BOEM DEEPWATER GULF OF MEXICO HISTORY PROJECT

Interviewee:	Denis Weber
Date:	March 25, 2010
Place:	Morgan City, Louisiana
Interviewer:	Jason Theriot
Ethnographic preface:	Denis Weber was born and raised in Donaldsonville, Louisiana, and took an engineering degree in 1975 from Nichols State University. The following year, he was hired by McDermott as a cost estimator, and through a career of thirty-four years with the firm, worked in a number of capacities. Weber served as a senior project manager for Shell Oil's Auger tension-leg platform in the early 1990s, helping to oversee its fabrication and assembly. In 1993, as the Mars TLP development began to come into shape, Weber was tapped to be the overall project manager for Mars. At the time of interview, Weber was a Division Chief Engineer for McDermott.

JT: This is an oral history interview with Denis Weber Jr., Morgan City, at McDermott. Denis has been with the company for thirty-four years. He's been in the industry thirty-five years. His current position is—

DW: Division chief engineer.

JT: —division chief engineer. In the nineties, back on Shell's TLP you were yard superintendent?

DW: I was project manager on Mars.

JT: Project manager on Mars, great. This is Jason Theriot. It is the twenty-fifth of March, and we are in Morgan City. This is for the MMS Deepwater History Project.

Denis, you told me a good bit of information already. Let's go back a little bit in your past, just so we can find out a little more about yourself, how you

got here, maybe a little bit about your dad, how he influenced you in getting into the industry, and then we'll bring things up through the troubled times of the eighties and into the booming deepwaters of the nineties, and we'll pick up on the Mars stuff.

DW: My dad started in 1956 as a welder, so he came in here a year or so after the yard was created, probably was about twenty-five years old at the time, from Donaldsonville. Not a lot of industry. None of the chemical plants were there. He was working at an agricultural machine shop, and the word got around that you could come here. Came here for less per hour, but you could get all the hours you wanted. So he came here in '56 and he retired in '98 at sixty-six years old as a welding superintendent here. So he was pretty much here in the beginning of this yard, and he worked on some of the TLP projects of the nineties.

I was born and raised at Donaldsonville, went to school at Nichols State. I have a degree in engineering technology, graduated 1975. I worked at Avondale Bayou Black, which was a competitor here. In '76, I hired on at McDermott as an estimator, and from there I've had different positions: pipe mill engineer, production engineer, senior production engineer. For a short time, I was head of our quality group here and back into projects as a senior project engineer and a project manager, and two years ago, promoted to division chief engineer. The project managers here report to me.

JT: What's your father's first name?

DW: Denis. Junior, obviously. Denis Weber, Senior. Retired, living in Donaldsonville, and every time I talk to him he wants to know what's going on here. I said, "Dad, the company you left is gone. We're a new company now."

JT: A worldwide venture.

DW: That's correct.

JT: So tell me what it was like starting here in '76, what was the atmosphere here during the energy crisis, during the shelf boom, and when you guys were seemingly building jackets every other week.

DW: I came over in '76, and we were in the middle or the tail end of the shallow water boom of the Gulf Coast. When I came here, deepwater was 400 foot. However, the Shell Cognac was under construction. It went in a thousand feet of water, but it left here in three pieces. It didn't leave as a thousand-foot structure. It was probably around 1980, '81 or so, where we saw some thousand-foot jackets, very, very expensive to build, and for a prospects, deepwater and that, the industry needed to find a new technology to make it work, and it went over to float over, such as a TLP or spar, some type of a hull that would float, to eliminate all the steel it took to come up from the seafloor.

A lot of work. Montgomery had expanded to pretty much what the facility is today, but, again, we had many, many shallow-water products going on at the same time. In fact, when I was a production engineer in what's our east yard where we built the jackets, at one time I had twenty of them assigned to me. We weren't as sophisticated as we are today with respect to construction management, such as our scheduling capabilities and forecasting capabilities we have now. But, again, the structures back then were a lot simpler.

In the early eighties, we did a couple of deepwater projects. Then I would say around '83, '84, the shallow-water market was over in the Gulf, not many prospects, and in the mid eighties I saw my first layoffs here at this facility. We struggled in the mid eighties, and around 1990 we did see a turnaround with the Freeport MacMoRan Sulfur Project, which filled the yard for a couple of years. Then Shell came out with their first TLP, Auger. That left here in '93, and at that time we were negotiating with Shell for the Mars project, which would be the first of several TLPs, plus different design than Auger. It took a lot of lessons learned.

While Auger was a technical success for us, financially it wasn't so. So at that point, Shell realized that a new methodology in management between them and the contractors needed to take place. They called it risk sharing, team management. Norm Moore [phonetic] was also selected project manager, so we went from having an adversarial relationship to a team-building and risk-sharing agreement. I actually sat next to one of my counterparts on Mars as we constructed that project. So it was a huge turnaround.

In fact, I mentioned to some of my Shell friends that I go to One Shell Square and on one floor you need to bring your bag of rocks going to talk Auger, and you went on another floor where Mars was it, you were going to a team relationship. So it took a while for that thought process and for everybody to get on board to do it. I want to say it led to a lot of success for us and Shell through the nineties as we completed their topsides.

JT: Let me mention one thing you said and then back up maybe ten years a little bit. You said it was a technical success but a financial failure for "us," meaning McDermott or for the team?

DW: For McDermott.

JT: And for Shell to some degree. It was very expensive, over budget?

DW: Well, it was a lump-sum project, okay, so Shell didn't see the overruns that McDermott did. Now, how we impacted Shell was we also didn't meet schedule, so we delayed their project by six months. Now, we're not responsible for those consequential damages, if you will, but I'm sure Shell was impacted. Their drilling program, bringing the oil up was all delayed because we failed to build a structure on time.

But both McDermott and Shell took the lessons learned from Shell, and Shell redesigned it. For instance, they did away the box-squared and [unclear]

construction, went to different-type designs, and the thing was they brought us in and we did a lot of constructability to make it as fabricator-friendly as we can. We wanted a contract where anybody on a team could make a project decision that would be Best for Project, and everybody would share in those gains or losses, if you will, for the project.

JT: The Alliance Agreement.

DW: That's correct.

JT: Let me back up maybe to the era of Cognac. You talked about forecasting. One of the questions I had on a list was about McDermott foreseeing the coming of deepwater activity. If you've got an oil bust in the early eighties, you've got the death, so says, of the shelf activity, and then you've got a big structure like Cognac and two or three others, how did McDermott foresee the coming of deepwater activity? When I say that, I'm talking about project planning, engineering workforce, the actual facility. Walk me through how like maybe in the mid eighties when you had that downturn and looking at what happens in the early nineties, how did McDermott prepare for that?

DW: Okay, I'll do the best I can. Again, as a contractor, we try to react to what we think the market's going to be, and we need our clients to tell us that. Hence, the top-size buildings erected in the early seventies. By the early eighties, you could see that the market was going to drop due to activity, but the only thing you could do was constrict layoffs, get new equipment, and then you looked at how are you going to adapt.

The oil companies themselves led the way with a new technology for drilling in deepwater, producing in deepwater. Now, without that technology, the yard probably would have been closed. Now, what we see here on the topsides is not new equipment. All that new equipment is under water, which here in this yard [unclear]. Now, McDermott may have some engineering, for instance, may see that subsea work, that we have a subsea group. But here in this facility, we don't see that technology. It's all under the structure, if you will.

JT: And you guys are over the water.

DW: But that new technology allowed the floaters and the topsides equipment to be required, and, hence, we adapted to those new topsides, which were modules. So we adapted our buildings to build some assemblies in lieu of a structure and bring them out to an erection site.

In the sixties and seventies, our rolling capabilities meant a lot to us as the jackets and piles were all tubular goods made from plate. Now, with these new topsides, you don't need tubules. So our West Shore facility has shrunken a lot. You don't need it as much. So that market decreased. So we went from a jacket

builder, if you will, to topsides builder, because that's where the activity was, and we adapted to meet the needs of the market in that respect.

JT: So it's more sophisticated engineering for these topsides?

DW: Absolutely.

JT: Did that require a different kind of skilled worker?

DW: I want to say no. We still cut, fit, and weld steel. It's just that the structures got bigger. So we needed to become more sophisticated in our scheduling, because in the old days you got a set of blueprints, you gave it to one of our superintendents, he flipped through it, and he knew how to build it in his head. Like Auger was the first time I saw that. No one guy can do that. So you needed sophisticated scheduling in order to get a grip on where you were with respect in the schedule. I mentioned our forecasting. What I meant was forecasting how we're in financially and forecasting schedules. As a project manager, I want to have a good grip on cost and schedule, because I've got dual responsibilities. I've got to let my boss know how we're doing. I've got to let the client know. Project controls, which is cost and schedule, is there to help me with that.

JT: So yourself in place, which your counterpart, Dwight Johnston [phonetic], on Mars—

DW: Correct.

JT: —is that what you mean by more sophisticated scheduling by bringing in the actual customer's project manager and working with them to make that scheduling more sophisticated, more on time?

DW: By forming a joint team, it increased communication, it increased your problem-solving abilities as a team. By the time of Mars, we're already using scheduling. In fact, I want to say Mars might have been our first project when we went with a dedicated schedule on it. When we formed the Mars team, typically each contractor had a [unclear] from the client.

We brought on a scheduler, and I remember our first presentation of the schedule. I think we impressed Shell. They liked the schedule. They liked the individual we had doing it. They elected not to have a counterpart on it, which, to me, was a victory. We'll learn and work together. That individual, Jim Robinson, still works for us. He was my scheduler on Mars. And, again, we go into our scheduled meeting. It'd be the contractor and the client. No surprises. Everybody know what we were doing.

JT: Did that evolve from Auger or further back maybe with some of the big stuff like Cognac, or was it a gradual thing?

DW: In the mid eighties we started with a scheduling department and it was a paradigm shift to get the superintendents on board.

JT: Why was that? Because of the mentality?

DW: Right. Now, the new generation, the [unclear] we have now, came up doing schedules, so they are on board. So one of the things on Auger, we had a scheduler and realized we needed one because the project was so huge and so complex. On Mars, I want to say Mars was the first project we went into the project with a dedicated scheduler, and I'll never do a big project without one.

JT: So this is a daily schedule of engineering, construction, load-out, all the way through the life of the project?

DW: Yes, it's a schedule from contract award to load-out, and a lot of effort, a huge effort is put into it. Output is only good what you put into it. Now, we work our schedules hard. My last project as a project manager was Ursa Princess [field] waterflood for Shell. I had a weekly schedule meeting. He wanted to discuss why we were a day late here. It was to discuss that we had a good schedule and what's impacting us. I invited my client to sit in with us, because he's delivering equipment to us. I want the client to understand why I need his equipment on a certain day to keep the fabrication going smoothly. That was a success. Every week, we progress once a week, and that progress was put to a schedule, and it lets us know when an activity is falling behind or not. Typically, on Thursdays the output is generated, so we have weekly production meetings on Thursday to look on fresh data on what the schedule's telling us. So scheduling has been a huge success for us, and we'd really gotten to that in the early nineties.

JT: So what we're really talking about, Denis, is managing man-hours, is that right?

DW: That's correct.

JT: Tell me a little bit of difference how McDermott and the superintendents managed man hours in the fifties, sixties, seventies, eighties, and how they managed man hours in the nineties.

DW: When I was a young production engineer, we had no sophisticated scheduling. Again, the structures were a lot simpler, and a superintendent can flip through a set of drawings, and he knew how he'd build it in his head. As a production engineer, my client would want a schedule. Back then we'd take one sheet of paper, we list eighteen or twenty activities, and we'd put some tape on it over time. I'll have to beg a superintendent to sit with me to help to determine what that duration was. No logic in the schedule, meaning that this one had to be done before the next one could start. Those are simple bar chart, and that's all it was.

Again, with Auger, a huge, complex structure, more sophisticated scheduling was needed. That superintendent couldn't flip through that drawings and know every little detail on how to erect it. So we came to depend on a schedule, and the generations of superintendents we had then, it was a hard shift for those guys. The new generation we have now, they grew up scheduling.

So back in the old days, we were on a project and I'd go ask the superintendent, "We going to make this load-out date?"

"Well, it's going to be tight." If he was really concerned, "Well, it's going to be tight, tight, tight."

I could go to a scheduler and says, "Now I have data." This is the superintendent. "We're minus five on this activity. We need to react to it." More people.

JT: Over time.

DW: Over time, or what. Typically, like on Shell, we came to agreement with our client that if we had activity went negative five, well, that meant you worked overtime and weekends. That meant more money, but we shared in that. But we had to set up guidelines on how to react to the schedule. The first thing we'd say, "Minus five. Do we think that's real or not? Okay, let's look at activity and our logic. Yes, you know, if you don't do this now, you're going to be negative five." So it allowed the teams to react in the right way, and in the end, it avoids panic at the end of the project.

JT: Did you guys use that reacting to schedule in Auger?

DW: In Auger, I want to say no. Again, it was before the team-based relationships. I'd say no, but the difficulty at building a nose in a box beam is what cost us money and schedule, and huge learning experience, again, which drove Shell to introduce the team-based concept. We liked it.

After Mars, I moved on to a Chevron project, and I used a lot of the things I learned from Shell on that project. In fact, my counterpart, Rick Burtwell [phonetic], who's actually an Exxon hand—Exxon was a partner with Chevron—he was a designated site rep, put him in the building sitting next to me, and he was so impressed that what he did—let me go back a minute.

What we have here in the yard is a Wall of Fame, where you could nominate an individual for different things, like for safety or being a quality individual, a services award. One of those awards is exemplary leader. I won that award one year while on that project, and come to find out it was the first time I wasn't nominated by a peer in the company; the client nominated me for it.

JT: This is for Chevron?

DW: Chevron Genesis project.

JT: Where was that? Was that in the Gulf?

DW: Yes, it's in the Gulf. It's in some of those pictures I showed you. It's the one I told you where we used the Shell [unclear] in lieu of skidding. So learned a lot from that.

Unfortunately, I think Shell has shifted away from it in the 2000s. Sorry to see that go. But, again, I had a good opportunity on Mars. It was a huge paradigm shift for me. Shell taught me a lot, and I'm trying to carry a lot, as much of that forward as I can.

JT: Yes, that's really good stuff. Now, I've talked with a bunch of Shell people about this, but no one has gone into great detail about what was kind of the actual process. Most of what they talk about is building the trust amongst the individuals and how for fifty years the industry worked like this and then suddenly it's working like this.

DW: Like I say, I went from Shell Oil. We were throwing rocks at each other. I remember at Shell we had a huge learning experience with passive fire protection, which is a coating you put on the structural members. Tough lesson learned. I remember one of the Shell guys saying, "Well, all you got to do is fly in some crews from Europe to do it for you." As long as they were spending my money, they had all the answers.

Well, on Mars, it was our money. So one of the first thing we did on Mars was set up a team to let's list all our lesson learned with passive fire protection, and it ain't going to happen on Mars. That was a huge success. We had Shell people. We had McDermott people. We brought in a subcontractor who was going to spray the fireproofing. How we going to do it this time? That was a huge victory. Not once was passive fire protection on a critical path on a project.

JT: Interesting. Give me some more examples if you can think of any.

DW: Constructability. We'd send out people to their designers, and we'd work with them as we're going through the project. In their power module, which is where they generate electricity for the platform, there's a major control room. Typically, they sent a building to us, and we just put it on a platform and do tie-in. For the TLPs, they were built into the structure. So right away, I knew the critical path to this project would go through that room. We need to build that module first, get that building erected, so then our contractor can do the outfitting inside. Shell had it designed, tying into all the structural members. I says, "Okay, we can cut schedule if you build it not tied into the main trusses. Don't do that and we can build faster." And they listened to us. So constructability was a success.

I sent superintendents, engineers to their design in New Orleans to flip through drawings in the early stages. Why this? Can we change to that? So it became more fabricator-friendly.

Our weekly production meeting used to be all McDermott. "Here's where we at. Let's get our stories straight to go tell Shell." It was all in one meeting.

One of the things I told Shell was, we negotiating more. I was going through our man-hour charts on Auger, showing them the overruns, flipping through it, and I said, "If I'd have showed you this while we were building Auger, they'd have run me off." But I says, "We're going to have one set of construction management tools. When I get the data, you're going to get the data." One set of data. The team is managing from one set of data. No secrets. It's out in the open. Shell, you may see some of my dirty laundry. Bear with me. If I have a problem, I'm bringing to you, because I can't solve it. Help me solve it."

JT: This had never been done before?

DW: No.

JT: This is all great stuff, Denis. Tell me about how you personally first came to find out about this new contracting alliance strategy. Tell me what your opinions were of it when you heard it, and tell me maybe some of your first moves in trying to adapt to it.

DW: Again, in summer of '93, I'm working on Auger as a senior project manager, erecting the platform. I learned something about fireproofing, erecting a huge structure. Moss gave me a call one day and said, "I want you to go over to estimating and get them a hand with the Mars proposal. They got two days to send it in, and they're behind."

Man, what can I do in two days? So went in and they were turning the Mars proposal in and were dragging and dragging and dragging, and I remember that. Well, we ain't going to make the deadline. So we got on the phone, called Shell, says, "Do y'all have a helipad top of One Shell Square?"

"No, but the New Orleans Heliport," which is now where the Hornets basketball is at, "is right close by."

"We have to fly in to you." So my role in the original bid is that I took the package at three o'clock one afternoon, got on a helicopter here in Morgan City and flew it to that deal. We had a guy from McDermott pick me up from 1010 Commerce Street, brought me to One Shell Square, and I went up and I delivered it.

JT: On time?

DW: Brought it on time. Then it looked like we had an addendum to do for a week, for about two months, and I was involved with that, in the addendums. I remember talking to Joe Kramer [phonetic], who was their head purchasing guy, one day, saying, "Joe, I really hope Shell don't throw us out because we misunderstand what you want from us."

Says, "We don't know. But here's what we trying to do." So the saying was this was a contract of intent. This is what we want, and we think we're complying.

This was in July when I took the helicopter flight, and I want to say around October they awarded it, and we got all five modules, and I was selected as project manager.

JT: Why was that? Because of your past experience?

DW: Probably, yes.

JT: So at that time, in October, had this alliance been formed yet? Had anyone been talking about it?

DW: It's being talked about, but not formed yet. So right off the bat, I'm introduced to something new, called a steering team, two McDermott vice presidents and two senior people from Shell, and Dwight and I were their guinea pigs. "You guys report out." We did this every six weeks through the life of the project, so they could get a feeling for how we're forming the project. First thing we did, once we selected the team members, both Shell and McDermott, we had three days of teambuilding.

JT: So this was something that must have come in a packet form that explained to you how to do this, or you guys came up with the steering concept on your own?

DW: I think the steering-team concept was used before. McDermott and Shell upper management just wanted to keep their pulse on what direction the team was going and help steer us, if you will.

The team-alignment concept, again, Shell knew what they wanted and we wanted to give them what they wanted. It was pretty much learn as you go. So we start off with three days of team-building, something I never been in before, and we elected that the team would all sit in one building, something never done before.

JT: When did you meet Mike Cushman, or when did you become aware of his association in this project?

DW: Right around award when we had the first steering team meeting, he was a facilitator. I remember Mike telling me one day, "Denis, you need to broaden your horizon."

JT: What does that mean?

DW: That means I need to start thinking to the future, not the past. I still remember him telling me that, and I still use that. In fact, I use it every now and then on

some of my guys, like Bubba Neesat [phonetic], been working together for thirty years. "Bubba, you need to broaden your horizons."

Again, I learned a lot. It was a lot of hard work, but a huge learning experience that I've taken forward in the last fifteen years.

Again, in '06, did the Ursa Princess, only about 2,000 tons of topsides. By then, Shell had gone away from the team concept, but I communicated as much as I could with the client, because scheduling. I got the guy, their site guy, in our meetings, gave him one of my [unclear]. Typically on these structures, the client furnishes the equipment that we put on topsides and we do the inner connect. So we have need dates. So first thing I want to do is, I want you to understand why I need it on that date. If I don't get it on that date, I can't continue my erection of the deck, and I'll impact it. On the other hand, I'm not going to tell you I need it two months earlier, make you pay overtime to get it to me, then it sits.

JT: There's the cost-risk management sharing.

DW: Right. I want you to understand when I need it. I remember sitting with one of the McDermott design engineers, and when I gave him my need dates for the equipment says, "Okay, I got your list, but when do you really need it?"

So communication was a key part, and, again, Shell Mars was a tough job. It was a huge learning experience for me. In fact, we had meetings after meetings, team-building, group, these kind of meetings. Some of the McDermott folks says, "Man, we got these meetings. We ain't get the job built," type of deal.

I mentioned that to Dwight, and I'll never forget he saying, "You get work done in meetings." So meetings has got to be a necessity. You got to have your act together, you got to be run properly, and decisions need to be made. And we made a rule: If you're invited to a meeting and you're not adding value, get out; go do what you need to do.

JT: When did it become apparent that in addition to the meetings, the team-building, the steering, that there was going to be a risk-sharing component to this project? When did you become aware of that, and what were your thoughts on that? I mean, that's something completely—

DW: The risk sharing was in our original contract. We pretty much developed unit rates for different components of the work scopes, and at bid time you may have an idea, for instance, may have an idea that there's 1,000 tons of structural steel, and we need 80 man hours a ton to build it. When the actual drawings come out, it might be 1100 tons. In the past, that would be a lump-sum change order. You bid the [unclear] change, we need more money. Here it says, "Okay, Shell, our target went from 80,000 man hours to 88,000." That's the AFC target, and then the risk sharing came in is that if we came in under that 80,000 man hours, Shell would pay us for half the man hours we didn't use. But if we went over those 80,000 man hours, they would only reimburse us for half of it. So if we did well, they gave us a 50 percent bonus, if you will, on man hours we didn't use. If we

overran it, we didn't do a good job and overran it, Shell's not going to pay us for those man hours. They'll only give us half of it. So there's the risk sharing. So Shell had an incentive to keep the man hours low. We had incentive to be productive.

JT: How did that equate and transform the yard, the yard superintendents, the leader men, and the actual men who are welding, cutting, and fitting this thing?

DW: To the guys on the front line, probably not a lot. Okay, again, you still got to cut, fit, and weld it. Now, where your efficiencies came into was your upfront constructability, the fabricator-friendly, you know, less man hours to do it this way. So the superintendents had a hand in saying, "Well, I could do it better and quicker this way if you change your drawing." Well, that gave Shell incentive to change the drawing.

JT: Whereas before, that would have been like pulling teeth, right?

DW: You got a lump sum, you bid on it, go ahead and do it. Or, "Okay, I'm going to change my drawing, but I want a credit back." So you'd get in those kind of negotiations. So when you get to the targeting process, of course, the superintendent wants to know how many man hours he has to do the work, scheduling develops the histograms so we can see how we're doing with respect to man hours needed to what we got on the work. For instance, we go in a meeting and, again, Shell and McDermott, "All right, we're supposed to have fifty men a week right now. I've only got forty. What's the deal?"

The superintendent said, "Well, I'm having trouble getting people," or, "Are y'all sure the schedule's right? Because I'm working all the people I can." It's an indicator that needs to be focused on. It's a tool. It's just a tool. Let's see what the tool's telling you. Or you say, "That's schedule, we can't do the schedule. We need to revise it." We call that a legitimate schedule change. You shouldn't change the schedule to make negative float just go away.

JT: To make what?

DW: Negative float. You know, we tended to not want to show the customer we're behind, so you might want to finagle with the schedule. I like using negative float to get action done. "Mr. Superintendent, you're behind over here. What are we going to do?" Or as a project manager, I'm competing with other project managers here. "Hey, we're more negative. We need to concentrate resources here." So the general superintendent's got a real balancing act to do with resources between projects.

What we had on Shell was, was a commitment that, okay—and in the past, that general superintendent could move people like he wanted. The commitment we got from the general superintendent on Shell was that he's not going to take people off unless the team said it was okay.

JT: Who was your general super on the Mars?

DW: At that time, it was Dan Pateraeu. He's retired now. In fact, lives right across the bayou. His son is our rigging superintendent, Jeff Pateraeu A lot of family here. On that side note, told you my dad retired from here. One of our senior estimator's downstairs dad also retired from here. His dad and my dad worked together for forty years.

JT: How do you spell Pateraeu?

DW: P-a-t-e-r-a-e-u. Pateraeu, local family here, and Jeff's a great rigging superintendent. I completely trust him.

That's my dad and that's [unclear].

So, again, I'm a contractor. What I like working here is when I'm finished building something, it goes away. I don't have to go from site to site to site. So that attracted a lot of people in the area, a lot of family. Most of my folks here are local. Not everybody in my production and engineering staff is a degreed engineer. We don't design anything here. I'm looking for construction management expertise. So we got some engineering technology grads. We got some construction technology grads from LSU [Louisiana State University]. We might have one or two business grads doing this. We got a couple of blue-collar folks come up through the ranks, highly technical, who absorbed and doing a great job. So we got a mixture.

JT: How did those folks, those traditional folks, like the yard superintendents respond to these meetings? I can picture what you're saying. You guys build things, and here you are in these meetings and trying to be productive with a big project on the line and time-sensitive, and I can see how from a perspective of someone who's used to hands-on building things at these meetings have got to be seeming to hold you back.

DW: We don't want to have an excessive meetings. They got to be meaningful.

JT: This is back to Mars?

DW: Right, back to Mars. Again, I tell you I'll never forget Dwight Johnson saying, "You get work done in meetings." It made me realize that I need to be a better meeting organizer, planner, and facilitator.

JT: Did you have help with that?

DW: Learned on the job. We've got some courses here that'll help you with it, but mostly learned on the job. Again, as a project manager, you got to get things done and need to do it to get things done. Once I had one of the guys next door

say, "Damn, Denis can run a meeting." But, again, you get who you need in the meeting, you need to establish what you're trying to accomplish, you discuss it, then move on, and then typically, like on Mars, I'd end the meeting by telling the guys, "All right, we ain't getting these modules built sitting in here."

JT: At the beginning when you and Dwight formed your own individual teams, he with Shell, you with McDermott, was there a communication between the two of you on who y'all would choose individually?

DW: Yes. Some of that was done—I had my team nominated, he had his, and, for instance, what these guys are going to be pairing up. Here's my electrical coordinator. Here's his guy. Those guys are going to work together. You sit them next door [unclear].

JT: You and Dwight were probably writing on a board putting names down, huh?

DW: And I still remember Dwight and I showing to the steering team what that org chart looked at. In fact, we had the direct team, then we had the other McDermott support, like the regular superintendent who worked all the jobs. At the time, my dad was here, welding superintendent. He was down at the bottom, Denis Weber Sr., welding superintendent. I still remember to this day presenting that to the steering team, and Gordon Sterling was on that team. He might have been over Dan Godfrey at the time. So we took a break and he comes up, and he's looking over his glasses, and he says, "That's your dad?"

I says, "Yes, sir, it is."

So he says, "I'm at the top with Dwight. Dad's down here in a support role. So how's this working out?"

I says, "I haven't had any problems with him yet." And he laughed and laughed and laughed.

JT: We spent about three hours at Gordon's house, a pleasant man to meet, to talk to.

DW: Yes.

JT: Tell me a little about histograms, and then we'll get into the load-out phase to see how all this applies to the actual load-out, and then maybe we'll wrap it up with a few other two or three questions.

DW: Okay. Again, as the structures became more complicated and we went to sophisticated scheduling techniques, right now the software we use is Primavera. We've got individuals assigned who know Primavera in and out, and it has logic, so we've got bar charts with logic creating the schedule. Superintendents play a part. We break the structure up. They determine the durations. By doing that, they become an owner of the schedule.

JT: So Primavera came out with Mars?

DW: I want to say no. At first in the late eighties, we're using Artemis, went away from that, I want to say in early nineties to Primavera, which is just another scheduling software.

JT: So putting all the data from the meetings, from the actual stuff that's going on in the yard and putting into a software and having it give you information back.

DW: Primavera's a scheduling software. You put in activities. You put in a duration for the activities. Then there's different logics you could put, okay, like "This activity can't start until this one's done." So if you're not part of this one and this one's enough, this one will slide. Or you can start this one with a 50 percent lag. Different types of logic which our schedulers know and our engineers know, and so the yard, the production engineer and superintendent, has got to give that to the planner to develop a schedule.

Then when we think we're done, we have a schedule validation exercise. "Here's what we did. Here's what output is telling us. Let's look at it again." Because once we say, "This is it," we're going to follow the schedule, and if it says you're negative, you're negative. So we develop a schedule with the superintendents. Again, that's important because we get buy-in from the superintendents.

Then once we go live with it, we progress that schedule every week from observe progress. So if you're not getting enough progress on activity, it will tell you whether you're plus or minus and you need to react. In addition, we can load each activity with man-hours. You said this activity takes ten weeks, it's 5,000 man-hours, it's 500 man hours a week. You can create a histogram. Now, I can track actual against that number. "We said we were going to spend 500. We're only spending 200. What's the deal?" And once you get it created, you can slice and dice it any way you want. You could show shop activities. You could do a structural-activities-only histogram, a piping histogram, E&I, the entire project. We typically report on all of that monthly to the client. We can show them S-curves, histograms, for overall, by discipline, by component.

JT: Was this something that Mike Cushman and his group was directly involved with in bringing here?

DW: No, no. We already had it here. What the team concept generated was the teams are going to have one schedule. We're going to have one set of construction management data. When I see it, you're going to see it, and we're going to manage from it. That was the breakthrough.

JT: Instead of having a McDermott schedule and a Shell schedule. Cushman was bringing those together.

DW: In the past, we go do a schedule, take a look at it, and says, "Well, we don't want to show them this. We're going to make this negative float go away, and then we're going to meet with the customer." It was live data. I remember telling Dwight, "You're going to see it when I see it." One set of books.

JT: How did you like sitting next to him every day for two years, like you said?

DW: Huge learning experience. Very bright guy. Really encouraged me to think outside of the box. Really enjoyed it. Got to meet his family and all, Mary and the kids. He lived in Houma for a couple years. I think Dwight's still at One Shell Square.

JT: Actually, last time I met with him, he was up in Robert at the training facility. I think he was involved in that as well.

DW: Maybe giving a couple of seminars.

JT: Yes.

DW: I talked to him maybe a couple years ago on Mars. His youngest son was only five or six at the time, and I think a few years ago he was trying to do a bicycle trick, flipping and whatnot, and he fell and impaled himself on a handlebar. The handlebar went through his abdomen. So I called Dwight to see how the boy was doing. So that's been a couple years.

JT: But he talked about, and many of those guys talk about that, when you open the door to go to work, there's your counterpart sitting there, and how strange that was and how different that was.

DW: It was.

JT: And when other vendors would show up and go, "Hey, I'm here. Where's the McDermott or the Shell people?" and there really wasn't a distinction. That's at least what the idea was.

DW: One of our major things we subcontract is E&I, and we used Seco [phonetic] on Mars. They sat with us too. So, again, the paradigm shift was joint management, time-now management, of the project, and what enabled that was risk sharing. I remember typically we have scaffold man-hours for structural. When we had a pipe erect company, they'd have scaffold man-hours, and the E&I contractor has scaffold man hours. Well, we came up with the idea, let's hire one scaffolding company that's going to do it all, but each group had to give up their scaffolding man hours. When I brought that to Dwight, he saw that as a breakthrough on us, starting to think project, Best for Project.

JT: What does E&I stand for?

DW: Electrical and instrumentation. I'd say probably on a typical topsides, 60 percent may be structural, may have another 25 percent of interconnect piping, and 15 percent would be the electrical and instrumentation. Again, both piping and electrical and instrumentation is going to connect. The client typically gives us their equipment in modules, you put it on a deck, and we run the interconnect piping, connecting them all together. Then electrical and instrumentation does the same thing. Mike didn't bring the scheduling activities to us; Mike was a champion of the team concept.

JT: Best for project.

DW: Best for project.

JT: Not best for McDermott or best for Shell.

DW: Correct. Again, Cushman facilitated the team-building meetings once we kicked off, and then the periodic steering team meetings, which was about every six weeks. So he acted as a consultant to upper management, if you will, on that project. I've seen Mike a few times since then. I think he's still doing a little consulting. He's probably retired by now.

JT: He's actually still going at it. His big bread and butter for years, the way I understand it, was defense contracts.

DW: At the time, he was in the reserves. I think he retired.

JT: He was in Iraq in the Gulf War.

DW: Yes, he was recalled for several months, and I thought he was working at the Pentagon. So he's a retired general?

JT: Brigadier general, yes.

DW: He's retired from teaching at UNO, I think, and he has a consulting business.

JT: Yes. He was a difficult guy to interview at first because he was very suspicious about my intentions with him, with his involvement in this, and you can see why from a legal perspective, I guess. But once he opened up a little bit and he understood that what he had to offer was important, was valuable to the history of this industry, he said—and I asked him, I said, "What do you think the role of this contract alliance was in making deepwater possible?" And he says, "It wasn't *the* major thing. There were many major things, but this was a key component." Without building that relationship between two big giants, Shell and McDermott,

Ram-Powell, Brutus, Ursa, Na Kika, those projects may not have happened the way that they did, and then the influence into Chevron, BP, Exxon, bringing all of what we're talking about together to make deepwater cost-effective, make it possible.

DW: Yes, because it's a huge undertaking by the oil companies to invest in one of these, billion, billion and a half dollars. Again, the thing that still amazes me is that their geologists know with a certain degree of certainty that there's that much oil down there. "Yes, we're going to spend a billion and a half dollars before we get a dollar back." Wow.

JT: How did all of this apply to the load-out? You guys had done it at Auger. What changed from Auger to Mars with respect to scheduling, team-building, risk sharing, those types of items?

DW: Again, the openness and the team concept of management and the Best for Project concept. Before it would be contractor's out for himself and the client needs what he needs. I think Shell foresaw that. Several more of these were coming out and they needed an alliance going to assure themselves they were going to get what they needed to develop their clients and their shareholders.

Now, when it came to load-out, load-out's just another one of the functions that one day you're going to finish and you got to get over the bulkhead so it can go to the next phase, whether it be integration installation. But the team attack load-out, just as any other phase, a group was responsible for it. They took a look at the barges that were coming in. We discuss how we're going to load it out, and then we just execute it. Actually, load-out was a minor part of the project. You got to do it properly. You got it plan for it properly. The Auger load-out was successful. So were all the other Shell TLP load-outs.

JT: Then take this Mars experience and apply it to the next one for you. Would that have been Brutus or Ram/Powell?

DW: After Mars, I was taken off of the team and I was put a head of a project for Chevron, Genesis, which was about 10,000 tons of topsides for Chevron, and I tried to bring to that project as much as I learned from Mars. When I set up shop, so to speak, with my team, I invited my client to sit next door to me, and he did.

JT: So they were receptive to the idea?

DW: Yes. I had joint meetings with them. And, again, that's the guy who nominated me for the award I got. So I want to say Chevron was pleased with what we did with that topsides.

From there, let's see where I went after Chevron. I went to Kerr-McGee, and they had two platforms coming out, Boomvang [phonetic] and Nansen [phonetic]. Again, I tried to bring as much as that as I could, but their site guy

was a guy in his early seventies from the past, and you could only do so much. But I did invite them to our weekly production meeting. I want to say Don Waterman [phonetic] at Kerr-McGee, which is now Anadarko, was pleased with what the fabricators did on that project.

JT: What about the industry at large, as far as—I'm sure in the '93, '94, '95 as Mars is moving to the phase of completion, that people in the industry are starting to get wind about the changes that are happening at McDermott as far as what we're talking about. How was the industry at large understanding what you guys were doing? Were they laughing behind closed doors? Were they trying to take a look? Were they curious? Were they asking questions?

DW: I guess everybody wants to get their foot in the door, and let's give credit where credit's due. Shell realized they had a series of structures coming out, and they knew the infrastructure here, that McDermott would be a prime candidate to fabricate them one after another. "How can we create an alliance with that supplier? What I need to make it happen?"

I'll never forget Dan Godfrey saying what he wanted the contractor to do, and he said he wanted the contractor to make a profit. I'll never forget that. Now, how much of a profit is agreeable between the two, well, that's a start. Just him realizing that I needed to make a profit moved us forward.

JT: That was something different. There's always been animosity between operator and contractor.

DW: Right. Now, on the flipside, they need to integrate these hulls, and they formed an alliance with Kiewit, who already had a stiff-leg and a deepwater port to bring the TLP in through to accomplish it. So, again, they don't want to create a contractor who's the only one who could provide you with a product. The price would go out of sight. While we competitively bid for Mars, we saw that if we executed schedule and give the client what he wanted, he'd come back, and it happened.

JT: What about Mars B? Is that alliance idea still in place? You mentioned how you since then have tried to implement what you learned, replicate what you learned.

DW: As much as I can.

JT: What about with Mars B coming on? I know after Shell group came in and took over, there's been a whole bunch of changes there.

DW: Shell has changed. A lot of what the [unclear] rules from Congress and the corporate purchasing mandates, you really can't just sit down and negotiate with someone. They're all going to want competitive bids. But I would think what we would take into Mars B is the team concept to a degree, the joint management

with one set of data to a degree. Rick Johnson, who worked on a couple of Shell projects, is helping with our estimate and would be on that project should we get it. So there's more details. That bid has been in house for about a week now. But Shell knows we can do it. They know our expertise is still here. A lot of the same people are still here. But Shell themselves are restricted to a degree. And not everybody with Shell was in alignment with this team concept. I remember one guy who was not in agreement believed that when you go to a fab yard, you got to have a dictator running that yard who can make the decisions.

JT: Was he somebody who worked on Auger?

DW: He wasn't allowed to. Wait, wait. Auger, yes. Mars, no. Mars, no, he wasn't allowed to work on Mars.

JT: I think I know who you're talking about.

DW: Okay. So you got to buy into it, and, again, Best for Project was one of the mottos. Contract of Intent was another one of the mottos. A huge paradigm shift. Dwight wore me out, but I grew a whole hell of a lot, and I owe it to Shell and I owe it to McDermott for letting me do it.

JT: That's a pretty good place to end. When the paradigm shifted, often there's a period and then there's a struggle to shift it again. Has the culture of McDermott continued along that path of what Shell taught you and what you guys learned from Shell, or has it begun to move away to something else?

DW: Yes, we all learned from it. We communicate a lot more within the McDermott world here. A lot of the craft superintendents in the Mars days fifteen years ago are still superintendents we have, so they work good in the meetings with the clients. We communicate a lot better with our clients. So I want to say it has benefited us overall.

JT: Yes. Great, man. That's perfect.

DW: All right.

JT: I'll turn this off.

[End of interview]