

like ten pages of shortages; long pages. so I signed for it, listing all the shortages. Ben Fowlkes said, "Just don't let any more get messed up, and we'll finally straighten it all out some day." So when we left, Steve Hanmer came, and I made him the property officer the same way. **By that** time we had reduced it down to about four pages and we continued to work on it.

Suddenly I got a letter from the Chief's office, about the first part of June, asking me if there were **any** cogent reasons **why** I shouldn't go to Princeton for my advanced degree. I didn't know **any** cogent reasons, but I knew that my wife was from Alabama and that she'd freeze to death in Princeton. She didn't own a fur coat, and I couldn't afford to buy her one. So I wrote a letter explaining the reasons and stating that I'd rather go to California, where we could afford it, than go to Princeton. That's the last I heard of it for nearly two months, and then about the 20th of July I received a telegram saying, "Report to the New York port in four days **for** passage by transport to California to attend the University of California."

I couldn't possibly turn over that company that fast and pack and drive to New York, so I called and asked permission to go overland by car. This of course was risky financially since you might not be reimbursed for anything except what could be related to the specified route, but they told me to go ahead. So we drove, and we drove into Berkeley about the eighth or ninth of August. En route, we had seen the Grand Canyon and been to the Olympics in Los Angeles for a day. We planned to visit my grandparents in Vancouver, Washington, since it was early August, while waiting for the fall semester to start at U.C., presumably in September, but thought we could rent an apartment then while there was no crowd. So we started at the engineering school and went out the gate and stopped at the first decent-looking apartments we saw. And the lady said, "Oh, you're going to be a student here this year?" And I said, "Yes ." She said, "Have you registered yet?" I said, "No, we're coming back in September to register." She said, "School starts tomorrow:" That's the first I'd ever heard of any school starting that early. That stopped

our trip to Portland and Vancouver, and we rented the apartment on the spot. I rushed to the university and met Dean [Charles] Derleth, and he said, "Oh, you're not coming here this year, there's not a word about you." "Well," I said, "I'm here, I've been sent here, what have you done in the past?" He said, "In the past these engineer officer groups have been to a summer school first, which entitles them to get a master's degree. But you can't get a master's degree, because you're only going to the two regular semesters." He said, "Furthermore, in the past the Chief of Engineers' office has always told us in great detail exactly what courses you'll take, and we haven't heard a word about you." I said, "Isn't anybody else coming?" He said, "We haven't **got** a word on anyone. You're it." So Dean Derleth said, "Here are some reports from prior years of what your predecessors have thought of us and the courses. Take a look at them, come back tomorrow **morning** early, and tell me what you think you ought to take."

**So I went home and read all those reports and made up my mind not to take the** courses that my predecessors had said were poor or not of value to us as officers, but also not to pick just the easy ones either. The next morning he said, "Fine. That's it." And I started. About a day later another officer showed up: Bill Carter, I think, was the second one.<sup>27</sup> He's a retired major general now, class of '30. Anyway, he showed.

And then six more dribbled in, day by day. Finally, after about two weeks, I was taking my first test in hydraulics under Dean [Morrough P.] O'Brien--he was later a dean, he was just an instructor in those days. He had started the course off by starting at one corner of the **room and walked around the four** walls deriving a calculus equation. He lost me back at the second corner. So I was having a hard time staying with this class. But as I am taking this first test I look up, and there's a familiar face at the glass door, and it's another classmate of mine, Al Viney, who 26 years later would be the deputy for troop operations while I was deputy for construction in the Chief's office. He looked, and I waved him in to an extra seat by me. I said, "Sit down. You

remember we took hydraulics at the military academy. This is just a little test in hydraulics. Take a question paper and respond to it, and when we get through with it I'll take you around the college and **get you** started, because I've **done it** now for about seven other people. So I'm the tour guide." So he sat down there.

Q: There were eight other people from the Corps?

A: Yes. They had just dribbled in. We had eight of us there by that time. And Al Viney was the ninth and last one. Anyhow, he read the first page and didn't write a thing. He looked over and I'm writing busily, and he looked all around and everybody's writing. He turned the page, and about this time sweat began to break out on him. And he didn't write a single thing. After about five minutes of letting him sweat, I said, "Relax, I don't know any more about this than you **do**, but we're just going to have to get out and learn it. Don't turn anything in, I just thought you might get a shock this way." He said, "I got plenty of shock!"

So we more or less loosely organized our studying. Most of us assembled every night in **one of** the apartments where the men took over the breakfast or dining **room and** our wives took over the living room or an adjoining apartment. We worked like dogs, and we worked every waking hour. We would take a break Saturday night about 11 o'clock and take our wives to Oakland to the late, late movie for about two hours. Then we'd come home and go to bed and start working again the minute **we woke up Sunday**. **And** with that effort, at the end of the first semester, we were still way down, way down. Then we got smart and took a couple **of easier** courses for the second semester and concentrated on the things we thought were most important in the civil engineering field, and we all came right on up near the top of the class.

But we had to write a thesis. The dean and several of the professors told me that we were doing a heck of a lot more work than our predecessors. But we didn't get a master's degree, we got a B.S. in civil engineering. So I'm a B.S.-squared! That's never bothered me. I don't think it would make a

difference except in the academic world. The main point is to stretch your head, and they sure stretched it!

But, **you** asked what choice? We took basically civil engineering, because we didn't know **any** better. We had no instructions, or guidance, other than what had happened in the past. And the facts of life were that **1932** was the year of the pay **freeze**, and there was a holiday of pay in July--we didn't get paid. And there wasn't much travel **money**. And they couldn't send us to the summer school course because they didn't have any **money**. **As a result the Chief's office got clear out of gear as far as cranking it up.**

**Q:** And that's why the list of names had never gotten to the university?

**A:** Yes. And again, most people would have thought if you got it all sorted out by the end of August you'd be in good time, but school started on the eighth of August, as I remember it. It was a shocker. But anyhow, we took, to start with, what I had come to the conclusion we ought to take, after reading the remarks of the prior years, and Dean Derleth had approved, and all the others arriving after me just glommed onto that same course.

In the spring we diverged a little bit, but basically we were all taking civil engineering. I called on the Division office in San Francisco and with their advice selected a thesis studying the movement of sand on the bottom of San Francisco Bay. My 1929 classmate, Bruce Rindlaub, thought this was a fine choice.<sup>28</sup> I thought it was a good one too. And I thought we had it made because we could ask the Division or District to get us some real true samples from down there to work on, and this would be better than anything anybody had ever done. Mike O'Brien, with a straight face, said, "That's a fine idea." Frank Cothran and I were going to do it.<sup>29</sup> Then Bruce Rindlaub came--he'd been captain of A Company our first class summer--and he said he'd found out about it, and could he please join the team? Well, he was a hard worker, so I said, "Sure, if he wants to do it, let him in."

We had a flume that ran about 35 or 40 feet, and we had this fine beautiful sand from the bottom of the bay in it, but it took about three hours of running the water **to get** the little ripples on the sand synchronized and built up **to** where they were really doing something.

We had classes every morning so we could only run the flume in the afternoon. So by the time we had to quit, because we'd run out of time, we were **just at a point** where it was time to really start taking readings. We never got anything consistent. And this went on and on, and we got up to -- well, you graduated in early May, the 15th of May, I think -- we got up to about the middle of April, thereabouts, and we were over there four or five days a week working with no consistent results.

Rindlaub finally came up with the idea that if Frank Cothran and I would run this model in the afternoons while he studied, he would take the data and analyze it at night. It was a good effort, but it was futile. We just never had -- the points on the graph just never had any consistency -- it looked like a shotgun blast. I didn't know what we were going to do, and I said to O'Brien, "We're not getting anywhere." He said, "I knew you weren't going to." I asked why he didn't tell me, and he said, "I thought you'd learn something." I said, "I've learned a lot." (I got even with him. Years later I was president of the Beach Erosion Board when he was a member. I had a lot of fun twisting his tail about this thesis.) He told us that if we would write up anything decent, he would give us a passing grade because we had really worked pretty hard and tried. I said, "All right." I went home and got Frank Cothran. I said, "Look, we aren't going to graduate unless we jimmy this some way or other in order to have something to turn in." He agreed, so I said, "Okay, let's draw a curve and let's write the equation of that curve. Then let's work backwards and plot the points so we end up with a curve." So we did, and we began feeding this stuff to Rindlaub. Gradually it began to fall into line.

One day he came busting into the lab and said, "We've got it, we've got it:" And he came up with our same equation. so we rushed the thesis

together and put it in shape and took it up. I said to O'Brien, "Everything up to the date of so and so is a fact, but everything beyond that is fiction." He said, "All right, I understand, you'll get a passing grade." Bruce Rindlaub was so intrigued with this thesis that he decided to ask the Chief's office to let him stay another year and continue the study. And they approved it.

The day before graduation, Bruce decided he'd run it himself just to see how pretty it 'would come out. And he ran the flume and nothing fell on the curve, which was to be expected. And he came around the next morning and accused me of being a crook. I told him, "You're right, I am. M.P. O'Brien knows it, however. We've done this together. We had to do something in order to graduate." Well, he was mad still. He didn't speak to me again until once [when] I ran across him in the Philippines in World War II. We got shortchanged. We did a lot of work. It didn't do us a bit of harm, and I doubt seriously whether it makes any difference. But we are B.S.-squared and not anything else.

**Q:** Next you spent some time with the Civilian Conservation Corps.<sup>30</sup> What do you recall about that assignment? Were you loaned to the CCC?

**A:** I came back from California by car with temporary duty orders to Vicksburg, to the laboratory [the Waterways Experiment Station], to get some experience.<sup>31</sup> And we drove through Vicksburg, and I almost went by the lab and reported in and I thought, no, we've got two weeks' leave coming. I'll wait till the leave's over before I report in. So we went to Birmingham, and then we went down to Clearwater, Florida, to the beach, and had a nice visit. And about four or five days later I got a telegram from my father saying, "Wherever you are, report to -- call in to -- the Corps area command up in Atlanta immediately." So he wasn't sure where I was and probably thought I was AWOL or something. But anyhow I called up Corps area and they said, 'Report to Fort McClellan tomorrow.'

So here I am **down in** Florida with my family and I have to report to Fort McClellan tomorrow, which left them stranded. Fortunately, my brother-in-law