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THE HEART OF HYDROELECTRIC POWER

July 1949

A BUILDER AND HIS FAMILY

By ROBERT L. INGRAM

1898-1948

FOREWORD

THE WORKS *of men speak for them, needing no words. However, signal occasions make words appropriate, as in 1948, the fiftieth anniversary of Dad Bechtel's start in the construction business. By then the ranks of oldtimers were rapidly thinning; there existed no single, related and permanent record of the work, and no man—not even this narrative's principals—knew all the key facts about a half-century's activities*

Consequently, William E. Waste Vice President of Bechtel Corporation, caused this accounting to be made, and called in Robert L. Bridges Counsel, for advisory assistance Other than these two, no one within the firm knew of its preparation, least of all the Bechtels themselves Therefore their engineering and construction accomplishment is shown not as seen through their eyes nor those of their associates but as viewed by many men—senior engineers and builders customers, other "construction stiffs" most of them "people who were there when it happened." How they felt was shown by the way their information was offered—eagerly, affectionately.

Should inaccuracies be found they likely will be of detail, traceable to faulty memories. The larger meanings were never in doubt; spirit and import stood out with crystal clarity in every interview and letter. It is hoped this brief book will partially repay its real authors for the pleasant hours and days they gave to re-create events of the past

Acknowledgment is made to all who contributed and there were many not named here. Especially to A. J. Barkley retired Southern Pacific engineer; John Q Burlow, also a retired engineer formerly with Southern Pacific and Utah Construction Co ; Warren A Bechtel, Jr., who believed he was going facts for a short article in the firm's employee magazine V. G Hindmarsh whose aid was enlisted under the same guise. Earle G. Lloyd, retired co-founder and former Secretary Treasurer of Industrial Indemnity ; E. E Voss, Chief Engineer Southern Pacific Company ; Emery Oliver former Western Pacific engineer ; Silas H. Palmer, former Bechtel partner and a Director of Pacific Gas and Electric Company; Otto W Peterson, Chief Engineer Construction Division Pacific Gas and Electric Company ; and Thomas L. Phillips Chief Engineer The Western Pacific Railroad Co To Robert L Bridges who gave valued counsel and Tom Moriarty for aid in research. Above all, to the instigator Bill Waste virtually a co-author who devoted hours on end to patiently keeping this pen writing along a straight line.

Altogether the task has been highly pleasurable Assembling the facts and documenting the Bechtel achievement through two generations provided an opportunity to come close, indeed, to appreciating its real significance One saw that for all its individuality this story also had a universal character, for it showed what men could do in the free air of America after the humblest of beginnings and frequent discouragements.

So—to Steve, Warren, Kenneth Sister Alice, and your organizations of Bechtel people everywhere: here is how fifty years of Dad's work and the "family's" looked from the sidelines.

R. L. I.

CHAPTER 1.

How it started

INTO Oklahoma, then "Indian Territory," one day in 1898 a young rancher came, driving a span of mules He was looking for a job Mulepower was a sure ticket to steady wages on a railroad construction in those days, so Warren A Bechtel had no trouble leasing his sturdy animals and hiring himself out to handle them.

Background of a builder

Grading with the old slip scraper was hard work, but hard work was nothing new to a young man who had fought to wring a living out of the Kansas soil following the great Money Panic of 1893 W A Bechtel was well prepared for rough going on the railroad job by the two circumstances of sturdy ancestral stock and a rugged outdoor childhood. His family line came straight down from Pennsylvania pioneers (There is a town of Bechtelsville located in Berks County, at the southeast corner of the state.) He was born on a farm near Freeport, Illinois, on September 12, 1872, grew up there and at Peabody, Kansas, under semi-frontier conditions that developed early self reliance and a strong body. At Peabody his duties were divided between the family farm, his father's in-town grocery store and the local schools When he had earned his high school diploma he tried cattle raising for several years with discouraging results

1898: The railroad got a mule-skinner

In January of 1897 W. A Bechtel married an attractive visitor from Aurora, Indiana, Miss Clara Alice West Like many another bridegroom, he wanted his lady to have the good things of life, and the ability of the ranch to provide them looked doubtful at best. By December 23, 1898, when Warren, his first son was born at Peabody, W. A. Bechtel already had turned his energies to better account. Rails were being laid in Indian Territory some miles to the south; in the spring of '98 word had reached him that the railroad would look with favor on a well-set-up young man willing to deliver a full day's work, especially if blessed with his own team of work animals.

The eventual outcome of his trip to Indian Territory is recorded in the works of one of the world's largest engineering and construction organizations. But the immediate result was no more important than the addition to the railroad section gang of one more hired hand with a "shanty outfit," except for a change that took place within the man himself. Here, in the heat and dust, he found what he had been looking for—and he knew it.

It would be agreeable to report that the railroad job was his first adventure in construction but this was not strictly the fact. In "off seasons" while ranching near Peabody, W. A Bechtel had done some local road work, and there was construction precedent in the family even farther back. His father, John Moyer Bechtel, had been a county road commissioner while living at Freeport, Illinois. Certainly, however, the job in Indian Territory marked the genesis of W A Bechtel's lifework.

Found: a lifework

For the right people heavy construction can be an infection. It got into the freshman

EDITOR'S NOTE

BECHTEL BRIEFS is privileged to present in a series of installments "A Builder and His Family," written and copyrighted by Robert L. Ingram. The telling of the Bechtel story is something that has been long overdue, at least in the form in which it now appears. In order that the many company friends and employees who have followed its growth through years of association with it can enjoy this story it will be reprinted in serial form in this and forthcoming issues of BECHTEL BRIEFS. The narrative, we think, capably depicts the principles, and lifework of a man, his sons and immediate family and also a larger group—the people who have chosen to make his precepts their guideposts to a way of life

"A Builder and His Family" is not the only Bechtel story that could be told There are as many facets to it as persons who could write it, however, we, at least, and the author feel privileged to have had a part in bringing into clear focus an era which started fifty years ago and has continued without interruption until the present time—ever changing but always resting on a solid foundation

teamster's blood and stayed there W. A had a natural affinity for this kind of work and he relished the satisfaction in accomplishment that is the builder's real reward. Years later a prominent engineer said of him: "He loved construction. Long after he had become a successful contractor, I have seen him peel off his coat and take a turn or two with a team and scraper. He used to climb up on a steam shovel and load a couple of cars, enjoying every minute of it. W. A. came right up from the grass."

1899: Eyes West

After the stretch in Indian Territory, he went north into Iowa and Minnesota, and then into Wyoming on Union Pacific reconstruction after Harriman took over the road. But for some time, in the Greeley tradition, his eyes had turned toward the Far West. He went there soon after the new century began, first to Oregon as a gang foreman on the Southern Pacific, and then to Wadsworth east of Reno, Nevada, where he figured cross sections for the SP Engineering Department. "I landed in Reno," he said, "with a wife and two babies, a slide trombone and a ten dollar bill!" A second son, Stephen Davison Bechtel, had been born at Aurora, Indiana, on September 24, 1900

The Far West at the turn of the century

The west at this time remained largely a land of promise. In the fifty years following the Gold Rush, giants like Stanford and General Dodge had finished paving the way for the future with highways of steel, yet California, always the leader in western development, by 1900 had attracted a population of only 1,213,400.

Resources were there, but except for gold, still almost entirely untapped. Oil, which was to inspire son Stephen D. Bechtel's engineering vision thirty years later, and water and gas as sources of power, a field in which today's Bechtel interests are highly active, had not been exploited to any considerable extent. People, the factor essential to empire, were still to come in numbers large enough to support a well-rounded economy. The key that could unlock the treasure house was transportation, and transportation meant the railroads.

When Collis P. Huntington, last survivor of Southern Pacific's "Big Four," died in 1900 his company already was operating eight thousand miles of railroad extending from Portland to Guaymas, Mexico, and east to Ogden and New Orleans. But Santa Fe's main line into Oakland had yet to be completed and Western Pacific was not in full operation until 1907. Southern Pacific was building down the Coast. Northward from Marin County a number of independent short lines would wait seven years for consolidation into the Northwestern Pacific.

So, although all the pioneer rail routes were complete as the Twentieth Century began, western carriers were engaged on the less spectacular but more comprehensive program of shortening distances, improving grades, and adding branch lines

1902: Some early friendships

V G. Hindmarsh, now a Vice President of Bechtel Corporation, and George S. Colley, father of International Bechtel's George Colley, became acquainted with W. A. Bechtel at Wadsworth, Nevada. The three men were employed during 1902 and 1903 on realignment of the Southern Pacific's Overland Route, then called the [illegible] al Pacific Division. The man who was Sl Supervising Construction Engineer on this job tell how W. A. caught on with the railroad. His name is A. J. Barkley, he is now retired and living in Berkeley. Here, in Mr. Barkley's words, is the story:

Wadsworth, Nevada

"I first met 'Beck' near Wadsworth during the winter while I was inspecting some work being done on the roadbed. I saw a man walking back from the worksite of the contracting firm of Carney, Roy and Higgins. He looked discouraged as he asked me if there was a chance to get a job with the railroad. I told him I knew of no job open at the moment, but that one might be, a little later. I asked him if he wanted a lift in our wagon, by which I meant that he could ride for a while on the buckboard and then walk in back for a while, hanging on. That's the way we did in those days when the weather was cold—and it was bitterly cold up there—with six inches of snow on the ground and a good wind blowing up the canyon

"He said his name was Bechtel, that he had been promised the job of superintendent by the contractor's agent, but that when he arrived at the site Higgins told him to clear out—that no superintendent was needed. I found out later that he had his family along and was short of money. He looked like a mighty fine man to me, so when I got to Wadsworth I asked at our office if a job was going to be open.

The SP hired an estimator

"Well, there was an opening and we offered it to 'Beck.' He took it, as an estimator." He worked hard and was well grounded. From there he was sent to the Ogden office. A little later I requisitioned a gravel pit superintendent for a quarry at Lovelock, and 'Beck' was sent out. There were fifteen to twenty rock cars on the pit sidings all the time. The rock was loaded by steam shovel, which then was a new idea. It was a tough job and 'Beck' did very well In those days out on the desert, men worked from sunup till sundown.

"He was learning all the time, but he seemed to me a natural engineer, and I've always thought that good engineers are born, not made. They must have a knack for it in the first place, or all the books on stress and strain won't do much good.

"I was glad to hear of his success in later years. He deserved to succeed. 'Beck' was what I've always thought an engineer should be—a man who understands what is to be done, knows how to do it, and finishes the job economically."

1903: Quarryman at Lovelock—Home was where Mother made it

At the Lovelock gravel pit the family lived in a converted box car, one of many improvised homes-on-the-job. Mrs. Bechtel had been reared in genteel surroundings—her parents were people of means and standing in Aurora—but soon after marriage she showed that she, too, had the stuff of pioneers, by adjusting to a modest income and primitive surroundings with resourcefulness and good grace. She proved (in fact, to possess and unusual talent for creating a real home under conditions that were anything but conducive to normal living. This helped W. A. immeasurably, and as time passed, had an important bearing on the children's development as well, because for several years they spent almost as much time living at the jobsites as at home in the cities.

[End of first installment]



Kenny, Steve and Warren in the 20's, standing in back of W A. (Dad) Bechtel.