last year in Hurricane Lily, and we moved eight people to Houston immediately to set up. So we had an operation over there in case we had to move the entire regional office because this office would be obliterated, presumably, in a hurricane, if we had a really bad one. First of all, we could not get to it. The roads would all be flooded, so no one could get anywhere. Presumably, most people would leave, just like I would. I live across the North Shore in Mandeville, and we have evacuated three times to 200 miles north, and just hoped that the house was still there. Well, we never have met a direct hit in our area, knock on wood. We have had some bad ones. High winds. And I am right up against a forest, so I have 200 pine trees that are 90 feet high in my backyard and I have French windows. So it would go right through the glass, over and above it would destroy the roof! So, I do have some concerns, as does everybody here. And then, the other concern is, you have a very, very forced contingency. Especially moving from California and then from Washington, I had to learn this over and over again – we have to act soon. If you act too late, the roads are crammed and no one can get out. No one can evacuate, because the roads are either under water and it is too late or the roads are full of people and cars. And you cannot get out very easily.

As an example . . . you are not from this area so just to pass on to you as an example. There was a big to-do about the governor of Louisiana and the governor

of Mississippi having an agreement that they would turn all of the interstates in Mississippi into one-way north. So the southbound lanes would be turned into . . . now, you can flee on both lanes going north to get the hell out of here. And there was a fight on that. Well, they reached agreement now that yes, they are going to do that because that would dump this huge amount of people into Mississippi, but we have got to get out of here. When push comes to shove, we have got to get out of here!

The other thing I was going to pass on, and I will not dwell on this too much but as an example, we have to act early. So, sometimes we move and dismiss our people to get the heck out of here so they can go home and take care of their families, which means they may have to evacuate. We maybe act a little bit too early but it is better to be too early than too late because if you are too late, you are in serious trouble. So, I have learned that as regional director many times, that one has to be very flexible. Do not think about putting your nose to the grindstone and keep these people here to work, and I am that kind of type. Big time. I have to get counsel from my deputy. So anyway, that is definitely a piece of this and the same thing with the oil industry, if you will. When a hurricane . . . if it does not just materialize in the Gulf which sometimes it does and then they have trouble. But when it is coming in to the Gulf from off West Africa, they watch that for days and days in advance, and they start evacuating nonessential people four or five days in advance. For one thing, because it is a big logistics

effort. There are 35,000 people, probably a lot more, that work offshore every day. Those people got to get in by boat and helicopter. That is the only way in. There are no roads. So, that is a lot of helicopters. So, when you get down to crunch time – you know the hurricane is coming, it is coming soon, . . . we usually release MMS's helicopters, all 15 of them. We turn them back, so that the oil industry can evacuate to help out because we have got to get those people out, of there. I mean, this is a big operation. It is like a mini city, actually, a big city, out there. There are 4,000 platforms of various sizes. Some of them are real small, and there are another thousand that are really big. And they are out there a long distance.

TP: I talked a little bit to Ralph Ainger about this. People do not realize what a huge operation offshore Gulf of Mexico is.

CO: Absolutely.

TP: It is still a relatively small government agency overseeing it.

CO: Yes, but it gets back to my strategic asset argument, and you can come at it from a number of angles: number of people, number of platforms and all that, the amount of energy. But, you know, this is a very, very big strategic thing in the government's profile, government's bag of projects. And it needs some strong

care and attention. Now, we have been very fortunate budget-wise. I am talking about the offshore program, not the royalty program of MMS. The offshore program and specifically, the Gulf of Mexico. We have gotten a lot more resources in the last several years. All this stuff about government decline and taking huge cuts, well, we went through some of that in MMS in general and offshore some, and we even got touched with a tinge of it here. I do not know what the number is, but we probably have had five years of budget initiatives that have given us more people. I have a net, on the order of like 100 new FTEs, full time employees, that have been given to me in the last six, seven years. 100 more people!

TP: Bucking the trend.

CO: Yes, we are bucking the system, the antithesis of the predominant view of government. But that is a huge increase in responsibilities, even though the number of platforms has stayed about the same roughly. I could go into those differences, but I am not sure you would want to. I want to do two things. I am not trying to end this. I basically do not have anything else scheduled so I can . . . I was behind this project so I want to talk!

I wanted to say a little bit on here about the Energy Action Education Foundation which I believe represented smaller offshore operations.

TP: I do not know where I got that. I sort of inferred that from something I was reading . . .

CO: It had a claim that it was a broader, public interest and whatnot, but it was an environmental group. And it was a two-man operation. I mean, it was kind of small. I say, a two-man. I do not know that for certain, but there were two prominent people. And I never saw anybody besides those two.

TP: I inferred that from something, an old article I was reading in the *Oil and Gas Journal* or somewhere. Some of the media coverage . . .

CO: I do not know how far you want to go or how far you are commissioned to go or whatnot. I have two names that are industry types that are familiar with the throes of the Atlantic fights.

TP: I am interested in all offshore U.S. This project I guess is specifically focused on south Louisiana, but while I am at it, I am not limiting the research.

CO: Right, well, and also, since we are talking about national issues. I can give it to you and if you follow it, that is up to you.

TP: This is for the Atlantic.

CO: For the Atlantic area. We are working in the Gulf now. Jack Newton. He is here locally.

TP: You said, industry type?

CO: He is a land man. He was with Tenneco, which had the only discovery in the Atlantic. He knows about this anyway, even if he was not from Tenneco, but I am pretty sure he was from Tenneco. He is an elderly gentleman, a very nice guy and very knowledgeable. And another guy, a smaller company, but was involved in and still is involved in sort of talking up the Atlantic. Chuck Beddell. Anyway, he is local. He is with Murphy Oil. He was involved as sort of a secondary partner, a smaller independent, in many of the Atlantic leases. He was also heavily involved in the Canadian drilling, so there is still interest in the Atlantic. They want us to come back in.

TP: I know a lot of people are, especially in offshore North Carolina there. They still think there is a lot of gas . . .

CO: Well, yes. They know there is gas in the Tenneco leases off New Jersey, 15 miles offshore. There were four leases that we discovered gas.

TP: That is great. So both in New Orleans.

CO: That could probably lead you to others, but those are the two that I run into all the time.

TP: Great. That was really contentious in the Atlantic. The Shell guy I talked to about the Atlantic was named O.J. Shirley. I do not know if you remember him.

CO: I know him.

TP: I got a good interview with him and a lot of it was about offshore Atlantic.

CO: I want to touch another aspect, back to the Gulf . . . we were talking about the hurricane and the small city and all that kind of stuff. The other thing, back to the strategic asset thing, if you shut in production from hurricane or storms, you greatly affect gas future prices. Seriously. And the gas futures people call us big time. Now, I just wanted to give you this . . .

End of Tape #1, Side 2

Tape #2, Side 1

CO: . . . with the various types of groups that are sometimes financially oriented and Tropical Storm Bill which is the one we had last week, last Monday. We had some shut in production. The total amount shut in, we finally calculated was six hundred and some million cubic feet of gas for four or five days. Anyway, that affects, or does not affect, but they need to know what the numbers are.

TP: Especially now with the price of gas . . .

CO: Yes. So, again, these are calls we got in one week that are related to Tropical Storm Bill. All the ones I checked here.

TP: Wow.

CO: So, just another aspect of when the Gulf catches a cold, everybody else sneezes. It is that kind of analogy. So, the Chicago Board of Trade calls all the time on futures pricing. They want to know what is going on, and they want to get a press release before we issue the press release. They want to get the numbers before anybody else gets them. All of the groups are that way. They want that data before anybody else because they can make some money, or avoid a loss or something! It is very, very sensitive. So, we instituted some very tight procedures.

First of all, in the last, say ten years, it has gotten much worse. Hurricane Andrew started it back in 1992 but Lily . . . so, back to my command post in Houston, we all evacuated. Nobody came into this office. We gave out daily statistics at two o'clock every day from Houston to all these financial guys. We faxed it to them because they had a number they could call in over in Houston and we could keep communication going as to what is going on.

TP: That is amazing. I never thought about this.

CO: And then, all the data, as an example, if this building is wiped out, all of the data is in California. And all we need, therefore, is an office building and computers to bring it all back up. And that is what Houston is for. The six to eight person team is the advance contingent if we had to move the entire region there and say, 'O.K., everybody here – your job is in Houston. We are paying for motels. Move. Get over there. All 560 of you!' And then, it is a matter of . . . they have credit cards and everything ready to go to buy . . .

TP: Are there staff in Houston anyway or is everybody here?

CO: We have some in south of Houston on the coast in Klute, Lake Jackson. It is an inspection district. It is about 20 people. And then, the royalty side of our house

has about 20 to 30 people in Houston proper. But in offshore program, nobody in large numbers now. So, our temporary office would be in the conference room with the royalty folks. And then, if we had to go rent space, well, the people that go over there on the advance team, they have authorization signed ahead of time to go get office space for all 500 if they need to. They can buy computers, go rent them, go lease them, whatever you need to bring us back up because we need to function over there. That is the plan.

TP: Another thing I wanted to get to: Rigs-to-Reef. Can you talk about that, the origins of it? I know there is one person who is responsible. I forget his name.

CO: Billy Reggio. And there is another guy here that is very familiar with it who is still working with us. Gosh, I just cannot remember his name. Billy is the main one.

TP: Environmentalists were very skeptical at first about it, weren't they?

CO: I do not know that they were down here but they have been skeptical elsewhere; again, for alternative reasons. As an example, the California legislature, I think they passed a bill to promote Rigs-to-Reefs because they had 20 some platforms out in California. And the governor vetoed it. And the reason he vetoed it was he

thought it was going to, in effect, give money, relieve money, an expenditure they would otherwise have to make to the oil companies. So, they are so "anti" out there. I mean it is just unbelievable.

TP: When did "Rigs" start in the Gulf?

CO: In the 1980s. Maybe the late 1980s. I do not remember off the top of my head but something like that. We have a little publication, I mean, a real short brochure, if you are interested.

TP: Sure. I can take one or two.

CO: But again, it started as recreational fishing happens around the platforms. And so, these reefs then become fishing sites. Fishing is a big deal around here. We have a lot of anglers. You can go to the stores and buy maps that shows, this is where the platforms are – South Pass 60 and this and this. Those are all fishing spots. Now, we have the other problem of do not tie up to the platform. Do not get too close. But they go up pretty close and fish around it because the steel attracts microorganisms, and then they attract bigger organisms, all the way up the food chain. Eventually, there are fish there. And so, those are good fishing places! In fact, you can get some pretty good eats on the platform if the guys just throw a line over and fish, and there is dinner!

TP: I was just reading today at lunch, *The Gambit*, the weekly magazine. A chef – I forget his name – every Monday, he goes out to the platforms and fishes for all sorts of different kinds. It is getting more difficult because there may be 20-30 other boats out there.

CO: Right, but it was a platform so . . . unless you just want to go to a particular hot spot, well then, everybody might be there. It started as a fishing thing. Now, it has started to evolve into almost like a habitat issue. It is probably the next step up. And also, that your biological organisms, in general - and I am not a scientist type or biologist by trade, so I sure am using long words here - but all of the biological communities, if you remove the platform, take it to shore and sand blast it and recycle it and install it somewhere else, well, all that community is killed, and there is nothing there anymore. But if you topple it in place or you tow it 10 miles into a designated reef site that the state of Louisiana or Texas or somebody manages, then the communities can continue. The attractiveness of the fishing is there. The communities thing is getting to be more and more of a issue in the last couple of years. So, as an example, MMS, I think we came out with an estimate. We either did that or were helping create the estimate. Anyway, they call this stuff hard substrate, where biological organisms can grow and develop. And it is estimated that 20% of all the hard substrate in the entire Gulf of Mexico comes from the platforms. Twenty percent. So, there is an important biological

function. Now, what you should do with it exactly is starting to evolve. But it has been approached more from this angle now as opposed to just that they are good fishing sites.

TP: That is interesting. Is every platform that is taken out of commission turned to . . .

CO: No, the vast majority of them are not. The vast majority are either taken to shore and cut up for scrap or possibly refurbished and then reinstalled.

TP: How many are uninstalled every year?

CO: Right now, there are about 100 new ones built versus 100 uninstalled every year. The numbers can go up and down. And sometimes, there are a little bit more than 100 taken out. Like, one year or so, there could be 150-160 platforms installed. But you are in some general balance. I do not remember the numbers off the top of my head, but certainly something less than 10%, maybe less than 5% of all the rigs are put into Rigs-to-Reefs. I mean, in terms of overall gross number, this is still relatively small. But it is, I do not know, maybe 100 or 200, something like that. All that is in that pamphlet, too, but I did not bring that.

TP: I will get that. I can ask Debbie for that. I have exhausted my questions.

CO: I wanted to go one more. One of the things that you mentioned was something about operations as opposed to, if you will, leasing in the coastal zone and all that. And, to me, that is another untold story. It gets back to this whole thing where we had a regulatory regime change big time. We had cycled several different times since the 1969 blowout in Santa Barbara. And that is an untold story, and it is vastly unappreciated. This is all somewhat new in the last ten years, but I would like to give you something. Again, if you talk to Dannenberger, he would give you a lot more chapter and verse because he knows his stuff. But as an example, we had an authorization to fine companies, issued what we called "civil penalties" in a statute, I think in 1990, if I am not mistaken. Anyway, that was taken to court and we got blocked. Anyway, we had to redesign our whole program. Anyway, but we got that back on track in 1993. And since 1993, so some ten years, we have been issuing civil penalties for safety violations to the companies. And these can get pretty steep, especially if you have a recurring thing. If you screw up once, that is one thing but we have a penalties chart. If you screw up a second time, it goes up. If you screw up a third time, in the same area, same kind of violation, you are talking some serious money. So, it can get up to $25,000 per incident per day. Well, if you have a safety valve that is shut in for ten days, that is ten x $25,000, as the maximum. So, we get into some serious money. And we have had several fines of hundreds of thousands of dollars. So, this is a piece of our operational program. The companies do not like to pay these penalties, so they work to avoid them and if you get one, you do not want it to ever happen

again. So, believe me, it really works on safety and operational excellence, if you will; another word for safety, in a sense.

TP: So, you get these safety rewards . . .

CO: Yes, and then update them. This year, we just gave out the 2002 award winners, if you will. We are always one year behind in terms of . . . not behind but what year we are acknowledging. The reason for that chart is: one to keep our focus on it, but another thing, I have a lot of oil companies come and visit me. They did not need any further push, but this gives them more push. Why isn't my company up there? Seriously. That is important. That is very, very important. Have you been out to the platforms?

TP: No, I have been trying to get a ride out.

CO: Well, one anecdote I would tell you about how things are perceived down there. The companies - and I am not talking about every single company now - but I am talking about certainly the mid-sized and large independents and all the big companies, majors, they have a tremendous amount of pride, in general. There are a few bad apples and we go after those guys, but in general, they have a tremendous amount of pride in trying to keep things safe. So, what they call is lost-time accidents where somebody hurts their hand and is off work for a day or

something like that, they try and avoid those. LTAs – Lost Time Accidents. And they keep track of those statistics. So, my anecdote is to you: They wear hard hats all over the place, all the time. That is mandatory. Man, you have got to have a hard hat on if you are going to step foot on that platform because they have got heavy machinery out all the time, things could fall. You have got to be protected. The same thing with steel toed shoes. It is almost a mandatory requirement on every single platform. Almost. So, what they do, you are out there and you are isolated. Stickers on the helmets, on the hard hats . . .

TP: Oh, like college football . . .

CO: Absolutely.

TP: Players.

CO: 3,000 hours without a lost time accident. They have stickers that say that. The companies give them out to encourage more safety. And if you have a whole year without a lost time accident, you get a gold award from the company. I swear. That is the psychology of how they operate. So, that is another piece that is hidden. John Doe in Jersey doesn't know that they try really, really hard.

TP: I believe it.

CO: Well, anyway, I was going to give you a litany. Just a few things because I do not know if you will get to them or how much and whatever, but operational in the 1990's. So, civil penalties we got back on track in 1993.

TP: There was a period when you didn't hand them out?

CO: There was a period where we could not do it even though we had a law that said we could do it.

TP: When was the law . . .

CO: In 1990. We had a court case that went against us, and we had to basically rebuild the program altogether, redesign it. O.K., then around 1996 . . . When we have a major accident, we do a formal panel investigation. And we do a formal report that we publish on every major accident. And what the definition of major, I will defer. I will defer on that, but certainly a fatality, as an example, is a major accident. A big fire is going to be a major accident. We do a full panel report as to what is the cause. What caused this accident? So that we can learn, did we need to change something in our regulations? Do we need to advise the companies that they need to change their practices in some way? In 1996, MMS instituted formal training to do what we call root cause analysis. This is all along the lines of national transportation safety board stuff. It is a very serious inquiry

as to how you look at, "What was the root cause?" O.K., John Doe slipped. Well, why did he slip? Was he not trained? Did he not have the right sneakers? Did he ignore somebody's order? What was the root cause of why did this really happen? So, MMS has gotten much more serious in 1996 or so with accident investigations on this root cause analysis.

Then, another thing . . . we have already picked up on the SAFE award as an encouragement, if you will. Besides the civil penalties, you've got the carrot and the stick. That is the carrot. The stick is these other penalties. The other sticks are shut-ins and that kind of thing, where they can order them to shut in their facility, no production. Well, no production, no money. That gets their attention!

And then, in 1998, down here, what we had is we had district offices, and we had offices organized by approvals. Plan approvals. Pipeline approvals. It was very pro industry. Guess what? In 1998, we formed Office of Safety Management to give a safety focus and to pick up on our root cause analysis. They do the accident investigations, the big ones. They do civil penalties. So, if you will, they organizationally have adjusted to get with it . . .

TP: Analogous to what oil companies' health and safety function, what they developed on their own.

CO: Yes. They have gotten much more prominent. We have gotten much more prominent. I am very proud of that because I caused that to happen.

TP: It is reasonable . . .

CO: To me, it is a no brainer. It took a few resources but we could find the resources. We will find them. Then, the other thing – I want to go back to a parallel. We talked about the huge expansion in leasing, the total number of leases grew and a big portion of them were in ultra deepwater. We had to deal with that drilling and effectively manage our offshore inspections; you know, like I mentioned the 15 helicopters that take about 60 people offshore every day given weather permitting. We had downsized from the 1980s to four district offices. And when I say district, that means they had not only a full inspection complement, but they had all of the latest technical reviews of plan approvals. So, if you will, that is why we strong arm to know what is going on with each of those operations – the district offices. There are about 20-22 people in each one of those offices. And we had downsized, so we had made one office a subdistrict. All the inspection personnel had 5 people. Then we had this gargantuan, huge increase in leasing and push for deep water. So, we changed that subdistrict from five people back to a full district, to 22 people, and we went to Congress and got the resources to do it. So, that was another focus to make sure that those operations are going to be handled correctly. That is another story that is very buried and nobody . . . I am not sure

that it needs much talking about but it is not the glamour story. But paying attention to business, if you will.

TP: Yes, well, it is nice to know that there are safeguards . . . I am sure you do not have to really convince people, that you are trying to protect people's lives and the environment. You do have to have systems in place to do that.

I am not aware of any major blowouts or accidents in recent history. I know, in the Gulf in, I guess it was 1970, 1971, which is before your time, there were a couple of big blowouts . . . Shell had a big blowout in Bay Marchand and Chevron had one. And the companies really got to it after that. Is there anything worth mentioning?

CO: No, not really. You have to take that with a grain of salt. There have been people that abide and there has been oil that has been spilled. And sometimes, amounts that are large enough to catch strong attention, but have you had a catastrophic fire, a catastrophic blowout, a catastrophic spill? No, not for a long, long time. The last big fire we had in which I think there were five fatalities in that, was South Pass 60. As it turns out, the deputy regional director, Chuck Schoennagel, was the accident panel chairman.

TP: When was that?

CO: I think it was in the mid-1980s, but I am not certain. But that was sort of the last really big one with multiple fatalities, although I think three years ago, we had one with two fatalities in that incident. But other than there were two fatalities, you have to say this with a grain of salt, but it was not really a big incident. I mean, there happened to be two people that got killed, but it was not a catastrophic accident otherwise.

TP: . . . major industry. It was unfortunate but you are going to lose lives.

CO: Exactly. But, at the same time, you always knock on wood because tomorrow could be another day. I mean, as an example, when summer comes, we almost always have zero fatalities going into April. And when we come out of the summer, we have six or seven because, first of all, there are a lot more part-time crews out there. You call them students, part-time help, whatever. Plus, it is better weather. So, that is when they are doing their maintenance, their pipeline laying, their painting. They are sand blasting. You have lots of people out there, temporary, going at it. More people, more activity, more accidents. That is general. Less trained, and there is a tendency . . . A lot of companies are paying a lot of strong attention to that but, at the same time, there are still a few that are trying to get by and doing dumb things. You would not believe the dumb things they do sometimes. I mean, they have got procedures. They violate ten things in

a row of the procedures. And guess what? Somebody got killed. Duh? What is wrong with this picture? And our accident report points it all out. What is the problem here guys? So, human factors were not trained, ignored instructions, did not follow procedures and did not have a brain!

TP: One other thing you may or may not want to comment on, and I talked to Ralph Ainger about this, was the boundary issue, with the doughnut holes in the central Gulf of Mexico, working all of that out with the Mexican government. It seems unbelievable that industry is getting that so far out that these issues are starting to arise.

CO: Well, let me show you. If you look, you will see at the outer limits there on the far left there, there is a little yellow block and then there is another one in the middle. And there is another one on the line there with the greens. Those were discoveries last year in 8,000 plus feet of water. Discoveries. So, the one on the far left is Shell's Great White, which is a very interesting prospect. That is only 9 miles, 6 miles from the Mexican border?

TP: Unbelievable.

CO: Yes, I keep track of some of this stuff. This one on the left over here, discoveries in 2002, and you see, there were three discoveries in 8,000. The next one is 4,000

feet. What is fortunate is the next one down, the fifth one down, Tahiti, that is a big one. Now, Great White has not showed its muscle yet. I suspect it is going to be a big one, but they have not got, if you will, a lot of appraisal wells drilled yet. Tahiti has got its third appraisal well. I do not know if it is the second or the third largest discovery in the Gulf of Mexico. That one is not up there.

TP: Who do you see as sort of leading in deep water? The talk is all that BP is overtaking Shell. There is a lot of handwringing about that.

CO: It is like with everything else. What is the substance behind the argument or the claim? The first thing is, in many of the Shell developments that had been the leaders for the last several years, BP was a partner. Sometimes they were 50/50.

TP: Mars. They brought BP into Mars and a lot of people asked why.

CO: And so, as an example, then Shell gets all the publicity, BP is just a partner along for the ride. They count the money, but they are not the operator. So, who is the designated operator, gets the glory, to a degree. And that is maybe an interesting piece behind Na Kika, the one that they are trying to install right now. Well, Shell will operate it for x number of months while it is being installed, and then BP is going to take over. They are going to be the operator. That must have been an interesting fight because that is like six developments that are feeding into one

semisubmersible to produce it.

TP: And after Shell and BP, who would you say are leaders out in the deep water? Kerr-McGee?

CO: Yes. Big discoveries. Oryx. That was who built the first spar. Oryx. And they moved key people. Don Vardeman was the big honcho at Oryx on the SPAR. He is over at Kerr-McGee and he is leading the effort. The Nansen spar which is installed. The Boomvang spar, which is installed. He was the leader on that. And you have got one or two others. So, I would say . . . I do not have the rankings by production and number of installation, but I have sort of an impressionistic type view, I would say, yes, Kerr-McGee is right up there. Right behind them.

TP: And, of course, still Chevron and Exxon.

CO: Right. Now, Chevron, they just have not had many discoveries, and they are not as huge ones. Tahiti will change that. They will become a major force with that. And they will also have major challenges, too.

TP: Anadarko. I know they are bidding on the shelf.

CO: Anadarko could be another one. Anadarko and Chevron could be fighting it out for the next one to climb into that sort of top tier. And maybe both of them would make it. But Anadarko has several prospects. They have one or two that are starting to come on line production, and Marco Polo is one of them, I think, that is coming quick. So, their nature is changing. They also had some very good drilling success in deepwater. So, their staying power for the long haul is probably assured. So, there is going to be more in name recognition over the years. But that gets back to just that there are more and more prospects. Look how many discoveries there were in 2001? Some of those went into production real fast, but like in the middle there, the front runner is going to be on production it is either this year or next year. And remember, there are a bunch of small ones. But as you see, Red Hawk down there, Kerr-McGee, that is the cell spar I talked about. It was the breakthrough technology that lowered the minimum economic field size down. That will be in production next year, absent some problems.

Trident and Unocal. That is really deepwater. That is over by the yellow one there, the Great White. They are thinking that those two might codevelop it in some way because there are just not enough resources out there to justify a pipeline right now. So they may come up with some approach.

TP: As the industry moved into deep water and as companies are having to partner more in bidding and bringing in companies of interest, are there people who try to

raise antitrust concerns about all of this?

CO: Not really.

TP: Look at all the companies. Over the years, you look at companies . . .

CO: Right. And let me tell you, document the 1978 amendments, I was very familiar with those. There was a fever pitch at that time about antitrust. So, Dingle and those guys got inserted, they had the charge, so there is a prohibition, I think in the 1973 law, not the OCS Lands Amendment, that says that there is a ban on joint bidding between large companies. Anybody who produces more than 1.6 million barrels a day, I think it is domestically, if I am not mistaken, cannot bid with another company that is in the same category. So, as an example, when Chevron and Texaco merged, they became too big, so they cannot bid with Shell anymore. Before, they could. They cannot bid with Shell anymore. And I think BP – I think there are four of them that are on the list right now, if I am not mistaken. Something like that. We put out a revised list just before every lease sale.

TP: They cannot bid but they can go in.

CO: Afterwards, yes. But another piece of the 1978 Amendments says that an

assignment between a banned bidder to another banned bidder or joining together has to be approved by the Justice Department. Now, we had a process, and I have given up keeping track of it over the twenty some years, but we used to have a process where we sent every single proposed assignment of title from one company to another that involved that to the Justice Department for review. We had to wait about thirty days before it came back. And they never disapproved of one of them. They reviewed it. Now, I do not know what our procedure is, but that process probably has evolved in some way, shape or form. But that was another provision in the 1978 Amendments that dealt with that theory. And that leads back to the Energy Educational Fund. That was the piece that they were after with antitrust type stuff. And they were after area wide.

TP: Well, it just came out of the embargo period and the political capital that could be made. That is interesting. Well, is there anything else you want to . . .

CO: I think that is it.

TP: You have my card. If there is anything else you can think of that you want to get in on record for this project . . .

CO: The bottom line is we kept talking about the program, and I am not sure that all of that is absolutely essential or relevant to the . . . I guess the only other thing, back

to this international. There is another piece of international that I just saw. The Gulf of Mexico is not just the U.S. It is Mexico, and Cuba. Back to Ralph Ainger's discussions as well. Well, here is an example of where we have a recent thing where we have joined with the Mexicans to study the meteorological conditions. In this case, the oceanographic – the flow of the water through the Gulf and measure it. And you are joining with them on a mooring station out in the middle of the Gulf in the middle of nowhere! But there are readings to understand what is going on. So anyway, that is just another piece of that. So, it has become more international in so many different ways, not only because of the body of water, but the regulators, the companies, and where they deploy their assets. All kinds of pieces like that.

TP: Is there a chance that companies . . . probably not, given the nature of PEMEX and the oil industry in Mexico, that they would relocate some of their onshore support bases to Mexico? It might be cheaper? As you see them developing further out here . . .

CO: Maybe, but that is still so far away that I do not think there is even a hint of that to even think about it. And then, the other thing would be that until you have a full support industry in Mexico, you would go with what is proven.

TP: You have got the labor market and infrastructure and everything. It is quite an

area there. It is a great map. I am trying to find old maps, old leasing maps. I saw a great one in the National Archives from 1962. A big one. Probably half the size of that. But they would not let me photocopy it.

CO: This is an inheritance from John Rankin. John Rankin had this . . . I do not know if it was exactly this size but something on this order in a big conference room when he had ran the office now on Camp Street. And then, let's see, was he here in this building? No, when we moved to this building, he had retired.

TP: Where was the office before this, Camp Street?

CO: The leasing office was on 500 Camp Street. It was in, I guess, the judicial building or something in that area. Some of the other guys that were in the building . . . I was never in that building other than I had visited there occasionally. Some of the other guys could tell you the specific address. Rankin had like a 9th or 10th floor office or maybe even higher. So he could look out the window and see the freighter and tanker traffic go up and down the river. It was a magnificent view. But anyway, he had a full wall map. This wall, I think, was bigger. It was bigger than this wall maybe, and he covered the entire wall because, you know, we have gotten more sophisticated with how you get print and the computers now. They did not have any computers back then. They did it by hand. Even this change is hard. I get this changed once a year.

TP: All right. Why don't I shut off the tape and we can conclude here. I thank you for your time!

THE END