

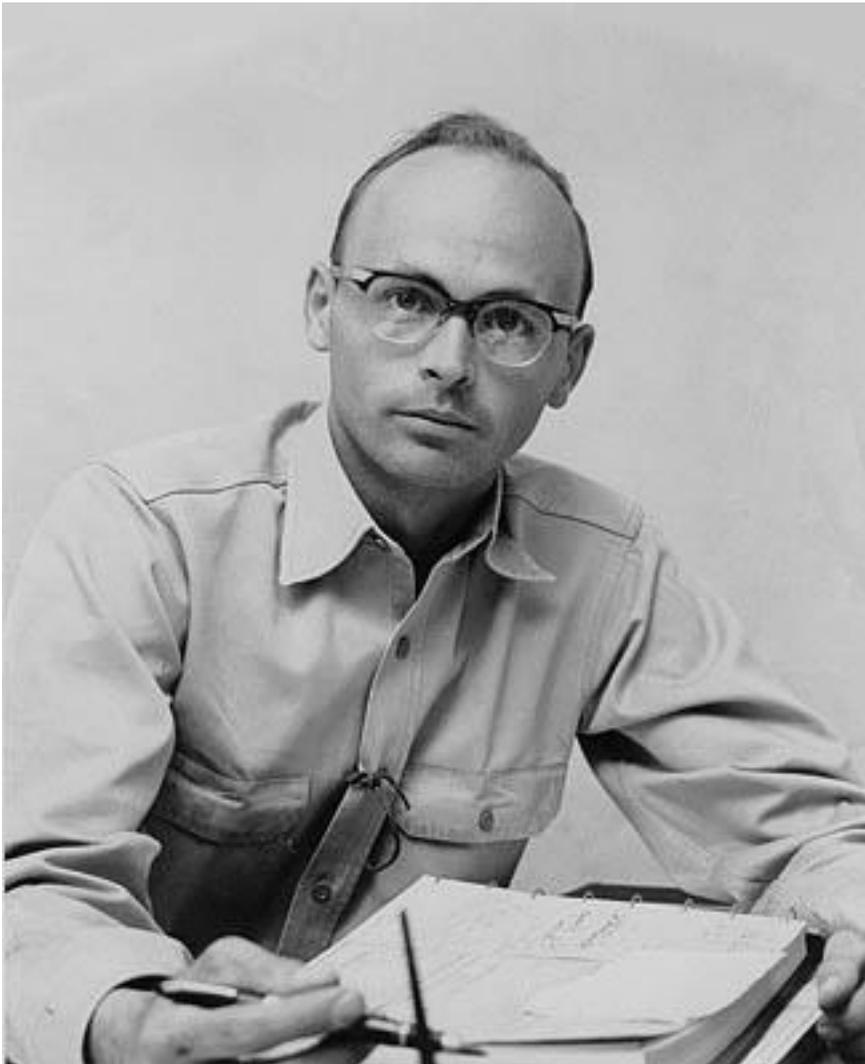
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“MY OLD MAN...THE ‘URANIUM KING’”

The Story of CHARLIE STEEN..Part 4

By Mark Steen

In order to follow the history of the exploration and development of the Big Indian mining district it is necessary to understand a few things about the geology of the uranium ore deposits that were found after Charlie Steen discovered the Mi Vida mine. The most important thing to remember is that none of the ore deposits discovered during the next four years were exposed on the surface. Although the ore bearing host rocks in the Moss Back member of the Chinle formation did outcrop in a few places along the face of the escarpment overlooking the Big Indian Wash, all of the uranium that was found after 1952 was discovered by exploration drilling. My father's discovery proved that someone could walk over \$100 million worth of uranium ore without knowing what lay beneath their feet unless they were willing to risk money on wildcat drilling in the search for totally hidden ore deposits.



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Although the Big Indian mining district was developed from the single drill hole Charlie Steen had drilled through 14 feet of high-grade uranium ore on July 6, 1952, none of the other mines in the district were brought into production on the basis of one drill hole. After the Mi Vida mine proved the existence of uranium ore in the Chinle formation, drilling became the chief guide to finding more ore in the district. Any drill hole that encountered good mineralization of minable thickness required additional drilling to block out the ore body. Remarkably, every hole in good ore was later developed into an ore body. Because there were no low-grade halos surrounding the ore bodies, a drill hole could miss penetrating a high-grade deposit by a few feet without finding any trace of uranium. Perhaps the best example of this is the original discovery drill hole on the Mi Vida claim. If my father hadn't insisted on pushing the bulldozer road as far down dip as possible before he set up his drilling rig, he probably would have missed the Mi

Vida ore deposit. Once the mine was blocked out, it was found that the discovery drill hole was located near the outer edge of the ore body. If Charlie Steen had drilled another 18 feet back towards the rim, he would not have cored through the 14 feet of high-grade uranium ore that started the Big Boom at the Big Indian.

After the hole came in on the Mi Vida claim, more than 2.2 million feet of drilling was completed in over 3,000 drill holes spaced between 200 and 500 feet apart during the next twelve years of exploration activity. Drilling reached an all time high in 1956, when more than 647,000 feet were drilled. This exploration drilling delineated a mineralized belt on the southwestern flank of the Lisbon Valley anticline that was approximately eleven miles long and between one-half and one mile wide. A five-mile long portion of the south central part of the anticline had been removed by erosion, leaving about six miles of the mineralized belt to the northwest and about five miles to the southeast. This belt of uranium mineralization follows the same trend my father reasoned existed when he was first drawn to the area. It confirmed his geologic theory that the uranium deposits in this district were structurally controlled by the anticline. As the Lisbon Valley anticline is plunging at the north end, the ore-bearing host rocks in the Moss Back member of the Chinle formation are found at greater depths to the northwest of the crest of the anticline where the Mi Vida and Big Buck claim groups were located.

All the larger ore deposits were tabular and mostly rectangular in shape with an irregular outline. The smaller ore deposits were more rounded in shape, but also tended to be elongated along the flank of the anticline. At the north end of the ore belt, the mines were developed in a cluster of nearly coalesced, large ore deposits that produced more than 30 million pounds of uranium oxide. A dozen smaller deposits that contained over 4 million pounds of uranium oxide were scattered between the northern portion and the central portion of the mineralized belt where the large Mi Vida and Big Buck ore deposits were developed. The cluster of Moss Back hosted ore deposits in this central portion of the belt produced over 22 million pounds of uranium oxide. Another 1.5 million pounds of uranium oxide was taken from a number of widely scattered, smaller deposits in the Moss Back member of the Chinle formation at the south end of the belt.



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The uranium deposits ranged in size from 500 to 1,500,000 tons of ore, and in thickness from a few feet to 45 feet with an average of about 6 feet. When my father had first examined the Lisbon Valley anticline, he figured that any uranium concentrated down dip from the low-grade rim outcrops would be found in thicker deposits on this part of the structure. And the thickest ore horizon was found in the Mi Vida and Big Buck mines, where the thickness varied from 10 to 45 feet. Ore grades averaged 0.37

percent uranium oxide, making the Big Indian mining district the highest grade of all of the large uranium districts discovered during the next ten years of exploration on the Colorado Plateau.

By the time that the Mi Vida mine began production, Dad had already insulated his original claim block with more claims, but he was concerned that the Atomic Energy Commission (the AEC) would withdraw the area from public entry. Under the Atomic Energy Act of 1946, all fissionable materials were reserved to the United States government. There was even some question if new mining claims could be located to claim uranium minerals.

Charlie Steen knew that if other prospectors located enough claims in the district that the AEC would not be able to withdraw his claims from private exploitation. If this seems far-fetched, just recall that this was during the Cold War. The uranium ore found in the Mi Vida mine was considered to be of great strategic importance in the atomic arms race with the Soviet Union. For several years, the ore produced at the Mi Vida mine was the largest single source of uranium in the United States. All of that uranium went into atomic weapons, which were vital to the defense of the country. My father encouraged every friend and fellow prospector he knew to get in on the ground floor before the AEC withdrew the area from mineral entry.

Dad always told me that if he had discovered the Mi Vida mine while he was working as a geologist for a mining company, it would have been the high point of his professional career. Because he was prospecting on his own account, the discovery completely changed Charles A. Steen's life. If he had been working for a mining company, none of what subsequently happened at the Big Indian would have occurred. A mining company would have kept the news of a discovery secret while it blanket staked the entire district. As it happened, more than 2 miles of the north end and about 5 miles of the south end of the mineralized belt remained open until the first months of 1953.



After forming a company he named Big Indian Mines, Dad conveyed six of his claims to this new entity and headed down to Texas to raise enough money to explore these properties. When he came back he brought along his brother-in-law, Albert Hrbacek (pronounced Herrbacheck) and a brand new Mayhew rotary rig.

In the frenzied rush to the Big Indian that followed the realization that something extraordinary was happening south of La Sal, Utah, a handful of venturesome individuals seized the opportunity to strike it rich. As a result of the ensuing stampede of claim stakers, most of the ore deposits on the north end of the Lisbon Valley anticline ended up being staked by more than one locator. And, after the prospectors sold their claims, grabbed their millions and left the district to the mining companies that were better able to exploit these deeper ore bodies, most of these uranium deposits were mined by several companies.

About four months after the Mi Vida mine began to bury the AEC's ore buying station at Thompson in uranium ore, my father realized that he had to do something to quicken the pace of exploration on his claims. The only drilling rig available was a core rig that seemed to take an eternity to reach the ore horizon when it had to drill through the full thickness of the Wingate and Chinle formation. When his then partners, Bob Barrett and Dan O'Laurie, resisted his plans to buy a modern Mayhew rotary drilling rig, Charlie Steen hit on the idea of raising money by selling an interest in some of the claims he hadn't contributed to Utex.

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explored for on the Colorado Plateau. Rotary rigs could drill deeper than 1,000 feet in less time than a core rig could drill 100 feet. Before the Boom tapered off, Moab Drilling Company was operating five Mayhew rigs around the clock. Its crews were able to drill a 25,000-foot contract in 30 days. The price per foot fell from \$20 to \$4 once the rotary rigs took over. Other companies followed Charlie Steen's example, and at one time all but 4 of the 21 drilling rigs active in the Big Indian district were Mayhew rotaries. Charlie Mayhew became a multimillionaire and a good friend of Charlie Steen. And thousands of strange-sounding, whiskey-drinking, hard-working, harder-partying roughnecks from Oklahoma and Texas joined the invasion of outsiders who made the Uranium Boom the biggest rush for riches since the Klondike Stampede.

Dan Hayes and Charlie Steen were good friends by the time the Mi Vida mine began producing in December of 1952. Hayes was a native of southeastern Utah and very familiar with the prospects and mines of the region. In the spring of 1948, while exploring the Lisbon Valley area, Hayes discovered the sparsely mineralized uranium outcrops in the Cutler formation that later caught my Dad's attention. Dan Hayes and two partners staked nearly a mile and half of claims along the rim, and began mining limited quantities of low-grade ore. Needing money to develop his claims, Hayes turned to Donald T. Adams, a Monticello, Utah lawyer he had known for years. Adams bought out Hayes' partners and advanced money to develop the Big Buck claim group in partnership with his cousin, Joe Adams, and Eddie Saul. Hayes and his new partners were unable to interest the AEC in drilling their property, and they were doing just enough work to maintain their claims when Charlie Steen appeared on the scene.

Don Adams was an honest attorney and an upright family man; and Dan Hayes was a practical, amiable man whose word was his bond. Hayes watched the developments at the Mi Vida mine, and Adams handled the legal affairs of the partnership in Monticello. Charlie Steen couldn't have asked for better neighbors.

On June 24, 1953, Adams and Hayes leased the two Big Buck claims closest to the Mi Vida mine to Wilfred Brunke, an experience uranium mine operator. My father welcomed Brunke back to the Big Indian. He recalled that Brunke had bulldozed the four miles of rough road onto his claims last summer. Charlie Steen enjoyed reminding Wilfred Brunke that Brunke had repeatedly warned him during every opportunity along every mile of bulldozing that there was no uranium back of the rim and he was throwing good money away.

With Dad's approval, Brunke began driving a 150-foot decline headed back towards the rim from the Mi Vida claim. Brunke blasted into ore bearing Moss Back at the bottom of the decline, and the Big Buck became the second mine in production on the anticline. Although uranium ore had been encountered at the bottom of the Brunke decline, nobody knew how far the ore would extend in any direction. The only plan was to mine until they ran out of ore. This was the same old-fashioned method that uranium miners had been using since the early radium days. But things were about to change.

For some time, Charlie Steen had wanted to get into a mining deal with his old partner, Bill McCormick. Together they approached Hayes and Adams about buying the Big Buck claim group. Although my father was optimistic about the possibility that the Mi Vida ore body extended onto his neighbors' property; he had no way of knowing how much ore could be found under the Big Bucks. It was a calculated gamble, but the odds looked very good.

Two years earlier, \$10,000 would have bought the Big Bucks; a year earlier \$50,000 would have been enough; now Adams and Hayes wanted \$2 million. No uranium mine on the Colorado Plateau had ever sold for that much money. Bill McCormick deferred the decision to Charlie Steen. This time my father was able to stake his old partner; and on December 1, 1953 (Dad's thirty-fourth birthday) the Big Bucks were optioned for \$50,000. Under the terms of the option, the sellers were to receive \$450,000 on August 1, 1954, and \$500,000 per year for three years. The deal gave the two partners eight months to raise the first big payment. It was structured so that the buyers would have enough time to prove up an ore body. Both the sellers and the buyers were on the same track.

Casting about for a method to make that first big payment and raise enough money to explore the Big Buck claim group, Charlie Steen and Bill McCormick landed a big deal within a few days. It involved the formation of a new corporation called the Standard Uranium Corporation. Ralph and Ray Bowman introduced Joseph W. Frazer, a New York City automobile company executive and financier, to my father and Bill McCormick. The Bowman brothers were Salt Lake City promoters who had approached my father about forming a public company to cash in on the growing interest in uranium company stocks. Frazer took them and the deal back to New York and arrangements were quickly made to raise money through a public offering. Fred Gearhart, a prominent investment banker, agreed to underwrite the project. Within a month, Dad and Bill McCormick had the \$50,000 option money back in the bank and Moab Drilling Company had a contract for the exploratory drilling. A day later, the Mayhew rotary was set up and drilling away a day later; and Charlie Mayhew got an urgent telephone call placing an order for another rotary rig. By the time that the paper work for the public offering was in place, 69 holes had been completed and over 200,000 tons of 0.37 percent uranium oxide ore worth more than \$6 million had been blocked out.

In New York the public was being primed for the first uranium company to be fully registered with the SEC. Frazer and Gearhart enlisted John A. Roosevelt (FDR's son), Newton Brozan and Aaron Holman (prominent New York attorneys) and Lucian H. Cullen (a Texas oilman) to be officers and directors of the new company along with William

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