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Interviewee: Koomey, Paul
Interview Date: October 6, 2001

OFFSHORE ENERGY CENTER

ORAL HISTORY PROJECT

Interviewee: Paul Koomey

Date: October 6, 2001

Place: Houston, Texas

Interviewer: Tyler Priest

Side A

TP: Let's start at the beginning. Tell us a little bit about your background, your education, and how you got into this industry.

PK: Well, I was born 74 years ago today.

TP: Happy Birthday!

PK: Today is the 6th, isn't it?

TP: Yes.

PK: Well, I went to A&M. I started there in the Mechanical Engineering program in June of 1945. In 1947, the University of Houston was just starting their football team and I later transferred there.

TP: Are you originally from Texas?

PK: No, I was born in Worcester, Massachusetts.

TP: Oh, really?

PK: Yes. When I was about five years old, my father died

suddenly, and my mother had three little boys to raise. She had relatives in Texas so we moved here. The cost of living was much lower.

In 1947, I believe, the University of Houston had just started their football program. My high school coach from Lamar was made Assistant Coach at U of H and I was given an athletic scholarship. I graduated from U of H with a B.S. in Mechanical Engineering.

TP: What position on the football team?

PK: I was a guard.

At that time, I was roustabouting for Gulf Oil Company in Pierce Junction. It was difficult to get a job at that time. The war was over and there were a lot of people in the industry. The superintendent at Pierce Junction wrote a letter of recommendation for me to Joe Russell who was Vice President of Gulf. The idea was to see if I could stay on in some capacity with Gulf since it was just a summer job.

They had an opening in South Louisiana and I took it. In September of 1949, I drove to Triumph, Louisiana, near the mouth of the Mississippi River and started working in

the roustabout gang in offshore fields. In Louisiana, Gulf Oil operated under the name Gulf Refining Company.

I worked in Grand Bay, Quarantine Bay, Lake Hermitage, West Bay and places like that. I roughnecked on a steam rig in all those different bay areas and ended up in working at Lake Hermitage.

Our barge steam rig was floated up the Harvey Canal to be completely reconditioned. Jim Ferrell, a Gulf engineer, and I had lived in the bachelor bunkhouse in Triumph. He was transferred to the Gulf Harvey office at the same time our rig moved there.

Bethlehem Supply had rooms on the second floor of their supply store for people to spend the night when visiting from Houston. They were vacant much of the time so Ferrell and I stayed there. We were only supposed to stay there for a day or two but we ended up staying over six months.

Jack Crunk, the store manager, was going to throw us out but Jim would give him parts orders from Gulf from time to time so he let us stay and the Bethlehem people from out of town stayed at hotels. About 30 years later, Jack ran the Gretna sales office for Koomey Inc.

My back was getting stronger and my mind was getting weaker so I left Gulf and took a job with the Alemite Division of Stewart & Stevenson in July of 1950. C. Jim Stewart, II hired me. I started out driving a truck in the parts department of Alemite Co. of the Gulf Coast which was a division of Stewart & Stevenson. Jimmy told me, "since you're a college man, instead of seventy-five cents an hour, we will pay you eighty-five cents and hour." I was getting about three dollars an hour on the rig so it was kind of a letdown but I thought I had an opportunity there.

After nine months of working in the Alemite Parts Department and driving the truck, they moved me into straight commission sales. I was reserved and quiet at that time and they had given me a territory with really not much in it. During those times, they would give a new salesman a $250.00 advance against commission, but they would not give it until the end of the month. After a couple of months, I ended up owing them money so I really buckled down and started to make some sales.

I remembered how we operated the blowout preventers on the steam rig in Louisiana. We had a big Wilson Snyder steam pump and had to open and shut the BOP's with water or drilling mud. While working with the Alemite

products, I became familiar with Alemite's industrial heavy duty air-operated plunger pumps. I asked Jimmy's boss, Ross Stewart, if I could build a closing unit on speculation and he said, "No, you keep selling those Alemite products."

I called on Carl Vogt who was the vice president of Shaffer Tool Works in Houston and showed him how we could close their 6[11]-5,000 psi ram blowout preventers in seconds. He said, "Well, son, if you can shut that preventer in six seconds or less, I'll buy one." We did and I took the order back to Alemite and they let us build the first BOP control unit. Shaffer sent it out to West Texas to Sam E. Jones Drilling Company and they liked it. We tried to get Gray Tool to sell our design and they sold one to John Mecom and dropped the project.

We tried to get Ideco to sell it. They called it an Ideco Multi-Powered Closing Unit. Sales didn't get off the ground and I had to go into the United states Air Force in 1953.

Just prior to going into the service, I wanted to get patent protection on the idea. Ross Stewart suggested I write it up, make a drawing and send it by registered mail to myself *(see photo A).* He said I should keep it

sealed and then if anyone patented something like it, I could give the sealed letter to a judge to prove I thought of it first.

My contract in the USAF was for two years. This was at the end of the Korean conflict and Eisenhower was President. The Air Force budget was cut drastically and they asked us to sign up indefinitely or be considered for early release since they had no funds to continue our training. I didn't want to stay in the service indefinitely so I was released early.

I came back and got things going again. I figured out that if I wanted to sell these closing units, I'd have to do it myself.

TP: Was there a special kind of system for shutting it off?

PK: I used modified Alemite heavy duty pumps in a reservoir with valves and so forth to close the blowout preventers rapidly. At that time, we didn't use accumulators they existed but we didn't use them. I would get in my 1950, two-door Chevrolet and drive through South Louisiana looking in the Yellow Pages for drilling contractors. I would find out who the superintendent was, make an appointment and then visit him.

The first unit we sold for a jack-up rig was to Mr. Claude Crone who was the Drilling Superintendent for the Southern Production Company in Baton Rouge, Louisiana which later became TransOcean, Sedco Forex. He was interested in what I had to show him. I brought the actual pumps in there, not models, so I could show him how the packing and so forth could be changed. He picked up the phone and called a large, white-haired man into the room. He said, "Stoney (Mr. Stoneman was the top man with Southern Production Company), what do you think about this?" He examined the packings and said, "Well, hell, I could fix that." Stoney said to me, "Son, what will it cost to operate a Hydril, three Cameron rams and two Cameron HCR valves?" I kind of swallowed and went outside and figured the price. He said, "Well, send one over to Orange, Texas, to the U.S. Steel Shipyards. We are building an offshore jack-up rig using DeLong air-operated jacks." That was all there was to it.

We came back and built it and got the purchase order later.

TP: Which rig was that?

PK: It was called Offshore Company Rig #2. They later changed it to #52. Alemite's service man was J.W. Wyatt.

He would build them and I would sell them. I was a serviceman, too. I worked on straight commission so we had to make a profit in order to get a percentage. If we lost money, it was subtracted. Now, that's incentive.

One day, Mr. Crone called from Grand Isle and asked me to meet him there. I went out on the offshore rig where Mr. Posgate (who was later VP of Humble, now Exxon Mobil) and Bob Stuart (Toolpusher for The Offshore Company) told me they had to close their preventers in a certain amount of time. They were timing it with a stopwatch. While this was going on, we looked up and saw a Humble (Exxon) well blowing out. I told him we would be able to meet Humble's closing time on these BOP's. We sold them some closing units. It was at that time when things started to take off.

One day, the Comptroller with S&S called me into his office and said, "You're making too much money". I said, "Well, you cut the pattern and we are just following it." Jim Stewart, II came up with a business arrangement for our part of the Alemite Division of Stewart & Stevenson to be a separate company within S&S in 1964, as I recall. We paid interested on borrowed money, rent, telephone and so forth. Whatever the sales were, we subtracted all the costs and got a certain percentage of the profit (or the

loss). They would always keep a certain amount in reserve to cover losses if that ever happened.

As we grew, we added more people. A portion of my profit was kept by S&S (by mutual agreement) as a reserve for any future losses we might incur. I split 1/2 of the remainder with our department heads {Calvin D. Hohle, Joe L. Lemoine, D. de Vries, Larry Levassas and Gary Mitchell) who spread it down the line to their people. With that, we had harmony and team work and everyone going in the same direction. We were doing very well. In fact, Jimmy told me that, per dollar invested, it was the best performing division of Stewart & Stevenson.

The first Koomey units were sold to Magnolia Petroleum Company, Ernie Pannell Well Service, Rowan Drilling Co., The Offshore Co., Stonolind [now BP], Phillips Petroleum Co., C.W. Eggelstron, Inc., etc.

TP: What year was this?

PK: I think it was the mid 1952-54.

TP: When you formed this special division or company within a company?

PK: It was formed by an agreement between C. Jim Stewart, II and myself.

TP: That was about 1955?

PK: I believe it was 1964. It was a handshake deal between Jimmy and me. In 1974, Ernst & Ernst said we needed to put it in writing so Jimmy wrote a one page agreement. He signed it and I signed it and that was that.

TP: So this is what they call the Koomey System?

PK: Yes. First, I put Alemite's name on one of the first units (Ernie Pannell Well Service). Stewart-Warner in Chicago didn't want to have anything to do with it because of liability. Then I put Stewart & Stevenson's name on it and by boss at that time (Bob Hardy, General Manager of Alemite Co. of the Gulf Coast) said, "No, they wanted you to sell Alemite products only. This is your idea.". So he put my name on it and that's how it got there *(see photo B).*

We set up agents around the world. We competed against McFarland, Payne Manufacturing and Hydril Co.

At that time, Cameron didn't make blowout preventer

controls. I think they started making controls in the late 50's or early 60's but they didn't work very well so we started building units for them. Payne built some units for them as well.

TP: Before we move on, can you just describe for someone who has never heard of a blowout - who doesn't know what a blowout preventer is and what your controls do? Can you try to explain that?

PK: During the drilling of a well, it is necessary to put what they call blowout preventers on top of the casing so as you drill the well, if you should drill into high pressure, the driller can close the BOP's to prevent a blowout. If the well is not shut, the difference in pressure can cause a blowout which blows gas out of the hole at incredible pressure. It sometimes ignites and the fire feeds itself from the gas in the well.

There are ram preventers and annular preventers. The annular preventer is a round unit which will close against anything, even on tool joints. The unit consists of a rubber element with steel inside. The first one, I believe was made by Hydril. There was also one called a Regan Torus, but for high pressure drilling, Hydril was the standard.

The reason the industry wanted the annular preventer was because you don't know exactly what it in the hole in the vicinity of the BOP stack. It could be the Kelly which may be square or octagonal in shape or it could be the tool joint portion of the drill pipe. Ram preventers are designed to close on drill pipe. If you have 5-1/2" drill pipe, you have a 5-1/2" ram so it makes a seal.

If a blowout occurs, there normally is panic so you always shut the annular preventer first. You then locate the tool joint and, provided it is not in the area of the pipe ram, you close it. Closing the rams secures the well. Since the tool joint is larger in diameter than the drill pipe, the rams can't close on it. If the tool joint is in there, you raise or lower it and then shut the pipe rams to secure the well, open the annular and pump heavy mud down the kill valve to kill the well. The column of mud pressure weight is greater than the pressure of the blowout.

We were in the business of designing, manufacturing, selling and servicing blowout preventer controls worldwide for land, offshore and deep offshore. Blowout preventer controls are powered by electrically driven andjor air operated pumps (or steam in the old days). Four-way valves direct the hydraulic fluid to the

preventers so you can remotely open and close the BOP's.

In order to get rapid closing on an annular preventer (since they can't take over pressure on the closing chamber), it was necessary to use a hydropneumatic accumulator with adequate capacity to operate the annular BOP's and other BOP's under blowout conditions. Since you cannot compress liquid, we put nitrogen in a rubber bag inside the pressure vessel (accumulator) and we would pump hydraulic fluid, compressing the nitrogen in a bag, and it would be like a cocked gun, ready to fire. Once you've opened the valve, you would have a rush of fluid out, shutting a particular device. At that time, I believe Hydril was the first with accumulators used for BOP operation, then Payne, then we used them.

Back in 1957, I worked on a system to pre-charge the accumulator, with 1,000 pounds of nitrogen, taking the pressure from 1,500 psi to 3,000 psi. As annular preventers got larger, they required more fluid to close. This new system allowed us to build systems to accommodate the pressure requirements with fewer accumulator bottles and get approximately 19 second closing time on annular BOPs. We had more fluid stored in the same volume at higher pressure.

Hydril used a regulator valve on their control systems to safely operate their annular BOP. We started using their valve on our systems. I figured we would take the Hydril valve and put a couple of washers under the handle to bring it from 3,000 to 1,500 pounds psi for use on our 3,000 psi systems. Well, it didn't work. I called Hydril and they said it wasn't designed to reduce pressure from 3,000 psi to 1,500 psi and regulate from o to 1,500 psi so we started working on our own valve (with Ron Loup from Double AA Products in Manchester, Michigan) which was later called the KR valve. It was a pressure reducing and regulating valve which would do what we wanted it to do. We could use the high pressure safely with any series of preventers and stay within the BOP manufacturers' recommendations. The first 3,000 psi Koomey BOP Control Unit was sold to Movable Offshore Drilling Company (headed by Bowman Thomas and Ray Meadows) in the late 50's.

About that time, Shell Oil Company had set aside approximately $8 million to develop technology that would allow drilling in 1,000' of water. They were preparing to select some BOP controls, but wouldn't tell us for what they would be used. We worked with Frank Poorman at Shell Development Co. and D. de Vries, Ron Geer and others in the Shell group headed by Geer as I remember.

TP: Had they been having trouble? I mean, they developed the first subsea with the Bluewater Project.

PK: Yes, the Bluewater I, a submersible Shell converted to the first semi-submersible.

TP: This was the Bluewater I?

PK: Yes, and as I recall, they started talking to various manufacturers around 1957-58. It was good because the oil industry had a hell of a slump in 1958. We barely made a profit. It could have been disastrous because if we hadn't made a profit, I would have owed S&S money.

TP: So they contacted you in about 1958 for this project?

PK: Yes. They liked our new design of the 3,000 psi accumulator system with the Koomey Pressure Reducing & Regulating Valves. We were the only ones who could show with arithmetic how to operate certain sized preventers in blowout conditions. I remember calling on Santa Fe Drilling. They had 59 rigs with 1,500 pound accumulator systems and they said, "We'd like to get your system but we have a spare parts system to fit these 1,500 psi units and we don't want to change." I said to Sam Madley and Bob Battersby, some of the founders of Santa Fe, "We'll,

Sam, if you want to standardize on the spare parts, buy what you've been buying, but if you want to shut the blowouts under blowout conditions, you ought to consider our 3,000 psi systems." When they made the calculations, they purchased a 3,000 psi Koomey system for their 60ili rig.

It was hard to get people to change. I met with Doug Pike at D&E up in Shreveport. He said, "You mean, we got so many rigs out here and if we have these preventers and this type of controls that we won't be able to close our preventers under certain blowout conditions?" and I said, "That's right." He laughed but after a while they switched to our system.

Anyway, Shell bought the system and that's where the bundle hose came into effect between the air remote control stations. Normally, we recommended putting the blowout preventer control system with its master controls at a distance away from the well bore so the hydraulic lines which would close and open the preventers went up to the preventers on a land rig. If a fire due to a blowout occurred, it was generally above the preventers or could blowout through the flanges and burn those lines.

We set the accumulator at a distance from the floor and had the driller's remote control on the rig floor next to the driller's station. These were air remote stations and D. de Vries with Shell Oil came up with his hose bundle idea at that time. It made for a clean and simple installation.

We were selected by Shell Development to design and build a special 3,000 psi Koomey BOP Control System for the first semi-submersible (Bluewater I).

TP: It was the Rudac System, I guess it was called.

PK: I think so. Shell held classes for the industry and charged them $1 million per person or something like that. They spent a lot of time and money on their conversion. During Shell's first well with the semi, a Gulf engineer would fly over the Bluewater I in a helicopter to try to see what they were doing.

TP: Yes, I heard that story. Someone even said that Dean McGee from Kerr McGee. . . That was who I heard flew over, but maybe it wasn't.

PK: I think it was true. I know that Virgil Stone with Gulf Oil Corp. buzzed the Bluewater I many times trying to

find out exactly what new technology Shell had designed.

TP: What were the problems? I know they had a lot of problems with subsea wells for many years. It took a long time to perfect the technology from the blowout preventer perspective.

PK: Yes. Up to the time of the BWI (Bluewater I) conversion, BOP controls were like land rig controls with longer, flexible, high pressure hoses on reels that were connected to the subsea BOP stack. This Shell design was made to drill in 600 to 1,000 feet of water. Texaco worked with Payne Manufacturing to design special BOP controls using Payne's 2,000 psi accumulators and was first to use twin pods mounted on the subsea BOP stack on the ocean floor.

According to Tom Gaines with Texaco, they spent a lot of money developing that type of system with Payne. They first put it on the Odeco Driller, as I remember. I told our people that we'd better get busy because our competitors were jumping ahead of us. I saw an ad in an Air Force magazine about a small nuclear generator. I filed for a patent on a nuclear-powered acoustic control subsea blowout preventer control system using the generators manufactured by Martin-Marietta and Uniroyal.

The idea was to design a BOP control system which could drill at any depth. In addition, we needed a simple way to connect a retrievable pod design which would outperform out competition (Payne Manufacturing Co.).

We used Hudson Machine Works to make just about all of our in-house designed products since we didn't have a machine shop and Sam Gilmore to make our relief valves. Joe LeMoine with S&S, Harry Burgess (with Hudson) and I worked on the first pod designs. I'd taken Harry offshore to the Bluewater II which was operating offshore California near Bodega Bay, California. Harry was not familiar with offshore rigs at that time.

Our first pod had 29 hydraulic ports with drain lines between each port. When extended, it was 29.5 feet long. We tried to put everything everyone wanted into that pod. We sold the first one to Shell UK for the "Staflo" semi-submersible rig in the North Sea well before the rig was finished. We shipped it to Lowestoft, U.K. and it was so heavy, Shell U.K. placed a counterweight on the other side of the stack to balance it.

They decided it was too big so we shortened the pod considerable with the development of the SPM (sub-plate mounted) valve by Joe LeMoine and Harry Burgess and Sam

Gilmore.

TP: This was the nuclear powered or were you still working on this?

PK: We were still working on the nuclear-powered system. Getting back to that, Martin Marietta was building the Apollo rockets for NASA and they were intrigued with what we were doing. They said if we assigned half the Koomey patent to them, they would fund the development of the nuclear powered acoustic controlled subsea BOP control system. Jimmy Stewart and I went to Baltimore at their request and agreed to their proposal. We talked to Humble and EPR and got a purchase order for our proposal for the nuclear-powered, acoustic controls around 1965. There were problems with the system and the Ph.D's at Martin Marietta didn't mix very well with the roughnecks on the rigs. Ultimately this project was terminated after oil union oil spill offshore_____. Maybe someone will pick it up again in 10 or 20 years.

During our development work on the nuclear BOP system, we, together with Martin Marietta, constructed a nuclear powered acoustic control subsea Christmas tree. We sold it to Joe Mefford with Sinclair Oil & Gas for installation on a subsea well offshore California. The

system loaded for 4 or 5 months - but trouble occurred in the electrical connections to the electric motors on the valves and the cost to maintain it was too much.

Martin Marietta was _____ with the oil patch - so they produce Payne Manufacturing Co., called the Co. Offshore System, Inc. We became instant competitors.

Back to the subsea pod, I was in London and called on Peter Swan with Burmah Oil Co. They were preparing to drill the Bass Straits offshore Australia. I explained our design (the shortened "carrot" pod). He actually called it the Koomey Carrot. I explained the features of the pod and he didn't seem overly impressed. When I got back to Houston, Hoyt Taylor of Zapata called me. Burmah had contracted their rig, Zapata Investigator, to drill the Bass Straits. Hoyt told me that Peter Swan wanted our pod on the rig. We got the purchase order and our first pod went in the water offshore Australia. They didn't purchase a spare, so we sent Larry Levassas (head of our service department at the time) to Australia to babysit our first pod.

TP: It says here that the innovation was non-orienting, retrievable control function . . .

PK: The pod was round and tapered in shape (it looked like a carrot) and required no orientation when it was engaged or disengaged in to the female portion located on the BOP stack.

TP: With Glomar 5, you're listed here for developing a compact packer.

PK: Yes. I got a call from George Richardson, President of The Offshore Company. He said, "Koomey, we want you to go to New Zealand because we're blowing o-rings off your pods." Bill Bohlmann was the superintendent with Exxon in New Plymouth, New Zealand. Bill and I were freshmen together at A&M. We went to the rig and stayed there three or four days.

Our pod had o-rings which separated each hydraulic port. As the driller engaged the male portion into the female portion, it worked perfectly unless he operated a function before it was engaged. Because of the close proximity to the female part, the rush of hydraulic fluid would blow the o-rings off the male pod. If the driller operated it exactly as it was designed, it would be okay but you know roughnecks. You have to make equipment as roughneck-proof as possible.

We redesigned the pod and made it much more compact with what we called the "packer seal design". The pods had to be orientated. The new features made the pod just about trouble-free and as roughneck-proof as possible. We had a rubber grommet which was located at the open and close ports of the male pod. We blew those rubber packers off so we put a steel ring inside the rubber and it was the best damned pod in existence then. We received a lot of business throughout the world because of the new design.

TP: Was this problem happening with other companies that were using the pod?

PK: Well, our competition had a different design and, apparently, it wasn't accepted as well as our design.

TP: Now, the other companies that were using your pod, were they having the same problems?

PK: Yes, only on the carrot-type pods with o-rings. Most all of the companies switched to our new design, as I remember. The oil companies wanted to go into deeper water. Shell was going to give contracts to drillers who used electrohydraulic equipment. We had been working on an electrohydraulic pilot valve for about a year with a company called Marotta out of New Jersey and with Exxon

Production Research.

We had been working on electrohydraulic controls in order to allow drilling in water depths greater than 1,000!

The contract award came up for Sedco 445 for Shell, Pelican for Total, and the Saipem Due for Agip. They all wanted deep water subsea BOP controls to drill in deeper water.

TP: These were all drillships?

PK: Yes. Duke Zinkgraf with Sedco called me one day and said he had good news and bad news. The good news was that we had been awarded the order for the Sedco 445 drillship. The bad news was that we couldn't use a pilot valve we had been working on with Marotta and Exxon for two years. He said we had to use a shear-seal valve for the pilot valve. I thanked him and said okay.

We had always bought our subsea cable from Victor Schlumberger. They were good people and supplied good cable. Duke said, "Look, I am going to get the cable. I can get it as cheap as you can," and we said, "Okay, get the cable."

In an electrohydraulic cable, there is a hydraulic hose in the middle with 205 wires surrounding it. The pilot valves were on top of the SPM valves which allowed fluid to go in and out of the preventers but the signal was sent electronically so it went fast. He bought the cables and put them on the reels. When they pressured it up, the hoses shrank. It was offshore near Brunei and some guy pushed a button and dropped the stack. We got a call out of the blue to do something about it. What can you do? If you drop the stack, what can you do?

We had the same problem with Total and Agip. Actually, the Sedco 445 for Shell Oil was the first of two other deep water drill ships that were built to drill in deep water. They both needed EH BOP controls.

As with Sedco 445 drill ship, we competed head on with Offshore Systems, Inc., a division of Martin Marietta and I believe TRW got into the picture. We booked both orders and the chairman of the board of Martin Marietta sold Offshore Systems, Inc. to CIW for what I hear was a value lower than book. The purchase put CIW back in the BOP control market.

TP: That had 6,000 psi accumulators on this one too?

PK: I'm not sure - but later, we did use 6000 psi accumulators. Then we got into the multiplex system and I think that was the first one. It was built for Getty Oil and Offshore Company.

TP: I have that listed as 1974.

PK: 1974. I guess that is right.

TP: What is the multiplex?

PK: You don't have the 205 wires. There are just two or three wires which send coded signals down.

We said, "What happens if we have a storm? How to you get off the location?". We used an emergency signal which was sent acoustically which we got from Raytheon. There was a device down there which would cut you loose and they called it the AMF. It stands for Adios, Mother . . .you get the idea. People today don't know what it stands for, but that's it.

We had a lot of interesting stories along the way. I got a call from Saipem Due once when their rig was down. I went to Milan to see Mr. Massimo Pocari. He was mad as the dickens. I got a plane down to Cratone, Italy so I

could get out to the rig to see what was wrong. They had an airline strike so I had to stop in Naples and then get a train to Cratone. I got off the train and a cajun boat driver took me to the rig.

I looked down in the moon pool area and saw the stack. The electrohydraulic cable was broken in two and they had no spare. Kerr was the guy's name, and Victor Schlumberger was there. I said, "Well, I guess we'll have to get a spare cable." We asked Schlumberger what it would cost. It was $175,000 or something like that.

I went to Mr. Pocari and told him what it would cost and I thought he was going to go through the roof of that building. We became very good friends. They went back to hydraulic operation until we could get it worked out. We were all cost conscious on that, but when it breaks, you've got to have a spare.

You'll get a lot of interesting stories from Joe LeMoine. One time we were fighting hard for an order. Joe was going back and forth between Paris and London working with our agent to get drawings and so forth. I would call him every day or he would call me. I said, "Well, did you do this, Joe?". He said, "Yes, I did that." That went on for several days. Finally, he said, "I've

done everything you've said. I'm going to Notre Dame tonight to light a candle." I didn't hear from him on Monday. When I finally talked to him, he said, "Oh, we got the order.".

TP: So these systems that you were talking about with Sedco and the Seven Seas and some of the other rigs, now were those for subsea?

PK: Yes, stacks on the bottom of the ocean. Everything from the Bluewater I had the stacks on the bottom. They built other rigs, submersibles, but subsea was the main focus. Joe will have a lot of stories because he was head of sales and was in on most of all these deals. We had a good team.

Stewart & Stevenson made more money out of that division than any other. The employees did, too. Then back in 1978, they had a big offer from NL to buy the division. Of course, we gave up that arrangement because they went public at that time.

TP: And NL is?

PK: National Lead. At the time I gave up the arrangement with Jimmy, I had a compete agreement because I didn't

think going public was the right thing to do at the time. The agreement was that I could compete if they ever sold the division. NL wanted to buy it and I guess they didn't care if I had a compete agreement or not. They bought it and the people who really made the thing tick were moved out and they brought in their own people.

Sure enough, sales went down. I exercised my compete option and started Koomey Inc. That was in 1979. 1980 and 1981 were really good and then, of course, you know the bottom fell out of the industry. I'm very proud of the work we did at Koomey Inc. We grew from 2 people to over 600 in less than two years. We had four subsidiaries and agents all over the world. It was a lot of fun and we were able to enter the blowout preventer market at that time with the help of Marvin Jones.

We were a very innovative company which made a lot of people uncomfortable. We had some lawsuits pending and with the downturn of the industry, we just couldn't afford the legal bills. We sold Koomey Inc to a Scandinavian group which is now part of ABB Group. That how that turned out.

TP: That is a long way from the gang, your first job on the Gulf gang, quite a story.

PK: Yes, that's where it started

TP: One question I am always trying to sort out is this running competition between subsea development versus platform, especially in the Gulf of Mexico. I know that subsea took off more quickly and was used more widely in the North Sea and other areas.

PK: If you could choose between platforms and submersibles and jack-ups, you would probably stay with surface units.

TP: And the cost of those kept going down over time.

PK: Well, they didn't go way up like the subsea systems. People wanted to explore new fields. I remember Mr. Andre Brun with Total Oil Co. saying, "This costs too much," and I said, "Well, compared to what?" Nobody had been down this road before. We weren't making any exorbitant profits or anything like that, but when you build new things and go out there, it's pioneering.

TP: All that development over 20-30 years is really coming to fruition now in the Gulf of Mexico?

PK: Well, yes, and the price of oil is going up. It seems like the deeper you go, the bigger the fields get. So

the price per barrel is probably down, even though you're spending these gigantic sums of money. I think BP proves that with these big fields they've got.

TP: And the fields being so productive, too.

PK: Yes, because they have got such enormous fields. They call them elephant fields. I remember, I believe it was in the 1960's, when BP found the 40's field. A year before that I called on Ken Charles, the Drilling Superintendent for BP in London. He said, "Aagh, we're not going to find any oil in the North Sea.". I said, "What do you think the chances are?", and he said, "About one in 300.".

About a year later, I was in London with my wife and got an emergency call from him. I went to see Ken again and said, "Ken, what do you think your chances are of hitting oil out there?", and he said "one in 30". I knew then that they had hit it.

Another funny thing was when we got this nuclear deal controlled, I went to see Mr. Wirtensohn with Asiatic Petroleum (Shell) in Houston. Joe and I were explaining the system and he asked what it would cost. When we told him, he started laughing and said it would be cheaper to

have a blowout. Those were the old-timers. They came up the hard way and they are very people oriented. Joe can tell you some stories about Mr. Gilbert Fort with Total. They were very cautious with the money they spent. He asked me one time, "Are you sure this thing will work just right?", and I said, "Mr. Fort, it will work just fine . . . just don't get it wet."

I'll tell you, we had a great group of people there at Stewart & Stevenson. We accomplished so much and we were so small compared to the other companies. Jimmy Stewart was my boss and he let us do what we wanted as long as it was honest and made money. It was one of the happiest times in my life, working with the people in that division.

TP: So D. de Vries was with you initially and then he moved over to Shell? Is that right?

PK: No, he was with Shell and then later started his own company.

TP: But he wasn't with Stewart & Stevenson?

PK: No, he wasn't with us then. He joined us later.

When NL bought the Koomey Division of S&S, I left at the end of my contract and de Vries worked for them for a while and later started his own business.

Most of the deals were verbal. We would build the equipment andthe paperwork would come later. handshake meant something. Of course, it's different now. I mentioned that to Scooter Yeargin one time and he said, "Son, that's called progress.".

TP: That is great. Well, this is a fascinating story. It is a part of the industry that I knew very little about.

PK: Do you have any other questions?

TP: You have names a lot of individuals, companies you worked most closely with were Shell and...

PK: We worked with EPR, Shell, Sinclair, Getty, Mobil, cities Service, Burmah, Total, The Offshore Company, Sedco, Foramer, Atlantic-Richfield (ARCO}, Tenneco, etc.

TP: Chevron?

PK: Not too much with Chevron. We worked with contractors who worked for Chevron. I believe, back in the mid

1970's, we had about 85% of the BOP control system business in the world. Prior to NL buying the Koomey Division, we had 100% of the Soviet market and 100% of the Chinese market of Western-manufactured controls. We went into the Soviet Union back in 1970. Cameron, Baker, Bowen, National and companies like that were invited on that first trip to the Soviet Union. And then we were invited. I found out several years later how we got the invitation.

In 1965, I went to the Balkans. There was an oil show in Yugoslavia consisting of mainly Eastern bloc countries. We went there and gave a presentation and met a man named Dr. Asa Nuri who was head of the All Union Drilling Institute in Moscow. His position would be our equivalent of the head of EPR only bigger. Because of that, a friendship developed. When they made the invitation of U.S. companies coming to the Soviet Union for the first time in 1970, he put our name on it and that was our entry into the Soviet market.

TP: Did you ever work with Petrobras?

PK: Oh, yes. We did a lot of work with Petrobras - land and offshore.

TP: They did incredible stuff.

PK: Yes. We got the first controls with Petrobras. They had a close association with the Offshore Company and we got all that business, I think every bit of it. We worked a lot with Dr. Helio Falcoa of Petrobras.

TP: Was this for the Camp Compass Basin development or was it earlier than that?

PK: I don't remember.

TP: This has been very interesting. I don't really have much else to add unless you have anything else or any last words you want to say.

PK: Thank you very much.

THE END

Photos are attached

Offshore Energy Center-Oral History Project

Interview of Paul Koomey

October 6, 2001